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A2 – Data Collection Instruments

- Furnace Metering Onsite Data Collection Instrument
- Onsite Form for Residential Gas Furnaces

**Comprehensive Manufactured/Mobile Home Program
PGE2078, SDGE3035, SCE2502/SCG3539**

The following measures will be asked about in the survey: Air conditioning diagnostic and tune-up, duct test and seal, Energy Star compact fluorescent lamps and fixtures, energy efficient faucet aerator, energy efficient showerhead.

Instrument-specific variables-- The CATI software will automatically fill the appropriate description in the questions.

[Product Type]

Air conditioning diagnostic and tune-up service
Duct test and seal service
Lamps and fixtures
Showerhead
Faucet aerators

[Measure]

Air conditioning diagnostic and tune-up service
Duct test and seal service
Energy Star compact fluorescent lamps and fixtures,
Low flow showerhead
Low flow faucet aerators

[Assistance]

Free air conditioning diagnostic and tune-up
Free duct test and seal
Free installation of Energy Star compact fluorescent lamps and fixtures
Free installation of low flow showerhead and faucet aerators

[Program]

Manufactured or Mobile Home Program

[Utility]

Pacific Gas & Electric
San Diego Gas & Electric
Southern California Edison/Southern California Gas

[Program Incentive]

Free

[Quantity]

Quantity exchanged/installed

[Incremental efficiency measures]

Energy Star compact fluorescent lamps and fixtures

[Efficiency enhancement measures]

Air conditioning diagnostic and tune-up
Duct test and seal
Energy efficient faucet aerator
Energy efficient showerhead

Introduction

Hello, my name is **[interviewer name]**, and I'm calling on behalf of the California Public Utilities Commission regarding **[utility's]** Manufactured or Mobile Home Program also know as the Synergy program or the Manufactured or Mobile Home Program. May I speak with **[contact name]**?

- 1 Yes
- 2 No [attempt to convert; if R not available, ask for an adult who makes decisions on how household uses energy]

I'm with **[data collection firm]**, an independent research firm. I am calling to learn about your experiences with the educational information and free installation of **[measures]** you received as part of Manufactured/Mobile Home Program offered through **[utility]**. I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and **[utility]** better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about (non-billing analysis-15/billing analysis=20) minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-454-5070)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the **[measures]** you purchased and received a rebate through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call Mikhail Haramati at 415-703-1458, or visit their website: www.cpuc.ca.gov/evaluation.)

(NOTE: For all questions, "DON'T KNOW" and "REFUSED" will be coded if offered as a response.)

Recall of Participation/Identification of Decision Maker (Section 1)

(QUANTITY REFERS TO THE NUMBER RECEIVED WITHIN THE MEASURE CATEGORY--E.G., 3 FAUCET AERATORS)

1.1 Program records indicate that the American Synergy Companies (or ASC) installed the following energy efficiency measures in your home through the Manufactured or Mobile Home Program around **[insert date of participation]**. (RECORD FOR EACH MEASURE RECEIVED)

MEASURES	Do you recall receiving this . . . ?	(IF QUANTITY > 1) Is this the correct quantity?
A. Air conditioning diagnostic and tune up	1 Yes 2 No D (DK) R (REFUSED)	--
B. Duct test and seal	1 Yes 2 No D (DK) R (REFUSED)	--
C. (quantity) Energy efficient faucet aerators	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
D. (quantity) Energy efficient showerhead(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
E. (quantity) Energy Star compact fluorescent lamps and fixtures	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)

(IF RECALLS MEASURES, SKIP TO 1.4)

1.2 (ASK IF DOESN'T RECALL RECEIVING ANY OF THESE MEASURES) Is it possible that someone else in your household would know about this/these **[measures]**? (RECORD ONE NUMBER)

- 1 Yes (SKIP TO 1.3)
- 2 No
- D (DON'T KNOW)
- R (REFUSED) (TERMINATE)

1.2b American Synergy Companies, also known as ASC or the Synergy Companies, was hired by **[utility]** to provide education and direct installation of energy saving measures in individual manufactured homes and community common areas. The **[measures]** would have been installed free of charge to you. Are you sure you don't recall receiving the/these **[measures]**? (Record one number)

- 1 Don't remember -> [TERMINATE, RECORD ANY COMMENTS MADE BY RESPONDENT BEFORE EXITING]
- 2 Remember -> [READ, "GREAT, THEN LET'S CONTINUE", SKIP TO 1.4]
- R (REFUSED) (TERMINATE)

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1.3 May I please speak with that person? (RECORD ONE NUMBER)

- 1 Yes (BEGIN THE SURVEY AGAIN WITH THIS NEW RESPONDENT)
- 2 No (TERMINATE)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

1.4 Are you the person [in your household/at this location] who decided to have this/these [measures] installed through the Manufactured/Mobile Home Program?

- 1 Yes
- 2 No (SKIP BACK TO 1.3)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

Sources of Program Information (Section 2)

2.1 How did you hear about the free services available as part of [utility's] Manufactured or Mobile Home Program? (PROBE: Did you hear about the program from any other sources?) (DO NOT READ LIST, RECORD ALL THAT APPLY)

Utility provided information

- 1 (Advertising—radio, newspaper, trade journal, billboard, TV)
- 2 (Bill insert, newsletter, or other mailing)
- 3 (Website)
- 4 (Email)
- 5 (Other utility) (SPECIFY)

Local Government/Community event/Nonprofit

- 6 (Meeting, event, workshop, training) (SPECIFY)
- 7 (School)
- 8 (Local government/community agency) (SPECIFY)
- 9 (City/county Energy Center such as Pacific Energy Center, Stockton, Food Service) (SPECIFY)
- 10 (Advertising—radio, newspaper, trade journal, billboard, TV)

Other

- 11 (Home or building audit or assessment) (SPECIFY)
- 12 (Meeting, event, workshop training) (SPECIFY)
- 13 (Flex your Power TV or radio advertising)
- 14 (Other advertising, don't recall)
- 15 (Friend/Relative/Neighbor)
- 16 (Other, Specify: _____)
- 17 (Property Manager/Mobile Home Park staff)
- D (DON'T KNOW) (SKIP TO SECTION 3)
- R (REFUSED) (SKIP TO SECTION 3)
- 20 (Other – Salesperson/rep)
- 21 (Other – Installer/Contractor)

Installation Behavior (Section 3)

(QUESTIONS IN THIS SECTION WILL BE REPEATED FOR FAUCET AERATORS, SHOWERHEADS AND CFLS)

3.1a (IF QUANTITY=1) Now, I would like to understand what you did with the [measure]. Is this [measure] currently installed at your home (either indoors or outdoors)? (RECORD ONE NUMBER)

- 1 Yes (IF LIGHTING, SKIP TO 3.4, ELSE SKIP TO SECTION 4)
- 2 No
- D (DON'T KNOW) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)
- R (REFUSED) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)

3.1b (IF QUANTITY=1) Which of the following best describes what happened with the [measure]? (READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location (SKIP TO 3.3a)
- 2 It was installed at your home but is now permanently removed (example: broke, burned out, don't fit, don't like, etc.) (SKIP TO 3.6)
- 3 It is in storage because it is only needed during certain months of the year
- 4 It is in storage for some other reason (SKIP TO SECTION 3.8)
- 5 It was sold or given away (SKIP TO 3.3a)
- 6 Something else (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

3.2 (IF QUANTITY>1) Now, I would like to understand what you did with the [quantity] [measure]. (READ LIST, RECORD NUMBER)

- a___ How many are currently installed at your home (either indoors or outdoors) (IF RESPONSE=QUANTITY, SKIP TO 3.4)
- b___ How many are installed at some other location?
- c___ How many were installed at your home (either indoors or outdoors) but are now permanently removed (example: broke, burned out, don't fit, don't like, etc.)
- d___ How many are in storage because they are only needed during certain months of the year?
- e___ How many are in storage for some other reason?
- f___ How many were sold or given away?
- g___ Something else? (SPECIFY)

CMMHP Participant Survey

3.3a (ASK IF 3.1b=1, 3.1b=5, 3.2b>0, 3.2f>0) Is the/Are these [measure] located in [utility's] service territory?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

(SKIP TO 5.3 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY) AND THAT LOCATION IS **OUTSIDE** OF SCE'S SERVICE TERRITORY (3.3A NE 1).

SKIP TO W1 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY) AND THAT LOCATION IS **INSIDE** OF SCE'S SERVICE TERRITORY (3.3A = 1).

Installed Measures (ASK ONLY FOR CFLs)

Now let's talk about the energy efficient lighting equipment you currently have installed.

3.4 (LIGHTING ONLY) Where [is the/are they] installed in your residence? (READ LIST, FILL IN BLANKS)

- _____ Living/family room
- _____ Dining room
- _____ Den/Office
- _____ Kitchen
- _____ Bedrooms
- _____ Bathrooms
- _____ Closets
- _____ Hallways
- _____ Attic
- _____ Basement
- _____ Garage
- _____ Yard/Outside
- _____ Other (specify: _____)
- _____ (DON'T KNOW)

[PROGRAMMING: MUST TOTAL TO **NUMBER INSTALLED** BEFORE MOVING ON]

Removed Measures (ASK ONLY IF THEY SAY THEY REMOVED A FAUCET AERATOR, SHOWERHEAD OR CLF AFTER INSTALLED, 3.1b=2 or 3.2c>0)

3.6 Now let's talk about [measure] you said you installed but have since removed. Why was this removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 (Equipment failed)
- 2 (Didn't work properly)
- 3 (Wrong size—too small or too large)
- 4 (Low water flow)
- 5 (Didn't like the color)
- 6 (Didn't like appearance/unattractive)
- 7 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

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3.7 What did you replace [measure] with? (DO NOT READ LIST; PROBE FOR EFFICIENCY, RECORD ALL THAT APPLY)

- 1 (With a new high efficiency [measure])
- 2 (With a less efficient [product type])
- 3 (Re-installed old equipment)
- 4 (Did not replace)
- 5 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

Measures in Storage (ASK ONLY IF THEY SAY MEASURE IS IN STORAGE FOR SOME OTHER REASON, 3.1b=4 or 3.2e>0)

3.8 When do you think you will install the [measure]? Would you say within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

- 1 Within the next 3 months
- 2 3 to 6 months from now
- 3 6 to 12 months from now
- 4 More than a year from now
- 5 Never
- D (DON'T KNOW)
- R (REFUSED)

NTGR and Spillover (Section 4)

Warm-up Questions/Background Context¹

- W1.** Please think back to the time when you were deciding to have the free **[product types]** done/installed, perhaps recalling things that occurred in your household shortly before and after **[timeframe]**. What factors motivated you to have the free **[product types]** done/installed? {DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE RESPONDENT HAS FINISHED, PROBE: Are there any other factors?}
1. Old equipment didn't work
 2. Old equipment working poorly
 3. The program incentive
 4. The program technical assistance
 5. Wanted to save energy
 6. Wanted to reduce energy costs
 7. The information provided by the Program
 8. Past experience with this program
 9. Because of past experience with another **[utility]** program
 10. Recommendation from other utility program (Probe: What program? _____)
 11. Recommendation of dealer/retailer
 12. Recommendation of someone else (Probe: Who? _____)
 13. Advertisement in newspaper (Probe: For what program? _____)
 14. Radio advertisement (Probe: For what program? _____)
 15. Other (SPECIFY)
 16. Environmental concerns
 17. Global warming
 18. Liked the appearance of the **[measure]** more than the old one
 19. Keeping up with the latest trends and fashions
 20. The program measures are free
 - D DON'T KNOW
 - R REFUSED

¹ Individual contract groups may chose to modify the wording of these warm-up questions.

CMMHP Participant Survey

{REPEAT W2-C2 FOR FIRST MEASURE. REPEAT SERIES IF IS A SECOND MEASURE}
{ASK W2a-W6 ONLY FOR INCREMENTAL EFFICIENCY REBATE MEASURES}

(NOTE: W2a-W2c WERE DELETED AS LIGHTING ISN'T A REBATE MEASURE)

W3. {IF MEASURE=LIGHTING} What type of lighting did this replace? {DO NOT READ}

- 1. Incandescent
- 2. CFL
- 3. Other (SPECIFY)
- D DON'T KNOW
- R REFUSED

W5. {IF MEASURE=LIGHTING} Was the old **[product type]** working or not working?

- 1. Working
- 2. Not working {SKIP TO FR1}
- D DON'T KNOW {SKIP TO FR1}
- R REFUSED {SKIP TO FR1}

W6. {IF MEASURE=LIGHTING} Was the old **[product type]** in good, fair, or poor working condition?

- 1. Good
- 2. Fair
- 3. Poor
- D DON'T KNOW
- R REFUSED

Free-Ridership Questions

FR1. At the time that you first heard about the **[assistance]** from **[utility]**, had you...? {READ LIST UNTIL R SAYS NO}

- 1. Already been thinking about purchasing **[product type]**? {IF NO, SKIP TO FR2}
- 2. Already begun collecting information about **[product type]**? {IF NO, SKIP TO FR2}
- 3a. **{FOR INCREMENTAL EFFICIENCY MEASURES}** Already selected the **[measure]** you were going to get? {IF NO, SKIP TO FR2}
- 3b. **{FOR EFFICIENCY ENHANCEMENT MEASURES}** Already decided to buy the **[product type]**? {IF NO, SKIP TO FR2}
- 4. Already installed the energy efficient **[measure]**? {IF YES, SKIP TO FR1B; ELSE FR2}
- 5. {DON'T READ} Other: _____ {SKIP TO FR2}
- D DON'T KNOW {SKIP TO FR2}
- R REFUSED {SKIP TO FR2}

FR1B.

So, the **[measure]** was installed before you learned about the **[assistance]** from **[utility]**?

- 1 Yes {SKIP FR5}
- 2 No
- D Don't know
- R Refused

FR2.

Just to be sure I understand, did you have specific plans to install a(n) **[product type]** before learning about the **[assistance]** available through the **[program]**?

- 1. Yes
- 2. No {SKIP TO FR4}
- D DON'T KNOW {SKIP TO FR4}
- R REFUSED {SKIP TO FR4}

FR3.

Did you have to make any changes to your existing plans in order to receive this **[assistance]** through the **[program]**?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4.

{REPEAT AS NEEDED FOR FR4 PARTS A – D} If the **[assistance]** from the **[utility]** **[program]** had not been available, would you still have:

FR4A. Purchased a(n) **[product type]** ?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW
- R REFUSED

FR4B. Purchased the **[product type]** at the same time? (PROBE: That would be around [date of participation])

- 1. Yes {SKIP TO FR4C}
- 2. No
- D DON'T KNOW {SKIP TO FR4C}
- R REFUSED {SKIP TO FR4C}

FR4B1. Bought the **[product type]** earlier or later?

- 1. Earlier
- 2. Same Time {REPEAT QUESTION FR4B}
- 3. Later
- D DON'T KNOW {SKIP TO FR4C}
- R REFUSED {SKIP TO FR4C}

FR4B2. How much **[earlier/later]** would you have bought the **[product type]**?

_____ Years {AND/OR} _____ Months
D DON'T KNOW
R REFUSED

FR4C. {IF RECEIVED MULTIPLE UNITS THROUGH THE PROGRAM, OR MEASURE IS OF VARIABLE AMOUNT} Without the program, would you have purchased the same quantity as the program provided?

- 1. Yes {SKIP TO FR4D}
- 2. No
- D DON'T KNOW {SKIP TO FR4D}
- R REFUSED {SKIP TO FR4D}

FR4C1. How many/much would you have purchased without the program?

_____ {RECORD NUMBER}
D DON'T KNOW
R REFUSED

FR4D. {FOR INCREMENTAL EFFICIENCY MEASURES} Purchased the same efficiency of **[product type]**?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4E. If the **[assistance]** from the **[utility] [program]** had not been available, would you have done anything else differently?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW {SKIP TO FR5}
- R REFUSED {SKIP TO FR5}

FR4E1 What would you have done differently?

{RECORD RESPONSE}: _____

FR5. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same **[measure]** if you had not received it from the program?

{RECORD RESPONSE (0-10)} _____ {SKIP TO FR7}
D DON'T KNOW {SKIP TO FR7}
R REFUSED {SKIP TO FR7}

{SKIP TO FR10 IF PROGRAM DOES NOT PROVIDE A FINANCIAL INCENTIVE/SUBSIDY}

NOTE: FR7-FR 9 WERE REMOVED AS NOT APPLICABLE FOR FREE MEASURES. WE VERIFY UP FRONT THAT THEY RECEIVED A FREE MEASURE.

{READ ONLY IF FR7-FR9 WAS SKIPPED}: I'm going to read several statements the **[product type]** you received. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR10. There may have been several reasons for my purchase decision. But the **[assistance]** from the **[utility] [program]** was a critical factor in my decision to have the **[measures]** installed/done.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

FR11. I would have bought a(n) **[product type]** within **[a year]** of when I did even if I had not received it from the **[utility] [program]**.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

1.1.1 Consistency Check & Resolution

{C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

FR4A (efficiency enhancement measures) OR FR4D (incremental efficiency measures)
FR5
FR10
FR11

{IF FR4A/D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the [measure] without the program'}

{IF FR4A/D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would not have purchased the [measure] without the program'}

{IF FR5 = 0,1 AND FR4A/D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the [measure] without the program'}

{IF FR5 = 9,10 AND FR4A/D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the [measure] without the program'}

{IF FR10 = 0,1 AND FR4A/D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program'}

{IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program'}

{IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the [product type] within [a year/2 years] even without the program'}

{IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the [product type] within [a year/2 years] even without the program'}

C1. Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **[measure]** at the time you did? {RECORD VERBATIM RESPONSE BELOW}

C2. **[fill with wording and response categories to the one question which was inconsistent]** {INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE}

CMMHP Participant Survey

Participant Like and Unlike Spillover Questions

{ONLY ASK LSP1-LSP4 IF INSTALLED LIGHTING MEASURES}

LSP1. Since you received [assistance] through [program] have you purchased and installed any efficient lighting on your own without any assistance from the [utility] [program] or another utility program {READ THE FOLLOWING ONLY FOR SMALL COMMERCIAL: either at this facility or at other locations}?

- 1. Yes, only at this home/facility
- 2. Yes, only at other locations {SMALL COMMERCIAL ONLY}
- 3. Yes, at this facility and other locations {SMALL COMMERCIAL ONLY}
- 4. No {SKIP TO 5.3}
- D DON'T KNOW {SKIP TO 5.3}
- R REFUSED {SKIP TO 5.3}

LSP2. How many more high efficiency lighting products did you buy on your own, compared to what you got through the program {READ THE FOLLOWING ONLY FOR SMALL COMMERCIAL: at this facility and/or at another location}?

{PROBE FOR PERCENT OR SHARE OF PROGRAM EQUIPMENT. READ THE FOLLOWING IF NEEDED} For example, was it about one-fourth (25%) of what you installed through the program, one-half (50%) of what you installed through the program, the same amount as what you installed through the program (100%), twice as much as what you installed through the program (200%), or some other amount?

- _____ % at this home/facility
- _____ % at another facility {SMALL COMMERCIAL ONLY}
- D DON'T KNOW
- R REFUSED

LSP3. I'm going to read a statement about the equipment that you purchased on your own, without any assistance from your utility. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement

My experience with the [measure] installed through the [utility] [program] in [2006, 2007, 2008] influenced my decision to install more high efficiency [measure] on my own.

- {RECORD RESPONSE (0-10)} _____
- D DON'T KNOW
- R REFUSED

LSP4. Why did you purchase this lighting without the financial assistance available from the [utility] [program]? {DO NOT READ; INDICATE ALL THAT APPLY}

1. Too much paperwork
 2. Takes too long to get approval
 3. No time to participate, needed equipment immediately
 4. The program had ended
 5. The equipment would not qualify {PROBE: WHY NOT?} _____
 6. The amount of the rebate wasn't important enough
 7. Other {SPECIFY} _____
- D DON'T KNOW
R REFUSED

Recent Program Participation (Section 5)

5.3 Which of the following phrases or messages have you heard before today? (ROTATE STARTING POINT)

A. Good Housekeeping

- 1 Yes
 - 2 No
- D (DON'T KNOW)
R (REFUSED)

B. Click it or Ticket

- 1 Yes
 - 2 No
- D (DON'T KNOW)
R (REFUSED)

C. Ahnu

- 1 Yes
 - 2 No
- D (DON'T KNOW)
R (REFUSED)

D. Flex Your Power

- 1 Yes
 - 2 No
- D (DON'T KNOW)
R (REFUSED)

E. Flex Alert

- 1 Yes
 - 2 No
- D (DON'T KNOW)
R (REFUSED)

F. Energy Hog

- 1 Yes
 - 2 No
- D (DON'T KNOW)

R (REFUSED)

G. Galley Bay

1 Yes

2 No

D (DON'T KNOW)

R (REFUSED)

H. Energy Star

1 Yes

2 No

D (DON'T KNOW)

R (REFUSED)

I. Hollister Co

1 Yes

2 No

D (DON'T KNOW)

R (REFUSED)

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 6)

NOTE: ALL QUESTIONS STARTING WITH THE LETTER 'C' ARE QUESTIONS THAT WOULD BE ASKED ONLY IF A BILLING ANALYSIS IS BEING DONE FOR CERTAIN MEASURES.

The last questions ask about household characteristics to make sure we're getting a representative sample of [utility] residents.

6.1 Do you own or rent your home?

1 Own

2 Rent

3 Other (SPECIFY)

D (DON'T KNOW)

R (REFUSED)

6.2 In what type of building do you live? (READ LIST IF NEEDED; PROBE IF SAYS CONDO: How many units are in your building?)

1 A one-family home detached from any other house

2 A one-family home attached to one or more houses

3 A building with 2 apartments

4 A building with 3 or 4 apartments

5 A building with 5 or more apartments

6 A mobile home

7 Boat, RV, Van, etc.

8 Other (SPECIFY)

D (DON'T KNOW)

R (REFUSED)

CMMHP Participant Survey

6.3 About when was this building first built? (READ LIST IF NEEDED)

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 7 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

6.3a Were you living in this same home around [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

6.4a How many full or half bathrooms do you have in your home? (PROBE: A full bathroom is one that has a sink with running water, and a toilet, and either a bathtub or shower. A half bathroom has either a toilet or a bathtub or a shower?)

- _____ Bathrooms
- D (DON'T KNOW)
 - R (REFUSED)

6.4b How many bedrooms do you have in your home (If a one-room efficiency, or studio apartment, bedrooms=0)

- _____ bedrooms
- D (DON'T KNOW)
 - R (REFUSED)

6.4c Other than bedrooms and bathrooms, how many other rooms are there in your home? Do not count laundry rooms, foyers, unfinished storage spaces, porches, or garages.

- _____ Other rooms
- D (DON'T KNOW)
 - R (REFUSED)

[If 6.3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.5a]

C6.4d Did you do any remodeling, renovation or additions since January 1, 2005?

- 1 Yes
- 2 No (SKIP TO 6.5a)
- D (DON'T KNOW) (SKIP TO 6.5a)
- R (REFUSED) (SKIP TO 6.5a)

CMMHP Participant Survey

C6.4e How many remodels, renovations or additions have you done since then?

- _____ Remodels, renovations or additions
 D (DON'T KNOW)
 R (REFUSED)

C6.4f I'm going to ask you several questions regarding the timeframe of your remodels, renovations or additions. We will try to run through them quickly. (ASK A-C FOR EACH REMODEL THAT TOOK PLACE SINCE JANUARY 1, 2005).

- a. In what month and year did it start?
- b. Did this increase or decrease your home's square footage, not counting unfinished storage spaces, porches or garages,
- c. In what month and year did it finish?

	a. START (mm/yyyy)	b. Increase or decrease? 1 Increase 2 Decrease 3 Same D (DK) R (REFUSED)	C. FINISH (mm/yyyy)
1			
2			
3			
4			

6.5a Including yourself, how many people currently live in your home year-round?

- _____ people
 D (DON'T KNOW)
 R (REFUSED)

6.5b (IF 6.5a=1) Which of the following best describes your age?

- 1 Less than 18 years old
- 2 18-24 years old
- 3 25-34 years old
- 4 35-44 years old
- 5 45-54 years old
- 6 55-64 years old
- 7 65 or older
- D (DON'T KNOW)
- R (REFUSED)

CMMHP Participant Survey

6.5c (IF 6.5a>1) Including yourself, how many people currently living in your home year-round are in the following age groups?

- ____ Less than 18 years old
- ____ 18-24 years old
- ____ 25-34 years old
- ____ 35-44 years old
- ____ 45-54 years old
- ____ 55-64 years old
- ____ 65 or older

TOTAL SHOULD EQUAL 6.5a

R (REFUSED)

[If 6.3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.7]

C6.5d Has the total number of people living in your home year-round changed since [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No (SKIP TO 6.6)
- D (DON'T KNOW) (SKIP TO 6.6)
- R (REFUSED) (SKIP TO 6.6)

C6.5e Do more people or less people live in your home now?

- 1 More→How many more? ____
- 2 Less→How many less? ____
- D (DON'T KNOW)
- R (REFUSED)

C6.5f In what year(s) did the number of people in your household change? (RECORD ALL YEARS OF CHANGE—NET CHANGE IS CALCULATED FROM C6.5e)

- 1st NET CHANGE: _____ YEAR
- 2nd NET CHANGE: _____ YEAR
- 3rd NET CHANGE: _____ YEAR
- D (DON'T KNOW)
- R (REFUSED)

6.7 This next question asks about other changes you have made that we haven't already talked about. Since January 1, 2005 have you made any other changes to the appliances, equipment or other characteristics of your home that would affect how much energy you are using?

- 1 Yes [ASK 6.7a-NSP5 FOR EACH MEASURE INSTALLED BEFORE ASKING 6.7i]
- 2 No [SKIP TO 6.7i]
- D DK [SKIP TO 6.7i]
- R REFUSED [SKIP TO 6.7i]

a. What types of changes did you make? (DO NOT READ. RECORD EACH TYPE OF CHANGE MADE. PROBE: Anything else?)

Heating and air conditioning measures

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Furnace
- 5 Programmable thermostat

Lighting measures

- 6 Fluorescent indoor fixture
- 7 Fluorescent outdoor fixture
- 8 Compact fluorescent bulb
- 9 Compact fluorescent fixture
- 10 Motion sensor
- 11 Dimmer switch

Laundry measures

- 12 Clothes washer
- 13 Clothes dryer

Water using measures

- 14 Water heater
- 15 Low Flow showerheads
- 16 Faucet aerators

Kitchen appliances

- 17 Refrigerator
- 18 Freezer
- 19 Range/oven
- 20 Dishwasher

Pool/spa/jacuzzi

- 21 Swimming pool
- 22 Swimming pool pump
- 23 Swimming pool cover
- 24 Spa/jacuzzi

Insulation/weatherstripping/sealing

- 25 Floor, wall, ceiling, or attic insulation
- 26 Weatherstripping/caulking/weatherization
- 27 Water heater/pipe wrapping/insulation
- 28 Duct sealing/repair (not cleaning)

Windows

- 29 Windows

30 Other (SPECIFY)

00 No other changes (SKIP TO C6.7i)

D DK

R REFUSED

CMMHP Participant Survey

b. Did this equipment replace existing equipment/measures or was it new to your home?

- 1 Replaced existing equipment
- 2 New to home
- D DK
- R REFUSED

c. When did this occur? (RECORD MONTH AND YEAR)

____/____ MM/YYYY

D DK --→Was this before or after you participated in the [program]?

- 1 Before
 - 2 After
 - D DK
 - R REFUSED
- R REFUSED

(ASK 6.7Cd and 6.7Ce ONLY IF BILLING ANALYSIS BEING DONE AND IF 6.7a = 4, 13, 14, 19, 24)

Cd. What type of fuel does the new [equipment] use?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D DK
- R REFUSED

Ce. (ASK IF 6.7b = REPLACED) What was the fuel type of the [equipment] you replaced?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D DK
- R REFUSED

f. Did you receive a rebate for this [equipment] through a [utility] program?

- 1 Yes [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- 2 No
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]

(ASK 6.7g and 6.7h IF 1-4, 12, 13, 14, 17, 18, 19, 20, 22, 24, 29 IN 6.7a; ELSE SKIP TO NSP4)

g. Is the new [equipment] energy efficient?

- 1 Yes
- 2 No [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]

CMMHP Participant Survey

- h. How do you know that this equipment is energy efficient? (PROBE: IS IT ENERGY STAR® RATED?)
- _____

(ASK NSP4-5 ONLY IF 6.7f = NO AND 6.7g = YES AND 6.7c = AFTER DATE OF PARTICIPATION)

NSP4. I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the [utility] [program] in [2006, 2007, 2008] influenced my decision to install different types of high efficiency equipment on my own.

{RECORD RESPONSE (0-10)} _____

D DON'T KNOW
R REFUSED

NSP5. Why did you purchase this high efficiency equipment without going through a [utility] program? {DO NOT READ; INDICATE ALL THAT APPLY}

1. Too much paperwork
 2. Takes too long to get approval
 3. No time to participate, needed equipment immediately
 4. The program had ended
 5. The equipment would not qualify {PROBE: WHY NOT?} _____
 6. The amount of the rebate wasn't important enough
 7. Did not know program was available
 8. There was no program available
 9. Other {SPECIFY} _____
- D DON'T KNOW
R REFUSED

(ASK C6.7i=c6.7m ONLY IF BILLING ANALYSIS BEING DONE)

C6.7i [IF FURNACE WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have gas or electric space heating?

- 1 Gas
 - 2 Electric
 - 3 Both
 - 4 Other (Specify) _____
- D (DON'T KNOW)
R (REFUSED)

CMMHP Participant Survey

C6.7j [IF WATER HEATER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

C6.7k [IF CLOTHES DRYER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric clothes dryer?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

C6.7l [IF RANGE/OVEN WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric range/oven?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

C6.7m [IF ROOM, CENTRAL AC, OR EVAPORATIVE COOLER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] What type of air conditioning system, if any, do you use in your home? (INDICATE ALL THAT APPLY)

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

6.8a Do you receive an electric or natural gas bill directly from [utility]?

- 1 Yes
- 2 No (SKIP TO 6.9)
- D (DON'T KNOW) (SKIP TO 6.9)
- R (REFUSED) (SKIP TO 6.9)

6.8b Does this bill only include your home's electric or natural gas use, or does it include the use of other households?

- 1 Only 1 household
- 2 Multiple households
- D (DON'T KNOW)
- R (REFUSED)

6.13 What is the primary language spoken in your home? (DO NOT READ; PROBE IF R SAYS CHINESE: Would this be Mandarin or Cantonese)

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

On-site Recruiting (Section 7)

(ONLY ASK IF 6.8a and 6.8b=1, HOUSEHOLD HAS OWN INDIVIDUAL METER)

7.1 We would like to offer you \$25 to participate in the on-site component of this evaluation we are doing for [utility]. We are NOT interested in selling anything. We would like to have one of our auditors visit your home at your convenience to look at the quality of the installation of the measures you received and how they are operating. The on-site visit would only take about 20-30 minutes. Would that be alright with you?

- 1 Yes→Great! Someone from [firm] will give you a call back to determine when they can schedule an appointment with one of our auditors in your area. Thank you for your cooperation with this important effort.
- 2 No

Thank and Terminate

PGE Duct Test & Seal/Refrigerant Charge and Airflow Program - PGE2000

The following measures will be asked about in the survey: Duct test and seal, Refrigerant charge test

Instrument-specific variables-- The CATI software will automatically fill the appropriate description in the questions.

[MEASURE]

Duct test and seal
Refrigerant charge test

[ASSISTANCE]

Free service

[PROGRAM]

Duct Test and Seal Program, Refrigerant Charge and Air Flow Program

[UTILITY]

PG&E

[AMOUNT OF PROGRAM INCENTIVE/SUBSIDY]

N/A

Recall of Participation/Identification of Decision Maker (Section 1)

Multi Family Rebate Initial Screener

Hello, my name is _____, and I'm calling on behalf of the California Public Utilities Commission here at PA Consulting Group.

May I speak with **[contact name]**?

- 1 SPEAKING WITH RESPONDENT
- 2 QUALIFIED RESPONDENT IS NOT CURRENTLY AVAILABLE

The reason for our call today is according to our records you had a Heating, Ventilation and Air Conditioning Contractor perform work on your **[complex name]** property at **[address]**. The contractor performed a **[measure]** test as part of a PGE program.

(IF ON-SITE CONDUCTED) Also, we are following up on the visit a RLW contractor made in **[on-site visit date]**.

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and SCE better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about 20 minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-454-5070)

(Sales concern: I am not selling anything; I'd just like to ask your opinion about this program.. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call Mikhail Haramati at 415-703-1458, or visit their website: www.cpuc.ca.gov/eevalidation.)

S0 Did a Heating, Ventilation and Air Conditioning contractor perform a **[measure]** at your property?

- 1 Yes (SKIP TO S1)
- 2 No

S0a Is it possible there is someone else at this location might recall a contractor performing this **[measure]**?

- 1 Yes (BEGIN SURVEY AGAIN WITH NEW RESPONDENT)
- 2 No (SKIP TO S4)

S1 Was this work done as part of a PG&E program?

- 1. Yes.
- 2. No (SKIP TO S1b)
- D. Don't know\ (SKIP TO S1b)

S1a How do you know that?

(ENTER RESPONSE)

PGE RCA/DST Participant Multi-Family Survey

(ONLY IF S1 = NO or DON'T KNOW).

S1b *Our records show that the contractor that provided the [measure] was part of a PG&E program. The intent of this program was to encourage PG&E customers to increase the efficiency of their heating, ventilation or air conditioning systems by offering maintenance and repair services at a free or discounted rate.*

CONTINUE

S2 Did you receive any assistance, such as a discount, or direct payment for the work performed?

1. Yes
2. No
- D. Don't know, or don't remember

S3 Exactly what type of assistance was provided?

(ENTER RESPONSE)

S4 (IF S0 = NO) Has there been any work done to your heating, ventilation, or air conditioning since January of 2007?

(PROBE: Was the work part of an air conditioner replacement, furnace replacement or some other HVAC work?)

(IF S0 = YES) Was the work part of an air conditioner replacement, furnace replacement or some other HVAC work?

- 1 Yes, air conditioner replacement
- 2 Yes, furnace replacement
- 3 Yes, other HVAC work (Describe)
- 4 No, just the [measure] test
- 5 No, it's part of normal maintenance contract
- 6 Other (SPECIFY)
- 7 No HVAC work
- D Don't know
- R Refused

(IF S0 = NO, THANK & TERMINATE)

S5 What type of residence do you own/manage? (READ LIST IF NEEDED)

- 1 A single-family home detached from any other house
- 2 A single-family home attached to one or more houses
- 3 An apartment or condo with 2 or fewer units
- 4 An apartment or condo with 3 to 4 apartments or less
- 5 An apartment or condo with 5 or more units
- 6 A mobile home
- 7 Other (SPECIFY)
- D Don't know
- R Refused

S6 Using a 0 to 10 rating scale, where 0 means not at all important and 10 means extremely important, please rate the importance of each of the following in your decision to implement this specific measure at this time.

1. The age or condition of the old equipment
2. Availability of financial assistance
3. Recommendation from a vendor/supplier (If >5, Collect Vendor Info)
4. General concerns about the environment
5. Specific concerns about global warming
6. Specific concerns about achieving energy independence

Sources of Program Information (Section 2)

ASK ONLY IF "YES" TO S1. IF THEY DON'T KNOW ABOUT ANY PROGRAM, DON'T ASK

- 2.1 How did you hear about the PG&E [program]? (PROBE: Did you hear about the program from any other sources?) (DO NOT READ LIST)

Utility provided information

- 1 Bill insert, newsletter, or other mailing
- 2 Website

Other

- 3 HVAC contractor (SPECIFY)
- 4 Friend/Relative/Neighbor
- 5 Other, Specify
- 6 Property Manager/Mobile Home Park staff
- 7 Don't know
- 8 Refused

NTGR and Spillover (Section 3-4)

[ASK FR1 – FR11 FOR EACH SERVICE PROVIDED]

- FR1. At the time that you first heard about the free service from PG&E for **[Duct Test and Seal/Refrigerant Charge and Airflow]**, had you...? {READ LIST}

1. Already been thinking about paying a contractor for **[Duct Test and Seal/Refrigerant Charge and Airflow]**?

- | | | |
|---|------------|---------------|
| 1 | YES | |
| 2 | NO | {SKIP TO FR2} |
| 8 | OTHER | {SKIP TO FR2} |
| D | DON'T KNOW | {SKIP TO FR2} |
| R | REFUSED | {SKIP TO FR2} |

2. Already begun collecting information about **[Duct Test and Seal/Refrigerant Charge and Airflow]**?

- | | | |
|---|------------|---------------|
| 1 | YES | |
| 2 | NO | {SKIP TO FR2} |
| 8 | OTHER | {SKIP TO FR2} |
| D | DON'T KNOW | {SKIP TO FR2} |
| R | REFUSED | {SKIP TO FR2} |

3. Already decided to buy the **[Duct Test and Seal/Refrigerant Charge and Airflow]** services)?

PG&E RCA/DST Participant Multi-Family Survey

- 1 YES
- 2 NO {SKIP TO FR2}
- 8 OTHER {SKIP TO FR2}
- D DON'T KNOW {SKIP TO FR2}
- R REFUSED {SKIP TO FR2}

4. Already had a contractor perform **[Duct Test and Seal/Refrigerant Charge and Airflow]**?]?

- 1 YES
- 2 NO {SKIP TO FR2}
- 8 OTHER {SKIP TO FR2}
- D DON'T KNOW {SKIP TO FR2}
- R REFUSED {SKIP TO FR2}

FR1B. So, A contractor performed **[Duct Test and Seal/Refrigerant Charge and Airflow]** before you learned about the free service from PG&E?

- 1. Yes {SKIP TO FR5}
- 2. No
- D. Don't Know
- R. Refused
- S.

FR2. Just to be sure I understand, did you have specific plans to have a contractor perform **[Duct Test and Seal/Refrigerant Charge and Airflow]** before learning about the free service available through the PG&E program ?

- 1. Yes
- 2. No {SKIP TO FR4}
- D. Don't Know {SKIP TO FR4}
- R. Refused {SKIP TO FR4}

FR3. Did you have to make any changes to your existing plans in order to receive this free service through the [PG&E program]?

- 1. Yes [Probe for changes]
- 2. No
- D. Don't Know
- R. Refused

FR4. If the free service from the [PG&E program] had not been available to purchase duct test and seal and refrigerant charge and airflow services, would you still have:

FR4A. Purchased any **[Duct Test and Seal/Refrigerant Charge and Airflow]** services ?

- 1. Yes
- 2. No {SKIP TO FR5}
- D. Don't Know
- R. Refused

FR4B. Purchased the **[Duct Test and Seal/Refrigerant Charge and Airflow]** services at the same time as you did?

- 1. Yes {SKIP TO FR4E}
- 2. No
- D. Don't Know {SKIP TO FR4E}
- R. Refused {SKIP TO FR4E}

PGE RCA/DST Participant Multi-Family Survey

FR4B1. Hired a contractor for **[Duct Test and Seal/Refrigerant Charge and Airflow]** services earlier than you did, or later?

- 1. Earlier
- 2. Same Time {REPEAT QUESTION FR4B}
- 3. Later
- D. Don't Know {SKIP TO FR4E}
- R. Refused {SKIP TO FR4E}

FR4B2. How much **[earlier/later]** would you have hired a contractor for the **[Duct Test and Seal/Refrigerant Charge and Airflow]** services?

- _____ Years {AND/OR} _____ Months
- D. Don't Know
 - R. Refused

FR4E. If the free service from the PG&E program had not been available, would you have done anything else differently?

- 1. Yes
- 2. No {SKIP TO FR5}
- D. Don't Know {SKIP TO FR5}
- R. Refused {SKIP TO FR5}

FR4E1 What would you have done differently?

{RECORD RESPONSE}: _____

FR5. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same **[Duct Test and Seal/Refrigerant Charge and Airflow]** services if you had not received any free service from the program?

- ___ RECORD RESPONSE (0-10)
- D. Don't Know
 - R. Refused

{SKIP TO FR10 IF PROGRAM DOES NOT PROVIDE A FINANCIAL INCENTIVE/SUBSIDY}

FR7. Did you receive a financial incentive from the PG&E program either directly or at the time of purchase from the participating contractor to offset the cost of the **[Duct Test and Seal/Refrigerant Charge and Airflow]**?

- 1. Yes
- 2. No {SKIP TO FR10}
- D. Don't Know {SKIP TO FR10}
- R. Refused {SKIP TO FR10}

FR8. What was the dollar amount of the incentive?

- ___ RECORD RESPONSE
- D. Don't Know
 - R. Refused

I'm going to read several statements about how you came to choose to have Duct Test and Seal/Refrigerant Charge and Airflow performed on the HVAC system at your property. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR9. If I had not had any assistance from the program, I would have paid the additional [Use FR8 amount of program incentive/subsidy] to pay for the [Duct Test and Seal/Refrigerant Charge and Airflow] on my own.

- ___ RECORD RESPONSE (0-10)
- D. Don't Know
- R. Refused

{READ ONLY IF FR7-FR9 WAS SKIPPED}: I'm going to read several statements about how you came to choose get [Duct Test and Seal/Refrigerant Charge and Airflow] services. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR10. There may have been several reasons for my decision to have this work performed. But, the free service from the [PG&E program] was a critical factor in my decision to have the **Duct Test and Seal/Refrigerant Charge and Airflow** services done.

- ___ RECORD RESPONSE (0-10)
- D. Don't Know
- R. Refused

FR11. I would have bought [**Duct Test and Seal/Refrigerant Charge and Airflow**] services within [a year] of when I did even without the free service from the [PG&E program].

- ___ RECORD RESPONSE (0-10)
- D. Don't Know
- R. Refused

1.1.1 Consistency Check & Resolution

C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) . The question responses that will be used to trigger C1 are:

- FR4A
- FR5
- FR10
- FR11

C1. Let me make sure I understand you. Earlier, you said [**fill with inconsistency 1**], but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to hire a contractor for [**Duct Test and Seal/Refrigerant Charge and Airflow**] services at the time you did? {RECORD VERBATIM RESPONSE BELOW}

C2. [**fill with wording and response categories to the one question which was inconsistent**]
{INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE}

Participant Like and Unlike Spillover Questions

6.7 This next question asks about other changes you have made that we haven't already talked about. Since January 1, 2005 have you made any other changes to the appliances, equipment or other characteristics of your property that would affect how much energy you are using?

- 1 Yes [ASK 6.7a-NSP5 FOR EACH MEASURE INSTALLED BEFORE ASKING 6.7i]
- 2 No [SKIP TO 6.7i]
- D DK [SKIP TO 6.7i]
- R REFUSED [SKIP TO 6.7i]

a. What types of changes did you make? (DO NOT READ. RECORD EACH TYPE OF CHANGE MADE. PROBE: Anything else?)

Heating and air conditioning measures

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Furnace
- 5 Programmable thermostat

Lighting measures

- 6 Fluorescent indoor fixture
- 7 Fluorescent outdoor fixture
- 8 Compact fluorescent bulb
- 9 Compact fluorescent fixture
- 10 Motion sensor
- 11 Dimmer switch

Laundry measures

- 12 Clothes washer
- 13 Clothes dryer

Water using measures

- 14 Water heater
- 15 Low Flow showerheads
- 16 Faucet aerators

Kitchen appliances

- 17 Refrigerator
- 18 Freezer
- 19 Range/oven
- 20 Dishwasher

Pool/spa/jacuzzi

- 21 Swimming pool
- 22 Swimming pool pump
- 23 Swimming pool cover
- 24 Spa/jacuzzi

Insulation/weatherstripping/sealing

- 25 Floor, wall, ceiling, or attic insulation
- 26 Weatherstripping/caulking/weatherization
- 27 Water heater/pipe wrapping/insulation
- 28 Duct sealing/repair (not cleaning)

Windows

- 29 Windows

30 Other (SPECIFY)

00 No other changes (SKIP TO C6.7i)

D Don't know

R Refused

b. Did this equipment replace existing equipment/measures or was it new to your property?

- 1 Replaced existing equipment
- 2 New to home
- D Don't know
- R Refused

c. When did this occur? (RECORD MONTH AND YEAR)

____/____ MM/YYYY

D Don't know --> Was this before or after you participated in the **[measure] program?**

- 1 Before
 - 2 After
 - D Don't know
 - R Refused
- R REFUSED

(ASK 6.7Cd and 6.7Ce ONLY IF BILLING ANALYSIS BEING DONE AND IF 6.7a = 4, 13, 14, 19, 24)

Cd. What type of fuel does the new [equipment] use?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D Don't know
- R Refused

Ce. (ASK IF 6.7b = REPLACED) What was the fuel type of the [equipment] you replaced?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D Don't know
- R Refused

f. Did you receive a rebate for this [equipment] through a [utility] program?

- 1 Yes [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- 2 No
- D Don't know [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- R Refused [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]

(ASK 6.7g and 6.7h IF 1-4, 12, 13, 14, 17, 18, 19, 20, 22, 24, 29 IN 6.7a; ELSE SKIP TO NSP4)

g. Is the new [equipment] energy efficient?

- 1 Yes
- 2 No [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- D Don't know [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- R Refused [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]

h. How do you know that this equipment is energy efficient? (PROBE: IS IT ENERGY STAR® RATED?)

PGE RCA/DST Participant Multi-Family Survey

(ASK NSP4-5 ONLY IF 6.7f = NO AND 6.7g = YES AND 6.7c = AFTER DATE OF PARTICIPATION)

NSP4. I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the PG&E program in [2006, 2007, 2008] influenced my decision to install different types of high efficiency equipment on my own.

— RECORD RESPONSE (0-10)
D DON'T KNOW
R REFUSED

NSP5. Why did you purchase this high efficiency equipment without going through a PG&E program? {DO NOT READ; INDICATE ALL THAT APPLY}

1. Too much paperwork
2. Takes too long to get approval
3. No time to participate, needed equipment immediately
4. The program had ended
5. The equipment would not qualify {PROBE: WHY NOT?}
6. The amount of the rebate wasn't important enough
7. Did not know program was available
8. There was no program available
9. Other {SPECIFY}
- D DON'T KNOW
- R REFUSED

Program Satisfaction (Section 5)

5.3 Have you participated in any other programs offered by PG&E because of your experience with the [measure] test you received through PG&E program?

- 1 Yes
2 No (SKIP TO 6.1)
D Don't know (SKIP TO 6.1)
R Refused (SKIP TO 6.1)

5.4 Which programs did you participate in because of your experience with this program? (RECORD)

PGE RCA/DST Participant Multi-Family Survey

5.5 Which of the following phrases or messages have you heard before today? (ROTATE STARTING POINT)

A. ENERGY STAR

- 1 Yes
- 2 No
- 3 OTHER (specify)
- D Don't know
- R Refused

B. Don't Trash California

- 1 Yes
- 2 No
- 3 OTHER (specify)
- D Don't know
- R Refused

C. Energy Hog

- 1 Yes
- 2 No
- 3 OTHER (specify)
- D Don't know
- R Refused

D. Click it or Ticket

- 1 Yes
- 2 No
- 3 OTHER (specify)
- D Don't know
- R Refused

E. Flex Your Power

- 1 Yes
- 2 No
- 3 OTHER (specify)
- D Don't know
- R Refused

F. Flex Alert

- 1 Yes
- 2 No
- 3 OTHER (specify)
- D Don't know
- R Refused

PGE RCA/DST Participant Multi-Family Survey

G. Spare the Air

- 1 Yes
- 2 No
- 3 OTHER (specify)
- D Don't know
- R Refused

H. Good Housekeeping

- 1 Yes
- 2 No
- 3 OTHER (specify)
- D Don't know
- R Refused

I. Ahnu ("A – new")

- 1 Yes
- 2 No
- 3 OTHER (specify)
- D Don't know
- R Refused

J. Galley Bay

- 1 Yes
- 2 No
- 3 OTHER (specify)
- D Don't know
- R Refused

K. Hollister Co

- 1 Yes
- 2 No
- 3 OTHER (specify)
- D Don't know
- R Refused

Property Manager and Site Characteristics (Section 6)

Now, I'd like to get some background information about you and the multifamily property at &ADDRESS.

R1 What is your position or job title at &ADDRESS or with the company that manages this property?

- 1 Owner
- 2 Property/leasing manager/associate
- 3 Senior property manager
- 4 Maintenance supervisor
- 5 Senior /regional maintenance supervisor
- 6 Purchasing manager
- 7 Other [RECORD]
- D Don't Know
- R Refused

PGE RCA/DST Participant Multi-Family Survey

R2 How many years have you been in the business of property ownership and management?

- __ Years
- D Don't Know
- R Refused

R3 How many years have you been in your current position at this property?

- __ Years
- D Don't Know
- R Refused

R4 How many buildings are there at this location?

- __ Locations
- D Don't Know
- R Refused

R5 About how many apartment units are located in the building or buildings at the property?

- __ Units
- D Don't Know
- R Refused

R6 Do you or your firm own the property only, manage the property only, or do you both own and manage the property?

- 1 Own it only
- 2 Manage it only
- 3 Both own and manage it
- 4 Other
- D Don't Know
- R Refused

R7 Do you have one or more centralized systems at the property that provide heating to all tenant units? By a centralized system, I mean a system that provides heat to more than one tenant unit.

- 1 Yes
- 2 No
- D Don't Know
- R Refused

R8 Do you have a one or more centralized systems at the property that provide cooling to all units?

- 1 Yes
- 2 No
- D Don't Know
- R Refused

R9 Do you have one or more centralized systems at the property that provide hot water to all units?

- 1 Yes
- 2 No
- D Don't Know
- R Refused

PGE RCA/DST Participant Multi-Family Survey

R10 Are the tenants responsible for paying their own utility bills or are the utilities included in the rent?

- 1 Tenants pay their own bills
- 2 Utilities are included in rent
- 3 Tenants pay some utilities while others are included in rent
- 4 Other [SPECIFY]
- D Don't Know
- R Refused

R11 Is the electricity for the tenant units at this property individually metered or master-metered? In other words, is there one electric meter for several tenants?

- 1 Individually metered
- 2 Master metered
- 3 Other [SPECIFY]
- D Don't Know
- R Refused

R12 Is the natural gas for the tenant units at this property individually metered or master-metered?

- 1 Individually metered
- 2 Master metered
- 3 Other [SPECIFY]
- D Don't Know
- R Refused

Thanks & Terminate

PGE Duct Test & Seal/Refrigerant Charge and Airflow Program - PGE2000

The following measures will be asked about in the survey: Duct test and seal, Refrigerant charge test

Instrument-specific variables-- The CATI software will automatically fill the appropriate description in the questions.

[MEASURE]

Duct test and seal
Refrigerant charge test

[ASSISTANCE]

Free service

[PROGRAM]

Duct Test and Seal Program, Refrigerant Charge and Air Flow Program

[UTILITY]

PG&E

[AMOUNT OF PROGRAM INCENTIVE/SUBSIDY]

N/A

Recall of Participation/Identification of Decision Maker (Section 1)

Single Family Rebate Initial Screener

Hello, my name is _____, and I'm calling on behalf of the California Public Utilities Commission here at PA Consulting Group.

May I speak with **[contact name]**?

- 1 SPEAKING WITH RESPONDENT
- 2 QUALIFIED RESPONDENT IS NOT CURRENTLY AVAILABLE

The reason for our call today is according to our records you had a Heating, Ventilation and Air Conditioning Contractor perform work on your home at **[address]**. The contractor performed a **[measure]** test as part of a PGE program.

(IF ON-SITE CONDUCTED) Also, we are following up on the visit a RLW contractor made in **[on-site visit date]**.

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and SCE better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about 20 minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-454-5070)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the **[measures]** you purchased and received a rebate through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call Mikhail Haramati at 415-703-1458, or visit their website: www.cpuc.ca.gov/evaluation.)

S0 Did a Heating, Ventilation and Air Conditioning contractor perform a **[measure]** at your home?

- 1 Yes (SKIP TO S1)
- 2 No

S0a Is it possible there is someone else in the household that might recall a contractor performing this **[measure]**?

- 1 Yes (BEGIN SURVEY AGAIN WITH NEW RESPONDENT)
- 2 No (SKIP TO S4)

S1 Was this work done as part of a PG&E program?

- 1. Yes.
- 2. No (SKIP TO S1b)
- D. Don't know\ (SKIP TO S1b)

S1a How do you know that?

(ENTER RESPONSE)

(ONLY IF S1 = NO or DON'T KNOW).

S1b *Our records show that the contractor that provided the [measure] was part of a PG&E program. The intent of this program was to encourage PG&E customers to increase the efficiency of their heating,*

PGE RCA/DST Participant Survey

ventilation or air conditioning systems by offering maintenance and repair services at a free or discounted rate.

CONTINUE

S2 Did you receive any assistance, such as a discount, or direct payment for the work performed?

1. Yes
2. No
- D. Don't know, or don't remember

S3 Exactly what type of assistance was provided?

(ENTER RESPONSE)

S4 (IF S0 = NO) Has there been any work done to your heating, ventilation, or air conditioning since January of 2007?

(PROBE: Was the work part of an air conditioner replacement, furnace replacement or some other HVAC work?)

(IF S0 = YES) Was the work part of an air conditioner replacement, furnace replacement or some other HVAC work?

- 1 Yes, air conditioner replacement
- 2 Yes, furnace replacement
- 3 Yes, other HVAC work (Describe)
- 4 No, just the [measure] test
- 5 No, it's part of normal maintenance contract
- 6 Other (SPECIFY)
- 7 No HVAC work
- D Don't know
- R Refused

(IF S0 = NO, THANK & TERMINATE)

S5 In what type of residence do you live? (READ LIST IF NEEDED)

- 1 A single-family home detached from any other house
- 2 A single-family home attached to one or more houses
- 3 An apartment or condo with 2 or fewer units
- 4 An apartment or condo with 3 to 4 apartments or less
- 5 An apartment or condo with 5 or more units
- 6 A mobile home
- 7 Other (SPECIFY)
- D Don't know
- R Refused

S6 Using a 0 to 10 rating scale, where 0 means not at all important and 10 means extremely important, please rate the importance of each of the following in your decision to implement this specific measure at this time.

1. The age or condition of the old equipment
2. Availability of financial assistance
3. Recommendation from a vendor/supplier (If >5, Collect Vendor Info)
4. General concerns about the environment

- 5. Specific concerns about global warming
- 6. Specific concerns about achieving energy independence

Sources of Program Information (Section 2)

ASK ONLY IF "YES" TO S1. IF THEY DON'T KNOW ABOUT ANY PROGRAM, DON'T ASK

2.1 How did you hear about the PG&E [program]? (PROBE: Did you hear about the program from any other sources?) (DO NOT READ LIST)

Utility provided information

- 1 Bill insert, newsletter, or other mailing
- 2 Website

Other

- 3 HVAC contractor (SPECIFY)
- 4 Friend/Relative/Neighbor
- 5 Other, Specify
- 6 Property Manager/Mobile Home Park staff
- 7 Don't know
- 8 Refused

NTGR and Spillover (Section 3-4)

FR1. At the time that you first heard about the free service from PG&E for **[Duct Test and Seal/Refrigerant Charge and Airflow]**, had you...? {READ LIST}

1. Already been thinking about paying a contractor for **[Duct Test and Seal/Refrigerant Charge and Airflow]**?

- 1 YES
- 2 NO {SKIP TO FR2}
- 8 OTHER {SKIP TO FR2}
- D DON'T KNOW {SKIP TO FR2}
- R REFUSED {SKIP TO FR2}

2. Already begun collecting information about **[Duct Test and Seal/Refrigerant Charge and Airflow]**?

- 1 YES
- 2 NO {SKIP TO FR2}
- 8 OTHER {SKIP TO FR2}
- D DON'T KNOW {SKIP TO FR2}
- R REFUSED {SKIP TO FR2}

3. Already decided to buy the **[Duct Test and Seal/Refrigerant Charge and Airflow]** services?

- 1 YES
- 2 NO {SKIP TO FR2}
- 8 OTHER {SKIP TO FR2}
- D DON'T KNOW {SKIP TO FR2}
- R REFUSED {SKIP TO FR2}

4. Already had a contractor perform **[Duct Test and Seal/Refrigerant Charge and Airflow]**?]?

- 1 YES
- 2 NO {SKIP TO FR2}
- 8 OTHER {SKIP TO FR2}
- D DON'T KNOW {SKIP TO FR2}
- R REFUSED {SKIP TO FR2}

FR1B. So, A contractor performed **[Duct Test and Seal/Refrigerant Charge and Airflow]** before you learned about the free service from PG&E?

- 1. Yes {SKIP TO FR5}
- 2. No
- D. Don't Know
- R. Refused
- S.

FR2. Just to be sure I understand, did you have specific plans to have a contractor perform **[Duct Test and Seal/Refrigerant Charge and Airflow]** before learning about the free service available through the PG&E program?

- 1. Yes
- 2. No {SKIP TO FR4}
- D. Don't Know {SKIP TO FR4}
- R. Refused {SKIP TO FR4}

FR3. Did you have to make any changes to your existing plans in order to receive this free service through the [PG&E program]?

- 1. Yes [Probe for changes]
- 2. No
- D. Don't Know
- R. Refused

FR4. If the free service from the [PG&E program] had not been available to purchase duct test and seal and refrigerant charge and airflow services, would you still have:

FR4A. Purchased any **[Duct Test and Seal/Refrigerant Charge and Airflow]** services ?

- 1. Yes
- 2. No {SKIP TO FR5}
- D. Don't Know
- R. Refused

FR4B. Purchased the **[Duct Test and Seal/Refrigerant Charge and Airflow]** services at the same time as you did?

- 1. Yes {SKIP TO FR4E}
- 2. No
- D. Don't Know {SKIP TO FR4E}
- R. Refused {SKIP TO FR4E}

FR4B1. Hired a contractor for **[Duct Test and Seal/Refrigerant Charge and Airflow]** services earlier than you did, or later?

- 1. Earlier
- 2. Same Time {REPEAT QUESTION FR4B}
- 3. Later

- D. Don't Know {SKIP TO FR4E}
- R. Refused {SKIP TO FR4E}

FR4B2. How much **[earlier/later]** would you have hired a contractor for the **[Duct Test and Seal/Refrigerant Charge and Airflow]** services?

- _____ Years {AND/OR} _____ Months
- D. Don't Know
 - R. Refused

FR4E. If the free service from the PG&E program had not been available, would you have done anything else differently?

- 1. Yes
- 2. No {SKIP TO FR5}
- D. Don't Know {SKIP TO FR5}
- R. Refused {SKIP TO FR5}

FR4E1 What would you have done differently?

{RECORD RESPONSE}: _____

FR5. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same **[Duct Test and Seal/Refrigerant Charge and Airflow]** services if you had not received any free service from the program?

- _____ RECORD RESPONSE (0-10)
- D. Don't Know
 - R. Refused

{SKIP TO FR10 IF PROGRAM DOES NOT PROVIDE A FINANCIAL INCENTIVE/SUBSIDY}

FR7. Did you receive a financial incentive from the PG&E program either directly or at the time of purchase from the participating contractor to offset the cost of the **[Duct Test and Seal/Refrigerant Charge and Airflow]**?

- 1. Yes
- 2. No {SKIP TO FR10}
- D. Don't Know {SKIP TO FR10}
- R. Refused {SKIP TO FR10}

FR8. What was the dollar amount of the incentive?

- _____ RECORD RESPONSE
- D. Don't Know
 - R. Refused

I'm going to read several statements about how you came to choose to have Duct Test and Seal/Refrigerant Charge and Airflow performed on your HVAC system. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR9. If I had not had any assistance from the program, I would have paid the additional **[Use FR8 amount of program incentive/subsidy]** to pay for the **[Duct Test and Seal/Refrigerant Charge and Airflow]** on my own.

- _____ RECORD RESPONSE (0-10)
- D. Don't Know

R. Refused

{READ ONLY IF FR7-FR9 WAS SKIPPED}: I'm going to read several statements about how you came to choose get **[Duct Test and Seal/Refrigerant Charge and Airflow]** services. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR10. There may have been several reasons for my decision to have this work performed. But, the free service from the [PG&E program] was a critical factor in my decision to have the **Duct Test and Seal/Refrigerant Charge and Airflow** services done.

___ RECORD RESPONSE (0-10)

D. Don't Know

R. Refused

FR11. I would have bought **[Duct Test and Seal/Refrigerant Charge and Airflow]** services within **[a year/2 years]** of when I did even without the free service from the [PG&E program].

___ RECORD RESPONSE (0-10)

D. Don't Know

R. Refused

1.1.1 Consistency Check & Resolution

C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) . The question responses that will be used to trigger C1 are:

FR4A

FR5

FR10

FR11

C1. Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to hire a contractor for **[Duct Test and Seal/Refrigerant Charge and Airflow]** services at the time you did? {RECORD VERBATIM RESPONSE BELOW}

C2. **[fill with wording and response categories to the one question which was inconsistent]**
{INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE}

Participant Like and Unlike Spillover Questions

6.7 This next question asks about other changes you have made that we haven't already talked about. Since January 1, 2005 have you made any other changes to the appliances, equipment or other characteristics of your home that would affect how much energy you are using?

- 1 Yes [ASK 6.7a-NSP5 FOR EACH MEASURE INSTALLED BEFORE ASKING 6.7i]
- 2 No [SKIP TO 6.7i]
- D DK [SKIP TO 6.7i]
- R REFUSED [SKIP TO 6.7i]

a. What types of changes did you make? (DO NOT READ. RECORD EACH TYPE OF CHANGE MADE. PROBE: Anything else?)

Heating and air conditioning measures

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Furnace
- 5 Programmable thermostat

Lighting measures

- 6 Fluorescent indoor fixture
- 7 Fluorescent outdoor fixture
- 8 Compact fluorescent bulb
- 9 Compact fluorescent fixture
- 10 Motion sensor
- 11 Dimmer switch

Laundry measures

- 12 Clothes washer
- 13 Clothes dryer

Water using measures

- 14 Water heater
- 15 Low Flow showerheads
- 16 Faucet aerators

Kitchen appliances

- 17 Refrigerator
- 18 Freezer
- 19 Range/oven
- 20 Dishwasher

Pool/spa/jacuzzi

- 21 Swimming pool
- 22 Swimming pool pump
- 23 Swimming pool cover
- 24 Spa/jacuzzi

Insulation/weatherstripping/sealing

- 25 Floor, wall, ceiling, or attic insulation
- 26 Weatherstripping/caulking/weatherization
- 27 Water heater/pipe wrapping/insulation
- 28 Duct sealing/repair (not cleaning)

Windows

- 29 Windows

- 30 Other (SPECIFY)
- 00 No other changes (SKIP TO C6.7i)
- D Don't know
- R Refused

b. Did this equipment replace existing equipment/measures or was it new to your home?

- 1 Replaced existing equipment
- 2 New to home
- D Don't know
- R Refused

c. When did this occur? (RECORD MONTH AND YEAR)

____/____ MM/YYYY

D Don't know --> Was this before or after you participated in the **[measure] program?**

- 1 Before
 - 2 After
 - D Don't know
 - R Refused
- R REFUSED

(ASK 6.7Cd and 6.7Ce ONLY IF BILLING ANALYSIS BEING DONE AND IF 6.7a = 4, 13, 14, 19, 24)

Cd. What type of fuel does the new [equipment] use?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D Don't know
- R Refused

Ce. (ASK IF 6.7b = REPLACED) What was the fuel type of the [equipment] you replaced?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D Don't know
- R Refused

f. Did you receive a rebate for this [equipment] through a [utility] program?

- 1 Yes [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- 2 No
- D Don't know [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- R Refused [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]

(ASK 6.7g and 6.7h IF 1-4, 12, 13, 14, 17, 18, 19, 20, 22, 24, 29 IN 6.7a; ELSE SKIP TO NSP4)

g. Is the new [equipment] energy efficient?

- 1 Yes
- 2 No [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- D Don't know [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- R Refused [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]

h. How do you know that this equipment is energy efficient? (PROBE: IS IT ENERGY STAR[®] RATED?)

(ASK NSP4-5 ONLY IF 6.7f = NO AND 6.7g = YES AND 6.7c = AFTER DATE OF PARTICIPATION)

NSP4. I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the PG&E program in **[2006, 2007, 2008]** influenced my decision to install different types of high efficiency equipment on my own.

___ RECORD RESPONSE (0-10)
D DON'T KNOW
R REFUSED

NSP5. Why did you purchase this high efficiency equipment without going through a PG&E program? {DO NOT READ; INDICATE ALL THAT APPLY}

- 1. Too much paperwork
- 2. Takes too long to get approval
- 3. No time to participate, needed equipment immediately
- 4. The program had ended
- 5. The equipment would not qualify {PROBE: WHY NOT?}
- 6. The amount of the rebate wasn't important enough
- 7. Did not know program was available
- 8. There was no program available
- 9. Other {SPECIFY}
- D DON'T KNOW
- R REFUSED

Program Satisfaction (Section 5)

5.3 Have you participated in any other programs offered by PG&E because of your experience with the [measure] test you received through PG&E program?

- 1 Yes
- 2 No (SKIP TO 6.1)
- D Don't know (SKIP TO 6.1)
- R Refused (SKIP TO 6.1)

5.4 Which programs did you participate in because of your experience with this program? (RECORD)

5.5 Which of the following phrases or messages have you heard before today? (ROTATE STARTING POINT)

PGE RCA/DST Participant Survey

A. ENERGY STAR

- 1 Yes
- 2 No
- 3 OTHER (specify)
- D Don't know
- R Refused

= B. Don't Trash California

- 1 Yes
- 2 No
- 3 OTHER (specify)
- D Don't know
- R Refused

C. Energy Hog

- 1 Yes
- 2 No
- 3 OTHER (specify)
- D Don't know
- R Refused

D. Click it or Ticket

- 1 Yes
- 2 No
- 3 OTHER (specify)
- D Don't know
- R Refused

E. Flex Your Power

- 1 Yes
- 2 No
- 3 OTHER (specify)
- D Don't know
- R Refused

F. Flex Alert

- 1 Yes
- 2 No
- 3 OTHER (specify)
- D Don't know
- R Refused

G. Spare the Air

- 1 Yes
- 2 No
- 3 OTHER (specify)
- D Don't know
- R Refused

PGE RCA/DST Participant Survey

H. Good Housekeeping

- 1 Yes
- 2 No
- 3 OTHER (specify)
- D Don't know
- R Refused

I. Ahnu ("A – new")

- 1 Yes
- 2 No
- 3 OTHER (specify)
- D Don't know
- R Refused

J. Galley Bay

- 1 Yes
- 2 No
- 3 OTHER (specify)
- D Don't know
- R Refused

K. Hollister Co

- 1 Yes
- 2 No
- 3 OTHER (specify)
- D Don't know
- R Refused

Homeowner Energy Use (Section 6)

- 6.1 How often do you use your furnace during the heating season months (November-April)? Would you say it is used.....?
- 1 Daily
 - 2 A few days a week
 - 3 A few days a month
 - 4 Only on extremely cold days
 - 5 Never
 - D Don't know
 - R Refused
- 6.2 Throughout the winter months do you heat your house to a certain temperature all the time or do you adjust the temperatures when you're home and/or when you're away?
- 1 One temperature
 - 6.2a What temperature?
 - 2 Adjust temperature when home and away
 - 6.2b What is the temperature setting when you are at home?
 - 6.2c What is the temperature setting when no one is at home?
 - 3 Something Else (SPECIFY)
 - D Don't know
 - R Refused
- 6.3 Does your furnace fan run 24 hours a day?
- 1. Yes
 - 2. No
 - D. Don't know
 - R. Refused
- 6.4 How many central air conditioning systems do you have in your home?
- ___ Qty
 - 0 NONE if no central AC – SKIP TO 6.6
 - D Don't know
 - R Refused
- 6.5 How often do you use your central air-conditioner during the cooling season months (July-September)? Would you say it is used.....?
- 1 Daily
 - 2 A few days a week
 - 3 A few days a month
 - 4 Only on extremely hot days
 - 5 Never
 - D Don't know
 - R Refused
- 6.6 How many thermostats do you have in your home?
- ___ Qty
 - 0 NONE if no t-stat SKIP TO 6.8

PGE RCA/DST Participant Survey

D Don't know
R Refused

6.7a Programmable thermostats have digital displays and allow you to "program" them to change the temperature setting automatically based on the times you set. Is/Are your thermostat(s) programmable or manual?

1 Programmable (digital)
2 Manual
3 Both
D Don't know
R Refused

PGE RCA/DST Participant Survey

[If S4 <> 1, SKIP TO 7.1]

6.8 Did your new unit(s) replace an existing air conditioning system, or are you adding air conditioning to your home?

- 1. Replaced an existing AC unit (one-for-one replacement)
- 2. Adding AC to home (SKIP TO 7.1)
- D. Don't Know (SKIP TO 7.1)
- R. Refused (SKIP TO 7.1)

6.9 Did you replace that AC system with a new one that has the same total cooling capacity?

- 1. Yes
- 2. No, replaced with new system that has less total cooling capacity
- 3. No, replaced with new system that has more total cooling capacity
- D. Don't know
- R. Refused

6.10 Was your previous AC unit(s) still functioning or had it failed?

- 1. Still functioning (early retirement)
- 2. Equipment failure (replace on burnout)
- D. Don't know
- R. Refused

6.11 What was the manufacturer name and model number of the unit(s) you replaced?

6.12 How old was the air conditioner(s) you replaced?

- 1. [Record response – skip to 6.14]
- D. Don't know
- R. Refused [Go to 6.14]

6.13 Was it...

- 1. 5 years old or less
- 2. 6 to 10 years old
- 3. 11 to 15 years old
- 4. 16 to 20 years old
- 5. Greater than 20 years old
- D. Don't know

6.14 Did you run your previous air conditioner all the time?

- 1. Yes
- 2. No
- D. Don't know
- R. Refused

6.15 Did you have a programmable thermostat(s) to control your previous air conditioner?

- 1. Yes
- 2. No
- D. Don't know
- R. Refused

6.16 Since the installation of your new AC unit, did you change your thermostat temperature settings from the setting you used with the prior unit?

- 1. Yes [record changes]
- 2. No
- D. Don't know
- R. Refused

Compliance Knowledge (Section 7)

7.1 (IF S4= 1,2 or 3) Are you aware as to whether or not you or the contractor filed for a building permit for the air conditioner replacement, furnace replacement, or other HVAC work?

- 1 Not Aware
- 2 Submitted by Homeowner
- 3 Submitted by Contractor
- D Don't know
- R Refused

7.2 (IF S4 = 1 AND CLIMATE ZONE 2, 12, 16 ONLY) Were you aware of the Title 24 requirement to have either a high efficiency furnace installed or duct testing and sealing at the time of air conditioner change out?

- 1 Yes I was aware
- 2 No I was not aware (SKIP TO 8.1)
- D Don't know (SKIP TO 8.1)
- R Refused (SKIP TO 8.1)

7.3 (IF S4 = 1 AND CLIMATE ZONE 2, 12, 16 ONLY) Which option would you have taken if you had not participated in the program? Would you have . . . (READ LIST)

- 1 Purchased a High Efficiency Furnace (AFUE 92 or greater)
- 2 Had Duct Testing and Sealing
- 3 Did both duct test and a high efficiency furnace
- D Don't know
- R Refused

7.4 (CLIMATE ZONE 9, 10, 11, 13, 14, 15 ONLY) Were you aware of the Title 24 requirement to have duct testing and sealing at the time of air conditioner change out?

- 1 Yes I was aware
- 2 No I was not aware of the requirement
- D Don't know
- R Refused

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 8)

These last few questions help us better understand PG&E customers who are utilizing this program.

8.1 Do you own or rent your home?

- 1 Own

PGE RCA/DST Participant Survey

- 2 Rent
- 3 Other (SPECIFY)
- D Don't know
- R Refused

8.2 In what year was your home constructed?

- 1 Verbatim _____
- 2 Before 1970's
- 3 1970's
- 4 1980's
- 5 1990-94
- 6 1995-99
- 7 2000-2005
- 8 2006 or newer
- D Don't know
- R Refused

8.3 What is the approximate square footage of your home?

- 1 Verbatim SQFT _____
- 2 Less 1000
- 3 1001-1500
- 4 1501-2000
- 5 2000-2500
- 6 Greater than 2500
- D Don't know
- R Refused

8.4 Including yourself, how many people currently live in your home year-round?

- _____ people
- D Don't know
- R Refused

8.5 What is the primary language spoken in your home? (DO NOT READ)

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 OTHER (specify)
- D Don't know
- R Refused

CPUC Residential Furnace Dealer Survey Codebook

NOTE:
 1. Variable names are in bold type.
 2. Questions were asked of all respondents unless indicated otherwise.
 3. A code of -8 means the respondent answered “Don’t know”
 4. A code of -9 means the respondent Refused to answer the question.

Introduction

C1 First, I’d just like to confirm that your company sells gas-fired forced air furnaces to the residential market. Is this correct?

- 1 Yes
- 2 No (*Confirm. Thank and terminate*)
- 8 Don’t Know (*Thank and terminate*)

C2 For all of the remaining questions I am interested in understanding the residential market only, so please, to the best of your ability, do not include information regarding non-residential systems in your answers.

I would also like to confirm that your company sells furnaces to customers who need replacement units in their existing homes. In other words, I would like to confirm that you sell furnaces to home owners in addition to new home builders. Is this correct?

- 1 Yes
- 2 No (*Confirm. Thank and terminate*)
- 8 Don’t Know (*Thank and terminate*)

C3 Approximately, what percent of your sales are to the new construction market and what percent are to the existing home market?

For C3a through C3b

- _____ Percent
- 8 Don’t Know
- 9 Refused

C3a New Construction
C3b Existing homes

C4 For all of the remaining questions, I am only seeking information regarding the furnaces you have sold that were replacing older furnaces in existing homes. If you would, please exclude units you have sold to the residential new construction market as well as excluding non-residential systems.

Are you familiar with rebates that are offered by utilities in the State of California toward the purchase of Energy-Efficient Natural Gas-Fired Furnaces for residential customers?

- 1 Yes
- 2 No (*PROBE - Use program descriptions*) (*SKIP TO D1*)
- 8 Don't Know (*PROBE - Use program descriptions*) (*SKIP TO D1*)

C5a Since 2006 has your company sold any gas-fired forced air furnaces to residential customers for where the customer DID NOT receive an incentive or rebate from a utility?

- 1 Yes
- 2 No (*SKIP TO C6*)
- 8 Don't Know (*SKIP TO D1*)

C5b What percent of your customers did not receive a rebate from their utility? (*Record percent that did not receive rebate*)

- _____ Percent
- 8 Don't Know (*SKIP TO D1*)
- 9 Refused (*SKIP TO D1*)

C6 Just to confirm, this means that [100% - C5b] of the gas-fired forced air furnaces that your company sold since 2006 went to customers who received a rebate for the furnace from their utility. Does this sound right?

- 1 Yes
- 2 No (*SKIP BACK TO C5b*)
- 8 Don't Know

Efficient Furnace Market Share

D1 What is the average size in BTU of the gas forced air furnaces that you sell to the residential existing home market? (*RECORD NUMBER*)

- _____ Number
- 8 Don't Know

(IF C5b>0)

D2 Is there a difference in the average sizes of the units you sold to homes which received utility rebates versus those which did not?

- 1 Yes
- 2 No (SKIP TO D4)
- 4 Did not know percentage of customers with rebates
- 8 Don't Know (SKIP TO D4)

(IF C5b>0)

D3 What was the difference in size (percent)?

For D3a through D3b

- _____ Percent
- 8 Don't Know
- 9 Refused

D3a The units in participant homes were ... larger
D3b The units in participant homes were ... smaller

(IF C5b>0)

D3 What was the difference in size (BTU)?

For D3c through D3d

- _____ Number in BTU's
- 8 Don't Know
- 9 Refused

D3c The units in participant homes were ... larger
D3d The units in participant homes were ... smaller

D4 Of the furnaces that you sell to the residential existing home market, what percent are rated:

For D4a through D4f

_____ Percent
-8 Don't Know
-9 Refused

D4a AFUE 78% or less
D4b AFUE 79-84%
D4c AFUE 85-89
D4d AFUE 90-92%
D4e AFUE 93-95
D4f AFUE 96 or higher

(If C5b>0)

D5 Is there a difference in the average efficiencies of the units you sold to homes which received utility rebates versus those which did not?

1 Yes
2 No (*SKIP TO D7*)
-4 Did not know percentage of customers with rebates
-8 Don't Know (*SKIP TO D7*)

(If C5b>0)

D6a What was the average efficiency level for homes that received a utility rebate?

_____ Percent in AFUE
-8 Don't Know

D6b What was the average efficiency level for homes that did not receive a utility rebate?

_____ Percent in AFUE
-8 Don't Know

D7 What is the average age and efficiency of the furnaces you replace?

D7a Average age in years

- _____ Number in years
- 8 Don't Know
- 9 Refused

D7b Average AFUE efficiency

- _____ Percent in AFUE
- 8 Don't Know
- 9 Refused

D8 In the past 12 months how many gas-fired forced air furnaces would you estimate that your company has sold to the residential market in total?

- _____ Number of units
- 8 Don't Know

D9 In what percent of the residential buildings in which you have worked is the ductwork located within conditioned spaces?

- _____ Percent
- 8 Don't Know

D10 In what percent of the residential forced air gas furnace sales that you have made since 2006 have you needed to update the ductwork because it was not sized appropriately?

- _____ Percent
- 8 Don't Know

D11 Have you received any comments from customers who have installed new, significantly more efficient furnaces, and who have either not seen as significant an impact as they expected on their utility bills, or perhaps realized more savings than expected?

- 1 Yes (SPECIFY)
- 2 No (SKIP TO E1)
- 8 Don't Know (SKIP TO E1)

D11_1 (SPECIFY)

[SEE RESPONSES IN OPEN ENDS SPREADSHEET]

D12 For what percent of your customers has this happened?

- _____ Percent
- 8 Don't Know

Non-participant recruitment

E1 As I mentioned earlier, we are working on behalf of the California Public Utilities Commission to study the impacts of Utility programs on the amount of natural gas consumed in California. We have spoken with numerous residential customers who participated in furnace rebate programs, but we need to speak to some customers who have purchased furnaces without rebates as well. We are offering these customers \$25 to compensate them for their time in taking a five minute telephone survey. We are also offering \$50 to furnace dealers who will share names and telephone numbers of customers who purchased furnaces between 2006 and 2008 and either did not take advantage of the rebate program or who were otherwise ineligible for the rebate. Again, we are not selling anything, this is purely a research effort, we would send the customer \$25, and the survey would take 5 minutes or less.

Would you be willing to provide us with some names and phone numbers of customers who meet these criteria?

- 1 Yes (*Coordinate sending of detail (via fax, email, postal mail)*)
- 2 No
- 8 Don't Know

If Yes (Record or confirm: Name, Business Name, Address, Primary contact Phone, Email, Fax (Question E2))

END Thank and terminate

Residential Retrofit Evaluation Team – High Impact Measure Survey Codebook
Furnaces – PGE Only

NOTE:

- 1. Variable names are in bold type.**
- 2. Questions were asked of all respondents unless indicated otherwise.**

Recall of Participation/Identification of Decision Maker (Section 1)

Q1_1a Program records indicate that you purchased and received a rebate for the following energy efficient equipment through PG&E's Energy Efficiency Program for Homes and Small Businesses around [date of participation]. Do you recall purchasing [measure]?

- 1 Yes (SKIP TO Q2_1)
- 2 No
- 8 Don't know
- 9 Refused (TERMINATE)

Q1_1b (IF QUANTITY > 1) Is this the correct quantity?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

Q1_1c Does this date sound about right?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

(IF RECALLS MEASURE, SKIP TO Q2_1)

Q1_2 (ASK IF DOESN'T RECALL ANY OF THESE MEASURES) Is it possible that someone else in your household would know about purchasing this/these [measures] and receiving a rebate?

- 1 Yes (SKIP TO Q1_5)
- 2 No
- 8 Don't know
- 9 Refused [TERMINATE]

RRET HIM Participant Survey Codebook – PGE Furnaces

Q1_3 PG&E is offering rebates for replacing less efficient heating equipment with more energy-efficient equipment. The rebate program is offered to PG&E's residential and small business customers. Are you sure you don't recall purchasing the/these [measures] and receiving a rebate? (RECORD ONE NUMBER)

- 1 Don't remember purchasing equipment
[TERMINATE, RECORD ANY COMMENTS MADE BY
RESPONDENT BEFORE EXITING]
- 2 Don't remember receiving rebate, but remember purchasing equipment
- 3 Remember [READ, "GREAT, THEN LET'S CONTINUE"]
- 9 Refused [TERMINATE]

Q1_4 Are you the person in your household who decided to purchase this/these [measures] and receive a rebate through PG&E's program?

- 1 Yes [SKIP BACK TO Q1_1]
- 2 No
- 8 Don't know [TERMINATE]
- 9 Refused [TERMINATE]

Q1_5 May I please speak with that person? (RECORD ONE NUMBER)

- 1 Yes [BEGIN THE SURVEY AGAIN WITH NEW RESPONDENT]
- 2 No [TERMINATE]
- 8 Don't know [TERMINATE]
- 9 Refused [TERMINATE]

Sources of Program Information (Section 2)

How did you hear about the rebate offered on the [measure] available as part of PG&E's Energy Efficiency Program for Homes and Small Businesses? (PROBE: Did you hear about the program from any other sources?) (DO NOT READ LIST, RECORD ALL THAT APPLY)

- Q2_1 Advertising—radio, newspaper, trade journal, billboard, TV
- Q2_2 Bill insert, newsletter, or other mailing
- Q2_3 Website
- Q2_4 Email
- Q2_5 Other utility (SPECIFY)
- Q2_6 Meeting, event, workshop, training (SPECIFY)
- Q2_7 School
- Q2_8 Local government/community agency (SPECIFY)
- Q2_9 Energy Center such as Pacific Energy Center, Stockton Training Center, Food Service, Technology Center (SPECIFY)
- Q2_10 Advertising—radio, newspaper, trade journal, billboard, TV
- Q2_11 Home or building audit or assessment (SPECIFY)
- Q2_12 Meeting, event, workshop training (SPECIFY)
- Q2_13 Flex your Power TV or radio advertising
- Q2_14 Other advertising, don't recall
- Q2_15 Friend/Relative/Neighbor
- Q2_16 Other, (SPECIFY)
- Q2_17 Salesperson/Sales rep
- Q2_18 Installer/contractor
- Q2_19 Don't know
- Q2_20 Refused
- Q2_21 PG&E
- Q2_22 Previous experience
- Q2_23 Real estate agent

Installation Behavior—REBATE MEASURES (Section 3)

Q3_1 [IF QUANTITY=1] Now, I would like to understand what you did with the [measure]. Is this [measure] currently installed at your home? (RECORD ONE NUMBER)

- 1 Yes (SKIP TO W1)
- 2 No
- 8 Don't know
- 9 Refused

[IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY]

RRET HIM Participant Survey Codebook – PGE Furnaces

Q3_2 [IF QUANTITY=1] Which of the following best describes what happened with the [measure]?
(READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location (SKIP TO Q3_4)
- 2 It was installed at your home but is now permanently removed (example: broke, burned out, didn't fit, don't like, etc.) (SKIP TO Q3_5)
- 3 Something else (SPECIFY)
- 4 Moved out of house
- 8 Don't know
- 9 Refused

Q3_3 [IF QUANTITY>1] Now, I would like to understand what you did with the [quantity] [measure].
(READ LIST, RECORD NUMBER)

- 1 How many are currently installed at your home
(IF RESPONSE=QUANTITY, SKIP TO W1)
- 2 How many are installed at some other location?
- 3 How many were installed at your home (either indoors or outdoors) but are now permanently removed (example: broke, burned out, don't fit, don't like)
- 4 Something else? (SPECIFY)
- 8 Don't know
- 9 Refused

Q3_4 [IF Q3_2=1, , Q3_3b>0] Is the/Are these [measure] located in PG&E's service territory?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

[SKIP TO Q5_1 IF ALL MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (Q3_2B + Q3_2F = QTY or Q3_2=1 or Q3_2=5) AND THAT LOCATION IS OUTSIDE OF PG&E'S SERVICE TERRITORY (Q3_4 NE 1)]

[SKIP TO W1 IF ALL MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (Q3_2B + Q3_2F = QTY or Q3_2=1 or Q3_2=5) AND THAT LOCATION IS INSIDE OF PG&E'S SERVICE TERRITORY (Q3_4 = 1)]

RRET HIM Participant Survey Codebook – PGE Furnaces

Removed Measures

(ASK ONLY IF THEY SAY THEY REMOVED A MEASURE AFTER INSTALLED, Q3_2=2 or Q3_3c>0)

Q3_5 Now let's talk about the [measure] you said you installed but have since removed. Why was this removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 Equipment failed
- 2 Didn't work properly
- 3 Wrong size—too small or too large
- 4 Low water flow
- 5 Didn't like the color
- 6 Didn't like appearance/unattractive
- 7 Other (SPECIFY)
- 8 Don't know
- 9 Refused

Q3_6 What did you replace the [measure] with? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 With a new high efficiency [measure]
- 2 With a less efficient [product type]
- 3 Re-installed old equipment
- 4 Did not replace
- 5 Other, Specify:
- 8 Don't know
- 9 Refused

RRET HIM Participant Survey Codebook – PGE Furnaces

W1 Please think back to the time when you were deciding to buy the [product types], perhaps recalling things that occurred in your household shortly before and after [timeframe]. What factors motivated you to purchase a [product type]?

- 0 Not mentioned
- 1 Mentioned

- W1_1 Old equipment didn't work
- W1_2 Old equipment working poorly
- W1_3 The program incentive / rebate
- W1_4 The program technical assistance
- W1_5 Wanted to save energy
- W1_6 Wanted to reduce energy costs
- W1_7 The information provided by the Program
- W1_8 Past experience with this program
- W1_9 Because of past experience with another [utility] program
- W1_10 Recommendation from other utility program (Probe: What program?)
- W1_11 Recommendation of dealer/retailer
- W1_12 Recommendation of someone else (Probe: Who? _____)
- W1_13 Advertisement in newspaper (Probe: For what program? ____)
- W1_14 Radio advertisement (Probe: For what program? _____)
- W1_15 Increase comfort (reduce drafts, noise)
- W1_16 Better quality product
- W1_17 Water saving features
- W1_18 Environment / Environmental benefit
- W1_19 Other (SPECIFY)
- W1_20 Don't know
- W1_21 Refused
- W1_22 Multiple measures installed at once/Added central air
- W1_23 Needed equipment
- W1_24 Good price on equipment
- W1_25 Wanted better efficiency
- W1_26 Part of remodel
- W1_27 Recommendation of installed/contractor

W2a Did you get this [measure] to replace an existing [product type]?

- 1 Yes (SKIP TO W4)
- 2 No
- 8 Don't know (SKIP TO Q3_48)
- 9 Refused (SKIP TO Q3_48)

W2b Is this [product type] the first you have ever had in your home?

- 1 Yes (SKIP TO Q3_48)
- 2 No
- 8 Don't know (SKIP TO Q3_48)
- 9 Refused (SKIP TO Q3_48)

RRET HIM Participant Survey Codebook – PGE Furnaces

W2c Did you get this [measure] because you wanted to add another/more [product type] to your home?

- 1 Yes (SKIP TO Q3_48)
- 2 No (SKIP TO Q3_48)
- 8 Don't know (SKIP TO Q3_48)
- 9 Refused (SKIP TO Q3_48)

W4 About how old was the [product type] you replaced? [READ CATEGORIES IF NEEDED]

- 1 Less than 5 years old
- 2 5 to less than 10 years old
- 3 10 to less than 20 years old
- 4 20 years to less than 30 years old
- 5 30 or more years old
- 8 Don't know
- 9 Refused

W5 Was the old [product type] working or not working?

- 1 Working
- 2 Not working (SKIP TO Q3_48)
- 8 Don't know (SKIP TO Q3_48)
- 9 Refused (SKIP TO Q3_48)

W6 Was the old [product type] in good, fair, or poor working condition?

- 1 Good
- 2 Fair
- 3 Poor
- 8 Don't know
- 9 Refused

Furnace Specific Battery (Billing Analysis Measure)

Q3_48 Was the furnace you received a rebate for through PG&E's program NEW when you purchased and installed it or was it refurbished or used?

- 1 New
- 2 Refurbished/Used
- 8 Don't know
- 9 Refused

RRET HIM Participant Survey Codebook – PGE Furnaces

Q3_49 [If W2A = 1] Did the old system also use natural gas? (If NO specify fuel type)

- 1 Yes/ Natural Gas
- 2 Electricity (SKIP TO Q3_51)
- 3 Propane (SKIP TO Q3_51)
- 4 Wood (SKIP TO Q3_51)
- 5 Kerosene (SKIP TO Q3_51)
- 6 Other (SPECIFY) (SKIP TO Q3_51)
- 8 Don't know (SKIP TO Q3_51)
- 9 Refused (SKIP TO Q3_51)

Q3_50 [If W2A = 1] Was the old system a forced air furnace or something else?

- 1 Forced air furnace
- 2 Wall furnace or furnaces
- 3 Room unit or units
- 4 Floor furnace
- 5 Other (SPECIFY)
- 6 Attic furnace
- 7 Gravity furnace
- 8 Convection furnace
- 8 Don't know
- 9 Refused

Q3_51 [If W2A = 1] Does the new furnace heat the same, more, or less living space as the old system?

- 1 Same
- 2 More
- 3 Less
- 8 Don't know
- 9 Refused

Q3_52 Was new ductwork installed at the same time the new furnace was installed?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

Q3_59 What is your primary heating fuel type?

- 1 Electricity
- 2 Natural Gas
- 3 Propane
- 4 Wood
- 5 Kerosene
- 6 Other (SPECIFY)
- 7 More than one type
- 8 Pellet stove
- 8 Don't know
- 9 Refused

Q3_60 Do you have air conditioning?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

Q3_61 [IF Q3_60=YES] Is this a central AC system, room air conditioner, or evaporative cooler?

- 1 Central AC
- 2 Room AC
- 3 Evaporative cooler
- 4 Other (specify)
- 8 Don't know
- 9 Refused

Q3_62 [IF Q3_61 =2] How many room air conditioners do you have?

- _____ Number of room air conditioners
- 8 Don't know
- 9 Refused

Free Ridership and Spillover (Section 4)

FR7 Our records indicate you received about [amount of program incentive/subsidy] from the [utility] [program] either directly or at the time of purchase to offset the cost of the [product type]. I want you to think about the PG&E rebate now. Does this amount sound about right?

- 1 Yes (SKIP TO FR1)
- 2 No
- 8 Don't know (SKIP TO FR1)
- 9 Refused (SKIP TO FR1)

FR8 What would you estimate to be the actual amount?

- _____ Amount of new incentive
- 8 Don't know
- 9 Refused

FR1_1 At the time that you first heard about the [assistance] from PG&E for [measure], had you already been thinking about purchasing [product type]?

- 1 Yes
- 2 No (SKIP TO FR2)
- 3 Other (SPECIFY) (SKIP TO FR2)
- 8 Don't know (SKIP TO FR2)
- 9 Refused (SKIP TO FR2)

RRET HIM Participant Survey Codebook – PGE Furnaces

FR1_2 Already begun collecting information about [product type]?

- 1 Yes
- 2 No (SKIP TO FR2)
- 3 Other (SPECIFY) (SKIP TO FR2)
- 8 Don't know (SKIP TO FR2)
- 9 Refused (SKIP TO FR2)

FR1_3a Already selected the [measure] you were going to get?

- 1 Yes
- 2 No (SKIP TO FR2)
- 3 Other (SPECIFY) (SKIP TO FR2)
- 8 Don't know (SKIP TO FR2)
- 9 Refused (SKIP TO FR2)

FR1_4 Already installed the energy efficient [measure]?

- 1 Yes
- 2 No (SKIP TO FR2)
- 3 Other (SPECIFY) (SKIP TO FR2)
- 8 Don't know (SKIP TO FR2)
- 9 Refused (SKIP TO FR2)

FR1B So, the [measure] was installed before you learned about the [assistance] from PG&E?

- 1 Yes (SKIP TO FR5)
- 2 No
- 8 Don't know
- 9 Refused

FR2 Just to be sure I understand, did you have specific plans to install a(n) [product type] before learning about the [assistance] available through PG&E's program?

- 1 Yes
- 2 No (SKIP TO FR4)
- 8 Don't know (SKIP TO FR4)
- 9 Refused (SKIP TO FR4)

FR3 Did you have to make any changes to your existing plans in order to receive this [assistance] through the PG&E program?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

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FR4A If the [assistance] from the PG&E program had not been available, would you still have purchased a(n) [product type]?

- 1 Yes
- 2 No (SKIP TO FR5)
- 8 Don't know
- 9 Refused

FR4B Purchased the [product type] at the same time as you did?

- 1 Yes (SKIP TO FR4C)
- 2 No
- 8 Don't know (SKIP TO FR4C)
- 9 Refused (SKIP TO FR4C)

FR4B1 Bought the [product type] earlier than you did, or later?

- 1 Earlier
- 2 Same Time (REPEAT QUESTION FR4B)
- 3 Later
- D DON'T KNOW (SKIP TO FR4C)
- R REFUSED (SKIP TO FR4C)

FR4B2 Bought the [product type] earlier than you did, or later?

- 1 Earlier
- 2 Same Time {REPEAT QUESTION FR4B}
- 3 Later
- 8 DON'T KNOW {SKIP TO FR4C}
- 9 REFUSED {SKIP TO FR4C}

FR4b_yr Number of years earlier/later
FR4b_mn Number of months earlier/later

FR4C [IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM, OR MEASURE IS OF VARIABLE AMOUNT] Without the program, would you have purchased the same quantity as you did?

- 1 Yes (SKIP TO FR4D)
- 2 No
- 8 Don't know (SKIP TO FR4D)
- 9 Refused (SKIP TO FR4D)

FR4C1 How many/much would you have purchased without the program?

- _____ Record response (number)
- 8 Don't know
- 9 Refused

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FR4D Purchased the same efficiency of [product type]?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

FR4E If the [assistance] from PG&E's program had not been available, would you have done anything else differently?

- 1 Yes
- 2 No (SKIP TO FR5)
- 8 Don't know (SKIP TO FR5)
- 9 Refused (SKIP TO FR5)

FR4E1 What would you have done differently?

[OPEN END RESPONSE]

FR5 On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same [measure] if you had not received any [assistance] from the program?

- [RECORD RESPONSE (1-10)] _____
- 8 Don't know
 - 9 Refused

FR10 There may have been several reasons for my purchase decision. But the [assistance] from PG&E's program was a critical factor in my decision to purchase the high efficiency/energy efficient product.

- [RECORD RESPONSE (1-10)] _____
- 8 Don't know
 - 9 Refused

FR11 I would have bought a(n) [product type] within a year of when I did even without the [assistance] from PG&E's program.

- [RECORD RESPONSE (1-10)] _____
- 8 Don't know
 - 9 Refused

Consistency Check & Resolution

[C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) (The question responses that will be used to trigger C1 are:

FR4A (efficiency enhancement measures) OR FR4D (incremental efficiency measures)
FR5
FR10
FR11)

[IF FR4A/D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = you would have purchased the [measure] without the program']

[IF FR4A/D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = you would not have purchased the [measure] without the program']

]
[IF FR5 = 0,1 AND FR4A/D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = you would likely not have purchased the [measure] without the program']

[IF FR5 = 9,10 AND FR4A/D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = you would likely have purchased the [measure] without the program']

]
[IF FR10 = 0,1 AND FR4A/D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program']

[IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program']

[IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = you would have bought the [product type] within [a year/2 years] even without the program']

[IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = you would not have bought the [product type] within [a year/2 years] even without the program']

C1. Let me make sure I understand you. Earlier, you said [fill with inconsistency 1], but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the [measure] at the time you did?

[OPEN END RESPONSE]

C2_1 FR4a correction
C2_2 FR5 correction
C2_3 FR10 correction
C2_4 FR11 correction

Recent Program Participation (Section 5)

Q5_1 Have you participated in any other programs offered by PG&E because of your experience with their energy efficiency programs for homes and small businesses?

- 1 Yes
- 2 No (SKIP TO Q5_3)
- 8 Don't know (SKIP TO Q5_3)
- 9 Refused (SKIP TO Q5_3)

Q5_2 Which programs?

[OPEN END RESPONSE]

Q5_3A

Which of the following phrases or messages have you heard before today?

Good Housekeeping

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

Q5_3B Click it or Ticket

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

Q5_3C Ahnu

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

Q5_3D Flex Your Power

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

Q5_3E Flex Alert

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

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Q5_3F Energy Hog

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

Q5_3G Galley Bay

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

Q5_3H Energy Star

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

Q5_3I Hollister Co

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 6)

Q6_1 Do you receive an electric or gas bill directly from PG&E?

- 1 Yes
- 2 No (SKIP TO Q6_3)
- 8 Don't know (SKIP TO Q6_3)
- 9 Refused (SKIP TO Q6_3)

Q6_2 Does this bill only include your home's electric or gas use, or does it include the use of other households?

- 1 Only 1 household
- 2 Multiple households
- 8 Don't know
- 9 Refused

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Q6_3 Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other (SPECIFY)
- 8 Don't know
- 9 Refused

Q6_4 In what type of building do you live? (READ LIST IF NEEDED)

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Other (SPECIFY)
- 8 Boat/RV/Van/Etc.
- 8 Don't know
- 9 Refused

Q6_5 About when was this building first built?

- _____ Year
- 8 Don't know
- 9 Refused

Q6_5a (If don't know year): Was it built . . . ?

- 1 Before 1978
- 2 Between 1978 and 1992
- 3 Between 1993 and 2000
- 4 Between 2001 and 2004
- 5 2005 or later
- 8 Don't know
- 9 Refused

Q6_6 Were you living in this same home around [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

Q6_7 How many square feet of living space are there in your residence, including bathrooms, foyers and hallways? (Exclude garages, basements and unheated porches.)

- _____ Square footage
- 8 Don't know
- 9 Refused

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Q6_7a (If don't know square feet): Is it . . . ?

- 1 Less than 500 square feet
- 2 Between 501 – 1,000 square feet
- 3 Between 1,001 – 1,500 square feet
- 4 Between 1,501 – 2,000 square feet
- 5 Between 2,001 – 2,500 square feet
- 6 Between 2,501 – 3,000 square feet
- 7 Greater than 3,000 square feet
- 8 Don't know
- 9 Refused

(If Q6_6 = NO, SKIP BILLING ANALYSIS SERIES. GO TO Q6_9)

C6_8a Did you do any remodeling, renovation or additions since January 1, 2005?

- 1 Yes
- 2 No (SKIP TO Q6_9a)
- 8 Don't know (SKIP TO Q6_9a)
- 9 Refused (SKIP TO Q6_9a)

C6_8b How many remodels, renovations or additions have you done since then?

- _____ Number of remodels
- 8 Don't know (PROCEED AND ASK C6_8c FOR EACH REMODEL)
- 9 Refused (SKIP TO C6_9a)

I'm going to ask you several questions regarding the timeframe of your remodels, renovations or additions. We will try to run through them quickly. (ASK A-C FOR EACH REMODEL THAT TOOK PLACE SINCE JANUARY 1, 2005).

- c6_8c1m - c6_8c4m** In what month did it start?
- c6_8c1y - c6_8c4y** In what year did it start?
- c6_8ca1 - c6_8ca4** Did this increase or decrease your home's square footage, not counting unfinished storage spaces, porches or garages?
- c6_8cb1m - c6_8cb4m** In what month did it finish?
- c6_8cb1y - c6_8cb4y** In what year did it finish?

Q6_9a Including yourself, how many people currently live in your home year-round?

- _____ Number of household residents
- 8 Don't know
- 9 Refused

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Q6_9b (IF Q6_9a=1) Which of the following best describes your age?

- 1 Less than 18 years old
- 2 18-24 years old
- 3 25-34 years old
- 4 35-44 years old
- 5 45-54 years old
- 6 55-64 years old
- 7 65 or older
- 8 Don't know
- 9 Refused

Q6_9c (IF Q6_9a>1) Including yourself, how many people currently living in your home year-round are in the following age groups? [TOTAL SHOULD EQUAL Q6_9a]

- Q6_9c1** Less than 18 years old
- Q6_9c2** 18-24 years old
- Q6_9c3** 25-34 years old
- Q6_9c4** 35-44 years old
- Q6_9c5** 45-54 years old
- Q6_9c6** 55-64 years old
- Q6_9c7** 65 or older

Q6_9d Is there typically an adult at home during the day?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

(IF Q6_6 = NO, SKIP BILLING ANALYSIS SERIES. GO TO Q6_10)

C6_9e Has the total number of people living in your home year-round changed since [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No [SKIP TO Q6_10]
- 8 Don't know [SKIP TO Q6_10]
- 9 Refused [SKIP TO Q6_10]

C6_9f Do more people or less people live in your home now?

- 1 More
- 2 Less
- 8 Don't Know
- 9 Refused

C6_9f1 How many more?

C6_9f2 How many less?

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In what year(s) did the number of people in your household change?

C6_9g1 YEAR OF CHANGE

C6_9g2 YEAR OF CHANGE

C6_9g3 YEAR OF CHANGE

Q6_10 Since January 1, 2005 have you made any changes to the appliances, equipment, or other characteristics of your home that would affect how much energy you are using?

- | | | |
|----|------------|------------------------------------------------|
| 1 | Yes | [ASK Q6_10a-Q6_10g FOR EACH MEASURE INSTALLED] |
| 2 | No | [SKIP TO Q6_11a] |
| -8 | Don't know | [SKIP TO Q6_11a] |
| -9 | Refused | [SKIP TO Q6_11a] |

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Q6_10a What types of changes did you make? (DO NOT READ. RECORD EACH TYPE OF CHANGE MADE. PROBE: Anything else?)

- Q6_10a01 Central air conditioner
- Q6_10a02 Room/wall air conditioner
- Q6_10a03 Evaporative cooler
- Q6_10a04 Furnace
- Q6_10a05 Programmable thermostat
- Q6_10a06 Fluorescent indoor fixture
- Q6_10a07 Fluorescent outdoor fixture
- Q6_10a08 Compact fluorescent bulb
- Q6_10a09 Compact fluorescent fixture
- Q6_10a10 Motion sensor
- Q6_10a11 Dimmer switch
- Q6_10a12 Clothes washer
- Q6_10a13 Clothes dryer
- Q6_10a14 Water heater
- Q6_10a15 Low Flow showerheads
- Q6_10a16 Faucet aerators
- Q6_10a17 Refrigerator
- Q6_10a18 Freezer
- Q6_10a19 Range/oven
- Q6_10a20 Dishwasher
- Q6_10a21 Swimming pool
- Q6_10a22 Swimming pool pump
- Q6_10a23 Swimming pool cover
- Q6_10a24 Spa/Jacuzzi
- Q6_10a25 Floor, wall, ceiling, or attic insulation
- Q6_10a26 Weather-stripping/caulking/weatherization
- Q6_10a27 Water heater/pipe wrapping/insulation
- Q6_10a28 Duct sealing/repair (not cleaning)
- Q6_10a29 Windows
- Q6_10a30 Other (SPECIFY)

Q610b1-30 Did this equipment replace existing equipment/measures or was it new to your home?

- 1 Replaced existing equipment
- 2 New to home
- 8 Don't know
- 9 Refused

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Q610c1-30 When did this occur? (RECORD MONTH AND YEAR)

Q610cm1-30 Month

Q610cy1-30 Year

Q610cD1-30 Was this before or after you participated in the [program]?

- 1 Before
- 2 After
- 8 Don't know
- 9 Refused

(ASK Q6_10d and Q6_10e ONLY IF BILLING ANALYSIS BEING DONE AND IF Q6_10a = 4, 13, 14, 19, 23)

Q610d1-30 What type of fuel does the new [equipment] use?

- 1 Gas
- 2 Electric
- 3 Other (SPECIFY)
- 4 Filtered
- 5 Both
- 8 Don't know
- 9 Refused

Q610e1-30 (ASK IF Q6_10b = REPLACED) What was the fuel type of the [equipment] you replaced?

- 1 Gas
- 2 Electric
- 3 Other (SPECIFY)
- 8 Don't know
- 9 Refused

Q610f1-30 Did you receive a rebate for this [equipment] through a [utility] program?

- 1 Yes [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6_11a]
- 2 No
- 8 Don't know [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6_11a]
- 9 Refused [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6_11a]

(ASK Q6_10g and Q6_10h IF 1-4, 12, 13, 14, 17, 18, 19, 20, 22, 24, 29 IN Q6_10a; ELSE SKIP TO NSP4)

Q610g1-30 Is the new [equipment] energy efficient?

- 1 Yes
- 2 No [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6_11a]
- 8 Don't know [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6_11a]
- 9 Refused [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6_11a]

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Q610h1-30 How do you know that this equipment is energy efficient? (PROBE: IS IT ENERGY STAR® RATED?)

- 1 ENERGY STAR
- 2 Sticker/label/paperwork
- 3 Research/Reason for purchase
- 4 Don't know/Unsure
- 5 Was told
- 6 New/High quality equipment
- 7 Low energy usage/rating
- 8 Matches other equipment
- 9 Multiple cycle/stage
- 8 Don't know
- 9 Refused

(ASK NSP4-5 ONLY IF Q6_10f = NO AND Q6_10g = YES AND Q6_10cD = AFTER DATE OF PARTICIPATION)

NSP4 I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the [utility] [program] in [2006, 2007, 2008] influenced my decision to install different types of high efficiency equipment on my own.

[RECORD RESPONSE (0-10)] _____

- 8 Don't know
- 9 Refused

Why did you purchase this high efficiency equipment without going through a [utility] program?

- NSP5_1** Too much paperwork
- NSP5_2** Takes too long to get approval
- NSP5_3** No time to participate, needed equipment immediately
- NSP5_4** The program had ended
- NSP5_5** The equipment would not qualify [PROBE: WHY NOT?]
- NSP5_6** The amount of the rebate wasn't important enough
- NSP5_7** Did not know program was available
- NSP5_8** There was no program available
- NSP5_9** Other (SPECIFY)
- NSP5_10** Don't know
- NSP5_11** Refused
- NSP5_12** Good price/efficiency
- NSP5_13** Don't know why/didn't think of it at the time
- NSP5_14** In the process/applying

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(ASK C6_11a-C6_11c ONLY IF BILLING ANALYSIS BEING DONE)

C6_11a [IF WATER HEATER WAS NOT REPLACED IN Q6_10a OR THROUGH PROGRAM] Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Propane
- 4 Solar
- 5 Other (SPECIFY)
- 6 None
- 8 Don't know
- 9 Refused

C6_11b [IF CLOTHES DRYER WAS NOT REPLACED IN Q6_10a OR THROUGH PROGRAM] Do you have a gas or electric clothes dryer?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (SPECIFY)
- 5 None
- 8 Don't know
- 9 Refused

C6_11c [IF RANGE/OVEN WAS NOT REPLACED IN Q6_10a OR THROUGH PROGRAM] Do you have a gas or electric range/oven?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (SPECIFY)
- 5 None
- 8 Don't know
- 9 Refused

Q6_12 What is the highest level of education you have completed?

- 1 No schooling
- 2 Less than high school some high school
- 3 High school graduate or equivalent (e.g., GED)
- 4 Trade or technical school some college
- 5 College graduate degree some graduate school graduate degree
- 6 Other (SPECIFY)
- 7 Post graduate/doctorate/PhD
- 8 Don't know
- 9 Refused

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Q6_13 Which of the following best represents your annual household income from all sources in 2007, before taxes? Was it . . . ?

- 1 Less than \$20,000 per year
- 2 \$20,000-49,999
- 3 \$50,000-74,999
- 4 \$75,000-99,999
- 5 \$1 00,000-149,999
- 6 \$150,000-199,999
- 7 \$200,000 or more
- 8 Don't know
- 9 Refused

Q6_14 What is your ethnicity?

(INDICATE ALL THAT APPLY)

- 0 Not Mentioned
- 1 Mentioned

- Q6_14_1** White
- Q6_14_2** Black, African American or Negro
- Q6_14_3** American Indian or Alaska Native Asian
- Q6_14_4** Chinese
- Q6_14_5** Japanese
- Q6_14_6** Korean
- Q6_14_7** Vietnamese
- Q6_14_8** Filipino
- Q6_14_9** Native Hawaiian
- Q6_14_10** Guamanian or Chamorro
- Q6_14_11** Samoan
- Q6_14_12** Other (SPECIFY)
- Q6_14_13** Don't know
- Q6_14_14** Refused
- Q6_14_15** Asian
- Q6_14_16** Hispanic/Spanish
- Q6_14_17** Bi or Multiracial
- Q6_14_18** European
- Q6_14_19** American
- Q6_14_20** Australian
- Q6_14_21** Indian- Figi
- Q6_14_22** Taiwanese

Q6_15 What is the primary language spoken in your home?

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 Other (SPECIFY)
- 8 Don't know
- 9 Refused
- 13 More than one
- 14 Tamio

Site Visit Recruitment (Section 7)

Over the next couple of weeks, we will be sending some of our staff to homes that have participated in this survey in order to measure the energy usage of [measure]s installed through the utility program. Participants in this study are being paid \$50 to compensate them for the 20 minute site visit in the coming weeks, and a 5 minute follow-up in April. Again, we are NOT interested in selling anything and our findings will be anonymous. Can we have one of our researchers contact you to make an appointment for this upcoming phase of the research project?

- 1 Yes
- 2 No

Sample Variables

- caseid** PA internal ID
- rebate** Rebate amount
- qty** Quantity
- p_date** Participation date
- p_mn** Participation month
- p_yr** Participation year
- cz** Climate zone
- city** City
- state** State
- zip4** Zip code
- recall** Recall participation flag

SCE 2501 Residential Energy Efficiency Incentive Program Participant Survey

The following measures will be asked about in the survey: pool pumps and motor(s), whole house fan, electric storage water heater(s), attic insulation, wall insulation, ENERGY STAR® refrigerator, ENERGY STAR® room air conditioner(s), cool roof, evaporative cooler, energy efficient lighting fixture.

Instrument-specific variables-- The CATI software will automatically fill the appropriate description in the questions.

[Product Type]

- Roof
- Air conditioner
- Wall Insulation
- Attic insulation
- Lighting fixture
- Pool pump
- Refrigerator
- Room air conditioner
- Water heater
- Whole house fan

[Measure]

- Cool Roof
- Evaporative coolers
- Wall insulation
- Attic insulation
- Energy efficient lighting fixture
- Multi-speed pool pump
- Single-speed pool pump
- Energy Star refrigerator
- Energy Star room AC
- Electric storage water heater
- Whole house fan

[Assistance]

- Rebate
- Lighting exchange

[Program]

- Residential Energy Efficiency Incentive Program

[Utility]

- SCE

[Program Incentive]

- Dollar amount of rebate

[Quantity]

- Quantity exchanged/installed

[Incremental efficiency measures]

- Evaporative coolers
- Lighting fixture
- Multi-speed pool pump
- Single-speed pool pump
- Refrigerator
- Room AC
- Water heater
- Whole house fan

[Efficiency enhancement measures]

- Cool Roof
- Insulation

SCE 2501 Residential Energy Efficiency Incentive Program Participant Survey

Introduction

Hello, my name is [interviewer name], and I'm calling on behalf of the California Public Utilities Commission regarding Southern California Edison's Residential Energy Efficiency Incentive Program. May I speak with [contact name]?

- 1 Yes
- 2 No [if R not available, ask for an adult who makes decisions on how household uses energy]

I'm with PA Consulting Group, an independent research firm. I am calling to learn about your experiences with the [IF REBATE: [measures] you purchased and the rebate you received from Southern California Edison or the retailer/IF LIGHTING EXCHANGE: lighting you turned in and exchanged] through SCE's Residential Energy Efficiency Incentive Program.

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and SCE better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about 20 minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-454-5070)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the [measures] you purchased and received a rebate through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call Mikhail Haramati at 415-703-1458, or visit their website: www.cpuc.ca.gov/evaluation.)

(NOTE: For all questions, "DON'T KNOW" and "REFUSED" will be coded if offered as a response.)

Recall of Participation/Identification of Decision Maker (Section 1)

(QUANTITY REFERS TO THE NUMBER RECEIVED WITHIN THE MEASURE CATEGORY--E.G., 5 LIGHTING FIXTURES)

1.1a (LIGHTING) Program records indicate that you exchanged [quantity] lighting fixtures at a community event through the Residential Energy Efficiency Incentive Program . Do you recall exchanging these? Is this the correct quantity? (RECORD FOR EACH MEASURE INSTALLED)

MEASURES	1. Do you recall exchanging this?	(IF QUANTITY > 1) Is this the correct quantity?
A. [quantity] lighting fixture(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)

SCE 2501 Residential Energy Efficiency Incentive Program Participant Survey

1.1b (NON-LIGHTING) Program records indicate that you purchased and received a mail-in, on-line or instant rebate for energy efficient equipment through the Residential Energy Efficiency Incentive Program around **[insert date of participation]**. (RECORD FOR EACH MEASURE INSTALLED)

MEASURES	Do you recall purchasing a/an. . . . ?	(IF QUANTITY > 1) Is this the correct quantity?
A. [quantity] Pool pump and motor	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
B. [quantity] Energy Star refrigerator	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
C. [quantity] Energy Star room air conditioner	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
D. Whole house fan	1 Yes 2 No D (DK) R (REFUSED)	--
E. [quantity] Electric storage water heater	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
F. Attic insulation	1 Yes 2 No D (DK) R (REFUSED)	--
G. Wall insulation	1 Yes 2 No D (DK) R (REFUSED)	--
H. Cool roof	1 Yes 2 No D (DK) R (REFUSED)	--
I. Evaporative cooler	1 Yes 2 No D (DK) R (REFUSED)	--

(ASK 1.1c-1.1d ONLY IF MEASURE = WATER HEATER)

1.1c How many gallons does your water heater hold?

_____ gallons (SKIP to 1.1e)
D (DK)
R (REFUSED)

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1.1d (IF DON'T KNOW OR REFUSED WATER HEATER SIZE) Is your water heater? (READ LIST)

- 1 Very Small – less than 30 gallons
- 2 Small: 30-39 gallons
- 3 Medium: 40-59 gallons
- 4 Large: 60 gallons or more
- D (DK)
- R (REFUSED)

REMOVED 1.1e – not asked for SCE2501

(ASK 1.1f-1.1g ONLY IF MEASURE = REFRIGERATOR)

1.1f Where is the Freezer located (mounted) on the refrigerator?

- 1 Freezer is on the bottom of the refrigerator
- 2 Freezer is on the top of the refrigerator
- 3 Freezer is on the side of the refrigerator
- 4 Refrigerator does not have an attached freezer
- D (DK)
- R (REFUSED)

1.1g Does your refrigerator have a through the door ice machine?

- 1 Yes
- 2 No
- D (DK)
- R (REFUSED)

(IF RECALLS MEASURES, SKIP TO 1.4)

1.2 (ASK IF DOESN'T RECALL ANY OF THESE MEASURES) Is it possible that someone else in your household would know about [IF REBATE: the **measures**] you purchased and applied for a mail-in or on-line rebate or received an instant rebate from the retailer/[IF LIGHTING EXCHANGE: the lighting you turned in and exchanged] through SCE's Residential Energy Efficiency Incentive Program. (RECORD ONE NUMBER)

- 1 Yes (SKIP TO 1.3)
- 2 No
- D (DON'T KNOW)
- R (REFUSED) (TERMINATE)

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1.2b Southern California Edison is [IF REBATE: offering mail-in, on-line or instant rebates for replacing less efficient electric and natural gas-fired appliances, cooling, and water heating equipment with more energy-efficient equipment. The program also provides rebates for attic and wall insulation, pool pumps, cool roofs, and whole house fans. Rebates are paid in two ways—either in response to a mail-in application for a rebate or through an instant rebate at the retailer.] [IF LIGHTING EXCHANGE: letting customers exchange less efficient lighting fixtures with energy efficient lighting fixtures as local community events.] This program is referred to as the Residential Energy Efficiency Incentive Program. Are you sure you don't recall [IF REBATE: purchasing the/these **[measures]** and applying for a rebate/IF LIGHTING EXCHANGE: exchanging lighting fixtures for energy efficient fixtures]? (RECORD ONE NUMBER)

- 1 Don't remember -> [TERMINATE, RECORD ANY COMMENTS MADE BY RESPONDENT BEFORE EXITING]
- 2 Remember -> [READ, "GREAT, THEN LET'S CONTINUE", SKIP TO 1.4]
- R (REFUSED) (TERMINATE)

1.3 May I please speak with that person? (RECORD ONE NUMBER)

- 1 Yes (BEGIN THE SURVEY AGAIN WITH THIS NEW RESPONDENT)
- 2 No (TERMINATE)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

1.4 Are you the person in your household who decided to [IF REBATE: purchase this/these **[measures]** and receive a rebate through SCE's Residential Energy Efficiency Incentive Program/IF LIGHTING EXCHANGE: exchange your lighting fixtures for more efficient fixtures as a local community event]?

- 1 Yes
- 2 No (SKIP BACK TO 1.3)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

Sources of Program Information (Section 2)

2.1 How did you hear about the (IF REBATE: rebate offered on the [measures]/IF LIGHTING: the lighting exchange) available as part of SCE’s Residential Energy Efficiency Incentive Program? (PROBE: Did you hear about the program from any other sources?) (DO NOT READ LIST, RECORD ALL THAT APPLY)

Utility provided information

- 1 (Advertising—radio, newspaper, trade journal, billboard, TV)
- 2 (Bill insert, newsletter, or other mailing)
- 3 (Website)
- 4 (Email)
- 5 (Other utility) (SPECIFY)

Local Government/Community event/Nonprofit

- 6 (Meeting, event, workshop, training) (SPECIFY)
- 7 (School)
- 8 (Local government/community agency) (SPECIFY)
- 9 (City/county Energy Center such as Pacific Energy Center, Stockton, Food Service) (SPECIFY)
- 10 (Advertising—radio, newspaper, trade journal, billboard, TV)

Other

- 11 (Home or building audit or assessment) (SPECIFY)
- 12 (Meeting, event, workshop training) (SPECIFY)
- 13 (Flex your Power TV or radio advertising)
- 14 (Other advertising, don't recall)
- 15 (Friend/Relative/Neighbor)
- 16 (Other, Specify: _____)
- D (DON'T KNOW) (SKIP TO SECTION 3)
- R (REFUSED) (SKIP TO SECTION 3)
- 19 Salesperson/Sales Rep
- 20 Installer/Contractor

SCE SDGE PG&E Non-Participant Appliance Recycling Questions

SERIES ASKED FOR INSTALLED ROOM ACS OR FRIDGES

ARP1.1 Did you discard an operable [measure] after you purchased a new ENERGY STAR unit through the Residential Energy Efficiency Incentive Program?

- 1 Yes
- 2 No (THANK AND TERMINATE ARP MODULE)
- D DON'T KNOW (THANK AND TERMINATE ARP MODULE)
- R REFUSED (THANK AND TERMINATE ARP MODULE)

ARP1.2 At the time you discarded it, how old was the [measure]

- ___ ENTER YEARS (IF LT 10 THANK AND TERMINATE ARP MODULE)
- 77 DON'T KNOW
- 99 REFUSED

ARP1.4 SCE offers an incentive to pick up and recycle old, operating refrigerators and room air conditioners. A contractor would have picked this up for your home. Are you sure you don't recall having a [measure] picked up and receiving a rebate from the utility?

- 1 Don't remember
- 2 Remember (THANK AND TERMINATE ARP MODULE)

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R REFUSED (THANK AND TERMINATE ARP MODULE)

ARP1.5 Did you discard more than one

- 1 Yes
- 2 No

For the following questions, please think only of the you used most or used most recently.

[IF RESPONDENT DISCARDED MORE THAN ONE UNIT, ASK THE RESPONDENT TO SELECT THE ONE USED THE MOST OR USED MOST RECENTLY AND INFORM THE RESPONDENT THAT ALL ENSUING QUESTIONS ARE BEING ASKED WITH REGARD TO ONLY THAT SPECIFIC APPLIANCE]

ARP2.1 During the time just before you decided to get rid of the [] was it being used as your main [] or had it been a secondary or spare?

(Interviewer: a main refrigerator is typically in the kitchen, a secondary or spare is usually kept someplace else and might or might not be running. If the person recently bought a new main refrigerator, it should be classified as "main.")

- 1 Main
- 2 Secondary or Spare
- D DON'T KNOW
- R REFUSED

ARP2.2a(REFRIGERATOR ONLY) Where was it located?

- 1 Kitchen
- 2 Garage
- 3 Porch/Patio
- 4 Basement
- 5 Other (SPECIFY:)
- D DON'T KNOW
- R REFUSED

ARP2.2b (ROOM AIR CONDITIONER ONLY) Where was it located?

- 1 Kitchen
- 2 Living room
- 3 Dining room
- 4 Bedroom
- 5 Other (SPECIFY:)
- D DON'T KNOW
- R REFUSED

ARP2.10 What was the condition of this appliance? Would you say ...?
(READ LIST; INDICATE ONE RESPONSE)

- 1 It worked and was in good physical condition
- 2 It worked but needed minor repairs (like a door seal or handle)
- 3 It worked but had some problems (like it wouldn't defrost)
- 4 Or, it didn't work
- D DON'T KNOW
- R REFUSED

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ARP3.1 How did you get rid of this

(CLARIFY IF NEEDED TO FIT LIST BELOW. EX: Did you give it away or sell it?)

- 1 Took it to a recycler or scrap dealer
- 2 Took it to the landfill or threw it away
- 3 Sold it to a friend, acquaintance or relative
- 4 Sold it to a used refrigerator / freezer dealer
- 5 Sold it via garage sale, estate sale, or newspaper ad
- 6 Sold it when you moved to new occupant
- 7 Hired someone to pick it up (for junking or dumping)
- 8 Called utility's appliance recycling program
- 9 Traded it for a replacement unit
- 10 Dealer I bought a new one from took it away
- 11 Gave it away
- 12 Left it behind when moved (for new occupant)
- 13 Still have it, and using
- 14 Still have it; store it unused
- 15 Other (SPECIFY)
- 16 Don't know
- 17 Refused

Installation Behavior (Section 3)

(QUESTIONS IN THIS SECTION WILL BE REPEATED FOR EACH MEASURE R RECALLS.)

3.0 (IF REBATE) How did you receive the rebate for this [measure]?
(IF NECESSARY: Did you mail in the rebate application to SCE, fill out the rebate application online, or receive an instant rebate at the store when you made your purchase?)

- 1 Mail in rebate
- 2 Online rebate
- 3 Instant rebate at store
- 4 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

3.1a (IF QUANTITY=1) Now, I would like to understand what you did with the [measure]. Is this [measure] currently installed at your home (either indoors or outdoors)? (RECORD ONE NUMBER)

- 1 Yes (IF LIGHTING, SKIP TO 3.4, ELSE SKIP TO 3.12)
- 2 No
- D (DON'T KNOW) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)
- R (REFUSED) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)

3.1b (IF QUANTITY=1) Which of the following best describes what happened with the [measure]? (READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location (SKIP TO 3.3a)
- 2 It was installed at your home but is now permanently removed (example: broke, burned out, don't fit, don't like, etc.) (SKIP TO 3.6)
- 3 It is in storage because it is only needed during certain months of the year
- 4 It is in storage for some other reason (SKIP TO 3.8)

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- 5 It was sold or given away (SKIP TO 3.3a)
- 6 Something else (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

3.2 (IF QUANTITY>1) Now, I would like to understand what you did with the [quantity] [measures].
(READ LIST, RECORD NUMBER)

- a___ How many are currently installed at your home (either indoors or outdoors)
(IF RESPONSE=QUANTITY, SKIP TO 3.4)
- b___ How many are installed at some other location?
- c___ How many were installed at your home (either indoors or outdoors) but are now permanently removed (example: broke, burned out, don't fit, don't like, etc.)
- d___ How many are in storage because they are only needed during certain months of the year?
- e___ How many are in storage for some other reason?
- f___ How many were sold or given away?
- g___ Something else? (SPECIFY)

3.3a (ASK IF 3.1b=1, 3.1b=5, 3.2b>0, 3.2f>0) Is the/Are these [measure] located in SCE's service territory?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

(SKIP TO 5.3 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY OR 3.1b = 1 OR 3.1b = 5) AND THAT LOCATION IS **OUTSIDE** OF SCE'S SERVICE TERRITORY (3.3A NE 1).

SKIP TO W1 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY OR 3.1b = 1 OR 3.1b = 5) AND THAT LOCATION IS **INSIDE** OF SCE'S SERVICE TERRITORY (3.3A = 1).

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Installed Measures (ASK ONLY FOR LIGHTING)

Now let's talk about the energy efficient lighting equipment you currently have installed.

3.4 (LIGHTING ONLY) Where [**is this/are the**] lighting you received through the program installed in your residence? (READ LIST, FILL IN BLANKS)

- _____ Living/family room
- _____ Dining room
- _____ Den/Office
- _____ Kitchen
- _____ Bedrooms
- _____ Bathrooms
- _____ Closets
- _____ Hallways
- _____ Attic
- _____ Basement
- _____ Garage
- _____ Yard/Outside
- _____ Other (specify: _____)
- _____ (DON'T KNOW)

[PROGRAMMING: MUST TOTAL TO **NUMBER INSTALLED** BEFORE MOVING ON]

Removed Measures (ASK ONLY IF THEY SAY THEY REMOVED A MEASURE AFTER INSTALLED, 3.1b=2 or 3.2c>0)

3.6 Now let's talk about [**measure**] you said you installed but have since removed. Why was this removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 (Equipment failed)
- 2 (Didn't work properly)
- 3 (Wrong size—too small or too large)
- 4 (Low water flow)
- 5 (Didn't like the color)
- 6 (Didn't like appearance/unattractive)
- 7 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

3.7 What did you replace [**measure**] with? (DO NOT READ LIST; PROBE FOR EFFICIENCY, RECORD ALL THAT APPLY)

- 1 (With a new high efficiency (measure))
- 2 (With a less efficient (product type))
- 3 (Re-installed old equipment)
- 4 (Did not replace)
- 5 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

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Measures in Storage (ASK ONLY IF THEY SAY MEASURE IS IN STORAGE FOR SOME OTHER REASON, 3.1b=4 or 3.2e>0)

3.8 When do you think you will install the [measure]? Would you say within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

- 1 Within the next 3 months
- 2 3 to 6 months from now
- 3 6 to 12 months from now
- 4 More than a year from now
- 5 Never
- D (DON'T KNOW)
- R (REFUSED)

(ASK 3.12-3.17 ONLY FOR INSTALLED SINGLE SPEED POOL PUMPS)

3.12 Since participating in Residential Energy Efficiency Incentive Program on [**insert date of participation**], what hours of the day do you typically run your pool pump on Monday-Friday during the summer months? (SUMMER MONTHS ARE MAY – SEPTEMBER)

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (OTHER, specify)
- 97 (DON'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.13 Since participating in Residential Energy Efficiency Incentive Program on [**insert date of participation**], what hours of the day do you typically run your pool pump on Monday-Friday during the winter months? (WINTER MONTHS ARE OCTOBER – APRIL)

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (OTHER, specify)
- 97 (DON'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.14 Before participating in Residential Energy Efficiency Incentive Program on [**insert date of participation**], what hours of the day did you typically run your pool pump on Monday-Friday during the summer months?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 95 NO POOL PUMP BEFORE PARTICIPATION (SKIP TO W1)
- 96 (OTHER, specify)
- 97 (DIDN'T USE)
- D (DON'T KNOW)

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3.15 R (REFUSED)
Before participating in Residential Energy Efficiency Incentive Program on [insert date of participation], what hours of the day did you typically run your pool pump on Monday-Friday during the winter months?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (OTHER, specify)
- 97 (DIDN'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.16 (IF 3.14C <> 3.12C) Why do you run your pool pump differently in the summer than you did before participation in the program?

SPECIFY: _____
D (DON'T KNOW)
R (REFUSED)

3.17 (IF 3.15C <> 3.13C) Why do you run your pool pump differently in the winter than you did before participation in the program?

SPECIFY: _____
D (DON'T KNOW)
R (REFUSED)

Free Ridership and Spillover (Section 4)

Warm-up Questions/Background Context¹

W1. Please think back to the time when you were deciding to (REBATE: buy the energy saving [product types]/LIGHTING EXCHANGE: exchange your lighting fixture), perhaps recalling things that occurred in your household shortly before and after [timeframe]. What factors motivated you to (REBATE: purchase energy saving [product types]/LIGHTING EXCHANGE: exchange your lighting fixture)? {DO NOT READ; INDICATE ALL THAT APPLY; ONCE THEY RESPONDENT HAS FINISHED, PROBE: Are there any other factors?}

1. Old equipment didn't work
 2. Old equipment working poorly
 3. The program incentive
 4. The program technical assistance
 5. Wanted to save energy
 6. Wanted to reduce energy costs
 7. The information provided by the Program
 8. Past experience with this program
 9. Because of past experience with another [utility] program
 10. Recommendation from other utility program (Probe: What program? _____)
 11. Recommendation of dealer/retailer
 12. Recommendation of someone else (Probe: Who? _____)
 13. Advertisement in newspaper (Probe: For what program? _____)
 14. Radio advertisement (Probe: For what program? _____)
 15. Other (SPECIFY)
 16. Environmental concerns
 17. Global warming
 18. Liked the appearance of the [measure] more than the old one
 19. Keeping up with the latest trends and fashions
- D DON'T KNOW
R REFUSED

¹ Individual contract groups may chose to modify the wording of these warm-up questions.

{REPEAT W2-C2 FOR FIRST MEASURE. REPEAT SERIES IF IS A SECOND MEASURE}

{ASK W2a-W6 ONLY FOR INCREMENTAL EFFICIENCY REBATE MEASURES}

W2a. Did you get this **[measure]** to replace [a/an] existing **[product type]**? }

1. Yes {SKIP TO W3}
2. No
- D. Don't Know (SKIP TO FR1)
- R. Refused (SKIP TO FR1)

W2b. Did you get this **[measure]** because you wanted to add another/more **[product type]** to your [home/business]?

1. Yes (SKIP TO FR1)
2. No
- D. Don't Know (SKIP TO FR1)
- R. Refused (SKIP TO FR1)

W2c. Is this **[product type]** the first you have ever had in your [home/business]?

1. Yes (SKIP TO FR1)
2. No (SKIP TO FR1)
- D. Don't Know (SKIP TO FR1)
- R. Refused (SKIP TO FR1)

W3. {IF MEASURE=LIGHTING} What type of lighting did this replace? {DO NOT READ}

1. Incandescent
2. CFL
3. Other (SPECIFY)
- D DON'T KNOW
- R REFUSED

W4. {IF MEASURE NOT CFL} About how old was the **[product type]** you replaced? {READ CATEGORIES IF NEEDED}

1. Less than 5 years old
2. 5 to less than 10 years old
3. 10 to less than 20 years old
4. 20 years to less than 30 years old
5. 30 or more years old
- D DON'T KNOW
- R REFUSED

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W5. Was the old **[product type]** working or not working?

- 1. Working
- 2. Not working {SKIP TO FR1}
- D DON'T KNOW {SKIP TO FR1}
- R REFUSED {SKIP TO FR1}

W6. Was the old **[product type]** in good, fair, or poor working condition?

- 1. Good
- 2. Fair
- 3. Poor
- D DON'T KNOW
- R REFUSED

W7. (INSULATION) Was the **[product type]** you received a rebate for installed in areas where no prior insulation existed?

- 1. Yes
- 2. No
- D. Don't Know
- R. Refused

Free-Ridership Questions

FR1. At the time that you first heard about the **[assistance]** from **[utility]** for **[measure]**, had you...?

- 1. Already been thinking about purchasing **[product type]**? {IF NO, SKIP TO FR2}
- 2. Already begun collecting information about **[product type]**? {IF NO, SKIP TO FR2}
- 3a. **{FOR INCREMENTAL EFFICIENCY MEASURES}** Already selected the **[measure]** you were going to get? {IF NO, SKIP TO FR2}
- 3b. **{FOR EFFICIENCY ENHANCEMENT MEASURES}** Already decided to buy the **[product type]**? {IF NO, SKIP TO FR2}
- 4. Already installed the energy efficient **[measure]**? {IF YES, SKIP TO FR1B; ELSE FR2}
- 5. {DON'T READ} Other: _____ {SKIP TO FR2}
- D DON'T KNOW {SKIP TO FR2}

R REFUSED {SKIP TO FR2}

FR1B.

So, the [measure] was installed before you learned about the [assistance] from [utility]?

- 1 Yes {SKIP FR5}
- 2 No
- D Don't know
- R Refused

FR2. Just to be sure I understand, did you have specific plans to install a(n) **[product type]** before learning about the **[assistance]** available through the **[program]**?

- 1. Yes
- 2. No {SKIP TO FR4}
- D DON'T KNOW {SKIP TO FR4}
- R REFUSED {SKIP TO FR4}

FR3. Did you have to make any changes to your existing plans in order to receive this **[assistance]** through the **[program]**?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4. {REPEAT AS NEEDED FOR FR4 PARTS A – D} If the **[assistance]** from the **[utility]** **[program]** had not been available, would you still have:

FR4A. Purchased a(n) **[product type]** ?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW
- R REFUSED

FR4B. Purchased the **[product type]** at the same time as you did?
(PROBE IF NECESSARY: "That would be around MM/YYYY")

- 1. Yes {SKIP TO FR4C}
- 2. No
- D DON'T KNOW {SKIP TO FR4C}
- R REFUSED {SKIP TO FR4C}

FR4B1. Bought the **[product type]** earlier than you did, or later?

- 1. Earlier
- 2. Same Time {REPEAT QUESTION FR4B}
- 3. Later
- D DON'T KNOW {SKIP TO FR4C}

R REFUSED {SKIP TO FR4C}

FR4B2. How much **[earlier/later]** would you have bought the **[product type]**?
_____ Years {AND/OR} _____ Months

D DON'T KNOW

R REFUSED

FR4C. {IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM, OR MEASURE IS OF VARIABLE AMOUNT} Without the program, would you have purchased the same quantity as you did?

1. Yes {SKIP TO FR4D}

2. No

D DON'T KNOW {SKIP TO FR4D}

R REFUSED {SKIP TO FR4D}

FR4C1. How many/much would you have purchased without the program?

_____ {RECORD NUMBER}

D DON'T KNOW

R REFUSED

FR4D. {FOR INCREMENTAL EFFICIENCY MEASURES AND INSULATION} Purchased the same [INSULATION = R value/OTHER=efficiency] of **[product type]**?

1. Yes

2. No

D DON'T KNOW

R REFUSED

FR4E. If the **[assistance]** from the **[utility] [program]** had not been available, would you have done anything else differently?

1. Yes

2. No {SKIP TO FR5}

D DON'T KNOW {SKIP TO FR5}

R REFUSED {SKIP TO FR5}

FR4E1 What would you have done differently?

{RECORD RESPONSE}: _____

FR5. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same **[measure]** if you had not received the **[assistance]** from the program?

{RECORD RESPONSE (0-10)} _____ {SKIP TO FR7}

D DON'T KNOW {SKIP TO FR7}

R REFUSED {SKIP TO FR7}

{SKIP TO FR10 IF PROGRAM DOES NOT PROVIDE A FINANCIAL INCENTIVE/SUBSIDY OR DATABASE DOES NOT CONTAIN THAT INFORMATION}

FR7. Our records indicate you received about **[amount of program incentive/subsidy]** from the **[utility] [program]** either directly or at the time of purchase to offset the cost of the **[product type]**. Does this amount sound about right?

- 1. Yes {SKIP TO FR9}
- 2. No
- D DON'T KNOW {SKIP TO FR9}
- R REFUSED {SKIP TO FR9}

FR8. What would you estimate to be the actual amount?

{RECORD RESPONSE} _____ {SET = NEW AMOUNT OF PROGRAM INCENTIVE/SUBSIDY}

- D DON'T KNOW
- R REFUSED

I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR9. If I had not had any assistance from the program, I would have paid the additional **[amount of program incentive/subsidy]** to buy the **[measure]** on my own?

{RECORD RESPONSE (0-10)} _____

- D DON'T KNOW
- R REFUSED

{READ ONLY IF FR7-FR9 WAS SKIPPED}: I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR10. There may have been several reasons for my purchase decision. But the **[assistance]** from the **[utility] [program]** was a critical factor in my decision to have the **[measure]** installed/done ...

{RECORD RESPONSE (0-10)} _____

- D DON'T KNOW
- R REFUSED

FR11. I would have bought a(n) **[product type]** within **a year** of when I did even without the **[assistance]** from the **[utility] [program]**.

{RECORD RESPONSE (0-10)} _____

- D DON'T KNOW
- R REFUSED

1.1.1 Consistency Check & Resolution

{C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

FR4A (efficiency enhancement measures) OR FR4D (incremental efficiency measures)
FR5
FR10
FR11

{IF FR4A/D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the [measure] without the program'}

{IF FR4A/D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would not have purchased the [measure] without the program'}

{IF FR5 = 0,1 AND FR4A/D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the [measure] without the program'}

{IF FR5 = 9,10 AND FR4A/D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the [measure] without the program'}

{IF FR10 = 0,1 AND FR4A/D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program'}

{IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program'}

{IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the [product type] within [a year/2 years] even without the program'}

{IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the [product type] within [a year/2 years] even without the program'}

C1. Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **[measure]** at the time you did? {RECORD VERBATIM RESPONSE BELOW}

C2. **[fill with wording and response categories to the one question which was inconsistent]** {INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE}

Participant Like and Unlike Spillover Questions

{ONLY ASK LSP1-LSP4 IF RECEIVED LIGHTING MEASURES}

LSP1. Since you received **[assistance]** through **[program]** have you purchased and installed any efficient lighting on your own without any assistance from the **[utility] [program]** or another utility program {READ THE FOLLOWING ONLY FOR SMALL COMMERCIAL: either at this facility or at other locations}?

1. Yes, only at this home/facility
2. Yes, only at other locations {SMALL COMMERCIAL ONLY}
3. Yes, at this facility and other locations {SMALL COMMERCIAL ONLY}
4. No {SKIP TO 5.3}
- D DON'T KNOW {SKIP TO 5.3}
- R REFUSED {SKIP TO 5.3}

LSP2. How many more high efficiency lighting products did you buy on your own, compared to what you got through the program {READ THE FOLLOWING ONLY FOR SMALL COMMERCIAL: at this facility and/or at another location}? {PROBE FOR PERCENT OR SHARE OF PROGRAM EQUIPMENT. READ THE FOLLOWING IF NEEDED} For example, was it about one-fourth (25%) of what you installed through the program, one-half (50%) of what your installed through the program, the same amount as what you installed though the program (100%), twice as much as what you installed through the program (200%), or some other amount?

- _____ % at this home/facility
_____ % at another facility {SMALL COMMERCIAL ONLY}
- D DON'T KNOW
R REFUSED

LSP3. I'm going to read a statement about the equipment that you purchased on your own, without any assistance from your utility. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement

My experience with the **[measure]** installed through the **[utility] [program]** in **[2006, 2007, 2008]** influenced my decision to install more high efficiency **[measure]** on my own.

- {RECORD RESPONSE (0-10)} _____
- D DON'T KNOW
R REFUSED

LSP4. Why did you purchase this lighting without the financial assistance available from the **[utility] [program]**? {DO NOT READ; INDICATE ALL THAT APPLY}

1. Too much paperwork
2. Takes too long to get approval
3. No time to participate, needed equipment immediately
4. The program had ended
5. The equipment would not qualify {PROBE: WHY NOT?} _____

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- 6. The amount of the rebate wasn't important enough
- 7. Other {SPECIFY} _____
- D DON'T KNOW
- R REFUSED

Recent Program Participation (Section 5)

5.3 Have you participated in any other programs offered by SCE because of your experience with the Residential Energy Efficiency Incentive Program?

- 1 Yes
- 2 No (SKIP TO 5.5)
- D (DON'T KNOW) (SKIP TO 5.5)
- R (REFUSED) (SKIP TO 5.5)

5.4 Which programs?

5.5 Which of the following phrases or messages have you heard before today? (ROTATE STARTING POINT)

A. Energy Star

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

B. Don't Trash California

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

C. Energy Hog

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

D. Click it or Ticket

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

E. Flex Your Power

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)

R (REFUSED)

F. Flex Alert

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

G. Spare the Air

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 6)

NOTE: ALL QUESTIONS STARTING WITH THE LETTER 'C' ARE QUESTIONS THAT WOULD BE ASKED ONLY IF A BILLING ANALYSIS IS BEING DONE FOR INSULATION AND COOL ROOFS.

The last questions ask about household characteristics to make sure we're getting a representative sample of [utility] residents.

6.1 Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6.2 In what type of building do you live? (READ LIST IF NEEDED)
(PROBE FOR 'Condo': "How many units are in your building?")

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Other (SPECIFY)
- 8 Boat/RV/Van/Etc.
- D (DON'T KNOW)
- R (REFUSED)

6.3 About when was this building first built? (READ LIST IF NEEDED)

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 7 (OTHER, specify)

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D (DON'T KNOW)
R (REFUSED)

6.3a Were you living in this same home around IF REBATE: [insert date 12 months prior to time of participation]/IF LIGHTING: one year before the lighting exchange?

1 Yes
2 No
D (DON'T KNOW)
R (REFUSED)

6.4a How many full or half bathrooms do you have in your home? (PROBE: A full bathroom is one that has a sink with running water, and a toilet, and either a bathtub or shower. A half bathroom has either a toilet or a bathtub or a shower?)

____ Bathrooms
D (DON'T KNOW)
R (REFUSED)

6.4b How many bedrooms do you have in your home (If a one-room efficiency, or studio apartment, open loft, bedrooms=0)

____ bedrooms
D (DON'T KNOW)
R (REFUSED)

6.4c Other than bedrooms and bathrooms, how many other rooms are there in your home? Do not count laundry rooms, foyers, unfinished storage spaces, porches, or garages.

____ Other rooms
D (DON'T KNOW)
R (REFUSED)

[If 6.3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.5a]

C6.4d Did you do any remodeling, renovation or additions since January 1, 2005?

1 Yes
2 No (SKIP TO 6.5a)
D (DON'T KNOW) (SKIP TO 6.5a)
R (REFUSED) (SKIP TO 6.5a)

C6.4e How many remodels, renovations or additions have you done since then?

____ Remodels, renovations or additions
D (DON'T KNOW)
R (REFUSED)

C6.4f I'm going to ask you several questions regarding the timeframe of your remodels, renovations or additions. We will try to run through them quickly. (ASK A-C FOR EACH REMODEL THAT TOOK PLACE SINCE JANUARY 1, 2005).

a. In what month and year did it start?

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- b. Did this increase or decrease your home's square footage, not counting unfinished storage spaces, porches or garages,
- c. In what month and year did it finish?

	a. START (mm/yyyy)	b. Increase or decrease? 1 Increase 2 Decrease 3 Same D (DK) R (REFUSED)	C. FINISH (mm/yyyy)
1			
2			
3			
4			

6.5a Including yourself, how many people currently live in your home year-round?

- _____ people
 D (DON'T KNOW)
 R (REFUSED)

6.5b (IF 6.5a=1) Which of the following best describes your age?

- 1 Less than 18 years old
- 2 18-24 years old
- 3 25-34 years old
- 4 35-44 years old
- 5 45-54 years old
- 6 55-64 years old
- 7 65 or older
- D (DON'T KNOW)
- R (REFUSED)

6.5c (IF 6.5a>1) Including yourself, how many people currently living in your home year-round are in the following age groups?

- _____ Less than 18 years old
- _____ 18-24 years old
- _____ 25-34 years old
- _____ 35-44 years old
- _____ 45-54 years old
- _____ 55-64 years old
- _____ 65 or older
- TOTAL SHOULD EQUAL 6.5a
- R (REFUSED)

[If 6.3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.7]

C6.5d Has the total number of people living in your home year-round changed since [insert date 12 months prior to time of participation]?

- 1 Yes

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- 2 No (SKIP TO 6.6)
- D (DON'T KNOW) (SKIP TO 6.6)
- R (REFUSED) (SKIP TO 6.6)

C6.5e Do more people or less people live in your home now?

- 1 More→How many more? ____
- 2 Less→How many less? ____
- D (DON'T KNOW)
- R (REFUSED)

C6.5f In what year(s) did the number of people in your household change? (RECORD ALL YEARS OF CHANGE—NET CHANGE IS CALCULATED FROM C6.5e)

- 1st NET CHANGE: _____ YEAR
- 2nd NET CHANGE: _____ YEAR
- 3rd NET CHANGE: _____ YEAR
- D (DON'T KNOW)
- R (REFUSED)

6.7 This next question asks about other changes you have made that we haven't already talked about. Since January 1, 2005 have you made any other changes to the appliances, equipment or other characteristics of your home that would affect how much energy you are using?

- 1 Yes [ASK 6.7a-NSP5 FOR EACH MEASURE INSTALLED BEFORE ASKING 6.7i]
- 2 No [SKIP TO 6.7i]
- D DK [SKIP TO 6.7i]
- R REFUSED [SKIP TO 6.7i]

a. What types of changes did you make? (DO NOT READ. RECORD EACH TYPE OF CHANGE MADE. PROBE: Anything else?)

Heating and air conditioning measures

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Furnace
- 5 Programmable thermostat

Lighting measures

- 6 Fluorescent indoor fixture
- 7 Fluorescent outdoor fixture
- 8 Compact fluorescent bulb
- 9 Compact fluorescent fixture
- 10 Motion sensor
- 11 Dimmer switch

Laundry measures

- 12 Clothes washer
- 13 Clothes dryer

Water using measures

- 14 Water heater
- 15 Low Flow showerheads
- 16 Faucet aerators

Kitchen appliances

- 17 Refrigerator
- 18 Freezer
- 19 Range/oven
- 20 Dishwasher

Pool/spa/jacuzzi

- 21 Swimming pool
- 22 Swimming pool pump
- 23 Swimming pool cover
- 24 Spa/jacuzzi

Insulation/weather-stripping/sealing

- 25 Floor, wall, ceiling, or attic insulation
- 26 Weather-stripping/caulking/weatherization
- 27 Water heater/pipe wrapping/insulation
- 28 Duct sealing/repair (not cleaning)

Windows

- 29 Windows

- 30 Other (SPECIFY)
- 00 No other changes (SKIP TO C6.7b)
- D DK
- R REFUSED

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b. Did this equipment replace existing equipment/measures or was it new to your home?

- 1 Replaced existing equipment
- 2 New to home
- D DK
- R REFUSED

c. When did this occur? (RECORD MONTH AND YEAR)

____/____ MM/YYYY

D DK --→Was this before or after you participated in the [program]?

- 1 Before
 - 2 After
 - D DK
 - R REFUSED
- R REFUSED

(ASK 6.7Cd and 6.7Ce ONLY IF BILLING ANALYSIS BEING DONE AND IF 6.7a = 4, 13, 14, 19, 23)

Cd. What type of fuel does the new [equipment] use?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D DK
- R REFUSED

Ce. (ASK IF 6.7b = REPLACED) What was the fuel type of the [equipment] you replaced?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D DK
- R REFUSED

f. Did you receive a rebate for this [equipment] through a SCE program?

- 1 Yes [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- 2 No
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]

(ASK 6.7g and 6.7h IF 1-4, 12, 13, 14, 17, 18, 19, 20, 22, 24, 29 IN 6.7a; ELSE SKIP TO NSP4)

g. Is the new [equipment] energy efficient?

- 1 Yes
- 2 No [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]

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- h. How do you know that this equipment is energy efficient? (PROBE: IS IT ENERGY STAR® RATED?)
- _____

(ASK NSP4-5 ONLY IF 6.7f = NO AND 6.7g = YES AND 6.7c = AFTER DATE OF PARTICIPATION)

NSP4. I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the [utility] [program] in [2006, 2007, 2008] influenced my decision to install different types of high efficiency equipment on my own.

{RECORD RESPONSE (0-10)} _____

D DON'T KNOW

R REFUSED

NSP5. Why did you purchase this high efficiency equipment without going through a [utility] program? {DO NOT READ; INDICATE ALL THAT APPLY}

1. Too much paperwork
 2. Takes too long to get approval
 3. No time to participate, needed equipment immediately
 4. The program had ended
 5. The equipment would not qualify {PROBE: WHY NOT?} _____
 6. The amount of the rebate wasn't important enough
 7. Did not know program was available
 8. There was no program available
 9. Other {SPECIFY} _____
- D DON'T KNOW
R REFUSED

(ASK C6.7i=c6.7m ONLY IF BILLING ANALYSIS BEING DONE)

C6.7i [IF FURNACE WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have gas or electric space heating?

- 1 Gas
 - 2 Electric
 - 3 Both
 - 4 Other (Specify) _____
 - 7 None
- D (DON'T KNOW)
R (REFUSED)

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C6.7j [IF WATER HEATER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

C6.7k [IF CLOTHES DRYER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric clothes dryer?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

C6.7l [IF RANGE/OVEN WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric range/oven?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

C6.7m [IF ROOM, CENTRAL AC, OR EVAPORATIVE COOLER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] What type of air conditioning system, if any, do you use in your home? (INDICATE ALL THAT APPLY)

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Other (Specify) _____
- 5 (DON'T KNOW)
- 6 (REFUSED)
- 7 None _____

6.8a Do you receive an electric bill directly from SCE?

- 1 Yes
- 2 No (SKIP TO 6.9)
- D (DON'T KNOW) (SKIP TO 6.9)
- R (REFUSED) (SKIP TO 6.9)

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6.8b Does this bill only include your home's electric use, or does it include the electric use of other households?

- 1 Only 1 household
- 2 Multiple households
- D (DON'T KNOW)
- R (REFUSED)

6.13 What is the primary language spoken in your home? (DO NOT READ)

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

On-site Recruiting (Section 7)

(RECRUIT FOR SINGLE SPEED POOL PUMPS AND ROOM AC)

7.1 (SINGLE SPEED POOL PUMPS) We would like to offer you \$25 to participate in the on-site component of this evaluation. We are NOT interested in selling anything. We would like to have one of our auditors visit your home at your convenience to look at the pool pump you installed through the program and how it/they are operating. The on-site visit would only take 20 minutes. Would that be alright with you?

- 1 Yes→Great! Someone will give you a call back to determine when they can schedule an appointment with one of our auditors in your area. Thank you for your cooperation with this important effort.
- 2 No

7.2 (ROOM AC) Does the new room air conditioner you purchased through the program plug directly into an outlet, or is it hard wired into the wall?

- 1 Plugs into wall (CONTINUE WITH RECRUITMENT)
- 2 Hard wired (THANK AND TERMINATE)
- D (DON'T KNOW) (THANK AND TERMINATE)
- R (REFUSED) (THANK AND TERMINATE)

7.3 (IF ROOM AC PLUGS INTO WALL) We would like to offer you \$25 to participate in the on-site component of this evaluation. We are NOT interested in selling anything. We would like to have one of our auditors visit your home at your convenience to attach a device to track how often your room air conditioner is running. This device would be left on for 3-4 months and it will not interfere with your use

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of your air conditioner. The on-site visit would only take 20 minutes to install this. Would that be alright with you?

(IF UNINSTALLED, PROBE "Will this unit be installed this summer?")

- 1 Yes→Great! Someone will give you a call back to determine when they can schedule an appointment with one of our auditors in your area. Thank you for your cooperation with this important effort.
- 2 No

Thank and Terminate

SDGE 3024 Residential Incentive Program Participant Survey

The following measures will be asked about in the survey: Pool pumps and motor(s), pool pump reset agreement, whole house fan, storage water heater(s), attic insulation, wall insulation, ENERGY STAR® refrigerator, ENERGY STAR® dishwasher(s), ENERGY STAR® central natural gas furnace(s), and ENERGY STAR® room air conditioner(s).

Instrument-specific variables-- The CATI software will automatically fill the appropriate description in the questions.

[Product Type]

- Attic insulation
- Wall insulation
- Pool pump
- Pool pump reset agreement
- Refrigerator
- Room air conditioner
- Dishwasher
- Furnace
- Water heater
- Whole house fan

[Measure]

- Attic insulation
- Wall insulation
- Multi-speed pool pump
- Single-speed pool pump
- Pool pump reset agreement
- Energy Star refrigerator
- Energy Star room air conditioner
- Energy Star dishwasher
- Energy Star central natural gas furnace
- Electric water heater
- Whole house fan
- Gas water heater

[Assistance]

- Rebate/\$25 check

[Program]

- Residential Energy Efficiency Incentive Program

[Utility]

- SDGE

[Program Incentive]

- Dollar amount/\$25 check

[Quantity]

- Quantity exchanged/installed

[Incremental efficiency measures]

- Multi-speed pool pump
- Single-speed pool pump
- Energy Star refrigerator
- Energy Star room air conditioner
- Energy Star dishwasher
- Energy Star central natural gas furnace
- Storage water heater
- Whole house fan

[Efficiency enhancement measures]

- Insulation
- Pool pump reset agreement

SDGE 3024 Residential Incentive Program Participant Survey

Introduction

Hello, my name is [interviewer name], and I'm calling on behalf of the California Public Utilities Commission regarding San Diego Gas and Electric's Residential Incentive Program. May I speak with [contact name]?

- 1 Yes
- 2 No [attempt to convert; if R not available, ask for an adult who makes decisions on how household uses energy]

I'm with [data collection firm], an independent research firm. I am calling to learn about your experiences with the [IF REBATE: [measures] you purchased and the rebate you received from the retailer/IF RESET AGREEMENT: pool pump reset agreement you signed and received a \$25 incentive for] through SDGE's Residential Incentive Program.

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and SDGE better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about (non-billing analysis=15/billing analysis=20) minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-XXX-XXXX)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the [measures] you purchased and received a rebate through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call Mikhail Haramati at 415-703-1458, or visit their website: www.cpuc.ca.gov/evaluation.)

(NOTE: For all questions, "DON'T KNOW" and "REFUSED" will be coded if offered as a response.)

Recall of Participation/Identification of Decision Maker (Section 1)

(QUANTITY REFERS TO THE NUMBER RECEIVED WITHIN THE MEASURE CATEGORY--E.G., 1 POOL PUMP)

1.1a (IF RESET AGREEMENT) Our records show that your household signed an agreement about how often you would use your pool pump. You would have received \$25 from SDGE for signing this agreement. Do you recall signing this agreement?

- 1 Yes (SKIP TO 1.3)
- 2 No (SKIP TO 1.2)
- D (DON'T KNOW) (SKIP TO 1.2)
- R (REFUSED) (TERMINATE)

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1.1b (IF REBATE) Program records indicate that you purchased and received a mail-in or instant rebate for the following energy efficient equipment through the Residential Incentive Program around **[insert date of participation]**. (RECORD FOR EACH MEASURE INSTALLED)

MEASURES	Do you recall purchasing ?	(IF QUANTITY > 1) Is this the correct quantity?
A. [quantity] Pool pump and motor	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
B. [quantity] Whole house fan	1 Yes 2 No D (DK) R (REFUSED)	--
C. [quantity] Storage water heater	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
D. Attic insulation	1 Yes 2 No D (DK) R (REFUSED)	--
E. Wall insulation	1 Yes 2 No D (DK) R (REFUSED)	--
F. Energy Star refrigerator	1 Yes 2 No D (DK) R (REFUSED)	--
G. [quantity] Energy Star Dishwasher	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
H. [quantity] Central natural gas furnace	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
I. [quantity] Room air conditioner	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)

(ASK 1.1c-1.1d ONLY IF MEASURE = WATER HEATER)

1.1c How many gallons does your water heater hold?

_____ gallons (SKIP to 1.1e)
 D (DK)
 R (REFUSED)

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1.1d (IF DON'T KNOW WATER HEATER SIZE) Is your water heater? (READ LIST)

- 1 Very small: Less than 30 gallons
- 2 Small: 30-39 gallons
- 3 Medium: 40-59 gallons
- 4 Large: 60 gallons or more
- D (DK)
- R (REFUSED)

(ASK 1.1e ONLY IF MEASURE = DISHWASHER)

1.1e Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (SPECIFY)
- D (DK)
- R (REFUSED)

(ASK 1.1f-1.1g ONLY IF MEASURE = REFRIGERATOR)

1.1f Where is the Freezer located (mounted) on the refrigerator?

- 1 Freezer is on the bottom of the refrigerator
- 2 Freezer is on the top of the refrigerator
- 3 Freezer is on the side of the refrigerator
- 4 Refrigerator does not have an attached freezer
- D (DK)
- R (REFUSED)

1.1g Does your refrigerator have a through the door ice machine?

- 1 Yes
- 2 No
- D (DK)
- R (REFUSED)

(IF RECALLS MEASURES, SKIP TO 1.4)

1.2 (ASK IF DOESN'T RECALL ANY OF THESE MEASURES) Is it possible that someone else in your household would know about (IF REBATE: purchasing this/these [**measures**] and applying for a mail-in or instant rebate from the retailer/IF RESET AGREEMENT: signing this agreement)? (RECORD ONE NUMBER)

- 1 Yes (SKIP TO 1.3)
- 2 No (TERMINATE IF RESET ONLY)
- D (DON'T KNOW) (TERMINATE IF RESET ONLY)
- R (REFUSED) (TERMINATE)

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1.2b (IF REBATE AND Q1.2 = NO OR DON'T KNOW) San Diego Gas and Electric is offering mail-in or instant rebates for replacing less efficient electric and natural gas-fired appliances, heating and cooling, and water heating equipment with more energy-efficient equipment. The program also provides rebates for attic and wall insulation, pool pumps, and whole house fans. Rebates are paid in two ways—either in response to a mail-in application for a rebate or through an instant rebate at the retailer. The rebate program is referred to as the Residential Incentive Program. Are you sure you don't recall purchasing the/these [measures] and applying for a rebate? (RECORD ONE NUMBER)

- 1 Don't remember -> [TERMINATE, RECORD ANY COMMENTS MADE BY RESPONDENT BEFORE EXITING]
- 2 Remember -> [READ, "GREAT, THEN LET'S CONTINUE", SKIP TO 1.4]
- R (REFUSED) (TERMINATE)

1.3 May I please speak with that person? (RECORD ONE NUMBER)

- 1 Yes (BEGIN THE SURVEY AGAIN WITH THIS NEW RESPONDENT)
- 2 No (TERMINATE)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

1.4 Are you the person in your household who decided to (IF REBATE: purchase this/these [measures] and receive a rebate through SDGE's Residential Incentive Program/IF RESET AGREEMENT: sign this agreement with SDGE)?

- 1 Yes
- 2 No (SKIP BACK TO 1.3)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

Sources of Program Information (Section 2)

2.1 How did you hear about the (IF REBATE: rebate offered on the [measures] available as part of/IF RESET AGREEMENT: pool pump reset agreement) SDGE's Residential Incentive Program? (PROBE: Did you hear about the program from any other sources?) (DO NOT READ LIST, RECORD ALL THAT APPLY)

Utility provided information

- 1 (Advertising—radio, newspaper, trade journal, billboard, TV)
- 2 (Bill insert, newsletter, or other mailing)
- 3 (Website)
- 4 (Email)
- 5 (Other utility) (SPECIFY)

Local Government/Community event/Nonprofit

- 6 (Meeting, event, workshop, training) (SPECIFY)
- 7 (School)
- 8 (Local government/community agency) (SPECIFY)
- 9 (City/county Energy Center such as Pacific Energy Center, Stockton, Food Service) (SPECIFY)
- 10 (Advertising—radio, newspaper, trade journal, billboard, TV)

Other

- 11 (Home or building audit or assessment) (SPECIFY)
- 12 (Meeting, event, workshop training) (SPECIFY)
- 13 (Flex your Power TV or radio advertising)
- 14 (Other advertising, don't recall)
- 15 (Friend/Relative/Neighbor)
- 16 (Other, Specify: _____)
- D (DON'T KNOW) (SKIP TO SECTION 3)
- R (REFUSED) (SKIP TO SECTION 3)
- 19 (Other – Salesperson/Sales rep)
- 20 (Other – Installer/Contractor)

Installation Behavior—REBATE MEASURES (Section 3)

(REPEAT 3.0-3.8 FOR EACH REBATE MEASURE R RECALLS)

3.0 (IF REBATE) How did you receive the rebate for this [measure]? Did you mail in the rebate application to SDGE, or receive an instant rebate at the store when you made your purchase?

- 1 Mail in rebate
- 2 Instant rebate at store
- D (DON'T KNOW)
- R (REFUSED)

3.1a (IF QUANTITY=1) Now, I would like to understand what you did with the [measure]. Is this [measure] currently installed at your home (either indoors or outdoors)? (RECORD ONE NUMBER)

- 1 Yes (SKIP TO 3.12)
- 2 No
- D (DON'T KNOW) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)

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R (REFUSED) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)

3.1b (IF QUANTITY=1) Which of the following best describes what happened with the [measure]? (READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location (SKIP TO 3.3a)
- 2 It was installed at your home but is now permanently removed (example: broke, burned out, don't fit, don't like, etc.) (SKIP TO 3.6)
- 3 It is in storage because it is only needed during certain months of the year
- 4 It is in storage for some other reason (SKIP TO SECTION 3.8)
- 5 It was sold or given away (SKIP TO 3.3a)
- 6 Something else (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

3.2 (IF QUANTITY>1) Now, I would like to understand what you did with the [quantity] [measure]. (READ LIST, RECORD NUMBER)

- a___ How many are currently installed at your home (either indoors or outdoors) (IF RESPONSE=QUANTITY, SKIP TO 3.4)
- b___ How many are installed at some other location?
- c___ How many were installed at your home (either indoors or outdoors) but are now permanently removed (example: broke, burned out, don't fit, don't like, etc.)
- d___ How many are in storage because they are only needed during certain months of the year?
- e___ How many are in storage for some other reason?
- f___ How many were sold or given away?
- g___ Something else? (SPECIFY)

3.3a (ASK IF 3.1b=1, 3.1b=5, 3.2b>0, 3.2f>0) Is the/Are these [measure] located in **SDGE's** service territory?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

(SKIP TO 5.3 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY) AND THAT LOCATION IS **OUTSIDE** OF SCE'S SERVICE TERRITORY (3.3A NE 1).

SKIP TO W1 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY) AND THAT LOCATION IS **INSIDE** OF SCE'S SERVICE TERRITORY (3.3A = 1).

Removed Measures (ASK ONLY IF THEY SAY THEY REMOVED A MEASURE AFTER INSTALLED, 3.1b=2 or 3.2c>0)

3.6 Now let's talk about [measure] you said you installed but have since removed. Why was this removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 (Equipment failed)
- 2 (Didn't work properly)
- 3 (Wrong size—too small or too large)
- 4 (Low water flow)
- 5 (Didn't like the color)
- 6 (Didn't like appearance/unattractive)

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- 7 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

3.7 What did you replace [measure] with? (DO NOT READ LIST; PROBE FOR EFFICIENCY, RECORD ALL THAT APPLY)

- 1 (With a new high efficiency [measure])
- 2 (With a less efficient [product type])
- 3 (Re-installed old equipment)
- 4 (Did not replace)
- 5 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

Measures in Storage (ASK ONLY IF THEY SAY MEASURE IS IN STORAGE FOR SOME OTHER REASON, 3.1b=4 or 3.2e>0)

3.8 When do you think you will install the [measure]? Would you say within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

- 1 Within the next 3 months
- 2 3 to 6 months from now
- 3 6 to 12 months from now
- 4 More than a year from now
- 5 Never
- D (DON'T KNOW)
- R (REFUSED)

(ASK 3.12-3.17 ONLY FOR POOL PUMP RESET AGREEMENT)

3.12 Since participating in Residential Incentive Program on [insert date of participation], what hours of the day do you typically run your pool pump on Monday-Friday during the summer months (May-September)?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (OTHER, specify)
- 97 (DON'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.13 Since participating in Residential Incentive Program on [insert date of participation], what hours of the day do you typically run your pool pump on Monday-Friday during the winter months (October-April)?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (OTHER, specify)
- 97 (DON'T USE)
- D (DON'T KNOW)

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R (REFUSED)

3.14 Before participating in Residential Incentive Program on **[insert date of participation]**, what hours of the day did you typically run your pool pump on Monday-Friday during the summer months?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 95 No prior pool pump (SKIP TO W1)
- 96 (OTHER, specify)
- 97 (DIDN'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.15 Before participating in Residential Incentive Program on **[insert date of participation]**, what hours of the day did you typically run your pool pump on Monday-Friday during the winter months?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (OTHER, specify)
- 97 (DIDN'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.16 (IF 3.14C <> 3.12C) Why do you run your pool pump differently in the summer than you did before participation in the program?

SPECIFY: _____

- D (DON'T KNOW)
- R (REFUSED)

3.17 (IF 3.15C <> 3.13C) Why do you run your pool pump differently in the winter than you did before participation in the program?

SPECIFY: _____

- D (DON'T KNOW)
- R (REFUSED)

Free Ridership and Spillover (Section 4)

Warm-up Questions/Background Context¹

W1. Please think back to the time when you were deciding to (REBATE: buy the energy saving [product types]/RESET AGREEMENT: sign the pool pump reset agreement), perhaps recalling things that occurred in your household shortly before and after [timeframe]. What factors motivated you to (REBATE: purchase energy saving [product types]/RESET AGREEMENT: sign this agreement)? {DO NOT READ; INDICATE ALL THAT APPLY; ONCE THEY RESPONDENT HAS FINISHED, PROBE: Are there any other factors?}

1. Old equipment didn't work
2. Old equipment working poorly
3. The program incentive
4. The program technical assistance
5. Wanted to save energy
6. Wanted to reduce energy costs
7. The information provided by the Program
8. Past experience with this program
9. Because of past experience with another [utility] program
10. Recommendation from other utility program (Probe: What program? _____)
11. Recommendation of dealer/retailer
12. Recommendation of someone else (Probe: Who? _____)
13. Advertisement in newspaper (Probe: For what program? _____)
14. Radio advertisement (Probe: For what program? _____)
15. Other (SPECIFY)
16. Environmental concerns
17. Global warming
18. Liked the appearance of the [measure] more than the old one
19. Keeping up with the latest trends and fashions
- D DON'T KNOW
- R REFUSED

{REPEAT W2-C2 FOR FIRST MEASURE. REPEAT SERIES IF IS A SECOND MEASURE}

{ASK W2a-W6 ONLY FOR INCREMENTAL EFFICIENCY REBATE MEASURES}

W2a. Did you get this [measure] to replace [a/an] existing [product type]? }

1. Yes {SKIP TO W3}
2. No
- D. Don't Know {SKIP TO FR1}
- R. Refused {SKIP TO FR1}

W2b. Did you get this [measure] because you wanted to add another/more [product type] to your home?

1. Yes {SKIP TO FR1}

¹ Individual contract groups may chose to modify the wording of these warm-up questions.

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- 2. No
- D. Don't Know {SKIP TO FR1}
- R. Refused {SKIP TO FR1}

W2c. Is this [**product type**] the first you have ever had in your home?

- 1. Yes {SKIP TO FR1}
- 2. No {SKIP TO FR1}
- D. Don't Know {SKIP TO FR1}
- R. Refused {SKIP TO FR1}

W4. {IF MEASURE NOT CFL} About how old was the [**product type**] you replaced? {READ CATEGORIES IF NEEDED}

- 1. Less than 5 years old
- 2. 5 to less than 10 years old
- 3. 10 to less than 20 years old
- 4. 20 years to less than 30 years old
- 5. 30 or more years old
- D DON'T KNOW
- R REFUSED

W5. Was the old [**product type**] working or not working?

- 1. Working
- 2. Not working {SKIP TO FR1}
- D DON'T KNOW {SKIP TO FR1}
- R REFUSED {SKIP TO FR1}

W6. Was the old [**product type**] in good, fair, or poor working condition?

- 1. Good
- 2. Fair
- 3. Poor
- D DON'T KNOW
- R REFUSED

W7. (INSULATION) Was the [product type] you received a rebate for installed in areas where no prior insulation existed?

- 1. Yes
- 2. No
- D. Don't Know
- R. Refused

Free-Ridership Questions – REBATED MEASURES MODULE

FR1. At the time that you first heard about the **[assistance]** from **[utility]** for **[measure]**, had you...?
{READ LIST}

1. Already been thinking about purchasing **[product type]**? {IF NO, SKIP TO FR2}
2. Already begun collecting information about **[product type]**? {IF NO, SKIP TO FR2}
- 3a. **{FOR INCREMENTAL EFFICIENCY MEASURES}** Already selected the **[measure]** you were going to get? {IF NO, SKIP TO FR2}
- 3b. **{FOR EFFICIENCY ENHANCEMENT MEASURES}** Already decided to buy the **[product type]**? {IF NO, SKIP TO FR2}
4. Already installed the energy efficient **[measure]**? {IF YES, SKIP TO FR1B; ELSE FR2}
5. {DON'T READ} Other: _____ {SKIP TO FR2}
- D DON'T KNOW {SKIP TO FR2}
- R REFUSED {SKIP TO FR2}

FR1B.

So, the **[measure]** was installed before you learned about the **[assistance]** from **[utility]**?

- 1 Yes {SKIP FR5}
- 2 No
- D Don't know
- R Refused

FR2. Just to be sure I understand, did you have specific plans to install a(n) **[product type]** before learning about the **[assistance]** available through the **[program]**?

1. Yes
2. No {SKIP TO FR4}
- D DON'T KNOW {SKIP TO FR4}
- R REFUSED {SKIP TO FR4}

FR3. Did you have to make any changes to your existing plans in order to receive this **[assistance]** through the **[program]**?

1. Yes
2. No
- D DON'T KNOW
- R REFUSED

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FR4. {REPEAT AS NEEDED FOR FR4 PARTS A – D} If the [assistance] from the [utility] [program] had not been available, would you still have:

FR4A. Purchased a(n)_ [product type] ?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW
- R REFUSED

FR4B. Purchased the [product type] at the same time as you did? (PROBE: That would be around [date of participation])

- 1. Yes {SKIP TO FR4C}
- 2. No
- D DON'T KNOW {SKIP TO FR4C}
- R REFUSED {SKIP TO FR4C}

FR4B1. Bought the [product type] earlier than you did, or later?

- 1. Earlier
- 2. Same Time {REPEAT QUESTION FR4B}
- 3. Later
- D DON'T KNOW {SKIP TO FR4C}
- R REFUSED {SKIP TO FR4C}

FR4B2. How much [earlier/later] would you have bought the [product type]?

- _____ Years {AND/OR} _____Months
- D DON'T KNOW
 - R REFUSED

FR4C. {IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM, OR MEASURE IS OF VARIABLE AMOUNT} Without the program, would you have purchased the same quantity as you did?

- 1. Yes {SKIP TO FR4D}
- 2. No
- D DON'T KNOW {SKIP TO FR4D}
- R REFUSED {SKIP TO FR4D}

FR4C1. How many/much would you have purchased without the program?

- _____ {RECORD NUMBER}
- D DON'T KNOW
 - R REFUSED

FR4D. {FOR INCREMENTAL EFFICIENCY MEASURES AND INSULATION} Purchased the same [INSULATION = R value/OTHER=efficiency] of [product type]?

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- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4E. If the **[assistance]** from the **[utility] [program]** had not been available, would you have done anything else differently?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW {SKIP TO FR5}
- R REFUSED {SKIP TO FR5}

FR4E1 What would you have done differently?

{RECORD RESPONSE}: _____

FR5. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same **[measure]** if you had not received any **[assistance]** from the program?

- {RECORD RESPONSE (0-10)} _____ {SKIP TO FR7}
- D DON'T KNOW {SKIP TO FR7}
 - R REFUSED {SKIP TO FR7}

{SKIP TO FR10 IF PROGRAM DOES NOT PROVIDE A FINANCIAL INCENTIVE/SUBSIDY OR DATABASE DOES NOT CONTAIN THAT INFORMATION}

FR7. Our records indicate you received about **[amount of program incentive/subsidy]** from the **[utility] [program]** either directly or at the time of purchase to offset the cost of the **[product type]**. Does this amount sound about right?

- 1. Yes {SKIP TO FR9}
- 2. No
- D DON'T KNOW {SKIP TO FR9}
- R REFUSED {SKIP TO FR9}

FR8. What would you estimate to be the actual amount?

- {RECORD RESPONSE} _____ {SET = NEW AMOUNT OF PROGRAM INCENTIVE/SUBSIDY}
- D DON'T KNOW
 - R REFUSED

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I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR9. If I had not had any assistance from the program, I would have paid the additional **[amount of program incentive/subsidy]** to buy the **[measure]** on my own.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

{READ ONLY IF FR7-FR9 WAS SKIPPED}: I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR10. There may have been several reasons for my purchase decision. But the **[assistance]** from the **[utility] [program]** was a critical factor in my decision to purchase the high efficiency/energy efficient product.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

FR11. I would have bought a(n) **[product type]** within a **year** of when I did even without the **[assistance]** from the **[utility] [program]**.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

Free-Ridership Questions – Pool Pump Reset Agreement Module

{ONLY ASK OF POOL PUMP RESET AGREEMENTS}

FR1. At the time that you first heard about the **incentive** from **SDG&E** for the Pool Pump Reset Agreement, had you...? {READ LIST}

1. Already been thinking about resetting your pool filtering times? (IF NO, SKIP TO FR2)
 2. Already begun collecting information about resetting your pool filtering times? (IF NO, SKIP TO FR2)
 3. Already selected new pool filtering times? (IF NO, SKIP TO FR2)
 4. Already changed your pool filtering times {IF YES, SKIP TO FR5; ELSE FR2}
 5. {DON'T READ} Other: _____ (SKIP TO FR2)
- D DON'T KNOW (SKIP TO FR2)
R REFUSED (SKIP TO FR2)

FR2. Just to be sure I understand, did you have specific plans to reset your pool filtering times before learning about the **incentive** available through the **Residential Incentive Program**?

1. Yes

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- 2. No {SKIP TO FR4}
- D DON'T KNOW {SKIP TO FR4}
- R REFUSED {SKIP TO FR4}

FR3. Did you have to make any changes to your existing plans in order to receive this **incentive** through the **Residential Incentive Program**?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4. If the **incentive** from the **SDG&E Residential Incentive Program** had not been available, would you still have:

FR4A. Changed your pool filtering times ?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW
- R REFUSED

FR4B1. Changed your pool filtering times at an earlier date than you did or a later date?

- 1. Earlier
- 2. Same Time {REPEAT QUESTION FR4A}
- 3. Later
- D DON'T KNOW {SKIP TO FR4C}
- R REFUSED {SKIP TO FR4C}

FR4B2. How much **[earlier/later]** would you have reset your filtering times?

- _____ Years {AND/OR} _____ Months
- D DON'T KNOW
 - R REFUSED

FR4E. If the **incentive** from the **SDG&E Residential Incentive Program** had not been available, would you have done anything else differently?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW {SKIP TO FR5}
- R REFUSED {SKIP TO FR5}

FR4E1 What would you have done differently?

{RECORD RESPONSE}: _____

FR5. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have reset your filtering times if you had not received any **incentive** from the program?

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{RECORD RESPONSE (0-10)} _____ {SKIP TO FR7}
D DON'T KNOW {SKIP TO FR7}
R REFUSED {SKIP TO FR7}

{SKIP TO FR10 IF PROGRAM DOES NOT PROVIDE A FINANCIAL INCENTIVE/SUBSIDY OR DATABASE DOES NOT CONTAIN THAT INFORMATION}

FR7. Our records indicate you received about **\$25** from the **SDG&E Residential Incentive Program**. Does this amount sound about right?

- 1. Yes {SKIP TO FR9}
- 2. No
- D DON'T KNOW {SKIP TO FR9}
- R REFUSED {SKIP TO FR9}

FR8. What would you estimate to be the actual amount?

{RECORD RESPONSE} _____ {SET = NEW AMOUNT OF PROGRAM INCENTIVE/SUBSIDY}
D DON'T KNOW
R REFUSED

I'm going to read several statements about how you came to participate in the Pool Pump Reset Agreement. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR9. If I had not had any assistance from the program, I would have reset my filtering times on my own?

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

FR10. There may have been several reasons to reset my pool filter times. But the **incentive** from the **SDG&E Residential Incentive Program** was a critical factor in my decision to reset my pool filtering times.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

FR11. I would have reset my pool filtering times within **a year** of when I did even without the **incentive** from the **SDG&E Residential Incentive Program**.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

1.1.1 Consistency Check & Resolution

{C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

- FR4A (efficiency enhancement measures) OR FR4D (incremental efficiency measures)
- FR5
- FR10
- FR11

{IF FR4A/D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the [measure] without the program'}

{IF FR4A/D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would not have purchased the [measure] without the program'}

{IF FR5 = 0,1 AND FR4A/D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the [measure] without the program'}

{IF FR5 = 9,10 AND FR4A/D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the [measure] without the program'}

{IF FR10 = 0,1 AND FR4A/D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program'}

{IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program'}

{IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the [product type] within [a year/2 years] even without the program'}

{IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the [product type] within [a year/2 years] even without the program'}

C1. Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **[measure]** at the time you did? {RECORD VERBATIM RESPONSE BELOW}

C2. **[fill with wording and response categories to the one question which was inconsistent]** {INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE}

Recent Program Participation (Section 5)

5.3 Have you participated in any other programs offered by SDGE because of your experience with the Residential Incentive Program.

- 1 Yes
- 2 No (SKIP TO 5.5)
- D (DON'T KNOW) (SKIP TO 5.5)
- R (REFUSED) (SKIP TO 5.5)

5.4 Which programs?

5.5 Which of the following phrases or messages have you heard before today? (ROTATE STARTING POINT)

A. Energy Star

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

B. Don't Trash California

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

C. Energy Hog

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

D. Click it or Ticket

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

E. Flex Your Power

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

F. Flex Alert

- 1 Yes
- 2 No

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- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

G. Spare the Air

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 6)

NOTE: ALL QUESTIONS STARTING WITH THE LETTER 'C' ARE QUESTIONS THAT WOULD BE ASKED ONLY IF A BILLING ANALYSIS IS BEING DONE FOR POOL PUMPS, POOL PUMP AGREEMENTS, AND INSULATION.

The last questions ask about household characteristics to make sure we're getting a representative sample of [utility] residents.

6.1 Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6.2 In what type of building do you live? (READ LIST IF NEEDED; PROBE IF SAYS CONDO: How many units are in your building?)

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Other (SPECIFY)
- 8 Boat, RV, Van, etc.
- D (DON'T KNOW)
- R (REFUSED)

6.3 About when was this building first built? (READ LIST IF NEEDED)

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 7 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

6.3a Were you living in this same home around [insert date 12 months prior to time of participation]?

SDGE 3024 Residential Incentive Program Participant Survey

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

6.4a How many full or half bathrooms do you have in your home? (PROBE: A full bathroom is one that has a sink with running water, and a toilet, and either a bathtub or shower. A half bathroom has either a toilet or a bathtub or a shower?)

- _____ Bathrooms
- D (DON'T KNOW)
- R (REFUSED)

6.4b How many bedrooms do you have in your home (If a one-room efficiency, or studio apartment, bedrooms=0)

- _____ bedrooms
- D (DON'T KNOW)
- R (REFUSED)

6.4c Other than bedrooms and bathrooms, how many other rooms are there in your home? Do not count laundry rooms, foyers, unfinished storage spaces, porches, or garages.

- _____ Other rooms
- D (DON'T KNOW)
- R (REFUSED)

[If 6.3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.5a]

C6.4d Did you do any remodeling, renovation or additions since January 1, 2005?

- 1 Yes
- 2 No (SKIP TO 6.5a)
- D (DON'T KNOW) (SKIP TO 6.5a)
- R (REFUSED) (SKIP TO 6.5a)

C6.4e How many remodels, renovations or additions have you done since then?

- _____ Remodels, renovations or additions
- D (DON'T KNOW)
- R (REFUSED)

SDGE 3024 Residential Incentive Program Participant Survey

C6.4f I'm going to ask you several questions regarding the timeframe of your remodels, renovations or additions. We will try to run through them quickly. (ASK A-C FOR EACH REMODEL THAT TOOK PLACE SINCE JANUARY 1, 2005).

- a. In what month and year did it start?
- b. Did this increase or decrease your home's square footage, not counting unfinished storage spaces, porches or garages,
- c. In what month and year did it finish?

	a. START (mm/yyyy)	b. Increase or decrease? 1 Increase 2 Decrease 3 Same D (DK) R (REFUSED)	C. FINISH (mm/yyyy)
1			
2			
3			
4			

6.5a Including yourself, how many people currently live in your home year-round?

- _____ people
- D (DON'T KNOW)
- R (REFUSED)

6.5b (IF 6.5a=1) Which of the following best describes your age?

- 1 Less than 18 years old
- 2 18-24 years old
- 3 25-34 years old
- 4 35-44 years old
- 5 45-54 years old
- 6 55-64 years old
- 7 65 or older
- D (DON'T KNOW)
- R (REFUSED)

6.5c (IF 6.5a>1) Including yourself, how many people currently living in your home year-round are in the following age groups?

- _____ Less than 18 years old
- _____ 18-24 years old
- _____ 25-34 years old
- _____ 35-44 years old
- _____ 45-54 years old
- _____ 55-64 years old
- _____ 65 or older
- TOTAL SHOULD EQUAL 6.5a
- R (REFUSED)

[If 6.3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.7]

SDGE 3024 Residential Incentive Program Participant Survey

C6.5d Has the total number of people living in your home year-round changed since [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No (SKIP TO 6.6)
- D (DON'T KNOW) (SKIP TO 6.6)
- R (REFUSED) (SKIP TO 6.6)

C6.5e Do more people or less people live in your home now?

- 1 More→How many more? _____
- 2 Less→How many less? _____
- D (DON'T KNOW)
- R (REFUSED)

C6.5f In what year(s) did the number of people in your household change? (RECORD ALL YEARS OF CHANGE—NET CHANGE IS CALCULATED FROM C6.5e)

- 1st NET CHANGE: _____ YEAR
- 2nd NET CHANGE: _____ YEAR
- 3rd NET CHANGE: _____ YEAR
- D (DON'T KNOW)
- R (REFUSED)

6.7 This next question asks about other changes you have made that we haven't already talked about. Since January 1, 2005 have you made any other changes to the appliances, equipment or other characteristics of your home that would affect how much energy you are using?

- 1 Yes [ASK 6.7a-NSP5 FOR EACH MEASURE INSTALLED BEFORE ASKING 6.7i]
- 2 No [SKIP TO 6.7i]
- D DK [SKIP TO 6.7i]
- R REFUSED [SKIP TO 6.7i]

a. What types of changes did you make? (DO NOT READ. RECORD EACH TYPE OF CHANGE MADE. PROBE: Anything else?)

Heating and air conditioning measures

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Furnace
- 5 Programmable thermostat

Lighting measures

- 6 Fluorescent indoor fixture
- 7 Fluorescent outdoor fixture
- 8 Compact fluorescent bulb
- 9 Compact fluorescent fixture
- 10 Motion sensor
- 11 Dimmer switch

Laundry measures

- 12 Clothes washer
- 13 Clothes dryer

Water using measures

- 14 Water heater
- 15 Low Flow showerheads
- 16 Faucet aerators

Kitchen appliances

- 17 Refrigerator
- 18 Freezer
- 19 Range/oven
- 20 Dishwasher

Pool/spa/jacuzzi

- 21 Swimming pool
- 22 Swimming pool pump
- 23 Swimming pool cover
- 24 Spa/jacuzzi

Insulation/weather-stripping/sealing

- 25 Floor, wall, ceiling, or attic insulation
- 26 Weather-stripping/caulking/weatherization
- 27 Water heater/pipe wrapping/insulation
- 28 Duct sealing/repair (not cleaning)

Windows

- 29 Windows

- 30 Other (SPECIFY)
- 00 No other changes (SKIP TO C6.7i)
- D DK
- R REFUSED

SDGE 3024 Residential Incentive Program Participant Survey

b. Did this equipment replace existing equipment/measures or was it new to your home?

- 1 Replaced existing equipment
- 2 New to home
- D DK
- R REFUSED

c. When did this occur? (RECORD MONTH AND YEAR)

____/____ MM/YYYY

D DK --→Was this before or after you participated in the [program]?

- 1 Before
 - 2 After
 - D DK
 - R REFUSED
- R REFUSED

(ASK 6.7Cd and 6.7Ce ONLY IF BILLING ANALYSIS BEING DONE AND IF 6.7a = 4, 13, 14, 19, 24)

Cd. What type of fuel does the new [equipment] use?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D DK
- R REFUSED

Ce. (ASK IF 6.7b = REPLACED) What was the fuel type of the [equipment] you replaced?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D DK
- R REFUSED

f. Did you receive a rebate for this [equipment] through a [utility] program?

- 1 Yes [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- 2 No
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]

(ASK 6.7g and 6.7h IF 1-4, 12, 13, 14, 17, 18, 19, 20, 22, 24, 29 IN 6.7a; ELSE SKIP TO NSP4)

g. Is the new [equipment] energy efficient?

- 1 Yes
- 2 No [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]

h. How do you know that this equipment is energy efficient? (PROBE: IS IT ENERGY STAR® RATED?)

SDGE 3024 Residential Incentive Program Participant Survey

(ASK NSP4-5 ONLY IF 6.7f = NO AND 6.7g = YES AND 6.7c = AFTER DATE OF PARTICIPATION)

NSP4. I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the [utility] [program] in [2006, 2007, 2008] influenced my decision to install different types of high efficiency equipment on my own.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

NSP5. Why did you purchase this high efficiency equipment without going through a [utility] program?
{DO NOT READ; INDICATE ALL THAT APPLY}

1. Too much paperwork
 2. Takes too long to get approval
 3. No time to participate, needed equipment immediately
 4. The program had ended
 5. The equipment would not qualify {PROBE: WHY NOT?} _____
 6. The amount of the rebate wasn't important enough
 7. Did not know program was available
 8. There was no program available
 9. Other {SPECIFY} _____
- D DON'T KNOW
R REFUSED

(ASK C6.7i=c6.7m ONLY IF BILLING ANALYSIS BEING DONE)

C6.7i [IF FURNACE WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have gas or electric space heating?

- 1 Gas
 - 2 Electric
 - 3 Both
 - 4 Other (Specify) _____
 - 7 None
- D (DON'T KNOW)
R (REFUSED)

SDGE 3024 Residential Incentive Program Participant Survey

C6.7j [IF WATER HEATER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

C6.7k [IF CLOTHES DRYER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric clothes dryer?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

C6.7l [IF RANGE/OVEN WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric range/oven?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

C6.7m [IF ROOM, CENTRAL AC, OR EVAPORATIVE COOLER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] What type of air conditioning system, if any, do you use in your home? (INDICATE ALL THAT APPLY)

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Other (Specify) _____
- 9 None
- D (DON'T KNOW)
- R (REFUSED)

6.8a Do you receive an electric or natural gas bill directly from SDGE?

- 1 Yes
- 2 No (SKIP TO 6.9)
- D (DON'T KNOW) (SKIP TO 6.9)
- R (REFUSED) (SKIP TO 6.9)

SDGE 3024 Residential Incentive Program Participant Survey

6.8b Does this bill only include your home's electric or natural gas use, or does it include the use of other households?

- 1 Only 1 household
- 2 Multiple households
- D (DON'T KNOW)
- R (REFUSED)

6.13 What is the primary language spoken in your home? (DO NOT READ; PROBE IF R SAYS CHINESE: Would this be Mandarin or Cantonese)

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

On-site Recruiting (Section 7)

(RECRUIT FOR SINGLE AND MULTIPLE SPEED POOL PUMPS AND POOL PUMP RESET AGREEMENTS ONLY)

7.1 We would like to offer you \$25 to participate in the on-site component of this evaluation. We are NOT interested in selling anything. We would like to have one of our auditors visit your home at your convenience to look at the pool pump you installed through the program and how it/they are operating. The on-site visit would only take about 20 minutes. Would that be alright with you?

- 1 Yes→Great! Someone will give you a call back to determine when they can schedule an appointment with one of our auditors in your area. Thank you for your cooperation with this important effort.
- 2 No

Thank and Terminate

HVAC Unit Site Sheet

Site ID	
Customer Name	
Customer Address	
Date of Visit	

AC Manf	Existing	New	HVAC Sys Type	Package	Split	Furnace Only
AC Model #			Heating Type	Elec Resist	Gas	HP
AC Serial #			Heating Manf	Existing	New	
Year Manf			Heating Model #			
AC Eff			Heating Serial #			
Refrig Type	R-22	R-410a	Heating Capacity			
Metering Device	Non-TXV	TXV	Heating Eff			
Evap Manf	Existing	New	Supply Fan Hp/Amps			
Evap Coil Model #			Condenser Fan Hp/FLA			
Evap Coil Serial #			Comp Motor RLA			
Cooling Capacity (Cond/Coil)						
Filter Information (MERV rating, cleanliness, size, photo, comments)						

Is unit accessible for maintenance? π Yes π No – describe below

Describe general unit condition: π Good π Average π Poor – describe below

Describe general condition around condenser π Good π Average π Poor – describe below

Notes:

Logger Installation

	Logger ID	Install Date	Install Time	Notes
Furnace Run Time - Unit 1				
Furnace Run Time - Unit 2				
Furnace Run Time - Unit 3				

Installation Notes

CPUC HIM - 90+ AFUE Residential Gas Furnaces

SECTION 1 - CUSTOMER and SCHEDULING

Customer Name(s): «rgfirstname» «rglastname»		Site ID: «rgsaid»	
Site Address: «rgaddress»			Phone 1: «rgphone»
City: «rgcity»	Zip: «rgzip»	Phone 2:	
Email:		Incentive ID:	
	Logger Installation Site Visit	Logger Retrieval Site Visit	
Inspector(s):			
Scheduled Date & Time:			
Actual Date & Time:			
Total Time Onsite:			
Customer and Scheduling Notes:			

SECTION 2 - DATABASE RECORDS

Application ID:		Climate Zone:		Rebate Paid Date:	
Furnace Measure Description:		Furnace Meas Qty:		Annual Therm Savings:	
VSD Meas Desc (if applicable):		VSD Meas Qty:		Annual Elec Savings:	
Gas Utility Name:		Gas SAID or Acct Number:			
Electric Utility Name:		Elec SAID or Acct Number:			
Database Records Notes:					

SECTION 3 - CUSTOMER INTERVIEW

3.1 What type of fuel do you use to heat your home? Gas Electric Propane Heat Pump

**** IMPORTANT NOTE: If the Heating Fuel Type = Propane, collect data but do not install meter. If Heating Fuel Type = Electric or Heat Pump, thank the participant and move on to next site. ****

3.2 Are your furnace and air conditioner all in one package or are they split? Packaged Split

3.2 In what year was your home built? _____

3.3 What is the conditioned square footage of your home? _____ square feet

3.4 Have you added any insulation to your home in the last two years, or do you plan to do so in the next 4 months? Yes No

[If 3.4 = Yes] What type of insulation did/will you add? Ceiling Wall Floor Other: _____

[If 3.4 = Yes] What month and year did/will you add the it? _____ What was/will be the R-value? _____

SECTION 3 - CUSTOMER INTERVIEW (continued from previous page)

3.5 Have you replaced any of your gas appliances in the last two years, or do you plan to do so in the next 4 months? Yes No

[If 3.5 = Yes] What gas appliance did/will you replace? (check all that apply)

- Water Heater *Month and year of replacement?* _____ *Was the previous unit gas or electric?* Gas Elec
- Stove *Month and year of replacement?* _____ *Was the previous unit gas or electric?* Gas Elec
- Dryer *Month and year of replacement?* _____ *Was the previous unit gas or electric?* Gas Elec
- Other: *Month/yr of replacement?* _____ *Was the previous unit gas or electric?* Gas Elec

3.6 Why did you replace your previous furnace? Replaced on Burnout Early Replacement Other: _____

[If 3.6 = Early Replacement] How old was the replaced unit? _____ years

Now I'd like to take a look at your thermostat, record the settings, and ask you a few questions about your setpoints.

Current Heating Setpoints

Start Month:	End Month:		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Heating Setpt 1:	degF	Hrs/Day at Setpt 1:							
Heating Setpt 2:	degF	Hrs/Day at Setpt 2:							
Heating Setpt 3:	degF	Hrs/Day at Setpt 3:							
Hours Per Day Unit is Turned Off:									

Current Cooling Setpoints

Start Month:	End Month:		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Heating Setpt 1:	degF	Hrs/Day at Setpt 1:							
Heating Setpt 2:	degF	Hrs/Day at Setpt 2:							
Heating Setpt 3:	degF	Hrs/Day at Setpt 3:							
Hours Per Day Unit is Turned Off:									

3.7 Have your heating setpoints changed significantly since your new furnace was installed? No Yes (fill out table below)

Previous Heating Setpoints (record only if significantly different than current setpoints)

Start Month:	End Month:		Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Heating Setpt 1:	degF	Hrs/Day at Setpt 1:							
Heating Setpt 2:	degF	Hrs/Day at Setpt 2:							
Heating Setpt 3:	degF	Hrs/Day at Setpt 3:							
Hours Per Day Unit is Turned Off:									

SECTION 4 - HEATING EQUIPMENT

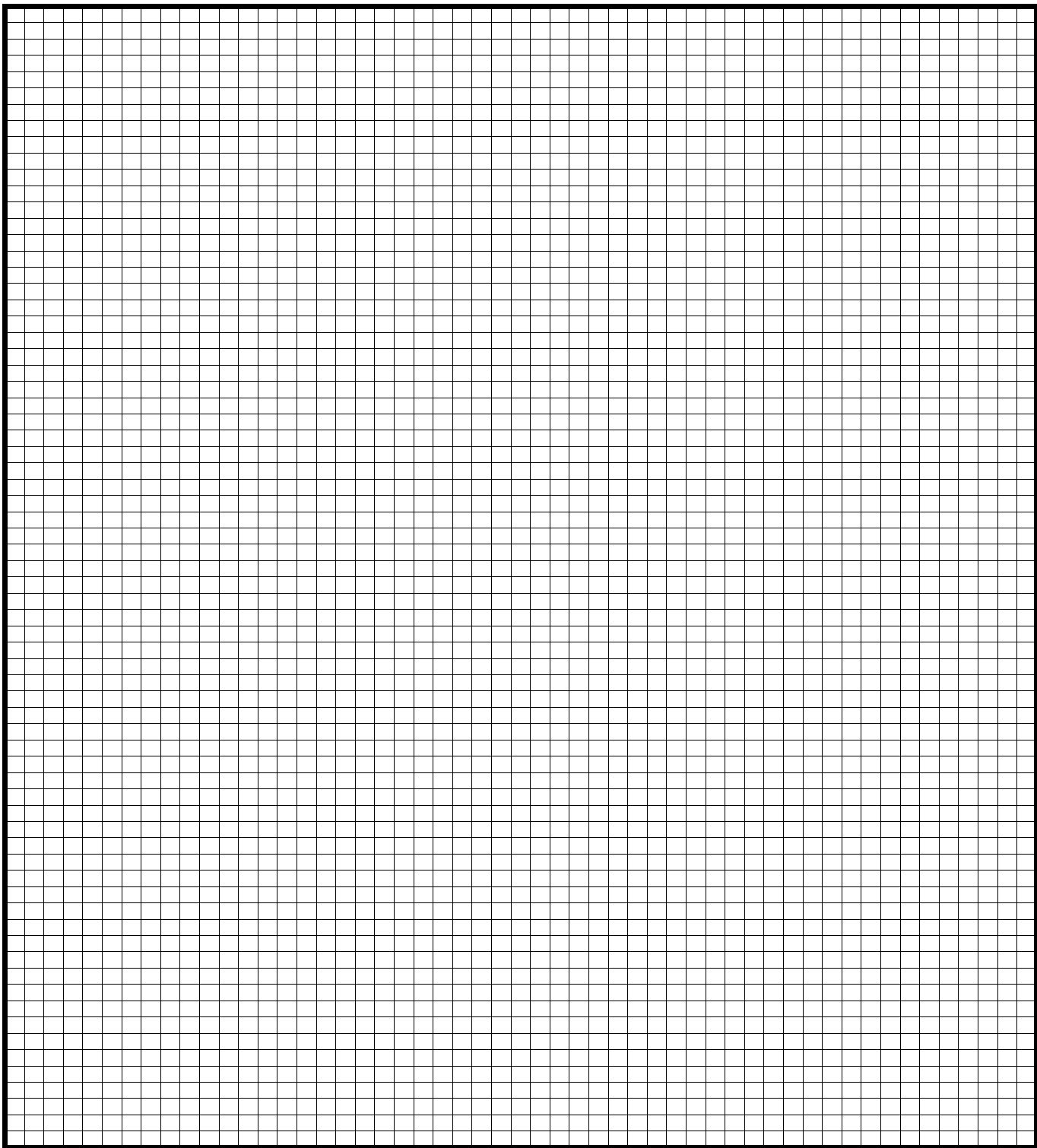
Heating Manufacturer:							
Heating Model Number:							
Heating Serial Number:							
Heating Input:		<input type="checkbox"/> kBtuh	<input type="checkbox"/> tons	Heating Output:		<input type="checkbox"/> kBtuh	<input type="checkbox"/> tons
Heating Efficiency:		<input type="checkbox"/> AFUE	<input type="checkbox"/> HSPF	Year Mfr:			
Data Logger Installation							
Location	Serial Number	Installation Date & Time	Retrieval Date & Time	Notes			
Heating Stage 1:							
Heating Stage 2:							
Supply Fan VSD:							
Heating Equipment Notes:							

SECTION 5 - COOLING EQUIPMENT

Condenser Manufacturer:							
Condenser Model Number:							
Condenser Serial Number:							
Condenser Disposition:	<input type="checkbox"/> Existing	<input type="checkbox"/> Replaced on Burnout	<input type="checkbox"/> Early Replacement	<i>If Early Replacement, how old was replaced unit?</i>		yrs.	
Refrig Type:	<input type="checkbox"/> R-22	<input type="checkbox"/> R-410a	TXV?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	Cooling Capacity:	
						<input type="checkbox"/> kBtuh	<input type="checkbox"/> tons
Evap Coil Manufacturer:							
Evap Coil Model Number:							
Evap Coil Serial Number:							
Evap Coil Disposition:	<input type="checkbox"/> Existing	<input type="checkbox"/> Replaced on Burnout	<input type="checkbox"/> Early Replacement	<i>If Early Replacement, how old was replaced unit?</i>		yrs.	
Duct Location:	<input type="checkbox"/> Attic	<input type="checkbox"/> Crawl Space	<input type="checkbox"/> Garage	<input type="checkbox"/> Other:			
	Quantity	RLA-Volts	FLA-Volts	Horsepower			
Compressor:							
Condenser Fan:							
Evap/Supply Fan:					VSD?	<input type="checkbox"/> Yes	<input type="checkbox"/> No
Supply Voltage:							
Cooling Equipment Notes:							

SECTION 6 - METER INFORMATION AND BUILDING SKETCH

Gas Meter Number:		Gas Meter Reading at Logger Installation:	
Electric Meter Number:		Gas Meter Reading at Logger Retrieval:	
Measured Conditioned Floor Area (from sketch below):		<i>square feet</i>	



Appendix B – Clothes Washers

B1 – Telephone Surveys

- Clothes Washer Participant Survey
- Non Participant Survey and Recruitment Effort
- PG&E 2000 Mass Markets Single Family Measures Participant Survey
- SCG 3517 SFEER Participant Survey

B2 – Data Collection Instruments

- Clothes Washer Site Data Collection Form
- SFEER Site Verification Form

**SCG 3517 Single Family Energy Efficiency Retrofit Program
PGE 2000R Mass Markets Program**

The following measures will be asked about in the survey: Energy Star clothes washer

Instrument-specific variables-- The CATI software will automatically fill the appropriate description in the questions.

[Product Type]

Clothes washer

[Measure]

Energy Star clothes washer

[Assistance]

Rebate

[Program]

2006-2008 PGE Energy Efficiency Rebates for Your Home

2006-2008 SCG Home Energy Efficiency Rebate Program

[Utility]

PGE

SCG

[Program Incentive]

Rebate dollar amount (should be PGE \$35 or \$75, SCG \$35)

[Quantity]

Quantity purchased

[Incremental efficiency measures]

Energy Star clothes washer

Introduction

Hello, my name is [interviewer name], and I'm calling on behalf of the California Public Utilities Commission regarding [Utility]'s [Program]. May I speak with [contact name]?

- 1 Yes
- 2 No [attempt to convert; if R not available, ask for an adult who makes decisions on how household uses energy]

I'm with PA Consulting Group, an independent research firm. I am calling to learn about your experiences with the ENERGY STAR clothes washer you purchased and received a rebate for through [Utility]'s Program.

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and [Utility] better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about (15) minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-454-5070)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the clothes washer you purchased and received a rebate through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call 415 703-2782, or visit their website: www.cpuc.ca.gov/eevalidation.)

(NOTE: For all questions, "DON'T KNOW" and "REFUSED" will be coded if offered as a response.)

Recall of Participation/Identification of Decision Maker (Section 1)

(ASSUMPTION throughout is that nearly all households purchase and use one clothes washer)

1_1b Program records indicate that you purchased and received a mail-in or instant rebate for a qualifying ENERGY STAR clothes washer through the 2006-2008 **[Program]** around **[insert date of participation]**. Do you recall purchasing this ENERGY STAR clothes washer?

MEASURE	Do you recall purchasing ?
[Energy Star] Clothes Washer	1 Yes 2 No D (DK) R (REFUSED)

(IF RECALLS MEASURE, SKIP TO 1.4)

1_2 (ASK IF DOESN'T RECALL THE MEASURE) Is it possible that someone else in your household would know about purchasing this ENERGY STAR clothes washer and applying for a mail-in rebate or receiving an instant rebate from the retailer? (RECORD ONE NUMBER)

- 1 Yes (SKIP TO 1.3)
- 2 No
- D (DON'T KNOW)
- R (REFUSED) (TERMINATE)

1_2b **[Utility]** offers rebates for replacing less efficient appliances with more energy-efficient equipment. Rebates are paid in two ways—either in response to a mail-in application for a rebate or through an instant rebate at the retailer. The rebate program is referred to as **[Program]**. Are you sure you don't recall purchasing the ENERGY STAR clothes washer and applying for a rebate from the utility? (RECORD ONE NUMBER)

- 1 Don't remember -> [TERMINATE, RECORD ANY COMMENTS MADE BY RESPONDENT BEFORE EXITING]
- 2 Remember -> [READ, "GREAT, THEN LET'S CONTINUE", SKIP TO 1.4]
- R (REFUSED) (TERMINATE)

1_3 May I please speak with that person? (RECORD ONE NUMBER)

- 1 Yes (BEGIN THE SURVEY AGAIN WITH THIS NEW RESPONDENT)
- 2 No (TERMINATE)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

1_4 Are you the person in your household who decided to purchase this ENERGY STAR clothes washer and receive a rebate through **[Utility]**'s **[Program]**?

- 1 Yes
- 2 No (SKIP BACK TO 1.3)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

Sources of Program Information (Section 2)

2_1 How did you hear about rebate offered on ENERGY STAR clothes washer available as part of [Utility]'s [Program]? (PROBE: Did you hear about the program from any other sources?) (DO NOT READ LIST, RECORD ALL THAT APPLY)

Utility provided information

- 1 (Advertising—radio, newspaper, trade journal, billboard, TV)
- 2 (Bill insert, newsletter, or other mailing)
- 3 (Website)
- 4 (Email)
- 5 (Other utility) (SPECIFY)

Local Government/Community event/Nonprofit

- 6 (Meeting, event, workshop, training) (SPECIFY)
- 7 (School)
- 8 (Local government/community agency) (SPECIFY)
- 9 (City/county Energy Center such as Pacific Energy Center, Stockton, Food Service) (SPECIFY)
- 10 (Advertising—radio, newspaper, trade journal, billboard, TV)

Other

- 11 (Appliance/Home improvement store salesperson)
- 12 (In store advertisement at Appliance / Home Improvement store)
- 13 (Home or building audit or assessment) (SPECIFY)
- 14 (Meeting, event, workshop training) (SPECIFY)
- 15 (Flex your Power TV or radio advertising)
- 16 (Other advertising, don't recall)
- 17 (Friend/Relative/Neighbor)
- 18 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

Installation Behavior (Section 3)

(QUESTIONS IN THIS SECTION ASSUME THAT RESPONDENT PURCHASED ONE CLOTHES WASHER.)

3_1a Now, I would like to understand what you did with the ENERGY STAR clothes washer. Is this ENERGY STAR clothes washer currently installed at your home? (RECORD ONE NUMBER)

- 1 Yes (SKIP TO SECTION 3.8)
- 2 No
- D (DON'T KNOW) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)
- R (REFUSED) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)

3_1b Which of the following best describes what happened with the ENERGY STAR clothes washer?
(READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location
- 2 It was installed at your home but is now permanently removed (example: broke, burned out, don't fit, don't like, etc.)
- 3 It was installed at home, wasn't working properly, and was replaced with another energy efficient clothes washer through warranty
- 5 It was sold or given away
- 6 Something else (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

3.3a (ASK IF 3.1b=1 or 3.1b=5) Is the location where the energy efficient clothes washer was installed in [Utility]'s service territory?

- 1 Yes (SKIP TO W1)
- 2 No (TERMINATE)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

Removed Measures (ASK ONLY IF THEY SAY THEY REMOVED A MEASURE AFTER INSTALLED, 3.1b=2)

3_6 Now let's talk about ENERGY STAR clothes washer you said you installed but have since removed. Why was this removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 (Equipment failed)
- 2 (Didn't work properly)
- 3 (Wrong size—too small or too large)
- 4 (Didn't like the color)
- 5 (Didn't like appearance/unattractive)
- 6 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

3_7 What did you replace ENERGY STAR clothes washer with? (DO NOT READ LIST; PROBE FOR EFFICIENCY, RECORD ALL THAT APPLY)

- 1 (With a new high efficiency ENERGY STAR clothes washer)
- 2 (With a less efficient clothes washer)
- 3 (Re-installed old equipment)
- 4 (Did not replace)
- 5 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

3_8a Regarding your clothes washer, approximately how many wash loads to you do in a (typical) week?

- 1 1
- 2 2
- 3 3
- 4 4
- 5 5
- 6 6
- 7 7
- 8 8
- 9 9
- 10 10
- 11 More than 10. Record number if given
- D (DON'T KNOW)
- R (REFUSED)

3_8c How does the number of wash loads you do now compare to the number that you did with your old clothes washer?

- 1 Same (skip to 3_9a)
- 2 Different
- D (DON'T KNOW)
- R (REFUSED)

3_8d If different, do you do more or less loads now than you did before? Could you estimate a percentage?

- 1 More loads now, Record percentage (like 125%)
- 2 Less loads now, Record percentage (like 75%)
- D (DON'T KNOW)
- R (REFUSED)

3_9a Do you typically choose the wash water temperature or do you mostly rely on the defaults that go with the machine's defined cycles?

- 1 Choose wash water temperature
- 2 Use the defaults that go with the machine's defined cycles
- D (DON'T KNOW)
- R (REFUSED)

3_9b About what percentage of wash cycles are...
(Total should be 100%)

- ___ Hot
- ___ Warm
- ___ Cold
- ___ (DON'T KNOW)
- ___ (REFUSED)

3_9Y Did the mix of wash cycles change from what you did with your old clothes washer?

- Hot: stayed the same / increased / decreased
- Warm: stayed the same / increased / decreased
- Cold: stayed the same / increased / decreased

3_9d Currently, about what percentage of rinse cycles are...
(Total should be 100%)

- ___ Hot
- ___ Warm
- ___ Cold
- ___ (DON'T KNOW)
- ___ (REFUSED)

3_9Z What types of wash loads are these?
(note for interviewers, this intentionally an open ended question. Purpose is to gather data on what sort of responses we receive: will it be by wash/rinse water temperatures or by cycle names)

Record brief response.

3_10 Do you also have a clothes dryer? Is it gas or electric?
(PROBE FOR GAS VS. ELECTRIC)

- 1 Yes, It's an electric dryer
- 2 Yes. It's a gas dryer
- 3 No dryer
- D (DON'T KNOW)
- R (REFUSED)

3_11 (IF 3.10 = YES) What is the age of your clothes dryer?

- 1 < 3 years
- 2 3-5 years
- 3 5-10 years
- 4 More than 10 years
- D (DON'T KNOW)
- R (REFUSED)

3_12 When you use your dryer, do you use automatic cycles that use a moisture sensor or manual, timed dryer cycles?

- 1 Automatic or moisture sensor
- 2 Manual or timed
- D (DON'T KNOW)
- R (REFUSED)

3_13a How much of your wash do you typically dry using a clothes dryer?
(READ CATEGORIES IF NEEDED)

- 1 <25%
- 2 25-50%
- 3 50-75%
- 4 75-100%
- D (DON'T KNOW)
- R (REFUSED)

3_13b Due to your new clothes washer, did your dryer usage change?

- 1 Yes
- 2 No (skip to question 3_14)

3_13c About how much did it change?
(READ CHOICES IF NEEDED)

- 1 Increased some
- 2 Increased a lot
- 3 Decreased some
- 4 Decreased a lot
- 5 Stayed about the same
- D (DON'T KNOW)
- R (REFUSED)

3_14 Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

NTGR and Spillover (Section 4)

Warm-up Questions/Background Context

W1 Please think back to the time when you were deciding to buy the ENERGY STAR clothes washer, perhaps recalling things that occurred in your household shortly before and after **[timeframe]**. What factors motivated you to purchase ENERGY STAR clothes washer? (DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE RESPONDENT HAS FINISHED, PROBE: Are there any other factors?)

- 1 Old equipment didn't work
- 2 Old equipment working poorly
- 3 The program incentive
- 4 The program technical assistance
- 5 Wanted to save energy
- 6 Wanted to reduce energy costs
- 8 The information provided by the Program
- 9 Past experience with this program
- 10 Because of past experience with another **[utility]** program
- 11 Recommendation from other utility program (Probe: What program? _____)
- 12 Recommendation of dealer/retailer
- 13 Recommendation of someone else (Probe: Who? _____)
- 14 Advertisement in newspaper (Probe: For what program? _____)
- 15 Radio advertisement (Probe: For what program? _____)
- 16 Other (SPECIFY)
- 17 Environmental concerns
- 18 Global warming
- 19 Liked the appearance of the **ENERGY STAR clothes washer** more than the old one
- 20 Keeping up with the latest trends and fashions
- D (DON'T KNOW)

R (REFUSED)

W2a Did you get this ENERGY STAR clothes washer to replace [a/an] existing clothes washer?

- 1 Yes (SKIP TO W4)
- 2 No
- D (DON'T KNOW) (SKIP TO FR7)
- R (REFUSED) (SKIP TO FR7)

W2b Did you get this ENERGY STAR clothes washer because you wanted to add another/more clothes washer to your home?

- 1 Yes (SKIP TO FR7)
- 2 No
- D (DON'T KNOW) (SKIP TO FR7)
- R (REFUSED) (SKIP TO FR7)

W2c Is this clothes washer the first you have ever had in your home?

- 1 Yes (SKIP TO FR7)
- 2 No (SKIP TO FR7)
- D (DON'T KNOW) (SKIP TO FR7)
- R (REFUSED) (SKIP TO FR7)

W4 About how old was the clothes washer you replaced? (READ CATEGORIES IF NEEDED)

- 1 Less than 5 years old
- 2 5 to less than 10 years old
- 3 10 to less than 20 years old
- 4 20 years to less than 30 years old
- 5 30 or more years old
- D (DON'T KNOW)
- R (REFUSED)

W5 Was the old clothes washer working or not working?

- 1 Working
- 2 Not working (SKIP TO FR7)
- D (DON'T KNOW) (SKIP TO FR7)
- R (REFUSED) (SKIP TO FR7)

W6 Was the old clothes washer in good, fair, or poor working condition?

- 1 Good
- 2 Fair
- 3 Poor
- D (DON'T KNOW)
- R (REFUSED)

Free-Ridership Questions

FR7 Our records indicate you received about **[amount of program incentive/subsidy]** from the **[utility] [program]** either directly or at the time of purchase to offset the cost of the **clothes washer**. Does this amount sound about right?

- 1. Yes (SKIP TO FR99)
- 2. No
- D (DON'T KNOW) (SKIP TO FR99)
- R (REFUSED) (SKIP TO FR99)

FR8 What would you estimate to be the actual amount?

(RECORD RESPONSE) _____ (SET = NEW AMOUNT OF PROGRAM INCENTIVE/SUBSIDY)
D (DON'T KNOW)
R (REFUSED)

FR98 For participants: Did you receive any other rebates, tax credits, or financial benefits for purchasing a new clothes washer besides the [utility] rebate ?

For nonparticipants: Did you receive any rebates, tax credits, or financial benefits for purchasing a new clothes washer ?

What would you estimate to be the total value of these benefits?

FR99 Do you recall how much you paid for your clothes washer?

- 1. Yes
- 2. No (SKIP TO FR1)
- D (DON'T KNOW) (SKIP TO FR1)
- R (REFUSED) (SKIP TO FR1)

FR99B About how much did you pay?

(RECORD RESPONSE) _____

FR1 At the time that you first heard about the **rebate** from **[utility]** for a qualified **ENERGY STAR clothes washer**, had you...? (READ LIST UNTIL R SAYS 'NO')

- 1 Already been thinking about purchasing **clothes washer**? (IF NO, SKIP TO FR2)
- 2 Already begun collecting information about **clothes washer**? (IF NO, SKIP TO FR2)
- 3a Already selected the **ENERGY STAR clothes washer** you were going to get? (IF NO, SKIP TO FR2)
- 4 Already installed the **ENERGY STAR clothes washer**? (IF YES, SKIP TO FR1B; ELSE FR2)
- 5 (DON'T READ) Other: _____ (SKIP TO FR2)
- D DON'T KNOW (SKIP TO FR2)
- R REFUSED (SKIP TO FR2)

FR1B So, the **ENERGY STAR clothes washer** was installed before you learned about the **rebate** from **[utility]**?

- 1 Yes {SKIP FR5}
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

FR2 Just to be sure I understand, did you have specific plans to install a(n) **clothes washer** before learning about the **rebate** available through the **[program]**?

- 1. Yes
- 2. No (SKIP TO FR4)
- D DON'T KNOW (SKIP TO FR4)
- R REFUSED (SKIP TO FR4)

FR3 Did you have to make any changes to your existing plans in order to receive this **rebate** through the **[program]**?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4 (REPEAT AS NEEDED FOR FR4 PARTS A – D) If the **rebate** from the **[utility] [program]** had not been available, would you still have:

FR4A Purchased any **clothes washer** ?

- 1. Yes
- 2. No (SKIP TO FR5)
- D DON'T KNOW
- R REFUSED

FR4B Purchased the **clothes washer** at the same time as you did? (PROBE: That would be around [date of participation])

- 1 Yes (SKIP TO FR4D)
- 2 No
- D (DON'T KNOW) (SKIP TO FR4D)
- R (REFUSED) (SKIP TO FR4D)

FR4B1 Bought the **clothes washer** earlier than you did, or later?

- 1 Earlier
- 2 Same Time (REPEAT QUESTION FR4B)
- 3 Later
- D (DON'T KNOW) (SKIP TO FR4C)
- R (REFUSED) (SKIP TO FR4C)

FR4B2 How much **[earlier/later]** would you have bought the **clothes washer**?

_____ Years (AND/OR) _____ Months
D (DON'T KNOW)
R (REFUSED)

FR4D Purchased the same efficiency of **clothes washer**?

1 Yes
2 No
D (DON'T KNOW)
R (REFUSED)

FR4E If the **rebate** from the **[utility] [program]** had not been available, would you have done anything else differently?

1 Yes
2 No (SKIP TO FR5)
D (DON'T KNOW) (SKIP TO FR5)
R (REFUSED) (SKIP TO FR5)

FR4E1 What would you have done differently?

(RECORD RESPONSE): _____

FR5 On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same **ENERGY STAR clothes washer** if you had not received any **rebate** from the program?

(RECORD RESPONSE (0-10)) _____
D DON'T KNOW (SKIP TO FR7)
R REFUSED (SKIP TO FR7)

FR9 I'm going to read several statements about how you came to choose your **clothes washer**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

If I had not had any assistance from the program, I would have paid the additional **[amount of program incentive/subsidy]** to buy the **ENERGY STAR clothes washer** on my own.

(RECORD RESPONSE (0-10)) _____
D DON'T KNOW
R REFUSED

FR10 The **rebate** from the **[utility] [program]** was a critical factor in my decision to purchase the energy efficient product.

(RECORD RESPONSE (0-10)) _____

D DON'T KNOW
R REFUSED

FR11 I would have bought a(n) **clothes washer** within a **year** of when I did even without the **rebate** from the **[utility] [program]**.

(RECORD RESPONSE (0-10)) _____
D DON'T KNOW
R REFUSED

CONSISTENCY CHECK & RESOLUTION

{C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

FR4D
FR5
FR10
FR11

{IF FR4D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the **ENERGY STAR clothes washer** without the program'}

{IF FR4D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would not have purchased the **ENERGY STAR clothes washer** without the program'}

{IF FR5 = 0,1 AND FR4D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the **ENERGY STAR clothes washer** without the program'}

{IF FR5 = 9,10 AND FR4D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the **ENERGY STAR clothes washer** without the program'}

{IF FR10 = 0,1 AND FR4D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the energy efficient **clothes washer** without the program'}

{IF FR10 = 9,10 AND FR4D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the energy efficient **clothes washer** without the program'}

{IF FR11 = 9,10 AND FR4D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the **clothes washer** within **[a year]** even without the program'}

{IF FR11 = 0,1 AND FR4D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the **clothes washer** within **[a year]** even without the program'}

C1 Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **ENERGY STAR clothes washer** at the time you did? {RECORD VERBATIM RESPONSE BELOW}

C2 **[fill with wording and response categories to the one question which was inconsistent]**
{INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE}

Recent Program Participation (Section 5)

Q5_3 Have you participated in any other programs offered by **[utility]**

- 1 Yes
- 2 No (SKIP TO Q5_5)
- D (DON'T KNOW) (SKIP TO Q5_5)
- R (REFUSED) (SKIP TO Q5_5)

Q5_4 Which programs?

(RECORD RESPONSES)

Q5_X Did you experience with other program(s) influence your participation in the clothes washer program?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5 Which of the following phrases or messages have you heard before today? (ROTATE STARTING POINT)

Q5_5A Good Housekeeping

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5B Click it or Ticket

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5C Ahnu
1 Yes
2 No
D (DON'T KNOW)
R (REFUSED)

Q5_5D Flex Your Power
1 Yes
2 No
D (DON'T KNOW)
R (REFUSED)

Q5_5E Flex Alert
1 Yes
2 No
D (DON'T KNOW)
R (REFUSED)

Q5_5F Energy Hog
1 Yes
2 No
D (DON'T KNOW)
R (REFUSED)

Q5_5G Galley Bay
1 Yes
2 No
D (DON'T KNOW)
R (REFUSED)

Q5_5H Energy efficient
1 Yes
2 No
D (DON'T KNOW)
R (REFUSED)

Q5_5I Hollister Co
1 Yes
2 No
D (DON'T KNOW)

R (REFUSED)

Energy Efficiency / Conservation Awareness

On a 0 to 10 scale, with 0 being strongly disagree and 10 being strongly agree, please indicate how much you agree with the following statements (there are 6 statements)

Statement	Score										
I believe Energy Efficiency or Conservation can reduce global warming.	0	1	2	3	4	5	6	7	8	9	10
Energy Efficiency or Conservation will help reduce our need for foreign oil.	0	1	2	3	4	5	6	7	8	9	10
It would be easy to use Energy Efficiency or Conservation to manage the use of electricity in my home.	0	1	2	3	4	5	6	7	8	9	10
If I weren't satisfied with using Energy Efficiency or Conservation in my home, I could easily go back to what I was doing before.	0	1	2	3	4	5	6	7	8	9	10
I'd like to find out how I personally can do Energy Efficiency or Conservation in my home.	0	1	2	3	4	5	6	7	8	9	10
There's nothing much more I can do to increase Energy Efficiency or Conservation in my home.	0	1	2	3	4	5	6	7	8	9	10

In the past year or so, have you talked with friends, relatives, neighbors, or co-workers about Energy Efficiency or Conservation?

- 1. Yes
- 2. No
- 3. (Don't know)

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 6)

The last questions ask about household characteristics to make sure we're getting a representative sample of [utility] residents.

6_1 Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6_2 In what type of building do you live? (READ LIST IF NEEDED; PROBE IF SAYS CONDO: How many units are in your building?)

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments

- 6 A mobile home
- 7 Boat, RV, Van, etc.
- 8 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6_3 About when was this building first built? (READ LIST IF NEEDED)

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 7 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

6_3a Were you living in this same home around [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

6_4a How many full or half bathrooms do you have in your home? (PROBE: A full bathroom is one that has a sink with running water, and a toilet, and either a bathtub or shower. A half bathroom has either a toilet or a bathtub or a shower?)

- _____ Bathrooms
- D (DON'T KNOW)
- R (REFUSED)

6_4b How many bedrooms do you have in your home (If a one-room efficiency, or studio apartment, bedrooms=0)

- _____ bedrooms
- D (DON'T KNOW)
- R (REFUSED)

6_4c Other than bedrooms and bathrooms, how many other rooms are there in your home? Do not count laundry rooms, foyers, unfinished storage spaces, porches, or garages.

- _____ Other rooms
- D (DON'T KNOW)
- R (REFUSED)

6_5a Including yourself, how many people currently live in your home year-round?

- _____ people

- D (DON'T KNOW)
- R (REFUSED)

6_5b (IF 6_5a=1) Which of the following best describes your age?

- 1 Less than 18 years old
- 2 18-24 years old
- 3 25-34 years old
- 4 35-44 years old
- 5 45-54 years old
- 6 55-64 years old
- 7 65 or older
- D (DON'T KNOW)
- R (REFUSED)

6_5c (IF 6_5a>1) Including yourself, how many people currently living in your home year-round are in the following age groups?

- ___ Less than 18 years old
- ___ 18-24 years old
- ___ 25-34 years old
- ___ 35-44 years old
- ___ 45-54 years old
- ___ 55-64 years old
- ___ 65 or older
- TOTAL SHOULD EQUAL 6_5a
- R (REFUSED)

Spillover {ONLY ASK ONCE}

NSP1 Since you participated in **[utility] [program]** have you purchased and installed any other type of high efficiency equipment or made energy efficiency improvements {READ THE FOLLOWING ONLY FOR SMALL COMMERCIAL: at this facility or at other locations}?

- 1 Yes, only at this home/facility
- 4 No (SKIP TO Q6_13)
- D Don't Know (SKIP TO Q6_13)
- R Refused (SKIP TO Q6_13)

NSP1B

(IF NSP1 = YES) Did you receive any assistance for this equipment through [utility] [program] or another utility program?

- 1 YES [SKIP TO NEXT SECTION, FINAL DEMOGRAPHICS]
- 2 NO
- D (DON'T KNOW)
- R (REFUSED)

NSP2 What type and quantity of high efficiency equipment did you install on your own? {PROBE TO GET EXACT TYPE AND QUANTITY }

Type 1: _____ Quantity 1: _____
 Type 2: _____ Quantity 2: _____
 Type 3: _____ Quantity 3: _____
 Type 4: _____ Quantity 4: _____

NSP3 {ASK FOR EACH TYPE OF EQUIPMENT IN NSP2} How do you know that this equipment is high efficiency? {PROBE: WAS IT ENERGY STAR[®] RATED?}

Type 1: _____
 Type 2: _____
 Type 3: _____
 Type 4: _____

NSP4 I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the [utility] [program] in [2006, 2007, 2008] influenced my decision to install different types of high efficiency equipment on my own.

- 1 {RECORD RESPONSE (0-10)}
- D (DON'T KNOW)
- R (REFUSED)

NSP5 Why did you purchase this high efficiency equipment without going through a [utility] program? {DO NOT READ; INDICATE ALL THAT APPLY}

For NSP5_1 to NSP5_11:

- 0 Not mentioned
- 1 Mentioned

- NSP5_1** Too much paperwork
- NSP5_2** Takes too long to get approval
- NSP5_3** No time to participate, needed equipment immediately
- NSP5_4** The program had ended
- NSP5_5** The equipment would not qualify {PROBE: WHY NOT?} _____
- NSP5_6** The amount of the rebate wasn't important enough
- NSP5_7** Did not know program was available
- NSP5_8** There was no program available
- NSP5_9** Other {SPECIFY} _____
- NSP5_10** (DON'T KNOW)
- NSP5_11** REFUSED

FINAL DEMOGRAPHICS

6_13 What is the primary language spoken in your home? (DO NOT READ; PROBE IF R SAYS CHINESE: Would this be Mandarin or Cantonese)

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

On-site Recruiting (Section 7)

(If respondent has a gas dryer (3.10 = 2), then they should NOT be recruited for on site metering)

- 7.1** We would like to offer you \$100 to participate in the on-site component of this evaluation we are doing for **[Utility]**. We are NOT interested in selling anything. We would like to have one of our technicians visit your home at your convenience to install meters on the **ENERGY STAR clothes washer** you installed through the program and assess how they are operating. The on-site visit would take about 30-90 minutes (times will vary slightly).

Would that be alright with you?

- 1 Yes → Great! Someone from **[firm]** will give you a call back to determine when they can schedule an appointment with one of our technicians in your area. Thank you for your cooperation with this important effort.
- 2 No

- 7.2** A few quick checks that help our technicians.
Are your clothes washer and dryer located near (within 5 feet) each other?

- 1 Yes → Thank you.
- 2 No About how far apart are they? (RECORD RESPONSE)

- 7.3** If you can see the cord to your electric dryer, can you describe it?
(OPTIONAL. If inconvenient, don't pursue)

- 1 Flat cord, Gray color => 3 wire cord and plug
- 2 Round cord, Black color => 4 wire cord and plug

Thank and Terminate

**CPUC Residential Retrofit Evaluation
Non-Participant Survey and Recruitment Effort**

Instrument-specific variables-- The CATI software will fill the appropriate description in the questions.

[Product Type]

Clothes washer
Refrigerator
Furnaces

[Utility]

Pacific Gas & Electric
Southern California Gas
San Diego Gas & Electric
Southern California Electric

Introduction

Hello, my name is **[interviewer name]**, and I'm calling on behalf of the California Public Utilities Commission regarding a study of clothes washers, furnaces, and refrigerators, and the energy they use. I'm with PA Consulting Group, an independent research firm. I'm not selling anything; I'd just like to ask you a few questions about your recent appliance purchases. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and **[Utility]** better understand customers' need for and interest in energy efficiency programs and products.)

(What is the goal of this study: This study is intended to determine whether rebates offered on high efficiency appliances help to save energy. To do this, we are going to collect very accurate data on the energy used by clothes washers, furnaces and refrigerators that were purchased and installed in 2006, 2007, and 2008.)

(Sales concern: I am not selling anything; we would simply like to learn about the energy used by your refrigerator, furnace (IF PGE or SDGE: clothes washer). Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call Mikhail Haramati at 415-703-1458, or visit their website: www.cpuc.ca.gov/eevalidation.)

(NOTE: For all questions, "DON'T KNOW" and "REFUSED" will be coded if offered as a response.)

Refrigerator Recycling Section

REFRIGERATORS (ASK IF [utility] = SDGE, PG&E or SCE)

R2.1 Did you have a working refrigerator removed from your home since January 2006?

- 1 Yes
- 2 No (SKIP TO CW2.1)
- D DON'T KNOW (SKIP TO CW2.1)
- R REFUSED (SKIP TO CW2.1)

R2.2 How many working refrigerators have been removed since January 2006?

_____ (number)

R2.3 During the time just before you decided to get rid of the refrigerator, was it being used as your main refrigerator, or had it been a secondary or spare?

(Interviewer: a main refrigerator is typically in the kitchen, a secondary or spare is usually kept someplace else and might or might not be running. If the person recently bought a new main refrigerator, it should be classified as "main.")

- 1 Main
- 2 Secondary or Spare
- D DON'T KNOW
- R REFUSED

R2.4 Where was it located?

- 1 Kitchen
- 2 Garage
- 3 Porch/Patio
- 4 Basement
- 5 Other (SPECIFY)
- D DON'T KNOW
- R REFUSED

R2.5 What was the condition of this refrigerator? Would you say ...? (READ LIST; INDICATE ONE RESPONSE)

- 1 It worked and was in good physical condition
- 2 It worked but needed minor repairs like a door seal or handle
- 3 It worked but had some problems like it wouldn't defrost
- 4 Other (SPECIFY)
- D DON'T KNOW
- R REFUSED

R2.6 Why did you decide to get rid of it? (DO NOT READ)

- 1 Got a brand new refrigerator to replace it
- 2 Got a used refrigerator to replace it
- 3 Or to get rid of a refrigerator you no longer wanted without replacing it
- 4 Other (SPECIFY)

Non Participant Survey

- D DON'T KNOW
- R REFUSED

R2.7 How did you dispose of your old refrigerator?
(CLARIFY IF NEEDED TO FIT LIST BELOW. FOR EXAMPLE: Did you give it away or sell it?)

HAULED IT AWAY YOURSELF

- 1 Took it to a recycler or scrap dealer
- 2 Took it to the landfill or threw it away

SOLD IT

- 3 Sold it to a friend, acquaintance or relative
- 4 Sold it on Craigslist/other Internet site (e.g., eBay)
- 5 Sold it to a used refrigerator / freezer dealer
- 6 Sold it via garage sale, estate sale, or newspaper ad
- 7 Sold it when you moved to new occupant

SOMEONE ELSE HAULED IT AWAY

- 8 Hired someone to pick it up (for junking or dumping)
- 9 Utility program hauled it away

DEALER TOOK IT

- 10 Traded it for a replacement unit
- 11 Dealer I bought a new one from took it away

GAVE IT AWAY (NOT SOLD)

- 12 Gave it away
- 13 Left it behind when moved (for new occupant)

SOME OTHER WAY

- 97 Other (SPECIFY:___)
- 98 Don't know
- 99 Refused

R2.8 Just to clarify, when you (sold/otherwise disposed of [PROGRAM BASED ON RESPONSE TO PREVIOUS QUESTION]) your refrigerator, did you receive any payment for it? And if so, how much did you receive?

- 1 Yes → How much _____ (R2.8a)
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

R2.9 When did you have it removed?

- 01 DATE (___ MONTH ____ YEAR)
- D DON'T KNOW
- R REFUSED

R2.10 At the time of removal, how old was the refrigerator?

- 1 YEARS _____ (1-50)
- D DON'T KNOW

R REFUSED

Clothes Washer Questions

CLOTHES WASHERS (ASK IF [utility] = PGE or SDGE. ELSE SKIP TO F2.1)

CW2.1. Did you purchase a new clothes washer since January 2006?

- 1 Yes
- 2 No (SKIP TO F2.1)
- D (DON'T KNOW) (SKIP TO F2.1)
- R (REFUSED) (SKIP TO F2.1)

CW2.2. When did you purchase your clothes washer?

- 1 2006
- 2 2007
- 3 2008
- 4 2009 (SKIP TO F2.1)
- D (DON'T KNOW) (SKIP TO F2.1)
- R (REFUSED) (SKIP TO F2.1))

CW2.3. Did you receive a utility rebate for this purchase?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

CW2.4. Do you also have a clothes dryer? Is it gas or electric?
(PROBE FOR GAS VS. ELECTRIC)

- 1 Yes, It's an electric dryer
- 2 Yes. It's a gas dryer (Record, SKIP TO F2.1)
- 3 No dryer (Record, SKIP TO F2.1)
- D (DON'T KNOW)
- R (REFUSED)

CW2.5. (If CW2.3=2) We would like to offer you \$100 to participate in the on-site component of this evaluation we are doing for the CPUC and [Utility]. We are NOT interested in selling anything. We would like to have one of our technicians visit your home at your convenience to install meters on your clothes washer and dryer. The on-site visit would take about 30-90 minutes (will vary slightly). Would that be alright with you?

- 1 Yes→ Great! Someone from [firm] will give you a call back to determine when they can schedule an appointment with one of our technicians in your area. Thank you for your cooperation with this important effort. [CONTINUE TO CW2.6]
- 2 No [SKIP TO F2.1]

Non Participant Survey

CW2.5a (If CW2.3=D or R) We are running an on-site component of this evaluation for the CPUC and **[Utility]** on-site evaluation in which you could be offered \$100 to participate in the on-site component of this evaluation. We are NOT interested in selling anything. We would like to have one of our technicians visit your home at your convenience to install meters on your clothes washer and dryer. The on-site visit would take about 30-90 minutes (will vary slightly). If we are able to confirm that you were not a participant, would you be willing to participate in this evaluation?

- 1 Yes → Great! If you are eligible, someone from **[firm]** will give you a call back to determine when they can schedule an appointment with one of our technicians in your area. Thank you for your cooperation with this important effort.
- 2 No [SKIP TO F2.1]

(Programming Note: The following questions in this CW section are asked only of those people that are recruited)

CW2.6. At the time of the purchase, were you aware that **[utility]** was offering rebates for energy efficient clothes washers?

- 1 Yes
- 2 No (SKIP to CW2.8)
- D (DON'T KNOW)
- R (REFUSED)

CW2.7. Why did you purchase a washing machine without using the **[utility]** rebate?

- 1 Don't recall
- 2 Machine purchased was not eligible for rebate
- 3 Rebate wasn't enough to cover incremental cost
- 4 Chose a less expensive washing machine
- 5 Application process was too complicated
- 6 Other (RECORD)
- D (DON'T KNOW)
- R (REFUSED)

CW2.8 Do you recall about how much you paid for your clothes washer?

1. Yes
2. No (SKIP TO CW2.11)
- D (DON'T KNOW) (SKIP TO CW2.11)
- R (REFUSED) (SKIP TO CW2.11)

CW2.9. About how much did you pay?

(RECORD RESPONSE) _____

CW2.10. What factors motivated you to purchase a new clothes washer? {DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE RESPONDENT HAS FINISHED, PROBE: Are there any other factors?}

1. Old equipment didn't work (SKIP TO CW2.13)
2. Old equipment working poorly (SKIP TO CW2.13)
3. Wanted to save energy
4. Wanted to reduce energy costs

Non Participant Survey

5. Recommendation of dealer/retailer
 6. Recommendation of someone else (Probe: Who? _____)
 7. Advertisement in newspaper
 8. Radio advertisement
 9. Other (SPECIFY) _____
 10. Environmental concerns
 11. Global warming
 12. Liked the appearance of the clothes washer more than the old one
 13. Keeping up with the latest trends and fashions
- D (DON'T KNOW)
R (REFUSED)

CW2.11. Did you get this clothes washer to replace an existing clothes washer?

1. Yes
2. No (SKIP TO CW2.16)
- D. (DON'T KNOW) (SKIP TO CW2.16)
- R. (REFUSED) (SKIP TO CW2.16)

CW2.12. About how old was the clothes washer you replaced? {READ CATEGORIES IF NEEDED}

1. Less than 5 years old
 2. 5 to less than 10 years old
 3. 10 to less than 20 years old
 4. 20 years to less than 30 years old
 5. 30 or more years old
- D DON'T KNOW
R REFUSED

CW2.13. Was the old clothes washer working or not working?

1. Working
2. Not working (SKIP TO CW2.16)
- D (DON'T KNOW) (SKIP TO CW2.16)
- R (REFUSED) (SKIP TO CW2.16)

CW2.14. Was the old clothes washer in good, fair or poor working condition?

1. Good
2. Fair
3. Poor
- D (DON'T KNOW)
- R (REFUSED)

CW2.15a Regarding your clothes washer, approximately how many wash loads to you do in a (typical) week?

Non Participant Survey

- 1 1
- 2 2
- 3 3
- 4 4
- 5 5
- 6 6
- 7 7
- 8 8
- 9 9
- 10 10
- 11 More than 10. Record number if given
- D (DON'T KNOW)
- R (REFUSED)

CW2.15b How does the number of wash loads you do now compare to the number that you did with your old clothes washer?

- 1 Same (skip to 3_9a)
- 2 Different
- D (DON'T KNOW)
- R (REFUSED)

CW2.15c If different, do you do more or less loads now than you did before? Could you estimate a percentage?

- 1 More loads now, Record percentage (like 125%)
- 2 Less loads now, Record percentage (like 75%)
- D (DON'T KNOW)
- R (REFUSED)

CW2.16a Do you typically choose the wash water temperature or do you mostly rely on the defaults that go with the machine's defined cycles?

- 1 Choose wash water temperature
- 2 Use the defaults that go with the machine's defined cycles
- D (DON'T KNOW)
- R (REFUSED)

CW2.16b About what percentage of wash cycles are...
(Total should be 100%)

- ___ Hot
- ___ Warm
- ___ Cold
- ___ (DON'T KNOW)
- R (REFUSED)

CW2.16c Did the mix of wash cycles change from what you did with your old clothes washer?

- Hot: stayed the same / increased / decreased
- Warm: stayed the same / increased / decreased
- Cold: stayed the same / increased / decreased

Non Participant Survey

CW2.16d About what percentage of rinse cycles are...
(Total should be 100%)

- ___ Hot
- ___ Warm
- ___ Cold
- ___ (DON'T KNOW)
- ___ (REFUSED)

CW2.17 (If CW2.4=1) You said a few moments ago that you have an electric clothes dryer. What is the age of your clothes dryer?

- 1 < 3 years
- 2 3-5 years
- 3 5-10 years
- 4 More than 10 years
- D (DON'T KNOW)
- R (REFUSED)

CW2.18 When you use your dryer, do you usually use automatic cycles that use a moisture sensor or manual, timed dryer cycles?

- 1 Automatic or moisture sensor
- 2 Manual or timed
- D (DON'T KNOW)
- R (REFUSED)

CW2.19a How much of your wash do you typically dry using a clothes dryer?
(READ CATEGORIES IF NEEDED)

- 1 <25%
- 2 25-50%
- 3 50-75%
- 4 75-100%
- D (DON'T KNOW)
- R (REFUSED)

CW2.19b Due to your new clothes washer, did your dryer usage change?

- 1 Yes
- 2 No (skip to question 3_14)

CW2.19c About how much did it change?
(READ CHOICES IF NEEDED)

- 1 Increased some
- 2 Increased a lot
- 3 Decreased some
- 4 Decreased a lot
- 5 Stayed about the same
- D (DON'T KNOW)
- R (REFUSED)

Non Participant Survey

CW2.20 Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

Energy Efficiency / Conservation Awareness

CW2.21. On a 0 to 10 scale, with 0 being strongly disagree and 10 being strongly agree, please indicate how much you agree with the following statements (there are 6 statements)
{RANDOMIZE ORDER}

Statement	Score										
I believe Energy Efficiency or Conservation can reduce global warming.	0	1	2	3	4	5	6	7	8	9	10
Energy Efficiency or Conservation will help reduce our need for foreign oil.	0	1	2	3	4	5	6	7	8	9	10
It would be easy to use Energy Efficiency or Conservation to manage the use of electricity in my home.	0	1	2	3	4	5	6	7	8	9	10
If I weren't satisfied with using Energy Efficiency or Conservation in my home, I could easily go back to what I was doing before.	0	1	2	3	4	5	6	7	8	9	10
I'd like to find out how I personally can do Energy Efficiency or Conservation in my home.	0	1	2	3	4	5	6	7	8	9	10
There's nothing much more I can do to increase Energy Efficiency or Conservation in my home.	0	1	2	3	4	5	6	7	8	9	10

CW2.22. Have you participated in any programs offered by [utility]

- 1 Yes
- 2 No (SKIP TO F2.1)
- D (DON'T KNOW) (SKIP TO F2.1)
- R (REFUSED) (SKIP TO F2.1)

CW2.23. Which programs?

(RECORD RESPONSES)

CW2.24 In the past year or so, have you talked with friends, relatives, neighbors, or co-workers about Energy Efficiency or Conservation?

- 1. Yes
- 2. No
- D. (DON'T KNOW)
- R (REFUSED)

Furnace Questions

F2.1 Do you have gas or electric space heating?

- 1 Gas
- 2 Electric (SKIP TO 6.1)
- 3 Both
- 4 Other (Specify) _____
- 7 None (SKIP TO 6.1)
- D (DON'T KNOW) (SKIP TO 6.1)
- R (REFUSED) (SKIP TO 6.1)

F2.2 (IF GAS/BOTH) Is your heating system a forced-air system, that is a system which blows heated air through ducts and vents in the walls, floors or ceiling of your rooms as opposed to a system that circulates water?

- 1 Yes
- 2 No (DESCRIBE HEATING SYSTEM TYPE): _____ (SKIP TO 6.1)
- 3 Other (DESCRIBE HEATING SYSTEM TYPE): _____ (SKIP TO 6.1)
- D (DON'T KNOW) (SKIP TO 6.1)
- R (REFUSED) (SKIP TO 6.1)

F2.2 (IF GAS/BOTH) Have you bought a new furnace since January 2006?

- 1 Yes
- 2 No (SKIP TO 6.1)
- D (DON'T KNOW) (SKIP TO 6.1)
- R (REFUSED) (SKIP TO 6.1)

F2.3 (IF YES) Did you receive a rebate from [utility] for the new furnace?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

F2.4 Do you recall the name of the company from whom you purchased the furnace?

- 1 Yes (specify name of company, probe for additional contact details)
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 6)

The last questions ask about household characteristics to make sure we're getting a representative sample of [utility] residents.

6.1 Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6.2 In what type of building do you live? (READ LIST IF NEEDED; PROBE IF SAYS CONDO: How many units are in your building?)

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Boat, RV, Van, etc.
- 8 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6.3 About when was this building first built? (READ LIST IF NEEDED)

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 7 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

6.3a Were you living in this same home 12 months ago?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Non Participant Survey

6.4a How many full or half bathrooms do you have in your home? (PROBE: A full bathroom is one that has a sink with running water, and a toilet, and either a bathtub or shower. A half bathroom has either a toilet or a bathtub or a shower?)

____ Bathrooms
D (DON'T KNOW)
R (REFUSED)

6.4b How many bedrooms do you have in your home (If a one-room efficiency, or studio apartment, bedrooms=0)

____ bedrooms
D (DON'T KNOW)
R (REFUSED)

6.4c Other than bedrooms and bathrooms, how many other rooms are there in your home? Do not count laundry rooms, foyers, unfinished storage spaces, porches, or garages.

____ Other rooms
D (DON'T KNOW)
R (REFUSED)

[If 6.3a = NO, GO TO 6.5a]

C6.4d Did you do any remodeling, renovation or additions since January 1, 2005?

1 Yes
2 No (*SKIP TO 6.5a*)
D (DON'T KNOW) (*SKIP TO 6.5a*)
R (REFUSED) (*SKIP TO 6.5a*)

C6.4e How many remodels, renovations or additions have you done since then?

____ Remodels, renovations or additions
D (DON'T KNOW)
R (REFUSED)

Non Participant Survey

C6.4f I'm going to ask you several questions regarding the timeframe of your remodels, renovations or additions. We will try to run through them quickly. (ASK A-C FOR EACH REMODEL THAT TOOK PLACE SINCE JANUARY 1, 2005).

- a. In what month and year did it start?
- b. Did this increase or decrease your home's square footage, not counting unfinished storage spaces, porches or garages,
- c. In what month and year did it finish?

a. START (mm/yyyy)	b. Increase or decrease?	C. FINISH (mm/yyyy)
	1 Increase	
	2 Decrease	
	3 Same	
	D (DK)	
	R (REFUSED)	

- 1
- 2
- 3
- 4

6.5a Including yourself, how many people currently live in your home year-round?

_____ people
D (DON'T KNOW)
R (REFUSED)

6.5b (IF 6.5a=1) Which of the following best describes your age?

- 1 Less than 18 years old
- 2 18-24 years old
- 3 25-34 years old
- 4 35-44 years old
- 5 45-54 years old
- 6 55-64 years old
- 7 65 or older
- D (DON'T KNOW)
- R (REFUSED)

6.5c (IF 6.5a>1) Including yourself, how many people currently living in your home year-round are in the following age groups?

_____ Less than 18 years old
_____ 18-24 years old
_____ 25-34 years old
_____ 35-44 years old
_____ 45-54 years old
_____ 55-64 years old
_____ 65 or older
TOTAL SHOULD EQUAL 6.5a
R (REFUSED)

Non Participant Survey

[If 6.3a = NO, GO TO 6.7]

C6.5d Has the total number of people living in your home year-round changed in the last 12 months?

- 1 Yes
- 2 No (SKIP TO 6.7)
- D (DON'T KNOW) (SKIP TO 6.7)
- R (REFUSED) (SKIP TO 6.7)

C6.5e Do more people or less people live in your home now?

- 1 More→How many more? _____
- 2 Less→How many less? _____
- D (DON'T KNOW)
- R (REFUSED)

C6.7 (Ask only if CW2.22 was skipped, otherwise set equal to CW2.22 and do not ask) Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

C6.7k (Ask only if CW2.4 was skipped, otherwise set equal to CW2.4 and do not ask) Do you also have a clothes dryer? Is it gas or electric?
(PROBE FOR GAS VS. ELECTRIC)

- 1 Yes, It's an electric dryer
- 2 Yes. It's a gas dryer
- 3 No dryer
- D (DON'T KNOW)
- R (REFUSED)

C6.7l Do you have a gas or electric range/oven?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

Non Participant Survey

C6.7m What type of air conditioning system, if any, do you use in your home? (INDICATE ALL THAT APPLY)

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Other (Specify) _____
- 9 None
- D (DON'T KNOW)
- R (REFUSED)

C6.7n Do you have any of the following...

(READ EACH ITEM AND RECORD YES OR NO)

- 1 Pool
- 2 Sauna
- 3 Hot tub or spa
- 4 Outdoor fireplace
- 5 Indoor fireplace
- 6 Outdoor grill
- 7 Indoor grill

C6.7o (ASK FOR EACH ITEM MENTIONED AT C6.7n) Is this **[equipment]** electric, gas, wood or charcoal – fired, or something else?

- 1 Gas
- 2 Electric
- 3 Wood or charcoal
- 4 Something else (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6.8a Do you receive an electric or natural gas bill directly from [utility]?

- 1 Yes
- 2 No (SKIP TO 6.13)
- D (DON'T KNOW) (SKIP TO 6.13)
- R (REFUSED) (SKIP TO 6.13)

6.8b Does this bill only include your home's electric or natural gas use, or does it include the use of other households?

- 1 Only 1 household
- 2 Multiple households
- D (DON'T KNOW)
- R (REFUSED)

Non Participant Survey

6.13 What is the primary language spoken in your home? (DO NOT READ; PROBE IF R SAYS CHINESE: Would this be Mandarin or Cantonese)

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

Thank and Terminate

PG&E2000 Mass Markets Single Family Measures Participant Survey

The following measures will be asked about in the survey: Pool pumps and motor(s), storage water heater(s), attic insulation, wall insulation, cool roof, ENERGY STAR® clothes washer(s), ENERGY STAR® dishwasher(s), ENERGY STAR® central natural gas furnace(s), and ENERGY STAR® room air conditioner(s). The CATI software will automatically fill the appropriate measure description in the questions.

[measure]

ENERGY STAR® clothes washer
ENERGY STAR® dishwasher
electric water heater
gas water heater
ENERGY STAR® room air conditioner
multi-speed pool pump and motor
single-speed pool pump and motor
ENERGY STAR® gas furnace
attic insulation
wall insulation

[product type]

clothes washer
dishwasher
water heater
room air conditioner
pool pump and motor
furnace
insulation

[utility] PG&E

[assistance] rebate

[program] PG&E's program

[amount of program incentive/subsidy] dollar amount of PG&E rebate

[home/business] home

[date of participation] installation / rebate paid date

[quantity] quantity of measures installed, insulation=1

[insulation] flag if attic and/or wall insulation was installed

[timeframe] month/year measure was purchased / installed

[incremental efficiency measures] flag for all SF measures other than insulation

[enhanced efficiency measures] flag for attic and/or wall insulation

Introduction

Hello, my name is [interviewer name], and I'm calling on behalf of the California Public Utilities Commission regarding Pacific Gas and Electric's Energy Efficiency Programs for Homes and Small Businesses. May I speak with [contact name]?

- 1 Yes
- 2 No [attempt to convert; if R not available, ask for an adult who makes decisions on how household uses energy]

I'm with [data collection firm], an independent research firm. I am calling to learn about your experiences with the [measures] you purchased and the rebate you received from PG&E's energy efficiency program.

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and PG&E better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about 15 minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-XXX-XXXX)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the [measures] you purchased and received a rebate for through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call Mikhail Haramati at 415-703-1458, or visit their website: www.cpuc.ca.gov/eevalidation.)

(NOTE: For all questions, "DON'T KNOW" and "REFUSED" will be coded if offered as a response.)

Recall of Participation/Identification of Decision Maker (Section 1)

(QUANTITY REFERS TO THE NUMBER RECEIVED WITHIN THE MEASURE CATEGORY--E.G., 1 POOL PUMP)

1.1 Program records indicate that you purchased and received a rebate for the following energy efficient equipment through PG&E's Energy Efficiency Program for Homes and Small Businesses around [date of participation]. (RECORD FOR EACH MEASURE PURCHASED)

MEASURES	Do you recall purchasing . . . ?	(IF QUANTITY > 1) Is this the correct quantity?	Does the date I read sound about right?
A. [quantity] Pool pump and motor(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY ___) D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY DATE ___) D (DK) R (REFUSED)
B. [quantity] ENERGY STAR® clothes washer(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY ___) D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY DATE ___) D (DK) R (REFUSED)
C. [quantity] Natural gas water heater(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY ___) D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY DATE ___) D (DK) R (REFUSED)
D. [quantity] Electric water heater(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY ___) D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY DATE ___) D (DK) R (REFUSED)
D. Attic insulation	1 Yes 2 No D (DK) R (REFUSED)	--	1 Yes 2 No (SPECIFY DATE ___) D (DK) R (REFUSED)
E. Wall insulation	1 Yes 2 No D (DK) R (REFUSED)	--	1 Yes 2 No (SPECIFY DATE ___) D (DK) R (REFUSED)
G. [quantity] ENERGY STAR® dishwasher(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY ___) D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY DATE ___) D (DK) R (REFUSED)
H. [quantity] Central natural gas furnace(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY ___) D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY DATE ___) D (DK) R (REFUSED)
I. [quantity] Room air conditioner(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY ___) D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY DATE ___) D (DK) R (REFUSED)
J. Cool Roof	1 Yes 2 No D (DK) R (REFUSED)	--	1 Yes 2 No (SPECIFY DATE ___) D (DK) R (REFUSED)

(IF RECALLS MEASURE, SKIP TO 1.5)

1.2 (ASK IF DOESN'T RECALL ANY OF THESE MEASURES) Is it possible that someone else in your household would know about purchasing this/these **[measures]** and receiving a rebate?

- 1 Yes **[SKIP TO 1.5]**
- 2 No
- D (DON'T KNOW)
- R (REFUSED) **[TERMINATE]**

1.3 PG&E is offering rebates for replacing less efficient electric and natural gas-fired appliances, heating and cooling, and water heating equipment with more energy-efficient equipment. The program also provides rebates for attic and wall insulation, pool pumps, and whole house fans. The rebate program is offered to PG&E's residential and small business customers. Are you sure you don't recall purchasing the/these **[measures]** and receiving a rebate? (RECORD ONE NUMBER)

- 1 Don't remember purchasing equipment → **[TERMINATE, RECORD ANY COMMENTS MADE BY RESPONDENT BEFORE EXITING]**
- 2 Don't remember receiving rebate, but remember purchasing equipment → **[SKIP TO 1.5]**
- 3 Remember → **[READ, "GREAT, THEN LET'S CONTINUE", SKIP TO 1.5]**
- R (REFUSED) → **[TERMINATE]**

1.4 May I please speak with that person? (RECORD ONE NUMBER)

- 1 Yes **[BEGIN THE SURVEY AGAIN WITH THIS NEW RESPONDENT]**
- 2 No **[TERMINATE]**
- D (DON'T KNOW) **[TERMINATE]**
- R (REFUSED) **[TERMINATE]**

1.5 Are you the person in your household who decided to purchase this/these **[measures]** and receive a rebate through PG&E's program?

- 1 Yes
- 2 No **[SKIP BACK TO 1.4]**
- D (DON'T KNOW) **[TERMINATE]**
- R (REFUSED) **[TERMINATE]**

Sources of Program Information (Section 2)

2.1 How did you hear about the rebate offered on the [measures] available as part of PG&E's Energy Efficiency Program for Homes and Small Businesses? **(PROBE: Did you hear about the program from any other sources?)** (DO NOT READ LIST, RECORD ALL THAT APPLY)

Utility provided information

- 1 (Advertising—radio, newspaper, trade journal, billboard, TV)
- 2 (Bill insert, newsletter, or other mailing)
- 3 (Website)
- 4 (Email)
- 5 (Other utility) (SPECIFY) _____

Local Government/Community center or event/Nonprofit

- 6 (Meeting, event, workshop, training) (SPECIFY) _____
- 7 (School)
- 8 (Local government/community agency) (SPECIFY) _____
- 9 (Energy Center such as Pacific Energy Center, Stockton Training Center, Food Service Technology Center) (SPECIFY) _____
- 10 (Advertising—radio, newspaper, trade journal, billboard, TV)

Other

- 11 (Home or building audit or assessment) (SPECIFY) _____
- 12 (Meeting, event, workshop training) (SPECIFY) _____
- 13 (Flex your Power TV or radio advertising)
- 14 (Other advertising, don't recall)
- 15 (Friend/Relative/Neighbor)
- 16 (Other, Specify: _____)
- 19 (Salesperson/Sales rep)
- 20 (Installer/contractor)
- D (DON'T KNOW)
- R (REFUSED)

Installation Behavior—REBATE MEASURES (Section 3)

(QUESTIONS IN THIS SECTION WILL BE REPEATED FOR EACH MEASURE R RECALLS)

3.1 (IF QUANTITY=1) Now, I would like to understand what you did with the [measure]. Is this [measure] currently installed at your home (either indoors or outdoors)? (RECORD ONE NUMBER)

- 1 Yes [SKIP TO W1]
- 2 No
- D (DON'T KNOW) [IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY]
- R (REFUSED) [IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY]

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3.2 (IF QUANTITY=1) Which of the following best describes what happened with the [measure]? (READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location [SKIP TO 3.4]
- 2 It was installed at your home but is now permanently removed (example: broke, burned out, don't fit, don't like, etc.) [SKIP TO 3.5]
- 3 It is in storage because it is only needed during certain months of the year [SKIP TO W1]
- 4 It is in storage for some other reason [SKIP TO 3.7]
- 5 It was sold or given away [SKIP TO 3.4]
- 6 Something else (SPECIFY) _____-
- D (DON'T KNOW)
- R (REFUSED)

3.3 (IF QUANTITY>1) Now, I would like to understand what you did with the [quantity] [measure]. (READ LIST, RECORD NUMBER)

- a____ How many are currently installed at your home (either indoors or outdoors) (IF RESPONSE=QUANTITY, SKIP TO W1)
- b____ How many are installed at some other location?
- c____ How many were installed at your home (either indoors or outdoors) but are now permanently removed (example: broke, burned out, don't fit, don't like, etc.)?
- d____ How many are in storage because they are only needed during certain months of the year?
- e____ How many are in storage for some other reason?
- f____ How many were sold or given away?
- g____ Something else? (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.4 (ASK IF 3.2=1, 3.2=5, 3.3b>0, 3.3f>0) Is the/Are these [measure] located in PG&E's service territory?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

SKIP TO 5.1 IF ALL MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY or 3.2=1 or 3.2=5) AND THAT LOCATION IS OUTSIDE OF PG&E'S SERVICE TERRITORY (3.4 NE 1).

SKIP TO W1 IF ALL MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY or 3.2=1 or 3.2=5) AND THAT LOCATION IS INSIDE OF PG&E'S SERVICE TERRITORY (3.4 = 1).

Removed Measures (ASK ONLY IF THEY SAY THEY REMOVED A MEASURE AFTER INSTALLED, 3.2=2 or 3.3c>0)

3.5 Now let's talk about the [measure] you said you installed but have since removed. Why was this removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 (Equipment failed)
- 2 (Didn't work properly)
- 3 (Wrong size—too small or too large)
- 4 (Low water flow)
- 5 (Didn't like the color)
- 6 (Didn't like appearance/unattractive)
- 7 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

3.6 What did you replace the [measure] with? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 (With a new high efficiency [measure])
- 2 (With a less efficient [product type])
- 3 (Re-installed old equipment)
- 4 (Did not replace)
- 5 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

Measures in Storage (ASK ONLY IF THEY SAY MEASURE IS IN STORAGE FOR SOME OTHER REASON, 3.2=4 or 3.3e>0)

3.7 When do you think you will install the [measure]? Would you say within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

- 1 Within the next 3 months
- 2 3 to 6 months from now
- 3 6 to 12 months from now
- 4 More than a year from now
- 5 Never
- D (DON'T KNOW)
- R (REFUSED)

Warm-Up Questions/Background Context

W1. Please think back to the time when you were deciding to buy the (INSULATION: insulation/ALL OTHER: energy saving [**product types**]), perhaps recalling things that occurred in your household shortly before and after [**timeframe**]. What factors motivated you to purchase (INSULATION: insulation/ALL OTHER: energy saving [**product types**])? [DO NOT READ; INDICATE ALL THAT APPLY; ONCE THEY RESPONDENT HAS FINISHED, PROBE: Are there any other factors?]

1. Old equipment didn't work
2. Old equipment working poorly
3. The program incentive / rebate
4. The program technical assistance
5. Wanted to save energy
6. Wanted to reduce energy costs
7. The information provided by the Program
8. Past experience with this program
9. Because of past experience with another [**utility**] program
10. Recommendation from other utility program (Probe: What program? _____)
11. Recommendation of dealer/retailer
12. Recommendation of someone else (Probe: Who? _____)
13. Advertisement in newspaper (Probe: For what program? _____)
14. Radio advertisement (Probe: For what program? _____)
15. Increase comfort (reduce drafts, noise)
16. Better quality product
17. Water saving features
18. Environment / Environmental benefit
19. Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

(ASK W2A-W6 ONLY FOR INCREMENTAL EFFICIENCY REBATE MEASURES. IF INSULATION, SKIP W2A-W6)

W2a. Did you get this [**measure**] to replace an existing [**product type**]?

1. Yes [SKIP TO W4]
2. No
- D (DON'T KNOW) [SKIP TO 3.8]
- R (REFUSED) [SKIP TO 3.8]

W2b Is this [**product type**] the first you have ever had in your home?

1. Yes [SKIP TO 3.8]
2. No
- D (DON'T KNOW) [SKIP TO 3.8]
- R (REFUSED) [SKIP TO 3.8]

W2c. Did you get this [**measure**] because you wanted to add another/more [**product type**] to your home?

1. Yes [SKIP TO 3.8]
2. No [SKIP TO 3.8]
- D (DON'T KNOW) [SKIP TO 3.8]
- R (REFUSED) [SKIP TO 3.8]

W3. [SKIPPED BECAUSE NO LIGHTING IN PG&E2000 SF MEASURE SURVEY]

W4. About how old was the [product type] you replaced? [READ CATEGORIES IF NEEDED]

- 1. Less than 5 years old
- 2. 5 to less than 10 years old
- 3. 10 to less than 20 years old
- 4. 20 years to less than 30 years old
- 5. 30 or more years old
- D (DON'T KNOW)
- R (REFUSED)

W5. Was the old [product type] working or not working?

- 1. Working
- 2. Not working [SKIP TO 3.8]
- D (DON'T KNOW) [SKIP TO 3.8]
- R (REFUSED) [SKIP TO 3.8]

W6. Was the old [product type] in good, fair, or poor working condition?

- 1. Good
- 2. Fair
- 3. Poor
- D (DON'T KNOW)
- R (REFUSED)

Pool Pump Specific Battery (Billing / Engineering Analysis Measure)

3.8 Was the pool pump and motor you received a rebate for through PG&E's program NEW when you purchased and installed it, or was it used?

- 1 New
- 2 Used
- D (DON'T KNOW)
- R (REFUSED)

3.9 What type of equipment was it installed on? Was it installed on an: [READ LIST]

- 1 In-ground swimming pool
- 2 Above-ground swimming pool
- 3 Spa
- 4 Other [SPECIFY]
- D (DON'T KNOW)
- R (REFUSED)

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3.10 Since participating in PG&E's program on [date of participation], what hours of the day do you typically run your pool pump on Monday-Friday during the summer months?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (Other, SPECIFY)
- 97 (DON'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.11 Since participating in PG&E's program on [date of participation], what hours of the day do you typically run your pool pump on Monday-Friday during the winter months?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (Other, SPECIFY)
- 97 (DON'T USE)
- D (DON'T KNOW)
- R (REFUSED)

[SKIP TO NEXT SECTION IF W2A ≠ 1]

3.12 Before participating in PG&E's program on [date of participation], what hours of the day did you typically run your pool pump on Monday-Friday during the summer months?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (Other, SPECIFY)
- 97 (DIDN'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.13 Before participating in PG&E's program on [date of participation], what hours of the day did you typically run your pool pump on Monday-Friday during the winter months?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (Other, SPECIFY)
- 97 (DIDN'T USE)
- D (DON'T KNOW)
- R (REFUSED)

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3.14 (IF 3.12C <> 3.10C) Why do you run your pool pump differently in the summer than you did before participation in the program?

SPECIFY: _____

- D (DON'T KNOW)
- R (REFUSED)

3.15 (IF 3.11C <> 3.13C) Why do you run your pool pump differently in the winter than you did before participation in the program?

SPECIFY: _____

- D (DON'T KNOW)
- R (REFUSED)

Dishwasher Specific Battery (Verify Plus Measure)

3.16 Was the dishwasher you received a rebate for through PG&E's program NEW when you purchased and installed it or was it used?

- 1 New
- 2 Used
- D (DON'T KNOW)
- R (REFUSED)

3.17 We would like to get an idea of how many dishwasher loads you do each week with your new dishwasher. We will break this into QUICK loads, REGULAR loads, POWER SAVING loads, and POWER BOOST loads. On average, how many [READ LOAD TYPE] loads do you do each week with your new dishwasher?

- ___ Quick
- ___ Regular
- ___ Power saving
- ___ Power boost
- D (DON'T KNOW)
- R (REFUSED)

3.18 (ASK IF 3.17 = DON'T KNOW) How many dishwasher loads do you do on average each week with your new dishwasher?

- _____ number
- D (DON'T KNOW)
- R (REFUSED)

3.19 (ASK IF W2a=1) Would you say that this is more, the same, or less loads per week than you did with your old dishwasher?

- 1 More
- 2 The same
- 3 Less
- D (DON'T KNOW)

R (REFUSED)

Clothes Washer Specific Battery (Verify Plus Measure)

3.20 Was the clothes washer you received a rebate for through PG&E's program NEW when you purchased and installed it or was it used?

- 1 New
- 2 Used
- D (DON'T KNOW)
- R (REFUSED)

3.21 We would like to get an idea of how many loads of wash you do each week with your new clothes washer. We will break this into HOT water loads, WARM water loads and COLD water loads.

- ___ Hot water wash loads per week (specify number)
- ___ Warm water wash loads per week (specify number)
- ___ Cold water wash loads per week (specify number)
- D (DON'T KNOW)
- R (REFUSED)

3.22 (ASK IF 3.21 = DON'T KNOW) How many loads of wash do you do on average each week with your new clothes washer?

- _____ number
- D (DON'T KNOW)
- R (REFUSED)

3.23 (ASK IF W2a=1) Would you say that this is more, the same, or less loads per week than you did with your old clothes washer?

- 1 More
- 2 The same
- 3 Less
- D (DON'T KNOW)
- R (REFUSED)

Clothes Dryer Battery to Support Clothes Washer Battery

3.24 Do you have a clothes dryer?

- 1 Yes
- 2 No [SKIP TO 3.30]
- D (DON'T KNOW) [SKIP TO 3.30]
- R (REFUSED) [SKIP TO 3.30]

3.25 Did you purchase your clothes dryer new at the same time as your new clothes washer?

- 1 Yes [SKIP TO 3.27]
- 2 No
- D (DON'T KNOW) [SKIP TO 3.27]
- R (REFUSED) [SKIP TO 3.27]

3.26 How old is your clothes dryer? Is it: (read list)

- 1 Less than 1 yr
- 2 1-5 yrs
- 3 5-10 yrs
- 4 More than 10 yrs
- D (DON'T KNOW)
- R (REFUSED)

3.27 What type of fuel does your clothes dryer use? (If unsure read 1, 2)

- 1 Electricity
- 2 Natural Gas
- 4 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.28 How often do you use your clothes dryer versus HANG DRYING your clothes? Do you... (Read All)

- 1 Always use dryer
- 2 Use dryer more than 50% of the time
- 3 Use dryer less than 50% of the time
- 4 Half and Half
- 5 Never use the dryer
- D (DON'T KNOW)
- R (REFUSED)

3.29 (ASK IF W2a=1) Would you say that you use your new clothes dryer more, the same, or less – in terms of loads per week - than you did with your old clothes dryer?

- 1 More
- 2 The same
- 3 Less
- D (DON'T KNOW)
- R (REFUSED)

Water Heater Battery to Support Clothes Washer & Dishwasher Battery

3.30 What type of fuel does your water heater use? (If Don't Know, prompt and read answers)

- 1 Electricity
- 2 Natural Gas
- 3 Propane [SKIP TO 3.37]
- 4 Solar (sun) [SKIP TO 3.37]
- 5 Other (SPECIFY) _____ [SKIP TO 3.37]
- D (DON'T KNOW)
- R (REFUSED)

3.31 Do you have a traditional or tankless water heater? [If unsure ask] Does your water heater store water?
[If yes, 1, If no, 2]

- 1 Traditional storage tank?
- 2 Tankless/on-demand? [SKIP TO 3.34]
- 3 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.32 How many gallons does your water heater hold?

- _____ Gallons [SKIP TO 3.34]
- D (DON'T KNOW)
- R (REFUSED)

3.33 Is your water heater... (Read All)

- 1 Very Small: less than 30 gallons?
- 2 Small: 30-39 gallons?
- 3 Medium: 40-59 gallons?
- 4 Large: more than 60 gallons?
- D (DON'T KNOW)
- R (REFUSED)

3.34 What temperature is your hot water heater set for?

- _____ Degrees [SKIP TO 3.36]
- D (DON'T KNOW)
- R (REFUSED)

3.35 Is your water heater set at a... (Read All)

- 1 Low temperature: 100-120 degrees F?
- 2 Medium temperature: 125-140 F?
- 3 High temperature: 145-160 F?
- D (DON'T KNOW)
- R (REFUSED)

3.36 How old is your water heater? Is it... (Read All)

- 1 Less than 1 yr
- 2 1-5 yrs
- 3 5-10 yrs
- 4 More than 10 yrs
- D (DON'T KNOW)
- R (REFUSED)

Water Heater Specific Battery (Verify Plus Measure)

3.37 Was the water heater you received a rebate for through PG&E's program NEW when you purchased and installed it or was it used?

- 1 New
- 2 Used
- D (DON'T KNOW)
- R (REFUSED)

3.38 What type of fuel does your new water heater use? (If Don't Know, prompt and read answers)

- 1 Electricity
- 2 Natural Gas
- 3 Propane
- 4 Solar (sun)
- 5 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.39 (Ask if W2A = 1) What type of fuel did your previous water heater use?

- 1 Electricity
- 2 Natural Gas
- 3 Propane
- 4 Solar (sun)
- 5 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.40 Is your new water heater a traditional storage tank water heater or is it a tankless or on-demand type water heater? [If unsure ask] Does your water heater store water? [If yes, 1, If no, 2]

- 1 Traditional storage tank?
- 2 Tankless/on-demand? [SKIP TO 3.43]
- 3 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.41 How many gallons does your new water heater hold?

- _____ Gallons [SKIP TO 3.43]
- D (DON'T KNOW)
- R (REFUSED)

3.42 Is your new water heater... (Read All)

- 1 Very Small: less than 30 gallons?
- 2 Small: 30-39 gallons?
- 3 Medium: 40-59 gallons?
- 4 Large: more than 60 gallons?
- D (DON'T KNOW)
- R (REFUSED)

3.43 What temperature is your new hot water heater set for?

- _____ Degrees [SKIP TO 3.45]
- D (DON'T KNOW)
- R (REFUSED)

3.44 Is your water heater set at a... (Read All)

- 1 Low temperature: 100-120 degrees F?
- 2 Medium temperature: 125-140 F?
- 3 High temperature: 145-160 F?
- D (DON'T KNOW)
- R (REFUSED)

3.45 Do you have a clothes washer?

- 1 Yes
- 2 No [SKIP TO 3.47]
- D (DON'T KNOW) [SKIP TO 3.47]
- R (REFUSED) [SKIP TO 3.47]

3.46 Do you always, sometimes, or never wash your clothes in warm or hot water?

- 1 Always
- 2 Sometimes
- 3 Never
- D (DON'T KNOW)
- R (REFUSED)

3.47 Do you have a dishwasher?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Furnace Specific Battery (Billing Analysis Measure)

3.48 Was the furnace you received a rebate for through PG&E's program NEW when you purchased and installed it or was it refurbished or used?

- 1 New
- 2 Refurbished/Used
- D (DON'T KNOW)
- R (REFUSED)

3.49 (Ask if W2A = 1) Did the old system also use natural gas? (If NO specify fuel type)

- 1 Yes/ Natural Gas
- 2 Electricity [SKIP TO 3.51]
- 3 Propane [SKIP TO 3.51]
- 4 Other (SPECIFY) _____ [SKIP TO 3.51]
- D (DON'T KNOW) [SKIP TO 3.51]
- R (REFUSED) [SKIP TO 3.51]

3.50 (Ask if W2A = 1) Was the old system a forced air furnace or something else?

- 1 Forced air furnace
- 2 Wall furnace or furnaces
- 3 Room unit or units
- 4 Floor furnace
- 5 Other [SPECIFY]
- D (DON'T KNOW)
- R (REFUSED)

3.51 (Ask if W2A = 1) Does the new furnace heat the same, more, or less living space as the old system?

- 1 Same
- 2 More
- 3 Less
- D (DON'T KNOW)
- R (REFUSED)

3.52 Was new ductwork installed at the same time the new furnace was installed?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Room AC Specific Battery (Verify Only Measure)

3.53 Was the room air conditioner you received a rebate for through PG&E's program NEW when you purchased and installed it or was it refurbished or used?

- 1 New
- 2 Refurbished/Used
- D (DON'T KNOW)
- R (REFUSED)

3.54 (Ask if W2A = 1) What happened with your old room air conditioner?

- 1 Installed in another location at house
- 2 Gave away
- 3 Sold
- 4 In storage, but not planning on using
- 5 Disposed of
- 6 Recycled
- 7 Other (specify) _____
- D (DON'T KNOW)
- R (REFUSED)

Attic Insulation Specific Battery (Billing Analysis Measure)

3.55 Was there insulation in the attic before you installed the new attic insulation you received a rebate for through PG&E's program?

- 1 Yes
- 2 No [SKIP TO 3.58]
- D (DON'T KNOW) [SKIP TO 3.58]
- R (REFUSED) [SKIP TO 3.58]

3.56 Was the pre-existing attic insulation installed when your home was built?

- 1 Yes [SKIP TO 3.58]
- 2 No
- D (DON'T KNOW) [SKIP TO 3.58]
- R (REFUSED) [SKIP TO 3.58]

3.57 Approximately when was the pre-existing attic insulation added to your home?

- ____ Year
- D (DON'T KNOW)
- R (REFUSED)

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3.58 Was any of the attic insulation that you installed on [read participation date] installed over a garage or any other non-living areas of your home?

- 1 Yes, Some attic insulation installed above my living area and over garage or other non-living areas
- 2 Yes, Only installed over garage or other non-living areas
- 3 No / Only living areas
- D (DON'T KNOW)
- R (REFUSED)

3.59 What is your primary heating fuel type?

- 1 Electricity
- 2 Natural Gas
- 3 Propane
- 4 Wood
- 5 Kerosene
- 6 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.60 Do you have air conditioning?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

3.61 [IF 3.60=YES] Is this a central AC system, room air conditioner, or evaporative cooler?

- 1 Central AC
- 2 Room AC
- 3 Evaporative cooler
- 4 Other (specify) _____
- D (DON'T KNOW)
- R (REFUSED)

3.62 [IF 3.61=2] How many room air conditioners do you have?

- _____ Room AC units
- D (DON'T KNOW)
- R (REFUSED)

Wall Insulation Specific Battery (Billing Analysis Measure)

3.63 Was there wall insulation in the wall before you installed the new wall insulation you received a rebate for through PG&E's program?

- 1 Yes / No pre-existing insulation
- 2 No / Pre-existing insulation [SKIP TO 3.66]
- D (DON'T KNOW) [SKIP TO 3.66]
- R (REFUSED) [SKIP TO 3.66]

3.64 Was the pre-existing wall insulation installed when your home was built?

- 1 Yes [SKIP TO 3.66]
- 2 No
- D (DON'T KNOW) [SKIP TO 3.66]
- R (REFUSED) [SKIP TO 3.66]

3.65 Approximately when was the pre-existing wall insulation added to your home?

- ____ Year
- D (DON'T KNOW)
 - R (REFUSED)

3.66 Was any of the wall insulation that you installed on [read participation date] installed in your garage or any other non-living areas of your home?

- 1 Yes, Some wall insulation installed in my living areas and in my garage or other non-living areas
- 2 Yes, Wall insulation was only installed in my garage or other non-living areas
- 3 No / Only living areas
- D (DON'T KNOW)
- R (REFUSED)

3.67 What is your primary heating fuel type?

- 1 Electricity
- 2 Natural Gas
- 3 Propane
- 4 Wood
- 5 Kerosene
- 6 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.68 Do you have air conditioning?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

3.69 [IF 3.68=YES] Is this a central AC system, room air conditioner, or evaporative cooler?

- 1 Central AC
- 2 Room AC
- 3 Evaporative cooler
- 4 Other (specify) _____
- D (DON'T KNOW)
- R (REFUSED)

3.70 [IF 3.69=2] How many room air conditioners do you have?

- _____ Room AC units
- D (DON'T KNOW)
- R (REFUSED)

Free Ridership and Spillover (Section 4)

(QUESTIONS IN THIS SECTION WILL BE REPEATED FOR EACH MEASURE CATEGORY)

FR7. Our records indicate you received about **[amount of program incentive/subsidy]** from the **[utility] [program]** either directly or at the time of purchase to offset the cost of the **[product type]**.

(IF CLOTHES WASHER INSTALLED) You might also have received a rebate from your local water district. We want you to think about the PG&E rebate now.

Does this amount sound about right?

- 1. Yes [SKIP TO FR1]
- 2. No
- D DON'T KNOW [SKIP TO FR1]
- R REFUSED [SKIP TO FR1]

FR8. What would you estimate to be the actual amount?

[RECORD RESPONSE] _____ [SET = NEW AMOUNT OF PROGRAM INCENTIVE/SUBSIDY]

- D DON'T KNOW
- R REFUSED

FR1. At the time that you first heard about the **[assistance]** from PG&E for **[measure]**, had you...? [READ LIST UNTIL R SAYS 'NO']

- 1. Already been thinking about purchasing **[product type]**? [IF NO, SKIP TO FR2]
- 2. Already begun collecting information about **[product type]**? [IF NO, SKIP TO FR2]
- 3a. **[FOR INCREMENTAL EFFICIENCY MEASURES]** Already selected the **[measure]** you were going to get? [IF NO, SKIP TO FR2]
- 3b. **[FOR EFFICIENCY ENHANCEMENT MEASURES]** Already decided to buy the **[product type]**? [IF NO, SKIP TO FR2]

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- 4. Already installed the energy efficient **[measure]**? [IF YES, SKIP TO FR1B; ELSE FR2]
- 5. [DON'T READ] Other: _____ [SKIP TO FR2]
- D DON'T KNOW [SKIP TO FR2]
- R REFUSED [SKIP TO FR2]

FR1B. So, the [measure] was installed before you learned about the [assistance] from PG&E?

- 1 Yes [SKIP FR5]
- 2 No
- D Don't know
- R Refused

FR2. Just to be sure I understand, did you have specific plans to install a(n) **[product type]** before learning about the **[assistance]** available through PG&E's program?

- 1. Yes
- 2. No [SKIP TO FR4]
- D DON'T KNOW [SKIP TO FR4]
- R REFUSED [SKIP TO FR4]

FR3. Did you have to make any changes to your existing plans in order to receive this **[assistance]** through the PG&E program?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4. [REPEAT AS NEEDED FOR FR4 PARTS A – D] If the **[assistance]** from the PG&E program had not been available, would you still have:

FR4A. Purchased a(n) **[product type]** ?

- 1. Yes
- 2. No [SKIP TO FR5]
- D DON'T KNOW
- R REFUSED

FR4B. Purchased the **[product type]** at the same time as you did?

- 1. Yes [SKIP TO FR4C]
- 2. No
- D DON'T KNOW [SKIP TO FR4C]
- R REFUSED [SKIP TO FR4C]

FR4B1. Bought the **[product type]** earlier than you did, or later?

- 1. Earlier
- 2. Same Time [REPEAT QUESTION FR4B]
- 3. Later
- D DON'T KNOW [SKIP TO FR4C]
- R REFUSED [SKIP TO FR4C]

FR4B2. How much **[earlier/later]** would you have bought the **[product type]**?
_____ Years [AND/OR] _____ Months

- D DON'T KNOW
- R REFUSED

FR4C. [IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM, OR MEASURE IS OF VARIABLE AMOUNT] Without the program, would you have purchased the same quantity as you did?

- 1. Yes [SKIP TO FR4D]
- 2. No
- D DON'T KNOW [SKIP TO FR4D]
- R REFUSED [SKIP TO FR4D]

FR4C1. How many/much would you have purchased without the program?

- _____ [RECORD NUMBER]
- D DON'T KNOW
 - R REFUSED

FR4D. **[FOR INCREMENTAL EFFICIENCY MEASURES AND INSULATION]** Purchased the same [INSULATION = R value/OTHER=efficiency] of **[product type]**?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4E. If the **[assistance]** from PG&E's program had not been available, would you have done anything else differently?

- 1. Yes
- 2. No [SKIP TO FR5]
- D DON'T KNOW [SKIP TO FR5]
- R REFUSED [SKIP TO FR5]

FR4E1 What would you have done differently?

[RECORD RESPONSE]: _____

FR5. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same **[measure]** if you had not received any **[assistance]** from the program?

[RECORD RESPONSE (0-10)] _____ [SKIP TO FR9]

D DON'T KNOW [SKIP TO FR9]

R REFUSED [SKIP TO FR9]

[Skip to FR10 if program does not provide a financial incentive/subsidy or database does not contain that information]

I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR9. If I had not had any assistance from the program (IF CLOTHES WASHER: for the clothes washer), I would have paid the additional **[amount of program incentive/subsidy]** to buy the **[measure]** on my own?

[RECORD RESPONSE (0-10)] _____

D DON'T KNOW

R REFUSED

[READ ONLY IF FR7-FR9 WAS SKIPPED]: I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR10. There may have been several reasons for my purchase decision. But the **[assistance]** from PG&E's program was a critical factor in my decision to purchase the high efficiency/energy efficient product.

[RECORD RESPONSE (0-10)] _____

D DON'T KNOW

R REFUSED

FR11. I would have bought a(n) **[product type]** within **a year** of when I did even without the **[assistance]** from PG&E's program.

[RECORD RESPONSE (0-10)] _____

D DON'T KNOW

R REFUSED

Consistency Check & Resolution

[C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

FR4A (efficiency enhancement measures) OR FR4D (incremental efficiency measures)
FR5
FR10
FR11

[IF FR4A/D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the [measure] without the program']

[IF FR4A/D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would not have purchased the [measure] without the program']

[IF FR5 = 0,1 AND FR4A/D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the [measure] without the program']

[IF FR5 = 9,10 AND FR4A/D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the [measure] without the program']

[IF FR10 = 0,1 AND FR4A/D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program']

[IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program']

[IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the [product type] within [a year/2 years] even without the program']

[IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the [product type] within [a year/2 years] even without the program']

C1. Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **[measure]** at the time you did? [RECORD VERBATIM RESPONSE BELOW]

C2. **[fill with wording and response categories to the one question which was inconsistent]** [INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE]

Recent Program Participation (Section 5)

5.1 Have you participated in any other programs offered by PG&E because of your experience with their energy efficiency programs for homes and small businesses?

- 1 Yes
- 2 No **[SKIP TO 5.3]**
- D (DON'T KNOW) **[SKIP TO 5.3]**
- R (REFUSED) **[SKIP TO 5.3]**

5.2 Which programs?

5.3 Which of the following phrases or messages have you heard before today? (ROTATE STARTING POINT)

A. Good Housekeeping

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

B. Click it or Ticket

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

C. Ahnu

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

D. Flex Your Power

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

E. Flex Alert

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

F. Energy Hog

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

- G. Galley Bay
1 Yes
2 No
D (DON'T KNOW)
R (REFUSED)

- H. Energy Star
1 Yes
2 No
D (DON'T KNOW)
R (REFUSED)

- I. Hollister Co
1 Yes
2 No
D (DON'T KNOW)
R (REFUSED)

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 6)

NOTE: ALL QUESTIONS STARTING WITH THE LETTER 'C' ARE QUESTIONS THAT WILL BE ASKED ONLY FOR WALL/ATTIC INSULATION AND FURNACE MEASURES [BILLING ANALYSES MEASURES]

The last questions ask about household characteristics to make sure we're getting a representative sample of [utility] residents.

6.1 Do you receive an electric or gas bill directly from PG&E?

- 1 Yes
2 No (SKIP TO 6.3)
D (DON'T KNOW) (SKIP TO 6.3)
R (REFUSED) (SKIP TO 6.3)

6.2 Does this bill only include your home's electric or gas use, or does it include the use of other households?

- 1 Only 1 household
2 Multiple households
D (DON'T KNOW)
R (REFUSED)

6.3 Do you own or rent your home?

- 1 Own
2 Rent
3 Other (SPECIFY)
D (DON'T KNOW)
R (REFUSED)

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6.4 In what type of building do you live? (READ LIST IF NEEDED)
(PROBE FOR 'Condo': "How many units are in your building?")

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Other (SPECIFY)
- 8 Boat/RV/Van/Etc.
- D (DON'T KNOW)
- R (REFUSED)

6.5 About when was this building first built?

RECORD YEAR: _____

IF DK YEAR: Was it built . . . ? (READ LIST)

- 1 Before 1978
- 2 Between 1978 and 1992
- 3 Between 1993 and 2000
- 4 Between 2001 and 2004
- 5 2005 or later
- D (DON'T KNOW)
- R (REFUSED)

6.6 Were you living in this same home around [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

6.7 How many square feet of **living space** are there in your residence, including bathrooms, foyers and hallways? (Exclude garages, basements and unheated porches.)

_____ Square feet

IF DK YEAR: Is it . . . ? (READ LIST)

- 1 Less than 500 square feet
- 2 Between 501 – 1000 square feet
- 3 Between 1001 – 1500 square feet
- 4 Between 1501 – 2000 square feet
- 5 Between 2001 – 2500 square feet
- 6 Between 2501 – 3000 square feet
- 7 Greater than 3000 square feet
- D (DON'T KNOW)
- R (REFUSED)

[If 6.6 = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.9]

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C6.8a Did you do any remodeling, renovation or additions since January 1, 2005?

- 1 Yes
- 2 No (SKIP TO 6.9a)
- D (DON'T KNOW) (SKIP TO 6.9a)
- R (REFUSED) (SKIP TO 6.9a)

C6.8b How many remodels, renovations or additions have you done since then?

- _____ Remodels, renovations or additions
- D (DON'T KNOW)
 - R (REFUSED)

C6.8c I'm going to ask you several questions regarding the timeframe of your remodels, renovations or additions. We will try to run through them quickly. (ASK A-C FOR EACH REMODEL THAT TOOK PLACE SINCE JANUARY 1, 2005).

- a. In what month and year did it start?
- b. Did this increase or decrease your home's square footage, not counting unfinished storage spaces, porches or garages,
- c. In what month and year did it finish?

	a. START (mm/yyyy)	b. Increase or decrease? 1 Increase 2 Decrease 3 Same D (DK) R (REFUSED)	C. FINISH (mm/yyyy)
1			
2			
3			
4			

6.9a Including yourself, how many people currently live in your home year-round?

- _____ people
- D (DON'T KNOW)
 - R (REFUSED)

6.9b (IF 6.9a=1) Which of the following best describes your age?

- 1 Less than 18 years old
- 2 18-24 years old
- 3 25-34 years old
- 4 35-44 years old
- 5 45-54 years old
- 6 55-64 years old
- 7 65 or older
- D (DON'T KNOW)
- R (REFUSED)

PG&E2000 Mass Markets Single Family Measures Participant Survey

6.9c (IF 6.9a>1) Including yourself, how many people currently living in your home year-round are in the following age groups?

- ____ Less than 18 years old
 - ____ 18-24 years old
 - ____ 25-34 years old
 - ____ 35-44 years old
 - ____ 45-54 years old
 - ____ 55-64 years old
 - ____ 65 or older
- TOTAL SHOULD EQUAL 6.9a
R (REFUSED)

6.9d Is there typically an adult at home during the day?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

[If 6.6 = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.10]

C6.9e Has the total number of people living in your home year-round changed since [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No (SKIP TO 6.10)
- D (DON'T KNOW) (SKIP TO 6.10)
- R (REFUSED) (SKIP TO 6.10)

C6.9f Do more people or less people live in your home now?

- 1 More→How many more? ____
- 2 Less→How many less? ____
- D (DON'T KNOW)
- R (REFUSED)

C6.9g In what year(s) did the number of people in your household change? (RECORD ALL YEARS OF CHANGE—NET CHANGE IS CALCULATED FROM C6.9f)

- 1st NET CHANGE: ____ YEAR
- 2nd NET CHANGE: ____ YEAR
- 3rd NET CHANGE: ____ YEAR
- D (DON'T KNOW)
- R (REFUSED)

6.10 This next question asks about other changes you have made that we haven't already talked about. Since January 1, 2005 have you made any changes to the appliances, equipment, or other characteristics of your home that would affect how much energy you are using?

- 1 Yes [ASK 6.10a-NSP5 FOR EACH MEASURE INSTALLED BEFORE ASKING 6.11a]
- 2 No [SKIP TO 6.11a]
- D DK [SKIP TO 6.11a]
- R REFUSED [SKIP TO 6.11a]

a. What types of changes did you make? (DO NOT READ. RECORD EACH TYPE OF CHANGE MADE. PROBE: Anything else?)

Heating and air conditioning measures

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Furnace
- 5 Programmable thermostat

Lighting measures

- 6 Fluorescent indoor fixture
- 7 Fluorescent outdoor fixture
- 8 Compact fluorescent bulb
- 9 Compact fluorescent fixture
- 10 Motion sensor
- 11 Dimmer switch

Laundry measures

- 12 Clothes washer
- 13 Clothes dryer

Water using measures

- 14 Water heater
- 15 Low Flow showerheads
- 16 Faucet aerators

Kitchen appliances

- 17 Refrigerator
- 18 Freezer
- 19 Range/oven
- 20 Dishwasher

Pool/spa/jacuzzi

- 21 Swimming pool
- 22 Swimming pool pump
- 23 Swimming pool cover
- 24 Spa/jacuzzi

Insulation/weatherstripping/sealing

- 25 Floor, wall, ceiling, or attic insulation
- 26 Weatherstripping/caulking/weatherization
- 27 Water heater/pipe wrapping/insulation
- 28 Duct sealing/repair (not cleaning)

Windows

- 29 Windows
- 30 Other (SPECIFY)
- 00 No other changes
- D DK
- R REFUSED

PG&E2000 Mass Markets Single Family Measures Participant Survey

b. Did this equipment replace existing equipment/measures or was it new to your home?

- 1 Replaced existing equipment
- 2 New to home
- D DK
- R REFUSED

c. When did this occur? (RECORD MONTH AND YEAR)

____/____ MM/YYYY

D DK -->Was this before or after you participated in the [program]?

- 1 Before
 - 2 After
 - D DK
 - R REFUSED
- R REFUSED

(ASK 6.10Cd and 6.10Ce ONLY IF BILLING ANALYSIS BEING DONE AND IF 6.10a = 4, 13, 14, 19, 23)

Cd. What type of fuel does the new [equipment] use?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D DK
- R REFUSED

Ce. (ASK IF 6.7b = REPLACED) What was the fuel type of the [equipment] you replaced?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D DK
- R REFUSED

f. Did you receive a rebate for this [equipment] through a [utility] program?

- 1 Yes [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.11a]
- 2 No
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.11a]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.11a]

(ASK 6.10g and 6.10h IF 1-4, 12, 13, 14, 17, 18, 19, 20, 22, 24, 29 IN 6.10a; ELSE SKIP TO NSP4)

g. Is the new [equipment] energy efficient?

- 1 Yes
- 2 No [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.11a]
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.11a]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.11a]

PG&E2000 Mass Markets Single Family Measures Participant Survey

- h. How do you know that this equipment is energy efficient? (PROBE: IS IT ENERGY STAR® RATED?)
-

(ASK NSP4-5 ONLY IF 6.10f = NO AND 6.10g = YES AND 6.10c = AFTER DATE OF PARTICIPATION)

NSP4. I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the [utility] [program] in [2006, 2007, 2008] influenced my decision to install different types of high efficiency equipment on my own.

[RECORD RESPONSE (0-10)] _____

D DON'T KNOW

R REFUSED

NSP5. Why did you purchase this high efficiency equipment without going through a [utility] program? [DO NOT READ; INDICATE ALL THAT APPLY]

1. Too much paperwork
 2. Takes too long to get approval
 3. No time to participate, needed equipment immediately
 4. The program had ended
 5. The equipment would not qualify [PROBE: WHY NOT?] _____
 6. The amount of the rebate wasn't important enough
 7. Did not know program was available
 8. There was no program available
 9. Other [SPECIFY] _____
- D DON'T KNOW
R REFUSED

(ASK C6.11a-C6.11c ONLY IF BILLING ANALYSIS BEING DONE)

PG&E2000 Mass Markets Single Family Measures Participant Survey

C6.11a [IF WATER HEATER WAS NOT REPLACED IN 6.10a OR THROUGH PROGRAM AND NOT ASKED IN 3.30 OR 3.38] Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Propane
- 4 Solar
- 5 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

C6.11b [IF CLOTHES DRYER WAS NOT REPLACED IN 6.10a OR THROUGH PROGRAM AND NOT ASKED IN 3.27] Do you have a gas or electric clothes dryer?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

C6.11c [IF RANGE/OVEN WAS NOT REPLACED IN 6.10a OR THROUGH PROGRAM] Do you have a gas or electric range/oven?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

6.12 What is the highest level of education you have completed?

- 1 no schooling
- 2 less than high school
- 3 some high school
- 4 high school graduate or equivalent (e.g., GED)
- 5 trade or technical school
- 6 some college
- 7 college graduate degree
- 8 some graduate school
- 9 graduate degree
- 10 other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

PG&E2000 Mass Markets Single Family Measures Participant Survey

6.13 Which of the following best represents your annual household income from all sources in 2007, before taxes? Was it . . . ? *(READ)*

- 1 Less than \$20,000 per year
- 2 \$20,000-49,999
- 3 \$50,000-74,999
- 4 \$75,000-99,999
- 5 \$100,000-149,999
- 6 \$150,000-199,999
- 7 \$200,000 or more
- D (DON'T KNOW)
- R (REFUSED)

6.14 What is your ethnicity? *(INDICATE ALL THAT APPLY)*

- 1 White
- 2 Black, African American or Negro
- 3 American Indian or Alaska Native
- 4 Asian
- 5 Chinese
- 6 Japanese
- 7 Korean
- 8 Vietnamese
- 9 Filipino
- 10 Native Hawaiian
- 11 Guamanian or Chamorro
- 12 Samoan
- 13 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6.15 What is the primary language spoken in your home? *(DO NOT READ)*

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

7.1

We would like to offer you \$25 to participate in the on-site component of this evaluation. We are NOT interested in selling anything. We would like to have one of our auditors visit your home at your convenience to look at the [measure] you installed through the program and how it/they are operating. The on-site visit would only take about 20 minutes. Would that be alright with you?

1 Yes

Great! Someone will give you a call back to determine when they can schedule an appointment with one of our auditors in your area. Thank you for your cooperation with this important effort.

2 No

Thank and Terminate

SCG 3517 Single Family Energy Efficiency Retrofit Program

The following measures will be asked about in the survey: Energy Star dishwasher, Energy Star or energy efficient clothes washer, high efficiency water heater, tankless water heater, high efficiency central gas furnace, attic insulation, wall insulation, low flow showerhead and faucet aerators.

Instrument-specific variables-- The CATI software will automatically fill the appropriate description in the questions.

[Product Type]

Attic insulation
Wall insulation
Dishwasher
Clothes washer
Furnace
Water heater
Showerhead and faucet aerators

[Measure]

Attic insulation
Wall insulation
Energy Star dishwasher
Energy Star/energy efficient clothes washer
High efficiency central gas furnace
High efficiency water heater
Tankless water heater
Low flow showerhead and faucet aerators

[Assistance]

Rebate/free

[Program]

2006-2008 Residential Retrofit Program

[Utility]

SCG

[Program Incentive]

Rebate dollar amount

[Quantity]

Quantity exchanged/installed

[Incremental efficiency measures]

Energy Star dishwasher
Energy Star/energy efficient clothes washer
High efficiency central gas furnace
High efficiency water heater
Tankless water heater

[Efficiency enhancement measures]

Low flow showerhead and faucet aerators
Insulation

Introduction

Hello, my name is [interviewer name], and I'm calling on behalf of the California Public Utilities Commission regarding Southern California Gas Company's 2006-2008 Residential Retrofit Program, also known as the Home Energy Efficiency Rebate Program. May I speak with [contact name]?

- 1 Yes
- 2 No [attempt to convert; if R not available, ask for an adult who makes decisions on how household uses energy]

I'm with PA Consulting Group, an independent research firm. I am calling to learn about your experiences with the . . . (READ ONE OR BOTH DEPENDING UPON THE MIX OF MEASURES):

Water Conservation only: . . . free faucet aerators and low-flow showerhead you received at a community event.

Other Measures: . . . [measures] you purchased and received a rebate for through Southern California Gas Company's Residential Retrofit Program (also referred to as the Home Energy Efficiency Rebate Program).

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and **SCG** better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about (non-billing analysis=15/billing analysis=20) minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-XXX-XXXX)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the [measures] you purchased and received a rebate through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call Mikhail Haramati at 415-703-1458, or visit their website: www.cpuc.ca.gov/eevalidation.)

(NOTE: For all questions, "DON'T KNOW" and "REFUSED" will be coded if offered as a response.)

Recall of Participation/Identification of Decision Maker (Section 1)

(QUANTITY REFERS TO THE NUMBER RECEIVED WITHIN THE MEASURE CATEGORY--E.G., 3 FAUCET AERATORS)

1.1a. (WATER CONSERVATION MEASURES) Program records indicate that you received three free faucet aerators and a low-flow showerhead at a community event through the 2006-2008 Residential Retrofit Program around **[insert date of participation]**. Do you recall receiving these? Is this the correct quantity? (RECORD INFORMATION)

MEASURES	Do you recall receiving . . . ?	(IF QUANTITY > 1) Is this the correct quantity?
A. One low-flow showerhead and three faucet aerators	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)

1.1b. (OTHER MEASURES) Program records indicate that you purchased and received a mail-in or instant rebate for the following energy efficient equipment through the 2006-2008 Residential Retrofit Program around **[insert date of participation]**. Do you recall purchasing this/these **[measure]**? Is this the correct quantity? (RECORD FOR EACH MEASURE INSTALLED)

MEASURES	Do you recall purchasing . . . ?	(IF QUANTITY > 1) Is this the correct quantity?
A. [quantity] Energy Star Dishwasher	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
B. [quantity] [Energy Star/Tier 1/Tier 2] Clothes Washer	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
C. [quantity] High efficiency water heater	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
D. [quantity] Tankless water heater(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
E. [quantity] Central gas furnace	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
F. Attic insulation	1 Yes 2 No D (DK) R (REFUSED)	--
G. Wall insulation	1 Yes 2 No D (DK) R (REFUSED)	--

(ASK 1.1c-1.1d ONLY IF MEASURE = HIGH EFFICIENCY WATER HEATER)

1.1c How many gallons does your water heater hold?

- _____ gallons (SKIP to 1.1e)
D (DK)
R (REFUSED)

1.1d (IF DON'T KNOW WATER HEATER SIZE) Is your water heater . . . ? (READ LIST)

- 1 Very Small – less than 30 gallons
2 Small: 30-39 gallons
3 Medium: 40-59 gallons
4 Large: 60 gallons or more
D (DK)
R (REFUSED)

(ASK 1.1e ONLY IF MEASURE = DISHWASHER)

1.1e Do you have a gas or electric water heater?

- 1 Gas
2 Electric
3 Both
4 Other (SPECIFY)
D (DK)
R (REFUSED)

REMOVED 1.1f AND 1.1g – DISHWASHER IS NOT OFFERED UNDER SCG3517

(IF RECALLS MEASURES, SKIP TO 1.4)

1.2 (ASK IF DOESN'T RECALL ANY OF THESE MEASURES) Is it possible that someone else in your household would know about (WATER CONSERVATION: receiving these water saving devices/OTHER MEASURES: purchasing this/these [measures] and applying for a mail-in rebate or receiving an instant rebate from the retailer)? (RECORD ONE NUMBER)

- 1 Yes (SKIP TO 1.3)
2 No (TERMINATE IF ONLY WATER CONSERV)
D (DON'T KNOW)
R (REFUSED) (TERMINATE)

1.2b (OTHER MEASURES ONLY) Southern California Gas offers rebates for replacing less efficient gas-fired appliances, heating equipment with more energy-efficient equipment, and for adding insulation. Rebates are paid in two ways—either in response to a mail-in application for a rebate or through an instant rebate at the retailer. The rebate program is referred to as the 2006-2008 Residential Retrofit Program, or the Home Energy Efficiency Rebate Program, or the Single Family Energy Efficiency Retrofit program. Are you sure you don't recall purchasing the/these [measures] and applying for a rebate from the utility? (RECORD ONE NUMBER)

- 1 Don't remember -> [TERMINATE, RECORD ANY COMMENTS MADE BY RESPONDENT BEFORE EXITING]

- 2 Remember -> [READ, "GREAT, THEN LET'S CONTINUE", SKIP TO 1.4]
- R (REFUSED) (TERMINATE)

1.3 May I please speak with that person? (RECORD ONE NUMBER)

- 1 Yes (BEGIN THE SURVEY AGAIN WITH THIS NEW RESPONDENT)
- 2 No (TERMINATE)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

1.4 Are you the person in your household who decided to (WATER CONSERVATION: accept these water saving devices/OTHER MEASURES: purchase this/these [measures] and receive a rebate) through Southern California Gas Company's Residential Retrofit Program?

- 1 Yes
- 2 No (SKIP BACK TO 1.3)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

Sources of Program Information (Section 2)

2.1 How did you hear about (REBATE: rebate offered on [measures]/WATER SAVING: free water saving devices) available as part of SCG's Residential Retrofit Program? (PROBE: Did you hear about the program from any other sources?) (DO NOT READ LIST, RECORD ALL THAT APPLY)

Utility provided information

- 1 (Advertising—radio, newspaper, trade journal, billboard, TV)
- 2 (Bill insert, newsletter, or other mailing)
- 3 (Website)
- 4 (Email)
- 5 (Other utility) (SPECIFY)

Local Government/Community event/Nonprofit

- 6 (Meeting, event, workshop, training) (SPECIFY)
- 7 (School)
- 8 (Local government/community agency) (SPECIFY)
- 9 (City/county Energy Center such as Pacific Energy Center, Stockton, Food Service) (SPECIFY)
- 10 (Advertising—radio, newspaper, trade journal, billboard, TV)

Other

- 11 (Home or building audit or assessment) (SPECIFY)
- 12 (Meeting, event, workshop training) (SPECIFY)
- 13 (Flex your Power TV or radio advertising)
- 14 (Other advertising, don't recall)
- 15 (Friend/Relative/Neighbor)
- 16 (Other, Specify: _____)
- D (DON'T KNOW) (SKIP TO SECTION 3)
- R (REFUSED) (SKIP TO SECTION 3)

Installation Behavior (Section 3)

(QUESTIONS IN THIS SECTION WILL BE REPEATED FOR EACH MEASURE R RECALLS)

3.1a (IF QUANTITY=1) Now, I would like to understand what you did with the [measure]. Is this [measure] currently installed at your home (either indoors or outdoors)? (RECORD ONE NUMBER)

- 1 Yes (SKIP TO SECTION 4)
- 2 No
- D (DON'T KNOW) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)
- R (REFUSED) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)

3.1b (IF QUANTITY=1) Which of the following best describes what happened with the [measure]? (READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location (SKIP TO 3.3a)
- 2 It was installed at your home but is now permanently removed (example: broke, burned out, don't fit, don't like, etc.) (SKIP TO 3.6)
- 3 It is in storage because it is only needed during certain months of the year
- 4 It is in storage for some other reason (SKIP TO SECTION 3.8)
- 5 It was sold or given away (SKIP TO 3.3a)
- 6 Something else (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

3.2 (IF QUANTITY>1) Now, I would like to understand what you did with the [quantity] [measure]. (READ LIST, RECORD NUMBER)

- a___ How many are currently installed at your home (either indoors or outdoors) (IF RESPONSE=QUANTITY, SKIP TO 3.4)
- b___ How many are installed at some other location?
- c___ How many were installed at your home (either indoors or outdoors) but are now permanently removed (example: broke, burned out, don't fit, don't like, etc.)
- d___ How many are in storage because they are only needed during certain months of the year?
- e___ How many are in storage for some other reason?
- f___ How many were sold or given away?
- g___ Something else? (SPECIFY)

3.3a (ASK IF 3.1b=1, 3.1b=5, 3.2b>0, 3.2f>0) Is the/Are these [measure] located in SCG's service territory?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

(SKIP TO 5.3 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY) AND THAT LOCATION IS **OUTSIDE** OF SCE'S SERVICE TERRITORY (3.3A NE 1).

SKIP TO W1 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY) AND THAT LOCATION IS **INSIDE** OF SCE'S SERVICE TERRITORY (3.3A = 1).

Removed Measures (ASK ONLY IF THEY SAY THEY REMOVED A MEASURE AFTER INSTALLED, 3.1b=2 or 3.2c>0)

3.6 Now let's talk about [measure] you said you installed but have since removed. Why was this removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 (Equipment failed)
- 2 (Didn't work properly)
- 3 (Wrong size—too small or too large)
- 4 (Low water flow)
- 5 (Didn't like the color)
- 6 (Didn't like appearance/unattractive)
- 7 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

3.7 What did you replace [measure] with? (DO NOT READ LIST; PROBE FOR EFFICIENCY, RECORD ALL THAT APPLY)

- 1 (With a new high efficiency [measure])
- 2 (With a less efficient [product type])
- 3 (Re-installed old equipment)
- 4 (Did not replace)
- 5 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

Measures in Storage (ASK ONLY IF THEY SAY MEASURE IS IN STORAGE FOR SOME OTHER REASON, 3.1b=4 or 3.2e>0)

3.8 When do you think you will install the [measure]? Would you say within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

- 1 Within the next 3 months
- 2 3 to 6 months from now
- 3 6 to 12 months from now
- 4 More than a year from now
- 5 Never
- D (DON'T KNOW)
- R (REFUSED)

NTGR and Spillover (Section 4)

Warm-up Questions/Background Context¹

W1. Please think back to the time when you were deciding to (REBATE: buy the energy saving [**product types**]/WATER SAVINGS: get the free water saving devices), perhaps recalling things that occurred in your household shortly before and after [**timeframe**]. What factors motivated you to (REBATE: purchase energy saving [**product types**]/WATER SAVINGS: get the free water saving devices)? {? {DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE RESPONDENT HAS FINISHED, PROBE: Are there any other factors?}}

1. Old equipment didn't work
 2. Old equipment working poorly
 3. The program incentive
 4. The program technical assistance
 5. Wanted to save energy
 6. Wanted to reduce energy costs
 8. The information provided by the Program
 9. Past experience with this program
 10. Because of past experience with another [**utility**] program
 11. Recommendation from other utility program (Probe: What program? _____)
 12. Recommendation of dealer/retailer
 13. Recommendation of someone else (Probe: Who? _____)
 14. Advertisement in newspaper (Probe: For what program? _____)
 15. Radio advertisement (Probe: For what program? _____)
 16. Other (SPECIFY)
 17. Environmental concerns
 18. Global warming
 19. Liked the appearance of the [**measure**] more than the old one
 20. Keeping up with the latest trends and fashions
- D DON'T KNOW
R REFUSED

¹ Individual contract groups may chose to modify the wording of these warm-up questions.

{REPEAT W2-C2 FOR FIRST MEASURE. REPEAT SERIES IF IS A SECOND MEASURE}

{ASK W2a-W6 ONLY FOR INCREMENTAL EFFICIENCY REBATE MEASURES}

W2a. Did you get this [measure] to replace [a/an] existing [product type]? }

1. Yes {SKIP TO W3}
2. No
- D. Don't Know (SKIP TO FR1)
- R. Refused (SKIP TO FR1)

W2b. Did you get this [measure] because you wanted to add another/more [product type] to your [home/business]?

1. Yes (SKIP TO FR1)
2. No
- D. Don't Know (SKIP TO FR1)
- R. Refused (SKIP TO FR1)

W2c. Is this [product type] the first you have ever had in your [home/business]?

1. Yes (SKIP TO FR1)
2. No (SKIP TO FR1)
- D. Don't Know (SKIP TO FR1)
- R. Refused (SKIP TO FR1)

W3. {IF MEASURE=LIGHTING} What type of lighting did this replace? {DO NOT READ}

1. Incandescent
2. CFL
3. Other (SPECIFY)
- D DON'T KNOW
- R REFUSED

W4. {IF MEASURE NOT CFL} About how old was the [product type] you replaced? {READ CATEGORIES IF NEEDED}

1. Less than 5 years old
2. 5 to less than 10 years old
3. 10 to less than 20 years old
4. 20 years to less than 30 years old
5. 30 or more years old
- D DON'T KNOW

R REFUSED

W5. Was the old **[product type]** working or not working?

- 1. Working
- 2. Not working {SKIP TO FR1}
- D DON'T KNOW {SKIP TO FR1}
- R REFUSED {SKIP TO FR1}

W6. Was the old **[product type]** in good, fair, or poor working condition?

- 1. Good
- 2. Fair
- 3. Poor
- D DON'T KNOW
- R REFUSED

W7. (INSULATION) Was the **[product type]** you received a rebate for installed in areas where no prior insulation existed?

- 1. Yes
- 2. No
- D. Don't Know
- R. Refused

Free-Ridership Questions

FR1. At the time that you first heard about the **[assistance]** from **[utility]** for **[measure]**, had you...? {READ LIST UNTIL R SAYS 'NO'}

- 1. Already been thinking about purchasing **[product type]**? {IF NO, SKIP TO FR2}
- 2. Already begun collecting information about **[product type]**? {IF NO, SKIP TO FR2}
- 3a. **{FOR INCREMENTAL EFFICIENCY MEASURES}** Already selected the **[measure]** you were going to get? {IF NO, SKIP TO FR2}
- 3b. **{FOR EFFICIENCY ENHANCEMENT MEASURES}** Already decided to buy the **[product type]**? {IF NO, SKIP TO FR2}
- 4. Already installed the energy efficient **[measure]**? {IF YES, SKIP TO FR5; ELSE FR2}
- 5. {DON'T READ} Other: _____ {SKIP TO FR2}
- D DON'T KNOW {SKIP TO FR2}
- R REFUSED {SKIP TO FR2}

FR2. Just to be sure I understand, did you have specific plans to install a(n) **[product type]** before learning about the **[assistance]** available through the **[program]**?

- 1. Yes
- 2. No {SKIP TO FR4}
- D DON'T KNOW {SKIP TO FR4}
- R REFUSED {SKIP TO FR4}

FR3. Did you have to make any changes to your existing plans in order to receive this **[assistance]** through the **[program]**?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4. {REPEAT AS NEEDED FOR FR4 PARTS A – D} If the **[assistance]** from the **[utility]** **[program]** had not been available, would you still have:

FR4A. Purchased any **[product type]** ?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW
- R REFUSED

FR4B. Purchased the **[product type]** at the same time as you did? (PROBE: That would be around [date of participation])

- 1. Yes {SKIP TO FR4C}
- 2. No
- D DON'T KNOW {SKIP TO FR4C}
- R REFUSED {SKIP TO FR4C}

FR4B1. Bought the **[product type]** earlier than you did, or later?

- 1. Earlier
- 2. Same Time {REPEAT QUESTION FR4B}
- 3. Later
- D DON'T KNOW {SKIP TO FR4C}
- R REFUSED {SKIP TO FR4C}

FR4B2. How much **[earlier/later]** would you have bought the **[product type]**?

- _____ Years {AND/OR} _____ Months
- D DON'T KNOW
 - R REFUSED

FR4C. {IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM, OR MEASURE IS OF VARIABLE AMOUNT} Without the program, would you have purchased the same quantity as you did?

- 1. Yes {SKIP TO FR4D}
- 2. No
- D DON'T KNOW {SKIP TO FR4D}
- R REFUSED {SKIP TO FR4D}

FR4C1. How many/much would you have purchased without the program?

- _____ {RECORD NUMBER}
- D DON'T KNOW
 - R REFUSED

FR4D. {FOR INCREMENTAL EFFICIENCY MEASURES AND INSULATION} Purchased the same [INSULATION = R value/OTHER=efficiency] of [product type]?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4E. If the [assistance] from the [utility] [program] had not been available, would you have done anything else differently?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW {SKIP TO FR5}
- R REFUSED {SKIP TO FR5}

FR4E1 What would you have done differently?

{RECORD RESPONSE}: _____

NOTE: TWO INSTRUMENTS WILL BE CREATED DURING PRE-TESTING. ONE USING A 1-5 POINT SCALE AND ONE USING A 0-10 POINT SCALE TO DETERMINE WHICH SEEMS LESS CONFUSING TO CUSTOMERS AND IF THERE IS AN EFFECT ON TIME TO COMPLETE

NOTE: FOR **INCREMENTAL EFFICIENCY MEASURES**, RESPONDENT WILL BE RANDOMLY ASSIGNED TO BE READ EITHER FR5 OR FR6. FOR **EFFICIENCY ENHANCEMENT MEASURES**, ALL RESPONDENTS WILL BE ASKED FR5.

FR5. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same [measure] if you had not received any [assistance] from the program?

- {RECORD RESPONSE (0-10)} _____ {SKIP TO FR7}
- D DON'T KNOW {SKIP TO FR7}
 - R REFUSED {SKIP TO FR7}

FR6. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought a less efficient [product type] if you had not received any [assistance] from the program?

- {RECORD RESPONSE (0-10)} _____
- D DON'T KNOW
 - R REFUSED

{SKIP TO FR10 IF PROGRAM DOES NOT PROVIDE A FINANCIAL INCENTIVE/SUBSIDY OR DATABASE DOES NOT CONTAIN THAT INFORMATION}

FR7. Our records indicate you received about **[amount of program incentive/subsidy]** from the **[utility] [program]** either directly or at the time of purchase to offset the cost of the **[product type]**. Does this amount sound about right?

- 1. Yes {SKIP TO FR9}
- 2. No
- D DON'T KNOW {SKIP TO FR9}
- R REFUSED {SKIP TO FR9}

FR8. What would you estimate to be the actual amount?

{RECORD RESPONSE} _____ {SET = NEW AMOUNT OF PROGRAM
INCENTIVE/SUBSIDY}
D DON'T KNOW
R REFUSED

I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR9. If I had not had any assistance from the program, I would have paid the additional **[amount of program incentive/subsidy]** to buy the **[measure]** on my own?

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

{READ ONLY IF FR7-FR9 WAS SKIPPED}: I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR10. The **[assistance]** from the **[utility] [program]** was a critical factor in my decision to (REBATE: purchase the high efficiency/energy efficient product./WATER CONSERVATION: install the water saving devices).

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

FR11. I would have bought a(n) **[product type]** within a year of when I did even without the **[assistance]** from the **[utility] [program]**.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

FR12A. **{FOR INCREMENTAL EFFICIENCY REBATE MEASURES}** The **[assistance]** from the **[utility] [program]** was not necessary to cause me to purchase the higher efficiency product when I bought my new **[product type]**.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

FR12B. **{FOR EFFICIENCY ENHANCEMENT REBATE MEASURES}** The **[assistance]** from the **[utility] [program]** was not necessary to cause me to (REBATE: purchase/WATER SAVING: install) the new **[product type]**.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

Consistency Check & Resolution

{C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) An algorithm will be provided after pretesting. The question responses that will be used to trigger C1 are:

- FR4A (only for efficiency enhancement measures)
- FR4D (only for incremental efficiency measures)
- FR5 or FR6 depending upon which version of the question they received
- FR10
- FR11
- FR12a or FR12b depending upon which version of the question they received}

C1. Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **[measure]** at the time you did? {RECORD VERBATIM RESPONSE BELOW}

C2. **[fill with wording and response categories to the one question which was inconsistent]** {INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE}

(NOTE: no lighting measures so no 'like spillover' questions)

Recent Program Participation (Section 5)

5.5 Which of the following phrases or messages have you heard before today? (ROTATE STARTING POINT)

A. Energy Star

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

B. Don't Trash California

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

C. Energy Hog

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

D. Click it or Ticket

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

E. Flex Your Power

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

F. Flex Alert

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

G. Spare the Air

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 6)

NOTE: ALL QUESTIONS STARTING WITH THE LETTER 'C' ARE QUESTIONS THAT WOULD BE ASKED ONLY IF A BILLING ANALYSIS IS BEING DONE FOR DISHWASHERS, CLOTHES WASHERS, WATER HEATER (STORAGE AND TANKLESS) CENTRAL GAS FURNACE, AND ATTIC/WALL INSULATION.

The last questions ask about household characteristics to make sure we're getting a representative sample of [utility] residents.

6.1 Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6.2 In what type of building do you live? (READ LIST IF NEEDED; PROBE IF SAYS CONDO: How many units are in your building?)

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Boat, RV, Van, etc.
- 8 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6.3 About when was this building first built? (READ LIST IF NEEDED)

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 7 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

6.3a Were you living in this same home around [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

6.4a How many full or half bathrooms do you have in your home? (PROBE: A full bathroom is one that has a sink with running water, and a toilet, and either a bathtub or shower. A half bathroom has either a toilet or a bathtub or a shower?)

- _____ Bathrooms
- D (DON'T KNOW)
 - R (REFUSED)

6.4b How many bedrooms do you have in your home (If a one-room efficiency, or studio apartment, bedrooms=0)

- _____ bedrooms
- D (DON'T KNOW)
 - R (REFUSED)

6.4c Other than bedrooms and bathrooms, how many other rooms are there in your home? Do not count laundry rooms, foyers, unfinished storage spaces, porches, or garages.

- _____ Other rooms
- D (DON'T KNOW)
 - R (REFUSED)

[If 6.3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.5a]

C6.4d Did you do any remodeling, renovation or additions since January 1, 2005?

- 1 Yes
- 2 No (SKIP TO 6.5a)
- D (DON'T KNOW) (SKIP TO 6.5a)
- R (REFUSED) (SKIP TO 6.5a)

C6.4e How many remodels, renovations or additions have you done since then?

- _____ Remodels, renovations or additions
- D (DON'T KNOW)
 - R (REFUSED)

C6.4f I'm going to ask you several questions regarding the timeframe of your remodels, renovations or additions. We will try to run through them quickly. (ASK A-C FOR EACH REMODEL THAT TOOK PLACE SINCE JANUARY 1, 2005).

- a. In what month and year did it start?
- b. Did this increase or decrease your home's square footage, not counting unfinished storage spaces, porches or garages,
- c. In what month and year did it finish?

	a. START (mm/yyyy)	b. Increase or decrease? 1 Increase 2 Decrease 3 Same D (DK) R (REFUSED)	C. FINISH (mm/yyyy)
1			
2			
3			
4			

6.5a Including yourself, how many people currently live in your home year-round?

- _____ people
 D (DON'T KNOW)
 R (REFUSED)

6.5b (IF 6.5a=1) Which of the following best describes your age?

- 1 Less than 18 years old
- 2 18-24 years old
- 3 25-34 years old
- 4 35-44 years old
- 5 45-54 years old
- 6 55-64 years old
- 7 65 or older
- D (DON'T KNOW)
- R (REFUSED)

6.5c (IF 6.5a>1) Including yourself, how many people currently living in your home year-round are in the following age groups?

- _____ Less than 18 years old
- _____ 18-24 years old
- _____ 25-34 years old
- _____ 35-44 years old
- _____ 45-54 years old
- _____ 55-64 years old
- _____ 65 or older
- _____ TOTAL SHOULD EQUAL 6.5a
- R (REFUSED)

[If 6.3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.7]

C6.5d Has the total number of people living in your home year-round changed since [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No (SKIP TO 6.6)
- D (DON'T KNOW) (SKIP TO 6.6)
- R (REFUSED) (SKIP TO 6.6)

C6.5e Do more people or less people live in your home now?

- 1 More→How many more? ____
- 2 Less→How many less? ____
- D (DON'T KNOW)
- R (REFUSED)

C6.5f In what year(s) did the number of people in your household change? (RECORD ALL YEARS OF CHANGE—NET CHANGE IS CALCULATED FROM C6.5e)

- 1st NET CHANGE: _____ MONTH _____ YEAR
- 2nd NET CHANGE: _____ MONTH _____ YEAR
- 3rd NET CHANGE: _____ MONTH _____ YEAR
- D (DON'T KNOW)
- R (REFUSED)

6.7 This next question asks about other changes you have made that we haven't already talked about. Since January 1, 2005 have you made any other changes to the appliances, equipment or other characteristics of your home that would affect how much energy you are using?

- 1 Yes [ASK 6.7a-NSP5 FOR EACH MEASURE INSTALLED BEFORE ASKING 6.7i]
- 2 No [SKIP TO 6.7i]
- D DK [SKIP TO 6.7i]
- R REFUSED [SKIP TO 6.7i]

a. What types of changes did you make? (DO NOT READ. RECORD EACH TYPE OF CHANGE MADE. PROBE: Anything else?)

Heating and air conditioning measures

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Furnace
- 5 Programmable thermostat

Lighting measures

- 6 Fluorescent indoor fixture
- 7 Fluorescent outdoor fixture
- 8 Compact fluorescent bulb
- 9 Compact fluorescent fixture
- 10 Motion sensor
- 11 Dimmer switch

Laundry measures

- 12 Clothes washer
- 13 Clothes dryer

Water using measures

- 14 Water heater
- 15 Low Flow showerheads
- 16 Faucet aerators

Kitchen appliances

- 17 Refrigerator
- 18 Freezer
- 19 Range/oven
- 20 Dishwasher

Pool/spa/jacuzzi

- 21 Swimming pool
- 22 Swimming pool pump
- 23 Swimming pool cover
- 24 Spa/jacuzzi

Insulation/weatherstripping/sealing

- 25 Floor, wall, ceiling, or attic insulation
- 26 Weatherstripping/caulking/weatherization
- 27 Water heater/pipe wrapping/insulation
- 28 Duct sealing/repair (not cleaning)

Windows

- 29 Windows
- 30 Other (SPECIFY)
- 00 No other changes (SKIP TO C6.7i)
- D DK
- R REFUSED

b. Did this equipment replace existing equipment/measures or was it new to your home?

- 1 Replaced existing equipment
- 2 New to home
- D DK
- R REFUSED

c. When did this occur? (RECORD MONTH AND YEAR)

____/____ MM/YYYY

D DK -->Was this before or after you participated in the [program]?

- 1 Before
 - 2 After
 - D DK
 - R REFUSED
- R REFUSED

(ASK 6.7Cd and 6.7Ce ONLY IF BILLING ANALYSIS BEING DONE AND IF 6.7a = 4, 13, 14, 19, 24)

Cd. What type of fuel does the new [equipment] use?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D DK
- R REFUSED

Ce. (ASK IF 6.7b = REPLACED) What was the fuel type of the [equipment] you replaced?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D DK
- R REFUSED

f. Did you receive a rebate for this [equipment] through a [utility] program?

- 1 Yes [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- 2 No
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]

(ASK 6.7g and 6.7h IF 1-4, 12, 13, 14, 17, 18, 19, 20, 22, 24, 29 IN 6.7a; ELSE SKIP TO NSP4)

g. Is the new [equipment] energy efficient?

- 1 Yes
- 2 No [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]

- h. How do you know that this equipment is energy efficient? (PROBE: IS IT ENERGY STAR® RATED?)
-

(ASK NSP4-5 ONLY IF 6.7f = NO AND 6.7g = YES AND 6.7c = AFTER DATE OF PARTICIPATION)

NSP4. I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the [utility] [program] in [2006, 2007, 2008] influenced my decision to install different types of high efficiency equipment on my own.

{RECORD RESPONSE (0-10)} _____

D DON'T KNOW
R REFUSED

NSP5. Why did you purchase this high efficiency equipment without going through a [utility] program? {DO NOT READ; INDICATE ALL THAT APPLY}

1. Too much paperwork
 2. Takes too long to get approval
 3. No time to participate, needed equipment immediately
 4. The program had ended
 5. The equipment would not qualify {PROBE: WHY NOT?} _____
 6. The amount of the rebate wasn't important enough
 7. Did not know program was available
 8. There was no program available
 9. Other {SPECIFY} _____
- D DON'T KNOW
R REFUSED

(ASK C6.7i=c6.7m ONLY IF BILLING ANALYSIS BEING DONE)

C6.7i [IF FURNACE WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have gas or electric space heating?

- 1 Gas
 - 2 Electric
 - 3 Both
 - 4 Other (Specify) _____
- D (DON'T KNOW)
R (REFUSED)

C6.7j [IF WATER HEATER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

C6.7k [IF CLOTHES DRYER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric clothes dryer?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

C6.7l [IF RANGE/OVEN WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric range/oven?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

C6.7m [IF ROOM, CENTRAL AC, OR EVAPORATIVE COOLER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] What type of air conditioning system, if any, do you use in your home? (INDICATE ALL THAT APPLY)

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

6.8a Do you receive a natural gas bill directly from SCG?

- 1 Yes
- 2 No (SKIP TO 6.9)
- D (DON'T KNOW) (SKIP TO 6.9)
- R (REFUSED) (SKIP TO 6.9)

6.8b Does this bill only include your home's natural gas use, or does it include the use of other households?

- 1 Only 1 household
- 2 Multiple households
- D (DON'T KNOW)
- R (REFUSED)

6.13 What is the primary language spoken in your home? (DO NOT READ; PROBE IF R SAYS CHINESE: Would this be Mandarin or Cantonese)

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

On-site Recruiting (Section 7)

(ONLY ASK IF 6.8a and 6.8b=1, HOUSEHOLD HAS OWN INDIVIDUAL METER, AND FOR THE FOLLOWING MEASURES: DISHWASHERS, CLOTHES WASHERS, WATER HEATER (STORAGE AND TANKLESS) CENTRAL GAS FURNACE, AND ATTIC/WALL INSULATION.)

7.1 We would like to offer you \$25 to participate in the on-site component of this evaluation we are doing for Southern California Gas Company. We are NOT interested in selling anything. We would like to have one of our auditors visit your home at your convenience to look at the measures you installed through the program and how they are operating. The on-site visit would only take about 15 minutes (will vary slightly depending on measures installed). Would that be alright with you?

- 1 Yes→Great! Someone from [**firm**] will give you a call back to determine when they can schedule an appointment with one of our auditors in your area. Thank you for your cooperation with this important effort.
- 2 No

Thank and Terminate

Site Data Collection Form - Residential Retrofit HIM Clothes Washer

This form is to be used for the two planned visits to each residential site where meters are to be installed (first visit) and uninstalled (second visit) on clothes washers and dryers

Note: SN = Serial Number

	From Tracking Database	Record On Site	#REF! Notes
Cadmus ID	#REF!		
Utility and Program	PGE 2000R / SDGE 3023		
Utility Account / SA_ID	#REF!		
Utility electric meter number. Note if accessible and convenient.			
Type of Home			
Approximate Square Footage			
Primary Contact Name	#REF!		
Phone 1	#REF!		
Phone 2			
Phone 3			
email			
Alternate Contact Name	#REF!		
Phone 1	#REF!		
Phone 2			
Phone 3			
email			
Address 1	#REF!		
Address 2			
City	#REF!		
State	CA		
Zip Code	#REF!		

First visit: Meter Installation	Record On Site	
Date		
Start Time of visit		
End Time of visit		
Letter from CPUC Presented		
M&V Incentive Paid		
Incentive Type, Check Number		
Recipient Signature or Initials		
Photographs taken of appliances, control panels		
Data Logger Type	U30 / Energy Logger Pro	
Data Logger SN		
Data Logger Launched (time)		
Watts Up SN		
Line Splitter Pulse Adapter SN		
Hot Water Flow Meter SN		
Hot Water Temp Sensor SN		
Cold Water Flow Meter SN		
Cold Water Temp Sensor SN		
120 outlet tested		
240 outlet tested		
Line splitter box number		
CW Flow meter pulse adapter SN		
HW flow meter pulse adapter SN		
U-30 signal Strength		
HW initial flow meter reading		
CW initial flow meter reading		
Technician Name / Initials		

Site Data Collection Form - Residential Retrofit HIM Clothes Washer

This form is to be used for the two planned visits to each residential site where meters are to be installed (first visit) and uninstalled (second visit) on clothes washers and dryers

Note: SN = Serial Number

#REF!

Second visit: Meter Removal

Record On Site

Date			
Start Time of visit			
End Time of visit			
Photograph taken after all equipment has been removed			
Has the number of people in the house changed?		Yes/No	
Have there been any changes in laundry usage? If so, provide details		Yes/No	
Did residents of home go on vacation?		Yes/No	
Technician Name / Initials			

From Telephone Survey

Notes

Contact name	#REF!		
Number of people living in home (6_5a)	#REF!		
Washer and Dryer location in home		Utility room / Garage / Other	
W/D in conditioned space?		Yes / No	
Washer and Dryer location (7.2)	Side by side / Distance / Stacked		
Wash Loads in a typical week (3_8a)	#REF!		

From Telephone Survey

From Telephone Survey

Cycle Mix (3_9b, 3_9c)

Wash

Rinse

Hot	#REF!	#REF!	
Warm	#REF!	#REF!	
Cold	#REF!	#REF!	

Clothes Washer

From Tracking Database

Record On Site

Notes

Manufacturer			
Model Number			
Serial Number			
Incentive Received			
Incentive Date			
Operational		Yes / No / Other	
Energy Star Label		Yes / No / Other	

Clothes Washer Cycle Names

Record On Site

Record On Site

Circle or record all that are present	Whitest Whites	
	Heavy Duty	
	Normal / Casual	
	Sanitary	
	Handwash / Delicate	
	Rinse & Spin	
	Drain & spin	
	Permanent Press	
	Cottons / Regular	
	Autosoak / Prewash	
	Knits	
Power Wash		

Site Data Collection Form - Residential Retrofit HIM Clothes Washer

This form is to be used for the two planned visits to each residential site where meters are to be installed (first visit) and uninstalled (second visit) on clothes washers and dryers

Note: SN = Serial Number

#REF!

Rinse speed options Circle or record all that are present	High	_____
	Medium	_____
	Low	_____
	Extra slow	_____
	No spin	_____

Do controls allow user to override default spin speed?

Yes / No / Other

Water Level / Load Size Options	Record On Site	Record On Site
Circle or record all that are present	Automatic	_____
	Extra Large	_____
	Large	_____
	Medium	_____
	Small	_____
	Extra Small	_____

Water lines	Hot Water Feed	Cold Water Feed
Diameter of supply line	_____	_____
Length of supply line	_____	_____
Estimated distance to water heater	_____	_____
Are water lines insulated?	_____	_____

At time of meter installation	Hot Water	Cold Water
Measured Temperature	_____	_____
Where Measured	_____	_____

At time of meter removal	Hot Water	Cold Water
Measured Temperature	_____	_____
Where Measured	_____	_____

Clothes Dryer	From Telephone Survey
Dryer Fuel (3_10)	#REF!
Dryer Cord Style and Color (7.3)	#REF!
Age of Clothes Dryer (3_11)	#REF!
Typical Usage (3_12)	#REF!
Percentage of wash that uses dryer	#REF!

	From Tracking Database	Record On Site
Manufacturer	_____	_____
Model Number	_____	_____
Operational	_____	Yes / No / Other
Moisture Sensor present	_____	Yes / No / Other

Site Data Collection Form - Residential Retrofit HIM Clothes Washer

This form is to be used for the two planned visits to each residential site where meters are to be installed (first visit) and uninstalled (second visit) on clothes washers and dryers

Note: SN = Serial Number

#REF!

Clothes Dryer Cycle Names

Circle or record all that are present	Accudry	_____
	Heavy	_____
	Normal	_____
	Casual / Perm. Press	_____
	Quick Dry	_____
	Delicates	_____
	Wrinkle Shield	_____
	Cool Down	_____
	Timed Dry	_____
	Heavy Dry	_____
	Damp Dry	_____
	Tumble Press	_____
	Air Only	_____

Water heater

From Tracking Database

Record On Site

	<i>Gas / Electric / Other</i>	<i>Gas / Electric / Other</i>	
Water heater Fuel (3_14)			
Water Heater Manufacturer			
Water Heater Model Number			
Water heater Setpoint			

Site Verification Form - Single Family Energy Efficient Retrofit (SFEER) (SCG 3517)

Inspection Date	<input type="text"/>	Telephone Survey ID	<input type="text"/>
Inspection Start Time	<input type="text"/>	SCG Account	<input type="text"/>
Inspection End Time	<input type="text"/>	SCE/Electric Account	<input type="text"/>
Inspector Name / Initials	<input type="text"/>		
Primary Contact Name	<input type="text"/>	Original Site Visit Date	<input type="text"/>
Phone 1	<input type="text"/>	Original Site Visit Time	<input type="text"/>
Phone 2	<input type="text"/>		
Phone 3	<input type="text"/>	New Confirmed Date	<input type="text"/>
email	<input type="text"/>	New Confirmed Time	<input type="text"/>
Alternate Contact Name	<input type="text"/>	Confirmation Call Date	<input type="text"/>
Phone 1	<input type="text"/>	Confirmation Call Time	<input type="text"/>
Phone 2	<input type="text"/>		
Phone 3	<input type="text"/>		
email	<input type="text"/>		
Address 1	<input type="text"/>	Notes <div style="border: 1px solid black; height: 80px; width: 100%;"></div>	
Address 2	<input type="text"/>		
City	<input type="text"/>		
State	<input type="text"/>		
Zip Code	<input type="text"/>		
	<input type="text"/>		

Complete for Each Measure that Received Appliance Incentive (per Tracking Database)

	Database	Onsite	Notes
Dishwasher			<div style="border: 1px solid black; height: 100%; width: 100%;"></div>
Incentive Received	<input type="text"/>	<input type="text"/>	
Incentive Date	<input type="text"/>	<input type="text"/>	
Unit Quantity	<input type="text"/>	<input type="text"/>	
Operational	<input type="text"/>	<input type="text"/>	
Manufacturer	<input type="text"/>	<input type="text"/>	
Brand	<input type="text"/>	<input type="text"/>	
Model Number	<input type="text"/>	<input type="text"/>	
Efficiency (EF, if avail)	<input type="text"/>	<input type="text"/>	
Energy Star Label	<input type="text"/>	<input type="text"/>	
Water Heater Fuel	<input type="text"/>	<input type="text"/>	
Method of Determination	<input type="text"/>	<input type="text"/>	

	Database	Onsite	Notes
Clotheswasher			<div style="border: 1px solid black; height: 100%; width: 100%;"></div>
Incentive Received	<input type="text"/>	<input type="text"/>	
Incentive Date	<input type="text"/>	<input type="text"/>	
Unit Quantity	<input type="text"/>	<input type="text"/>	
Operational	<input type="text"/>	<input type="text"/>	
Manufacturer	<input type="text"/>	<input type="text"/>	
Brand	<input type="text"/>	<input type="text"/>	
Model Number	<input type="text"/>	<input type="text"/>	
Efficiency (MEF, if avail.)	<input type="text"/>	<input type="text"/>	
Efficiency (WF, if avail.)	<input type="text"/>	<input type="text"/>	
Energy Star Label	<input type="text"/>	<input type="text"/>	
Water Heater Fuel	<input type="text"/>	<input type="text"/>	
Method of Determination	<input type="text"/>	<input type="text"/>	

Gas Water Heater	Database	Onsite	Notes
Incentive Received			
Incentive Date			
Unit Quantity			
Operational		Yes / No / Other	
Manufacturer			
Brand			
Model Number			
Capacity (gallons)			
Efficiency (EF, if avail.)			

Central Gas Furnace	Database	Onsite	Notes
Incentive Received			
Incentive Date			
Unit Quantity			
Operational		Yes / No / Other	
Manufacturer			
Brand			
Model Number			
Efficiency (AFUE %)			
Energy Star Label			

Complete for Each Insulation Measure that Received Incentive (per Tracking Database)

HVAC Information	Database	Onsite	Notes
Heating Fuel Type		Electric / Gas / Other	
Method of Determination		Cust SR / Insp / Other	

Attic Insulation	Database	Onsite	Notes
Incentive Received			Required
Incentive Date			
Unit Quantity (Sq feet)			
Sq feet installed over conditioned living area			
Method of determination		Cust SR / Insp Estimate / Other	
Location(s) rebated			
Insulation material			
Method of determination		Cust SR / Insp / Invoice / Printed on Insul / Other	Required

R-Value Information	Database	Onsite	Notes
Thickness of Insulation			Required
Method of determination		Cust SR / Measurement / Invoice / Printed / Other	Required
Total R-value present			Required
Method of determination		Cust SR / Calculation / Invoice / Printed / Other	Required

Pre-Existing Insulation	Database	Onsite	Notes
Was insulation present		Yes / No	Required
Thickness of Insulation			
Method of determination		Cust SR / Measurement / Invoice / Printed / Other	
Pre-Existing R-Value			
Method of determination		Cust SR / Calculation / Invoice / Printed / Other	

	Database	Onsite	Notes
Wall Insulation			
Incentive Received			
Incentive Date			
Unit Quantity (Sq feet)			Required
Sq feet installed between conditioned living area and unconditioned space		Cust SR / Insp Estimate / Other	Required
Method of determination		Cust SR / Insp / Other	Required
Location(s) rebated			
Insulation material			Required
Method of determination		Cust SR / Insp / Invoice / Printed on Insul / Other	Required
R-Value Information			
Thickness of Insulation			Required
Method of determination		Cust SR / Measurement / Invoice / Printed / Other	Required
Total R-value present			Required
Method of determination		Cust SR / Calculation / Invoice / Printed / Other	Required
Pre-Existing Insulation			
Was insulation present		Yes / No	Required
Thickness of Insulation			
Method of determination		Cust SR / Measurement / Invoice / Printed / Other	
Pre-Existing R-Value			
Method of determination		Cust SR / Calculation / Invoice / Printed / Other	

Complete for Household Reported Spillover Measures

	From Survey	Onsite	Notes
Spillover Measure #1			
Type of Measure			
Description			
Quantity			
Manufacturer / Brand			
Model Number			
Energy Star Label			
Fuel Type (if applicable)			
Location(s)			
Efficiency (EF, MEF, WF, AFUE%)			
Spillover Measure #2			
Type of Measure			
Description			
Quantity			
Manufacturer / Brand			
Model Number			
Energy Star Label			
Fuel Type (if applicable)			
Location(s)			
Efficiency (EF, MEF, WF, AFUE%)			

Appendix C – Dishwashers

C1 – Telephone Surveys

- PG&E 2000 Participant Survey
- SCE 3517 SFEER Survey
- SDGE 3024 Residential Program Participant Survey
- SDGE 3024 Rebate Participant Survey

C2 – Data Collection Instruments

- Site Visit Form SFEGR SCG 3517

PG&E2000 Mass Markets Single Family Measures Participant Survey

The following measures will be asked about in the survey: Pool pumps and motor(s), storage water heater(s), attic insulation, wall insulation, cool roof, ENERGY STAR® clothes washer(s), ENERGY STAR® dishwasher(s), ENERGY STAR® central natural gas furnace(s), and ENERGY STAR® room air conditioner(s). The CATI software will automatically fill the appropriate measure description in the questions.

[measure]

ENERGY STAR® clothes washer
ENERGY STAR® dishwasher
electric water heater
gas water heater
ENERGY STAR® room air conditioner
multi-speed pool pump and motor
single-speed pool pump and motor
ENERGY STAR® gas furnace
attic insulation
wall insulation

[product type]

clothes washer
dishwasher
water heater
room air conditioner
pool pump and motor
furnace
insulation

[utility] PG&E

[assistance] rebate

[program] PG&E's program

[amount of program incentive/subsidy] dollar amount of PG&E rebate

[home/business] home

[date of participation] installation / rebate paid date

[quantity] quantity of measures installed, insulation=1

[insulation] flag if attic and/or wall insulation was installed

[timeframe] month/year measure was purchased / installed

[incremental efficiency measures] flag for all SF measures other than insulation

[enhanced efficiency measures] flag for attic and/or wall insulation

PG&E2000 Mass Markets Single Family Measures Participant Survey

Introduction

Hello, my name is **[interviewer name]**, and I'm calling on behalf of the California Public Utilities Commission regarding Pacific Gas and Electric's Energy Efficiency Programs for Homes and Small Businesses. May I speak with **[contact name]**?

- 1 Yes
- 2 No [attempt to convert; if R not available, ask for an adult who makes decisions on how household uses energy]

I'm with **[data collection firm]**, an independent research firm. I am calling to learn about your experiences with the **[measures]** you purchased and the rebate you received from PG&E's energy efficiency program.

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and **PG&E** better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about 15 minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-XXX-XXXX)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the **[measures]** you purchased and received a rebate for through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call Mikhail Haramati at 415-703-1458, or visit their website: www.cpuc.ca.gov/eevalidation.)

(NOTE: For all questions, "DON'T KNOW" and "REFUSED" will be coded if offered as a response.)

Recall of Participation/Identification of Decision Maker (Section 1)

(QUANTITY REFERS TO THE NUMBER RECEIVED WITHIN THE MEASURE CATEGORY--E.G., 1 POOL PUMP)

1.1 Program records indicate that you purchased and received a rebate for the following energy efficient equipment through PG&E's Energy Efficiency Program for Homes and Small Businesses around **[date of participation]**. (RECORD FOR EACH MEASURE PURCHASED)

MEASURES	Do you recall purchasing . . . ?	(IF QUANTITY > 1) Is this the correct quantity?	Does the date I read sound about right?
A. [quantity] Pool pump and motor(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY DATE __) D (DK) R (REFUSED)
B. [quantity] ENERGY STAR® clothes washer(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY DATE __) D (DK) R (REFUSED)
C. [quantity] Natural gas water heater(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY DATE __) D (DK) R (REFUSED)
D. [quantity] Electric water heater(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY DATE __) D (DK) R (REFUSED)
D. Attic insulation	1 Yes 2 No D (DK) R (REFUSED)	--	1 Yes 2 No (SPECIFY DATE __) D (DK) R (REFUSED)
E. Wall insulation	1 Yes 2 No D (DK) R (REFUSED)	--	1 Yes 2 No (SPECIFY DATE __) D (DK) R (REFUSED)
G. [quantity] ENERGY STAR® dishwasher(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY DATE __) D (DK) R (REFUSED)
H. [quantity] Central natural gas furnace(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY DATE __) D (DK) R (REFUSED)
I. [quantity] Room air conditioner(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY DATE __) D (DK) R (REFUSED)
J. Cool Roof	1 Yes 2 No D (DK) R (REFUSED)	--	1 Yes 2 No (SPECIFY DATE __) D (DK) R (REFUSED)

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(IF RECALLS MEASURE, SKIP TO 1.5)

1.2 (ASK IF DOESN'T RECALL ANY OF THESE MEASURES) Is it possible that someone else in your household would know about purchasing this/these **[measures]** and receiving a rebate?

- 1 Yes **[SKIP TO 1.5]**
- 2 No
- D (DON'T KNOW)
- R (REFUSED) **[TERMINATE]**

1.3 PG&E is offering rebates for replacing less efficient electric and natural gas-fired appliances, heating and cooling, and water heating equipment with more energy-efficient equipment. The program also provides rebates for attic and wall insulation, pool pumps, and whole house fans. The rebate program is offered to PG&E's residential and small business customers. Are you sure you don't recall purchasing the/these **[measures]** and receiving a rebate? (RECORD ONE NUMBER)

- 1 Don't remember purchasing equipment → **[TERMINATE, RECORD ANY COMMENTS MADE BY RESPONDENT BEFORE EXITING]**
- 2 Don't remember receiving rebate, but remember purchasing equipment → **[SKIP TO 1.5]**
- 3 Remember → **[READ, "GREAT, THEN LET'S CONTINUE", SKIP TO 1.5]**
- R (REFUSED) → **[TERMINATE]**

1.4 May I please speak with that person? (RECORD ONE NUMBER)

- 1 Yes **[BEGIN THE SURVEY AGAIN WITH THIS NEW RESPONDENT]**
- 2 No **[TERMINATE]**
- D (DON'T KNOW) **[TERMINATE]**
- R (REFUSED) **[TERMINATE]**

1.5 Are you the person in your household who decided to purchase this/these **[measures]** and receive a rebate through PG&E's program?

- 1 Yes
- 2 No **[SKIP BACK TO 1.4]**
- D (DON'T KNOW) **[TERMINATE]**
- R (REFUSED) **[TERMINATE]**

Sources of Program Information (Section 2)

2.1 How did you hear about the rebate offered on the [measures] available as part of PG&E's Energy Efficiency Program for Homes and Small Businesses? **(PROBE: Did you hear about the program from any other sources?)** (DO NOT READ LIST, RECORD ALL THAT APPLY)

Utility provided information

- 1 (Advertising—radio, newspaper, trade journal, billboard, TV)
- 2 (Bill insert, newsletter, or other mailing)
- 3 (Website)
- 4 (Email)
- 5 (Other utility) (SPECIFY) _____

Local Government/Community center or event/Nonprofit

- 6 (Meeting, event, workshop, training) (SPECIFY) _____
- 7 (School)
- 8 (Local government/community agency) (SPECIFY) _____
- 9 (Energy Center such as Pacific Energy Center, Stockton Training Center, Food Service Technology Center) (SPECIFY) _____
- 10 (Advertising—radio, newspaper, trade journal, billboard, TV)

Other

- 11 (Home or building audit or assessment) (SPECIFY) _____
- 12 (Meeting, event, workshop training) (SPECIFY) _____
- 13 (Flex your Power TV or radio advertising)
- 14 (Other advertising, don't recall)
- 15 (Friend/Relative/Neighbor)
- 16 (Other, Specify: _____)
- 19 (Salesperson/Sales rep)
- 20 (Installer/contractor)
- D (DON'T KNOW)
- R (REFUSED)

Installation Behavior—REBATE MEASURES (Section 3)

(QUESTIONS IN THIS SECTION WILL BE REPEATED FOR EACH MEASURE R RECALLS)

3.1 (IF QUANTITY=1) Now, I would like to understand what you did with the [measure]. Is this [measure] currently installed at your home (either indoors or outdoors)? (RECORD ONE NUMBER)

- 1 Yes [SKIP TO W1]
- 2 No
- D (DON'T KNOW) [IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY]
- R (REFUSED) [IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY]

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3.2 (IF QUANTITY=1) Which of the following best describes what happened with the [measure]? (READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location [SKIP TO 3.4]
- 2 It was installed at your home but is now permanently removed (example: broke, burned out, don't fit, don't like, etc.) [SKIP TO 3.5]
- 3 It is in storage because it is only needed during certain months of the year [SKIP TO W1]
- 4 It is in storage for some other reason [SKIP TO 3.7]
- 5 It was sold or given away [SKIP TO 3.4]
- 6 Something else (SPECIFY) _____-
- D (DON'T KNOW)
- R (REFUSED)

3.3 (IF QUANTITY>1) Now, I would like to understand what you did with the [quantity] [measure]. (READ LIST, RECORD NUMBER)

- a_____ How many are currently installed at your home (either indoors or outdoors) (IF RESPONSE=QUANTITY, SKIP TO W1)
- b_____ How many are installed at some other location?
- c_____ How many were installed at your home (either indoors or outdoors) but are now permanently removed (example: broke, burned out, don't fit, don't like, etc.)?
- d_____ How many are in storage because they are only needed during certain months of the year?
- e_____ How many are in storage for some other reason?
- f_____ How many were sold or given away?
- g_____ Something else? (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.4 (ASK IF 3.2=1, 3.2=5, 3.3b>0, 3.3f>0) Is the/Are these [measure] located in PG&E's service territory?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

SKIP TO 5.1 IF ALL MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY or 3.2=1 or 3.2=5) AND THAT LOCATION IS OUTSIDE OF PG&E'S SERVICE TERRITORY (3.4 NE 1).

SKIP TO W1 IF ALL MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY or 3.2=1 or 3.2=5) AND THAT LOCATION IS INSIDE OF PG&E'S SERVICE TERRITORY (3.4 = 1).

Removed Measures (ASK ONLY IF THEY SAY THEY REMOVED A MEASURE AFTER INSTALLED, 3.2=2 or 3.3c>0)

3.5 Now let's talk about the [measure] you said you installed but have since removed. Why was this removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 (Equipment failed)
- 2 (Didn't work properly)
- 3 (Wrong size—too small or too large)
- 4 (Low water flow)
- 5 (Didn't like the color)
- 6 (Didn't like appearance/unattractive)
- 7 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

3.6 What did you replace the [measure] with? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 (With a new high efficiency [measure])
- 2 (With a less efficient [product type])
- 3 (Re-installed old equipment)
- 4 (Did not replace)
- 5 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

Measures in Storage (ASK ONLY IF THEY SAY MEASURE IS IN STORAGE FOR SOME OTHER REASON, 3.2=4 or 3.3e>0)

3.7 When do you think you will install the [measure]? Would you say within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

- 1 Within the next 3 months
- 2 3 to 6 months from now
- 3 6 to 12 months from now
- 4 More than a year from now
- 5 Never
- D (DON'T KNOW)
- R (REFUSED)

Warm-Up Questions/Background Context

W1. Please think back to the time when you were deciding to buy the (INSULATION: insulation/ALL OTHER: energy saving [product types]), perhaps recalling things that occurred in your household shortly before and after [timeframe]. What factors motivated you to purchase (INSULATION: insulation/ALL OTHER: energy saving [product types])? [DO NOT READ; INDICATE ALL THAT APPLY; ONCE THEY RESPONDENT HAS FINISHED, PROBE: Are there any other factors?]

- 1. Old equipment didn't work
- 2. Old equipment working poorly
- 3. The program incentive / rebate
- 4. The program technical assistance
- 5. Wanted to save energy
- 6. Wanted to reduce energy costs
- 7. The information provided by the Program
- 8. Past experience with this program
- 9. Because of past experience with another [utility] program
- 10. Recommendation from other utility program (Probe: What program? _____)
- 11. Recommendation of dealer/retailer
- 12. Recommendation of someone else (Probe: Who? _____)
- 13. Advertisement in newspaper (Probe: For what program? _____)
- 14. Radio advertisement (Probe: For what program? _____)
- 15. Increase comfort (reduce drafts, noise)
- 16. Better quality product
- 17. Water saving features
- 18. Environment / Environmental benefit
- 19. Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

(ASK W2A-W6 ONLY FOR INCREMENTAL EFFICIENCY REBATE MEASURES. IF INSULATION, SKIP W2A-W6)

W2a. Did you get this [measure] to replace an existing [product type]?

- 1. Yes [SKIP TO W4]
- 2. No
- D (DON'T KNOW) [SKIP TO 3.8]
- R (REFUSED) [SKIP TO 3.8]

W2b Is this [product type] the first you have ever had in your home?

- 1. Yes [SKIP TO 3.8]
- 2. No
- D (DON'T KNOW) [SKIP TO 3.8]
- R (REFUSED) [SKIP TO 3.8]

W2c. Did you get this [measure] because you wanted to add another/more [product type] to your home?

- 1. Yes [SKIP TO 3.8]
- 2. No [SKIP TO 3.8]
- D (DON'T KNOW) [SKIP TO 3.8]
- R (REFUSED) [SKIP TO 3.8]

W3. [SKIPPED BECAUSE NO LIGHTING IN PG&E2000 SF MEASURE SURVEY]

W4. About how old was the [product type] you replaced? [READ CATEGORIES IF NEEDED]

1. Less than 5 years old
 2. 5 to less than 10 years old
 3. 10 to less than 20 years old
 4. 20 years to less than 30 years old
 5. 30 or more years old
- D (DON'T KNOW)
R (REFUSED)

W5. Was the old [product type] working or not working?

1. Working
 2. Not working [SKIP TO 3.8]
- D (DON'T KNOW) [SKIP TO 3.8]
R (REFUSED) [SKIP TO 3.8]

W6. Was the old [product type] in good, fair, or poor working condition?

1. Good
 2. Fair
 3. Poor
- D (DON'T KNOW)
R (REFUSED)

Pool Pump Specific Battery (Billing / Engineering Analysis Measure)

3.8 Was the pool pump and motor you received a rebate for through PG&E's program NEW when you purchased and installed it, or was it used?

- 1 New
 - 2 Used
- D (DON'T KNOW)
R (REFUSED)

3.9 What type of equipment was it installed on? Was it installed on an: [READ LIST]

- 1 In-ground swimming pool
 - 2 Above-ground swimming pool
 - 3 Spa
 - 4 Other [SPECIFY]
- D (DON'T KNOW)
R (REFUSED)

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3.10 Since participating in PG&E's program on [date of participation], what hours of the day do you typically run your pool pump on Monday-Friday during the summer months?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (Other, SPECIFY)
- 97 (DON'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.11 Since participating in PG&E's program on [date of participation], what hours of the day do you typically run your pool pump on Monday-Friday during the winter months?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (Other, SPECIFY)
- 97 (DON'T USE)
- D (DON'T KNOW)
- R (REFUSED)

[SKIP TO NEXT SECTION IF W2A ≠ 1]

3.12 Before participating in PG&E's program on [date of participation], what hours of the day did you typically run your pool pump on Monday-Friday during the summer months?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (Other, SPECIFY)
- 97 (DIDN'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.13 Before participating in PG&E's program on [date of participation], what hours of the day did you typically run your pool pump on Monday-Friday during the winter months?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (Other, SPECIFY)
- 97 (DIDN'T USE)
- D (DON'T KNOW)
- R (REFUSED)

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- 3.14** (IF 3.12C <> 3.10C) Why do you run your pool pump differently in the summer than you did before participation in the program?
SPECIFY: _____
D (DON'T KNOW)
R (REFUSED)

- 3.15** (IF 3.11C <> 3.13C) Why do you run your pool pump differently in the winter than you did before participation in the program?
SPECIFY: _____
D (DON'T KNOW)
R (REFUSED)

Dishwasher Specific Battery (Verify Plus Measure)

- 3.16** Was the dishwasher you received a rebate for through PG&E's program NEW when you purchased and installed it or was it used?

1 New
2 Used
D (DON'T KNOW)
R (REFUSED)

- 3.17** We would like to get an idea of how many dishwasher loads you do each week with your new dishwasher. We will break this into QUICK loads, REGULAR loads, POWER SAVING loads, and POWER BOOST loads. On average, how many [READ LOAD TYPE] loads do you do each week with your new dishwasher?

____ Quick
____ Regular
____ Power saving
____ Power boost
D (DON'T KNOW)
R (REFUSED)

- 3.18** (ASK IF 3.17 = DON'T KNOW) How many dishwasher loads do you do on average each week with your new dishwasher?

_____ number
D (DON'T KNOW)
R (REFUSED)

- 3.19** (ASK IF W2a=1) Would you say that this is more, the same, or less loads per week than you did with your old dishwasher?

1 More
2 The same
3 Less
D (DON'T KNOW)

R (REFUSED)

Clothes Washer Specific Battery (Verify Plus Measure)

3.20 Was the clothes washer you received a rebate for through PG&E's program NEW when you purchased and installed it or was it used?

- 1 New
- 2 Used
- D (DON'T KNOW)
- R (REFUSED)

3.21 We would like to get an idea of how many loads of wash you do each week with your new clothes washer. We will break this into HOT water loads, WARM water loads and COLD water loads.

- _____ Hot water wash loads per week (specify number)
- _____ Warm water wash loads per week (specify number)
- _____ Cold water wash loads per week (specify number)
- D (DON'T KNOW)
- R (REFUSED)

3.22 (ASK IF 3.21 = DON'T KNOW) How many loads of wash do you do on average each week with your new clothes washer?

- _____ number
- D (DON'T KNOW)
- R (REFUSED)

3.23 (ASK IF W2a=1) Would you say that this is more, the same, or less loads per week than you did with your old clothes washer?

- 1 More
- 2 The same
- 3 Less
- D (DON'T KNOW)
- R (REFUSED)

Clothes Dryer Battery to Support Clothes Washer Battery

3.24 Do you have a clothes dryer?

- 1 Yes
- 2 No [SKIP TO 3.30]
- D (DON'T KNOW) [SKIP TO 3.30]
- R (REFUSED) [SKIP TO 3.30]

3.25 Did you purchase your clothes dryer new at the same time as your new clothes washer?

- 1 Yes [SKIP TO 3.27]
- 2 No
- D (DON'T KNOW) [SKIP TO 3.27]
- R (REFUSED) [SKIP TO 3.27]

3.26 How old is your clothes dryer? Is it: (read list)

- 1 Less than 1 yr
- 2 1-5 yrs
- 3 5-10 yrs
- 4 More than 10 yrs
- D (DON'T KNOW)
- R (REFUSED)

3.27 What type of fuel does your clothes dryer use? (If unsure read 1, 2)

- 1 Electricity
- 2 Natural Gas
- 4 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.28 How often do you use your clothes dryer versus HANG DRYING your clothes? Do you... (Read All)

- 1 Always use dryer
- 2 Use dryer more than 50% of the time
- 3 Use dryer less than 50% of the time
- 4 Half and Half
- 5 Never use the dryer
- D (DON'T KNOW)
- R (REFUSED)

3.29 (ASK IF W2a=1) Would you say that you use your new clothes dryer more, the same, or less – in terms of loads per week - than you did with your old clothes dryer?

- 1 More
- 2 The same
- 3 Less
- D (DON'T KNOW)
- R (REFUSED)

Water Heater Battery to Support Clothes Washer & Dishwasher Battery

3.30 What type of fuel does your water heater use? (If Don't Know, prompt and read answers)

- 1 Electricity
- 2 Natural Gas
- 3 Propane [SKIP TO 3.37]
- 4 Solar (sun) [SKIP TO 3.37]
- 5 Other (SPECIFY) _____ [SKIP TO 3.37]
- D (DON'T KNOW)
- R (REFUSED)

3.31 Do you have a traditional or tankless water heater? [If unsure ask] Does your water heater store water?
[If yes, 1, If no, 2]

- 1 Traditional storage tank?
- 2 Tankless/on-demand? [SKIP TO 3.34]
- 3 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.32 How many gallons does your water heater hold?

- _____ Gallons [SKIP TO 3.34]
- D (DON'T KNOW)
- R (REFUSED)

3.33 Is your water heater... (Read All)

- 1 Very Small: less than 30 gallons?
- 2 Small: 30-39 gallons?
- 3 Medium: 40-59 gallons?
- 4 Large: more than 60 gallons?
- D (DON'T KNOW)
- R (REFUSED)

3.34 What temperature is your hot water heater set for?

- _____ Degrees [SKIP TO 3.36]
- D (DON'T KNOW)
- R (REFUSED)

3.35 Is your water heater set at a... (Read All)

- 1 Low temperature: 100-120 degrees F?
- 2 Medium temperature: 125-140 F?
- 3 High temperature: 145-160 F?
- D (DON'T KNOW)
- R (REFUSED)

3.36 How old is your water heater? Is it... (Read All)

- 1 Less than 1 yr
- 2 1-5 yrs
- 3 5-10 yrs
- 4 More than 10 yrs
- D (DON'T KNOW)
- R (REFUSED)

Water Heater Specific Battery (Verify Plus Measure)

3.37 Was the water heater you received a rebate for through PG&E's program NEW when you purchased and installed it or was it used?

- 1 New
- 2 Used
- D (DON'T KNOW)
- R (REFUSED)

3.38 What type of fuel does your new water heater use? (If Don't Know, prompt and read answers)

- 1 Electricity
- 2 Natural Gas
- 3 Propane
- 4 Solar (sun)
- 5 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.39 (Ask if W2A = 1) What type of fuel did your previous water heater use?

- 1 Electricity
- 2 Natural Gas
- 3 Propane
- 4 Solar (sun)
- 5 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.40 Is your new water heater a traditional storage tank water heater or is it a tankless or on-demand type water heater? [If unsure ask] Does your water heater store water? [If yes, 1, If no, 2]

- 1 Traditional storage tank?
- 2 Tankless/on-demand? [SKIP TO 3.43]
- 3 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.41 How many gallons does your new water heater hold?

- _____ Gallons [SKIP TO 3.43]
- D (DON'T KNOW)
- R (REFUSED)

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3.42 Is your new water heater... (Read All)

- 1 Very Small: less than 30 gallons?
- 2 Small: 30-39 gallons?
- 3 Medium: 40-59 gallons?
- 4 Large: more than 60 gallons?
- D (DON'T KNOW)
- R (REFUSED)

3.43 What temperature is your new hot water heater set for?

- _____ Degrees [SKIP TO 3.45]
- D (DON'T KNOW)
- R (REFUSED)

3.44 Is your water heater set at a... (Read All)

- 1 Low temperature: 100-120 degrees F?
- 2 Medium temperature: 125-140 F?
- 3 High temperature: 145-160 F?
- D (DON'T KNOW)
- R (REFUSED)

3.45 Do you have a clothes washer?

- 1 Yes
- 2 No [SKIP TO 3.47]
- D (DON'T KNOW) [SKIP TO 3.47]
- R (REFUSED) [SKIP TO 3.47]

3.46 Do you always, sometimes, or never wash your clothes in warm or hot water?

- 1 Always
- 2 Sometimes
- 3 Never
- D (DON'T KNOW)
- R (REFUSED)

3.47 Do you have a dishwasher?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Furnace Specific Battery (Billing Analysis Measure)

3.48 Was the furnace you received a rebate for through PG&E's program NEW when you purchased and installed it or was it refurbished or used?

- 1 New
- 2 Refurbished/Used
- D (DON'T KNOW)
- R (REFUSED)

3.49 (Ask if W2A = 1) Did the old system also use natural gas? (If NO specify fuel type)

- 1 Yes/ Natural Gas
- 2 Electricity [SKIP TO 3.51]
- 3 Propane [SKIP TO 3.51]
- 4 Other (SPECIFY) _____ [SKIP TO 3.51]
- D (DON'T KNOW) [SKIP TO 3.51]
- R (REFUSED) [SKIP TO 3.51]

3.50 (Ask if W2A = 1) Was the old system a forced air furnace or something else?

- 1 Forced air furnace
- 2 Wall furnace or furnaces
- 3 Room unit or units
- 4 Floor furnace
- 5 Other [SPECIFY]
- D (DON'T KNOW)
- R (REFUSED)

3.51 (Ask if W2A = 1) Does the new furnace heat the same, more, or less living space as the old system?

- 1 Same
- 2 More
- 3 Less
- D (DON'T KNOW)
- R (REFUSED)

3.52 Was new ductwork installed at the same time the new furnace was installed?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Room AC Specific Battery (Verify Only Measure)

3.53 Was the room air conditioner you received a rebate for through PG&E's program NEW when you purchased and installed it or was it refurbished or used?

- 1 New
- 2 Refurbished/Used
- D (DON'T KNOW)
- R (REFUSED)

3.54 (Ask if W2A = 1) What happened with your old room air conditioner?

- 1 Installed in another location at house
- 2 Gave away
- 3 Sold
- 4 In storage, but not planning on using
- 5 Disposed of
- 6 Recycled
- 7 Other (specify) _____
- D (DON'T KNOW)
- R (REFUSED)

Attic Insulation Specific Battery (Billing Analysis Measure)

3.55 Was there insulation in the attic before you installed the new attic insulation you received a rebate for through PG&E's program?

- 1 Yes
- 2 No [SKIP TO 3.58]
- D (DON'T KNOW) [SKIP TO 3.58]
- R (REFUSED) [SKIP TO 3.58]

3.56 Was the pre-existing attic insulation installed when your home was built?

- 1 Yes [SKIP TO 3.58]
- 2 No [SKIP TO 3.58]
- D (DON'T KNOW) [SKIP TO 3.58]
- R (REFUSED) [SKIP TO 3.58]

3.57 Approximately when was the pre-existing attic insulation added to your home?

- ____ Year
- D (DON'T KNOW)
- R (REFUSED)

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3.58 Was any of the attic insulation that you installed on [read participation date] installed over a garage or any other non-living areas of your home?

- 1 Yes, Some attic insulation installed above my living area and over garage or other non-living areas
- 2 Yes, Only installed over garage or other non-living areas
- 3 No / Only living areas
- D (DON'T KNOW)
- R (REFUSED)

3.59 What is your primary heating fuel type?

- 1 Electricity
- 2 Natural Gas
- 3 Propane
- 4 Wood
- 5 Kerosene
- 6 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.60 Do you have air conditioning?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

3.61 [IF 3.60=YES] Is this a central AC system, room air conditioner, or evaporative cooler?

- 1 Central AC
- 2 Room AC
- 3 Evaporative cooler
- 4 Other (specify) _____
- D (DON'T KNOW)
- R (REFUSED)

3.62 [IF 3.61=2] How many room air conditioners do you have?

- _____ Room AC units
- D (DON'T KNOW)
- R (REFUSED)

Wall Insulation Specific Battery (Billing Analysis Measure)

3.63 Was there wall insulation in the wall before you installed the new wall insulation you received a rebate for through PG&E's program?

- 1 Yes / No pre-existing insulation
- 2 No / Pre-existing insulation [SKIP TO 3.66]
- D (DON'T KNOW) [SKIP TO 3.66]
- R (REFUSED) [SKIP TO 3.66]

3.64 Was the pre-existing wall insulation installed when your home was built?

- 1 Yes [SKIP TO 3.66]
- 2 No
- D (DON'T KNOW) [SKIP TO 3.66]
- R (REFUSED) [SKIP TO 3.66]

3.65 Approximately when was the pre-existing wall insulation added to your home?

- _____ Year
- D (DON'T KNOW)
 - R (REFUSED)

3.66 Was any of the wall insulation that you installed on **[read participation date]** installed in your garage or any other non-living areas of your home?

- 1 Yes, Some wall insulation installed in my living areas and in my garage or other non-living areas
- 2 Yes, Wall insulation was only installed in my garage or other non-living areas
- 3 No / Only living areas
- D (DON'T KNOW)
- R (REFUSED)

3.67 What is your primary heating fuel type?

- 1 Electricity
- 2 Natural Gas
- 3 Propane
- 4 Wood
- 5 Kerosene
- 6 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.68 Do you have air conditioning?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

3.69 [IF 3.68=YES] Is this a central AC system, room air conditioner, or evaporative cooler?

- 1 Central AC
- 2 Room AC
- 3 Evaporative cooler
- 4 Other (specify) _____
- D (DON'T KNOW)
- R (REFUSED)

3.70 [IF 3.69=2] How many room air conditioners do you have?

- _____ Room AC units
- D (DON'T KNOW)
- R (REFUSED)

Free Ridership and Spillover (Section 4)

(QUESTIONS IN THIS SECTION WILL BE REPEATED FOR EACH MEASURE CATEGORY)

FR7. Our records indicate you received about **[amount of program incentive/subsidy]** from the **[utility] [program]** either directly or at the time of purchase to offset the cost of the **[product type]**.

(IF CLOTHES WASHER INSTALLED) You might also have received a rebate from your local water district. We want you to think about the PG&E rebate now.

Does this amount sound about right?

- 1. Yes [SKIP TO FR1]
- 2. No
- D DON'T KNOW [SKIP TO FR1]
- R REFUSED [SKIP TO FR1]

FR8. What would you estimate to be the actual amount?

[RECORD RESPONSE] _____ [SET = NEW AMOUNT OF PROGRAM INCENTIVE/SUBSIDY]

- D DON'T KNOW
- R REFUSED

FR1. At the time that you first heard about the **[assistance]** from PG&E for **[measure]**, had you...? [READ LIST UNTIL R SAYS 'NO']

- 1. Already been thinking about purchasing **[product type]**? [IF NO, SKIP TO FR2]
- 2. Already begun collecting information about **[product type]**? [IF NO, SKIP TO FR2]
- 3a. **[FOR INCREMENTAL EFFICIENCY MEASURES]** Already selected the **[measure]** you were going to get? [IF NO, SKIP TO FR2]
- 3b. **[FOR EFFICIENCY ENHANCEMENT MEASURES]** Already decided to buy the **[product type]**? [IF NO, SKIP TO FR2]

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- 4. Already installed the energy efficient **[measure]**? [IF YES, SKIP TO FR1B; ELSE FR2]
- 5. [DON'T READ] Other: _____ [SKIP TO FR2]
- D DON'T KNOW [SKIP TO FR2]
- R REFUSED [SKIP TO FR2]

FR1B. So, the [measure] was installed before you learned about the [assistance] from PG&E?

- 1 Yes [SKIP FR5]
- 2 No
- D Don't know
- R Refused

FR2. Just to be sure I understand, did you have specific plans to install a(n) **[product type]** before learning about the **[assistance]** available through PG&E's program?

- 1. Yes
- 2. No [SKIP TO FR4]
- D DON'T KNOW [SKIP TO FR4]
- R REFUSED [SKIP TO FR4]

FR3. Did you have to make any changes to your existing plans in order to receive this **[assistance]** through the PG&E program?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4. [REPEAT AS NEEDED FOR FR4 PARTS A – D] If the **[assistance]** from the PG&E program had not been available, would you still have:

FR4A. Purchased a(n) **[product type]** ?

- 1. Yes
- 2. No [SKIP TO FR5]
- D DON'T KNOW
- R REFUSED

FR4B. Purchased the **[product type]** at the same time as you did?

- 1. Yes [SKIP TO FR4C]
- 2. No
- D DON'T KNOW [SKIP TO FR4C]
- R REFUSED [SKIP TO FR4C]

FR4B1. Bought the **[product type]** earlier than you did, or later?

- 1. Earlier
- 2. Same Time [REPEAT QUESTION FR4B]
- 3. Later
- D DON'T KNOW [SKIP TO FR4C]
- R REFUSED [SKIP TO FR4C]

FR4B2. How much **[earlier/later]** would you have bought the **[product type]**?

- _____ Years [AND/OR] _____ Months
- D DON'T KNOW
 - R REFUSED

FR4C. [IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM, OR MEASURE IS OF VARIABLE AMOUNT] Without the program, would you have purchased the same quantity as you did?

- 1. Yes [SKIP TO FR4D]
- 2. No
- D DON'T KNOW [SKIP TO FR4D]
- R REFUSED [SKIP TO FR4D]

FR4C1. How many/much would you have purchased without the program?

- _____ [RECORD NUMBER]
- D DON'T KNOW
 - R REFUSED

FR4D. **[FOR INCREMENTAL EFFICIENCY MEASURES AND INSULATION]** Purchased the same [INSULATION = R value/OTHER=efficiency] of **[product type]**?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4E. If the **[assistance]** from PG&E's program had not been available, would you have done anything else differently?

- 1. Yes
- 2. No [SKIP TO FR5]
- D DON'T KNOW [SKIP TO FR5]
- R REFUSED [SKIP TO FR5]

FR4E1 What would you have done differently?

[RECORD RESPONSE]: _____

FR5. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same **[measure]** if you had not received any **[assistance]** from the program?

[RECORD RESPONSE (0-10)] _____ [SKIP TO FR9]
D DON'T KNOW [SKIP TO FR9]
R REFUSED [SKIP TO FR9]

[Skip to FR10 if program does not provide a financial incentive/subsidy or database does not contain that information]

I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR9. If I had not had any assistance from the program (IF CLOTHES WASHER: for the clothes washer), I would have paid the additional **[amount of program incentive/subsidy]** to buy the **[measure]** on my own?

[RECORD RESPONSE (0-10)] _____
D DON'T KNOW
R REFUSED

[READ ONLY IF FR7-FR9 WAS SKIPPED]: I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR10. There may have been several reasons for my purchase decision. But the **[assistance]** from PG&E's program was a critical factor in my decision to purchase the high efficiency/energy efficient product.

[RECORD RESPONSE (0-10)] _____
D DON'T KNOW
R REFUSED

FR11. I would have bought a(n) **[product type]** within a year of when I did even without the **[assistance]** from PG&E's program.

[RECORD RESPONSE (0-10)] _____
D DON'T KNOW
R REFUSED

Consistency Check & Resolution

[C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

FR4A (efficiency enhancement measures) OR FR4D (incremental efficiency measures)
FR5
FR10
FR11

[IF FR4A/D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the **[measure]** without the program']

[IF FR4A/D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would not have purchased the **[measure]** without the program']

[IF FR5 = 0,1 AND FR4A/D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the **[measure]** without the program']

[IF FR5 = 9,10 AND FR4A/D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the **[measure]** without the program']

[IF FR10 = 0,1 AND FR4A/D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient **[product type]** without the program']

[IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient **[product type]** without the program']

[IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the **[product type]** within **[a year/2 years]** even without the program']

[IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the **[product type]** within **[a year/2 years]** even without the program']

C1. Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **[measure]** at the time you did? [RECORD VERBATIM RESPONSE BELOW]

C2. **[fill with wording and response categories to the one question which was inconsistent]** [INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE]

Recent Program Participation (Section 5)

5.1 Have you participated in any other programs offered by PG&E because of your experience with their energy efficiency programs for homes and small businesses?

- 1 Yes
- 2 No [SKIP TO 5.3]
- D (DON'T KNOW) [SKIP TO 5.3]
- R (REFUSED) [SKIP TO 5.3]

5.2 Which programs?

5.3 Which of the following phrases or messages have you heard before today? (ROTATE STARTING POINT)

A. Good Housekeeping

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

B. Click it or Ticket

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

C. Ahnu

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

D. Flex Your Power

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

E. Flex Alert

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

F. Energy Hog

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

- G. Galley Bay
1 Yes
2 No
D (DON'T KNOW)
R (REFUSED)

- H. Energy Star
1 Yes
2 No
D (DON'T KNOW)
R (REFUSED)

- I. Hollister Co
1 Yes
2 No
D (DON'T KNOW)
R (REFUSED)

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 6)

NOTE: ALL QUESTIONS STARTING WITH THE LETTER 'C' ARE QUESTIONS THAT WILL BE ASKED ONLY FOR WALL/ATTIC INSULATION AND FURNACE MEASURES [BILLING ANALYSES MEASURES]

The last questions ask about household characteristics to make sure we're getting a representative sample of [utility] residents.

6.1 Do you receive an electric or gas bill directly from PG&E?

- 1 Yes
2 No (SKIP TO 6.3)
D (DON'T KNOW) (SKIP TO 6.3)
R (REFUSED) (SKIP TO 6.3)

6.2 Does this bill only include your home's electric or gas use, or does it include the use of other households?

- 1 Only 1 household
2 Multiple households
D (DON'T KNOW)
R (REFUSED)

6.3 Do you own or rent your home?

- 1 Own
2 Rent
3 Other (SPECIFY)
D (DON'T KNOW)
R (REFUSED)

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6.4 In what type of building do you live? (READ LIST IF NEEDED)
(PROBE FOR 'Condo': "How many units are in your building?")

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Other (SPECIFY)
- 8 Boat/RV/Van/Etc.
- D (DON'T KNOW)
- R (REFUSED)

6.5 About when was this building first built?

RECORD YEAR: _____

IF DK YEAR: Was it built . . . ? (READ LIST)

- 1 Before 1978
- 2 Between 1978 and 1992
- 3 Between 1993 and 2000
- 4 Between 2001 and 2004
- 5 2005 or later
- D (DON'T KNOW)
- R (REFUSED)

6.6 Were you living in this same home around **[insert date 12 months prior to time of participation]**?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

6.7 How many square feet of **living space** are there in your residence, including bathrooms, foyers and hallways? (*Exclude garages, basements and unheated porches.*)

_____ Square feet

IF DK YEAR: Is it . . . ? (READ LIST)

- 1 Less than 500 square feet
- 2 Between 501 – 1000 square feet
- 3 Between 1001 – 1500 square feet
- 4 Between 1501 – 2000 square feet
- 5 Between 2001 – 2500 square feet
- 6 Between 2501 – 3000 square feet
- 7 Greater than 3000 square feet
- D (DON'T KNOW)
- R (REFUSED)

[If 6.6 = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.9]

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C6.8a Did you do any remodeling, renovation or additions since January 1, 2005?

- 1 Yes
- 2 No (SKIP TO 6.9a)
- D (DON'T KNOW) (SKIP TO 6.9a)
- R (REFUSED) (SKIP TO 6.9a)

C6.8b How many remodels, renovations or additions have you done since then?

- _____ Remodels, renovations or additions
- D (DON'T KNOW)
 - R (REFUSED)

C6.8c I'm going to ask you several questions regarding the timeframe of your remodels, renovations or additions. We will try to run through them quickly. (ASK A-C FOR EACH REMODEL THAT TOOK PLACE SINCE JANUARY 1, 2005).

- a. In what month and year did it start?
- b. Did this increase or decrease your home's square footage, not counting unfinished storage spaces, porches or garages,
- c. In what month and year did it finish?

	a. START (mm/yyyy)	b. Increase or decrease? 1 Increase 2 Decrease 3 Same D (DK) R (REFUSED)	C. FINISH (mm/yyyy)
1			
2			
3			
4			

6.9a Including yourself, how many people currently live in your home year-round?

- _____ people
- D (DON'T KNOW)
 - R (REFUSED)

6.9b (IF 6.9a=1) Which of the following best describes your age?

- 1 Less than 18 years old
- 2 18-24 years old
- 3 25-34 years old
- 4 35-44 years old
- 5 45-54 years old
- 6 55-64 years old
- 7 65 or older
- D (DON'T KNOW)
- R (REFUSED)

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6.9c (IF 6.9a>1) Including yourself, how many people currently living in your home year-round are in the following age groups?

- _____ Less than 18 years old
 - _____ 18-24 years old
 - _____ 25-34 years old
 - _____ 35-44 years old
 - _____ 45-54 years old
 - _____ 55-64 years old
 - _____ 65 or older
- TOTAL SHOULD EQUAL 6.9a
R (REFUSED)

6.9d Is there typically an adult at home during the day?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

[If 6.6 = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.10]

C6.9e Has the total number of people living in your home year-round changed since [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No (SKIP TO 6.10)
- D (DON'T KNOW) (SKIP TO 6.10)
- R (REFUSED) (SKIP TO 6.10)

C6.9f Do more people or less people live in your home now?

- 1 More→How many more? _____
- 2 Less→How many less? _____
- D (DON'T KNOW)
- R (REFUSED)

C6.9g In what year(s) did the number of people in your household change? (RECORD ALL YEARS OF CHANGE—NET CHANGE IS CALCULATED FROM C6.9f)

- 1st NET CHANGE: _____ YEAR
- 2nd NET CHANGE: _____ YEAR
- 3rd NET CHANGE: _____ YEAR
- D (DON'T KNOW)
- R (REFUSED)

6.10 This next question asks about other changes you have made that we haven't already talked about. Since January 1, 2005 have you made any changes to the appliances, equipment, or other characteristics of your home that would affect how much energy you are using?

- 1 Yes [ASK 6.10a-NSP5 FOR EACH MEASURE INSTALLED BEFORE ASKING 6.11a]
- 2 No [SKIP TO 6.11a]
- D DK [SKIP TO 6.11a]
- R REFUSED [SKIP TO 6.11a]

a. What types of changes did you make? (DO NOT READ. RECORD EACH TYPE OF CHANGE MADE. PROBE: Anything else?)

Heating and air conditioning measures

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Furnace
- 5 Programmable thermostat

Lighting measures

- 6 Fluorescent indoor fixture
- 7 Fluorescent outdoor fixture
- 8 Compact fluorescent bulb
- 9 Compact fluorescent fixture
- 10 Motion sensor
- 11 Dimmer switch

Laundry measures

- 12 Clothes washer
- 13 Clothes dryer

Water using measures

- 14 Water heater
- 15 Low Flow showerheads
- 16 Faucet aerators

Kitchen appliances

- 17 Refrigerator
- 18 Freezer
- 19 Range/oven
- 20 Dishwasher

Pool/spa/jacuzzi

- 21 Swimming pool
- 22 Swimming pool pump
- 23 Swimming pool cover
- 24 Spa/jacuzzi

Insulation/weatherstripping/sealing

- 25 Floor, wall, ceiling, or attic insulation
- 26 Weatherstripping/caulking/weatherization
- 27 Water heater/pipe wrapping/insulation
- 28 Duct sealing/repair (not cleaning)

Windows

- 29 Windows
- 30 Other (SPECIFY)
- 00 No other changes
- D DK
- R REFUSED

PG&E2000 Mass Markets Single Family Measures Participant Survey

b. Did this equipment replace existing equipment/measures or was it new to your home?

- 1 Replaced existing equipment
- 2 New to home
- D DK
- R REFUSED

c. When did this occur? (RECORD MONTH AND YEAR)

____/____ MM/YYYY

D DK --→Was this before or after you participated in the [program]?

- 1 Before
 - 2 After
 - D DK
 - R REFUSED
- R REFUSED

(ASK 6.10Cd and 6.10Ce ONLY IF BILLING ANALYSIS BEING DONE AND IF 6.10a = 4, 13, 14, 19, 23)

Cd. What type of fuel does the new [equipment] use?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D DK
- R REFUSED

Ce. (ASK IF 6.7b = REPLACED) What was the fuel type of the [equipment] you replaced?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D DK
- R REFUSED

f. Did you receive a rebate for this [equipment] through a [utility] program?

- 1 Yes [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.11a]
- 2 No
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.11a]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.11a]

(ASK 6.10g and 6.10h IF 1-4, 12, 13, 14, 17, 18, 19, 20, 22, 24, 29 IN 6.10a; ELSE SKIP TO NSP4)

g. Is the new [equipment] energy efficient?

- 1 Yes
- 2 No [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.11a]
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.11a]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.11a]

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- h. How do you know that this equipment is energy efficient? (PROBE: IS IT ENERGY STAR® RATED?)
- _____

(ASK NSP4-5 ONLY IF 6.10f = NO AND 6.10g = YES AND 6.10c = AFTER DATE OF PARTICIPATION)

- NSP4.** I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the **[utility] [program]** in **[2006, 2007, 2008]** influenced my decision to install different types of high efficiency equipment on my own.

[RECORD RESPONSE (0-10)] _____

D DON'T KNOW

R REFUSED

- NSP5.** Why did you purchase this high efficiency equipment without going through a **[utility]** program? [DO NOT READ; INDICATE ALL THAT APPLY]

1. Too much paperwork
 2. Takes too long to get approval
 3. No time to participate, needed equipment immediately
 4. The program had ended
 5. The equipment would not qualify [PROBE: WHY NOT?] _____
 6. The amount of the rebate wasn't important enough
 7. Did not know program was available
 8. There was no program available
 9. Other [SPECIFY] _____
- D DON'T KNOW
R REFUSED

(ASK C6.11a-C6.11c ONLY IF BILLING ANALYSIS BEING DONE)

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C6.11a [IF WATER HEATER WAS NOT REPLACED IN 6.10a OR THROUGH PROGRAM AND NOT ASKED IN 3.30 OR 3.38] Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Propane
- 4 Solar
- 5 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

C6.11b [IF CLOTHES DRYER WAS NOT REPLACED IN 6.10a OR THROUGH PROGRAM AND NOT ASKED IN 3.27] Do you have a gas or electric clothes dryer?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

C6.11c [IF RANGE/OVEN WAS NOT REPLACED IN 6.10a OR THROUGH PROGRAM] Do you have a gas or electric range/oven?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

6.12 What is the highest level of education you have completed?

- 1 no schooling
- 2 less than high school
- 3 some high school
- 4 high school graduate or equivalent (e.g., GED)
- 5 trade or technical school
- 6 some college
- 7 college graduate degree
- 8 some graduate school
- 9 graduate degree
- 10 other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

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6.13 Which of the following best represents your annual household income from all sources in 2007, before taxes? Was it . . . ? *(READ)*

- 1 Less than \$20,000 per year
- 2 \$20,000-49,999
- 3 \$50,000-74,999
- 4 \$75,000-99,999
- 5 \$100,000-149,999
- 6 \$150,000-199,999
- 7 \$200,000 or more
- D (DON'T KNOW)
- R (REFUSED)

6.14 What is your ethnicity? *(INDICATE ALL THAT APPLY)*

- 1 White
- 2 Black, African American or Negro
- 3 American Indian or Alaska Native
- 4 Asian
- 5 Chinese
- 6 Japanese
- 7 Korean
- 8 Vietnamese
- 9 Filipino
- 10 Native Hawaiian
- 11 Guamanian or Chamorro
- 12 Samoan
- 13 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6.15 What is the primary language spoken in your home? *(DO NOT READ)*

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

PG&E2000 Mass Markets Single Family Measures Participant Survey

7.1

We would like to offer you \$25 to participate in the on-site component of this evaluation. We are NOT interested in selling anything. We would like to have one of our auditors visit your home at your convenience to look at the [measure] you installed through the program and how it/they are operating. The on-site visit would only take about 20 minutes. Would that be alright with you?

1 Yes

Great! Someone will give you a call back to determine when they can schedule an appointment with one of our auditors in your area. Thank you for your cooperation with this important effort.

2 No

Thank and Terminate

SCG 3517 Single Family Energy Efficiency Retrofit Program

The following measures will be asked about in the survey: Energy Star dishwasher, Energy Star or energy efficient clothes washer, high efficiency water heater, tankless water heater, high efficiency central gas furnace, attic insulation, wall insulation, low flow showerhead and faucet aerators.

Instrument-specific variables-- The CATI software will automatically fill the appropriate description in the questions.

[Product Type]

Attic insulation
Wall insulation
Dishwasher
Clothes washer
Furnace
Water heater
Showerhead and faucet aerators

[Measure]

Attic insulation
Wall insulation
Energy Star dishwasher
Energy Star/energy efficient clothes washer
High efficiency central gas furnace
High efficiency water heater
Tankless water heater
Low flow showerhead and faucet aerators

[Assistance]

Rebate/free

[Program]

2006-2008 Residential Retrofit Program

[Utility]

SCG

[Program Incentive]

Rebate dollar amount

[Quantity]

Quantity exchanged/installed

[Incremental efficiency measures]

Energy Star dishwasher
Energy Star/energy efficient clothes washer
High efficiency central gas furnace
High efficiency water heater
Tankless water heater

[Efficiency enhancement measures]

Low flow showerhead and faucet aerators
Insulation

SCG 3517 SFEER Participant Survey

Introduction

Hello, my name is **[interviewer name]**, and I'm calling on behalf of the California Public Utilities Commission regarding Southern California Gas Company's 2006-2008 Residential Retrofit Program, also known as the Home Energy Efficiency Rebate Program. May I speak with **[contact name]**?

- 1 Yes
- 2 No [attempt to convert; if R not available, ask for an adult who makes decisions on how household uses energy]

I'm with PA Consulting Group, an independent research firm. I am calling to learn about your experiences with the . . . (READ ONE OR BOTH DEPENDING UPON THE MIX OF MEASURES):

Water Conservation only: . . . free faucet aerators and low-flow showerhead you received at a community event.

Other Measures: . . . **[measures]** you purchased and received a rebate for through Southern California Gas Company's Residential Retrofit Program (also referred to as the Home Energy Efficiency Rebate Program).

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and **SCG** better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about (non-billing analysis=15/billing analysis=20) minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-XXX-XXXX)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the **[measures]** you purchased and received a rebate through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call Mikhail Haramati at 415-703-1458, or visit their website: www.cpuc.ca.gov/evaluation.)

(NOTE: For all questions, "DON'T KNOW" and "REFUSED" will be coded if offered as a response.)

Recall of Participation/Identification of Decision Maker (Section 1)

(QUANTITY REFERS TO THE NUMBER RECEIVED WITHIN THE MEASURE CATEGORY--E.G., 3 FAUCET AERATORS)

1.1a. (WATER CONSERVATION MEASURES) Program records indicate that you received three free faucet aerators and a low-flow showerhead at a community event through the 2006-2008 Residential Retrofit Program around **[insert date of participation]**. Do you recall receiving these? Is this the correct quantity? (RECORD INFORMATION)

MEASURES	Do you recall receiving ?	(IF QUANTITY > 1) Is this the correct quantity?
A. One low-flow showerhead and three faucet aerators	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)

1.1b. (OTHER MEASURES) Program records indicate that you purchased and received a mail-in or instant rebate for the following energy efficient equipment through the 2006-2008 Residential Retrofit Program around **[insert date of participation]**. Do you recall purchasing this/these **[measure]**? Is this the correct quantity? (RECORD FOR EACH MEASURE INSTALLED)

MEASURES	Do you recall purchasing ?	(IF QUANTITY > 1) Is this the correct quantity?
A. [quantity] Energy Star Dishwasher	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
B. [quantity] [Energy Star/Tier 1/Tier 2] Clothes Washer	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
C. [quantity] High efficiency water heater	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
D. [quantity] Tankless water heater(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
E. [quantity] Central gas furnace	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
F. Attic insulation	1 Yes 2 No D (DK) R (REFUSED)	--
G. Wall insulation	1 Yes 2 No D (DK) R (REFUSED)	--

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(ASK 1.1c-1.1d ONLY IF MEASURE = HIGH EFFICIENCY WATER HEATER)

1.1c How many gallons does your water heater hold?

- _____ gallons (SKIP to 1.1e)
- D (DK)
- R (REFUSED)

1.1d (IF DON'T KNOW WATER HEATER SIZE) Is your water heater? (READ LIST)

- 1 Very Small – less than 30 gallons
- 2 Small: 30-39 gallons
- 3 Medium: 40-59 gallons
- 4 Large: 60 gallons or more
- D (DK)
- R (REFUSED)

(ASK 1.1e ONLY IF MEASURE = DISHWASHER)

1.1e Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (SPECIFY)
- D (DK)
- R (REFUSED)

REMOVED 1.1f AND 1.1g – DISHWASHER IS NOT OFFERED UNDER SCG3517

(IF RECALLS MEASURES, SKIP TO 1.4)

1.2 (ASK IF DOESN'T RECALL ANY OF THESE MEASURES) Is it possible that someone else in your household would know about (WATER CONSERVATION: receiving these water saving devices/OTHER MEASURES: purchasing this/these [measures] and applying for a mail-in rebate or receiving an instant rebate from the retailer)? (RECORD ONE NUMBER)

- 1 Yes (SKIP TO 1.3)
- 2 No (TERMINATE IF ONLY WATER CONSERV)
- D (DON'T KNOW)
- R (REFUSED) (TERMINATE)

1.2b (OTHER MEASURES ONLY) Southern California Gas offers rebates for replacing less efficient gas-fired appliances, heating equipment with more energy-efficient equipment, and for adding insulation. Rebates are paid in two ways—either in response to a mail-in application for a rebate or through an instant rebate at the retailer. The rebate program is referred to as the 2006-2008 Residential Retrofit Program, or the Home Energy Efficiency Rebate Program, or the Single Family Energy Efficiency Retrofit program. Are you sure you don't recall purchasing the/these [measures] and applying for a rebate from the utility? (RECORD ONE NUMBER)

- 1 Don't remember -> [TERMINATE, RECORD ANY COMMENTS MADE BY RESPONDENT BEFORE EXITING]

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- 2 Remember -> [READ, "GREAT, THEN LET'S CONTINUE", SKIP TO 1.4]
- R (REFUSED) (TERMINATE)

1.3 May I please speak with that person? (RECORD ONE NUMBER)

- 1 Yes (BEGIN THE SURVEY AGAIN WITH THIS NEW RESPONDENT)
- 2 No (TERMINATE)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

1.4 Are you the person in your household who decided to (WATER CONSERVATION: accept these water saving devices/OTHER MEASURES: purchase this/these [measures] and receive a rebate) through Southern California Gas Company's Residential Retrofit Program?

- 1 Yes
- 2 No (SKIP BACK TO 1.3)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

Sources of Program Information (Section 2)

2.1 How did you hear about (REBATE: rebate offered on [measures]/WATER SAVING: free water saving devices) available as part of SCG's Residential Retrofit Program? (PROBE: Did you hear about the program from any other sources?) (DO NOT READ LIST, RECORD ALL THAT APPLY)

Utility provided information

- 1 (Advertising—radio, newspaper, trade journal, billboard, TV)
- 2 (Bill insert, newsletter, or other mailing)
- 3 (Website)
- 4 (Email)
- 5 (Other utility) (SPECIFY)

Local Government/Community event/Nonprofit

- 6 (Meeting, event, workshop, training) (SPECIFY)
- 7 (School)
- 8 (Local government/community agency) (SPECIFY)
- 9 (City/county Energy Center such as Pacific Energy Center, Stockton, Food Service) (SPECIFY)
- 10 (Advertising—radio, newspaper, trade journal, billboard, TV)

Other

- 11 (Home or building audit or assessment) (SPECIFY)
- 12 (Meeting, event, workshop training) (SPECIFY)
- 13 (Flex your Power TV or radio advertising)
- 14 (Other advertising, don't recall)
- 15 (Friend/Relative/Neighbor)
- 16 (Other, Specify: _____)
- D (DON'T KNOW) (SKIP TO SECTION 3)
- R (REFUSED) (SKIP TO SECTION 3)
- 19 (Other - salesperson/rep)
- 20 (Other – installer/contractor)

Installation Behavior (Section 3)

(QUESTIONS IN THIS SECTION WILL BE REPEATED FOR EACH MEASURE R RECALLS)

3.1a (IF QUANTITY=1) Now, I would like to understand what you did with the [measure]. Is this [measure] currently installed at your home (either indoors or outdoors)? (RECORD ONE NUMBER)

- 1 Yes (SKIP TO SECTION 4)
- 2 No
- D (DON'T KNOW) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)
- R (REFUSED) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)

3.1b (IF QUANTITY=1) Which of the following best describes what happened with the [measure]? (READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location (SKIP TO 3.3a)
- 2 It was installed at your home but is now permanently removed (example: broke, burned out, don't fit, don't like, etc.) (SKIP TO 3.6)
- 3 It is in storage because it is only needed during certain months of the year
- 4 It is in storage for some other reason (SKIP TO SECTION 3.8)
- 5 It was sold or given away (SKIP TO 3.3a)
- 6 Something else (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

3.2 (IF QUANTITY>1) Now, I would like to understand what you did with the [quantity] [measure]. (READ LIST, RECORD NUMBER)

- a____ How many are currently installed at your home (either indoors or outdoors) (IF RESPONSE=QUANTITY, SKIP TO 3.4)
- b____ How many are installed at some other location?
- c____ How many were installed at your home (either indoors or outdoors) but are now permanently removed (example: broke, burned out, don't fit, don't like, etc.)
- d____ How many are in storage because they are only needed during certain months of the year?
- e____ How many are in storage for some other reason?
- f____ How many were sold or given away?
- g____ Something else? (SPECIFY)

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3.3a (ASK IF 3.1b=1, 3.1b=5, 3.2b>0, 3.2f>0) Is the/Are these [measure] located in SCG's service territory?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

(SKIP TO 5.3 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY) AND THAT LOCATION IS **OUTSIDE** OF SCE'S SERVICE TERRITORY (3.3A NE 1).

SKIP TO W1 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY) AND THAT LOCATION IS **INSIDE** OF SCE'S SERVICE TERRITORY (3.3A = 1).

Removed Measures (ASK ONLY IF THEY SAY THEY REMOVED A MEASURE AFTER INSTALLED, 3.1b=2 or 3.2c>0)

3.6 Now let's talk about [measure] you said you installed but have since removed. Why was this removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 (Equipment failed)
- 2 (Didn't work properly)
- 3 (Wrong size—too small or too large)
- 4 (Low water flow)
- 5 (Didn't like the color)
- 6 (Didn't like appearance/unattractive)
- 7 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

3.7 What did you replace [measure] with? (DO NOT READ LIST; PROBE FOR EFFICIENCY, RECORD ALL THAT APPLY)

- 1 (With a new high efficiency [measure])
- 2 (With a less efficient [product type])
- 3 (Re-installed old equipment)
- 4 (Did not replace)
- 5 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

Measures in Storage (ASK ONLY IF THEY SAY MEASURE IS IN STORAGE FOR SOME OTHER REASON, 3.1b=4 or 3.2e>0)

3.8 When do you think you will install the [measure]? Would you say within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

- 1 Within the next 3 months
- 2 3 to 6 months from now
- 3 6 to 12 months from now
- 4 More than a year from now
- 5 Never
- D (DON'T KNOW)
- R (REFUSED)

NTGR and Spillover (Section 4)

Warm-up Questions/Background Context¹

W1. Please think back to the time when you were deciding to (REBATE: buy the energy saving [**product types**]/WATER SAVINGS: get the free water saving devices), perhaps recalling things that occurred in your household shortly before and after [**timeframe**]. What factors motivated you to (REBATE: purchase energy saving [**product types**]/WATER SAVINGS: get the free water saving devices)? {DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE RESPONDENT HAS FINISHED, PROBE: Are there any other factors?}

1. Old equipment didn't work
2. Old equipment working poorly
3. The program incentive
4. The program technical assistance
5. Wanted to save energy
6. Wanted to reduce energy costs
7. The information provided by the Program
8. Past experience with this program
9. Because of past experience with another [**utility**] program
10. Recommendation from other utility program (Probe: What program? _____)
11. Recommendation of dealer/retailer
12. Recommendation of someone else (Probe: Who? _____)
13. Advertisement in newspaper (Probe: For what program? _____)
14. Radio advertisement (Probe: For what program? _____)
15. Other (SPECIFY)
16. Environmental concerns
17. Global warming
18. Liked the appearance of the [**measure**] more than the old one
19. Keeping up with the latest trends and fashions
- D DON'T KNOW
- R REFUSED

¹ Individual contract groups may chose to modify the wording of these warm-up questions.

{REPEAT W2-C2 FOR FIRST MEASURE. REPEAT SERIES IF IS A SECOND MEASURE}

{ASK W2a-W6 ONLY FOR INCREMENTAL EFFICIENCY REBATE MEASURES}

W2a. Did you get this [measure] to replace [a/an] existing [product type]? }

1. Yes (SKIP TO W3)
2. No
- D. Don't Know (SKIP TO FR1)
- R. Refused (SKIP TO FR1)

W2b. Did you get this [measure] because you wanted to add another/more [product type] to your [home/business]?

1. Yes (SKIP TO FR1)
2. No
- D. Don't Know (SKIP TO FR1)
- R. Refused (SKIP TO FR1)

W2c. Is this [product type] the first you have ever had in your [home/business]?

1. Yes (SKIP TO FR1)
2. No (SKIP TO FR1)
- D. Don't Know (SKIP TO FR1)
- R. Refused (SKIP TO FR1)

W3. {IF MEASURE=LIGHTING} What type of lighting did this replace? {DO NOT READ}

1. Incandescent
2. CFL
3. Other (SPECIFY)
- D DON'T KNOW
- R REFUSED

W4. {IF MEASURE NOT CFL} About how old was the [product type] you replaced? {READ CATEGORIES IF NEEDED}

1. Less than 5 years old
2. 5 to less than 10 years old
3. 10 to less than 20 years old
4. 20 years to less than 30 years old
5. 30 or more years old
- D DON'T KNOW

R REFUSED

W5. Was the old **[product type]** working or not working?

- 1. Working
- 2. Not working {SKIP TO FR1}
- D DON'T KNOW {SKIP TO FR1}
- R REFUSED {SKIP TO FR1}

W6. Was the old **[product type]** in good, fair, or poor working condition?

- 1. Good
- 2. Fair
- 3. Poor
- D DON'T KNOW
- R REFUSED

W7. (INSULATION) Was the **[product type]** you received a rebate for installed in areas where no prior insulation existed?

- 1. Yes
- 2. No
- D. Don't Know
- R. Refused

Free-Ridership Questions

FR1. At the time that you first heard about the **[assistance]** from **[utility]** for **[measure]**, had you...? {READ LIST UNTIL R SAYS 'NO'}

- 1. Already been thinking about purchasing **[product type]**? {IF NO, SKIP TO FR2}
- 2. Already begun collecting information about **[product type]**? {IF NO, SKIP TO FR2}
- 3a. **{FOR INCREMENTAL EFFICIENCY MEASURES}** Already selected the **[measure]** you were going to get? {IF NO, SKIP TO FR2}
- 3b. **{FOR EFFICIENCY ENHANCEMENT MEASURES}** Already decided to buy the **[product type]**? {IF NO, SKIP TO FR2}
- 4. Already installed the energy efficient **[measure]**? {IF YES, SKIP TO FR5; ELSE FR2}
- 5. {DON'T READ} Other: _____ {SKIP TO FR2}
- D DON'T KNOW {SKIP TO FR2}
- R REFUSED {SKIP TO FR2}

FR2. Just to be sure I understand, did you have specific plans to install a(n) **[product type]** before learning about the **[assistance]** available through the **[program]**?

- 1. Yes
- 2. No {SKIP TO FR4}
- D DON'T KNOW {SKIP TO FR4}
- R REFUSED {SKIP TO FR4}

FR3. Did you have to make any changes to your existing plans in order to receive this **[assistance]** through the **[program]**?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4. {REPEAT AS NEEDED FOR FR4 PARTS A – D} If the **[assistance]** from the **[utility]** **[program]** had not been available, would you still have:

FR4A. Purchased any **[product type]** ?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW
- R REFUSED

FR4B. Purchased the **[product type]** at the same time as you did? (PROBE: That would be around [date of participation])

- 1. Yes {SKIP TO FR4C}
- 2. No
- D DON'T KNOW {SKIP TO FR4C}
- R REFUSED {SKIP TO FR4C}

FR4B1. Bought the **[product type]** earlier than you did, or later?

- 1. Earlier
- 2. Same Time {REPEAT QUESTION FR4B}
- 3. Later
- D DON'T KNOW {SKIP TO FR4C}
- R REFUSED {SKIP TO FR4C}

FR4B2. How much **[earlier/later]** would you have bought the **[product type]**?

- _____ Years {AND/OR} _____ Months
- D DON'T KNOW
 - R REFUSED

FR4C. {IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM, OR MEASURE IS OF VARIABLE AMOUNT} Without the program, would you have purchased the same quantity as you did?

- 1. Yes {SKIP TO FR4D}
- 2. No
- D DON'T KNOW {SKIP TO FR4D}
- R REFUSED {SKIP TO FR4D}

FR4C1. How many/much would you have purchased without the program?

- _____ {RECORD NUMBER}
- D DON'T KNOW
 - R REFUSED

FR4D. {FOR INCREMENTAL EFFICIENCY MEASURES AND INSULATION} Purchased the same [INSULATION = R value/OTHER=efficiency] of [product type]?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4E. If the [assistance] from the [utility] [program] had not been available, would you have done anything else differently?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW {SKIP TO FR5}
- R REFUSED {SKIP TO FR5}

FR4E1 What would you have done differently?

{RECORD RESPONSE}: _____

NOTE: FOR **INCREMENTAL EFFICIENCY MEASURES**, RESPONDENT WILL BE RANDOMLY ASSIGNED TO BE READ EITHER FR5 OR FR6. FOR **EFFICIENCY ENHANCEMENT MEASURES**, ALL RESPONDENTS WILL BE ASKED FR5.

FR5. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same [measure] if you had not received any [assistance] from the program?

- {RECORD RESPONSE (0-10)} _____ {SKIP TO FR7}
- D DON'T KNOW {SKIP TO FR7}
 - R REFUSED {SKIP TO FR7}

{SKIP TO FR10 IF PROGRAM DOES NOT PROVIDE A FINANCIAL INCENTIVE/SUBSIDY OR DATABASE DOES NOT CONTAIN THAT INFORMATION}

FR7. Our records indicate you received about [amount of program incentive/subsidy] from the [utility] [program] either directly or at the time of purchase to offset the cost of the [product type]. Does this amount sound about right?

- 1. Yes {SKIP TO FR9}
- 2. No
- D DON'T KNOW {SKIP TO FR9}
- R REFUSED {SKIP TO FR9}

FR8. What would you estimate to be the actual amount?

{RECORD RESPONSE} _____ {SET = NEW AMOUNT OF PROGRAM
INCENTIVE/SUBSIDY}
D DON'T KNOW
R REFUSED

I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR9. If I had not had any assistance from the program, I would have paid the additional **[amount of program incentive/subsidy]** to buy the **[measure]** on my own?

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

{READ ONLY IF FR7-FR9 WAS SKIPPED}: I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR10. The **[assistance]** from the **[utility] [program]** was a critical factor in my decision to (REBATE: purchase the high efficiency/energy efficient product./WATER CONSERVATION: install the water saving devices).

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

FR11. I would have bought a(n) **[product type]** within **a year** of when I did even without the **[assistance]** from the **[utility] [program]**.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

Consistency Check & Resolution

[C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

FR4A (efficiency enhancement measures) OR FR4D (incremental efficiency measures)
FR5
FR10
FR11

[IF FR4A/D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the **[measure]** without the program']

[IF FR4A/D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would not have purchased the **[measure]** without the program']

[IF FR5 = 0,1 AND FR4A/D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the **[measure]** without the program']

[IF FR5 = 9,10 AND FR4A/D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the **[measure]** without the program']

[IF FR10 = 0,1 AND FR4A/D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient **[product type]** without the program']

[IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient **[product type]** without the program']

[IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the **[product type]** within **[a year/2 years]** even without the program']

[IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the **[product type]** within **[a year/2 years]** even without the program']

C1. Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **[measure]** at the time you did? {RECORD VERBATIM RESPONSE BELOW}

C2. **[fill with wording and response categories to the one question which was inconsistent]** {INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE}

(NOTE: no lighting measures so no 'like spillover' questions)

Recent Program Participation (Section 5)

5.3 Have you participated in any other programs offered by PG&E because of your experience with their energy efficiency programs for homes and small businesses?

- 1 Yes
- 2 No [SKIP TO 5.5]
- D (DON'T KNOW) [SKIP TO 5.5]
- R (REFUSED) [SKIP TO 5.5]

5.4 Which programs?

5.5 Which of the following phrases or messages have you heard before today? (ROTATE STARTING POINT)

A. Energy Star

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

B. Don't Trash California

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

C. Energy Hog

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

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D. Click it or Ticket

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

E. Flex Your Power

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

F. Flex Alert

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

G. Spare the Air

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 6)

NOTE: ALL QUESTIONS STARTING WITH THE LETTER 'C' ARE QUESTIONS THAT WOULD BE ASKED ONLY IF A BILLING ANALYSIS IS BEING DONE FOR DISHWASHERS, CLOTHES WASHERS, WATER HEATER (STORAGE AND TANKLESS) CENTRAL GAS FURNACE, AND ATTIC/WALL INSULATION.

The last questions ask about household characteristics to make sure we're getting a representative sample of **[utility]** residents.

6.1 Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6.2 In what type of building do you live? (READ LIST IF NEEDED; PROBE IF SAYS CONDO: How many units are in your building?)

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Other (SPECIFY)

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- 8 Boat, RV, Van, etc.
- D (DON'T KNOW)
- R (REFUSED)

6.3 About when was this building first built? (READ LIST IF NEEDED)

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 7 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

6.3a Were you living in this same home around [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

6.4a How many full or half bathrooms do you have in your home? (PROBE: A full bathroom is one that has a sink with running water, and a toilet, and either a bathtub or shower. A half bathroom has either a toilet or a bathtub or a shower?)

- _____ Bathrooms
- D (DON'T KNOW)
 - R (REFUSED)

6.4b How many bedrooms do you have in your home (If a one-room efficiency, or studio apartment, bedrooms=0)

- _____ bedrooms
- D (DON'T KNOW)
 - R (REFUSED)

6.4c Other than bedrooms and bathrooms, how many other rooms are there in your home? Do not count laundry rooms, foyers, unfinished storage spaces, porches, or garages.

- _____ Other rooms
- D (DON'T KNOW)
 - R (REFUSED)

[If 6.3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.5a]

C6.4d Did you do any remodeling, renovation or additions since January 1, 2005?

- 1 Yes
- 2 No (SKIP TO 6.5a)
- D (DON'T KNOW) (SKIP TO 6.5a)
- R (REFUSED) (SKIP TO 6.5a)

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C6.4e How many remodels, renovations or additions have you done since then?

- _____ Remodels, renovations or additions
 D (DON'T KNOW)
 R (REFUSED)

C6.4f I'm going to ask you several questions regarding the timeframe of your remodels, renovations or additions. We will try to run through them quickly. (ASK A-C FOR EACH REMODEL THAT TOOK PLACE SINCE JANUARY 1, 2005).

- a. In what month and year did it start?
- b. Did this increase or decrease your home's square footage, not counting unfinished storage spaces, porches or garages,
- c. In what month and year did it finish?

	a. START (mm/yyyy)	b. Increase or decrease? 1 Increase 2 Decrease 3 Same D (DK) R (REFUSED)	C. FINISH (mm/yyyy)
1			
2			
3			
4			

6.5a Including yourself, how many people currently live in your home year-round?

- _____ people
 D (DON'T KNOW)
 R (REFUSED)

6.5b (IF 6.5a=1) Which of the following best describes your age?

- 1 Less than 18 years old
- 2 18-24 years old
- 3 25-34 years old
- 4 35-44 years old
- 5 45-54 years old
- 6 55-64 years old
- 7 65 or older
- D (DON'T KNOW)
- R (REFUSED)

6.5c (IF 6.5a>1) Including yourself, how many people currently living in your home year-round are in the following age groups?

- _____ Less than 18 years old
- _____ 18-24 years old
- _____ 25-34 years old
- _____ 35-44 years old
- _____ 45-54 years old

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____ 55-64 years old
____ 65 or older
TOTAL SHOULD EQUAL 6.5a
R (REFUSED)

[If 6.3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.7]

C6.5d Has the total number of people living in your home year-round changed since [insert date 12 months prior to time of participation]?

1 Yes
2 No (SKIP TO 6.6)
D (DON'T KNOW) (SKIP TO 6.6)
R (REFUSED) (SKIP TO 6.6)

C6.5e Do more people or less people live in your home now?

1 More→How many more? ____
2 Less→How many less? ____
D (DON'T KNOW)
R (REFUSED)

C6.5f In what year(s) did the number of people in your household change? (RECORD ALL YEARS OF CHANGE—NET CHANGE IS CALCULATED FROM C6.5e)

1st NET CHANGE: _____ MONTH _____ YEAR
2nd NET CHANGE: _____ MONTH _____ YEAR
3rd NET CHANGE: _____ MONTH _____ YEAR
D (DON'T KNOW)
R (REFUSED)

6.7 This next question asks about other changes you have made that we haven't already talked about. Since January 1, 2005 have you made any other changes to the appliances, equipment or other characteristics of your home that would affect how much energy you are using?

- 1 Yes [ASK 6.7a-NSP5 FOR EACH MEASURE INSTALLED BEFORE ASKING 6.7i]
- 2 No [SKIP TO 6.7i]
- D DK [SKIP TO 6.7i]
- R REFUSED [SKIP TO 6.7i]

a. What types of changes did you make? (DO NOT READ. RECORD EACH TYPE OF CHANGE MADE. PROBE: Anything else?)

Heating and air conditioning measures

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Furnace
- 5 Programmable thermostat

Lighting measures

- 6 Fluorescent indoor fixture
- 7 Fluorescent outdoor fixture
- 8 Compact fluorescent bulb
- 9 Compact fluorescent fixture
- 10 Motion sensor
- 11 Dimmer switch

Laundry measures

- 12 Clothes washer
- 13 Clothes dryer

Water using measures

- 14 Water heater
- 15 Low Flow showerheads
- 16 Faucet aerators

Kitchen appliances

- 17 Refrigerator
- 18 Freezer
- 19 Range/oven
- 20 Dishwasher

Pool/spa/jacuzzi

- 21 Swimming pool
- 22 Swimming pool pump
- 23 Swimming pool cover
- 24 Spa/jacuzzi

Insulation/weather-stripping/sealing

- 25 Floor, wall, ceiling, or attic insulation
- 26 Weather-stripping/caulking/weatherization
- 27 Water heater/pipe wrapping/insulation
- 28 Duct sealing/repair (not cleaning)

Windows

- 29 Windows
- 30 Other (SPECIFY)
- 00 No other changes (SKIP TO C6.7i)
- D DK
- R REFUSED

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b. Did this equipment replace existing equipment/measures or was it new to your home?

- 1 Replaced existing equipment
- 2 New to home
- D DK
- R REFUSED

c. When did this occur? (RECORD MONTH AND YEAR)

____/____ MM/YYYY

- D DK -->Was this before or after you participated in the [program]?
 - 1 Before
 - 2 After
 - D DK
 - R REFUSED
- R REFUSED

(ASK 6.7Cd and 6.7Ce ONLY IF BILLING ANALYSIS BEING DONE AND IF 6.7a = 4, 13, 14, 19, 24)

Cd. What type of fuel does the new [equipment] use?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D DK
- R REFUSED

Ce. (ASK IF 6.7b = REPLACED) What was the fuel type of the [equipment] you replaced?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D DK
- R REFUSED

f. Did you receive a rebate for this [equipment] through a [utility] program?

- 1 Yes [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- 2 No [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]

(ASK 6.7g and 6.7h IF 1-4, 12, 13, 14, 17, 18, 19, 20, 22, 24, 29 IN 6.7a; ELSE SKIP TO NSP4)

g. Is the new [equipment] energy efficient?

- 1 Yes
- 2 No [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]

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- h. How do you know that this equipment is energy efficient? (PROBE: IS IT ENERGY STAR® RATED?)
- _____

(ASK NSP4-5 ONLY IF 6.7f = NO AND 6.7g = YES AND 6.7c = AFTER DATE OF PARTICIPATION)

- NSP4.** I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the **[utility] [program]** in **[2006, 2007, 2008]** influenced my decision to install different types of high efficiency equipment on my own.

{RECORD RESPONSE (0-10)} _____

D DON'T KNOW
R REFUSED

- NSP5.** Why did you purchase this high efficiency equipment without going through a **[utility]** program? {DO NOT READ; INDICATE ALL THAT APPLY}

1. Too much paperwork
 2. Takes too long to get approval
 3. No time to participate, needed equipment immediately
 4. The program had ended
 5. The equipment would not qualify {PROBE: WHY NOT?} _____
 6. The amount of the rebate wasn't important enough
 7. Did not know program was available
 8. There was no program available
 9. Other {SPECIFY} _____
- D DON'T KNOW
R REFUSED

(ASK C6.7i=c6.7m ONLY IF BILLING ANALYSIS BEING DONE)

- C6.7i** [IF FURNACE WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have gas or electric space heating?

- 1 Gas
 - 2 Electric
 - 3 Both
 - 4 Other (Specify) _____
- D (DON'T KNOW)
R (REFUSED)

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C6.7j [IF WATER HEATER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

C6.7k [IF CLOTHES DRYER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric clothes dryer?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

C6.7l [IF RANGE/OVEN WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric range/oven?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

C6.7m [IF ROOM, CENTRAL AC, OR EVAPORATIVE COOLER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] What type of air conditioning system, if any, do you use in your home? (INDICATE ALL THAT APPLY)

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

6.8a Do you receive a natural gas bill directly from SCG?

- 1 Yes
- 2 No (SKIP TO 6.9)
- D (DON'T KNOW) (SKIP TO 6.9)
- R (REFUSED) (SKIP TO 6.9)

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6.8b Does this bill only include your home's natural gas use, or does it include the use of other households?

- 1 Only 1 household
- 2 Multiple households
- D (DON'T KNOW)
- R (REFUSED)

6.13 What is the primary language spoken in your home? (DO NOT READ; PROBE IF R SAYS CHINESE: Would this be Mandarin or Cantonese)

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

On-site Recruiting (Section 7)

(ONLY ASK IF 6.8a and 6.8b=1, HOUSEHOLD HAS OWN INDIVIDUAL METER, AND FOR THE FOLLOWING MEASURES: DISHWASHERS, CLOTHES WASHERS, WATER HEATER (STORAGE AND TANKLESS) CENTRAL GAS FURNACE, AND ATTIC/WALL INSULATION.)

7.1 We would like to offer you \$25 to participate in the on-site component of this evaluation we are doing for Southern California Gas Company. We are NOT interested in selling anything. We would like to have one of our auditors visit your home at your convenience to look at the measures you installed through the program and how they are operating. The on-site visit would only take about 15 minutes (will vary slightly depending on measures installed). Would that be alright with you?

- 1 Yes→Great! Someone from **[firm]** will give you a call back to determine when they can schedule an appointment with one of our auditors in your area. Thank you for your cooperation with this important effort.
- 2 No

Thank and Terminate

SDGE 3024 Single Family Rebate Program

The following measures will be asked about in the survey: Qualified **ENERGY STAR dishwasher**

Instrument-specific variables - The CATI software will automatically fill the appropriate description in the questions.

[Product Type]

Dishwasher

[Measure]

ENERGY STAR dishwasher

[Assistance]

Rebate

[Program]

2006-2008 Residential Retrofit Program

[Utility]

SDGE

[Program Incentive]

Rebate dollar amount

[Quantity]

Quantity exchanged/installed

[Incremental efficiency measures]

ENERGY STAR dishwasher

[Efficiency enhancement measures]

Introduction

Hello, my name is [interviewer name], and I'm calling on behalf of the California Public Utilities Commission regarding San Diego Gas & Electric Company's 2006-2008 Residential Retrofit Program, also known as the Home Energy Efficiency Rebate Program. May I speak with [contact name]?

- 1 Yes
- 2 No [attempt to convert; if R not available, ask for an adult who makes decisions on how household uses energy]

I'm with PA Consulting Group, an independent research firm. I am calling to learn about your experiences with the **ENERGY STAR dishwasher** you purchased and received a rebate for through San Diego Gas & Electric Company's Residential Retrofit Program (also referred to as the Home Energy Efficiency Rebate Program).

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and **SDGE** better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about (15) minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-XXX-XXXX)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the ENERGY STAR dishwasher you purchased and received a rebate through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call 415-703-2782, or visit their website: www.cpuc.ca.gov/eevalidation.)

(NOTE: For all questions, "DON'T KNOW" and "REFUSED" will be coded if offered as a response.)

Recall of Participation/Identification of Decision Maker (Section 1)

(ASSUMPTION: throughout the survey it is assumed that nearly all households purchase and use one dishwasher)

1.1b Program records indicate that you purchased and received a mail-in or instant rebate for an **ENERGY STAR dishwasher** through the 2006-2008 Residential Retrofit Program around [insert date of participation]. Do you recall purchasing this **ENERGY STAR dishwasher**?

MEASURE	Do you recall purchasing ?
ENERGY STAR dishwasher	1 Yes 2 No D (DK) R (REFUSED)

1.1e Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (SPECIFY)
- D (DK)
- R (REFUSED)

(IF RECALLS MEASURES, SKIP TO 1.4)

1.2 (ASK IF DOESN'T RECALL ANY OF THESE MEASURES) Is it possible that someone else in your household would know about purchasing this **ENERGY STAR dishwasher** and applying for a mail-in rebate, online rebate, or receiving an instant rebate from the retailer)? (RECORD ONE NUMBER)

- 1 Yes (SKIP TO 1.3)
- 2 No
- D (DON'T KNOW)
- R (REFUSED) (TERMINATE)

1.2b San Diego Gas & Electric offers rebates for replacing less efficient appliances with more energy-efficient equipment. Rebates are paid in several ways—either in response to a mail-in application for a rebate, filling out a form online, or through an instant rebate at the retailer. The rebate program is referred to as the 2006-2008 Residential Retrofit Program, or the Home Energy Efficiency Rebate Program, or the Single Family Rebate program. Are you sure you don't recall purchasing the **ENERGY STAR dishwasher** and applying for a rebate from the utility? (RECORD ONE NUMBER)

- 1 Don't remember -> [TERMINATE, RECORD ANY COMMENTS MADE BY RESPONDENT BEFORE EXITING]
- 2 Remember -> [READ, "GREAT, THEN LET'S CONTINUE", SKIP TO 1.4]
- R (REFUSED) (TERMINATE)

1.3 May I please speak with that person? (RECORD ONE NUMBER)

- 1 Yes (BEGIN THE SURVEY AGAIN WITH THIS NEW RESPONDENT)
- 2 No (TERMINATE)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

1.4 Are you the person in your household who decided to purchase this **ENERGY STAR dishwasher** and receive a rebate through San Diego Gas & Electric Company's Residential Retrofit Program?

- 1 Yes
- 2 No (SKIP BACK TO 1.3)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

Sources of Program Information (Section 2)

2.1 How did you hear about the rebate offered on the **ENERGY STAR dishwasher** available as part of SDG&E's Residential Retrofit Program? (PROBE: Did you hear about the program from any other sources?) (DO NOT READ LIST, RECORD ALL THAT APPLY)

Utility provided information

- 1 (Advertising—radio, newspaper, trade journal, billboard, TV)
- 2 (Bill insert, newsletter, or other mailing)
- 3 (Website)
- 4 (Email)
- 5 (Other utility) (SPECIFY)

Local Government/Community event/Nonprofit

- 6 (Meeting, event, workshop, training) (SPECIFY)
- 7 (School)
- 8 (Local government/community agency) (SPECIFY)

- 9 (City/county Energy Center such as Pacific Energy Center, Stockton, Food Service) (SPECIFY)
- 10 (Advertising—radio, newspaper, trade journal, billboard, TV)
- Other**
- 11 (Appliance/Home improvement store salesperson)
- 12 (In store advertisement at Appliance / Home Improvement store)
- 13 (Home or building audit or assessment) (SPECIFY)
- 14 (Meeting, event, workshop training) (SPECIFY)
- 15 (Flex your Power TV or radio advertising)
- 16 (Other advertising, don't recall)
- 17 (Friend/Relative/Neighbor)
- 18 (Other, Specify: _____)
- D (DON'T KNOW) (SKIP TO SECTION 3)
- R (REFUSED) (SKIP TO SECTION 3)

Installation Behavior (Section 3)

3.1a Now, I would like to understand what you did with the **ENERGY STAR dishwasher**. Is this **ENERGY STAR dishwasher** currently installed at your home? (RECORD ONE NUMBER)

- 1 Yes (SKIP TO SECTION 3.8)
- 2 No
- D (DON'T KNOW) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE)
- R (REFUSED) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE)

3.1b Which of the following best describes what happened with the **ENERGY STAR dishwasher**? (READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location
- 2 It was installed at your home but is now permanently removed (example: broke, burned out, don't fit, don't like, etc.) (SKIP TO 3.6)
- 3 It was installed at your home but it broke/didn't work properly and was replaced with another ENERGY STAR dishwasher through warranty (or without a rebate)
- 4 It is in storage because it is only needed during certain months of the year
- 5 It is in storage for some other reason
- 6 It was sold or given away
- 7 Something else (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

3.3a (ASK IF 3.1b=1 or 3.1b=6) Is the location where the [measure] was installed in [Utility]'s service territory?

- 1 Yes (SKIP TO W1)
- 2 No (TERMINATE)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

Removed Measures (ASK ONLY IF THEY SAY THEY REMOVED A MEASURE AFTER INSTALLED, 3.1b=2)

3.6 Now let's talk about **ENERGY STAR dishwasher** you said you installed but have since removed. Why was this removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 (Equipment failed)
- 2 (Didn't work properly)
- 3 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

(ASK ONLY FOR INSTALLED MEASURES)

3.8 On the door of **ENERGY STAR dishwasher** there should be a model number and manufacturer listed. Could you please read that information off to me? (RECORD MODEL NUMBER & MANUFACTURER)

- 1 (Yes)
- 2 (No)
- D (DON'T KNOW)
- R (REFUSED)

3.10 How many times a week would you estimate that you use the **ENERGY STAR dishwasher**?

- 1 (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- 7 (7)
- 8 (8)
- 9 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

3.11 Of the times the ENERGY STAR dishwasher is run in a week, what percentage of those loads would you say were run in the following cycles?

- 1 Power Wash
- 2 Normal Wash
- 3 Conserve Wash
- 4 Rinse Wash
- 5 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

3.12 What percentage of the time would you say you run a load of dishes with the following drying options?

- 1 Heated Drying
- 2 Unheated Drying
- 3 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

3.13a Now think about how you normally load dishes into the ENERGY STAR dishwasher. When running a full load of dishes, what percent of the time would you say you pre-treat the dishes by....

- 1 Removing food without water (scraping food off with utensil)? (IF 100%, SKIP TO W1)
- 2 Removing food with water (soaking, rinsing, etc.)?
- 3 Removing food using a combination of scraping and water?
- 4 Don't remove food remnants before loading (IF 100%, SKIP TO W1)
- 5 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

3.13b About what temperature is the water that you use to remove food remnants from dishes before loading into the dishwasher: hot, warm or cold?

- 1 Hot water
- 2 Warm water
- 3 Cold water
- D (DON'T KNOW)
- R (REFUSED)

NTGR and Spillover (Section 4)

Warm-up Questions/Background Context

W1 Please think back to the time when you were deciding to buy the energy efficient dishwasher, perhaps recalling things that occurred in your household shortly before and after [**timeframe**]. What factors motivated you to purchase the energy saving dishwasher? {? {DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE RESPONDENT HAS FINISHED, PROBE: Are there any other factors?}}

- 1 Old equipment didn't work
- 2 Old equipment working poorly
- 3 The program incentive
- 4 The program technical assistance
- 5 Wanted to save energy
- 6 Wanted to reduce energy costs
- 8 The information provided by the Program
- 9 Past experience with this program
- 10 Because of past experience with another SDGE program
- 11 Recommendation from other utility program (Probe: What program? _____)
- 12 Recommendation of dealer/retailer
- 13 Recommendation of someone else (Probe: Who? _____)
- 14 Advertisement in newspaper (Probe: For what program? _____)
- 15 Radio advertisement (Probe: For what program? _____)
- 16 Other (SPECIFY)
- 17 Environmental concerns
- 18 Global warming
- 19 Liked the appearance of the **ENERGY STAR dishwasher** more than the old one
- 20 Keeping up with the latest trends and fashions
- D DON'T KNOW
- R REFUSED

{ASK W2a-W6 ONLY FOR INCREMENTAL EFFICIENCY REBATE MEASURES}

W2a Did you get this **ENERGY STAR dishwasher** to replace [a/an] existing dishwasher? }

- 1 Yes (SKIP TO W4)
- 2 No
- D Don't Know (SKIP TO FR7)
- R Refused (SKIP TO FR7)

W2b Did you get this **ENERGY STAR dishwasher** because you wanted to add another/more dishwasher to your [home/business]?

- 1 Yes (SKIP TO FR7)
- 2 No
- D Don't Know (SKIP TO FR7)
- R Refused (SKIP TO FR7)

W2c Is this **dishwasher** the first you have ever had in your home?

- 1 Yes (SKIP TO FR7)
- 2 No (SKIP TO FR7)
- D Don't Know (SKIP TO FR7)
- R Refused (SKIP TO FR7)

W4 About how old was the **dishwasher** you replaced? {READ CATEGORIES IF NEEDED}

- 1 Less than 5 years old
- 2 5 to less than 10 years old
- 3 10 to less than 20 years old
- 4 20 years to less than 30 years old
- 5 30 or more years old
- D DON'T KNOW
- R REFUSED

W5 Was the old **dishwasher** working or not working?

- 1 Working
- 2 Not working (SKIP TO FR7)
- D DON'T KNOW (SKIP TO FR7)
- R REFUSED (SKIP TO FR7)

W6 Was the old **dishwasher** in good, fair, or poor working condition?

- 1 Good
- 2 Fair
- 3 Poor
- D DON'T KNOW
- R REFUSED

Free-Ridership Questions

FR7 Our records indicate you received about **[amount of program incentive/subsidy]** from the **SDGE 2006-2008 Residential Retrofit Program** either directly or at the time of purchase to offset the cost of the **dishwasher**. Does this amount sound about right?

- 1 Yes (SKIP TO FR1)
- 2 No
- D DON'T KNOW (SKIP TO FR1)
- R REFUSED (SKIP TO FR1)

FR8 What would you estimate to be the actual amount?

{RECORD RESPONSE} _____ {SET = NEW AMOUNT OF PROGRAM INCENTIVE/SUBSIDY}

- D DON'T KNOW
- R REFUSED

FR1 At the time that you first heard about the **rebate** from **SDGE** for **ENERGY STAR dishwasher**, had you...? {READ LIST UNTIL R SAYS 'NO'}

- 1 Already been thinking about purchasing **dishwasher**? {IF NO, SKIP TO FR2}
- 2 Already begun collecting information about **dishwasher**? {IF NO, SKIP TO FR2}
- 3a Already selected the **ENERGY STAR dishwasher** you were going to get? {IF NO, SKIP TO FR2}
- 4 Already installed the energy efficient **ENERGY STAR dishwasher**? {IF YES, SKIP TO FR1B; ELSE FR2}
- 5 {DON'T READ} Other: _____ {SKIP TO FR2}
- D DON'T KNOW {SKIP TO FR2}
- R REFUSED {SKIP TO FR2}

FR1B So, the **ENERGY STAR dishwasher** was installed before you learned about the **rebate** from **SDGE**?

- 1 Yes (SKIP FR5)
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

FR2 Just to be sure I understand, did you have specific plans to install a(n) **dishwasher** before learning about the **rebate** available through the **2006-2008 Residential Retrofit Program**?

- 1 Yes
- 2 No {SKIP TO FR4}
- D DON'T KNOW {SKIP TO FR4}
- R REFUSED {SKIP TO FR4}

FR3 Did you have to make any changes to your existing plans in order to receive this **rebate** through the **2006-2008 Residential Retrofit Program**?

- 1 Yes
- 2 No
- D DON'T KNOW
- R REFUSED

FR4 {REPEAT AS NEEDED FOR FR4 PARTS A – D} If the **rebate** from the **SDGE 2006-2008 Residential Retrofit Program** had not been available, would you still have:

FR4A Purchased any **dishwasher**?

- 1 Yes
- 2 No {SKIP TO FR5}
- D DON'T KNOW
- R REFUSED

FR4B Purchased the **dishwasher** at the same time as you did? (PROBE: That would be around [date of participation])

- 1 Yes {SKIP TO FR4D}
- 2 No
- D DON'T KNOW {SKIP TO FR4D}
- R REFUSED {SKIP TO FR4D}

FR4B1 Bought the **dishwasher** earlier than you did, or later?

- 1. Earlier
- 2 Same Time {REPEAT QUESTION FR4B}
- 3. Later
- D DON'T KNOW {SKIP TO FR4D}
- R REFUSED {SKIP TO FR4D}

FR4B2 How much **[earlier/later]** would you have bought the **dishwasher**?

_____ Years {AND/OR} _____ Months

D DON'T KNOW

R REFUSED

FR4D Purchased the same efficiency of **dishwasher**?

1 Yes

2 No

D DON'T KNOW

R REFUSED

FR4E If the **rebate** from the **SDGE 2006-2008 Residential Retrofit Program** had not been available, would you have done anything else differently?

1 Yes

2 No {SKIP TO FR5}

D DON'T KNOW {SKIP TO FR5}

R REFUSED {SKIP TO FR5}

FR4E1 What would you have done differently?

{RECORD RESPONSE}: _____

FR5 On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same **ENERGY STAR dishwasher** if you had not received any **rebate** from the program?

{RECORD RESPONSE (0-10)} _____ {SKIP TO FR9}

D DON'T KNOW {SKIP TO FR9}

R REFUSED {SKIP TO FR9}

FR9 I'm going to read several statements about how you came to choose your **dishwasher**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

If I had not had any assistance from the program, I would have paid the additional **[amount of program incentive/subsidy]** to buy the **ENERGY STAR dishwasher** on my own.

{RECORD RESPONSE (0-10)} _____

D DON'T KNOW

R REFUSED

FR10 The **rebate** from the **SDGE 2006-2008 Residential Retrofit Program** was a critical factor in my decision to purchase the high efficiency/energy efficient product.

{RECORD RESPONSE (0-10)} _____

D DON'T KNOW

R REFUSED

FR11 I would have bought a(n) **dishwasher** within a **year** of when I did even without the **rebate** from the **SDGE 2006-2008 Residential Retrofit Program**.

{RECORD RESPONSE (0-10)} _____

D DON'T KNOW

R REFUSED

CONSISTENCY CHECK & RESOLUTION

{C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

FR4D

FR5

FR10

FR11

{IF FR4D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would have purchased the **ENERGY STAR dishwasher** without the program'}

{IF FR4D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would not have purchased the **ENERGY STAR dishwasher** without the program'}

{IF FR5 = 0,1 AND FR4D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would likely not have purchased the **ENERGY STAR dishwasher** without the program'}

{IF FR5 = 9,10 AND FR4D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would likely have purchased the **ENERGY STAR dishwasher** without the program'}

{IF FR10 = 0,1 AND FR4D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient **dishwasher** without the program'}

{IF FR10 = 9,10 AND FR4D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient **dishwasher** without the program'}

{IF FR11 = 9,10 AND FR4D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would have bought the **dishwasher** within [**a year**] even without the program'}

{IF FR11 = 0,1 AND FR4D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would not have bought the **dishwasher** within [**a year**] even without the program'}

C1 Let me make sure I understand you. Earlier, you said [**fill with inconsistency 1**], but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **ENERGY STAR dishwasher** at the time you did? {RECORD VERBATIM RESPONSE BELOW}

C2 [**fill with wording and response categories to the one question which was inconsistent**] {INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE}

Recent Program Participation (Section 5)

Q5_3 Have you participated in any other programs offered by **SDGE** because of your experience with the Residential Energy Efficiency Incentive Program?

- 1 Yes
- 2 No *(SKIP TO Q5_5)*
- D (DON'T KNOW) *(SKIP TO Q5_5)*
- R (REFUSED) *(SKIP TO Q5_5)*

Q5_4 Which programs?

Q5_5 Which of the following phrases or messages have you heard before today? (ROTATE STARTING POINT)

Q5_5A Good Housekeeping

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5B Click it or Ticket

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5C Ahnu

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5D Flex Your Power

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5E Flex Alert

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5F Energy Hog

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5G Galley Bay

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5H Energy Star

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5I Hollister Co

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 6)

Q6_1 The last questions ask about household characteristics to make sure we're getting a representative sample of SDGE residents.

Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

Q6_2 In what type of building do you live? (READ LIST IF NEEDED)
(PROBE FOR 'Condo': "How many units are in your building?")

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Other (SPECIFY)
- 8 Boat/RV/Van/Etc.
- D (DON'T KNOW)
- R (REFUSED)

Q6_3 About when was this building first built? (READ LIST IF NEEDED)

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 7 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

Q6_3a Were you living in this same home around IF REBATE: [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q6_4a How many full or half bathrooms do you have in your home? (PROBE: A full bathroom is one that has a sink with running water, and a toilet, and either a bathtub or shower. A half bathroom has either a toilet or a bathtub or a shower?)

- _____Bathrooms
- D (DON'T KNOW)
 - R (REFUSED)

Q6_4b How many bedrooms do you have in your home (If a one-room efficiency, or studio apartment, open loft, bedrooms=0)

_____bedrooms
D (DON'T KNOW)
R (REFUSED)

Q6_4c Other than bedrooms and bathrooms, how many other rooms are there in your home? Do not count laundry rooms, foyers, unfinished storage spaces, porches, or garages.

_____Other rooms
D (DON'T KNOW)
R (REFUSED)

Q6_5a Including yourself, how many people currently live in your home year-round?

_____people
D (DON'T KNOW)
R (REFUSED)

Q6_5b (IF Q6_5a=1) Which of the following best describes your age?

- 1 Less than 18 years old
 - 2 18-24 years old
 - 3 25-34 years old
 - 4 35-44 years old
 - 5 45-54 years old
 - 6 55-64 years old
 - 7 65 or older
- D (DON'T KNOW)
R (REFUSED)

Q6_5c (IF Q6_5a>1) Including yourself, how many people currently living in your home year-round are in the following age groups?

For Q6_5c1 to Q6_5c7:

_____ Number of people
R Refused

Q6_5c1 Less than 18 years old

Q6_5c2 18-24 years old

Q6_5c3 25-34 years old

Q6_5c4 35-44 years old

Q6_5c5 45-54 years old

Q6_5c6 55-64 years old

Q6_5c7 65 or older

(TOTAL SHOULD EQUAL Q6_5a)

Spillover {ONLY ASK ONCE}

NSP1A Since you participated in **2006-2008 Residential Retrofit Program** have you purchased and installed any other type of high efficiency equipment or made energy efficiency improvements {READ THE FOLLOWING ONLY FOR SMALL COMMERCIAL: at this facility or at other locations}?

1 Yes, only at this home/facility

4 No (SKIP TO Q6_8a)

D Don't Know (SKIP TO Q6_8a)

R Refused (SKIP TO Q6_8a)

NSP1B (IF NSP1 = YES) Did you receive any assistance for this equipment through [utility] [program] or another utility program?

1 YES [SKIP TO NEXT SECTION, FINAL DEMOGRAPHICS]

2 NO

D (DON'T KNOW)

R (REFUSED)

NSP2 What type and quantity of high efficiency equipment did you install on your own? {PROBE TO GET EXACT TYPE AND QUANTITY AND LOCATION/BUILDING IF SMALL COMMERCIAL}

Type 1: _____ Quantity 1: _____

Type 2: _____ Quantity 2: _____

Type 3: _____ Quantity 3: _____

Type 4: _____ Quantity 4: _____

NSP3 {ASK FOR EACH TYPE OF EQUIPMENT IN NSP2} How do you know that this equipment is high efficiency? {PROBE: WAS IT ENERGY STAR® RATED?}

Type 1: _____
Type 2: _____
Type 3: _____
Type 4: _____

NSP4 I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the **SDGE 2006-2008 Residential Retrofit Program** in [2006, 2007, 2008] influenced my decision to install different types of high efficiency equipment on my own.

1 {RECORD RESPONSE (0-10)}
D (DON'T KNOW)
R (REFUSED)

NSP5 Why did you purchase this high efficiency equipment without going through a **SDGE** program? {DO NOT READ; INDICATE ALL THAT APPLY}

For NSP5_1 to NSP5_11:

0 Not mentioned
1 Mentioned

- NSP5_1** Too much paperwork
- NSP5_2** Takes too long to get approval
- NSP5_3** No time to participate, needed equipment immediately
- NSP5_4** The program had ended
- NSP5_5** The equipment would not qualify {PROBE: WHY NOT?} _____
- NSP5_6** The amount of the rebate wasn't important enough
- NSP5_7** Did not know program was available
- NSP5_8** There was no program available
- NSP5_9** Other {SPECIFY} _____
- NSP5_10** (DON'T KNOW)
- NSP5_11** REFUSED

RESIDENTIAL FINAL DEMOGRAPHIC QUESTIONS (Section 7)

Q7_1a Do you receive an electric bill directly from SDGE ?

- 1 Yes
- 2 No *(SKIP TO Q7_2)*
- D (DON'T KNOW) *(SKIP TO Q7_2)*
- R (REFUSED) *(SKIP TO Q7_2)*

Q7_1b Does this bill only include your home's electric use, or does it include the electric use of other households?

- 1 Only 1 household
- 2 Multiple households
- D (DON'T KNOW)
- R (REFUSED)

Q7_2 What is the primary language spoken in your home? *(DO NOT READ)*

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

Thank and Terminate

SDGE 3024 Residential Incentive Program Participant Survey

SDGE 3024 Residential Incentive Program Participant Survey

The following measures will be asked about in the survey: Pool pumps and motor(s), pool pump reset agreement, whole house fan, storage water heater(s), attic insulation, wall insulation, ENERGY STAR® refrigerator, ENERGY STAR® dishwasher(s), ENERGY STAR® central natural gas furnace(s), and ENERGY STAR® room air conditioner(s).

Instrument-specific variables-- The CATI software will automatically fill the appropriate description in the questions.

[Product Type]

Attic insulation
Wall insulation
Pool pump
Pool pump reset agreement
Refrigerator
Room air conditioner
Dishwasher
Furnace
Water heater
Whole house fan

[Measure]

Attic insulation
Wall insulation
Multi-speed pool pump
Single-speed pool pump
Pool pump reset agreement
Energy Star refrigerator
Energy Star room air conditioner
Energy Star dishwasher
Energy Star central natural gas furnace
Electric water heater
Whole house fan
Gas water heater

[Assistance]

Rebate/\$25 check

[Program]

Residential Energy Efficiency Incentive Program

[Utility]

SDGE

[Program Incentive]

Dollar amount/\$25 check

[Quantity]

Quantity exchanged/installed

[Incremental efficiency measures]

Multi-speed pool pump
Single-speed pool pump
Energy Star refrigerator
Energy Star room air conditioner
Energy Star dishwasher
Energy Star central natural gas furnace
Storage water heater
Whole house fan

[Efficiency enhancement measures]

Insulation
Pool pump reset agreement

SDGE 3024 Residential Incentive Program Participant Survey

Introduction

Hello, my name is [interviewer name], and I'm calling on behalf of the California Public Utilities Commission regarding San Diego Gas and Electric's Residential Incentive Program. May I speak with [contact name]?

- 1 Yes
- 2 No [attempt to convert; if R not available, ask for an adult who makes decisions on how household uses energy]

I'm with [data collection firm], an independent research firm. I am calling to learn about your experiences with the [IF REBATE: [measures] you purchased and the rebate you received from the retailer/IF RESET AGREEMENT: pool pump reset agreement you signed and received a \$25 incentive for] through SDGE's Residential Incentive Program.

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and SDGE better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about (non-billing analysis=15/billing analysis=20) minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-XXX-XXXX)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the [measures] you purchased and received a rebate through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call Mikhail Haramati at 415-703-1458, or visit their website: www.cpuc.ca.gov/eevalidation.)

(NOTE: For all questions, "DON'T KNOW" and "REFUSED" will be coded if offered as a response.)

Recall of Participation/Identification of Decision Maker (Section 1)

(QUANTITY REFERS TO THE NUMBER RECEIVED WITHIN THE MEASURE CATEGORY--E.G., 1 POOL PUMP)

1.1a (IF RESET AGREEMENT) Our records show that your household signed an agreement about how often you would use your pool pump. You would have received \$25 from SDGE for signing this agreement. Do you recall signing this agreement?

- 1 Yes (SKIP TO 1.3)
- 2 No (SKIP TO 1.2)
- D (DON'T KNOW) (SKIP TO 1.2)
- R (REFUSED) (TERMINATE)

SDGE 3024 Residential Incentive Program Participant Survey

1.1b (IF REBATE) Program records indicate that you purchased and received a mail-in or instant rebate for the following energy efficient equipment through the Residential Incentive Program around **[insert date of participation]**. (RECORD FOR EACH MEASURE INSTALLED)

MEASURES	Do you recall purchasing ?	(IF QUANTITY > 1) Is this the correct quantity?
A. [quantity] Pool pump and motor	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
B. [quantity] Whole house fan	1 Yes 2 No D (DK) R (REFUSED)	--
C. [quantity] Storage water heater	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
D. Attic insulation	1 Yes 2 No D (DK) R (REFUSED)	--
E. Wall insulation	1 Yes 2 No D (DK) R (REFUSED)	--
F. Energy Star refrigerator	1 Yes 2 No D (DK) R (REFUSED)	--
G. [quantity] Energy Star Dishwasher	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
H. [quantity] Central natural gas furnace	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
I. [quantity] Room air conditioner	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)

(ASK 1.1c-1.1d ONLY IF MEASURE = WATER HEATER)

1.1c How many gallons does your water heater hold?

_____ gallons (SKIP to 1.1e)
 D (DK)
 R (REFUSED)

SDGE 3024 Residential Incentive Program Participant Survey

1.1d (IF DON'T KNOW WATER HEATER SIZE) Is your water heater? (READ LIST)

- 1 Very small: Less than 30 gallons
- 2 Small: 30-39 gallons
- 3 Medium: 40-59 gallons
- 4 Large: 60 gallons or more
- D (DK)
- R (REFUSED)

(ASK 1.1e ONLY IF MEASURE = DISHWASHER)

1.1e Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (SPECIFY)
- D (DK)
- R (REFUSED)

(ASK 1.1f-1.1g ONLY IF MEASURE = REFRIGERATOR)

1.1f Where is the Freezer located (mounted) on the refrigerator?

- 1 Freezer is on the bottom of the refrigerator
- 2 Freezer is on the top of the refrigerator
- 3 Freezer is on the side of the refrigerator
- 4 Refrigerator does not have an attached freezer
- D (DK)
- R (REFUSED)

1.1g Does your refrigerator have a through the door ice machine?

- 1 Yes
- 2 No
- D (DK)
- R (REFUSED)

(IF RECALLS MEASURES, SKIP TO 1.4)

1.2 (ASK IF DOESN'T RECALL ANY OF THESE MEASURES) Is it possible that someone else in your household would know about (IF REBATE: purchasing this/these [measures] and applying for a mail-in or instant rebate from the retailer/IF RESET AGREEMENT: signing this agreement)? (RECORD ONE NUMBER)

- 1 Yes (SKIP TO 1.3)
- 2 No (TERMINATE IF RESET ONLY)
- D (DON'T KNOW) (TERMINATE IF RESET ONLY)
- R (REFUSED) (TERMINATE)

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1.2b (IF REBATE AND Q1.2 = NO OR DON'T KNOW) San Diego Gas and Electric is offering mail-in or instant rebates for replacing less efficient electric and natural gas-fired appliances, heating and cooling, and water heating equipment with more energy-efficient equipment. The program also provides rebates for attic and wall insulation, pool pumps, and whole house fans. Rebates are paid in two ways—either in response to a mail-in application for a rebate or through an instant rebate at the retailer. The rebate program is referred to as the Residential Incentive Program. Are you sure you don't recall purchasing the/these **[measures]** and applying for a rebate? (RECORD ONE NUMBER)

- 1 Don't remember -> [TERMINATE, RECORD ANY COMMENTS MADE BY RESPONDENT BEFORE EXITING]
- 2 Remember -> [READ, "GREAT, THEN LET'S CONTINUE", SKIP TO 1.4]
- R (REFUSED) (TERMINATE)

1.3 May I please speak with that person? (RECORD ONE NUMBER)

- 1 Yes (BEGIN THE SURVEY AGAIN WITH THIS NEW RESPONDENT)
- 2 No (TERMINATE)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

1.4 Are you the person in your household who decided to (IF REBATE: purchase this/these **[measures]** and receive a rebate through SDGE's Residential Incentive Program/IF RESET AGREEMENT: sign this agreement with SDGE)?

- 1 Yes
- 2 No (SKIP BACK TO 1.3)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

Sources of Program Information (Section 2)

2.1 How did you hear about the (IF REBATE: rebate offered on the [measures] available as part of/IF RESET AGREEMENT: pool pump reset agreement) SDGE's Residential Incentive Program? (PROBE: Did you hear about the program from any other sources?) (DO NOT READ LIST, RECORD ALL THAT APPLY)

Utility provided information

- 1 (Advertising—radio, newspaper, trade journal, billboard, TV)
- 2 (Bill insert, newsletter, or other mailing)
- 3 (Website)
- 4 (Email)
- 5 (Other utility) (SPECIFY)

Local Government/Community event/Nonprofit

- 6 (Meeting, event, workshop, training) (SPECIFY)
- 7 (School)
- 8 (Local government/community agency) (SPECIFY)
- 9 (City/county Energy Center such as Pacific Energy Center, Stockton, Food Service) (SPECIFY)
- 10 (Advertising—radio, newspaper, trade journal, billboard, TV)

Other

- 11 (Home or building audit or assessment) (SPECIFY)
- 12 (Meeting, event, workshop training) (SPECIFY)
- 13 (Flex your Power TV or radio advertising)
- 14 (Other advertising, don't recall)
- 15 (Friend/Relative/Neighbor)
- 16 (Other, Specify: _____)
- D (DON'T KNOW) (SKIP TO SECTION 3)
- R (REFUSED) (SKIP TO SECTION 3)
- 19 (Other – Salesperson/Sales rep)
- 20 (Other – Installer/Contractor)

Installation Behavior—REBATE MEASURES (Section 3)

(REPEAT 3.0-3.8 FOR EACH REBATE MEASURE R RECALLS)

3.0 (IF REBATE) How did you receive the rebate for this [measure]? Did you mail in the rebate application to SDGE, or receive an instant rebate at the store when you made your purchase?

- 1 Mail in rebate
- 2 Instant rebate at store
- D (DON'T KNOW)
- R (REFUSED)

3.1a (IF QUANTITY=1) Now, I would like to understand what you did with the [measure]. Is this [measure] currently installed at your home (either indoors or outdoors)? (RECORD ONE NUMBER)

- 1 Yes (SKIP TO 3.12)
- 2 No
- D (DON'T KNOW) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)

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R (REFUSED) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)

3.1b (IF QUANTITY=1) Which of the following best describes what happened with the [measure]? (READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location (SKIP TO 3.3a)
- 2 It was installed at your home but is now permanently removed (example: broke, burned out, don't fit, don't like, etc.) (SKIP TO 3.6)
- 3 It is in storage because it is only needed during certain months of the year
- 4 It is in storage for some other reason (SKIP TO SECTION 3.8)
- 5 It was sold or given away (SKIP TO 3.3a)
- 6 Something else (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

3.2 (IF QUANTITY>1) Now, I would like to understand what you did with the [quantity] [measure]. (READ LIST, RECORD NUMBER)

- a___ How many are currently installed at your home (either indoors or outdoors) (IF RESPONSE=QUANTITY, SKIP TO 3.4)
- b___ How many are installed at some other location?
- c___ How many were installed at your home (either indoors or outdoors) but are now permanently removed (example: broke, burned out, don't fit, don't like, etc.)
- d___ How many are in storage because they are only needed during certain months of the year?
- e___ How many are in storage for some other reason?
- f___ How many were sold or given away?
- g___ Something else? (SPECIFY)

3.3a (ASK IF 3.1b=1, 3.1b=5, 3.2b>0, 3.2f>0) Is the/Are these [measure] located in **SDGE's** service territory?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

(SKIP TO 5.3 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY) AND THAT LOCATION IS **OUTSIDE** OF SCE'S SERVICE TERRITORY (3.3A NE 1).

SKIP TO W1 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY) AND THAT LOCATION IS **INSIDE** OF SCE'S SERVICE TERRITORY (3.3A = 1).

Removed Measures (ASK ONLY IF THEY SAY THEY REMOVED A MEASURE AFTER INSTALLED, 3.1b=2 or 3.2c>0)

3.6 Now let's talk about [measure] you said you installed but have since removed. Why was this removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 (Equipment failed)
- 2 (Didn't work properly)
- 3 (Wrong size—too small or too large)
- 4 (Low water flow)
- 5 (Didn't like the color)
- 6 (Didn't like appearance/unattractive)

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- 7 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

3.7 What did you replace [measure] with? (DO NOT READ LIST; PROBE FOR EFFICIENCY, RECORD ALL THAT APPLY)

- 1 (With a new high efficiency [measure])
- 2 (With a less efficient [product type])
- 3 (Re-installed old equipment)
- 4 (Did not replace)
- 5 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

Measures in Storage (ASK ONLY IF THEY SAY MEASURE IS IN STORAGE FOR SOME OTHER REASON, 3.1b=4 or 3.2e>0)

3.8 When do you think you will install the [measure]? Would you say within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

- 1 Within the next 3 months
- 2 3 to 6 months from now
- 3 6 to 12 months from now
- 4 More than a year from now
- 5 Never
- D (DON'T KNOW)
- R (REFUSED)

(ASK 3.12-3.17 ONLY FOR POOL PUMP RESET AGREEMENT)

3.12 Since participating in Residential Incentive Program on [insert date of participation], what hours of the day do you typically run your pool pump on Monday-Friday during the summer months (May-September)?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (OTHER, specify)
- 97 (DON'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.13 Since participating in Residential Incentive Program on [insert date of participation], what hours of the day do you typically run your pool pump on Monday-Friday during the winter months (October-April)?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (OTHER, specify)
- 97 (DON'T USE)
- D (DON'T KNOW)

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R (REFUSED)

3.14 Before participating in Residential Incentive Program on [insert date of participation], what hours of the day did you typically run your pool pump on Monday-Friday during the summer months?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 95 No prior pool pump (SKIP TO W1)
- 96 (OTHER, specify)
- 97 (DIDN'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.15 Before participating in Residential Incentive Program on [insert date of participation], what hours of the day did you typically run your pool pump on Monday-Friday during the winter months?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (OTHER, specify)
- 97 (DIDN'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.16 (IF 3.14C <> 3.12C) Why do you run your pool pump differently in the summer than you did before participation in the program?

SPECIFY: _____
D (DON'T KNOW)
R (REFUSED)

3.17 (IF 3.15C <> 3.13C) Why do you run your pool pump differently in the winter than you did before participation in the program?

SPECIFY: _____
D (DON'T KNOW)
R (REFUSED)

Free Ridership and Spillover (Section 4)

Warm-up Questions/Background Context¹

W1. Please think back to the time when you were deciding to (REBATE: buy the energy saving [product types]/RESET AGREEMENT: sign the pool pump reset agreement), perhaps recalling things that occurred in your household shortly before and after [timeframe]. What factors motivated you to (REBATE: purchase energy saving [product types]/RESET AGREEMENT: sign this agreement)? {DO NOT READ; INDICATE ALL THAT APPLY; ONCE THEY RESPONDENT HAS FINISHED, PROBE: Are there any other factors?}

1. Old equipment didn't work
2. Old equipment working poorly
3. The program incentive
4. The program technical assistance
5. Wanted to save energy
6. Wanted to reduce energy costs
7. The information provided by the Program
8. Past experience with this program
9. Because of past experience with another [utility] program
10. Recommendation from other utility program (Probe: What program? _____)
11. Recommendation of dealer/retailer
12. Recommendation of someone else (Probe: Who? _____)
13. Advertisement in newspaper (Probe: For what program? _____)
14. Radio advertisement (Probe: For what program? _____)
15. Other (SPECIFY)
16. Environmental concerns
17. Global warming
18. Liked the appearance of the [measure] more than the old one
19. Keeping up with the latest trends and fashions
- D DON'T KNOW
- R REFUSED

{REPEAT W2-C2 FOR FIRST MEASURE. REPEAT SERIES IF IS A SECOND MEASURE}

{ASK W2a-W6 ONLY FOR INCREMENTAL EFFICIENCY REBATE MEASURES}

W2a. Did you get this [measure] to replace [a/an] existing [product type]? }

1. Yes {SKIP TO W3}
2. No
- D. Don't Know {SKIP TO FR1}
- R. Refused {SKIP TO FR1}

W2b. Did you get this [measure] because you wanted to add another/more [product type] to your home?

1. Yes {SKIP TO FR1}

¹ Individual contract groups may chose to modify the wording of these warm-up questions.

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- 2. No
- D. Don't Know {SKIP TO FR1}
- R. Refused {SKIP TO FR1}

W2c. Is this [product type] the first you have ever had in your home?

- 1. Yes {SKIP TO FR1}
- 2. No {SKIP TO FR1}
- D. Don't Know {SKIP TO FR1}
- R. Refused {SKIP TO FR1}

W4. {IF MEASURE NOT CFL} About how old was the [product type] you replaced? {READ CATEGORIES IF NEEDED}

- 1. Less than 5 years old
- 2. 5 to less than 10 years old
- 3. 10 to less than 20 years old
- 4. 20 years to less than 30 years old
- 5. 30 or more years old
- D DON'T KNOW
- R REFUSED

W5. Was the old [product type] working or not working?

- 1. Working
- 2. Not working {SKIP TO FR1}
- D DON'T KNOW {SKIP TO FR1}
- R REFUSED {SKIP TO FR1}

W6. Was the old [product type] in good, fair, or poor working condition?

- 1. Good
- 2. Fair
- 3. Poor
- D DON'T KNOW
- R REFUSED

W7. (INSULATION) Was the [product type] you received a rebate for installed in areas where no prior insulation existed?

- 1. Yes
- 2. No
- D. Don't Know
- R. Refused

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Free-Ridership Questions – REBATED MEASURES MODULE

FR1. At the time that you first heard about the **[assistance]** from **[utility]** for **[measure]**, had you...?
{READ LIST}

1. Already been thinking about purchasing **[product type]**? {IF NO, SKIP TO FR2}
2. Already begun collecting information about **[product type]**? {IF NO, SKIP TO FR2}
- 3a. **{FOR INCREMENTAL EFFICIENCY MEASURES}** Already selected the **[measure]** you were going to get? {IF NO, SKIP TO FR2}
- 3b. **{FOR EFFICIENCY ENHANCEMENT MEASURES}** Already decided to buy the **[product type]**? {IF NO, SKIP TO FR2}
4. Already installed the energy efficient **[measure]**? {IF YES, SKIP TO FR1B; ELSE FR2}
5. {DON'T READ} Other: _____ {SKIP TO FR2}
- D DON'T KNOW {SKIP TO FR2}
- R REFUSED {SKIP TO FR2}

FR1B.

So, the **[measure]** was installed before you learned about the **[assistance]** from **[utility]**?

- 1 Yes {SKIP FR5}
- 2 No
- D Don't know
- R Refused

FR2. Just to be sure I understand, did you have specific plans to install a(n) **[product type]** before learning about the **[assistance]** available through the **[program]**?

1. Yes
2. No {SKIP TO FR4}
- D DON'T KNOW {SKIP TO FR4}
- R REFUSED {SKIP TO FR4}

FR3. Did you have to make any changes to your existing plans in order to receive this **[assistance]** through the **[program]**?

1. Yes
2. No
- D DON'T KNOW
- R REFUSED

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FR4. {REPEAT AS NEEDED FOR FR4 PARTS A – D} If the [assistance] from the [utility] [program] had not been available, would you still have:

FR4A. Purchased a(n)_ [product type] ?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW
- R REFUSED

FR4B. Purchased the [product type] at the same time as you did? (PROBE: That would be around [date of participation])

- 1. Yes {SKIP TO FR4C}
- 2. No
- D DON'T KNOW {SKIP TO FR4C}
- R REFUSED {SKIP TO FR4C}

FR4B1. Bought the [product type] earlier than you did, or later?

- 1. Earlier
- 2. Same Time {REPEAT QUESTION FR4B}
- 3. Later
- D DON'T KNOW {SKIP TO FR4C}
- R REFUSED {SKIP TO FR4C}

FR4B2. How much [earlier/later] would you have bought the [product type]?

- _____ Years {AND/OR} _____ Months
- D DON'T KNOW
 - R REFUSED

FR4C. {IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM, OR MEASURE IS OF VARIABLE AMOUNT} Without the program, would you have purchased the same quantity as you did?

- 1. Yes {SKIP TO FR4D}
- 2. No
- D DON'T KNOW {SKIP TO FR4D}
- R REFUSED {SKIP TO FR4D}

FR4C1. How many/much would you have purchased without the program?

- _____ {RECORD NUMBER}
- D DON'T KNOW
 - R REFUSED

FR4D. {FOR INCREMENTAL EFFICIENCY MEASURES AND INSULATION} Purchased the same [INSULATION = R value/OTHER=efficiency] of [product type]?

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- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4E. If the **[assistance]** from the **[utility] [program]** had not been available, would you have done anything else differently?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW {SKIP TO FR5}
- R REFUSED {SKIP TO FR5}

FR4E1 What would you have done differently?

{RECORD RESPONSE}: _____

FR5. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same **[measure]** if you had not received any **[assistance]** from the program?

- {RECORD RESPONSE (0-10)} _____ {SKIP TO FR7}
- D DON'T KNOW {SKIP TO FR7}
 - R REFUSED {SKIP TO FR7}

{SKIP TO FR10 IF PROGRAM DOES NOT PROVIDE A FINANCIAL INCENTIVE/SUBSIDY OR DATABASE DOES NOT CONTAIN THAT INFORMATION}

FR7. Our records indicate you received about **[amount of program incentive/subsidy]** from the **[utility] [program]** either directly or at the time of purchase to offset the cost of the **[product type]**. Does this amount sound about right?

- 1. Yes {SKIP TO FR9}
- 2. No
- D DON'T KNOW {SKIP TO FR9}
- R REFUSED {SKIP TO FR9}

FR8. What would you estimate to be the actual amount?

- {RECORD RESPONSE} _____ {SET = NEW AMOUNT OF PROGRAM INCENTIVE/SUBSIDY}
- D DON'T KNOW
 - R REFUSED

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I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR9. If I had not had any assistance from the program, I would have paid the additional **[amount of program incentive/subsidy]** to buy the **[measure]** on my own.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

{READ ONLY IF FR7-FR9 WAS SKIPPED}: I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR10. There may have been several reasons for my purchase decision. But the **[assistance]** from the **[utility] [program]** was a critical factor in my decision to purchase the high efficiency/energy efficient product.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

FR11. I would have bought a(n) **[product type]** within a **year** of when I did even without the **[assistance]** from the **[utility] [program]**.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

Free-Ridership Questions – Pool Pump Reset Agreement Module

{ONLY ASK OF POOL PUMP RESET AGREEMENTS}

FR1. At the time that you first heard about the **incentive** from **SDG&E** for the Pool Pump Reset Agreement, had you...? {READ LIST}

1. Already been thinking about resetting your pool filtering times? (IF NO, SKIP TO FR2)
 2. Already begun collecting information about resetting your pool filtering times? (IF NO, SKIP TO FR2)
 3. Already selected new pool filtering times? (IF NO, SKIP TO FR2)
 4. Already changed your pool filtering times {IF YES, SKIP TO FR5; ELSE FR2}
 5. {DON'T READ} Other: _____ (SKIP TO FR2)
- D DON'T KNOW (SKIP TO FR2)
R REFUSED (SKIP TO FR2)

FR2. Just to be sure I understand, did you have specific plans to reset your pool filtering times before learning about the **incentive** available through the **Residential Incentive Program**?

1. Yes

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- 2. No {SKIP TO FR4}
- D DON'T KNOW {SKIP TO FR4}
- R REFUSED {SKIP TO FR4}

FR3. Did you have to make any changes to your existing plans in order to receive this **incentive** through the **Residential Incentive Program**?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4. If the **incentive** from the **SDG&E Residential Incentive Program** had not been available, would you still have:

FR4A. Changed your pool filtering times ?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW
- R REFUSED

FR4B1. Changed your pool filtering times at an earlier date than you did or a later date?

- 1. Earlier
- 2. Same Time {REPEAT QUESTION FR4A}
- 3. Later
- D DON'T KNOW {SKIP TO FR4C}
- R REFUSED {SKIP TO FR4C}

FR4B2. How much **[earlier/later]** would you have reset your filtering times?

- _____ Years {AND/OR} _____ Months
- D DON'T KNOW
 - R REFUSED

FR4E. If the **incentive** from the **SDG&E Residential Incentive Program** had not been available, would you have done anything else differently?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW {SKIP TO FR5}
- R REFUSED {SKIP TO FR5}

FR4E1 What would you have done differently?

{RECORD RESPONSE}: _____

FR5. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have reset your filtering times if you had not received any **incentive** from the program?

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{RECORD RESPONSE (0-10)} _____ {SKIP TO FR7}
D DON'T KNOW {SKIP TO FR7}
R REFUSED {SKIP TO FR7}

{SKIP TO FR10 IF PROGRAM DOES NOT PROVIDE A FINANCIAL INCENTIVE/SUBSIDY OR DATABASE DOES NOT CONTAIN THAT INFORMATION}

FR7. Our records indicate you received about **\$25** from the **SDG&E Residential Incentive Program**. Does this amount sound about right?

1. Yes {SKIP TO FR9}
 2. No
- D DON'T KNOW {SKIP TO FR9}
R REFUSED {SKIP TO FR9}

FR8. What would you estimate to be the actual amount?

{RECORD RESPONSE} _____ {SET = NEW AMOUNT OF PROGRAM INCENTIVE/SUBSIDY}
D DON'T KNOW
R REFUSED

I'm going to read several statements about how you came to participate in the Pool Pump Reset Agreement. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR9. If I had not had any assistance from the program, I would have reset my filtering times on my own?

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

FR10. There may have been several reasons to reset my pool filter times. But the **incentive** from the **SDG&E Residential Incentive Program** was a critical factor in my decision to reset my pool filtering times.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

FR11. I would have reset my pool filtering times within a **year** of when I did even without the **incentive** from the **SDG&E Residential Incentive Program**.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

1.1.1 Consistency Check & Resolution

{C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

FR4A (efficiency enhancement measures) OR FR4D (incremental efficiency measures)
FR5
FR10
FR11

{IF FR4A/D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the [measure] without the program'}

{IF FR4A/D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would not have purchased the [measure] without the program'}

{IF FR5 = 0,1 AND FR4A/D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the [measure] without the program'}

{IF FR5 = 9,10 AND FR4A/D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the [measure] without the program'}

{IF FR10 = 0,1 AND FR4A/D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program'}

{IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program'}

{IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the [product type] within [a year/2 years] even without the program'}

{IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the [product type] within [a year/2 years] even without the program'}

C1. Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **[measure]** at the time you did? {RECORD VERBATIM RESPONSE BELOW}

C2. **[fill with wording and response categories to the one question which was inconsistent]** {INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE}

Recent Program Participation (Section 5)

5.3 Have you participated in any other programs offered by SDGE because of your experience with the Residential Incentive Program.

- 1 Yes
- 2 No (SKIP TO 5.5)
- D (DON'T KNOW) (SKIP TO 5.5)
- R (REFUSED) (SKIP TO 5.5)

5.4 Which programs?

5.5 Which of the following phrases or messages have you heard before today? (ROTATE STARTING POINT)

A. Energy Star

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

B. Don't Trash California

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

C. Energy Hog

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

D. Click it or Ticket

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

E. Flex Your Power

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

F. Flex Alert

- 1 Yes
- 2 No

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- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

G. Spare the Air

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 6)

NOTE: ALL QUESTIONS STARTING WITH THE LETTER 'C' ARE QUESTIONS THAT WOULD BE ASKED ONLY IF A BILLING ANALYSIS IS BEING DONE FOR POOL PUMPS, POOL PUMP AGREEMENTS, AND INSULATION.

The last questions ask about household characteristics to make sure we're getting a representative sample of [utility] residents.

6.1 Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6.2 In what type of building do you live? (READ LIST IF NEEDED; PROBE IF SAYS CONDO: How many units are in your building?)

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Other (SPECIFY)
- 8 Boat, RV, Van, etc.
- D (DON'T KNOW)
- R (REFUSED)

6.3 About when was this building first built? (READ LIST IF NEEDED)

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 7 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

6.3a Were you living in this same home around [insert date 12 months prior to time of participation]?

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- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

6.4a How many full or half bathrooms do you have in your home? (PROBE: A full bathroom is one that has a sink with running water, and a toilet, and either a bathtub or shower. A half bathroom has either a toilet or a bathtub or a shower?)

- _____ Bathrooms
- D (DON'T KNOW)
 - R (REFUSED)

6.4b How many bedrooms do you have in your home (If a one-room efficiency, or studio apartment, bedrooms=0)

- _____ bedrooms
- D (DON'T KNOW)
 - R (REFUSED)

6.4c Other than bedrooms and bathrooms, how many other rooms are there in your home? Do not count laundry rooms, foyers, unfinished storage spaces, porches, or garages.

- _____ Other rooms
- D (DON'T KNOW)
 - R (REFUSED)

[If 6.3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.5a]

C6.4d Did you do any remodeling, renovation or additions since January 1, 2005?

- 1 Yes
- 2 No (SKIP TO 6.5a)
- D (DON'T KNOW) (SKIP TO 6.5a)
- R (REFUSED) (SKIP TO 6.5a)

C6.4e How many remodels, renovations or additions have you done since then?

- _____ Remodels, renovations or additions
- D (DON'T KNOW)
 - R (REFUSED)

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C6.4f I'm going to ask you several questions regarding the timeframe of your remodels, renovations or additions. We will try to run through them quickly. (ASK A-C FOR EACH REMODEL THAT TOOK PLACE SINCE JANUARY 1, 2005).

- a. In what month and year did it start?
- b. Did this increase or decrease your home's square footage, not counting unfinished storage spaces, porches or garages,
- c. In what month and year did it finish?

	a. START (mm/yyyy)	b. Increase or decrease? 1 Increase 2 Decrease 3 Same D (DK) R (REFUSED)	C. FINISH (mm/yyyy)
1			
2			
3			
4			

6.5a Including yourself, how many people currently live in your home year-round?

- _____ people
- D (DON'T KNOW)
- R (REFUSED)

6.5b (IF 6.5a=1) Which of the following best describes your age?

- 1 Less than 18 years old
- 2 18-24 years old
- 3 25-34 years old
- 4 35-44 years old
- 5 45-54 years old
- 6 55-64 years old
- 7 65 or older
- D (DON'T KNOW)
- R (REFUSED)

6.5c (IF 6.5a>1) Including yourself, how many people currently living in your home year-round are in the following age groups?

- _____ Less than 18 years old
- _____ 18-24 years old
- _____ 25-34 years old
- _____ 35-44 years old
- _____ 45-54 years old
- _____ 55-64 years old
- _____ 65 or older
- TOTAL SHOULD EQUAL 6.5a
- R (REFUSED)

[If 6.3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.7]

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C6.5d Has the total number of people living in your home year-round changed since [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No (SKIP TO 6.6)
- D (DON'T KNOW) (SKIP TO 6.6)
- R (REFUSED) (SKIP TO 6.6)

C6.5e Do more people or less people live in your home now?

- 1 More→How many more? ____
- 2 Less→How many less? ____
- D (DON'T KNOW)
- R (REFUSED)

C6.5f In what year(s) did the number of people in your household change? (RECORD ALL YEARS OF CHANGE—NET CHANGE IS CALCULATED FROM C6.5e)

- 1st NET CHANGE: ____ YEAR
- 2nd NET CHANGE: ____ YEAR
- 3rd NET CHANGE: ____ YEAR
- D (DON'T KNOW)
- R (REFUSED)

6.7 This next question asks about other changes you have made that we haven't already talked about. Since January 1, 2005 have you made any other changes to the appliances, equipment or other characteristics of your home that would affect how much energy you are using?

- 1 Yes [ASK 6.7a-NSP5 FOR EACH MEASURE INSTALLED BEFORE ASKING 6.7i]
- 2 No [SKIP TO 6.7i]
- D DK [SKIP TO 6.7i]
- R REFUSED [SKIP TO 6.7i]

a. What types of changes did you make? (DO NOT READ. RECORD EACH TYPE OF CHANGE MADE. PROBE: Anything else?)

Heating and air conditioning measures

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Furnace
- 5 Programmable thermostat

Lighting measures

- 6 Fluorescent indoor fixture
- 7 Fluorescent outdoor fixture
- 8 Compact fluorescent bulb
- 9 Compact fluorescent fixture
- 10 Motion sensor
- 11 Dimmer switch

Laundry measures

- 12 Clothes washer
- 13 Clothes dryer

Water using measures

- 14 Water heater
- 15 Low Flow showerheads
- 16 Faucet aerators

Kitchen appliances

- 17 Refrigerator
- 18 Freezer
- 19 Range/oven
- 20 Dishwasher

Pool/spa/jacuzzi

- 21 Swimming pool
- 22 Swimming pool pump
- 23 Swimming pool cover
- 24 Spa/jacuzzi

Insulation/weather-stripping/sealing

- 25 Floor, wall, ceiling, or attic insulation
- 26 Weather-stripping/caulking/weatherization
- 27 Water heater/pipe wrapping/insulation
- 28 Duct sealing/repair (not cleaning)

Windows

- 29 Windows

- 30 Other (SPECIFY)
- 00 No other changes (SKIP TO C6.7i)
- D DK
- R REFUSED

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b. Did this equipment replace existing equipment/measures or was it new to your home?

- 1 Replaced existing equipment
- 2 New to home
- D DK
- R REFUSED

c. When did this occur? (RECORD MONTH AND YEAR)

____/____ MM/YYYY

D DK --→Was this before or after you participated in the [program]?

- 1 Before
 - 2 After
 - D DK
 - R REFUSED
- R REFUSED

(ASK 6.7Cd and 6.7Ce ONLY IF BILLING ANALYSIS BEING DONE AND IF 6.7a = 4, 13, 14, 19, 24)

Cd. What type of fuel does the new [equipment] use?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D DK
- R REFUSED

Ce. (ASK IF 6.7b = REPLACED) What was the fuel type of the [equipment] you replaced?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D DK
- R REFUSED

f. Did you receive a rebate for this [equipment] through a [utility] program?

- 1 Yes [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- 2 No
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]

(ASK 6.7g and 6.7h IF 1-4, 12, 13, 14, 17, 18, 19, 20, 22, 24, 29 IN 6.7a; ELSE SKIP TO NSP4)

g. Is the new [equipment] energy efficient?

- 1 Yes
- 2 No [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]

h. How do you know that this equipment is energy efficient? (PROBE: IS IT ENERGY STAR[®] RATED?)

SDGE 3024 Residential Incentive Program Participant Survey

(ASK NSP4-5 ONLY IF 6.7f = NO AND 6.7g = YES AND 6.7c = AFTER DATE OF PARTICIPATION)

NSP4. I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the **[utility] [program]** in **[2006, 2007, 2008]** influenced my decision to install different types of high efficiency equipment on my own.

{RECORD RESPONSE (0-10)} _____

D DON'T KNOW

R REFUSED

NSP5. Why did you purchase this high efficiency equipment without going through a **[utility]** program?
{DO NOT READ; INDICATE ALL THAT APPLY}

1. Too much paperwork
 2. Takes too long to get approval
 3. No time to participate, needed equipment immediately
 4. The program had ended
 5. The equipment would not qualify {PROBE: WHY NOT?} _____
 6. The amount of the rebate wasn't important enough
 7. Did not know program was available
 8. There was no program available
 9. Other {SPECIFY} _____
- D DON'T KNOW
R REFUSED

(ASK C6.7i=c6.7m ONLY IF BILLING ANALYSIS BEING DONE)

C6.7i [IF FURNACE WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have gas or electric space heating?

- 1 Gas
 - 2 Electric
 - 3 Both
 - 4 Other (Specify) _____
 - 7 None
- D (DON'T KNOW)
R (REFUSED)

SDGE 3024 Residential Incentive Program Participant Survey

C6.7j [IF WATER HEATER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

C6.7k [IF CLOTHES DRYER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric clothes dryer?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

C6.7l [IF RANGE/OVEN WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric range/oven?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

C6.7m [IF ROOM, CENTRAL AC, OR EVAPORATIVE COOLER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] What type of air conditioning system, if any, do you use in your home? (INDICATE ALL THAT APPLY)

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Other (Specify) _____
- 9 None
- D (DON'T KNOW)
- R (REFUSED)

6.8a Do you receive an electric or natural gas bill directly from SDGE?

- 1 Yes
- 2 No (SKIP TO 6.9)
- D (DON'T KNOW) (SKIP TO 6.9)
- R (REFUSED) (SKIP TO 6.9)

SDGE 3024 Residential Incentive Program Participant Survey

6.8b Does this bill only include your home's electric or natural gas use, or does it include the use of other households?

- 1 Only 1 household
- 2 Multiple households
- D (DON'T KNOW)
- R (REFUSED)

6.13 What is the primary language spoken in your home? (DO NOT READ; PROBE IF R SAYS CHINESE: Would this be Mandarin or Cantonese)

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

On-site Recruiting (Section 7)

(RECRUIT FOR SINGLE AND MULTIPLE SPEED POOL PUMPS AND POOL PUMP RESET AGREEMENTS ONLY)

7.1 We would like to offer you \$25 to participate in the on-site component of this evaluation. We are NOT interested in selling anything. We would like to have one of our auditors visit your home at your convenience to look at the pool pump you installed through the program and how it/they are operating. The on-site visit would only take about 20 minutes. Would that be alright with you?

- 1 Yes→Great! Someone will give you a call back to determine when they can schedule an appointment with one of our auditors in your area. Thank you for your cooperation with this important effort.
- 2 No

Thank and Terminate

Site Verification Form - Single Family Energy Efficient Retrofit (SFEER) (SCG 3517)

Inspection Date	<input type="text"/>	Telephone Survey ID	<input type="text"/>
Inspection Start Time	<input type="text"/>	SCG Account	<input type="text"/>
Inspection End Time	<input type="text"/>	SCE/Electric Account	<input type="text"/>
Inspector Name / Initials	<input type="text"/>		
Primary Contact Name	<input type="text"/>	Original Site Visit Date	<input type="text"/>
Phone 1	<input type="text"/>	Original Site Visit Time	<input type="text"/>
Phone 2	<input type="text"/>		
Phone 3	<input type="text"/>	New Confirmed Date	<input type="text"/>
email	<input type="text"/>	New Confirmed Time	<input type="text"/>
Alternate Contact Name	<input type="text"/>	Confirmation Call Date	<input type="text"/>
Phone 1	<input type="text"/>	Confirmation Call Time	<input type="text"/>
Phone 2	<input type="text"/>		
Phone 3	<input type="text"/>		
email	<input type="text"/>		
Address 1	<input type="text"/>	Notes <div style="border: 1px solid black; height: 100px;"></div>	
Address 2	<input type="text"/>		
City	<input type="text"/>		
State	<input type="text"/>		
Zip Code	<input type="text"/>		

Complete for Each Measure that Received Appliance Incentive (per Tracking Database)

	Database	Onsite	Notes
Dishwasher			
Incentive Received	<input type="text"/>	<input type="text"/>	
Incentive Date	<input type="text"/>	<input type="text"/>	
Unit Quantity	<input type="text"/>	<input type="text"/>	
Operational	<input type="text"/>	<input type="text"/>	
Manufacturer	<input type="text"/>	<input type="text"/>	
Brand	<input type="text"/>	<input type="text"/>	
Model Number	<input type="text"/>	<input type="text"/>	
Efficiency (EF, if avail)	<input type="text"/>	<input type="text"/>	
Energy Star Label	<input type="text"/>	<input type="text"/>	
Water Heater Fuel	<input type="text"/>	<input type="text"/>	
Method of Determination	<input type="text"/>	<input type="text"/>	

	Database	Onsite	Notes
Clotheswasher			
Incentive Received	<input type="text"/>	<input type="text"/>	
Incentive Date	<input type="text"/>	<input type="text"/>	
Unit Quantity	<input type="text"/>	<input type="text"/>	
Operational	<input type="text"/>	<input type="text"/>	
Manufacturer	<input type="text"/>	<input type="text"/>	
Brand	<input type="text"/>	<input type="text"/>	
Model Number	<input type="text"/>	<input type="text"/>	
Efficiency (MEF, if avail.)	<input type="text"/>	<input type="text"/>	
Efficiency (WF, if avail.)	<input type="text"/>	<input type="text"/>	
Energy Star Label	<input type="text"/>	<input type="text"/>	
Water Heater Fuel	<input type="text"/>	<input type="text"/>	
Method of Determination	<input type="text"/>	<input type="text"/>	

	Database	Onsite	Notes
Gas Water Heater			
Incentive Received	<input type="text"/>	<input type="text"/>	
Incentive Date	<input type="text"/>	<input type="text"/>	
Unit Quantity	<input type="text"/>	<input type="text"/>	
Operational	<input type="text"/>	<input type="text"/>	
Manufacturer	<input type="text"/>	<input type="text"/>	
Brand	<input type="text"/>	<input type="text"/>	

Model Number			
Capacity (gallons)			
Efficiency (EF, if avail.)			

Central Gas Furnace	Database	Onsite	Notes
Incentive Received			
Incentive Date			
Unit Quantity			
Operational		Yes / No / Other	
Manufacturer			
Brand			
Model Number			
Efficiency (AFUE %)			
Energy Star Label			

Complete for Each Insulation Measure that Received Incentive (per Tracking Database)

HVAC Information	Database	Onsite	Notes
Heating Fuel Type		Electric / Gas / Other	
Method of Determination		Cust SR / Insp / Other	

Attic Insulation	Database	Onsite	Notes
Incentive Received			Required
Incentive Date			
Unit Quantity (Sq feet)			
Sq feet installed over conditioned living area			
Method of determination		Cust SR / Insp Estimate / Other	
Location(s) rebated			
Insulation material			
Method of determination		Cust SR / Insp / Invoice / Printed on Insul / Other	

R-Value Information	Database	Onsite	Notes
Thickness of Insulation			Required
Method of determination		Cust SR / Measurement / Invoice / Printed / Other	Required
Total R-value present			Required
Method of determination		Cust SR / Calculation / Invoice / Printed / Other	Required

Pre-Existing Insulation	Database	Onsite	Notes
Was insulation present		Yes / No	Required
Thickness of Insulation			
Method of determination		Cust SR / Measurement / Invoice / Printed / Other	
Pre-Existing R-Value			
Method of determination		Cust SR / Calculation / Invoice / Printed / Other	

Wall Insulation	Database	Onsite	Notes
Incentive Received			Required
Incentive Date			
Unit Quantity (Sq feet)			
Sq feet installed between conditioned living area and unconditioned space		Cust SR / Insp Estimate / Other	
Method of determination		Cust SR / Insp / Other	
Location(s) rebated			
Insulation material			Required

Method of determination		Cust SR / Insp / Invoice / Printed on Insul / Other	Required
R-Value Information			
Thickness of Insulation			Required
Method of determination		Cust SR / Measurement / Invoice / Printed / Other	Required
Total R-value present			Required
Method of determination		Cust SR / Calculation / Invoice / Printed / Other	Required
Pre-Existing Insulation			
Was insulation present		Yes / No	Required
Thickness of Insulation			
Method of determination		Cust SR / Measurement / Invoice / Printed / Other	
Pre-Existing R-Value			
Method of determination		Cust SR / Calculation / Invoice / Printed / Other	

Complete for Household Reported Spillover Measures

Spillover Measure #1	From Survey	Onsite	Notes
Type of Measure			
Description			
Quantity			
Manufacturer / Brand			
Model Number			
Energy Star Label			
Fuel Type (if applicable)			
Location(s)			
Efficiency (EF, MEF, WF, AFUE%)			
Spillover Measure #2	From Survey	Onsite	Notes
Type of Measure			
Description			
Quantity			
Manufacturer / Brand			
Model Number			
Energy Star Label			
Fuel Type (if applicable)			
Location(s)			
Efficiency (EF, MEF, WF, AFUE%)			

Appendix D – Water Heaters

D1 – Telephone Surveys

- Water Survey for PGE 2000R and SDGE 3024
- Water Heater Codebook

D2 – Data Collection Instruments

- Site Verification Procedure Form

Survey for PGE2000R and SDGE3024

Sample variables

[Measure] = High Efficiency Hot Water Heater

[Product Type] = Hot Water Heaters

[Utility] = Pacific Gas and Electric (PG&E) or San Diego Gas and Electric (SDGE)

[Assistance] = Rebate

[Incentive Amount] = \$30

Assumed H2O was incremental efficiency measure and kept those questions in various modules

Introduction

Intro1 Hello, my name is **[interviewer name]**, and I'm calling on behalf of the California Public Utilities Commission regarding **[utility]**'s Residential Incentive Program. May I speak with **[contact name]**?

1 Yes

2 No [attempt to convert; if R not available, ask for an adult who makes decisions on how household uses energy]

I'm with **[data collection firm]**, an independent research firm. I am calling to learn about your experiences with the **[measure]** you purchased and the rebate you received from the retailer through **[utility]**'s Residential Incentive Program.

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and **[utility]** better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about 15 minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-XXX-XXXX)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the **[measure]** you purchased and received a rebate through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call 415-703-2782, or visit their website: www.cpuc.ca.gov.)

(NOTE: For all questions, "DON'T KNOW" and "REFUSED" will be coded if offered as a response.)

Identification Questions

- 1.1 Program records indicate that you purchased and received a mail-in rebate for a **[measure]** from **[utility]** around **[insert date of participation]**.

Do you recall purchasing a **[measure]**?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

- 1.2 (ASK IF DOESN'T RECALL) Is it possible that someone else in your household would know about purchasing a **[measure]** and applying for a mail-in rebate from the retailer?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

- 1.3 May I please speak with that person?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

- 1.4 Are you the person in your household who decided to purchase and receive a mail-in rebate for a **[measure]** from **[utility]** around **[insert date of participation]**?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Installation Behavior (Section 3)

3.1a Now, I would like to understand what you did with the [measure]. Is this [measure] currently installed at your home ?(RECORD ONE NUMBER)

- 1 Yes (SKIP TO W1)
- 2 No
- D (DON'T KNOW) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE)
- R (REFUSED) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE)

3.1b Which of the following best describes what happened with the [measure]? (READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location (SKIP TO 3.3a)
- 2 It was installed at your home but is now permanently removed (example: broke, burned out, don't fit, don't like, etc.) (SKIP TO 3.6)
- 3 It is in storage
- 4 It was sold or given away (SKIP TO 3.3a)
- 5 Something else (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

Q3_3a (ASK IF 3.1b=1, 3.1b=4)

Is the/Are these [measure] located in [Utility] service territory?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

(SKIP TO 4.1 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.1b = 4) AND THAT LOCATION IS **OUTSIDE** OF [Utility] SERVICE TERRITORY (3.3A = 2).

SKIP TO W1 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.1b = 4) AND THAT LOCATION IS **INSIDE** OF [Utility] SERVICE TERRITORY (3.3A = 1).

Removed Measures

(ASK ONLY IF THEY SAY THEY REMOVED A MEASURE AFTER INSTALLED, 3.1b=2)

Q3_6 Now let's talk about [**measure**] you said you installed but have since removed. Why was this removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 (Equipment failed)
- 2 (Didn't work properly)
- 3 (Wrong size—too small or too large)
- 5 (Didn't like the color)
- 6 (Didn't like appearance/unattractive)
- 7 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

Q3_7 What did you replace [**measure**] with? (DO NOT READ LIST; PROBE FOR EFFICIENCY, RECORD ALL THAT APPLY)

- 1 (With a new high efficiency [**measure**])
- 2 (With a less efficient [**product type**])
- 3 (Re-installed old equipment)
- 4 (Did not replace)
- 5 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

NTGR and Spillover

W1 Please think back to the time when you were deciding to buy the [**measure**], perhaps recalling things that occurred in your household shortly before and after [**timeframe**]. What factors motivated you to purchase the [**measure**]? {DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE RESPONDENT HAS FINISHED, PROBE: Are there any other factors?}

- 1. Old equipment didn't work
- 2. Old equipment working poorly
- 3. The program incentive
- 4. The program technical assistance
- 5. Wanted to save energy
- 6. Wanted to reduce energy costs
- 8. The information provided by the Program
- 9. Past experience with this program
- 10. Because of past experience with another [**utility**] program
- 11. Recommendation from other utility program (Probe: What program? _____)
- 12. Recommendation of dealer/retailer
- 13. Recommendation of someone else (Probe: Who? _____)
- 14. Advertisement in newspaper (Probe: For what program? _____)
- 15. Radio advertisement (Probe: For what program? _____)
- 16. Other (SPECIFY)
- 17. Environmental concerns

- 18. Global warming
- 19. Liked the appearance of the **[measure]** more than the old one
- 20. Keeping up with the latest trends and fashions
- D (DON'T KNOW)
- R (REFUSED)

W2 Did you get this **[measure]** to replace an existing **[product type]**?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

W3 About how old was the **[product type]** you replaced? {READ CATEGORIES IF NEEDED}

- 1. Less than 5 years old
- 2. 5 to less than 10 years old
- 3. 10 to less than 20 years old
- 4. 20 years to less than 30 years old
- 5. 30 or more years old
- D (DON'T KNOW)
- R (REFUSED)

W4 Was the **[product type]** working or not working?

- 1. Working
- 2. Not working {SKIP TO FR7}
- D (DON'T KNOW)
- R (REFUSED)

W5 Was the old **[product type]** in good, fair, or poor working condition?

- 1. Good
- 2. Fair
- 3. Poor
- D (DON'T KNOW)
- R (REFUSED)

Free-Ridership Questions

FR7. Our records indicate you received about **[amount of program incentive/subsidy]** from the **[utility] [program]** either directly or at the time

of purchase to offset the cost of the **[product type]**. Does this amount sound about right?

- 1. Yes {SKIP TO FR1.1}
- 2. No
- D DON'T KNOW {SKIP TO FR1.1}
- R REFUSED {SKIP TO FR1.1}

FR8. What would you estimate to be the actual amount?

{RECORD RESPONSE} _____ {SET = NEW AMOUNT OF PROGRAM INCENTIVE/SUBSIDY}

- D DON'T KNOW
- R REFUSED

FR1.1 At the time that you first heard about the **[assistance]** from **[utility]** for the **[measure]**, had you...? {READ FR1 SERIES UNTIL R SAYS 'NO'}

Already been thinking about purchasing a **[product type]**?

- 1 Yes
- 2 No {SKIP TO FR2}
- D (DON'T KNOW) {SKIP TO FR2}
- R (REFUSED) {SKIP TO FR2}

FR1.2. Already begun collecting information about **[product type]**?

- 1 Yes
- 2 No {SKIP TO FR2}
- D (DON'T KNOW) {SKIP TO FR2}
- R (REFUSED) {SKIP TO FR2}

FR1.3a. Already selected the **[product type]** you were going to get?

- 1 Yes
- 2 No {SKIP TO FR2}
- D (DON'T KNOW) {SKIP TO FR2}
- R (REFUSED) {SKIP TO FR2}

FR1.4. Already installed the **[measure]**?

- 1 Yes
- 2 No {SKIP TO FR2}
- D (DON'T KNOW) {SKIP TO FR2}
- R (REFUSED) {SKIP TO FR2}

FR1B. So, the **[measure]** was installed before you learned about the **[assistance]** from **[utility]**?

- 1 Yes *{SKIP FR5}*
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

FR2. Just to be sure I understand, did you have specific plans to install a **[product type]** before learning about the **[assistance]** available through the **[program]**?

- 1. Yes
- 2. No *{SKIP TO FR4}*
- D (DON'T KNOW) *{SKIP TO FR4}*
- R (REFUSED) *{SKIP TO FR4}*

FR3. Did you have to make any changes to your existing plans in order to receive this **[assistance]** through the **[program]**?

- 1. Yes
- 2. No
- D (DON'T KNOW)
- R (REFUSED)

FR4. {REPEAT AS NEEDED FOR FR4 PARTS A – D} If the **[assistance]** from the **[utility]** **[program]** had not been available, would you still have:

FR4A. Purchased any **[product type]**?

- 1. Yes
- 2. No *{SKIP TO FR5}*
- D (DON'T KNOW)
- R (REFUSED)

FR4B. Purchased the **[product type]** at the same time as you did? (PROBE: That would be around **[date of participation]**)

- 1. Yes *{SKIP TO FR4D}*
- 2. No
- D (DON'T KNOW) *{SKIP TO FR4D }*
- R (REFUSED) *{SKIP TO FR4D }*

FR4B1. Bought the **[product type]** earlier than you did, or later?

1. Earlier
2. Same Time {REPEAT QUESTION FR4B}
3. Later
- D (DON'T KNOW) {SKIP TO FR4D }
- R (REFUSED) {SKIP TO FR4D }

FR4B2. (if earlier or later) How much **[earlier/later]** would you have bought the **[product type]**?

_____ Years {AND/OR} _____ Months
D (DON'T KNOW)
R (REFUSED)

FR4D. Purchased the same efficiency of **[product type]**?

1. Yes
2. No
- D (DON'T KNOW)
- R (REFUSED)

FR4E. If the **[assistance]** from the **[utility] [program]** had not been available, would you have done anything else differently?

1. Yes
2. No {SKIP TO FR5}
- D (DON'T KNOW) {SKIP TO FR5}
- R (REFUSED) {SKIP TO FR5}

FR4E1 What would you have done differently?

{RECORD RESPONSE}: _____

NOTE: TWO INSTRUMENTS WILL BE CREATED DURING PRE-TESTING. ONE AT A 5-POINT SCALE AND ONE AT A 10-POINT SCALE TO DETERMINE WHICH SEEMS LESS CONFUSING TO CUSTOMERS AND IF THERE IS AN EFFECT ON TIME TO COMPLETE

NOTE: FOR **INCREMENTAL EFFICIENCY MEASURES**, RESPONDENT WILL BE RANDOMLY ASSIGNED TO BE READ EITHER FR5 OR FR6. FOR **EFFICIENCY ENHANCEMENT MEASURES**, ALL RESPONDENTS WILL BE ASKED FR5.

FR5. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same **[measure]** if you had not received any **[assistance]** from the program?

{RECORD RESPONSE (0-10)} _____ {SKIP TO FR9}
D (DON'T KNOW) {SKIP TO FR9}
R (REFUSED) {SKIP TO FR9}

FR6. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought a less efficient **[product type]** if you had not received any **[assistance]** from the program?

{RECORD RESPONSE (0-10)} _____
-98. Don't Know
-99. Refused

FR7. Our records indicate you received about **[amount of program incentive/subsidy]** from the **[utility] [program]** either directly or at the time of purchase to offset the cost of the **[product type]**. Does this amount sound about right?

1. Yes {SKIP TO FR9}
 2. No
- 98. Don't Know {SKIP TO FR9}
-99. Refused {SKIP TO FR9}

FR8. What would you estimate to be the actual amount?

{RECORD RESPONSE} _____ {SET = NEW AMOUNT OF PROGRAM INCENTIVE/SUBSIDY}
-98. Don't Know
-99. Refused

I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR9. If I had not had any assistance from the program, I would have paid the additional **[amount of program incentive/subsidy]** to buy the **[measure]** on my own?

{RECORD RESPONSE (0-10)} _____
D (DON'T KNOW)
R (REFUSED)

{READ ONLY IF FR7-FR9 WAS SKIPPED}: I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR10. The **[assistance]** from the **[utility] [program]** was a critical factor in my decision to purchase the **[measure]**.

{RECORD RESPONSE (0-10)} _____
D (DON'T KNOW)
R (REFUSED)

FR11. I would have bought a(n) **[product type]** within a year of when I did even without the **[assistance]** from the **[utility] [program]**.

{RECORD RESPONSE (0-10)} _____
D (DON'T KNOW)
R (REFUSED)

Consistency Check & Resolution

CONSISTENCY CHECK & RESOLUTION

{C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

FR4A (efficiency enhancement measures) OR FR4D (incremental efficiency measures)
FR5
FR10
FR11

{IF FR4A/D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would have purchased the **[measure]** without the program'}

{IF FR4A/D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would not have purchased the **[measure]** without the program'}

{IF FR5 = 0,1 AND FR4A/D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would likely not have purchased the **[measure]** without the program'}

{IF FR5 = 9,10 AND FR4A/D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would likely have purchased the **[measure]** without the program'}

{IF FR10 = 0,1 AND FR4A/D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program'}

{IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program'}

{IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would have bought the [product type] within [a year/2 years] even without the program'}

{IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would not have bought the [product type] within [a year/2 years] even without the program'}

- C1. Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **[measure]** at the time you did? {RECORD VERBATIM RESPONSE BELOW}

- C2. **[fill with wording and response categories to the one question which was inconsistent]** {INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE}

Measure Specific

- 4.1 How many gallons does your water heater hold?

_____ Gallons
88 Tankless
D (DON'T KNOW)
R (REFUSED)

- 4.1a (IF DON'T KNOW WATER HEATER SIZE) Is your water heater . . . ?
(READ LIST)

1 Very Small – less than 30 gallons
2 Small: 30-39 gallons
3 Medium: 40-59 gallons
4 60 gallons or more

- 5 Tankless
- D (DON'T KNOW)
- R (REFUSED)

4.2 Where is your water heater located? (i.e. in your basement or garage)

- 1 Basement
- 2 Garage
- 3 Other
- D (DON'T KNOW)
- R (REFUSED)

4.3 Is your water heater electric or gas?

- 1 Electricity
- 2 Natural Gas
- 3 Propane
- 4 Solar (sun)
- 5 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 6)

Q6_1 The last questions ask about household characteristics to make sure we're getting a representative sample of **[utility]** residents.

Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

Q6_2 In what type of building do you live? (READ LIST IF NEEDED)
(PROBE FOR 'Condo': "How many units are in your building?")

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home

- 7 Other (SPECIFY)
- 8 Boat/RV/Van/Etc.
- D (DON'T KNOW)
- R (REFUSED)

Q6_3 About when was this building first built? (READ LIST IF NEEDED)

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 7 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

Spillover {ONLY ASK ONCE}

NSP1. Since you participated in **[program]** have you purchased and installed any other type of high efficiency equipment or made energy efficiency improvements {READ THE FOLLOWING ONLY FOR SMALL COMMERCIAL: at this facility or at other locations}?

- 1. Yes, only at this home/facility
- 2. Yes, only at other locations {SMALL COMMERCIAL ONLY}
- 3. Yes, at this facility and other locations {SMALL COMMERCIAL ONLY}
- 4. No
- 98. Don't Know
- 99. Refused

NSP2. What type and quantity of high efficiency equipment did you install on your own? {PROBE TO GET EXACT TYPE AND QUANTITY AND LOCATION/BUIDLING IF SMALL COMMERCIAL}

Type 1: _____	Quantity 1: _____	Location 1: _____
Type 2: _____	Quantity 2: _____	Location 2: _____
Type 3: _____	Quantity 3: _____	Location 3: _____
Type 4: _____	Quantity 4: _____	Location 4: _____

NSP3. {ASK FOR EACH TYPE OF EQUIPMENT IN NSP2} How do you know that this equipment is high efficiency? {PROBE: WAS IT ENERGY STAR[®] RATED?}

Type 1: _____
 Type 2: _____

Type 3: _____
Type 4: _____

NSP4 I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the **[utility]** **[program]** in **[timeframe]** influenced my decision to install different types of high efficiency equipment on my own.

- 1 {RECORD RESPONSE (0-10)}
- D (DON'T KNOW)
- R (REFUSED)

NSP5 Why did you purchase this high efficiency equipment without going through a **[utility]** program? *{DO NOT READ; INDICATE ALL THAT APPLY}*

For NSP5_1 to NSP5_11:

- 0 Not mentioned
- 1 Mentioned

- NSP5_1** Too much paperwork
- NSP5_2** Takes too long to get approval
- NSP5_3** No time to participate, needed equipment immediately
- NSP5_4** The program had ended
- NSP5_5** The equipment would not qualify {PROBE: WHY NOT?} _____
- NSP5_6** The amount of the rebate wasn't important enough
- NSP5_7** Did not know program was available
- NSP5_8** There was no program available
- NSP5_9** Other {SPECIFY} _____
- NSP5_10** (DON'T KNOW)
- NSP5_11** (REFUSED)

Q6_8a Do you receive an electric bill directly from **[utility]**?

- 1 Yes
- 2 No {SKIP TO Q6_13}
- D (DON'T KNOW) {SKIP TO Q6_13}
- R (REFUSED) {SKIP TO Q6_13}

Q6_8b Does this bill only include your home's electric use, or does it include the electric use of other households?

- 1 Only 1 household
- 2 Multiple households
- D (DON'T KNOW)
- R (REFUSED)

Q6_13 What is the primary language spoken in your home? (*DO NOT READ*)

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

Onsite Recruiting

We would like to offer you \$25 to participate in the on-site component of this evaluation we are doing for **[utility]**. We are NOT interested in selling anything. We would like to have one of our auditors visit your home at your convenience to look at the **[measure]** you installed through the program and how they are operating. The on-site visit would only take about 15 minutes (will vary slightly depending on measures installed). Would that be alright with you?

- 1 Yes→Great! Someone from **[firm]** will give you a call back to determine when they can schedule an appointment with one of our auditors in your area. Thank you for your cooperation with this important effort.
- 2 No

COMMENTS

Those are all of my questions. Do you have any questions or comments for me?

- 1 Yes
- 2 No

Residential Incentive Program Participant Survey

The following measures will be asked about in the survey:

Water heater

Sample variables

Measure = High Efficiency Hot Water Heater

Product Type = Hot Water Heaters

Utility = Pacific Gas and Electric (PG&E) or San Diego Gas and Electric (SDGE)

Assistance = Rebate

Incentive Amount = \$30

Assumed H2O was incremental efficiency measure and kept those questions in various modules

RESPNUM\$ Respondent number

INTRODUCTION

DIALSCR Hello, my name is [**interviewer name**], and I'm calling on behalf of the California Public Utilities Commission regarding [**utility**]'s Residential Incentive Program. May I speak with [**contact name**]?

1 Yes

2 No [attempt to convert; if R not available, ask for an adult who makes decisions on how household uses energy]

INTRO2 I'm with [**data collection firm**], an independent research firm. I am calling to learn about your experiences with the [**measure**] you purchased and the rebate you received from the retailer through [**utility**]'s Residential Incentive Program.

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

INTRO3

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California’s energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and **[utility]** better understand customers’ need for and interest in energy programs and services.)

(Timing: This survey should take about 15 minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-XXX-XXXX)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the **[measure]** you purchased and received a rebate through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call 415-703-2782, or visit their website: www.cpuc.ca.gov.)

(NOTE: For all questions, “DON’T KNOW” and “REFUSED” will be coded if offered as a response.)

IDENTIFICATION QUESTIONS (Section 2)

Q1_1

Program records indicate that you purchased and received a mail-in rebate for a **[measure]** from **[utility]** around **[insert date of participation]**.

Do you recall purchasing a **[measure]**?

- 1 Yes {SKIP TO Q1_4}
- 2 No
- 8 DON’T KNOW
- 9 REFUSED

Q1_2

(ASK IF DOESN’T RECALL) Is it possible that someone else in your household would know about purchasing a **[measure]** and applying for a mail-in rebate from the retailer?

- 1 Yes
- 2 No {THANK & TERMINATE}
- 8 DON’T KNOW {THANK & TERMINATE}
- 9 REFUSED {THANK & TERMINATE}

Q1_3 May I please speak with that person?

- 1 Yes {RESTART INTERVIEW}
- 2 No {SCHEDULE CALLBACK AND TERMINATE}
- 8 DON'T KNOW {SCHEDULE CALLBACK AND TERMINATE}
- 9 REFUSED {SCHEDULE CALLBACK AND TERMINATE}

Q1_4 Are you the person in your household who decided to purchase and receive a mail-in rebate for a **[measure]** from **[utility]** around **[insert date of participation]**?

- 1 Yes
- 2 No {SKIP TO 1.2}
- 8 DON'T KNOW {SKIP TO 1.2}
- 9 REFUSED {SKIP TO 1.2}

Q2_1 How did you hear about the rebate for high efficiency water heaters as part of [IOU]'s Residential Incentive Program? (PROBE: Did you hear about the program from any other sources?)
(DO NOT READ LIST, RECORD ALL THAT APPLY)

For Q2_1_1 through Q2_1_20

- 0 Not mentioned
- 1 Mentioned

Utility provided information

- Q2_1_1** (Advertising—radio, newspaper, trade journal, billboard, TV)
- Q2_1_2** (Bill insert, newsletter, or other mailing)
- Q2_1_3** (Website)
- Q2_1_4** (Email)
- Q2_1_5** (Other utility) (*SPECIFY*)
- Q2_1_6** Local Government/Community event/Nonprofit (Meeting, event, workshop, training) (*SPECIFY*)
- Q2_1_7** (School)
- Q2_1_8** (Local government/community agency) (*SPECIFY*)
- Q2_1_9** (City/county Energy Center - Pacific Energy Center, Stockton, Food Service) (*SPECIFY*)
- Q2_1_10** (Advertising—radio, newspaper, trade journal, billboard, TV)
Other
- Q2_1_11** (Home or building audit or assessment) (*SPECIFY*)
- Q2_1_12** (Meeting, event, workshop training) (*SPECIFY*)
- Q2_1_13** (Flex your Power TV or radio advertising)
- Q2_1_14** (Other advertising, don't recall)
- Q2_1_15** (Friend/Relative/Neighbor)
- Q2_1_16** (Other, Specify:_____)
- Q2_1_17** Salesperson/Sales Rep
- Q2_1_18** Installer/Contractor
- Q2_1_19** DON'T KNOW
- Q2_1_20** REFUSED

Installation Behavior (Section 3)

Q3_1a Now, I would like to understand what you did with the [measure]. Is this [measure] currently installed at your home?(RECORD ONE NUMBER)

- 1 Yes (SKIP TO W1)
- 2 No
- 8 DON'T KNOW (IF NO OTHER KNOWLEDGEABLE R, TERMINATE)
- 9 REFUSED (IF NO OTHER KNOWLEDGEABLE R, TERMINATE)

Q3_1b Which of the following best describes what happened with the [measure]? (READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location (SKIP TO 3.3a)
- 2 It was installed at your home but is now permanently removed (example: broke, burned out, don't fit, don't like, etc.) (SKIP TO 3.6)
- 3 It is in storage
- 4 It was sold or given away (SKIP TO 3.3a)
- 5 Something else (SPECIFY)
- 8 DON'T KNOW
- 9 REFUSED

(ASK IF 3.1b=1, 3.1b=4)

Q3_3a Is the/Are these [measure] located in [Utility] service territory?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

(SKIP TO 4.1 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.1b = 4) AND THAT LOCATION IS **OUTSIDE** OF [Utility] SERVICE TERRITORY (3.3A = 2).

SKIP TO W1 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.1b = 4) AND THAT LOCATION IS **INSIDE** OF [Utility] SERVICE TERRITORY (3.3A = 1).

Removed Measures

(ASK ONLY IF THEY SAY THEY REMOVED MEASURE AFTER INSTALLED, 3.1b=2)

Q3_6 Now let's talk about [measure] you said you installed but have since removed. Why was this removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 Equipment failed
- 2 Didn't work properly
- 3 Wrong size—too small or too large
- 5 Didn't like the color
- 6 Didn't like appearance/unattractive
- 7 Other, Specify
- 8 DON'T KNOW
- 9 REFUSED

Q3_7 What did you replace [measure] with? (DO NOT READ LIST; PROBE FOR EFFICIENCY, RECORD ALL THAT APPLY)

For Q3_7_1 through Q3_7_7

- 0 Not mentioned
- 1 Mentioned

- Q3_7_1 With a new high efficiency [measure]
- Q3_7_2 With a less efficient [product type]
- Q3_7_3 Re-installed old equipment
- Q3_7_4 Did not replace
- Q3_7_5 Other, Specify
- Q3_7_6 DON'T KNOW
- Q3_7_7 REFUSED

NTG AND SPILLOVER

W1 Please think back to the time when you were deciding to buy the **[measure]**, perhaps recalling things that occurred in your household shortly before and after **[timeframe]**. What factors motivated you to purchase the **[measure]**? {DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE RESPONDENT HAS FINISHED, PROBE: Are there any other factors?}

For W1_1 through W1_23

- 0 Not mentioned
- 1 Mentioned

- W1_1 Old equipment didn't work
- W1_2 Old equipment working poorly
- W1_3 The program incentive
- W1_4 The program technical assistance
- W1_5 Wanted to save energy
- W1_6 Wanted to reduce energy costs
- W1_7 The information provided by the Program
- W1_8 Past experience with this program
- W1_9 Because of past experience with another **[utility]** program
- W1_10 Recommendation from other utility program (Probe: What program? _____)
- W1_11 Recommendation of dealer/retailer
- W1_12 Recommendation of someone else (Probe: Who? _____)
- W1_13 Advertisement in newspaper (Probe: For what program? _____)
- W1_14 Radio advertisement (Probe: For what program? _____)
- W1_15 Environmental concerns
- W1_16 Global warming
- W1_17 Liked the appearance of the **[measure]** more than the old one
- W1_18 Keeping up with the latest trends and fashions
- W1_19 Increased comfort
- W1_20 Better quality product
- W1_21 Other (SPECIFY)
- W1_22 DON'T KNOW
- W1_23 REFUSED

W2 Did you get this **[measure]** to replace an existing **[product type]**?

- 1 Yes
- 2 No {SKIP TO FR7}
- 8 DON'T KNOW {SKIP TO FR7}
- 9 REFUSED {SKIP TO FR7}

W3 About how old was the **[product type]** you replaced? {READ CATEGORIES IF NEEDED}

- 1 Less than 5 years old
- 2 5 to less than 10 years old
- 3 10 to less than 20 years old
- 4 20 years to less than 30 years old
- 5 30 or more years old
- 8 DON'T KNOW
- 9 REFUSED

W4 Was the **[product type]** working or not working?

- 1 Working
- 2 Not working {SKIP TO FR7}
- 8 DON'T KNOW
- 9 REFUSED

W5 Was the old **[product type]** in good, fair, or poor working condition?

- 1 Good
- 2 Fair
- 3 Poor
- 8 DON'T KNOW
- 9 REFUSED

FREE RIDERSHIP

FR7 Our records indicate you received about **[amount of program incentive/subsidy]** from the **[utility] [program]** either directly or at the time of purchase to offset the cost of the **[product type]**. Does this amount sound about right?

- 1 Yes {skip to FR1_1}
- 2 No
- 8 DON'T KNOW {skip to FR1_1}
- 9 REFUSED {skip to FR1_1}

FR8 What would you estimate to be the actual amount?

- _____ {Record Response}
- _____ {Set = New amount of program incentive/subsidy}
- 8 DON'T KNOW
- 9 REFUSED

FR1_1 At the time that you first heard about the **[assistance]** from **[utility]** for the **[measure]**, had you...? {READ FR1 SERIES UNTIL R SAYS 'NO'}

Already been thinking about purchasing a **[product type]**?

- 1 Yes
- 2 No {SKIP TO FR2}
- 8 DON'T KNOW {SKIP TO FR2}
- 9 REFUSED {SKIP TO FR2}

FR1_2 Already begun collecting information about **[product type]**?

- 1 Yes
- 2 No {SKIP TO FR2}
- 8 DON'T KNOW {SKIP TO FR2}
- 9 REFUSED {SKIP TO FR2}

FR1_3a Already selected the **[product type]** you were going to get?

- 1 Yes
- 2 No {SKIP TO FR2}
- 8 DON'T KNOW {SKIP TO FR2}
- 9 REFUSED {SKIP TO FR2}

FR1_4 Already installed the **[measure]**?

- 1 Yes
- 2 No {SKIP TO FR2}
- 8 DON'T KNOW {SKIP TO FR2}
- 9 REFUSED {SKIP TO FR2}

FR1B So, the **[measure]** was installed before you learned about the **[assistance]** from **[utility]**?

- 1 Yes {SKIP FR5}
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

FR2 Just to be sure I understand, did you have specific plans to install a **[product type]** before learning about the **[assistance]** available through the **[program]**?

- 1 Yes
- 2 No {skip to FR4}
- 8 DON'T KNOW {skip to FR4}
- 9 REFUSED {skip to FR4}

FR3 Did you have to make any changes to your existing plans in order to receive this **[assistance]** through the **[program]**?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

FR4i {REPEAT AS NEEDED FOR FR4 PARTS A – D} If the **[assistance]** from the **[utility] [program]** had not been available, would you still have:

FR4A Purchased any **[product type]**?

- 1 Yes
- 2 No {skip to FR5}
- 8 DON'T KNOW
- 9 REFUSED

FR4B Purchased the **[product type]** at the same time as you did? (PROBE: That would be around **[date of participation]**)

- 1 Yes {skip to FR4D}
- 2 No
- 8 DON'T KNOW {skip to FR4D }
- 9 REFUSED {skip to FR4D }

FR4B1 Bought the **[product type]** earlier than you did, or later?

- 1 Earlier
- 2 Same Time {Repeat Question FR4b}
- 3 Later
- 8 DON'T KNOW {skip to FR4D }
- 9 REFUSED {skip to FR4D }

FR4B2 (If earlier or later) How much **[earlier/later]** would you have bought the **[product type]**?

FR4B2_YR _____ Number of years
-8 DON'T KNOW
-9 REFUSED

FR4B2_MN _____ Number of months
-8 DON'T KNOW
-9 REFUSED

FR4D Purchased the same efficiency of **[product type]**?

1 Yes
2 No
-8 DON'T KNOW
-9 REFUSED

FR4E If the **[assistance]** from the **[utility] [program]** had not been available, would you have done anything else differently?

1 Yes
2 No {skip to FR5}
-8 DON'T KNOW {skip to FR5}
-9 REFUSED {skip to FR5}

FR4E1 What would you have done differently?

_____ {RECORD RESPONSE}

FR5

On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same **[measure]** if you had not received any **[assistance]** from the program?

- 0 Not at all likely
- 1 1
- 2 2
- 3 3
- 4 4
- 5 5
- 6 6
- 7 7
- 8 8
- 9 9
- 10 Very likely
- 8 DON'T KNOW {SKIP TO FR9}
- 9 REFUSED {SKIP TO FR9}

FR9

I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

If I had not had any assistance from the program, I would have paid the additional **[amount of program incentive/subsidy]** to buy the **[measure]** on my own?

- 0 Strongly disagree
- 1 1
- 2 2
- 3 3
- 4 4
- 5 5
- 6 6
- 7 7
- 8 8
- 9 9
- 10 Strongly agree
- 8 DON'T KNOW
- 9 REFUSED

{READ ONLY IF FR7-FR9 WAS SKIPPED}

FR10 I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

The [assistance] from the [utility] [program] was a critical factor in my decision to purchase the [measure].

- 0 Strongly disagree
- 1 1
- 2 2
- 3 3
- 4 4
- 5 5
- 6 6
- 7 7
- 8 8
- 9 9
- 10 Strongly agree
- 8 DON'T KNOW
- 9 REFUSED

FR11 I would have bought a(n) **[product type]** within a year of when I did even without the **[assistance]** from the **[utility] [program]**.

- 0 Strongly disagree
- 1 1
- 2 2
- 3 3
- 4 4
- 5 5
- 6 6
- 7 7
- 8 8
- 9 9
- 10 Strongly agree
- 8 DON'T KNOW
- 9 REFUSED

Consistency Check & Resolution

CONSISTENCY CHECK & RESOLUTION

{C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

FR4A (efficiency enhancement measures) OR FR4D (incremental efficiency measures)
 FR5
 FR10
 FR11

{IF FR4A/D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the [measure] without the program'}

{IF FR4A/D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would not have purchased the [measure] without the program'}

{IF FR5 = 0,1 AND FR4A/D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the [measure] without the program'}

{IF FR5 = 9,10 AND FR4A/D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the [measure] without the program'}

{IF FR10 = 0,1 AND FR4A/D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program'}

{IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program'}

{IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the [product type] within [a year/2 years] even without the program'}

{IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the [product type] within [a year/2 years] even without the program'}

C1 Let me make sure I understand you. Earlier, you said [fill with inconsistency 1], but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the [measure] at the time you did? {Record verbatim Response below}

C2 [Fill with wording and response categories to the one question which was inconsistent] {INTERVIEWER; BASED ON verbatim RESPONSE TO C1, PLEASE RECORD new response}

MEASURE-SPECIFIC

Q4_1 How many gallons does your water heater hold?

- _____ Gallons
- 888 Tankless
- 8 DON'T KNOW
- 9 REFUSED

(IF DON'T KNOW WATER HEATER SIZE)

Q4_1a Is your water heater . . .?
(READ LIST)

- 1 Very Small – less than 30 gallons
- 2 Small: 30-39 gallons
- 3 Medium: 40-59 gallons
- 4 60 gallons or more
- 5 Tankless
- 8 DON'T KNOW
- 9 REFUSED

Q4_2 Where is your water heater located? (i.e. in your basement or garage)

- 1 Basement
- 2 Garage
- 3 Other
- 4 Laundry room
- 8 DON'T KNOW
- 9 REFUSED

Q4_3 Is your water heater electric or gas?

- 1 Electricity
- 2 Natural Gas
- 3 Propane
- 4 Solar (sun)
- 5 Other (SPECIFY) _____
- 8 DON'T KNOW
- 9 REFUSED

SPILLOVER

NSP1 Since you participated in [program] have you purchased and installed any other type of high efficiency equipment or made energy efficiency improvements {read the following only for SMALL COMMERCIAL: at this facility or at other locations}?

- 1 Yes, only at this home
- 2 No [SKIP TO Q6_1]
- 8 Don't Know [SKIP TO Q6_1]
- 9 Refused [SKIP TO Q6_1]

(IF NSP1 = YES)

NSP1B Did you receive any assistance for this equipment through [utility] [program] or another utility program?

- 1 Yes [SKIP TO Q6_1]
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

NSP2AT What type of high efficiency equipment did you install on your own?
{PROBE TO GET EXACT TYPE AND QUANTITY AND LOCATION/BUILDING IF SMALL COMMERCIAL}

_____ Type of equipment

NSP2AQ What quantity of high efficiency equipment did you install on your own?
{PROBE TO GET EXACT TYPE AND QUANTITY AND LOCATION/BUILDING IF SMALL COMMERCIAL}

_____ Quantity of equipment

NSP2BT What type of high efficiency equipment did you install on your own?
{PROBE TO GET EXACT TYPE AND QUANTITY AND
LOCATION/BUIDLING IF SMALL COMMERCIAL}

_____ Type of equipment

NSP2BQ What quantity of high efficiency equipment did you install on your own?
{PROBE TO GET EXACT TYPE AND QUANTITY AND
LOCATION/BUIDLING IF SMALL COMMERCIAL}

_____ Quantity of equipment

NSP2CT What type of high efficiency equipment did you install on your own?
{PROBE TO GET EXACT TYPE AND QUANTITY AND
LOCATION/BUIDLING IF SMALL COMMERCIAL}

_____ Type of equipment

NSP2CQ What quantity of high efficiency equipment did you install on your own?
{PROBE TO GET EXACT TYPE AND QUANTITY AND
LOCATION/BUIDLING IF SMALL COMMERCIAL}

_____ Quantity of equipment

NSP2DT What type of high efficiency equipment did you install on your own?
{PROBE TO GET EXACT TYPE AND QUANTITY AND
LOCATION/BUIDLING IF SMALL COMMERCIAL}

_____ Type of equipment

NSP2DQ What quantity of high efficiency equipment did you install on your own?
{PROBE TO GET EXACT TYPE AND QUANTITY AND
LOCATION/BUIDLING IF SMALL COMMERCIAL}

_____ Quantity of equipment

{ASK FOR EACH TYPE OF EQUIPMENT IN NSP2}

NSP3a How do you know that this equipment is high efficiency? {PROBE: Was it Energy Star® rated?}

_____ Type 1

{ASK FOR EACH TYPE OF EQUIPMENT IN NSP2}

NSP3b How do you know that this equipment is high efficiency? {PROBE: Was it Energy Star® rated?}

_____ Type 2

{ASK FOR EACH TYPE OF EQUIPMENT IN NSP2}

NSP3c How do you know that this equipment is high efficiency? {PROBE: Was it Energy Star® rated?}

_____ Type 3

{ASK FOR EACH TYPE OF EQUIPMENT IN NSP2}

NSP3d How do you know that this equipment is high efficiency? {PROBE: Was it Energy Star® rated?}

_____ Type 3

NSP4

I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the [utility] [program] in [timeframe] influenced my decision to install different types of high efficiency equipment on my own.

- 0 Strongly disagree
- 1 1
- 2 2
- 3 3
- 4 4
- 5 5
- 6 6
- 7 7
- 8 8
- 9 9
- 10 Strongly agree
- 8 DON'T KNOW
- 9 REFUSED

NSP5

Why did you purchase this high efficiency equipment without going through a [utility] program? {DO NOT READ; INDICATE ALL THAT APPLY}

For NSP5_1 to NSP5_11:

- 0 Not mentioned
- 1 Mentioned

- NSP5_1** Too much paperwork
- NSP5_2** Takes too long to get approval
- NSP5_3** No time to participate, needed equipment immediately
- NSP5_4** The program had ended
- NSP5_5** The equipment would not qualify {PROBE: Why not?} _____
- NSP5_6** The amount of the rebate wasn't important enough
- NSP5_7** Did not know program was available
- NSP5_8** There was no program available
- NSP5_9** Other {SPECIFY} _____
- NSP5_10** DON'T KNOW
- NSP5_11** REFUSED

RESIDENTIAL DEMOGRAPHIC QUESTIONS

Q6_1 The last questions ask about household characteristics to make sure we're getting a representative sample of [utility] residents.

Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other (SPECIFY)
- 8 DON'T KNOW
- 9 REFUSED

Q6_2 In what type of building do you live? (READ LIST IF NEEDED)
(PROBE FOR 'Condo': "How many units are in your building?")

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Other (SPECIFY)
- 8 Boat/RV/Van/Etc.
- 8 DON'T KNOW
- 9 REFUSED

Q6_3 About when was this building first built? (READ LIST IF NEEDED)

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 7 (OTHER, specify)
- 8 DON'T KNOW
- 9 REFUSED

Q6_8a Do you receive an electric bill directly from [utility]?

- 1 Yes
- 2 No {SKIP TO Q6_13}
- 8 DON'T KNOW {SKIP TO Q6_13}
- 9 REFUSED {SKIP TO Q6_13}

Q6_8b Does this bill only include your home’s electric use, or does it include the electric use of other households?

- 1 Only 1 household
- 2 Multiple households
- 8 DON'T KNOW
- 9 REFUSED

Q6_13 What is the primary language spoken in your home? *(DO NOT READ)*

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 (OTHER, specify)
- 11 DON'T KNOW
- 12 REFUSED

ONSITE RECRUITING

Q7_3 We would like to offer you \$25 to participate in the on-site component of this evaluation we are doing for **[utility]**. We are NOT interested in selling anything. We would like to have one of our auditors visit your home at your convenience to look at the **[measure]** you installed through the program and how they are operating. The on-site visit would only take about 15 minutes (will vary slightly depending on measures installed). Would that be alright with you?

- 1 Yes, Great! Someone from **[firm]** will give you a call back to determine when they can schedule an appointment with one of our auditors in your area. Thank you for your cooperation with this important effort.
- 2 No

COMMENTS

END Those are all of my questions. Do you have any questions or comments for me?

- 1 Yes
- 2 No

SYSTEM VARIABLES

CASEID	PA internal case ID
REP	Replicate
P_DATE	Participation date
REBATE	Rebate
QTY	Quantity of water heaters
P_MN	Month of participation
P_YR	Year of participation
CZ	Climate zone
IOU	Utility
CADMUSID	Cadmus assigned ID
ALTPHONE	Alternate phone number
SITE_NBR	Site number
QUARTER	Quarter
AAPOR	Disposition
REFNAME	First name given during interview
RECLNAME	Last name given during interview
RECPHONE	Phone given during interview

Site Verification Procedures for Hot Water Heaters

This document describes the procedures that will be followed for measure verification at a sampled site for hot water heaters. The procedures begin with the assignment of a site and end with final documentation in the project database. The flow diagram of recruitment and scheduling is attached as Figure 1.

These procedures apply to participants in the Pacific Gas and Electric 2000R and San Diego Gas and Electric 3024 programs who purchased and received a rebate for an efficient hot water heater. Site visits will be performed with a total of 150 participants who installed qualified hot water heaters in 2006-2008.

The site visits will be distributed across two utility programs as shown in the Table 1.

Table 1. Participant Site Visits by Utility

Measure	PGE2000R Site Visit	SDGE3024 Site Visit
	Sample	Sample
Hot Water Heater	75	75

1.1 Site Assignment

After the sites are assigned to a field technician, a partially pre-populated verification form will be provided for each site, including contact log and known measure information.

1.2 Site Recruitment

Initial recruitment and eligibility screening will take place as part of the telephone survey of program participants. This will be a two-stage process: First the customer will be asked to verbally agree to a site visit. Then, once a customer has agreed to the site visit, the field technician (or associated staff) will contact the customer via phone to arrange an appointment for the visit. A contact will only be considered to be a successful recruitment after scheduling a specific date and time for a visit. If a customer cannot be successfully scheduled, that prospect will be removed from the site visit list and an additional name from the “agree to participate” sample will be utilized.

As the recruitment process is completed for each site, entries will be tracked in an electronic contact log. The contact log will provide the status of each site visit (scheduled or completed) and updated on a regular basis.

1.3 Scheduling On-Site Data Collection

The following guidelines will be followed in scheduling the on-site survey:

- The phone surveyor and the person scheduling the visit will each confirm that someone at the site is familiar with the specific measure to be verified. If the contact does not know, an alternative contact will be sought. If no contact is aware of the measure, a replacement site will be selected.
- Attempts will be made to coordinate the scheduling of site visits in such a manner as to minimize travel time between sites.

- Attempts will be made to make appointments one week in advance to give the customer adequate notice. Additionally, confirmation calls will be made to the site contact the day before the visit to confirm the appointment.
- At the time the visit is scheduled, contacts will be provided with the name, telephone number (including cellular) and e-mail address of the person conducting the site visit with the contact so that he/she can be reached if it becomes necessary to reschedule.
- All staff conducting site visits will have badge photo IDs. They will also be provided with business cards that can be left with site contacts, along with a letter from the CPUC explaining the purpose of the site visit.

The site scheduling form will be used to record all of the information related to scheduling on-site data collection activities for each site.

Field technicians assigned to perform onsite verification activities will possess the following minimum qualifications:

- Professional demeanor
- Training regarding the program measures. For water heaters this will include verification that the qualifying unit is installed and operational.
- Ability to accurately identify and record information on nameplate such as Energy Factor (EF), ENERGY STAR[®] label, manufacturer, brand, model #, capacity, temperature set point.
- Ability to accurately identify if hot water heater is gas or electric.

1.4 On-Site Data Collection

The verification data collection form has three sections: a contact information section, a data collection section for the hot water heater and a spillover section. In each section there are some fields that will be completed prior to the site visit using data from the participant database or from the telephone survey. The other fields in each section will be completed during the on-site survey based on observations made in the field and information provided by the customer (through the site contact). Each of these sections is described in more detail below.

For each site visit, the field technician will gather all information on the data collection form including: confirming the background information (program records and some information from the phone survey), number and type of equipment installed, model specific data, current operational status, and other information necessary to confirm adherence to program guidelines. On-site data collection is limited to the information that is needed to complete the verification form. There will be one form for each site visit.

Completed before site visit

Prior to the site visit, the following fields will be completed using data from the tracking database, phone survey data, and appointment scheduling call. An attempt will be made to resolve any discrepancies between these data sources prior to the site visit. Remaining discrepancies will be resolved during the site visit.

The following information will be pre-completed before each site visit occurs:

Service Account Number/Unique Identifier: Unique identifiers, assigned by the IOU or evaluator, associated with the sampled measure.

Install Date: The date that the measure was installed, as documented in the IOU tracking database. The install dates should normally be in 2006, 2007 or 2008; although it is possible for the install date to be in 2005 if the incentive was paid in 2006 or 2007.

Unit Quantity: The installed number of hot water heaters documented by the IOUs in the tracking database. For most sites this will be a single number.

Incentive Received: For each rebated measure, this field will be populated with the rebate amount as documented in the IOU tracking database.

Site Address: The address for the site, including street, city, and zip, where the hot water heater was installed. The site inspection will occur at this address.

Primary Contact: The name of the person at the site that will be contacted to schedule the site inspection. This person should also be familiar with the installed measure.

Phone: The telephone number for the site contact.

E-mail: The e-mail for the site contact (if available).

All pre-completed information will be confirmed during the site visit. Discrepancies between pre-completed and inspector observed will be noted by the inspector on-site and documented.

Completed during site visit

During field data collection, the following entries will be made:

Inspector Name: The name and initials for the field staff who performs the on-site survey.

Inspection Date: The date that the on-site survey was performed, including the start and end time of the inspection.

Location: The location where the unit is located (e.g. garage, conditioned basement).

Unit Quantity: The number of installed hot water heaters found during the site visit. This quantity should be compared to the “Unit Quantity” in the database column in the pre-completed portion of the form.

Manufacturer: Manufacturer of unit.

Brand: If there is a brand designation in addition to the name of the manufacturer.

Model Number: Manufacturer model number of unit as labeled on unit nameplate.

Operational: Site visits must note whether the hot water heater is capable of operation in a manner as to produce the expected savings. This includes installation quality and that the unit is not broken. For hot water heaters this will be performed by turning on a faucet and manually feeling if the water turns hot.

Capacity: If available, the inspector will record the unit capacity.

Efficiency: If available, the inspector will record the energy factor of the unit.

Energy Source: Verify the type of hot water heater, gas or electric.

Temperature Set Point: If easily accessible, inspector will identify and record the temperature setting. Due to the different water heater manufacturers having a variety of temperature dials, the inspector should record the entire scale and then circle the setting. For example, the inspector may see this variety of temperature scales:

1. Numerical: 110, 115, 120, 130, 140 etc. (indicating degrees F)
2. Symbols: 0, 0, ▲, A, B, C
3. Words: Warm, Hot, Very Hot

These scales should be captured on the form and the appropriate set point circled.

BTU Input or Element Wattage: If unit is gas heating identify BTU input on nameplate. If unit is electric identify element wattage from nameplate.

Supplemental Data: Examples of supplemental data that might be useful include “spillover” equipment as discussed below.

Notes: Entry of information in the notes field is optional if there are no discrepancies between the project tracking data/application file and what was found during the site visit. For cases where discrepancies are found, this column should document observations that will be useful in analyzing the site survey data, such as explaining the reasons for differences between field observations and the IOU tracking database.

Before leaving the site, the inspector will review the completed data collection form thoroughly to be sure that all necessary verification information has been collected and documented properly.

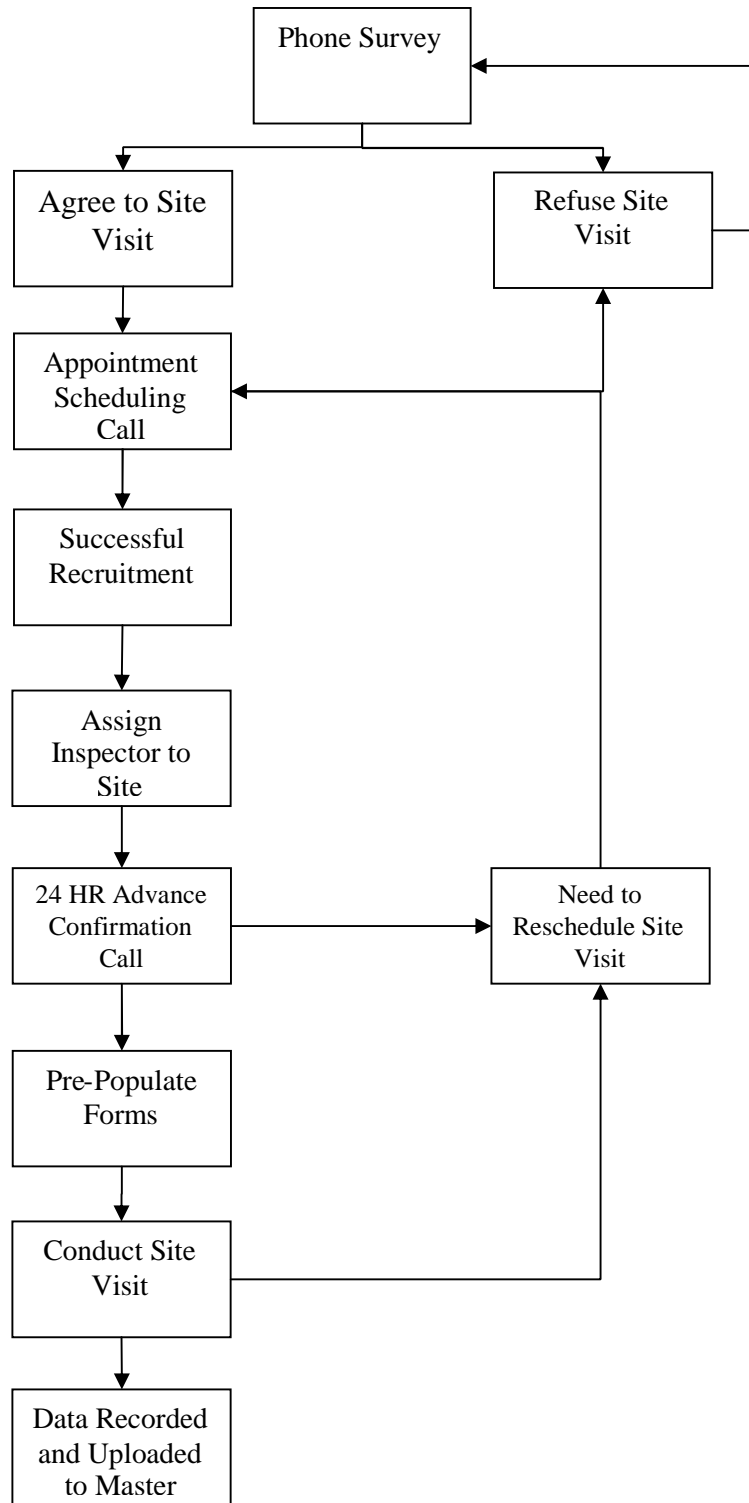
Completed during site visit (Supplemental)

In cases where the participant has reported purchasing efficient equipment due to the influence of the program without receiving an incentive for that equipment (spillover) additional data will be collected. This additional data will be entered into the spillover section, and will consist of documenting makes and models of all spillover equipment.

1.5 Preparing Site Evaluation Reports

Data from the site visits will be entered electronically into a data collection worksheet. The data from each site visit will be uploaded to a central site visit database for review and analysis by the program leads.

Figure 1: Site Visit Flow Model



Appendix E – Water Aerators

E1 – Telephone Surveys

- Showerheads Aerators MF Survey Codebook
- SCG 3517 SFEER Survey Codebook
- Shower Aerator Participant Survey
- Shower Aerator Participant Survey

Multi-family Water-Saving Devices Rebate Program Survey Codebook

NOTE:
 1. Variable names are in bold type.
 2. Questions were asked of all respondents unless indicated otherwise.
 3. For all “other” and open-ended responses: please see “HIM showerheads aerators MF open ends.xls”.

Sample variables

ADDRESS	Respondent’s address
CITY	Respondent’s city
STATE	Respondent’s state
ZIP4	Respondent’s zip code
AREA	Respondent’s area code
PHONE	Respondent’s phone number
UTILITY	Utility
PROGRAM	Program
PDATE	Participation date
P_YR	Year of participation
MEAS1QTY	Quantity of showerheads
MEAS2QTY	Quantity of faucet aerators
MEAS1	Showerhead flag
MEAS2	Faucet aerator flag
MEAS1INC	Showerhead incentive
MEAS2INC	Faucet aerator incentive
SAP_YEAR	SAP_Year
QUARTER	Quarter
CAD_ID	Cadmus ID
AAPOR	Disposition

Identification Questions

Q1_1 Program records indicate that you purchased **[qty]** faucet aerators and **[qty]** low-flow showerheads around **[insert date of participation]** and received a rebate from **SDGE**. Do you recall purchasing these? (*RECORD INFORMATION*)

1 Yes
 2 Yes, but different qty
 3 No
 -8 (DON’T KNOW)
 -9 (REFUSED)

Q1_2 (*ASK IF QTY IS DIFFERENT*) How many did you purchase? (*ASK FOR EACH MEASURE. USE THIS QTY THROUGHOUT REST OF SURVEY*)

Q1_2a1 Showerhead quantity
-8 (DON'T KNOW)
-9 (REFUSED)

Q1_2b Faucet aerator quantity
-8 (DON'T KNOW)
-9 (REFUSED)

Q1_3 (*ASK IF DOESN'T RECALL*) Is it possible that someone else in your organization would know about purchasing these items for [address]?

1 Yes
2 No
-8 (DON'T KNOW)
-9 (REFUSED)

Q1_4 May I please speak with that person?

1 Yes [SKIP TO 1.1]
2 No [THANK & TERMINATE]
-8 (DON'T KNOW) [THANK & TERMINATE]
-9 (REFUSED) [THANK & TERMINATE]

Sources of Program Information (Section 2)

Q2_1 How did you hear about the rebate offered on the [measures] available as part of **SDGE** [program]? (PROBE: Did you hear about the program from any other sources?) (*DO NOT READ LIST, RECORD ALL THAT APPLY*)

For Q2_1_1 to Q2_1_21:

- 0 Not mentioned
- 1 Mentioned

- Q2_1 (Advertising—radio, newspaper, trade journal, billboard, TV)
- Q2_2 (Bill insert, newsletter, or other mailing)
- Q2_3 (Website)
- Q2_4 (Email)
- Q2_5 (Other utility) (*SPECIFY*)
- Q2_6 (Meeting, event, workshop, training) (*SPECIFY*)
- Q2_7 (School)
- Q2_8 (Local government/community agency) (*SPECIFY*)
- Q2_9 (City/county Energy Center such as Pacific Energy Center, Stockton, Food Service) (*SPECIFY*)
- Q2_10 (Advertising—radio, newspaper, trade journal, billboard, TV)
- Q2_11 (Home or building audit or assessment) (*SPECIFY*)
- Q2_12 (Meeting, event, workshop training) (*SPECIFY*)
- Q2_13 (Flex your Power TV or radio advertising)
- Q2_14 (Other advertising, don't recall)
- Q2_15 (Friend/Relative/Neighbor)
- Q2_16 (Other) (*SPECIFY*)
- Q2_17 (Salesperson/Sales Rep)
- Q2_18 (Installer/Contractor)
- Q2_19 (DON'T KNOW)
- Q2_20 (REFUSED)
- Q2_21* Management company

Installation Behavior (Section 3)

Q3_1a¹ (IF QUANTITY=1) Now, I would like to understand what you did with the [measure]. Is this [measure] currently installed at your building? (RECORD ONE NUMBER)

- 1 Yes [SKIP TO W1]
- 2 No
- 8 (DON'T KNOW) [IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY]
- 9 (REFUSED) [IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY]

Q3_1b (IF QUANTITY=1) Which of the following best describes what happened with the [measure]? (READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location [SKIP TO Q3_3a]
- 2 It was installed at this location but is now permanently removed (example: broke, burned out, don't fit, don't like, etc.) [SKIP TO Q3_6]
- 3 It is in storage because it is only needed during certain months of the year
- 4 It is in storage for some other reason [SKIP TO SECTION Q3_8]
- 5 It was sold or given away [SKIP TO Q3_3a]
- 6 Something else (SPECIFY)
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q3_2 (IF QUANTITY>1) Now, I would like to understand what you did with the [quantity] [measure]. (READ LIST, RECORD NUMBER)

Q3_2a How many are currently installed at this location (IF RESPONSE = QUANTITY, SKIP TO NEXT MEASURE OR SECTION IF NO OTHER MEASURES)

Q3_2b How many are installed at some other location?

Q3_2c How many were installed at this location (either indoors or outdoors) but are now permanently removed (example: broke, burned out, don't fit, don't like, etc.)

Q3_2d How many are in storage because they are only needed during certain months of the year?

Q3_2e How many are in storage for some other reason?

Q3_2f How many were sold or given away?

Q3_2g Something else? (SPECIFY)

¹ For questions Q3_1a to Q3_8: Low-flow showerheads = _1, faucet aerators = _2.

Q3_3a (ASK IF 3.1b=1, 3.1b=5, 3.2b>0, 3.2f>0)
Is the/Are these [measure] located in **[Utility]** service territory?

- 1 Yes
- 2 No
- 8 (DON'T KNOW)
- 9 (REFUSED)

[SKIP TO Q5_3 IF ALL MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (Q3_2B + Q3_2F = QTY) AND THAT LOCATION IS OUTSIDE OF [Utility] SERVICE TERRITORY (Q3_3A NE 1).

SKIP TO W1 IF ALL MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (Q3_2B + Q3_2F = QTY) AND THAT LOCATION IS INSIDE OF [Utility] SERVICE TERRITORY (Q3_3A = 1).]

Removed Measures

(ASK ONLY IF THEY SAY THEY REMOVED A MEASURE AFTER INSTALLED, Q3_1b=2 or Q3_2c>0)

Q3_6 Now let's talk about [measure] you said you installed but have since removed. Why was this removed? *(DO NOT READ LIST, RECORD ALL THAT APPLY)*

For Q3_6_1 to Q3_6_9:

- 0 Not mentioned
- 1 Mentioned

- Q3_6_1** (Equipment failed)
- Q3_6_2** (Didn't work properly)
- Q3_6_3** (Wrong size—too small or too large)
- Q3_6_4** (Low water flow)
- Q3_6_5** (Didn't like the color)
- Q3_6_6** (Didn't like appearance/unattractive)
- Q3_6_7** (Other) *(SPECIFY)*
- Q3_6_8** (DON'T KNOW)
- Q3_6_9** (REFUSED)

Q3_7 What did you replace [measure] with? (*DO NOT READ LIST; PROBE FOR EFFICIENCY, RECORD ALL THAT APPLY*)

Q3_7_1 (With a new high efficiency [measure])

Q3_7_2 (With a less efficient [measure])

Q3_7_3 (Re-installed old equipment)

Q3_7_4 (Did not replace)

Q3_7_5 (Other) (*SPECIFY*)

Q3_7_6 (DON'T KNOW)

Q3_7_7 (REFUSED)

Measures in Storage

(*ASK ONLY IF THEY SAY MEASURE IS IN STORAGE FOR SOME OTHER REASON, Q3_1b =4 or Q3_2e >0*)

Q3_8 When do you think you will install the [measure]? Would you say within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

- 1 Within the next 3 months
- 2 3 to 6 months from now
- 3 6 to 12 months from now
- 4 More than a year from now
- 5 Never
- 8 (DON'T KNOW)
- 9 (REFUSED)

NTGR and Spillover

W1 Please think back to the time when you were deciding to purchase water saving devices, perhaps recalling things that occurred shortly before and after **[timeframe]**. What factors motivated you to purchase the water saving devices? [? [DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE RESPONDENT HAS FINISHED, PROBE: Are there any other factors?]

- W1_1 Old equipment didn't work
- W1_2 Old equipment working poorly
- W1_3 The program incentive
- W1_4 The program technical assistance
- W1_5 Wanted to save energy
- W1_6 Wanted to reduce energy costs
- W1_7 The information provided by the Program
- W1_8 Past experience with this program
- W1_9 Because of past experience with another **SDGE** program
- W1_10 Recommendation from other utility program (*Probe: What program?*)
- W1_11 Recommendation of dealer/retailer
- W1_12 Recommendation of someone else (*Probe: Who?*)
- W1_13 Advertisement in newspaper (*Probe: For what program?*)
- W1_14 Radio advertisement (*Probe: For what program?*)
- W1_15 Other (*SPECIFY*)
- W1_16 Environmental concerns
- W1_17 Global warming
- W1_18 Liked the appearance of the **[measure]** more than the old one
- W1_19 Keeping up with the latest trends and fashions
- W1_20 DON'T KNOW
- W1_21 REFUSED

Free-Ridership Questions

[ASK FR SERIES FOR EACH MEASURE]

FR7² Our records indicate you received about **[amount of program incentive/subsidy]** from the **[utility] [program]** either directly or at the time of purchase to offset the cost of the **[equipment]**. Does this amount sound about right?

- 1 Yes *[SKIP TO FR1]*
- 2 No
- 8 (DON'T KNOW) *[SKIP TO FR1]*
- 9 (REFUSED) *[SKIP TO FR1]*

² For questions FR7 to FR11: Low-flow showerheads = _1, faucet aerators = _2.

FR8 What would you estimate to be the actual amount?
 _____ (RECORD RESPONSE) {SET=NEW AMOUNT OF PROGRAM
 INCENTIVE/SUBSIDY}
 -8 (DON'T KNOW)
 -9 (REFUSED)

FR1_1 At the time that you first heard about the **rebate** from **SDGE** for the **[measure]**, had you...? (READ LIST UNTIL R SAYS 'NO')

Already been thinking about purchasing a **[product type]**?

1 Yes
 2 No [SKIP TO FR2]
 -8 (DON'T KNOW) [SKIP TO FR2]
 -9 (REFUSED) [SKIP TO FR2]

FR1_2 Already begun collecting information about **[product type]**?

1 Yes
 2 No [SKIP TO FR2]
 -8 (DON'T KNOW) [SKIP TO FR2]
 -9 (REFUSED) [SKIP TO FR2]

FR1_3a (IF SHOWERHEAD) Already selected the **[product type]** you were going to get?

1 Yes
 2 No [SKIP TO FR2]
 -8 (DON'T KNOW) [SKIP TO FR2]
 -9 (REFUSED) [SKIP TO FR2]

FR1_3b (IF FAUCET AERATOR) Already decided to buy the **[product type]**?

1 Yes
 2 No [SKIP TO FR2]
 -8 (DON'T KNOW) [SKIP TO FR2]
 -9 (REFUSED) [SKIP TO FR2]

FR1_4 Already installed the energy efficient **[measure]**?

1 Yes
 2 No [SKIP TO FR2]
 -8 (DON'T KNOW) [SKIP TO FR2]
 -9 (REFUSED) [SKIP TO FR2]

FR1B So, the **[measure]** was installed before you learned about the **rebate** from **SDGE**?

- 1 Yes *[SKIP TO FR5]*
- 2 No
- 8 (DON'T KNOW)
- 9 (REFUSED)

FR2 Just to be sure I understand, did you have specific plans to install a **[product type]** before learning about the rebate available through the **Multi-family Rebate Program**?

- 1 Yes
- 2 No *[SKIP TO FR4]*
- 8 (DON'T KNOW) *[SKIP TO FR4]*
- 9 (REFUSED) *[SKIP TO FR4]*

FR3 Did you have to make any changes to your existing plans in order to receive a **rebate** through the **Multi-family Rebate Program**?

- 1 Yes
- 2 No
- 8 (DON'T KNOW)
- 9 (REFUSED)

FR4 *(REPEAT AS NEEDED FOR FR4 PARTS A – D)* If the **rebate** from **SDGE Multi-family Rebate Program** had not been available, would you still have:

FR4A Purchased any **[product type]** ?

- 1 Yes
- 2 No *[SKIP TO FR5]*
- 8 (DON'T KNOW)
- 9 (REFUSED)

FR4B Purchased the **[product type]** at the same time as you did? *(PROBE: That would be around [date of participation])*

- 1 Yes
- 2 No
- 8 (DON'T KNOW)
- 9 (REFUSED)

FR4B1 Bought the **[product type]** earlier than you did, or later?

- 1 Earlier
- 2 Same Time
- 3 Later
- 8 (DON'T KNOW)
- 9 (REFUSED)

FR4B2 *(IF EARLIER OR LATER)* How much **[earlier/later]** would you have bought the **[product type]**?

- _____ Years [AND/OR] _____ Months
- 8 (DON'T KNOW)
 - 9 (REFUSED)

FR4C *(IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM)* Without the program, would you have purchased the same quantity as you did?

- 1 Yes *[SKIP TO FR4D]*
- 2 No
- 8 (DON'T KNOW) *[SKIP TO FR4D]*
- 9 (REFUSED) *[SKIP TO FR4D]*

FR4C1 How many/much would you have purchased without the program?

- _____ *(RECORD NUMBER)*
- 8 (DON'T KNOW)
 - 9 (REFUSED)

FR4C2 *(IF PURCHASED AMOUNT IS GREATER THAN SAMPLE QUANTITY)* Let me make sure I understand. You said you would have purchased more **[product type]** if you hadn't participated in the program. Why would you have purchased a greater number of **[product type]** if you hadn't participated in the program?

_____ *(RECORD RESPONSE)*

FR4D *(IF SHOWERHEADS)* Purchased the same efficiency of **showerhead**?

- 1 Yes
- 2 No
- 8 (DON'T KNOW)
- 9 (REFUSED)

FR4E If the **rebate** from **SDGE Multi-family Rebate Program** had not been available, would you have done anything else differently?

- 1 Yes
- 2 No [SKIP TO FR5]
- 8 (DON'T KNOW) [SKIP TO FR5]
- 9 (REFUSED) [SKIP TO FR5]

FR4E1 (IF YES) What would you have done differently?

_____ (RECORD RESPONSE)

FR5 On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same **[measure]** if you had not received any **rebate** from the program?

- _____ (RECORD RESPONSE (0-10))
- 8 (DON'T KNOW)
 - 9 (REFUSED)

FR9 I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement.

If I had not had any assistance from the program, I would have paid the additional **[amount of program incentive/subsidy]** to buy the **[measure]** on my own?

- _____ (RECORD RESPONSE (0-10))
- 8 (DON'T KNOW)
 - 9 (REFUSED)

FR10 The **rebate** from the **SDGE Multi-family Rebate Program** was a critical factor in my decision to install these water saving devices?

- _____ (RECORD RESPONSE (0-10))
- 8 (DON'T KNOW)
 - 9 (REFUSED)

FR11 I would have bought a(n) **[product type]** within a year of when I did even without the **rebate** from the **SDGE Multi-family Rebate Program**.

- _____ (RECORD RESPONSE (0-10))
- 8 (DON'T KNOW)
 - 9 (REFUSED)

Consistency Check & Resolution

[C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

FR4A (efficiency enhancement measures) OR FR4D (incremental efficiency measures)

FR5

FR10

FR11

[IF FR4A/D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would have purchased the **[measure]** without the program']

[IF FR4A/D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would not have purchased the **[measure]** without the program']

[IF FR5 = 0,1 AND FR4A/D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would likely not have purchased the **[measure]** without the program']

[IF FR5 = 9,10 AND FR4A/D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would likely have purchased the **[measure]** without the program']

[IF FR10 = 0,1 AND FR4A/D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient **[product type]** without the program']

[IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient **[product type]** without the program']

[IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would have bought the **[product type]** within **[a year/2 years]** even without the program']

[IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would not have bought the **[product type]** within **[a year/2 years]** even without the program']

C1 Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **[measure]** at the time you did?
(RECORD VERBATIM RESPONSE BELOW)

C2 **[fill with wording and response categories to the one question which was inconsistent]** *(INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE)*

Spillover [ONLY ASK ONCE]

LSP1 Since you received **rebate** through **Multi-family Rebate Program** have you purchased and installed any water conservation products on your own without any assistance from the **SDGE Multi-family Rebate Program** or another utility program either at this facility or at other locations?

- 1 Yes, only at this home/facility
- 2 Yes, only at other locations
- 3 Yes, at this facility and other locations
- 4 No *[SKIP TO NSP1]*
- 8 (DON'T KNOW) *[SKIP TO NSP1]*
- 9 (REFUSED) *[SKIP TO NSP1]*

LSP2 How many more water conservation products did you buy on your own, compared to what you got through the program *(READ THE FOLLOWING ONLY FOR SMALL COMMERCIAL: at this facility and/or at another location)?*

(PROBE FOR PERCENT OR SHARE OF PROGRAM EQUIPMENT. READ THE FOLLOWING IF NEEDED) For example, was it about one-fourth (25%) of what you installed through the program, one-half (50%) of what your installed through the program, the same amount as what you installed though the program (100%), twice as much as what you installed through the program (200%), or some other amount?

LSP2 _____% at this home/facility

LSP2b _____% at another facility

-8 (DON'T KNOW)

-9 (REFUSED)

LSP3 I'm going to read a statement about the equipment that you purchased on your own, without any assistance from your utility. On a scale from 1-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement
 My experience with the [measure] installed through the **SDGE Multi-family Rebate Program** in [2006, 2007, 2008] influenced my decision to install more efficient [measure] on my own.

_____ (RECORD RESPONSE (0-10))
 -8 (DON'T KNOW)
 -9 (REFUSED)

LSP4 Why did you purchase this water conservation measure without the financial assistance available from the **SDGE Multi-family Rebate Program**? (DO NOT READ; INDICATE ALL THAT APPLY)

- LSP4_1** Too much paperwork
- LSP4_2** Takes too long to get approval
- LSP4_3** No time to participate, needed equipment immediately
- LSP4_4** The program had ended
- LSP4_5** The equipment would not qualify (PROBE: WHY NOT?)
- LSP4_6** The amount of the rebate wasn't important enough
- LSP4_7** Other (SPECIFY)
- LSP4_8** (DON'T KNOW)
- LSP4_9** (REFUSED)

NSP1 Since you participated in the **Multi-family Rebate Program** have you purchased and installed any other type of high efficiency equipment or made energy efficiency improvements (READ THE FOLLOWING ONLY FOR *SMALL COMMERCIAL: at this facility or at other locations*)?

- 1 Yes, only at this home/facility
- 2 Yes, only at other locations (SMALL COMMERCIAL ONLY)
- 3 Yes, at this facility and other locations (SMALL COMMERCIAL ONLY)
- 4 No
- 8 (DON'T KNOW)
- 9 (REFUSED)

NSP1B (IF NSP1 = YES) Did you receive any assistance for this equipment through [utility] [program] or another utility program?

- 1 Yes [SKIP TO Q5.3]
- 2 No
- 4 Skipped – item was added mid-field
- 8 (DON'T KNOW)
- 9 (REFUSED)

NSP2AT What type of high efficiency equipment did you install on your own?
(PROBE TO GET EXACT TYPE AND QUANTITY AND LOCATION/BUILDING IF SMALL COMMERCIAL)

_____ Type of equipment

NSP2AQ What quantity of high efficiency equipment did you install on your own?
(PROBE TO GET EXACT TYPE AND QUANTITY AND LOCATION/BUILDING IF SMALL COMMERCIAL)

_____ Quantity of equipment

NSP2BT What type of high efficiency equipment did you install on your own?
(PROBE TO GET EXACT TYPE AND QUANTITY AND LOCATION/BUILDING IF SMALL COMMERCIAL)

_____ Type of equipment

NSP2BQ What quantity of high efficiency equipment did you install on your own?
(PROBE TO GET EXACT TYPE AND QUANTITY AND LOCATION/BUILDING IF SMALL COMMERCIAL)

_____ Quantity of equipment

NSP2CT What type of high efficiency equipment did you install on your own?
(PROBE TO GET EXACT TYPE AND QUANTITY AND LOCATION/BUILDING IF SMALL COMMERCIAL)

_____ Type of equipment

NSP2CQ What quantity of high efficiency equipment did you install on your own?
(PROBE TO GET EXACT TYPE AND QUANTITY AND LOCATION/BUILDING IF SMALL COMMERCIAL)

_____ Quantity of equipment

NSP2DT What type of high efficiency equipment did you install on your own?
(PROBE TO GET EXACT TYPE AND QUANTITY AND LOCATION/BUILDING IF SMALL COMMERCIAL)

_____ Type of equipment

NSP2DQ What quantity of high efficiency equipment did you install on your own?
(*PROBE TO GET EXACT TYPE AND QUANTITY AND LOCATION/BUIDLING IF SMALL COMMERCIAL*)

_____ Quantity of equipment

[ASK FOR EACH TYPE OF EQUIPMENT IN NSP2]

NSP3a How do you know that this equipment is high efficiency? (PROBE: Was it Energy Star® rated?)

_____ Type 1

[ASK FOR EACH TYPE OF EQUIPMENT IN NSP2]

NSP3b How do you know that this equipment is high efficiency? (PROBE: Was it Energy Star® rated?)

_____ Type 2

[ASK FOR EACH TYPE OF EQUIPMENT IN NSP2]

NSP3c How do you know that this equipment is high efficiency? (PROBE: Was it Energy Star® rated?)

_____ Type 3

[ASK FOR EACH TYPE OF EQUIPMENT IN NSP2]

NSP3d How do you know that this equipment is high efficiency? (PROBE: Was it Energy Star® rated?)

_____ Type 4

NSP4 I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the **SDGE Multi-family Rebate Program** in [2006, 2007, 2008] influenced my decision to install different types of high efficiency equipment on my own.

(RECORD RESPONSE (0-10))

-8 (DON'T KNOW)

-9 (REFUSED)

NSP5 Why did you purchase this high efficiency equipment without going through a **SDGE** program? (DO NOT READ; INDICATE ALL THAT APPLY)

For NSP5_1 to NSP5_11

0 Not mentioned

1 Mentioned

- NSP5_1** Too much paperwork
- NSP5_2** Takes too long to get approval
- NSP5_3** No time to participate, needed equipment immediately
- NSP5_4** The program had ended
- NSP5_5** The equipment would not qualify (PROBE: WHY NOT?)
- NSP5_6** The amount of the rebate wasn't important enough
- NSP5_7** Did not know program was available
- NSP5_8** There was no program available
- NSP5_9** Other (SPECIFY)
- NSP5_10** (DON'T KNOW)
- NSP5_11** REFUSED

Recent Program Participation (Section 5)

Q5_3 Have you participated in any other programs offered by **SDGE** because of your experience with the **Multi-family Rebate Program**?

1 Yes

2 No [SKIP TO Q5_5]

-8 (DON'T KNOW) [SKIP TO Q5_5]

-9 (REFUSED) [SKIP TO Q5_5]

Q5_4 Which programs?

Q5_5 Which of the following phrases or messages have you heard before today?
(ROTATE STARTING POINT)

1 Continue

Q5_5A Good Housekeeping

1 Yes
2 No
-8 (DON'T KNOW)
-9 (REFUSED)

Q5_5B Click it or Ticket

1 Yes
2 No
-8 (DON'T KNOW)
-9 (REFUSED)

Q5_5C Ahnu

1 Yes
2 No
-8 (DON'T KNOW)
-9 (REFUSED)

Q5_5D Flex Your Power

1 Yes
2 No
-8 (DON'T KNOW)
-9 (REFUSED)

Q5_5E Flex Alert

1 Yes
2 No
-8 (DON'T KNOW)
-9 (REFUSED)

Q5_5F Energy Hog

1 Yes
2 No
-8 (DON'T KNOW)
-9 (REFUSED)

Q5_5G Galley Bay
1 Yes
2 No
-8 (DON'T KNOW)
-9 (REFUSED)

Q5_5H Energy Star
1 Yes
2 No
-8 (DON'T KNOW)
-9 (REFUSED)

Q5_5I Hollister Co
1 Yes
2 No
-8 (DON'T KNOW)
-9 (REFUSED)

Property Manager and Site Characteristics (Section 6)

Now, I'd like to get some background information about you and the multifamily property at **[ADDRESS]**.

R1 What is your position or job title with the company that manages this property?

1 Owner
2 Property/leasing manager/associate
3 Senior property manager
4 Maintenance supervisor
5 Senior /regional maintenance supervisor
6 Purchasing manager
7 Other (*RECORD*)
-8 (DON'T KNOW)
-9 (REFUSED)

R2 How many years have you been in the business of property ownership and management?

— Years
-8 (DON'T KNOW)
-9 (REFUSED)

R3 How many years have you been in your current position at this property?

- ___ Years
- 8 (DON'T KNOW)
- 9 (REFUSED)

R4 How many buildings are there at this location?

- ___ Locations
- 8 (DON'T KNOW)
- 9 (REFUSED)

R5 About how many apartment units are located in the building or buildings at the property?

- ___ Units
- 8 (DON'T KNOW)
- 9 (REFUSED)

R6 Do you or your firm own the property only, manage the property only, or do you both own and manage the property?

- 1 Own it only
- 2 Manage it only
- 3 Both own and manage it
- 4 Other
- 8 (DON'T KNOW)
- 9 (REFUSED)

R7 Do you have one or more centralized systems at the property that provide heating to all tenant units? By a centralized system, I mean a system that provides heat to more than one tenant unit.

- 1 Yes
- 2 No
- 8 (DON'T KNOW)
- 9 (REFUSED)

R8 Do you have a one or more centralized systems at the property that provide cooling to all units?

- 1 Yes
- 2 No
- 8 (DON'T KNOW)
- 9 (REFUSED)

R11 Is the electricity for the tenant units at this property individually metered or master-metered? In other words, is there one electric meter for several tenants?

- 1 Individually metered
- 2 Master metered
- 3 Other (*SPECIFY*)
- 8 (DON'T KNOW)
- 9 (REFUSED)

R12 Is the natural gas for the tenant units at this property individually metered or master-metered?

- 1 Individually metered
- 2 Master metered
- 3 Other (*SPECIFY*)
- 8 (DON'T KNOW)
- 9 (REFUSED)

R9a Does the building have a centralized water heating source?

- 1 Yes
- 2 No *[SKIP TO R9C]*
- 8 (DON'T KNOW) *[SKIP TO R9C]*
- 9 (REFUSED) *[SKIP TO R9C]*

R9b What type of water heating system does the building have?

- 1 Boiler *[SKIP TO R10]*
- 2 Electric water heater *[SKIP TO R10]*
- 3 Gas water heater *[SKIP TO R10]*
- 4 Other (*SPECIFY*) *[SKIP TO R10]*
- 8 (DON'T KNOW) *[SKIP TO R10]*
- 9 (REFUSED) *[SKIP TO R10]*

R9c What type of fuel does the primary unit water heating system use?

- 1 Electricity
- 2 Natural Gas
- 3 Propane
- 4 Solar (sun)
- 5 Other (*SPECIFY*)
- 8 (DON'T KNOW)
- 9 (REFUSED)

R10 Are the tenants responsible for paying their own utility bills or are the utilities included in the rent?

- 1 Tenants pay their own bills
- 2 Utilities are included in rent
- 3 Tenants pay some utilities while others are included in rent
- 4 *Other (SPECIFY)*
- 8 (DON'T KNOW)
- 9 (REFUSED)

SCG 3517 Single Family Energy Efficiency Retrofit Program

The following measures will be asked about in the survey: Energy Star dishwasher, Energy Star or energy efficient clothes washer, high efficiency water heater, tankless water heater, high efficiency central gas furnace, attic insulation, wall insulation, low flow showerhead and faucet aerators.

Instrument-specific variables-- The CATI software will automatically fill the appropriate description in the questions.

[Product Type]

Attic insulation
Wall insulation
Dishwasher
Clothes washer
Furnace
Water heater
Showerhead and faucet aerators

[Measure]

Attic insulation
Wall insulation
Energy Star dishwasher
Energy Star/energy efficient clothes washer
High efficiency central gas furnace
High efficiency water heater
Tankless water heater
Low flow showerhead and faucet aerators

[Assistance]

Rebate/free

[Program]

2006-2008 Residential Retrofit Program

[Utility]

SCG

[Program Incentive]

Rebate dollar amount

[Quantity]

Quantity exchanged/installed

[Incremental efficiency measures]

Energy Star dishwasher
Energy Star/energy efficient clothes washer
High efficiency central gas furnace
High efficiency water heater
Tankless water heater

[Efficiency enhancement measures]

Low flow showerhead and faucet aerators
Insulation

Introduction

Hello, my name is [interviewer name], and I'm calling on behalf of the California Public Utilities Commission regarding Southern California Gas Company's 2006-2008 Residential Retrofit Program, also known as the Home Energy Efficiency Rebate Program. May I speak with [contact name]?

- 1 Yes
- 2 No [attempt to convert; if R not available, ask for an adult who makes decisions on how household uses energy]

I'm with PA Consulting Group, an independent research firm. I am calling to learn about your experiences with the . . . (READ ONE OR BOTH DEPENDING UPON THE MIX OF MEASURES):

Water Conservation only: . . . free faucet aerators and low-flow showerhead you received at a community event.

Other Measures: . . . [measures] you purchased and received a rebate for through Southern California Gas Company's Residential Retrofit Program (also referred to as the Home Energy Efficiency Rebate Program).

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and **SCG** better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about (non-billing analysis=15/billing analysis=20) minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-XXX-XXXX)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the [measures] you purchased and received a rebate through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call Mikhail Haramati at 415-703-1458, or visit their website: www.cpuc.ca.gov/eevalidation.)

(NOTE: For all questions, "DON'T KNOW" and "REFUSED" will be coded if offered as a response.)

Recall of Participation/Identification of Decision Maker (Section 1)

(QUANTITY REFERS TO THE NUMBER RECEIVED WITHIN THE MEASURE CATEGORY--E.G., 3 FAUCET AERATORS)

Q1_1aa (WATER CONSERVATION MEASURES) Program records indicate that you received three free faucet aerators and a low-flow showerhead at a community event through the 2006-2008 Residential Retrofit Program around **[insert date of participation]**.

Do you recall receiving these?

- 1 Yes
- 2 No
- 8 Don't know

Q1_1ab Is this the correct quantity?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

Q1_1ac (IF QUANTITY > 1) What is the correct quantity?

- _____ Quantity
- 8 Don't know
- 9 Refused

Q1_1b (OTHER MEASURES) Program records indicate that you purchased and received a mail-in or instant rebate for the following energy efficient equipment through the 2006-2008 Residential Retrofit Program around **[insert date of participation]**.

Q1_1ba_1 – Q1_1ba_8 Do you recall purchasing a/an [# of measure] [measure – see footnote below]?

- 1 Yes
- 2 No
- 8 Don't know

Q1_1bb_1 – Q1_1bb_8 Is this the correct quantity?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

Q1_1bc_1 – Q1_1bc_8 (IF QUANTITY > 1) What is the correct quantity?

- _____ Quantity
- 8 Don't know
- 9 Refused

(Measure –specific data represented as suffix as follows: _1=Attic insulation, _2=Wall insulation, _3=Energy Star dishwasher, _4=Energy Star/energy efficient clothes washer, _5=High efficiency central gas furnace, _6=High efficiency water heater, _7=Tankless water heater, _8=Low flow showerhead and faucet aerators

Q1_2b (OTHER MEASURES ONLY) Southern California Gas offers rebates for replacing less efficient gas-fired appliances, heating equipment with more energy-efficient equipment, and for adding insulation. Rebates are paid in two ways—either in response to a mail-in application for a rebate or through an instant rebate at the retailer. The rebate program is referred to as the 2006-2008 Residential Retrofit Program, or the Home Energy Efficiency Rebate Program, or the Single Family Energy Efficiency Retrofit program. Are you sure you don't recall purchasing the/these [measures] and applying for a rebate from the utility? (RECORD ONE NUMBER)

- 1 Don't remember -> [TERMINATE, RECORD ANY COMMENTS MADE BY RESPONDENT BEFORE EXITING]
- 2 Remember -> [READ, "GREAT, THEN LET'S CONTINUE", SKIP TO Q1_4]
- 9 (REFUSED) (TERMINATE)

Q1_3 May I please speak with that person? (RECORD ONE NUMBER)

- 1 Yes (BEGIN THE SURVEY AGAIN WITH THIS NEW RESPONDENT)
- 2 No (TERMINATE)
- 8 (DON'T KNOW) (TERMINATE)
- 9 (REFUSED) (TERMINATE)

Q1_4 Are you the person in your household who decided to (WATER CONSERVATION: accept these water saving devices/OTHER MEASURES: purchase this/these [measures] and receive a rebate) through Southern California Gas Company's Residential Retrofit Program?

- 1 Yes
- 2 No (SKIP BACK TO Q1_3)
- 8 (DON'T KNOW) (TERMINATE)
- 9 (REFUSED) (TERMINATE)

Sources of Program Information (Section 2)

Q2_1 How did you hear about (REBATE: rebate offered on [measures]/WATER SAVING: free water saving devices) available as part of SCG's Residential Retrofit Program? (PROBE: Did you hear about the program from any other sources?) (DO NOT READ LIST, RECORD ALL THAT APPLY)

For Q2_1_1 to Q2_1_18:

- 0 Not mentioned
- 1 Mentioned

Utility provided information

- Q2_1_1** (Advertising—radio, newspaper, trade journal, billboard, TV)
- Q2_1_2** (Bill insert, newsletter, or other mailing)
- Q2_1_3** (Website)
- Q2_1_4** (Email)
- Q2_1_5** (Other utility) (SPECIFY)

Local Government/Community event/Nonprofit

- Q2_1_6** (Meeting, event, workshop, training) (SPECIFY)
- Q2_1_7** (School)
- Q2_1_8** (Local government/community agency) (SPECIFY)
- Q2_1_9** (City/county Energy Center such as Pacific Energy Center, Stockton, Food Service) (SPECIFY)
- Q2_1_10** (Advertising—radio, newspaper, trade journal, billboard, TV)

Other

- Q2_1_11** (Home or building audit or assessment) (SPECIFY)
- Q2_1_12** (Meeting, event, workshop training) (SPECIFY)
- Q2_1_13** (Flex your Power TV or radio advertising)
- Q2_1_14** (Other advertising, don't recall)
- Q2_1_15** (Friend/Relative/Neighbor)
- Q2_1_16** (Other, Specify: _____)
- Q2_1_17** (DON'T KNOW) (SKIP TO SECTION 3)
- Q2_1_18** (REFUSED) (SKIP TO SECTION 3)

Installation Behavior (Section 3)

(QUESTIONS IN THIS SECTION WILL BE REPEATED FOR EACH MEASURE R RECALLS)

Q3_1a_1 to Q3_1a_8 (IF QUANTITY=1) Now, I would like to understand what you did with the [measure]. Is this [measure] currently installed at your home (either indoors or outdoors)? (RECORD ONE NUMBER)

- 1 Yes (SKIP TO SECTION 4)
- 2 No
- 8 (DON'T KNOW) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)
- 9 (REFUSED) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)

Q3_1b_1 to Q3_1b_8 (IF QUANTITY=1) Which of the following best describes what happened with the [measure]? (READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location (SKIP TO 3.3a)
- 2 It was installed at your home but is now permanently removed (example: broke, burned out, don't fit, don't like, etc.) (SKIP TO 3.6)
- 3 It is in storage because it is only needed during certain months of the year
- 4 It is in storage for some other reason (SKIP TO SECTION 3.8)
- 5 It was sold or given away (SKIP TO 3.3a)
- 6 Something else (SPECIFY)
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q3_2 (IF QUANTITY>1) Now, I would like to understand what you did with the [quantity] [measure]. (READ LIST, RECORD NUMBER)

Q3_2a_1 to Q3_2a_8 How many are currently installed at your home (either indoors or outdoors) (IF RESPONSE=QUANTITY, SKIP TO Q3_4)

Q3_2b_1 to Q3_2b_8 How many are installed at some other location?

Q3_2c_1 to Q3_2c_8 How many were installed at your home (either indoors or outdoors) but are now permanently removed (example: broke, burned out, don't fit, don't like, etc.)

Q3_2d_1 to Q3_2d_8 How many are in storage because they are only needed during certain months of the year?

Q3_2e_1 to Q3_2e_8 How many are in storage for some other reason?

Q3_2f_1 to Q3_2f_8 How many were sold or given away?

Q3_2g_1 to Q3_2g_8 Something else? (SPECIFY)

Q3_3a_1 to Q3_3a_8 (ASK IF Q3_1b=1, Q3_1b=5, Q3_2b>0, Q3_2f>0) Is the/Are these [measure] located in SCE's service territory?

- 1 Yes
- 2 No
- 8 (DON'T KNOW)
- 9 (REFUSED)

(SKIP TO Q5_3 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (Q3_2B + Q3_2F = QTY) AND THAT LOCATION IS **OUTSIDE** OF SCE'S SERVICE TERRITORY (Q3_3A NE 1).
 SKIP TO W1 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (Q3_2B + Q3_2F = QTY) AND THAT LOCATION IS **INSIDE** OF SCE'S SERVICE TERRITORY (Q3_3A = 1).

Removed Measures (ASK ONLY IF THEY SAY THEY REMOVED A MEASURE AFTER INSTALLED, Q3_1b=2 or Q3_2c>0)

Q3_6 Now let's talk about [measure] you said you installed but have since removed. Why was this removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

(See footnote below. Q3_6_1_X to Q3_6_9_X – "X" represents each measure)

- Q3_6_1_1 to Q3_6_1_8 (Equipment failed)
- Q3_6_2_1 to Q3_6_2_8 (Didn't work properly)
- Q3_6_3_1 to Q3_6_3_8 (Wrong size—too small or too large)
- Q3_6_4_1 to Q3_6_4_8 (Low water flow)
- Q3_6_5_1 to Q3_6_5_8 (Didn't like the color)
- Q3_6_6_1 to Q3_6_6_8 (Didn't like appearance/unattractive)
- Q3_6_7_1 to Q3_6_7_8 (Other, Specify: _____)
- Q3_6_8_1 to Q3_6_8_8 (DON'T KNOW)
- Q3_6_9_1 to Q3_6_9_8 (REFUSED)

Q3_7 What did you replace [measure] with? (DO NOT READ LIST; PROBE FOR EFFICIENCY, RECORD ALL THAT APPLY)

- Q3_7_1_1 to Q3_7_1_8 (With a new high efficiency [measure])
- Q3_7_2_1 to Q3_7_2_8 (With a less efficient [product type])
- Q3_7_3_1 to Q3_7_3_8 (Re-installed old equipment)
- Q3_7_4_1 to Q3_7_4_8 (Did not replace)
- Q3_7_5_1 to Q3_7_5_8 (Other, Specify: _____)
- Q3_7_6_1 to Q3_7_6_8 (DON'T KNOW)
- Q3_7_7_1 to Q3_7_7_8 (REFUSED)

Measures in Storage (ASK ONLY IF THEY SAY MEASURE IS IN STORAGE FOR SOME OTHER REASON, Q3_1b=4 or Q3_2e>0)

(Measure –specific data represented as suffix as follows: _1=Attic insulation, _2=Wall insulation, _3=Energy Star dishwasher, _4=Energy Star/energy efficient clothes washer, _5=High efficiency central gas furnace, _6=High efficiency water heater, _7=Tankless water heater, _8=Low flow showerhead and faucet aerators

Q3_8_1 to Q3_8_8 When do you think you will install the [measure]? Would you say within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

- 1 Within the next 3 months
- 2 3 to 6 months from now
- 3 6 to 12 months from now
- 4 More than a year from now
- 5 Never
- 8 (DON'T KNOW)
- 9 (REFUSED)

NTGR and Spillover (Section 4)

Warm-up Questions/Background Context¹

W1int Please think back to the time when you were deciding to (REBATE: buy the energy saving [product types]/WATER SAVINGS: get the free water saving devices), perhaps recalling things that occurred in your household shortly before and after [timeframe].

1 Continue

W1 What factors motivated you to (REBATE: purchase energy saving [product types]/ WATER SAVINGS: get the free water saving devices)? {? {DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE RESPONDENT HAS FINISHED, PROBE: Are there any other factors?}

For W1_1 to W1_21:

- 0 Not mentioned
- 1 Mentioned

- W1_1** Old equipment didn't work
- W1_2** Old equipment working poorly
- W1_3** The program incentive
- W1_4** The program technical assistance
- W1_5** Wanted to save energy
- W1_6** Wanted to reduce energy costs
- W1_7** The information provided by the Program
- W1_8** Past experience with this program
- W1_9** Because of past experience with another [utility] program
- W1_10** Recommendation from other utility program (Probe: What program? _____)
- W1_11** Recommendation of dealer/retailer
- W1_12** Recommendation of someone else (Probe: Who? _____)
- W1_13** Advertisement in newspaper (Probe: For what program? _____)
- W1_14** Radio advertisement (Probe: For what program? _____)
- W1_15** Other (SPECIFY)
- W1_16** Environmental concerns
- W1_17** Global warming
- W1_18** Liked the appearance of the [measure] more than the old one
- W1_19** Keeping up with the latest trends and fashions
- W1_20** DON'T KNOW
- W1_21** REFUSED

¹ Individual contract groups may chose to modify the wording of these warm-up questions.

(Measure –specific data represented as suffix as follows: _1=Attic insulation, _2=Wall insulation, _3=Energy Star dishwasher, _4=Energy Star/energy efficient clothes washer, _5=High efficiency central gas furnace, _6=High efficiency water heater, _7=Tankless water heater, _8=Low flow showerhead and faucet aerators

{REPEAT W2-C2 FOR FIRST MEASURE. REPEAT SERIES IF IS A SECOND MEASURE}

{ASK W2a-W6 ONLY FOR INCREMENTAL EFFICIENCY REBATE MEASURES}

W2a to W2a_2 Did you get this [measure] to replace [a/an] existing [product type]? }

- 1 Yes {SKIP TO W3}
- 2 No
- 8 Don't Know (SKIP TO FR1)
- 9 Refused (SKIP TO FR1)

W2b to W2b_2 Did you get this [measure] because you wanted to add another/more [product type] to your [home/business]?

- 1 Yes (SKIP TO FR1)
- 2 No
- 8 Don't Know (SKIP TO FR1)
- 9 Refused (SKIP TO FR1)

W2c to W2c_2 Is this [product type] the first you have ever had in your [home/business]?

- 1 Yes (SKIP TO FR1)
- 2 No (SKIP TO FR1)
- 8 Don't Know (SKIP TO FR1)
- 9 Refused (SKIP TO FR1)

W3 to W3_2 {IF MEASURE=LIGHTING} What type of lighting did this replace? {DO NOT READ}

- 1 Incandescent
- 2 CFL
- 3 Other (SPECIFY)
- 8 DON'T KNOW
- 9 REFUSED

W4 to W4_2 {IF MEASURE NOT CFL} About how old was the [product type] you replaced? {READ CATEGORIES IF NEEDED}

- 1 Less than 5 years old
- 2 5 to less than 10 years old
- 3 10 to less than 20 years old
- 4 20 years to less than 30 years old
- 5 30 or more years old
- 8 DON'T KNOW
- 9 REFUSED

W5 to W5_2 Was the old [product type] working or not working?

- 1 Working
- 2 Not working {SKIP TO FR1}
- 8 DON'T KNOW {SKIP TO FR1}
- 9 REFUSED {SKIP TO FR1}

(Measure –specific data represented as suffix as follows: _1=Attic insulation, _2=Wall insulation, _3=Energy Star dishwasher, _4=Energy Star/energy efficient clothes washer, _5=High efficiency central gas furnace, _6=High efficiency water heater, _7=Tankless water heater, _8=Low flow showerhead and faucet aerators

W6 to W6_2 Was the old **[product type]** in good, fair, or poor working condition?

- 1 Good
- 2 Fair
- 3 Poor
- 8 DON'T KNOW
- 9 REFUSED

W7 to W7_2 (INSULATION) Was the **[product type]** you received a rebate for installed in areas where no prior insulation existed?

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

Free-Ridership Questions

FR1 At the time that you first heard about the **[assistance]** from **[utility]** for **[measure]**, had you...? {READ LIST UNTIL R SAYS 'NO'}

For FR1_1 to FR1_7_2:

- 1 Yes
- 2 No
- 3 Other (*SPECIFY*)
- 8 Don't know
- 9 Refused

- FR1_1 to FR1_1_2** Already been thinking about purchasing **[product type]**? {IF NO, SKIP TO FR2}
- FR1_2 to FR1_2_2** Already begun collecting information about **[product type]**? {IF NO, SKIP TO FR2}
- FR1_3a to FR1_3a_2** **{FOR INCREMENTAL EFFICIENCY MEASURES}** Already selected the **[measure]** you were going to get? {IF NO, SKIP TO FR2}
- FR1_3b to FR1_3b_2** **{FOR EFFICIENCY ENHANCEMENT MEASURES}** Already decided to buy the **[product type]**? {IF NO, SKIP TO FR2}
- FR1_4 to FR1_4_2** Already installed the energy efficient **[measure]**? {IF YES, SKIP TO FR5; ELSE FR2}
- FR1_5 to FR1_5_2** {DON'T READ} Other: _____ {SKIP TO FR2}
- FR1_6 to FR1_6_2** DON'T KNOW {SKIP TO FR2}
- FR1_7 to FR1_7_2** REFUSED {SKIP TO FR2}

FR2 to FR2_2 Just to be sure I understand, did you have specific plans to install a(n) **[product type]** before learning about the **[assistance]** available through the **[program]**?

- 1 Yes
- 2 No {SKIP TO FR4}
- 8 DON'T KNOW {SKIP TO FR4}
- 9 REFUSED {SKIP TO FR4}

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FR3 to FR3_2 Did you have to make any changes to your existing plans in order to receive this [assistance] through the [program]?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

FR4i to FR4i_2 {REPEAT AS NEEDED FOR FR4 PARTS A – D} If the [assistance] from the [utility] [program] had not been available, would you still have:

- 1 Continue

FR4A to FR4A_2 Purchased any [product type] ?

- 1 Yes
- 2 No {SKIP TO FR5}
- 8 DON'T KNOW
- 9 REFUSED

FR4B to FR4B_2 Purchased the [product type] at the same time as you did? (PROBE: That would be around [date of participation])

- 1 Yes {SKIP TO FR4C}
- 2 No
- 8 DON'T KNOW {SKIP TO FR4C}
- 9 REFUSED {SKIP TO FR4C}

FR4B1 to FR4B1_2 Bought the [product type] earlier than you did, or later?

- 1 Earlier
- 2 Same Time {REPEAT QUESTION FR4B}
- 3 Later
- 8 DON'T KNOW {SKIP TO FR4C}
- 9 REFUSED {SKIP TO FR4C}

FR4Bx to FR4Bx_2 How much [earlier/later] would you have bought the [product type]?

- 1 **FR4b_yr to FR4b_yr2**____Years {AND/OR} **FR4b_mn to FR4b_mn2**____Months
- 8 DON'T KNOW
- 9 REFUSED

(Measure –specific data represented as suffix as follows: _1=Attic insulation, _2=Wall insulation, _3=Energy Star dishwasher, _4=Energy Star/energy efficient clothes washer, _5=High efficiency central gas furnace, _6=High efficiency water heater, _7=Tankless water heater, _8=Low flow showerhead and faucet aerators

FR4C to FR4C_2 {IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM, OR MEASURE IS OF VARIABLE AMOUNT} Without the program, would you have purchased the same quantity as you did?

- 1 Yes {SKIP TO FR4D}
- 2 No
- 8 DON'T KNOW {SKIP TO FR4D}
- 9 REFUSED {SKIP TO FR4D}

FR4C1x to FR4C1x_2 How many/much would you have purchased without the program?

- 1 **FR4C1 to FR4C1_2** _____ {RECORD NUMBER}
- 8 DON'T KNOW
- 9 REFUSED

FR4D to FR4D_2 {FOR INCREMENTAL EFFICIENCY MEASURES AND INSULATION} Purchased the same [INSULATION = R value/OTHER=efficiency] of [product type]?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

FR4E to FR4E_2 If the [assistance] from the [utility] [program] had not been available, would you have done anything else differently?

- 1 Yes
- 2 No {SKIP TO FR5}
- 8 DON'T KNOW {SKIP TO FR5}
- 9 REFUSED {SKIP TO FR5}

FR4E1 to FR4E1_2 What would you have done differently?

{RECORD RESPONSE}: _____

NOTE: TWO INSTRUMENTS WILL BE CREATED DURING PRE-TESTING. ONE USING A 1-5 POINT SCALE AND ONE USING A 0-10 POINT SCALE TO DETERMINE WHICH SEEMS LESS CONFUSING TO CUSTOMERS AND IF THERE IS AN EFFECT ON TIME TO COMPLETE

NOTE: FOR **INCREMENTAL EFFICIENCY MEASURES**, RESPONDENT WILL BE RANDOMLY ASSIGNED TO BE READ EITHER FR5 OR FR6. FOR **EFFICIENCY ENHANCEMENT MEASURES**, ALL RESPONDENTS WILL BE ASKED FR5.

FR5 to FR5_2 On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same [measure] if you had not received any [assistance] from the program?

- _____ {RECORD RESPONSE (0-10)} {SKIP TO FR7}
- 8 DON'T KNOW {SKIP TO FR7}
- 9 REFUSED {SKIP TO FR7}

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FR6 to FR6_2 On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought a less efficient **[product type]** if you had not received any **[assistance]** from the program?

_____ {RECORD RESPONSE (0-10)}
 -8 DON'T KNOW
 -9 REFUSED

{SKIP TO FR10 IF PROGRAM DOES NOT PROVIDE A FINANCIAL INCENTIVE/SUBSIDY OR DATABASE DOES NOT CONTAIN THAT INFORMATION}

FR7 to FR7_2 Our records indicate you received about **[amount of program incentive/subsidy]** from the **[utility] [program]** either directly or at the time of purchase to offset the cost of the **[product type]**. Does this amount sound about right?

1 Yes {SKIP TO FR9}
 2 No
 -8 DON'T KNOW {SKIP TO FR9}
 -9 REFUSED {SKIP TO FR9}

FR8 to FR8_2 What would you estimate to be the actual amount?

_____ {RECORD RESPONSE} {SET=NEW AMOUNT OF PROGRAM INCENTIVE/SUBSIDY}
 -8 DON'T KNOW
 -9 REFUSED

FR9i to FR9i_2 I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

1 Continue

FR9 to FR9_2 If I had not had any assistance from the program, I would have paid the additional **[amount of program incentive/subsidy]** to buy the **[measure]** on my own?

_____ {RECORD RESPONSE (0-10)}
 -8 DON'T KNOW
 -9 REFUSED

FR10I TO FR10I_2 {READ ONLY IF FR7-FR9 WAS SKIPPED}: I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

1 Continue

FR10 to FR10_2 The **[assistance]** from the **[utility] [program]** was a critical factor in my decision to
(REBATE: purchase the high efficiency/energy efficient product./WATER
CONSERVATION: install the water saving devices).

{RECORD RESPONSE (0-10)} _____
-8 DON'T KNOW
-9 REFUSED

FR11 to FR11_2 I would have bought a (n) **[product type]** within a **year** of when I did even without the
[assistance] from the **[utility] [program]**.

_____ {RECORD RESPONSE (0-10)}
-8 DON'T KNOW
-9 REFUSED

FR12A to FR12A_2 **{FOR INCREMENTAL EFFICIENCY REBATE MEASURES}** The **[assistance]** from
the **[utility] [program]** was not necessary to cause me to purchase the higher
efficiency product when I bought my new **[product type]**.

_____ {RECORD RESPONSE (0-10)}
-8 DON'T KNOW
-9 REFUSED

FR12B to FR12B_2 **{FOR EFFICIENCY ENHANCEMENT REBATE MEASURES}** The **[assistance]** from
the **[utility] [program]** was not necessary to cause me to (REBATE:
purchase/WATER SAVING: install) the new **[product type]**.

{RECORD RESPONSE (0-10)} _____
-8 DON'T KNOW
-9 REFUSED

Consistency Check & Resolution

{C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) An algorithm will be provided after pretesting. The question responses that will be used to trigger C1 are:

FR4A (only for efficiency enhancement measures)
FR4D (only for incremental efficiency measures)
FR5 or FR6 depending upon which version of the question they received
FR10
FR11
FR12a or FR12b depending upon which version of the question they received}

C1_1 to C1_2 Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **[measure]** at the time you did? {RECORD VERBATIM RESPONSE BELOW}

C2 **[fill with wording and response categories to the one question which was inconsistent]**
{INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE}

(NOTE: no lighting measures so no 'like spillover' questions)

Recent Program Participation (Section 5)

Q5_5 Which of the following phrases or messages have you heard before today? (ROTATE STARTING POINT)

1 Continue

Q5_5A Energy Star

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q5_5B Don't Trash California

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q5_5C Energy Hog

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q5_5D Click it or Ticket

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q5_5E Flex Your Power

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q5_5F Flex Alert

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q5_5G Spare the Air

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- 8 (DON'T KNOW)
- 9 (REFUSED)

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 6)

NOTE: ALL QUESTIONS STARTING WITH THE LETTER 'C' ARE QUESTIONS THAT WOULD BE ASKED ONLY IF A BILLING ANALYSIS IS BEING DONE FOR DISHWASHERS, CLOTHES WASHERS, WATER HEATER (STORAGE AND TANKLESS) CENTRAL GAS FURNACE, AND ATTIC/WALL INSULATION.

The last questions ask about household characteristics to make sure we're getting a representative sample of **[utility]** residents.

Q6_1 The last questions ask about household characteristics to make sure we're getting a representative sample of **[utility]** residents.

Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other (SPECIFY)
- 8 (DON'T KNOW)
- 9 (REFUSED)

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Q6_2 In what type of building do you live? (READ LIST IF NEEDED)
(PROBE FOR 'Condo': "How many units are in your building?")

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Boat, RV, Van, etc.
- 8 Other (SPECIFY)
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q6_3 About when was this building first built? (READ LIST IF NEEDED)

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 7 (OTHER, specify)
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q6_3a Were you living in this same home around [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q6_4a How many full or half bathrooms do you have in your home? (PROBE: A full bathroom is one that has a sink with running water, and a toilet, and either a bathtub or shower. A half bathroom has either a toilet or a bathtub or a shower?)

- _____ Bathrooms
- 8 (DON'T KNOW)
 - 9 (REFUSED)

Q6_4b How many bedrooms do you have in your home (If a one-room efficiency, or studio apartment, open loft, bedrooms=0)

- _____ Bedrooms
- 8 (DON'T KNOW)
 - 9 (REFUSED)

Q6_4c Other than bedrooms and bathrooms, how many other rooms are there in your home? Do not count laundry rooms, foyers, unfinished storage spaces, porches, or garages.

- _____ Other rooms
- 8 (DON'T KNOW)
 - 9 (REFUSED)

[If Q6_3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO Q6_5a]

C6_4d Did you do any remodeling, renovation or additions since January 1, 2005?

- 1 Yes
- 2 No (SKIP TO Q6_5a)
- 8 (DON'T KNOW) (SKIP TO Q6_5a)
- 9 (REFUSED) (SKIP TO Q6_5a)

C6_4en How many remodels, renovations or additions have you done since then?

- 1 **C6_4e**_____Remodels, renovations or additions
- 8 (DON'T KNOW)
- 9 (REFUSED)

C6_4fi I'm going to ask you several questions regarding the timeframe of your remodels, renovations or additions. We will try to run through them quickly. (ASK A-C FOR EACH REMODEL THAT TOOK PLACE SINCE JANUARY 1, 2005).

- 1 Continue

C6_4fa1 to C6_4fa4 In what month and year did it start?

- 1 Enter date (C6_4fa1m to C6_4fa4m _____Start month)
(C6_4fa1y to C6_4fa4y _____Start year)
- 8 Don't know
- 9 Refused

C6_4fb1 to C6_4fb4 Did this increase or decrease your home's square footage, not counting unfinished storage spaces, porches or garages?

- 1 Increase
- 2 Decrease
- 3 Same
- 8 Don't know
- 9 Refused

C6_4fc1 to C6_4fc4 In what month and year did it finish?

- 1 Enter date (C6_4fc1m to C6_4fc4m _____Finish month)
(C6_4fc1y to C6_4fc4y _____Finish year)
- 8 Don't know
- 9 Refused

Q6_5a Including yourself, how many people currently live in your home year-round?

- _____ People
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q6_5b (IF Q6_5a=1) Which of the following best describes your age?

- 1 Less than 18 years old
- 2 18-24 years old
- 3 25-34 years old
- 4 35-44 years old
- 5 45-54 years old
- 6 55-64 years old
- 7 65 or older
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q6_5c (IF Q6_5a>1) Including yourself, how many people currently living in your home year-round are in the following age groups?

For Q6_5c1 to Q6_5c7:

- _____ Number of people
- 9 Refused

- Q6_5c1** Less than 18 years old
- Q6_5c2** 18-24 years old
- Q6_5c3** 25-34 years old
- Q6_5c4** 35-44 years old
- Q6_5c5** 45-54 years old
- Q6_5c6** 55-64 years old
- Q6_5c7** 65 or older
- (TOTAL SHOULD EQUAL Q6_5a)

[If Q6_3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO Q6_7]

C6_5d Has the total number of people living in your home year-round changed since [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No (SKIP TO Q6_6)
- 8 (DON'T KNOW) (SKIP TO Q6_6)
- 9 (REFUSED) (SKIP TO Q6_6)

C6_5e Do more people or less people live in your home now?

- 1 More → How many more? **C6_5e1**_____
- 2 Less → How many less? **C6_5e2**_____
- 8 (DON'T KNOW)
- 9 (REFUSED)

C6_5fx In what year(s) did the number of people in your household change? (RECORD ALL YEARS OF CHANGE—NET CHANGE IS CALCULATED FROM C6_5e)

- 1 Enter year **C6_5f1** _____ YEAR
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q6_7int This next question asks about other changes you have made that we haven't already talked about.

- 1 Continue

Q6_7x Since January 1, 2005 have you made any other changes to the appliances, equipment or other characteristics of your home that would affect how much energy you are using?

- 1 Yes [ASK Q6_7a-NSP5 FOR EACH MEASURE INSTALLED BEFORE ASKING Q6_7i]
- 2 No [SKIP TO Q6_7i]
- 8 DK [SKIP TO Q6_7i]
- 9 REFUSED [SKIP TO Q6_7i]

Q6_7 What types of changes did you make? (DO NOT READ. RECORD EACH TYPE OF CHANGE MADE. PROBE: Anything else?)

Heating and air conditioning measures

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Furnace
- 5 Programmable thermostat

Lighting measures

- 6 Fluorescent indoor fixture
- 7 Fluorescent outdoor fixture
- 8 Compact fluorescent bulb
- 9 Compact fluorescent fixture
- 10 Motion sensor
- 11 Dimmer switch

Laundry measures

- 12 Clothes washer
- 13 Clothes dryer

Water using measures

- 14 Water heater
- 15 Low Flow showerheads
- 16 Faucet aerators

Kitchen appliances

- 17 Refrigerator
- 18 Freezer
- 19 Range/oven
- 20 Dishwasher

Pool/spa/jacuzzi

- 21 Swimming pool
- 22 Swimming pool pump
- 23 Swimming pool cover
- 24 Spa/jacuzzi

Insulation/weatherstripping/sealing

- 25 Floor, wall, ceiling, or attic insulation
- 26 Weatherstripping/caulking/weatherization
- 27 Water heater/pipe wrapping/insulation
- 28 Duct sealing/repair (not cleaning)

Windows

- 29 Windows
- 30 Other (SPECIFY)

Q6_7b Did this equipment replace existing equipment/measures or was it new to your home?

For Q6_7b_1 to Q6_7b_30:

- 1 Replaced existing equipment
- 2 New to home
- 8 DK
- 9 REFUSED

- Q6_7b_1** Central air conditioner
- Q6_7b_2** Room/wall air conditioner
- Q6_7b_3** Evaporative cooler
- Q6_7b_4** Furnace
- Q6_7b_5** Programmable thermostat
- Q6_7b_6** Fluorescent indoor fixture
- Q6_7b_7** Fluorescent outdoor fixture
- Q6_7b_8** Compact fluorescent bulb
- Q6_7b_9** Compact fluorescent fixture
- Q6_7b_10** Motion sensor
- Q6_7b_11** Dimmer switch
- Q6_7b_12** Clothes washer
- Q6_7b_13** Clothes dryer
- Q6_7b_14** Water heater
- Q6_7b_15** Low Flow showerheads
- Q6_7b_16** Faucet aerators
- Q6_7b_17** Refrigerator
- Q6_7b_18** Freezer
- Q6_7b_19** Range/oven
- Q6_7b_20** Dishwasher
- Q6_7b_21** Swimming pool
- Q6_7b_22** Swimming pool pump
- Q6_7b_23** Swimming pool cover
- Q6_7b_24** Spa/jacuzzi
- Q6_7b_25** Floor, wall, ceiling, or attic insulation
- Q6_7b_26** Weatherstripping/caulking/weatherization
- Q6_7b_27** Water heater/pipe wrapping/insulation
- Q6_7b_28** Duct sealing/repair (not cleaning)
- Q6_7b_29** Windows
- Q6_7b_30** Other (SPECIFY)

Q6_7ci_1 to Q6_7ci_30 When did this occur? (RECORD MONTH AND YEAR)

- 1 Enter date **Q6_7cm_1 to Q6_7cm_30** ____MM
Q6_7cy_1 to Q6_7cy_30 ____YYYY
- 8 Don't know
- 9 Refused

Q6_7cd_1 to Q6_7cd_30 Was this before or after you participated in the [program]?

- 1 Before
- 2 After
- 8 DK
- 9 REFUSED

(Measure –specific data represented as suffix as follows: _1=Attic insulation, _2=Wall insulation, _3=Energy Star dishwasher, _4=Energy Star/energy efficient clothes washer, _5=High efficiency central gas furnace, _6=High efficiency water heater, _7=Tankless water heater, _8=Low flow showerhead and faucet aerators

(ASK 6.7Cd and 6.7Ce ONLY IF BILLING ANALYSIS BEING DONE AND IF 6.7a = 4, 13, 14, 19, 23)

Q6_7d_1 to Q6_7d_30 What type of fuel does the new [equipment] use?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- 8 DK
- 9 REFUSED

Q6_7e_1 to Q6_7e_30 (ASK IF 6.7b = REPLACED) What was the fuel type of the [equipment] you replaced?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- 8 DK
- 9 REFUSED

Q6_7f_1 to Q6_7f_30 Did you receive a rebate for this [equipment] through a [utility] program?

- 1 Yes [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6_7i]
- 2 No
- 8 DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6_7i]
- 9 REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6_7i]

(ASK Q6_7g and Q6_7h IF 1-4, 12, 13, 14, 17, 18, 19, 20, 22, 24, 29 IN Q6_7a; ELSE SKIP TO NSP4)

Q6_7g_1 to Q6_7g_30 Is the new [equipment] energy efficient?

- 1 Yes
- 2 No [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6_7i]
- 8 DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6_7i]
- 9 REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6_7i]

Q6_7h_1 to Q6_7h_30 How do you know that this equipment is energy efficient? (PROBE: IS IT ENERGY STAR[®] RATED?)

(ASK NSP4-5 ONLY IF Q6_7f = NO AND Q6_7g = YES AND Q6_7c = AFTER DATE OF PARTICIPATION)

NSP4 I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the [utility] [program] in [2006, 2007, 2008] influenced my decision to install different types of high efficiency equipment on my own.

- 1 {RECORD RESPONSE (0-10)} **NSP4**____
- 8 DON'T KNOW
- 9 REFUSED

NSP5 Why did you purchase this high efficiency equipment without going through a [utility] program? {DO NOT READ; INDICATE ALL THAT APPLY}

For NSP5_1 to NSP5_11:

- 0 Not mentioned
- 1 Mentioned

- NSP5_1** Too much paperwork
- NSP5_2** Takes too long to get approval
- NSP5_3** No time to participate, needed equipment immediately
- NSP5_4** The program had ended
- NSP5_5** The equipment would not qualify {PROBE: WHY NOT?} _____
- NSP5_6** The amount of the rebate wasn't important enough
- NSP5_7** Did not know program was available
- NSP5_8** There was no program available
- NSP5_9** Other {SPECIFY} _____
- NSP5_10** DON'T KNOW
- NSP5_11** REFUSED

(ASK C6.7i=c6.7m ONLY IF BILLING ANALYSIS BEING DONE)

C6_7i [IF FURNACE WAS NOT REPLACED IN Q6_7a OR THROUGH PROGRAM] Do you have gas or electric space heating?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- 8 (DON'T KNOW)
- 9 (REFUSED)

C6_7j [IF WATER HEATER WAS NOT REPLACED IN Q6_7a OR THROUGH PROGRAM] Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 8 (DON'T KNOW)
- 9 (REFUSED)

C6_7k [IF CLOTHES DRYER WAS NOT REPLACED IN Q6_7a OR THROUGH PROGRAM] Do you have a gas or electric clothes dryer?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 8 (DON'T KNOW)
- 9 (REFUSED)

C6_7l [IF RANGE/OVEN WAS NOT REPLACED IN Q6_7a OR THROUGH PROGRAM] Do you have a gas or electric range/oven?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 8 (DON'T KNOW)
- 9 (REFUSED)

C6_7m [IF ROOM, CENTRAL AC, OR EVAPORATIVE COOLER WAS NOT REPLACED IN Q6_7a OR THROUGH PROGRAM] What type of air conditioning system, if any, do you use in your home? (INDICATE ALL THAT APPLY)

For C6_7m_1 to C6_7m_6:

- 0 Not mentioned
- 1 Mentioned

- Q6_7m_1** Central air conditioner
- Q6_7m_2** Room/wall air conditioner
- Q6_7m_3** Evaporative cooler
- Q6_7m_4** Other (Specify) _____
- Q6_7m_5** (DON'T KNOW)
- Q6_7m_6** (REFUSED)

Q6_8a Do you receive an electric bill directly from SCG?

- 1 Yes
- 2 No (SKIP TO Q6_9)
- 8 (DON'T KNOW) (SKIP TO Q6_9)
- 9 (REFUSED) (SKIP TO Q6_9)

Q6_8b Does this bill only include your home's electric use, or does it include the electric use of other households?

- 1 Only 1 household
- 2 Multiple households
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q6_13 What is the primary language spoken in your home? (DO NOT READ; PROBE IF R SAYS CHINESE: Would this be Mandarin or Cantonese)

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 (OTHER, specify)
- 8 (DON'T KNOW)
- 9 (REFUSED)

On-site Recruiting (Section 7)

(ONLY ASK IF Q6_8a and Q6_8b=1, HOUSEHOLD HAS OWN INDIVIDUAL METER, AND FOR THE FOLLOWING MEASURES: DISHWASHERS, CLOTHES WASHERS, WATER HEATER (STORAGE AND TANKLESS) CENTRAL GAS FURNACE, AND ATTIC/WALL INSULATION.)

Q7_1 We would like to offer you \$25 to participate in the on-site component of this evaluation we are doing for Southern California Gas Company. We are NOT interested in selling anything. We would like to have one of our auditors visit your home at your convenience to look at the measures you installed through the program and how they are operating. The on-site visit would only take about 15 minutes (will vary slightly depending on measures installed). Would that be alright with you?

- 1 Yes→ Great! Someone from **[firm]** will give you a call back to determine when they can schedule an appointment with one of our auditors in your area. Thank you for your cooperation with this important effort.
- 2 No

Thank and Terminate

Survey for SDGE3017

Sample Variables

[Measure] = Efficient Showerhead and Faucet Aerator

[Product Type] = Showerhead and faucet aerators

[Utility] = SDGE

[Assistance] = rebate

[Program] = multi family rebate program

Introduction

Intro1 Hello, my name is **[interviewer name]**, and I'm calling on behalf of the California Public Utilities Commission regarding **[utility]**'s Multi-family Rebate Program. May I speak with **[contact name]**?

1 Yes

2 No [attempt to convert; if R not available, ask for an adult who makes decisions on how property uses energy]

I'm with **[data collection firm]**, an independent research firm. I am calling to learn about your experiences with the **[measures]** that you received through **[utility]**'s Multi-family Rebate Program.

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and **[utility]** better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about 15 minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-XXX-XXXX)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the **[measure]** you received through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call 415-7032782, or visit their website: www.cpuc.ca.gov.)

(NOTE: For all questions, "DON'T KNOW" and "REFUSED" will be coded if offered as a response.)

Identification Questions

1.1 (Program records indicate that you purchased [qty] faucet aerators and [qty] low-flow showerhead around [insert date of participation] and received a rebate from [utility]. Do you recall receiving these? (RECORD INFORMATION)

- 1 Yes
- 2 Yes, but different qty
- 3 No
- D (DON'T KNOW)
- R (REFUSED)

1.2 (ASK IF Qty IS DIFFERENT) How many did you purchase? (ASK FOR EACH MEASURE. USE THIS QTY THROUGHOUT REST OF SURVEY)

_____ Showerhead Qty

_____ Faucet Aerator Qty

1.3 (ASK IF DOESN'T RECALL) Is it possible that someone else in your organization would know about receiving these items?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

1.4 May I please speak with that person?

- 1 Yes {SKIP TO 1.1}
- 2 No {THANKS & TERMINATE}
- D (DON'T KNOW)
- R (REFUSED)

Sources of Program Information (Section 2)

Q2_1 How did you hear about the rebate offered on the [measures] available as part of [Utility] Residential Energy Efficiency Incentive Program? (PROBE: Did you hear about the program from any other sources?) (DO NOT READ LIST, RECORD ALL THAT APPLY)

For Q2_1_1 to Q2_1_20:

- 0 Not mentioned
- 1 Mentioned

Utility provided information

Q2_1_1 (Advertising—radio, newspaper, trade journal, billboard, TV)

Q2_1_2 (Bill insert, newsletter, or other mailing)

- Q2_1_3 (Website)
- Q2_1_4 (Email)
- Q2_1_5 (Other utility) *(SPECIFY)*
Local Government/Community event/Nonprofit
- Q2_1_6 (Meeting, event, workshop, training) *(SPECIFY)*
- Q2_1_7 (School)
- Q2_1_8 (Local government/community agency) *(SPECIFY)*
- Q2_1_9 (City/county Energy Center such as Pacific Energy Center, Stockton, Food Service) *(SPECIFY)*
- Q2_1_10 (Advertising—radio, newspaper, trade journal, billboard, TV)
Other
- Q2_1_11 (Home or building audit or assessment) *(SPECIFY)*
- Q2_1_12 (Meeting, event, workshop training) *(SPECIFY)*
- Q2_1_13 (Flex your Power TV or radio advertising)
- Q2_1_14 (Other advertising, don't recall)
- Q2_1_15 (Friend/Relative/Neighbor)
- Q2_1_16 (Other, Specify: _____)
- Q2_1_17 (DON'T KNOW) *(SKIP TO SECTION 3)*
- Q2_1_18 (REFUSED) *(SKIP TO SECTION 3)*
- Q2_1_19 Salesperson/Sales Rep
- Q2_1_20 Installer/Contractor

3.1 *(IF remember purchasing)* Now, I would like to understand what you did with the **[measure(s)]**. Are all of these **[measure(s)]** currently installed in your building? (RECORD ONE NUMBER)

- 1 Yes
- 2 No (skip to 3.4)
- D (DON'T KNOW)
- R (REFUSED)

3.2 How many **[measure]** are installed? (ASK FOR BOTH SHOWERHEAD AND AERATOR)
_____ Record Response (IF QTY DOES NOT EQUAL QTY PROVIDED ABOVE, ASK Q3.3)

- D (DON'T KNOW)
- R (REFUSED)

3.3 (IF QTY INSTALLED DOES NOT = QTY RECEIVED) Ok, you mentioned before purchasing **[qty]**. What happened to the following units? (RECORD ALL ANSWERS AND QUANTITY)

- 1 Storage (RECORD QTY) (SKIP TO 3.8)
- 2 Given Away or Sold (RECORD QTY) (Skip to 3.5)
- 3 Equipment Failed (RECORD QTY) (Skip to 3.6)
- 4 Installed but removed (RECORD QTY) (Skip to 3.6)
- 5 Something Else (Specify) (RECORD QTY)

D (DON'T KNOW)
R (REFUSED)

3.4 (IF measures are not installed) Which of the following best describes what happened with the **[measures]**? (READ LIST AND RECORD ONE RESPONSE. ASK FOR EACH INSTALLED MEASURE)

1 They are installed at some other location {SKIP TO 3.5}
2 They were installed but are now permanently removed (example: broke, burned out, don't fit, don't like, etc.) {SKIP TO 3.6}
4 They are in storage for some other reason {SKIP TO 3.8}
5 They were sold or given away {SKIP TO 3.5}
6 Something else (SPECIFY)
D (DON'T KNOW)
R (REFUSED)

3.5 Are these **[measures]** located in **[utility]** service territory?

1 Yes
2 No
D (DON'T KNOW)
R (REFUSED)

3.6 (ASK ONLY IF INSTALLED BUT PERMENANTLY REMOVED) Now let's talk about **[measures]** you said you installed but have since removed. Why were these removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

1 (Equipment failed)
2 (Didn't work properly)
3 (Wrong size—too small or too large)
4 (Low water flow)
5 (Didn't like the color)
6 (Didn't like appearance/unattractive)
7 (Other, Specify: _____)
D (DON'T KNOW)
R (REFUSED)

3.7 What did you replace **[measures]** with? (DO NOT READ LIST; PROBE FOR EFFICIENCY, RECORD ALL THAT APPLY)

1 (With a new high efficiency **[measure]**)
2 (With a less efficient **[product type]**)
3 (Re-installed old equipment)
4 (Did not replace)
5 (Other, Specify: _____)
D (DON'T KNOW)
R (REFUSED)

3.8 (ASK ONLY IF THEY SAY MEASURE IS IN STORAGE FOR SOME OTHER REASON) When do you think you will install the **[measures]**? Would you say within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

- 1 Within the next 3 months
- 2 3 to 6 months from now
- 3 6 to 12 months from now
- 4 More than a year from now
- 5 Never
- D (DON'T KNOW)
- R (REFUSED)

NTGR and Spillover

W1 Please think back to the time when you were deciding to get the free water saving devices, perhaps recalling things that occurred shortly before and after **[timeframe]**. What factors motivated you to get the free water saving devices? {? {DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE RESPONDENT HAS FINISHED, PROBE: Are there any other factors?}}

1. Old equipment didn't work
 2. Old equipment working poorly
 3. The program incentive
 4. The program technical assistance
 5. Wanted to save energy
 6. Wanted to reduce energy costs
 8. The information provided by the Program
 9. Past experience with this program
 10. Because of past experience with another **[utility]** program
 11. Recommendation from other utility program (Probe: What program? _____)
 12. Recommendation of dealer/retailer
 13. Recommendation of someone else (Probe: Who? _____)
 14. Advertisement in newspaper (Probe: For what program? _____)
 15. Radio advertisement (Probe: For what program? _____)
 16. Other (SPECIFY)
 17. Environmental concerns
 18. Global warming
 19. Liked the appearance of the **[measure]** more than the old one
 20. Keeping up with the latest trends and fashions
- D DON'T KNOW
R REFUSED

Free-Ridership Questions

(ASK FR SERIES FOR EACH MEASURE)

FR1.1 At the time that you first heard about the **[assistance]** from **[utility]** for the **[measure]**, had you...? {READ LIST UNTIL R SAYS 'NO'}

Already been thinking about purchasing a **[product type]**?

- 1 Yes
- 2 No {SKIP TO FR2}
- D (DON'T KNOW) {SKIP TO FR2}
- R (REFUSED) {SKIP TO FR2}

FR1.2. Already begun collecting information about **[product type]**?

- 1 Yes
- 2 No {SKIP TO FR2}
- D (DON'T KNOW) {SKIP TO FR2}

R (REFUSED) {SKIP TO FR2}

FR1.3a. (IF SHOWERHEAD) Already selected the **[product type]** you were going to get?

- 1 Yes
- 2 No {SKIP TO FR2}
- D (DON'T KNOW) {SKIP TO FR2}
- R (REFUSED) {SKIP TO FR2}

FR1.3b. (IF FAUCET AERATOR) Already decided to buy the **[product type]**?

- 1 Yes
- 2 No {SKIP TO FR2}
- D (DON'T KNOW) {SKIP TO FR2}
- R (REFUSED) {SKIP TO FR2}

FR1.4. Already installed the energy efficient **[measure]**?

- 1 Yes
- 2 No {SKIP TO FR2}
- D (DON'T KNOW) {SKIP TO FR2}
- R (REFUSED) {SKIP TO FR2}

FR1B. So, the **[measure]** was installed before you learned about the **[assistance]** from **[utility]**?

- 1 Yes {SKIP FR5}
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

FR2. Just to be sure I understand, did you have specific plans to install a **[product type]** before learning about the **[assistance]** available through the **[program]**?

- 1. Yes
- 2. No {SKIP TO FR4}
- D (DON'T KNOW) {SKIP TO FR4}
- R (REFUSED) {SKIP TO FR4}

FR3. Did you have to make any changes to your existing plans in order to receive **[assistance]** through the **[program]**?

- 1. Yes
- 2. No
- D (DON'T KNOW)

R (REFUSED)

FR4. {REPEAT AS NEEDED FOR FR4 PARTS A – D} If the **[assistance]** from **[utility] [program]** had not been available, would you still have:

FR4A. Purchased any **[product type]** ?

- 1. Yes
- 2. No {SKIP TO FR10}
- D (DON'T KNOW)
- R (REFUSED)

FR4B. Purchased the **[product type]** at the same time as you did? (PROBE: That would be around **[date of participation]**)

- 1. Yes
- 2. No
- D (DON'T KNOW)
- R (REFUSED)

FR4B1. Bought the **[product type]** earlier than you did, or later?

- 1. Earlier
- 2. Same Time
- 3. Later
- D (DON'T KNOW)
- R (REFUSED)

FR4B2. (if earlier or later) How much **[earlier/later]** would you have bought the **[product type]**?

- _____ Years {AND/OR} _____ Months
- D (DON'T KNOW)
 - R (REFUSED)

FR4D. (IF SHOWERHEADS) Purchased the same efficiency of **[measures]**?

- 1. Yes
- 2. No
- D (DON'T KNOW)
- R (REFUSED)

FR4E. If the **[assistance]** from **[utility] [program]** had not been available, would you have done anything else differently?

- 1. Yes
- 2. No {SKIP TO FR10}
- D (DON'T KNOW) {SKIP TO FR10}

R (REFUSED) {SKIP TO FR10}

FR4E1 (if yes) What would you have done differently?

{RECORD RESPONSE}: _____

FR5 On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same **[measure]** if you had not received any **[assistance]** from the program?

_____ {RECORD RESPONSE (0-10)}

D (DON'T KNOW)

R (REFUSED)

I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR10. The **[assistance]** from the **[utility] [program]** was a critical factor in my decision to install these water saving devices?

{RECORD RESPONSE (0-10)} _____

D (DON'T KNOW)

R (REFUSED)

FR11. I would have bought a(n) **[product type]** within a year of when I did even without the **[assistance]** from the **[utility] [program]**.

{RECORD RESPONSE (0-10)} _____

D (DON'T KNOW)

R (REFUSED)

Consistency Check & Resolution

{C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

FR4A (efficiency enhancement measures) OR FR4D (incremental efficiency measures)

FR10

FR11

{IF FR4A/D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would have purchased the **[measure]** without the program'}

{IF FR4A/D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would not have purchased the [measure] without the program'}

{IF FR5 = 0,1 AND FR4A/D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would likely not have purchased the [measure] without the program'}

{IF FR5 = 9,10 AND FR4A/D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would likely have purchased the [measure] without the program'}

{IF FR10 = 0,1 AND FR4A/D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program'}

{IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program'}

{IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would have bought the [product type] within [a year/2 years] even without the program'}

{IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would not have bought the [product type] within [a year/2 years] even without the program'}

C1. Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **[measure]** at the time you did?
{RECORD VERBATIM RESPONSE BELOW}

C2. **[fill with wording and response categories to the one question which was inconsistent]** {INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE}

Recent Program Participation (Section 5)

Q5_3 Have you participated in any other programs offered by **[utility]** because of your experience with the Residential Energy Efficiency Incentive Program?

- 1 Yes
- 2 No *(SKIP TO Q5_5)*
- D (DON'T KNOW) *(SKIP TO Q5_5)*
- R (REFUSED) *(SKIP TO Q5_5)*

Q5_4 Which programs?

Q5_5 Which of the following phrases or messages have you heard before today?
(ROTATE STARTING POINT)

1 Continue

Q5_5A Good Housekeeping

1 Yes

2 No

D (DON'T KNOW)

R (REFUSED)

Q5_5B Click it or Ticket

1 Yes

2 No

D (DON'T KNOW)

R (REFUSED)

Q5_5C Ahnu

1 Yes

2 No

D (DON'T KNOW)

R (REFUSED)

Q5_5D Flex Your Power

1 Yes

2 No

D (DON'T KNOW)

R (REFUSED)

Q5_5E Flex Alert

1 Yes

2 No

D (DON'T KNOW)

R (REFUSED)

Q5_5F Energy Hog

1 Yes

2 No

D (DON'T KNOW)

R (REFUSED)

Q5_5G Galley Bay

1 Yes

- 2 No
- D (DON'T KNOW)
- R (REFUSED)

- Q5_5H** Energy Star
- 1 Yes
 - 2 No
 - D (DON'T KNOW)
 - R (REFUSED)

- Q5_5I** Hollister Co
- 1 Yes
 - 2 No
 - D (DON'T KNOW)
 - R (REFUSED)
-

Spillover {ONLY ASK ONCE}

LSP1. Since you received **[assistance]** through **[program]** have you purchased and installed any water conservation products on your own without any assistance from the **[utility] [program]** or another utility program {READ THE FOLLOWING ONLY FOR SMALL COMMERCIAL: either at this facility or at other locations}?

- 1. Yes, only at this home/facility
- 2. Yes, only at other locations {SMALL COMMERCIAL ONLY}
- 3. Yes, at this facility and other locations {SMALL COMMERCIAL ONLY}
- 4. No {SKIP TO NSP1}
- 98. Don't Know {SKIP TO NSP1}
- 99. Refused {SKIP TO NSP1}

LSP2. How many more water conservation products did you buy on your own, compared to what you got through the program {READ THE FOLLOWING ONLY FOR SMALL COMMERCIAL: at this facility and/or at another location}?

{PROBE FOR PERCENT OR SHARE OF PROGRAM EQUIPMENT. READ THE FOLLOWING IF NEEDED} For example, was it about one-fourth (25%) of what you installed through the program, one-half (50%) of what your installed through the program, the same amount as what you installed though the program (100%), twice as much as what you installed through the program (200%), or some other amount?

_____ % at this home/facility
_____ % at another facility {SMALL COMMERCIAL ONLY}

- 98. Don't Know
- 99. Refused

LSP3. I'm going to read a statement about the equipment that you purchased on your own, without any assistance from your utility. On a scale from 1-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement

My experience with the **[measure]** installed through the **[utility] [program]** in **[2006, 2007, 2008]** influenced my decision to install more efficient **[measure]** on my own.

{RECORD RESPONSE (0-10)} _____

-98. Don't Know

-99. Refused

LSP4. Why did you purchase this water conservation measure without the financial assistance available from the **[utility] [program]**? {DO NOT READ; INDICATE ALL THAT APPLY}

1. Too much paperwork

2. Takes too long to get approval

3. No time to participate, needed equipment immediately

4. The program had ended

5. The equipment would not qualify {PROBE: WHY NOT?} _____

6. The amount of the rebate wasn't important enough

7. Other {SPECIFY} _____

-98. Don't Know

-99. Refused

NSP1. Since you participated in **[program]** have you purchased and installed any other type of high efficiency equipment or made energy efficiency improvements {READ THE FOLLOWING ONLY FOR SMALL COMMERCIAL: at this facility or at other locations}?

1. Yes, only at this home/facility

2. Yes, only at other locations {SMALL COMMERCIAL ONLY}

3. Yes, at this facility and other locations {SMALL COMMERCIAL ONLY}

4. No

-98. Don't Know

-99. Refused

NSP2. What type and quantity of high efficiency equipment did you install on your own? {PROBE TO GET EXACT TYPE AND QUANTITY AND LOCATION/BUIDLING IF SMALL COMMERCIAL}

Type 1: _____ Quantity 1: _____ Location 1: _____

Type 2: _____ Quantity 2: _____ Location 2: _____

Type 3: _____ Quantity 3: _____ Location 3: _____
Type 4: _____ Quantity 4: _____ Location 4: _____

NSP3. {ASK FOR EACH TYPE OF EQUIPMENT IN NSP2} How do you know that this equipment is high efficiency? {PROBE: WAS IT ENERGY STAR[®] RATED?}

Type 1: _____
Type 2: _____
Type 3: _____
Type 4: _____

NSP4 I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the [utility] [program] in [2006, 2007, 2008] influenced my decision to install different types of high efficiency equipment on my own.

1 {RECORD RESPONSE (0-10)}
D (DON'T KNOW)
R (REFUSED)

NSP5 Why did you purchase this high efficiency equipment without going through a [utility] program? {DO NOT READ; INDICATE ALL THAT APPLY}

- NSP5_1 Too much paperwork
- NSP5_2 Takes too long to get approval
- NSP5_3 No time to participate, needed equipment immediately
- NSP5_4 The program had ended
- NSP5_5 The equipment would not qualify {PROBE: WHY NOT?} _____
- NSP5_6 The amount of the rebate wasn't important enough
- NSP5_7 Did not know program was available
- NSP5_8 There was no program available
- NSP5_9 Other {SPECIFY} _____
- NSP5_10 (DON'T KNOW)
- NSP5_11 REFUSED

Property Manager and Site Characteristics (Section 6)

Now, I'd like to get some background information about you and the multifamily property at &ADDRESS.

R1 What is your position or job title with the company that manages this property?

- 1 Owner
- 2 Property/leasing manager/associate
- 3 Senior property manager
- 4 Maintenance supervisor
- 5 Senior /regional maintenance supervisor
- 6 Purchasing manager
- 7 Other [RECORD]
- D Don't Know
- R Refused

R2 How many years have you been in the business of property ownership and management?

- ___ Years
- D (DON'T KNOW)
- R (REFUSED)

R3 How many years have you been in your current position at this property?

- ___ Years
- D (DON'T KNOW)
- R (REFUSED)

R4 How many buildings are there at this location?

- ___ Locations
- D (DON'T KNOW)
- R (REFUSED)

R5 About how many apartment units are located in the building or buildings at the property?

- ___ Units
- D (DON'T KNOW)
- R (REFUSED)

R6 Do you or your firm own the property only, manage the property only, or do you both own and manage the property?

- 1 Own it only
- 2 Manage it only
- 3 Both own and manage it
- 4 Other
- D (DON'T KNOW)
- R (REFUSED)

R7 Do you have one or more centralized systems at the property that provide heating to all tenant units? By a centralized system, I mean a system that provides heat to more than one tenant unit.

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

R8 Do you have a one or more centralized systems at the property that provide cooling to all units?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

R9 Do you have one or more centralized systems at the property that provide hot water to all units?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

R9a Does the building have a centralized water heating source?

- 1 Yes
- 2 No *(SKP R9c)*
- D (DON'T KNOW) *(SKP R9C)*
- R (REFUSED) *(SKP R9c)*

R9b What type of water heating source?

- 1 Boiler *(SKIP TO R10)*
- 2 Electric *(SKIP TO R10)*
- 3 Gas *(SKIP TO R10)*
- 4 Other _____ *(SKIP TO R10)*
- D (DON'T KNOW) *(SKIP TO R10)*
- R (REFUSED) *(SKIP TO R10)*

R9c What is the primary unit water heating source?

- 1 Electricity

- 2 Natural Gas
- 3 Propane
- 4 Solar (sun)
- 5 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

R10 Are the tenants responsible for paying their own utility bills or are the utilities included in the rent?

- 1 Tenants pay their own bills
- 2 Utilities are included in rent
- 3 Tenants pay some utilities while others are included in rent
- 4 Other [SPECIFY]
- D (DON'T KNOW)
- R (REFUSED)

R11 Is the electricity for the tenant units at this property individually metered or master-metered? In other words, is there one electric meter for several tenants?

- 1 Individually metered
- 2 Master metered
- 3 Other [SPECIFY]
- D (DON'T KNOW)
- R (REFUSED)

R12 Is the natural gas for the tenant units at this property individually metered or master-metered?

- 1 Individually metered
- 2 Master metered
- 3 Other [SPECIFY]
- D (DON'T KNOW)
- R (REFUSED)

COMMENTS

Those are all of my questions. Do you have any questions or comments for me?

- 1 Yes
- 2 No

THANK & TERMINATE

Survey for SDGE3035, SCG3517

Sample Variables

[Measure] = Efficient Showerhead and Faucet Aerator (SDGE only)

[Product Type] = Showerhead and faucet aerators (SDGE only)

[Utility] = San Diego Gas & Electric (SDGE) or Southern California Gas (SCG)

[Assistance] = Free equipment

[Program] = SDGE = manufactured/mobile home program, SCG = Home Efficiency Rebate Program

Introduction

Intro1 Hello, my name is **[interviewer name]**, and I'm calling on behalf of the California Public Utilities Commission regarding **[utility]**'s Multi-family Rebate Program. May I speak with **[contact name]**?

1 Yes

2 No [attempt to convert; if R not available, ask for an adult who makes decisions on how household uses energy]

I'm with **[data collection firm]**, an independent research firm. I am calling to learn about your experiences with the **[measures]** that you received through **[utility]**'s Multi-family Rebate Program.

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and **[utility]** better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about 15 minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-XXX-XXXX)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the **[measures]** you received through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call 415-7032782, or visit their website: www.cpuc.ca.gov.)

(NOTE: For all questions, "DON'T KNOW" and "REFUSED" will be coded if offered as a response.)

Identification Questions

1.1 Program records indicate that you received free faucet aerators and a low-flow showerhead from **[Utility]** around **[insert date of participation]**. Do you recall receiving these? (RECORD INFORMATION)

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

1.1a (IF REMEMBER RECEIVING) How many of each measure did you receive?

Showerhead _____qty
Faucet Aerator _____qty

1.2 (ASK IF DOESN'T RECALL) Is it possible that someone else in your household would know about receiving these items?

- 1 Yes
- 2 No {THANK & TERMINATE}
- D (DON'T KNOW)
- R (REFUSED)

1.3 May I please speak with that person?

- 1 Yes {SKIP TO 1.1}
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Sources of Program Information (Section 2)

Q2_1 How did you hear about the rebate offered on the [measures] available as part of **[Utility]** Residential Energy Efficiency Incentive Program? (PROBE: Did you hear about the program from any other sources?) (DO NOT READ LIST, RECORD ALL THAT APPLY)

Utility provided information

- Q2_1_1 (Advertising—radio, newspaper, trade journal, billboard, TV)
- Q2_1_2 (Bill insert, newsletter, or other mailing)
- Q2_1_3 (Website)
- Q2_1_4 (Email)
- Q2_1_5 (Other utility) (SPECIFY)

Local Government/Community event/Nonprofit

- Q2_1_6 (Meeting, event, workshop, training) (SPECIFY)
- Q2_1_7 (School)
- Q2_1_8 (Local government/community agency) (SPECIFY)
- Q2_1_9 (City/county Energy Center) (SPECIFY)
- Q2_1_10 (Advertising—radio, newspaper, trade journal, billboard, TV)

Other

- Q2_1_11 (Home or building audit or assessment) (SPECIFY)
- Q2_1_12 (Meeting, event, workshop training) (SPECIFY)
- Q2_1_13 (Flex your Power TV or radio advertising)
- Q2_1_14 (Other advertising, don't recall)
- Q2_1_15 (Friend/Relative/Neighbor)
- Q2_1_16 (Other, Specify: _____)
- Q2_1_17 (DON'T KNOW) (SKIP TO SECTION 3)
- Q2_1_18 (REFUSED) (SKIP TO SECTION 3)
- Q2_1_19 Salesperson/Sales Rep
- Q2_1_20 Installer/Contractor

3.1 (IF REMEMBER RECEIVING) Now, I would like to understand what you did with the **[measure(s)]**. Is this **[measure(s)]** currently installed at your home? (RECORD ONE NUMBER)

- 1 Yes
- 2 No {SKIP TO 3.4}
- D (DON'T KNOW)
- R (REFUSED)

3.2 How many **[measure]** are installed? (ASK FOR BOTH SHOWERHEAD AND AERATOR)
_____ Record Response (IF QTY DOES NOT EQUAL RECEIVED QTY PROVIDED ABOVE, SKIP TO Q3.3)

- D (DON'T KNOW)
- R (REFUSED)

3.3 (IF QTY INSTALLED DOES NOT = QTY RECEIVED) Ok, you mentioned before receiving **[qty]**. What happened to the following units? (RECORD ALL ANSWERS AND QUANTITY)

- 1 Storage (RECORD QTY) (SKIP TO 3.8)
- 2 Given Away or Sold (RECORD QTY) (Skip to 3.5)
- 3 Equipment Failed (RECORD QTY) (Skip to 3.6)
- 4 Installed but removed (RECORD QTY) (Skip to 3.6)

- 5 Something Else (Specify) (RECORD QTY)

- D (DON'T KNOW)
- R (REFUSED)

3.4 (IF MEASURE IS NOT INSTALLED) Which of the following best describes what happened with the **[measure]**? (READ LIST AND RECORD ONE RESPONSE. ASK FOR EACH INSTALLED MEASURE)

- 1 It is installed at some other location {SKIP TO 3.5}

- 2 It was installed at your home but is now permanently removed (example: broke, burned out, don't fit, don't like, etc.) {SKIP TO 3.6}
- 4 It is in storage for some other reason {SKIP TO 3.8}
- 5 It was sold or given away {SKIP TO 3.5}
- 6 Something else (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

3.5 Is the/Are these **[measure]** located in **[utility]** service territory?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

3.6 (ASK ONLY IF THEY SAY MEASURE WAS INSTALLED BUT PERMANENTLY REMOVED) Now let's talk about **[measure]** you said you installed but have since removed. Why was this removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 (Equipment failed)
- 2 (Didn't work properly)
- 3 (Wrong size—too small or too large)
- 4 (Low water flow)
- 5 (Didn't like the color)
- 6 (Didn't like appearance/unattractive)
- 7 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

3.7 What did you replace **[measure]** with? (DO NOT READ LIST; PROBE FOR EFFICIENCY, RECORD ALL THAT APPLY)

- 1 (With a new high efficiency **[measure]**)
- 2 (With a less efficient **[product type]**)
- 3 (Re-installed old equipment)
- 4 (Did not replace)
- 5 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

3.8 (ASK ONLY IF THEY SAY MEASURE IS IN STORAGE FOR SOME OTHER REASON)

When do you think you will install the **[measure]**? Would you say within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

- 1 Within the next 3 months
- 2 3 to 6 months from now
- 3 6 to 12 months from now
- 4 More than a year from now
- 5 Never
- D (DON'T KNOW)
- R (REFUSED)

(Q 3.8 – 3.11 ASK FOR EACH SHOWERHEAD INSTALLED)

3.8 (ASK IF QTY > 1) Where was the showerhead installed? (Probe if needed. i.e. master bath or spare bedroom)?

_____ [RECORD RESPONSE]

3.9 (IF SHOWERHEAD) How many people use this shower?

- 1 1
- 2 2
- 3 3
- 4 More than 3
- D (DON'T KNOW)
- R (REFUSED)

3.10 (IF SHOWERHEAD) How often does the shower get used (per day)?

- 1 1
- 2 2
- 3 3
- 4 More than 3
- D (DON'T KNOW)
- R (REFUSED)

3.11 (IF SHOWERHEAD) What would you say is the typical shower length (minutes)?

- 1 5
- 2 10
- 3 15
- 4 20
- 5 More than 20
- D (DON'T KNOW)
- R (REFUSED)

3.12 (ASK IF QTY > 1 AND FOR EACH AERATOR INSTALLED) Where were the faucet aerators installed (probe if needed. i.e. kitchen, bathroom)?

_____ [RECORD RESPONSE]

NTGR and Spillover

W1 Please think back to the time when you were deciding to get the free water saving devices, perhaps recalling things that occurred in your household shortly before and after **[timeframe]**. What factors motivated you to get the free water saving devices? {? {DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE RESPONDENT HAS FINISHED, PROBE: Are there any other factors?}}

1. Old equipment didn't work
 2. Old equipment working poorly
 3. The program incentive
 4. The program technical assistance
 5. Wanted to save energy
 6. Wanted to reduce energy costs
 8. The information provided by the Program
 9. Past experience with this program
 10. Because of past experience with another **[utility]** program
 11. Recommendation from other utility program (Probe: What program?)
 12. Recommendation of dealer/retailer
 13. Recommendation of someone else (Probe: Who?)
 14. Advertisement in newspaper (Probe: For what program?)
 15. Radio advertisement (Probe: For what program?)
 16. Other (SPECIFY)
 17. Environmental concerns
 18. Global warming
 19. Liked the appearance of the **[measure]** more than the old one
 20. Keeping up with the latest trends and fashions
- D (DON'T KNOW)
R (REFUSED)

Free-Ridership Questions

(ASK FR SERIES FOR EACH MEASURE)

FR1.1 At the time that you first heard about the **[assistance]** from **[utility]** for the **[measure]**, had you...? {READ LIST UNTIL R SAYS 'NO'}

Already been thinking about purchasing a **[product type]**?

- 1 Yes
- 2 No {SKIP TO FR2}
- D (DON'T KNOW) {SKIP TO FR2}
- R (REFUSED) {SKIP TO FR2}

FR1.2. Already begun collecting information about **[product type]**?

- 1 Yes
- 2 No {SKIP TO FR2}
- D (DON'T KNOW) {SKIP TO FR2}
- R (REFUSED) {SKIP TO FR2}

FR1.3a. (IF SHOWERHEAD) Already selected the **[product type]** you were going to get?

- 1 Yes
- 2 No {SKIP TO FR2}
- D (DON'T KNOW) {SKIP TO FR2}
- R (REFUSED) {SKIP TO FR2}

FR1.3b. (IF FAUCET AERATOR) Already decided to buy the **[product type]**?

- 1 Yes
- 2 No {SKIP TO FR2}
- D (DON'T KNOW) {SKIP TO FR2}
- R (REFUSED) {SKIP TO FR2}

FR1.4. Already installed the energy efficient **[measure]**?

- 1 Yes
- 2 No {SKIP TO FR2}
- D (DON'T KNOW) {SKIP TO FR2}
- R (REFUSED) {SKIP TO FR2}

FR1B. So, the **[measure]** was installed before you learned about the **[assistance]** from **[utility]**?

- 1 Yes {SKIP FR5}
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

FR2. Just to be sure I understand, did you have specific plans to install a **[product type]** before learning about the **[assistance]** available through the **[program]**?

- 1. Yes
- 2. No {SKIP TO FR4}
- D DON'T KNOW {SKIP TO FR4}
- R REFUSED {SKIP TO FR4}

FR3. Did you have to make any changes to your existing plans in order to receive the **[assistance]** through the **[program]**?

- 1. Yes
- 2. No
- D (DON'T KNOW)
- R (REFUSED)

FR4. {REPEAT AS NEEDED FOR FR4 PARTS A – D} If the **[assistance]** from the **[utility]** **[program]** had not been available, would you still have:

FR4A. Purchased any **[product type]**?

- 1. Yes
- 2. No {SKIP TO FR10}
- D (DON'T KNOW)
- R (REFUSED)

FR4B. Purchased the **[product type]** at the same time as you did? (PROBE: That would be around **[date of participation]**)

- 1. Yes
- 2. No
- D (DON'T KNOW)
- R (REFUSED)

FR4B1. Bought the **[product type]** earlier than you did, or later?

- 1. Earlier
- 2. Same Time
- 3. Later
- D (DON'T KNOW)
- R (REFUSED)

FR4B2. (if earlier or later) How much **[earlier/later]** would you have bought the **[product type]**?

_____ Years {AND/OR} _____ Months

- D (DON'T KNOW)
- R (REFUSED)

FR4D. (IF SHOWERHEAD) Purchased the same efficiency of **[measure]**?

- 1. Yes
- 2. No
- D (DON'T KNOW)
- R (REFUSED)

FR4E. If the **[assistance]** from the **[utility] [program]** had not been available, would you have done anything else differently?

- 1. Yes
- 2. No
- D (DON'T KNOW)
- R (REFUSED)

FR4E1 What would you have done differently?

{RECORD RESPONSE}: _____

FR5 On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same **[measure]** if you had not received any **[assistance]** from the program?

- _____ {RECORD RESPONSE (0-10)}
- D (DON'T KNOW)
 - R (REFUSED)

I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR10. The **[assistance]** from the **[utility] [program]** was a critical factor in my decision to install these water saving devices ?

- {RECORD RESPONSE (0-10)} _____
- D (DON'T KNOW)
 - R (REFUSED)

FR11. I would have bought a(n) **[product type]** within a year of when I did even without the **[assistance]** from the **[utility] [program]**.

- {RECORD RESPONSE (0-10)} _____
- D (DON'T KNOW)
 - R (REFUSED)

Consistency Check & Resolution

{C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

FR4A (efficiency enhancement measures) OR FR4D (incremental efficiency measures)

FR10

FR11

{IF FR4A/D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would have purchased the [measure] without the program'}

{IF FR4A/D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would not have purchased the [measure] without the program'}

{IF FR5 = 0,1 AND FR4A/D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would likely not have purchased the [measure] without the program'}

{IF FR5 = 9,10 AND FR4A/D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would likely have purchased the [measure] without the program'}

{IF FR10 = 0,1 AND FR4A/D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program'}

{IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program'}

{IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would have bought the [product type] within [a year/2 years] even without the program'}

{IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would not have bought the [product type] within [a year/2 years] even without the program'}

C1. Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **[measure]** at the time you did?
{RECORD VERBATIM RESPONSE BELOW}

C2. **[fill with wording and response categories to the one question which was inconsistent]** {INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE}

Q5_3 Have you participated in any other programs offered by **[utility]** because of your experience with the Residential Energy Efficiency Incentive Program?

- 1 Yes
- 2 No *(SKIP TO Q5_5)*
- D (DON'T KNOW) *(SKIP TO Q5_5)*
- R (REFUSED) *(SKIP TO Q5_5)*

Q5_4 Which programs?

Q5_5 Which of the following phrases or messages have you heard before today?
(ROTATE STARTING POINT)

- 1 Continue

Q5_5A Good Housekeeping

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5B Click it or Ticket

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5C Ahnu

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5D Flex Your Power

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5E Flex Alert

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5F Energy Hog
1 Yes
2 No
D (DON'T KNOW)
R (REFUSED)

Q5_5G Galley Bay
1 Yes
2 No
D (DON'T KNOW)
R (REFUSED)

Q5_5H Energy Star
1 Yes
2 No
D (DON'T KNOW)
R (REFUSED)

Q5_5I Hollister Co
1 Yes
2 No
D (DON'T KNOW)
R (REFUSED)

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 6)

Q6_1 The last questions ask about household characteristics to make sure we're getting a representative sample of **[utility]** residents.

Do you own or rent your home?

1 Own
2 Rent
3 Other (SPECIFY)
D (DON'T KNOW)
R (REFUSED)

Q6_2 In what type of building do you live? (READ LIST IF NEEDED)
(PROBE FOR 'Condo': "How many units are in your building?")

1 A one-family home detached from any other house
2 A one-family home attached to one or more houses
3 A building with 2 apartments
4 A building with 3 or 4 apartments
5 A building with 5 or more apartments
6 A mobile home
7 Other (SPECIFY)
8 Boat/RV/Van/Etc.

- D (DON'T KNOW)
- R (REFUSED)

Q6_3 About when was this building first built? (READ LIST IF NEEDED)

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 7 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

4.3 Is your water heater electric or gas?

- 1 Electricity
- 2 Natural Gas
- 3 Propane
- 4 Solar (sun)
- 5 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

Spillover {ONLY ASK ONCE}

LSP1. Since you received **[assistance]** through **[program]** have you purchased and installed any water conservation products on your own without any assistance from the **[utility] [program]** or another utility program {READ THE FOLLOWING ONLY FOR SMALL COMMERCIAL: either at this facility or at other locations}?

- 1. Yes, only at this home/facility
- 2. Yes, only at other locations {SMALL COMMERCIAL ONLY}
- 3. Yes, at this facility and other locations {SMALL COMMERCIAL ONLY}
- 4. No {SKIP TO NSP1}
- 98. Don't Know {SKIP TO NSP1}
- 99. Refused {SKIP TO NSP1}

LSP2. How many more water conservation products did you buy on your own, compared to what you got through the program {READ THE FOLLOWING ONLY FOR SMALL COMMERCIAL: at this facility and/or at another location}?

{PROBE FOR PERCENT OR SHARE OF PROGRAM EQUIPMENT. READ THE FOLLOWING IF NEEDED} For example, was it about one-fourth (25%) of what you installed through the program, one-half (50%) of what your installed through the program, the same amount as what you installed though the program (100%), twice as much as what you installed through the program (200%), or some other amount?

_____ % at this home/facility

_____ % at another facility {SMALL COMMERCIAL ONLY}

-98. Don't Know

-99. Refused

LSP3. I'm going to read a statement about the equipment that you purchased on your own, without any assistance from your utility. On a scale from 1-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement

My experience with the **[measure]** installed through the **[utility] [program]** in **[2006, 2007, 2008]** influenced my decision to install more efficient **[measure]** on my own.

{RECORD RESPONSE (0-10)} _____

-98. Don't Know

-99. Refused

LSP4. Why did you purchase this water conservation measure without the financial assistance available from the **[utility] [program]**? {DO NOT READ; INDICATE ALL THAT APPLY}

1. Too much paperwork

2. Takes too long to get approval

3. No time to participate, needed equipment immediately

4. The program had ended

5. The equipment would not qualify {PROBE: WHY NOT?} _____

6. The amount of the rebate wasn't important enough

7. Other {SPECIFY} _____

-98. Don't Know

-99. Refused

- NSP1. Since you participated in **[program]** have you purchased and installed any other type of high efficiency equipment or made energy efficiency improvements {READ THE FOLLOWING ONLY FOR SMALL COMMERCIAL: at this facility or at other locations}?
1. Yes, only at this home/facility
 2. Yes, only at other locations {SMALL COMMERCIAL ONLY}
 3. Yes, at this facility and other locations {SMALL COMMERCIAL ONLY}
 4. No
 - 98. Don't Know
 - 99. Refused

- NSP2. What type and quantity of high efficiency equipment did you install on your own? {PROBE TO GET EXACT TYPE AND QUANTITY AND LOCATION/BUILDING IF SMALL COMMERCIAL}
- | | | |
|---------------|-------------------|-------------------|
| Type 1: _____ | Quantity 1: _____ | Location 1: _____ |
| Type 2: _____ | Quantity 2: _____ | Location 2: _____ |
| Type 3: _____ | Quantity 3: _____ | Location 3: _____ |
| Type 4: _____ | Quantity 4: _____ | Location 4: _____ |

- NSP3. {ASK FOR EACH TYPE OF EQUIPMENT IN NSP2} How do you know that this equipment is high efficiency? {PROBE: WAS IT ENERGY STAR[®] RATED?}
- Type 1: _____
- Type 2: _____
- Type 3: _____
- Type 4: _____

- NSP4** I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the **[utility]** **[program]** in **[2006, 2007, 2008]** influenced my decision to install different types of high efficiency equipment on my own.

- 1 {RECORD RESPONSE (0-10)}
- D (DON'T KNOW)
- R (REFUSED)

- NSP5 Why did you purchase this high efficiency equipment without going through a **[utility]** program? {DO NOT READ; INDICATE ALL THAT APPLY}

- NSP5_1 Too much paperwork
- NSP5_2 Takes too long to get approval
- NSP5_3 No time to participate, needed equipment immediately
- NSP5_4 The program had ended
- NSP5_5 The equipment would not qualify {PROBE: WHY NOT?} _____
- NSP5_6 The amount of the rebate wasn't important enough
- NSP5_7 Did not know program was available
- NSP5_8 There was no program available
- NSP5_9 Other {SPECIFY} _____
- NSP5_10 (DON'T KNOW)
- NSP5_11 REFUSED

Q6_8a Do you receive an electric bill directly from **[utility]**?

- 1 Yes
- 2 No {SKIP TO Q6_13}
- D (DON'T KNOW) {SKIP TO Q6_13}
- R (REFUSED) {SKIP TO Q6_13}

Q6_8b Does this bill only include your home's electric use, or does it include the electric use of other households?

- 1 Only 1 household
- 2 Multiple households
- D (DON'T KNOW)
- R (REFUSED)

Q6_13 What is the primary language spoken in your home? (*DO NOT READ*)

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

COMMENTS

These are all of my questions. Do you have any questions or comments for me?

- 1 Yes

2 No

THANK & TERMINATE

Appendix F – Insulation

F1 – Telephone Surveys

- Insulation Participant Survey
- PGE 2000 SF Measures Participant Survey
- SCG 3517 SFEER Survey
- SDGE 3024 Residential Incentive Program Participant Survey

F2 – Data Collection Instruments

- Insulation Site Visit Form
- Site Visit Form SFEER SCE 3517

**Residential Insulation Installation Incentive Program Participant Survey
PGE2000, SDGE3024, and SCG3517**

The following measures will be asked about in the survey:

Attic insulation
Wall insulation

[Measure]

Attic insulation
Wall insulation

[Product Type]

Attic insulation
Wall insulation

[Utility]

Pacific Gas and Electric (PG&E), San Diego Gas and Electric (SDGE), Southern California Gas (SCG)

[Assistance]

Rebate

[Incentive Amount]

\$0.15/sq. ft.

Introduction

Intro1 Hello, my name is **[interviewer name]**, and I'm calling on behalf of the California Public Utilities Commission regarding **[utility]'s [program]**. May I speak with **[contact name]**?

1 Yes

2 No [attempt to convert; if R not available, ask for an adult who makes decisions on how household uses energy]

I'm with **[data collection firm]**, an independent research firm. I am calling to learn about your experiences with the **[measures]** that you received through **[utility]'s [program]**.

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and **[utility]** better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about 15 minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-XXX-XXXX)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the **[measures]** you received through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call 415-703-2782, or visit their website: www.cpuc.ca.gov/evaluation.)

(NOTE: For all questions, “DON’T KNOW” and “REFUSED” will be coded if offered as a response.)

Identification Questions

- 1.1 Program records indicate that you purchased and received an on-line or mail-in rebate for **[measure]** from **[utility]** around **[insert date of participation]**. Do you recall purchasing **[measure]**?
- 1 Yes {SKIP TO 1.4}
 - 2 No
 - D (DON’T KNOW)
 - R (REFUSED)
- 1.2 (ASK IF DOESN’T RECALL) Is it possible that someone else in your household would know about purchasing **[measure]** and applying for an on-line or mail-in rebate from the retailer?
- 1 Yes
 - 2 No {THANK & TERMINATE}
 - D (DON’T KNOW) {THANK & TERMINATE}
 - R (REFUSED) {THANK & TERMINATE}
- 1.3 May I please speak with that person?
- 1 Yes {RESTART INTERVIEW WITH NEW RESPONDENT}
 - 2 No {SCHEDULE CALLBACK }
 - D (DON’T KNOW) {SCHEDULE CALLBACK}
 - R (REFUSED) {THANK & TERMINATE}
- 1.4 Are you the person in your household who decided to purchase and receive an on-line or mail-in rebate for **[measure]** from **[utility]** around **[insert date of participation]**?
- 1 Yes {SKIP TO Q2_1}
 - 2 No {SKIP TO 1.2}
 - D (DON’T KNOW) {SKIP TO 1.2}
 - R (REFUSED) {SKIP TO 1.2}

Sources of Program Information (Section 2)

Q2_1 How did you hear about the rebate offered on the **[measure]** available as part of **[utility] [program]**? (PROBE: Did you hear about the program from any other sources?) (DO NOT READ LIST, RECORD ALL THAT APPLY)

For Q2_1_1 to Q2_1_20:

- 0 Not mentioned
- 1 Mentioned

Utility provided information

- Q2_1_1 (Advertising—radio, newspaper, trade journal, billboard, TV)
- Q2_1_2 (Bill insert, newsletter, or other mailing)
- Q2_1_3 (Website)
- Q2_1_4 (Email)
- Q2_1_5 (Other utility) (SPECIFY)

Local Government/Community event/Nonprofit

- Q2_1_6 (Meeting, event, workshop, training) (SPECIFY)
- Q2_1_7 (School)
- Q2_1_8 (Local government/community agency) (SPECIFY)
- Q2_1_9 (City/county Energy Center - Pacific Energy Center, Stockton, Food Service) (SPECIFY)
- Q2_1_10 (Advertising—radio, newspaper, trade journal, billboard, TV)

Other

- Q2_1_11 (Home or building audit or assessment) (SPECIFY)
- Q2_1_12 (Meeting, event, workshop training) (SPECIFY)
- Q2_1_13 (Flex your Power TV or radio advertising)
- Q2_1_14 (Other advertising, don't recall)
- Q2_1_15 (Friend/Relative/Neighbor)
- Q2_1_16 (Other, Specify: _____)
- Q2_1_17 (DON'T KNOW)
- Q2_1_18 (REFUSED)
- Q2_1_19 Salesperson/Sales Rep
- Q2_1_20 Installer/Contractor

NTGR and Spillover

W1 Please think back to the time when you were deciding to buy the **[measure]**, perhaps recalling things that occurred in your household shortly before and after **[timeframe]**. What factors motivated you to purchase the **[measure]**? {DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE RESPONDENT HAS FINISHED, PROBE: Are there any other factors?}

1. The program incentive
2. The program technical assistance
3. Wanted to save energy
4. Wanted to reduce energy costs
5. The information provided by the Program
6. Past experience with this program
7. Because of past experience with another **[utility]** program
8. Recommendation from other utility program (Probe: What program?)
9. Recommendation of dealer/retailer
10. Recommendation of someone else (Probe: Who?)
11. Advertisement in newspaper (Probe: For what program?)
12. Radio advertisement (Probe: For what program?)
13. Other (SPECIFY)
14. Environmental concerns
15. Global warming
- 19 Liked the appearance of the **[measure]** more than the old one
20. Keeping up with the latest trends and fashions
- D (DON'T KNOW)
- R (REFUSED)

W7. Was the **[product type]** you received a rebate for installed in areas where no prior insulation existed?

- 1 Yes
2 No
DK Don't Know
REF Refused

Free-Ridership Questions

FR7. Our records indicate you received about **[amount of program incentive/subsidy]** from the **[utility]** **[program]** either directly or at the time of purchase to offset the cost of the **[product type]**. Does this amount sound about right?

1. Yes {SKIP TO FR1.1}
2. No
D DON'T KNOW {SKIP TO FR1.1}
R REFUSED {SKIP TO FR1.1}

Comment [d1]: Will this question be clear for interviewers when participants who got both attic and wall insulation?

Might need to provide interviewer with detail: Attic incentive \$XX Wall incentive \$YY

FR8. What would you estimate to be the actual amount?

{RECORD RESPONSE} _____ {SET = NEW AMOUNT OF PROGRAM INCENTIVE/SUBSIDY}

D DON'T KNOW
R REFUSED

FR1.1 At the time that you first heard about the **rebate** from **[utility]** for the **[measure]**, had you...?

Already been thinking about purchasing **[product type]**?

1 Yes
2 No {SKIP TO FR2}
D (DON'T KNOW) {SKIP TO FR2}
R (REFUSED) {SKIP TO FR2}

FR1.2. Already begun collecting information about **[product type]**?

1 Yes
2 No {SKIP TO FR2}
D (DON'T KNOW) {SKIP TO FR2}
R (REFUSED) {SKIP TO FR2}

FR1.3a. Already selected the R-value of **[product type]** you were going to get?

1 Yes
2 No {SKIP TO FR2}
D (DON'T KNOW) {SKIP TO FR2}
R (REFUSED) {SKIP TO FR2}

FR1.4. Already installed the **[measure]**?

1 Yes
2 No {SKIP TO FR2}
D (DON'T KNOW) {SKIP TO FR2}
R (REFUSED) {SKIP TO FR2}

FR1B. So, the **[measure]** was installed before you learned about the **rebate** from **[utility]**?

- 1 Yes {SKIP FR5}
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

FR2. Just to be sure I understand, did you have specific plans to install **[product type]** before learning about the **rebate** available through the **[program]**?

- 1. Yes
- 2. No {SKIP TO FR4}
- D DON'T KNOW {SKIP TO FR4}
- R REFUSED {SKIP TO FR4}

FR3. Did you have to make any changes to your existing plans in order to receive this **rebate** through the **[program]**?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4. {REPEAT AS NEEDED FOR FR4 PARTS A – D} If the **rebate** from the **[utility]** **[program]** had not been available, would you still have:

FR4A. Purchased any **[product type]** ?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW
- R REFUSED

FR4B. Purchased the **[product type]** at the same time as you did? (PROBE: That would be around **[date of participation]**)

- 1. Yes {SKIP TO FR4D}
- 2. No
- D DON'T KNOW {SKIP TO FR4C}
- R REFUSED {SKIP TO FR4C}

FR4B1. Bought the **[product type]** earlier than you did, or later?

- 1. Earlier
- 2. Same Time {REPEAT QUESTION FR4B}
- 3. Later
- D DON'T KNOW {SKIP TO FR4C}
- R REFUSED {SKIP TO FR4C}

FR4B2. (if earlier or later) How much **[earlier/later]** would you have bought the **[product type]**?

- _____ Years {AND/OR} _____ Months
- D DON'T KNOW
 - R REFUSED

FR4D. Purchased the same R-value of **[product type]**?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4E. If the **rebate** from the **[utility] [program]** had not been available, would you have done anything else differently?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW {SKIP TO FR5}
- R REFUSED {SKIP TO FR5}

FR4E1 What would you have done differently?

{RECORD RESPONSE}: _____

FR5. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same R-value of **[measure]** if you had not received any **rebate** from the program?

- {RECORD RESPONSE (0-10)} _____ {SKIP TO FR9}
- D DON'T KNOW {SKIP TO FR9}
 - R REFUSED {SKIP TO FR9}

I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR9. If I had not had any assistance from the program, I would have paid the additional **[amount of program incentive/subsidy]** to buy the **[measure]** on my own?

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

{READ ONLY IF FR7-FR9 WAS SKIPPED}: I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR10. The **rebate** from the **[utility] [program]** was a critical factor in my decision to purchase the **[measure]**.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

FR11. I would have bought **[product type]** within a year of when I did even without the **rebate** from the **[utility] [program]**.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

Consistency Check & Resolution

{C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

FR4A (efficiency enhancement measures) OR FR4D (incremental efficiency measures)
FR5
FR10
FR11

{IF FR4A/D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would have purchased the [measure] without the program'}

{IF FR4A/D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would not have purchased the [measure] without the program'}

{IF FR5 = 0,1 AND FR4A/D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would likely not have purchased the [measure] without the program'}

{IF FR5 = 9,10 AND FR4A/D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would likely have purchased the [measure] without the program'}

{IF FR10 = 0,1 AND FR4A/D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program'}

{IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program'}

{IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would have bought the [product type] within [a year] even without the program'}

{IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would not have bought the [product type] within [a year] even without the program'}

C1. Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **[measure]** at the time you did?
{RECORD VERBATIM RESPONSE BELOW}

C2. **[fill with wording and response categories to the one question which was inconsistent]** {INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE}

Recent Program Participation (Section 5)

Q5_3 Have you participated in any other programs offered by **[utility]** because of your experience with the **[program]**?

- 1 Yes
- 2 No *(SKIP TO Q5_5)*
- D (DON'T KNOW) *(SKIP TO Q5_5)*
- R (REFUSED) *(SKIP TO Q5_5)*

Q5_4 Which programs?

Q5_5 Which of the following phrases or messages have you heard before today?
(ROTATE STARTING POINT)

- 1 Continue

Q5_5A Good Housekeeping

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5B Click it or Ticket

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5C Ah-nu

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5D Flex Your Power

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5E Flex Alert

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5F Energy Hog

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5G Galley Bay

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5H Energy Star

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5I Hollister Co

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 6)

Jeremy- Please ensure that these questions are consistent with the billing analysis demographics questions- they should be the same.

Q6_1 The last questions ask about household characteristics to make sure we're getting a representative sample of [**utility**] residents.

Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

Q6_2 In what type of building do you live? (READ LIST IF NEEDED)
(PROBE FOR 'Condo': "How many units are in your building?")

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Other (SPECIFY)
- 8 Boat/RV/Van/Etc.
- D (DON'T KNOW)
- R (REFUSED)

Q6_3a About when was this building first built? (READ LIST IF NEEDED)

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 7 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

6.3b Were you living in this same home around [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

6.4a How many full or half bathrooms do you have in your home? (PROBE: A full bathroom is one that has a sink with running water, and a toilet, and either a bathtub or shower. A half bathroom has either a toilet or a bathtub or a shower?)

- ____ Bathrooms
- D (DON'T KNOW)
 - R (REFUSED)

6.4b How many bedrooms do you have in your home (If a one-room efficiency, or studio apartment, bedrooms=0)

- ____ bedrooms
- D (DON'T KNOW)
 - R (REFUSED)

6.4c Other than bedrooms and bathrooms, how many other rooms are there in your home? Do not count laundry rooms, foyers, unfinished storage spaces, porches, or garages.

- ____ Other rooms
- D (DON'T KNOW)
 - R (REFUSED)

[If 6.3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.5a]

C6.4d Did you do any remodeling, renovation or additions since January 1, 2005?

- 1 Yes
- 2 No (SKIP TO 6.5a)
- D (DON'T KNOW) (SKIP TO 6.5a)
- R (REFUSED) (SKIP TO 6.5a)

C6.4e How many remodels, renovations or additions have you done since then?

- _____ Remodels, renovations or additions
- D (DON'T KNOW)
- R (REFUSED)

C6.4f I'm going to ask you several questions regarding the timeframe of your remodels, renovations or additions. We will try to run through them quickly. (ASK A-C FOR EACH REMODEL THAT TOOK PLACE SINCE JANUARY 1, 2005).

- a. In what month and year did it start?
- b. Did this increase or decrease your home's square footage, not counting unfinished storage spaces, porches or garages,
- c. In what month and year did it finish?

	a. START (mm/yy yy)	b. Increase or decrease? 1 Increase 2 Decrease 3 Same D (DK) R (REFUSED)	C. FINISH (mm/y yyy)
1			
2			
3			
4			

6.5a Including yourself, how many people currently live in your home year-round?

- _____ people
- D (DON'T KNOW)
- R (REFUSED)

6.5b (IF 6.5a=1) Which of the following best describes your age?

- 1 Less than 18 years old
- 2 18-24 years old
- 3 25-34 years old
- 4 35-44 years old
- 5 45-54 years old
- 6 55-64 years old
- 7 65 or older
- D (DON'T KNOW)
- R (REFUSED)

6.5c (IF 6.5a>1) Including yourself, how many people currently living in your home year-round are in the following age groups?

- _____ Less than 18 years old
- _____ 18-24 years old
- _____ 25-34 years old
- _____ 35-44 years old
- _____ 45-54 years old
- _____ 55-64 years old
- _____ 65 or older
- TOTAL SHOULD EQUAL 6.5a
- R (REFUSED)

[If 6.3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.7]

C6.5d Has the total number of people living in your home year-round changed since [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No (SKIP TO 6.6)
- D (DON'T KNOW) (SKIP TO 6.6)
- R (REFUSED) (SKIP TO 6.6)

C6.5e Do more people or less people live in your home now?

- 1 More→How many more? _____
- 2 Less→How many less? _____
- D (DON'T KNOW)
- R (REFUSED)

C6.5f In what year(s) did the number of people in your household change?
(RECORD ALL YEARS OF CHANGE—NET CHANGE IS CALCULATED FROM C6.5e)

1st NET CHANGE: _____MONTH _____YEAR
2nd NET CHANGE: _____MONTH _____YEAR
3rd NET CHANGE: _____MONTH _____YEAR
D (DON'T KNOW)
R (REFUSED)

6.7 This next question asks about other changes you have made that we haven't already talked about. Since January 1, 2005 have you made any other changes to the appliances, equipment or other characteristics of your home that would affect how much energy you are using?

1 Yes
2 No (SKIP TO 6.7i)
D (DON'T KNOW) (SKIP TO 6.7i)
R (REFUSED) (SKIP TO 6.7i)

6.7a What types of changes did you make? (DO NOT READ. RECORD EACH TYPE OF CHANGE MADE. PROBE: Anything else?)

Heating and air conditioning measures

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Furnace
- 5 Programmable thermostat

Lighting measures

- 6 Fluorescent indoor fixture
- 7 Fluorescent outdoor fixture
- 8 Compact fluorescent bulb
- 9 Compact fluorescent fixture
- 10 Motion sensor
- 11 Dimmer switch

Laundry measures

- 12 Clothes washer
- 13 Clothes dryer

Water using measures

- 14 Water heater
- 15 Low Flow showerheads
- 16 Faucet aerators

Kitchen appliances

- 17 Refrigerator
- 18 Freezer
- 19 Range/oven
- 20 Dishwasher

Pool/spa/jacuzzi

- 21 Swimming pool
- 22 Swimming pool pump
- 23 Swimming pool cover
- 24 Spa/jacuzzi

Insulation/weatherstripping/sealing

- 25 Floor, wall, ceiling, or attic insulation
- 26 Weatherstripping/caulking/weatherization
- 27 Water heater/pipe wrapping/insulation
- 28 Duct sealing/repair (not cleaning)

Windows

- 29 Windows

- 30 Other (SPECIFY)
- 00 No other changes
- D (DON'T KNOW)
- R (REFUSED)

(ASK 6.7B TO 6.7H FOR EACH MEASURE SELECTED AT 6.7A)

6.7b Did this equipment replace existing equipment/measures or was it new to your home?

- 1 Replaced existing equipment
- 2 New to home
- D (DON'T KNOW)
- R (REFUSED)

6.7c When did this occur? (RECORD MONTH AND YEAR)

____/____ MM/YYYY

- D (DON'T KNOW)
- R (REFUSED)

6.7Cd (IF Q6.7c = DK) Was this before or after you participated in the [program]?

- 1 Before
- 2 After
- D (DON'T KNOW)
- R (REFUSED)

(ASK C6.7d and C6.7e ONLY IF BILLING ANALYSIS BEING DONE AND IF 6.7a = 4, 13, 14, 19, 24)

C6.7d What type of fuel does the new [equipment] use?

- 1 Gas
- 2 Electric
- 3 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

C6.7e (ASK IF 6.7b = REPLACED) What was the fuel type of the [equipment] you replaced?

- 1 Gas
- 2 Electric
- 3 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6.7f Did you receive a rebate for this [equipment] through a [utility] program?

- 1 Yes (SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i)
- 2 No
- D (DON'T KNOW) (SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i)
- R (REFUSED) (SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i)

(ASK 6.7g and 6.7h IF 1-4, 12, 13, 14, 17, 18, 19, 20, 22, 24, 29 IN 6.7a; ELSE SKIP TO NSP4)

6.7g Is the new [equipment] energy efficient?

- 1 Yes
- 2 No (SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i)
- D (DON'T KNOW) (SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i)
- R (REFUSED) (SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i)

6.7h How do you know that this equipment is energy efficient? (PROBE: IS IT ENERGY STAR® RATED?)

(ASK NSP4-5 ONLY IF 6.7f = NO AND 6.7g = YES AND 6.7c = AFTER DATE OF PARTICIPATION)

NSP4 I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.
My experience with the [utility] [program] in [2006, 2007, 2008] influenced my decision to install different types of high efficiency equipment on my own.

(RECORD RESPONSE (0-10)) _____

- D (DON'T KNOW)
- R (REFUSED)

NSP5 Why did you purchase this high efficiency equipment without going through a [utility] program? (DO NOT READ; INDICATE ALL THAT APPLY)

1. Too much paperwork
 2. Takes too long to get approval
 3. No time to participate, needed equipment immediately
 4. The program had ended
 5. The equipment would not qualify (PROBE: WHY NOT?) _____
 6. The amount of the rebate wasn't important enough
 7. Did not know program was available
 8. There was no program available
 9. Other (SPECIFY) _____
- D (DON'T KNOW)
R (REFUSED)

C6.7i [IF FURNACE WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have gas or electric space heating?

- 1 Gas
 - 2 Electric
 - 3 Both
 - 4 Other (Specify) _____
 - 7 None
- D (DON'T KNOW)
R (REFUSED)

C6.7j [IF WATER HEATER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric water heater?

- 1 Gas
 - 2 Electric
 - 3 Both
 - 4 Other (Specify) _____
 - 5 Solar
- D (DON'T KNOW)
R (REFUSED)

C6.7k [IF CLOTHES DRYER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric clothes dryer?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____

- 7 None
- D (DON'T KNOW)
- R (REFUSED)

C6.7I [IF RANGE/OVEN WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM]

Do you have a gas or electric range/oven?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

C6.7m [IF ROOM, CENTRAL AC, OR EVAPORATIVE COOLER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] What type of air conditioning system, if any, do you use in your home? (INDICATE ALL THAT APPLY)

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Other (Specify) _____
- 9 None
- D (DON'T KNOW)
- R (REFUSED)

Q6_8a1 Do you receive an electric bill directly from [utility]?

- 1 Yes
- 2 No {SKIP TO Q6_8a2}
- D (DON'T KNOW) {SKIP TO Q6_8a2}
- R (REFUSED) {SKIP TO Q6_8a2}

Comment [d2]: This seems like a holdover from a billing analysis. I don't know why it is needed since we're not doing a billing analysis.

At a minimum, we should ask appropriate questions: if SCG customer, then ask about receiving a gas bill. For G&E utilities, ask both.

Q6_8b1 Does this bill only include your home's electric use, or does it include the electric use of other households?

- 1 Only 1 household
- 2 Multiple households
- D (DON'T KNOW)
- R (REFUSED)

Q6_8a2 Do you receive a gas bill directly from [utility]?

- 1 Yes
- 2 No {SKIP TO Q6_13}
- D (DON'T KNOW) {SKIP TO Q6_13}

Comment [d3]: This seems like a holdover from a billing analysis. I don't know why it is needed since we're not doing a billing analysis.

At a minimum, we should ask appropriate questions: if SCG customer, then ask about receiving a gas bill. For G&E utilities, ask both.

R (REFUSED) {SKIP TO Q6_13}

Q6_8b2 Does this bill only include your home's gas use, or does it include the gas use of other households?

- 1 Only 1 household
- 2 Multiple households
- D (DON'T KNOW)
- R (REFUSED)

Q6_13 What is the primary language spoken in your home? (DO NOT READ)

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

Onsite Recruiting

7.1 We would like to offer you \$25 to participate in the on-site component of this evaluation we are doing for **[utility]**. We are NOT interested in selling anything. We would like to have one of our auditors visit your home at your convenience to look at the **[measure]** installed through the program. The on-site visit would only take about 15 minutes (will vary slightly depending on measures installed).

Would that be alright with you?

- 1 Yes
- 2 No (SKIP TO COMMENTS)

7.2 Great! Someone from **[firm]** will give you a call back to determine when they can schedule an appointment with one of our auditors in your area. Thank you for your cooperation with this important effort.

Do you have access to a work order or receipt that we could use to verify the type of insulation that was installed?

- 1 Yes

2 No

COMMENTS Those are all of my questions. Do you have any questions or comments for me?

1 Yes

2 No

THANK & TERMINATE

PG&E2000 Mass Markets Single Family Measures Participant Survey

The following measures will be asked about in the survey: Pool pumps and motor(s), storage water heater(s), attic insulation, wall insulation, cool roof, ENERGY STAR® clothes washer(s), ENERGY STAR® dishwasher(s), ENERGY STAR® central natural gas furnace(s), and ENERGY STAR® room air conditioner(s). The CATI software will automatically fill the appropriate measure description in the questions.

[measure]

ENERGY STAR® clothes washer
ENERGY STAR® dishwasher
electric water heater
gas water heater
ENERGY STAR® room air conditioner
multi-speed pool pump and motor
single-speed pool pump and motor
ENERGY STAR® gas furnace
attic insulation
wall insulation

[product type]

clothes washer
dishwasher
water heater
room air conditioner
pool pump and motor
furnace
insulation

[utility] PG&E

[assistance] rebate

[program] PG&E's program

[amount of program incentive/subsidy] dollar amount of PG&E rebate

[home/business] home

[date of participation] installation / rebate paid date

[quantity] quantity of measures installed, insulation=1

[insulation] flag if attic and/or wall insulation was installed

[timeframe] month/year measure was purchased / installed

[incremental efficiency measures] flag for all SF measures other than insulation

[enhanced efficiency measures] flag for attic and/or wall insulation

Introduction

Hello, my name is [interviewer name], and I'm calling on behalf of the California Public Utilities Commission regarding Pacific Gas and Electric's Energy Efficiency Programs for Homes and Small Businesses. May I speak with [contact name]?

- 1 Yes
- 2 No [attempt to convert; if R not available, ask for an adult who makes decisions on how household uses energy]

I'm with [data collection firm], an independent research firm. I am calling to learn about your experiences with the [measures] you purchased and the rebate you received from PG&E's energy efficiency program.

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and **PG&E** better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about 15 minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-XXX-XXXX)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the [measures] you purchased and received a rebate for through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call Mikhail Haramati at 415-703-1458, or visit their website: www.cpuc.ca.gov/eevalidation..)

(NOTE: For all questions, "DON'T KNOW" and "REFUSED" will be coded if offered as a response.)

Recall of Participation/Identification of Decision Maker (Section 1)

(QUANTITY REFERS TO THE NUMBER RECEIVED WITHIN THE MEASURE CATEGORY--E.G., 1 POOL PUMP)

1.1 Program records indicate that you purchased and received a rebate for the following energy efficient equipment through PG&E's Energy Efficiency Program for Homes and Small Businesses around [date of participation]. (RECORD FOR EACH MEASURE PURCHASED)

MEASURES	Do you recall purchasing . . . ?	(IF QUANTITY > 1) Is this the correct quantity?	Does the date I read sound about right?
A. [quantity] Pool pump and motor(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY ___) D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY DATE ___) D (DK) R (REFUSED)
B. [quantity] ENERGY STAR® clothes washer(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY ___) D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY DATE ___) D (DK) R (REFUSED)
C. [quantity] Natural gas water heater(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY ___) D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY DATE ___) D (DK) R (REFUSED)
D. [quantity] Electric water heater(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY ___) D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY DATE ___) D (DK) R (REFUSED)
D. Attic insulation	1 Yes 2 No D (DK) R (REFUSED)	--	1 Yes 2 No (SPECIFY DATE ___) D (DK) R (REFUSED)
E. Wall insulation	1 Yes 2 No D (DK) R (REFUSED)	--	1 Yes 2 No (SPECIFY DATE ___) D (DK) R (REFUSED)
G. [quantity] ENERGY STAR® dishwasher(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY ___) D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY DATE ___) D (DK) R (REFUSED)
H. [quantity] Central natural gas furnace(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY ___) D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY DATE ___) D (DK) R (REFUSED)
I. [quantity] Room air conditioner(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY ___) D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY DATE ___) D (DK) R (REFUSED)
J. Cool Roof	1 Yes 2 No D (DK) R (REFUSED)	--	1 Yes 2 No (SPECIFY DATE ___) D (DK) R (REFUSED)

(IF RECALLS MEASURE, SKIP TO 1.5)

1.2 (ASK IF DOESN'T RECALL ANY OF THESE MEASURES) Is it possible that someone else in your household would know about purchasing this/these **[measures]** and receiving a rebate?

- 1 Yes **[SKIP TO 1.5]**
- 2 No
- D (DON'T KNOW)
- R (REFUSED) **[TERMINATE]**

1.3 PG&E is offering rebates for replacing less efficient electric and natural gas-fired appliances, heating and cooling, and water heating equipment with more energy-efficient equipment. The program also provides rebates for attic and wall insulation, pool pumps, and whole house fans. The rebate program is offered to PG&E's residential and small business customers. Are you sure you don't recall purchasing the/these **[measures]** and receiving a rebate? (RECORD ONE NUMBER)

- 1 Don't remember purchasing equipment → **[TERMINATE, RECORD ANY COMMENTS MADE BY RESPONDENT BEFORE EXITING]**
- 2 Don't remember receiving rebate, but remember purchasing equipment → **[SKIP TO 1.5]**
- 3 Remember → **[READ, "GREAT, THEN LET'S CONTINUE", SKIP TO 1.5]**
- R (REFUSED) → **[TERMINATE]**

1.4 May I please speak with that person? (RECORD ONE NUMBER)

- 1 Yes **[BEGIN THE SURVEY AGAIN WITH THIS NEW RESPONDENT]**
- 2 No **[TERMINATE]**
- D (DON'T KNOW) **[TERMINATE]**
- R (REFUSED) **[TERMINATE]**

1.5 Are you the person in your household who decided to purchase this/these **[measures]** and receive a rebate through PG&E's program?

- 1 Yes
- 2 No **[SKIP BACK TO 1.4]**
- D (DON'T KNOW) **[TERMINATE]**
- R (REFUSED) **[TERMINATE]**

Sources of Program Information (Section 2)

2.1 How did you hear about the rebate offered on the [measures] available as part of PG&E's Energy Efficiency Program for Homes and Small Businesses? **(PROBE: Did you hear about the program from any other sources?)** (DO NOT READ LIST, RECORD ALL THAT APPLY)

Utility provided information

- 1 (Advertising—radio, newspaper, trade journal, billboard, TV)
- 2 (Bill insert, newsletter, or other mailing)
- 3 (Website)
- 4 (Email)
- 5 (Other utility) (SPECIFY) _____

Local Government/Community center or event/Nonprofit

- 6 (Meeting, event, workshop, training) (SPECIFY) _____
- 7 (School)
- 8 (Local government/community agency) (SPECIFY) _____
- 9 (Energy Center such as Pacific Energy Center, Stockton Training Center, Food Service Technology Center) (SPECIFY) _____
- 10 (Advertising—radio, newspaper, trade journal, billboard, TV)

Other

- 11 (Home or building audit or assessment) (SPECIFY) _____
- 12 (Meeting, event, workshop training) (SPECIFY) _____
- 13 (Flex your Power TV or radio advertising)
- 14 (Other advertising, don't recall)
- 15 (Friend/Relative/Neighbor)
- 16 (Other, Specify: _____)
- 19 (Salesperson/Sales rep)
- 20 (Installer/contractor)
- D (DON'T KNOW)
- R (REFUSED)

Installation Behavior—REBATE MEASURES (Section 3)

(QUESTIONS IN THIS SECTION WILL BE REPEATED FOR EACH MEASURE R RECALLS)

3.1 (IF QUANTITY=1) Now, I would like to understand what you did with the [measure]. Is this [measure] currently installed at your home (either indoors or outdoors)? (RECORD ONE NUMBER)

- 1 Yes [SKIP TO W1]
- 2 No
- D (DON'T KNOW) [IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY]
- R (REFUSED) [IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY]

PG&E2000 Mass Markets Single Family Measures Participant Survey

3.2 (IF QUANTITY=1) Which of the following best describes what happened with the [measure]? (READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location [SKIP TO 3.4]
- 2 It was installed at your home but is now permanently removed (example: broke, burned out, don't fit, don't like, etc.) [SKIP TO 3.5]
- 3 It is in storage because it is only needed during certain months of the year [SKIP TO W1]
- 4 It is in storage for some other reason [SKIP TO 3.7]
- 5 It was sold or given away [SKIP TO 3.4]
- 6 Something else (SPECIFY) _____-
- D (DON'T KNOW)
- R (REFUSED)

3.3 (IF QUANTITY>1) Now, I would like to understand what you did with the [quantity] [measure]. (READ LIST, RECORD NUMBER)

- a____ How many are currently installed at your home (either indoors or outdoors) (IF RESPONSE=QUANTITY, SKIP TO W1)
- b____ How many are installed at some other location?
- c____ How many were installed at your home (either indoors or outdoors) but are now permanently removed (example: broke, burned out, don't fit, don't like, etc.)?
- d____ How many are in storage because they are only needed during certain months of the year?
- e____ How many are in storage for some other reason?
- f____ How many were sold or given away?
- g____ Something else? (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.4 (ASK IF 3.2=1, 3.2=5, 3.3b>0, 3.3f>0) Is the/Are these [measure] located in PG&E's service territory?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

SKIP TO 5.1 IF ALL MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY or 3.2=1 or 3.2=5) AND THAT LOCATION IS OUTSIDE OF PG&E'S SERVICE TERRITORY (3.4 NE 1).

SKIP TO W1 IF ALL MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY or 3.2=1 or 3.2=5) AND THAT LOCATION IS INSIDE OF PG&E'S SERVICE TERRITORY (3.4 = 1).

Removed Measures (ASK ONLY IF THEY SAY THEY REMOVED A MEASURE AFTER INSTALLED, 3.2=2 or 3.3c>0)

3.5 Now let's talk about the [measure] you said you installed but have since removed. Why was this removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 (Equipment failed)
- 2 (Didn't work properly)
- 3 (Wrong size—too small or too large)
- 4 (Low water flow)
- 5 (Didn't like the color)
- 6 (Didn't like appearance/unattractive)
- 7 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

3.6 What did you replace the [measure] with? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 (With a new high efficiency [measure])
- 2 (With a less efficient [product type])
- 3 (Re-installed old equipment)
- 4 (Did not replace)
- 5 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

Measures in Storage (ASK ONLY IF THEY SAY MEASURE IS IN STORAGE FOR SOME OTHER REASON, 3.2=4 or 3.3e>0)

3.7 When do you think you will install the [measure]? Would you say within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

- 1 Within the next 3 months
- 2 3 to 6 months from now
- 3 6 to 12 months from now
- 4 More than a year from now
- 5 Never
- D (DON'T KNOW)
- R (REFUSED)

Warm-Up Questions/Background Context

W1. Please think back to the time when you were deciding to buy the (INSULATION: insulation/ALL OTHER: energy saving [**product types**]), perhaps recalling things that occurred in your household shortly before and after [**timeframe**]. What factors motivated you to purchase (INSULATION: insulation/ALL OTHER: energy saving [**product types**])? [DO NOT READ; INDICATE ALL THAT APPLY; ONCE THEY RESPONDENT HAS FINISHED, PROBE: Are there any other factors?]

1. Old equipment didn't work
2. Old equipment working poorly
3. The program incentive / rebate
4. The program technical assistance
5. Wanted to save energy
6. Wanted to reduce energy costs
7. The information provided by the Program
8. Past experience with this program
9. Because of past experience with another [**utility**] program
10. Recommendation from other utility program (Probe: What program? _____)
11. Recommendation of dealer/retailer
12. Recommendation of someone else (Probe: Who? _____)
13. Advertisement in newspaper (Probe: For what program? _____)
14. Radio advertisement (Probe: For what program? _____)
15. Increase comfort (reduce drafts, noise)
16. Better quality product
17. Water saving features
18. Environment / Environmental benefit
19. Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

(ASK W2A-W6 ONLY FOR INCREMENTAL EFFICIENCY REBATE MEASURES. IF INSULATION, SKIP W2A-W6)

W2a. Did you get this [**measure**] to replace an existing [**product type**]?

1. Yes [SKIP TO W4]
2. No
- D (DON'T KNOW) [SKIP TO 3.8]
- R (REFUSED) [SKIP TO 3.8]

W2b Is this [**product type**] the first you have ever had in your home?

1. Yes [SKIP TO 3.8]
2. No
- D (DON'T KNOW) [SKIP TO 3.8]
- R (REFUSED) [SKIP TO 3.8]

W2c. Did you get this [**measure**] because you wanted to add another/more [**product type**] to your home?

1. Yes [SKIP TO 3.8]
2. No [SKIP TO 3.8]
- D (DON'T KNOW) [SKIP TO 3.8]
- R (REFUSED) [SKIP TO 3.8]

W3. [SKIPPED BECAUSE NO LIGHTING IN PG&E2000 SF MEASURE SURVEY]

W4. About how old was the [product type] you replaced? [READ CATEGORIES IF NEEDED]

1. Less than 5 years old
2. 5 to less than 10 years old
3. 10 to less than 20 years old
4. 20 years to less than 30 years old
5. 30 or more years old
- D (DON'T KNOW)
- R (REFUSED)

W5. Was the old [product type] working or not working?

1. Working
2. Not working [SKIP TO 3.8]
- D (DON'T KNOW) [SKIP TO 3.8]
- R (REFUSED) [SKIP TO 3.8]

W6. Was the old [product type] in good, fair, or poor working condition?

1. Good
2. Fair
3. Poor
- D (DON'T KNOW)
- R (REFUSED)

Pool Pump Specific Battery (Billing / Engineering Analysis Measure)

3.8 Was the pool pump and motor you received a rebate for through PG&E's program NEW when you purchased and installed it, or was it used?

- 1 New
- 2 Used
- D (DON'T KNOW)
- R (REFUSED)

3.9 What type of equipment was it installed on? Was it installed on an: [READ LIST]

- 1 In-ground swimming pool
- 2 Above-ground swimming pool
- 3 Spa
- 4 Other [SPECIFY]
- D (DON'T KNOW)
- R (REFUSED)

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3.10 Since participating in PG&E's program on [date of participation], what hours of the day do you typically run your pool pump on Monday-Friday during the summer months?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (Other, SPECIFY)
- 97 (DON'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.11 Since participating in PG&E's program on [date of participation], what hours of the day do you typically run your pool pump on Monday-Friday during the winter months?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (Other, SPECIFY)
- 97 (DON'T USE)
- D (DON'T KNOW)
- R (REFUSED)

[SKIP TO NEXT SECTION IF W2A ≠ 1]

3.12 Before participating in PG&E's program on [date of participation], what hours of the day did you typically run your pool pump on Monday-Friday during the summer months?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (Other, SPECIFY)
- 97 (DIDN'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.13 Before participating in PG&E's program on [date of participation], what hours of the day did you typically run your pool pump on Monday-Friday during the winter months?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (Other, SPECIFY)
- 97 (DIDN'T USE)
- D (DON'T KNOW)
- R (REFUSED)

PG&E2000 Mass Markets Single Family Measures Participant Survey

3.14 (IF 3.12C <> 3.10C) Why do you run your pool pump differently in the summer than you did before participation in the program?

SPECIFY: _____

- D (DON'T KNOW)
- R (REFUSED)

3.15 (IF 3.11C <> 3.13C) Why do you run your pool pump differently in the winter than you did before participation in the program?

SPECIFY: _____

- D (DON'T KNOW)
- R (REFUSED)

Dishwasher Specific Battery (Verify Plus Measure)

3.16 Was the dishwasher you received a rebate for through PG&E's program NEW when you purchased and installed it or was it used?

- 1 New
- 2 Used
- D (DON'T KNOW)
- R (REFUSED)

3.17 We would like to get an idea of how many dishwasher loads you do each week with your new dishwasher. We will break this into QUICK loads, REGULAR loads, POWER SAVING loads, and POWER BOOST loads. On average, how many [READ LOAD TYPE] loads do you do each week with your new dishwasher?

- ___ Quick
- ___ Regular
- ___ Power saving
- ___ Power boost
- D (DON'T KNOW)
- R (REFUSED)

3.18 (ASK IF 3.17 = DON'T KNOW) How many dishwasher loads do you do on average each week with your new dishwasher?

- _____ number
- D (DON'T KNOW)
- R (REFUSED)

3.19 (ASK IF W2a=1) Would you say that this is more, the same, or less loads per week than you did with your old dishwasher?

- 1 More
- 2 The same
- 3 Less
- D (DON'T KNOW)

R (REFUSED)

Clothes Washer Specific Battery (Verify Plus Measure)

3.20 Was the clothes washer you received a rebate for through PG&E's program NEW when you purchased and installed it or was it used?

- 1 New
- 2 Used
- D (DON'T KNOW)
- R (REFUSED)

3.21 We would like to get an idea of how many loads of wash you do each week with your new clothes washer. We will break this into HOT water loads, WARM water loads and COLD water loads.

- ___ Hot water wash loads per week (specify number)
- ___ Warm water wash loads per week (specify number)
- ___ Cold water wash loads per week (specify number)
- D (DON'T KNOW)
- R (REFUSED)

3.22 (ASK IF 3.21 = DON'T KNOW) How many loads of wash do you do on average each week with your new clothes washer?

- _____ number
- D (DON'T KNOW)
- R (REFUSED)

3.23 (ASK IF W2a=1) Would you say that this is more, the same, or less loads per week than you did with your old clothes washer?

- 1 More
- 2 The same
- 3 Less
- D (DON'T KNOW)
- R (REFUSED)

Clothes Dryer Battery to Support Clothes Washer Battery

3.24 Do you have a clothes dryer?

- 1 Yes
- 2 No [SKIP TO 3.30]
- D (DON'T KNOW) [SKIP TO 3.30]
- R (REFUSED) [SKIP TO 3.30]

3.25 Did you purchase your clothes dryer new at the same time as your new clothes washer?

- 1 Yes [SKIP TO 3.27]
- 2 No
- D (DON'T KNOW) [SKIP TO 3.27]
- R (REFUSED) [SKIP TO 3.27]

3.26 How old is your clothes dryer? Is it: (read list)

- 1 Less than 1 yr
- 2 1-5 yrs
- 3 5-10 yrs
- 4 More than 10 yrs
- D (DON'T KNOW)
- R (REFUSED)

3.27 What type of fuel does your clothes dryer use? (If unsure read 1, 2)

- 1 Electricity
- 2 Natural Gas
- 4 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.28 How often do you use your clothes dryer versus HANG DRYING your clothes? Do you... (Read All)

- 1 Always use dryer
- 2 Use dryer more than 50% of the time
- 3 Use dryer less than 50% of the time
- 4 Half and Half
- 5 Never use the dryer
- D (DON'T KNOW)
- R (REFUSED)

3.29 (ASK IF W2a=1) Would you say that you use your new clothes dryer more, the same, or less – in terms of loads per week - than you did with your old clothes dryer?

- 1 More
- 2 The same
- 3 Less
- D (DON'T KNOW)
- R (REFUSED)

Water Heater Battery to Support Clothes Washer & Dishwasher Battery

3.30 What type of fuel does your water heater use? (If Don't Know, prompt and read answers)

- 1 Electricity
- 2 Natural Gas
- 3 Propane [SKIP TO 3.37]
- 4 Solar (sun) [SKIP TO 3.37]
- 5 Other (SPECIFY) _____ [SKIP TO 3.37]
- D (DON'T KNOW)
- R (REFUSED)

3.31 Do you have a traditional or tankless water heater? [If unsure ask] Does your water heater store water?
[If yes, 1, If no, 2]

- 1 Traditional storage tank?
- 2 Tankless/on-demand? [SKIP TO 3.34]
- 3 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.32 How many gallons does your water heater hold?

- _____ Gallons [SKIP TO 3.34]
- D (DON'T KNOW)
- R (REFUSED)

3.33 Is your water heater... (Read All)

- 1 Very Small: less than 30 gallons?
- 2 Small: 30-39 gallons?
- 3 Medium: 40-59 gallons?
- 4 Large: more than 60 gallons?
- D (DON'T KNOW)
- R (REFUSED)

3.34 What temperature is your hot water heater set for?

- _____ Degrees [SKIP TO 3.36]
- D (DON'T KNOW)
- R (REFUSED)

3.35 Is your water heater set at a... (Read All)

- 1 Low temperature: 100-120 degrees F?
- 2 Medium temperature: 125-140 F?
- 3 High temperature: 145-160 F?
- D (DON'T KNOW)
- R (REFUSED)

3.36 How old is your water heater? Is it... (Read All)

- 1 Less than 1 yr
- 2 1-5 yrs
- 3 5-10 yrs
- 4 More than 10 yrs
- D (DON'T KNOW)
- R (REFUSED)

Water Heater Specific Battery (Verify Plus Measure)

3.37 Was the water heater you received a rebate for through PG&E's program NEW when you purchased and installed it or was it used?

- 1 New
- 2 Used
- D (DON'T KNOW)
- R (REFUSED)

3.38 What type of fuel does your new water heater use? (If Don't Know, prompt and read answers)

- 1 Electricity
- 2 Natural Gas
- 3 Propane
- 4 Solar (sun)
- 5 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.39 (Ask if W2A = 1) What type of fuel did your previous water heater use?

- 1 Electricity
- 2 Natural Gas
- 3 Propane
- 4 Solar (sun)
- 5 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.40 Is your new water heater a traditional storage tank water heater or is it a tankless or on-demand type water heater? [If unsure ask] Does your water heater store water? [If yes, 1, If no, 2]

- 1 Traditional storage tank?
- 2 Tankless/on-demand? [SKIP TO 3.43]
- 3 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.41 How many gallons does your new water heater hold?

- _____ Gallons [SKIP TO 3.43]
- D (DON'T KNOW)
- R (REFUSED)

3.42 Is your new water heater... (Read All)

- 1 Very Small: less than 30 gallons?
- 2 Small: 30-39 gallons?
- 3 Medium: 40-59 gallons?
- 4 Large: more than 60 gallons?
- D (DON'T KNOW)
- R (REFUSED)

3.43 What temperature is your new hot water heater set for?

- _____ Degrees [SKIP TO 3.45]
- D (DON'T KNOW)
- R (REFUSED)

3.44 Is your water heater set at a... (Read All)

- 1 Low temperature: 100-120 degrees F?
- 2 Medium temperature: 125-140 F?
- 3 High temperature: 145-160 F?
- D (DON'T KNOW)
- R (REFUSED)

3.45 Do you have a clothes washer?

- 1 Yes
- 2 No [SKIP TO 3.47]
- D (DON'T KNOW) [SKIP TO 3.47]
- R (REFUSED) [SKIP TO 3.47]

3.46 Do you always, sometimes, or never wash your clothes in warm or hot water?

- 1 Always
- 2 Sometimes
- 3 Never
- D (DON'T KNOW)
- R (REFUSED)

3.47 Do you have a dishwasher?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Furnace Specific Battery (Billing Analysis Measure)

3.48 Was the furnace you received a rebate for through PG&E's program NEW when you purchased and installed it or was it refurbished or used?

- 1 New
- 2 Refurbished/Used
- D (DON'T KNOW)
- R (REFUSED)

3.49 (Ask if W2A = 1) Did the old system also use natural gas? (If NO specify fuel type)

- 1 Yes/ Natural Gas
- 2 Electricity [SKIP TO 3.51]
- 3 Propane [SKIP TO 3.51]
- 4 Other (SPECIFY) _____ [SKIP TO 3.51]
- D (DON'T KNOW) [SKIP TO 3.51]
- R (REFUSED) [SKIP TO 3.51]

3.50 (Ask if W2A = 1) Was the old system a forced air furnace or something else?

- 1 Forced air furnace
- 2 Wall furnace or furnaces
- 3 Room unit or units
- 4 Floor furnace
- 5 Other [SPECIFY]
- D (DON'T KNOW)
- R (REFUSED)

3.51 (Ask if W2A = 1) Does the new furnace heat the same, more, or less living space as the old system?

- 1 Same
- 2 More
- 3 Less
- D (DON'T KNOW)
- R (REFUSED)

3.52 Was new ductwork installed at the same time the new furnace was installed?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Room AC Specific Battery (Verify Only Measure)

3.53 Was the room air conditioner you received a rebate for through PG&E's program NEW when you purchased and installed it or was it refurbished or used?

- 1 New
- 2 Refurbished/Used
- D (DON'T KNOW)
- R (REFUSED)

3.54 (Ask if W2A = 1) What happened with your old room air conditioner?

- 1 Installed in another location at house
- 2 Gave away
- 3 Sold
- 4 In storage, but not planning on using
- 5 Disposed of
- 6 Recycled
- 7 Other (specify) _____
- D (DON'T KNOW)
- R (REFUSED)

Attic Insulation Specific Battery (Billing Analysis Measure)

3.55 Was there insulation in the attic before you installed the new attic insulation you received a rebate for through PG&E's program?

- 1 Yes
- 2 No [SKIP TO 3.58]
- D (DON'T KNOW) [SKIP TO 3.58]
- R (REFUSED) [SKIP TO 3.58]

3.56 Was the pre-existing attic insulation installed when your home was built?

- 1 Yes [SKIP TO 3.58]
- 2 No
- D (DON'T KNOW) [SKIP TO 3.58]
- R (REFUSED) [SKIP TO 3.58]

3.57 Approximately when was the pre-existing attic insulation added to your home?

- ____ Year
- D (DON'T KNOW)
- R (REFUSED)

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3.58 Was any of the attic insulation that you installed on [read participation date] installed over a garage or any other non-living areas of your home?

- 1 Yes, Some attic insulation installed above my living area and over garage or other non-living areas
- 2 Yes, Only installed over garage or other non-living areas
- 3 No / Only living areas
- D (DON'T KNOW)
- R (REFUSED)

3.59 What is your primary heating fuel type?

- 1 Electricity
- 2 Natural Gas
- 3 Propane
- 4 Wood
- 5 Kerosene
- 6 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.60 Do you have air conditioning?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

3.61 [IF 3.60=YES] Is this a central AC system, room air conditioner, or evaporative cooler?

- 1 Central AC
- 2 Room AC
- 3 Evaporative cooler
- 4 Other (specify) _____
- D (DON'T KNOW)
- R (REFUSED)

3.62 [IF 3.61=2] How many room air conditioners do you have?

- _____ Room AC units
- D (DON'T KNOW)
- R (REFUSED)

Wall Insulation Specific Battery (Billing Analysis Measure)

3.63 Was there wall insulation in the wall before you installed the new wall insulation you received a rebate for through PG&E's program?

- 1 Yes / No pre-existing insulation
- 2 No / Pre-existing insulation [SKIP TO 3.66]
- D (DON'T KNOW) [SKIP TO 3.66]
- R (REFUSED) [SKIP TO 3.66]

3.64 Was the pre-existing wall insulation installed when your home was built?

- 1 Yes [SKIP TO 3.66]
- 2 No
- D (DON'T KNOW) [SKIP TO 3.66]
- R (REFUSED) [SKIP TO 3.66]

3.65 Approximately when was the pre-existing wall insulation added to your home?

- ____ Year
- D (DON'T KNOW)
 - R (REFUSED)

3.66 Was any of the wall insulation that you installed on [read participation date] installed in your garage or any other non-living areas of your home?

- 1 Yes, Some wall insulation installed in my living areas and in my garage or other non-living areas
- 2 Yes, Wall insulation was only installed in my garage or other non-living areas
- 3 No / Only living areas
- D (DON'T KNOW)
- R (REFUSED)

3.67 What is your primary heating fuel type?

- 1 Electricity
- 2 Natural Gas
- 3 Propane
- 4 Wood
- 5 Kerosene
- 6 Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

3.68 Do you have air conditioning?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

3.69 [IF 3.68=YES] Is this a central AC system, room air conditioner, or evaporative cooler?

- 1 Central AC
- 2 Room AC
- 3 Evaporative cooler
- 4 Other (specify) _____
- D (DON'T KNOW)
- R (REFUSED)

3.70 [IF 3.69=2] How many room air conditioners do you have?

- _____ Room AC units
- D (DON'T KNOW)
- R (REFUSED)

Free Ridership and Spillover (Section 4)

(QUESTIONS IN THIS SECTION WILL BE REPEATED FOR EACH MEASURE CATEGORY)

FR7. Our records indicate you received about **[amount of program incentive/subsidy]** from the **[utility] [program]** either directly or at the time of purchase to offset the cost of the **[product type]**.

(IF CLOTHES WASHER INSTALLED) You might also have received a rebate from your local water district. We want you to think about the PG&E rebate now.

Does this amount sound about right?

- 1. Yes [SKIP TO FR1]
- 2. No
- D DON'T KNOW [SKIP TO FR1]
- R REFUSED [SKIP TO FR1]

FR8. What would you estimate to be the actual amount?

[RECORD RESPONSE] _____ [SET = NEW AMOUNT OF PROGRAM INCENTIVE/SUBSIDY]

- D DON'T KNOW
- R REFUSED

FR1. At the time that you first heard about the **[assistance]** from PG&E for **[measure]**, had you...? [READ LIST UNTIL R SAYS 'NO']

- 1. Already been thinking about purchasing **[product type]**? [IF NO, SKIP TO FR2]
- 2. Already begun collecting information about **[product type]**? [IF NO, SKIP TO FR2]
- 3a. **[FOR INCREMENTAL EFFICIENCY MEASURES]** Already selected the **[measure]** you were going to get? [IF NO, SKIP TO FR2]
- 3b. **[FOR EFFICIENCY ENHANCEMENT MEASURES]** Already decided to buy the **[product type]**? [IF NO, SKIP TO FR2]

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- 4. Already installed the energy efficient **[measure]**? [IF YES, SKIP TO FR1B; ELSE FR2]
- 5. [DON'T READ] Other: _____ [SKIP TO FR2]
- D DON'T KNOW [SKIP TO FR2]
- R REFUSED [SKIP TO FR2]

FR1B. So, the [measure] was installed before you learned about the [assistance] from PG&E?

- 1 Yes [SKIP FR5]
- 2 No
- D Don't know
- R Refused

FR2. Just to be sure I understand, did you have specific plans to install a(n) **[product type]** before learning about the **[assistance]** available through PG&E's program?

- 1. Yes
- 2. No [SKIP TO FR4]
- D DON'T KNOW [SKIP TO FR4]
- R REFUSED [SKIP TO FR4]

FR3. Did you have to make any changes to your existing plans in order to receive this **[assistance]** through the PG&E program?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4. [REPEAT AS NEEDED FOR FR4 PARTS A – D] If the **[assistance]** from the PG&E program had not been available, would you still have:

FR4A. Purchased a(n) **[product type]** ?

- 1. Yes
- 2. No [SKIP TO FR5]
- D DON'T KNOW
- R REFUSED

FR4B. Purchased the **[product type]** at the same time as you did?

- 1. Yes [SKIP TO FR4C]
- 2. No
- D DON'T KNOW [SKIP TO FR4C]
- R REFUSED [SKIP TO FR4C]

FR4B1. Bought the **[product type]** earlier than you did, or later?

- 1. Earlier
- 2. Same Time [REPEAT QUESTION FR4B]
- 3. Later
- D DON'T KNOW [SKIP TO FR4C]
- R REFUSED [SKIP TO FR4C]

FR4B2. How much **[earlier/later]** would you have bought the **[product type]**?
_____ Years [AND/OR] _____ Months

- D DON'T KNOW
- R REFUSED

FR4C. [IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM, OR MEASURE IS OF VARIABLE AMOUNT] Without the program, would you have purchased the same quantity as you did?

- 1. Yes [SKIP TO FR4D]
- 2. No
- D DON'T KNOW [SKIP TO FR4D]
- R REFUSED [SKIP TO FR4D]

FR4C1. How many/much would you have purchased without the program?

- _____ [RECORD NUMBER]
- D DON'T KNOW
 - R REFUSED

FR4D. [FOR INCREMENTAL EFFICIENCY MEASURES AND INSULATION] Purchased the same [INSULATION = R value/OTHER=efficiency] of **[product type]**?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4E. If the **[assistance]** from PG&E's program had not been available, would you have done anything else differently?

- 1. Yes
- 2. No [SKIP TO FR5]
- D DON'T KNOW [SKIP TO FR5]
- R REFUSED [SKIP TO FR5]

FR4E1 What would you have done differently?

[RECORD RESPONSE]: _____

FR5. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same **[measure]** if you had not received any **[assistance]** from the program?

[RECORD RESPONSE (0-10)] _____ [SKIP TO FR9]

D DON'T KNOW [SKIP TO FR9]

R REFUSED [SKIP TO FR9]

[Skip to FR10 if program does not provide a financial incentive/subsidy or database does not contain that information]

I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR9. If I had not had any assistance from the program (IF CLOTHES WASHER: for the clothes washer), I would have paid the additional **[amount of program incentive/subsidy]** to buy the **[measure]** on my own?

[RECORD RESPONSE (0-10)] _____

D DON'T KNOW

R REFUSED

[READ ONLY IF FR7-FR9 WAS SKIPPED]: I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR10. There may have been several reasons for my purchase decision. But the **[assistance]** from PG&E's program was a critical factor in my decision to purchase the high efficiency/energy efficient product.

[RECORD RESPONSE (0-10)] _____

D DON'T KNOW

R REFUSED

FR11. I would have bought a(n) **[product type]** within **a year** of when I did even without the **[assistance]** from PG&E's program.

[RECORD RESPONSE (0-10)] _____

D DON'T KNOW

R REFUSED

Consistency Check & Resolution

[C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

FR4A (efficiency enhancement measures) OR FR4D (incremental efficiency measures)
FR5
FR10
FR11

[IF FR4A/D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the [measure] without the program']

[IF FR4A/D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would not have purchased the [measure] without the program']

[IF FR5 = 0,1 AND FR4A/D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the [measure] without the program']

[IF FR5 = 9,10 AND FR4A/D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the [measure] without the program']

[IF FR10 = 0,1 AND FR4A/D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program']

[IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program']

[IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the [product type] within [a year/2 years] even without the program']

[IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the [product type] within [a year/2 years] even without the program']

C1. Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **[measure]** at the time you did? [RECORD VERBATIM RESPONSE BELOW]

C2. **[fill with wording and response categories to the one question which was inconsistent]** [INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE]

Recent Program Participation (Section 5)

5.1 Have you participated in any other programs offered by PG&E because of your experience with their energy efficiency programs for homes and small businesses?

- 1 Yes
- 2 No **[SKIP TO 5.3]**
- D (DON'T KNOW) **[SKIP TO 5.3]**
- R (REFUSED) **[SKIP TO 5.3]**

5.2 Which programs?

5.3 Which of the following phrases or messages have you heard before today? (ROTATE STARTING POINT)

A. Good Housekeeping

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

B. Click it or Ticket

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

C. Ahnu

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

D. Flex Your Power

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

E. Flex Alert

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

F. Energy Hog

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

- G. Galley Bay
1 Yes
2 No
D (DON'T KNOW)
R (REFUSED)

- H. Energy Star
1 Yes
2 No
D (DON'T KNOW)
R (REFUSED)

- I. Hollister Co
1 Yes
2 No
D (DON'T KNOW)
R (REFUSED)

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 6)

NOTE: ALL QUESTIONS STARTING WITH THE LETTER 'C' ARE QUESTIONS THAT WILL BE ASKED ONLY FOR WALL/ATTIC INSULATION AND FURNACE MEASURES [BILLING ANALYSES MEASURES]

The last questions ask about household characteristics to make sure we're getting a representative sample of [utility] residents.

6.1 Do you receive an electric or gas bill directly from PG&E?

- 1 Yes
2 No (SKIP TO 6.3)
D (DON'T KNOW) (SKIP TO 6.3)
R (REFUSED) (SKIP TO 6.3)

6.2 Does this bill only include your home's electric or gas use, or does it include the use of other households?

- 1 Only 1 household
2 Multiple households
D (DON'T KNOW)
R (REFUSED)

6.3 Do you own or rent your home?

- 1 Own
2 Rent
3 Other (SPECIFY)
D (DON'T KNOW)
R (REFUSED)

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6.4 In what type of building do you live? (READ LIST IF NEEDED)
(PROBE FOR 'Condo': "How many units are in your building?")

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Other (SPECIFY)
- 8 Boat/RV/Van/Etc.
- D (DON'T KNOW)
- R (REFUSED)

6.5 About when was this building first built?

RECORD YEAR: _____

IF DK YEAR: Was it built . . . ? (READ LIST)

- 1 Before 1978
- 2 Between 1978 and 1992
- 3 Between 1993 and 2000
- 4 Between 2001 and 2004
- 5 2005 or later
- D (DON'T KNOW)
- R (REFUSED)

6.6 Were you living in this same home around [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

6.7 How many square feet of **living space** are there in your residence, including bathrooms, foyers and hallways? (Exclude garages, basements and unheated porches.)

_____ Square feet

IF DK YEAR: Is it . . . ? (READ LIST)

- 1 Less than 500 square feet
- 2 Between 501 – 1000 square feet
- 3 Between 1001 – 1500 square feet
- 4 Between 1501 – 2000 square feet
- 5 Between 2001 – 2500 square feet
- 6 Between 2501 – 3000 square feet
- 7 Greater than 3000 square feet
- D (DON'T KNOW)
- R (REFUSED)

[If 6.6 = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.9]

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C6.8a Did you do any remodeling, renovation or additions since January 1, 2005?

- 1 Yes
- 2 No (SKIP TO 6.9a)
- D (DON'T KNOW) (SKIP TO 6.9a)
- R (REFUSED) (SKIP TO 6.9a)

C6.8b How many remodels, renovations or additions have you done since then?

- _____ Remodels, renovations or additions
- D (DON'T KNOW)
 - R (REFUSED)

C6.8c I'm going to ask you several questions regarding the timeframe of your remodels, renovations or additions. We will try to run through them quickly. (ASK A-C FOR EACH REMODEL THAT TOOK PLACE SINCE JANUARY 1, 2005).

- a. In what month and year did it start?
- b. Did this increase or decrease your home's square footage, not counting unfinished storage spaces, porches or garages,
- c. In what month and year did it finish?

	a. START (mm/yyyy)	b. Increase or decrease? 1 Increase 2 Decrease 3 Same D (DK) R (REFUSED)	C. FINISH (mm/yyyy)
1			
2			
3			
4			

6.9a Including yourself, how many people currently live in your home year-round?

- _____ people
- D (DON'T KNOW)
 - R (REFUSED)

6.9b (IF 6.9a=1) Which of the following best describes your age?

- 1 Less than 18 years old
- 2 18-24 years old
- 3 25-34 years old
- 4 35-44 years old
- 5 45-54 years old
- 6 55-64 years old
- 7 65 or older
- D (DON'T KNOW)
- R (REFUSED)

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6.9c (IF 6.9a>1) Including yourself, how many people currently living in your home year-round are in the following age groups?

- _____ Less than 18 years old
 - _____ 18-24 years old
 - _____ 25-34 years old
 - _____ 35-44 years old
 - _____ 45-54 years old
 - _____ 55-64 years old
 - _____ 65 or older
- TOTAL SHOULD EQUAL 6.9a
R (REFUSED)

6.9d Is there typically an adult at home during the day?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

[If 6.6 = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.10]

C6.9e Has the total number of people living in your home year-round changed since [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No (SKIP TO 6.10)
- D (DON'T KNOW) (SKIP TO 6.10)
- R (REFUSED) (SKIP TO 6.10)

C6.9f Do more people or less people live in your home now?

- 1 More→How many more? _____
- 2 Less→How many less? _____
- D (DON'T KNOW)
- R (REFUSED)

C6.9g In what year(s) did the number of people in your household change? (RECORD ALL YEARS OF CHANGE—NET CHANGE IS CALCULATED FROM C6.9f)

- 1st NET CHANGE: _____ YEAR
- 2nd NET CHANGE: _____ YEAR
- 3rd NET CHANGE: _____ YEAR
- D (DON'T KNOW)
- R (REFUSED)

6.10 This next question asks about other changes you have made that we haven't already talked about. Since January 1, 2005 have you made any changes to the appliances, equipment, or other characteristics of your home that would affect how much energy you are using?

- 1 Yes [ASK 6.10a-NSP5 FOR EACH MEASURE INSTALLED BEFORE ASKING 6.11a]
- 2 No [SKIP TO 6.11a]
- D DK [SKIP TO 6.11a]
- R REFUSED [SKIP TO 6.11a]

a. What types of changes did you make? (DO NOT READ. RECORD EACH TYPE OF CHANGE MADE. PROBE: Anything else?)

Heating and air conditioning measures

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Furnace
- 5 Programmable thermostat

Lighting measures

- 6 Fluorescent indoor fixture
- 7 Fluorescent outdoor fixture
- 8 Compact fluorescent bulb
- 9 Compact fluorescent fixture
- 10 Motion sensor
- 11 Dimmer switch

Laundry measures

- 12 Clothes washer
- 13 Clothes dryer

Water using measures

- 14 Water heater
- 15 Low Flow showerheads
- 16 Faucet aerators

Kitchen appliances

- 17 Refrigerator
- 18 Freezer
- 19 Range/oven
- 20 Dishwasher

Pool/spa/jacuzzi

- 21 Swimming pool
- 22 Swimming pool pump
- 23 Swimming pool cover
- 24 Spa/jacuzzi

Insulation/weatherstripping/sealing

- 25 Floor, wall, ceiling, or attic insulation
- 26 Weatherstripping/caulking/weatherization
- 27 Water heater/pipe wrapping/insulation
- 28 Duct sealing/repair (not cleaning)

Windows

- 29 Windows
- 30 Other (SPECIFY)
- 00 No other changes
- D DK
- R REFUSED

PG&E2000 Mass Markets Single Family Measures Participant Survey

b. Did this equipment replace existing equipment/measures or was it new to your home?

- 1 Replaced existing equipment
- 2 New to home
- D DK
- R REFUSED

c. When did this occur? (RECORD MONTH AND YEAR)

____/____ MM/YYYY

D DK -->Was this before or after you participated in the [program]?

- 1 Before
 - 2 After
 - D DK
 - R REFUSED
- R REFUSED

(ASK 6.10Cd and 6.10Ce ONLY IF BILLING ANALYSIS BEING DONE AND IF 6.10a = 4, 13, 14, 19, 23)

Cd. What type of fuel does the new [equipment] use?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D DK
- R REFUSED

Ce. (ASK IF 6.7b = REPLACED) What was the fuel type of the [equipment] you replaced?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D DK
- R REFUSED

f. Did you receive a rebate for this [equipment] through a [utility] program?

- 1 Yes [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.11a]
- 2 No
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.11a]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.11a]

(ASK 6.10g and 6.10h IF 1-4, 12, 13, 14, 17, 18, 19, 20, 22, 24, 29 IN 6.10a; ELSE SKIP TO NSP4)

g. Is the new [equipment] energy efficient?

- 1 Yes
- 2 No [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.11a]
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.11a]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.11a]

PG&E2000 Mass Markets Single Family Measures Participant Survey

- h. How do you know that this equipment is energy efficient? (PROBE: IS IT ENERGY STAR[®] RATED?)
-

(ASK NSP4-5 ONLY IF 6.10f = NO AND 6.10g = YES AND 6.10c = AFTER DATE OF PARTICIPATION)

NSP4. I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the [utility] [program] in [2006, 2007, 2008] influenced my decision to install different types of high efficiency equipment on my own.

[RECORD RESPONSE (0-10)] _____

D DON'T KNOW

R REFUSED

NSP5. Why did you purchase this high efficiency equipment without going through a [utility] program? [DO NOT READ; INDICATE ALL THAT APPLY]

1. Too much paperwork
 2. Takes too long to get approval
 3. No time to participate, needed equipment immediately
 4. The program had ended
 5. The equipment would not qualify [PROBE: WHY NOT?] _____
 6. The amount of the rebate wasn't important enough
 7. Did not know program was available
 8. There was no program available
 9. Other [SPECIFY] _____
- D DON'T KNOW
R REFUSED

(ASK C6.11a-C6.11c ONLY IF BILLING ANALYSIS BEING DONE)

PG&E2000 Mass Markets Single Family Measures Participant Survey

C6.11a [IF WATER HEATER WAS NOT REPLACED IN 6.10a OR THROUGH PROGRAM AND NOT ASKED IN 3.30 OR 3.38] Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Propane
- 4 Solar
- 5 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

C6.11b [IF CLOTHES DRYER WAS NOT REPLACED IN 6.10a OR THROUGH PROGRAM AND NOT ASKED IN 3.27] Do you have a gas or electric clothes dryer?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

C6.11c [IF RANGE/OVEN WAS NOT REPLACED IN 6.10a OR THROUGH PROGRAM] Do you have a gas or electric range/oven?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

6.12 What is the highest level of education you have completed?

- 1 no schooling
- 2 less than high school
- 3 some high school
- 4 high school graduate or equivalent (e.g., GED)
- 5 trade or technical school
- 6 some college
- 7 college graduate degree
- 8 some graduate school
- 9 graduate degree
- 10 other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

PG&E2000 Mass Markets Single Family Measures Participant Survey

6.13 Which of the following best represents your annual household income from all sources in 2007, before taxes? Was it . . . ? *(READ)*

- 1 Less than \$20,000 per year
- 2 \$20,000-49,999
- 3 \$50,000-74,999
- 4 \$75,000-99,999
- 5 \$100,000-149,999
- 6 \$150,000-199,999
- 7 \$200,000 or more
- D (DON'T KNOW)
- R (REFUSED)

6.14 What is your ethnicity? *(INDICATE ALL THAT APPLY)*

- 1 White
- 2 Black, African American or Negro
- 3 American Indian or Alaska Native
- 4 Asian
- 5 Chinese
- 6 Japanese
- 7 Korean
- 8 Vietnamese
- 9 Filipino
- 10 Native Hawaiian
- 11 Guamanian or Chamorro
- 12 Samoan
- 13 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6.15 What is the primary language spoken in your home? *(DO NOT READ)*

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

7.1

We would like to offer you \$25 to participate in the on-site component of this evaluation. We are NOT interested in selling anything. We would like to have one of our auditors visit your home at your convenience to look at the [measure] you installed through the program and how it/they are operating. The on-site visit would only take about 20 minutes. Would that be alright with you?

1 Yes

Great! Someone will give you a call back to determine when they can schedule an appointment with one of our auditors in your area. Thank you for your cooperation with this important effort.

2 No

Thank and Terminate

SCG 3517 Single Family Energy Efficiency Retrofit Program

The following measures will be asked about in the survey: Energy Star dishwasher, Energy Star or energy efficient clothes washer, high efficiency water heater, tankless water heater, high efficiency central gas furnace, attic insulation, wall insulation, low flow showerhead and faucet aerators.

Instrument-specific variables-- The CATI software will automatically fill the appropriate description in the questions.

[Product Type]

Attic insulation
Wall insulation
Dishwasher
Clothes washer
Furnace
Water heater
Showerhead and faucet aerators

[Measure]

Attic insulation
Wall insulation
Energy Star dishwasher
Energy Star/energy efficient clothes washer
High efficiency central gas furnace
High efficiency water heater
Tankless water heater
Low flow showerhead and faucet aerators

[Assistance]

Rebate/free

[Program]

2006-2008 Residential Retrofit Program

[Utility]

SCG

[Program Incentive]

Rebate dollar amount

[Quantity]

Quantity exchanged/installed

[Incremental efficiency measures]

Energy Star dishwasher
Energy Star/energy efficient clothes washer
High efficiency central gas furnace
High efficiency water heater
Tankless water heater

[Efficiency enhancement measures]

Low flow showerhead and faucet aerators
Insulation

Introduction

Hello, my name is [interviewer name], and I'm calling on behalf of the California Public Utilities Commission regarding Southern California Gas Company's 2006-2008 Residential Retrofit Program, also known as the Home Energy Efficiency Rebate Program. May I speak with [contact name]?

- 1 Yes
- 2 No [attempt to convert; if R not available, ask for an adult who makes decisions on how household uses energy]

I'm with PA Consulting Group, an independent research firm. I am calling to learn about your experiences with the . . . (READ ONE OR BOTH DEPENDING UPON THE MIX OF MEASURES):

Water Conservation only: . . . free faucet aerators and low-flow showerhead you received at a community event.

Other Measures: . . . [measures] you purchased and received a rebate for through Southern California Gas Company's Residential Retrofit Program (also referred to as the Home Energy Efficiency Rebate Program).

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and **SCG** better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about (non-billing analysis=15/billing analysis=20) minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-XXX-XXXX)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the [measures] you purchased and received a rebate through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call Mikhail Haramati at 415-703-1458, or visit their website: www.cpuc.ca.gov/eevalidation.)

(NOTE: For all questions, "DON'T KNOW" and "REFUSED" will be coded if offered as a response.)

Recall of Participation/Identification of Decision Maker (Section 1)

(QUANTITY REFERS TO THE NUMBER RECEIVED WITHIN THE MEASURE CATEGORY--E.G., 3 FAUCET AERATORS)

1.1a. (WATER CONSERVATION MEASURES) Program records indicate that you received three free faucet aerators and a low-flow showerhead at a community event through the 2006-2008 Residential Retrofit Program around **[insert date of participation]**. Do you recall receiving these? Is this the correct quantity? (RECORD INFORMATION)

MEASURES	Do you recall receiving . . . ?	(IF QUANTITY > 1) Is this the correct quantity?
A. One low-flow showerhead and three faucet aerators	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)

1.1b. (OTHER MEASURES) Program records indicate that you purchased and received a mail-in or instant rebate for the following energy efficient equipment through the 2006-2008 Residential Retrofit Program around **[insert date of participation]**. Do you recall purchasing this/these **[measure]**? Is this the correct quantity? (RECORD FOR EACH MEASURE INSTALLED)

MEASURES	Do you recall purchasing . . . ?	(IF QUANTITY > 1) Is this the correct quantity?
A. [quantity] Energy Star Dishwasher	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
B. [quantity] [Energy Star/Tier 1/Tier 2] Clothes Washer	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
C. [quantity] High efficiency water heater	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
D. [quantity] Tankless water heater(s)	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
E. [quantity] Central gas furnace	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
F. Attic insulation	1 Yes 2 No D (DK) R (REFUSED)	--
G. Wall insulation	1 Yes 2 No D (DK) R (REFUSED)	--

(ASK 1.1c-1.1d ONLY IF MEASURE = HIGH EFFICIENCY WATER HEATER)

1.1c How many gallons does your water heater hold?

- _____ gallons (SKIP to 1.1e)
D (DK)
R (REFUSED)

1.1d (IF DON'T KNOW WATER HEATER SIZE) Is your water heater? (READ LIST)

- 1 Very Small – less than 30 gallons
2 Small: 30-39 gallons
3 Medium: 40-59 gallons
4 Large: 60 gallons or more
D (DK)
R (REFUSED)

(ASK 1.1e ONLY IF MEASURE = DISHWASHER)

1.1e Do you have a gas or electric water heater?

- 1 Gas
2 Electric
3 Both
4 Other (SPECIFY)
D (DK)
R (REFUSED)

REMOVED 1.1f AND 1.1g – DISHWASHER IS NOT OFFERED UNDER SCG3517

(IF RECALLS MEASURES, SKIP TO 1.4)

1.2 (ASK IF DOESN'T RECALL ANY OF THESE MEASURES) Is it possible that someone else in your household would know about (WATER CONSERVATION: receiving these water saving devices/OTHER MEASURES: purchasing this/these [measures] and applying for a mail-in rebate or receiving an instant rebate from the retailer)? (RECORD ONE NUMBER)

- 1 Yes (SKIP TO 1.3)
2 No (TERMINATE IF ONLY WATER CONSERV)
D (DON'T KNOW)
R (REFUSED) (TERMINATE)

1.2b (OTHER MEASURES ONLY) Southern California Gas offers rebates for replacing less efficient gas-fired appliances, heating equipment with more energy-efficient equipment, and for adding insulation. Rebates are paid in two ways—either in response to a mail-in application for a rebate or through an instant rebate at the retailer. The rebate program is referred to as the 2006-2008 Residential Retrofit Program, or the Home Energy Efficiency Rebate Program, or the Single Family Energy Efficiency Retrofit program. Are you sure you don't recall purchasing the/these [measures] and applying for a rebate from the utility? (RECORD ONE NUMBER)

- 1 Don't remember -> [TERMINATE, RECORD ANY COMMENTS MADE BY RESPONDENT BEFORE EXITING]

- 2 Remember -> [READ, "GREAT, THEN LET'S CONTINUE", SKIP TO 1.4]
- R (REFUSED) (TERMINATE)

1.3 May I please speak with that person? (RECORD ONE NUMBER)

- 1 Yes (BEGIN THE SURVEY AGAIN WITH THIS NEW RESPONDENT)
- 2 No (TERMINATE)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

1.4 Are you the person in your household who decided to (WATER CONSERVATION: accept these water saving devices/OTHER MEASURES: purchase this/these [measures] and receive a rebate) through Southern California Gas Company's Residential Retrofit Program?

- 1 Yes
- 2 No (SKIP BACK TO 1.3)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

Sources of Program Information (Section 2)

2.1 How did you hear about (REBATE: rebate offered on [measures]/WATER SAVING: free water saving devices) available as part of SCG's Residential Retrofit Program? (PROBE: Did you hear about the program from any other sources?) (DO NOT READ LIST, RECORD ALL THAT APPLY)

Utility provided information

- 1 (Advertising—radio, newspaper, trade journal, billboard, TV)
- 2 (Bill insert, newsletter, or other mailing)
- 3 (Website)
- 4 (Email)
- 5 (Other utility) (SPECIFY)

Local Government/Community event/Nonprofit

- 6 (Meeting, event, workshop, training) (SPECIFY)
- 7 (School)
- 8 (Local government/community agency) (SPECIFY)
- 9 (City/county Energy Center such as Pacific Energy Center, Stockton, Food Service) (SPECIFY)
- 10 (Advertising—radio, newspaper, trade journal, billboard, TV)

Other

- 11 (Home or building audit or assessment) (SPECIFY)
- 12 (Meeting, event, workshop training) (SPECIFY)
- 13 (Flex your Power TV or radio advertising)
- 14 (Other advertising, don't recall)
- 15 (Friend/Relative/Neighbor)
- 16 (Other, Specify: _____)
- D (DON'T KNOW) (SKIP TO SECTION 3)
- R (REFUSED) (SKIP TO SECTION 3)

Installation Behavior (Section 3)

(QUESTIONS IN THIS SECTION WILL BE REPEATED FOR EACH MEASURE R RECALLS)

3.1a (IF QUANTITY=1) Now, I would like to understand what you did with the [measure]. Is this [measure] currently installed at your home (either indoors or outdoors)? (RECORD ONE NUMBER)

- 1 Yes (SKIP TO SECTION 4)
- 2 No
- D (DON'T KNOW) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)
- R (REFUSED) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)

3.1b (IF QUANTITY=1) Which of the following best describes what happened with the [measure]? (READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location (SKIP TO 3.3a)
- 2 It was installed at your home but is now permanently removed (example: broke, burned out, don't fit, don't like, etc.) (SKIP TO 3.6)
- 3 It is in storage because it is only needed during certain months of the year
- 4 It is in storage for some other reason (SKIP TO SECTION 3.8)
- 5 It was sold or given away (SKIP TO 3.3a)
- 6 Something else (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

3.2 (IF QUANTITY>1) Now, I would like to understand what you did with the [quantity] [measure]. (READ LIST, RECORD NUMBER)

- a___ How many are currently installed at you home (either indoors or outdoors) (IF RESPONSE=QUANTITY, SKIP TO 3.4)
- b___ How many are installed at some other location?
- c___ How many were installed at your home (either indoors or outdoors) but are now permanently removed (example: broke, burned out, don't fit, don't like, etc.)
- d___ How many are in storage because they are only needed during certain months of the year?
- e___ How many are in storage for some other reason?
- f___ How many were sold or given away?
- g___ Something else? (SPECIFY)

3.3a (ASK IF 3.1b=1, 3.1b=5, 3.2b>0, 3.2f>0) Is the/Are these [measure] located in SCG's service territory?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

(SKIP TO 5.3 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY) AND THAT LOCATION IS **OUTSIDE** OF SCE'S SERVICE TERRITORY (3.3A NE 1).

SKIP TO W1 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY) AND THAT LOCATION IS **INSIDE** OF SCE'S SERVICE TERRITORY (3.3A = 1).

Removed Measures (ASK ONLY IF THEY SAY THEY REMOVED A MEASURE AFTER INSTALLED, 3.1b=2 or 3.2c>0)

3.6 Now let's talk about [measure] you said you installed but have since removed. Why was this removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 (Equipment failed)
- 2 (Didn't work properly)
- 3 (Wrong size—too small or too large)
- 4 (Low water flow)
- 5 (Didn't like the color)
- 6 (Didn't like appearance/unattractive)
- 7 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

3.7 What did you replace [measure] with? (DO NOT READ LIST; PROBE FOR EFFICIENCY, RECORD ALL THAT APPLY)

- 1 (With a new high efficiency [measure])
- 2 (With a less efficient [product type])
- 3 (Re-installed old equipment)
- 4 (Did not replace)
- 5 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

Measures in Storage (ASK ONLY IF THEY SAY MEASURE IS IN STORAGE FOR SOME OTHER REASON, 3.1b=4 or 3.2e>0)

3.8 When do you think you will install the [measure]? Would you say within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

- 1 Within the next 3 months
- 2 3 to 6 months from now
- 3 6 to 12 months from now
- 4 More than a year from now
- 5 Never
- D (DON'T KNOW)
- R (REFUSED)

NTGR and Spillover (Section 4)

Warm-up Questions/Background Context¹

W1. Please think back to the time when you were deciding to (REBATE: buy the energy saving [**product types**]/WATER SAVINGS: get the free water saving devices), perhaps recalling things that occurred in your household shortly before and after [**timeframe**]. What factors motivated you to (REBATE: purchase energy saving [**product types**]/WATER SAVINGS: get the free water saving devices)? {? {DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE RESPONDENT HAS FINISHED, PROBE: Are there any other factors?}}

1. Old equipment didn't work
2. Old equipment working poorly
3. The program incentive
4. The program technical assistance
5. Wanted to save energy
6. Wanted to reduce energy costs
8. The information provided by the Program
9. Past experience with this program
10. Because of past experience with another [**utility**] program
11. Recommendation from other utility program (Probe: What program? _____)
12. Recommendation of dealer/retailer
13. Recommendation of someone else (Probe: Who? _____)
14. Advertisement in newspaper (Probe: For what program? _____)
15. Radio advertisement (Probe: For what program? _____)
16. Other (SPECIFY)
17. Environmental concerns
18. Global warming
19. Liked the appearance of the [**measure**] more than the old one
20. Keeping up with the latest trends and fashions
- D DON'T KNOW
- R REFUSED

¹ Individual contract groups may chose to modify the wording of these warm-up questions.

{REPEAT W2-C2 FOR FIRST MEASURE. REPEAT SERIES IF IS A SECOND MEASURE}

{ASK W2a-W6 ONLY FOR INCREMENTAL EFFICIENCY REBATE MEASURES}

W2a. Did you get this [measure] to replace [a/an] existing [product type]? }

1. Yes {SKIP TO W3}
2. No
- D. Don't Know (SKIP TO FR1)
- R. Refused (SKIP TO FR1)

W2b. Did you get this [measure] because you wanted to add another/more [product type] to your [home/business]?

1. Yes (SKIP TO FR1)
2. No
- D. Don't Know (SKIP TO FR1)
- R. Refused (SKIP TO FR1)

W2c. Is this [product type] the first you have ever had in your [home/business]?

1. Yes (SKIP TO FR1)
2. No (SKIP TO FR1)
- D. Don't Know (SKIP TO FR1)
- R. Refused (SKIP TO FR1)

W3. {IF MEASURE=LIGHTING} What type of lighting did this replace? {DO NOT READ}

1. Incandescent
2. CFL
3. Other (SPECIFY)
- D DON'T KNOW
- R REFUSED

W4. {IF MEASURE NOT CFL} About how old was the [product type] you replaced? {READ CATEGORIES IF NEEDED}

1. Less than 5 years old
2. 5 to less than 10 years old
3. 10 to less than 20 years old
4. 20 years to less than 30 years old
5. 30 or more years old
- D DON'T KNOW

R REFUSED

W5. Was the old **[product type]** working or not working?

- 1. Working
- 2. Not working {SKIP TO FR1}
- D DON'T KNOW {SKIP TO FR1}
- R REFUSED {SKIP TO FR1}

W6. Was the old **[product type]** in good, fair, or poor working condition?

- 1. Good
- 2. Fair
- 3. Poor
- D DON'T KNOW
- R REFUSED

W7. (INSULATION) Was the **[product type]** you received a rebate for installed in areas where no prior insulation existed?

- 1. Yes
- 2. No
- D. Don't Know
- R. Refused

Free-Ridership Questions

FR1. At the time that you first heard about the **[assistance]** from **[utility]** for **[measure]**, had you...? {READ LIST UNTIL R SAYS 'NO'}

- 1. Already been thinking about purchasing **[product type]**? {IF NO, SKIP TO FR2}
- 2. Already begun collecting information about **[product type]**? {IF NO, SKIP TO FR2}
- 3a. **{FOR INCREMENTAL EFFICIENCY MEASURES}** Already selected the **[measure]** you were going to get? {IF NO, SKIP TO FR2}
- 3b. **{FOR EFFICIENCY ENHANCEMENT MEASURES}** Already decided to buy the **[product type]**? {IF NO, SKIP TO FR2}
- 4. Already installed the energy efficient **[measure]**? {IF YES, SKIP TO FR5; ELSE FR2}
- 5. {DON'T READ} Other: _____ {SKIP TO FR2}
- D DON'T KNOW {SKIP TO FR2}
- R REFUSED {SKIP TO FR2}

FR2. Just to be sure I understand, did you have specific plans to install a(n) **[product type]** before learning about the **[assistance]** available through the **[program]**?

- 1. Yes
- 2. No {SKIP TO FR4}
- D DON'T KNOW {SKIP TO FR4}
- R REFUSED {SKIP TO FR4}

FR3. Did you have to make any changes to your existing plans in order to receive this **[assistance]** through the **[program]**?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4. {REPEAT AS NEEDED FOR FR4 PARTS A – D} If the **[assistance]** from the **[utility]** **[program]** had not been available, would you still have:

FR4A. Purchased any **[product type]** ?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW
- R REFUSED

FR4B. Purchased the **[product type]** at the same time as you did? (PROBE: That would be around [date of participation])

- 1. Yes {SKIP TO FR4C}
- 2. No
- D DON'T KNOW {SKIP TO FR4C}
- R REFUSED {SKIP TO FR4C}

FR4B1. Bought the **[product type]** earlier than you did, or later?

- 1. Earlier
- 2. Same Time {REPEAT QUESTION FR4B}
- 3. Later
- D DON'T KNOW {SKIP TO FR4C}
- R REFUSED {SKIP TO FR4C}

FR4B2. How much **[earlier/later]** would you have bought the **[product type]**?

- _____ Years {AND/OR} _____ Months
- D DON'T KNOW
 - R REFUSED

FR4C. {IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM, OR MEASURE IS OF VARIABLE AMOUNT} Without the program, would you have purchased the same quantity as you did?

- 1. Yes {SKIP TO FR4D}
- 2. No
- D DON'T KNOW {SKIP TO FR4D}
- R REFUSED {SKIP TO FR4D}

FR4C1. How many/much would you have purchased without the program?

- _____ {RECORD NUMBER}
- D DON'T KNOW
 - R REFUSED

FR4D. {FOR INCREMENTAL EFFICIENCY MEASURES AND INSULATION} Purchased the same [INSULATION = R value/OTHER=efficiency] of [product type]?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4E. If the [assistance] from the [utility] [program] had not been available, would you have done anything else differently?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW {SKIP TO FR5}
- R REFUSED {SKIP TO FR5}

FR4E1 What would you have done differently?

{RECORD RESPONSE}: _____

NOTE: TWO INSTRUMENTS WILL BE CREATED DURING PRE-TESTING. ONE USING A 1-5 POINT SCALE AND ONE USING A 0-10 POINT SCALE TO DETERMINE WHICH SEEMS LESS CONFUSING TO CUSTOMERS AND IF THERE IS AN EFFECT ON TIME TO COMPLETE

NOTE: FOR **INCREMENTAL EFFICIENCY MEASURES**, RESPONDENT WILL BE RANDOMLY ASSIGNED TO BE READ EITHER FR5 OR FR6. FOR **EFFICIENCY ENHANCEMENT MEASURES**, ALL RESPONDENTS WILL BE ASKED FR5.

FR5. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same [measure] if you had not received any [assistance] from the program?

- {RECORD RESPONSE (0-10)} _____ {SKIP TO FR7}
- D DON'T KNOW {SKIP TO FR7}
 - R REFUSED {SKIP TO FR7}

FR6. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought a less efficient [product type] if you had not received any [assistance] from the program?

- {RECORD RESPONSE (0-10)} _____
- D DON'T KNOW
 - R REFUSED

{SKIP TO FR10 IF PROGRAM DOES NOT PROVIDE A FINANCIAL INCENTIVE/SUBSIDY OR DATABASE DOES NOT CONTAIN THAT INFORMATION}

FR7. Our records indicate you received about **[amount of program incentive/subsidy]** from the **[utility] [program]** either directly or at the time of purchase to offset the cost of the **[product type]**. Does this amount sound about right?

- 1. Yes {SKIP TO FR9}
- 2. No
- D DON'T KNOW {SKIP TO FR9}
- R REFUSED {SKIP TO FR9}

FR8. What would you estimate to be the actual amount?

{RECORD RESPONSE} _____ {SET = NEW AMOUNT OF PROGRAM
INCENTIVE/SUBSIDY}
D DON'T KNOW
R REFUSED

I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR9. If I had not had any assistance from the program, I would have paid the additional **[amount of program incentive/subsidy]** to buy the **[measure]** on my own?

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

{READ ONLY IF FR7-FR9 WAS SKIPPED}: I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR10. The **[assistance]** from the **[utility] [program]** was a critical factor in my decision to (REBATE: purchase the high efficiency/energy efficient product./WATER CONSERVATION: install the water saving devices).

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

FR11. I would have bought a(n) **[product type]** within a year of when I did even without the **[assistance]** from the **[utility] [program]**.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

FR12A. **{FOR INCREMENTAL EFFICIENCY REBATE MEASURES}** The **[assistance]** from the **[utility] [program]** was not necessary to cause me to purchase the higher efficiency product when I bought my new **[product type]**.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

FR12B. **{FOR EFFICIENCY ENHANCEMENT REBATE MEASURES}** The **[assistance]** from the **[utility] [program]** was not necessary to cause me to (REBATE: purchase/WATER SAVING: install) the new **[product type]**.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

Consistency Check & Resolution

{C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) An algorithm will be provided after pretesting. The question responses that will be used to trigger C1 are:

- FR4A (only for efficiency enhancement measures)
- FR4D (only for incremental efficiency measures)
- FR5 or FR6 depending upon which version of the question they received
- FR10
- FR11
- FR12a or FR12b depending upon which version of the question they received}

C1. Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **[measure]** at the time you did? {RECORD VERBATIM RESPONSE BELOW}

C2. **[fill with wording and response categories to the one question which was inconsistent]** {INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE}

(NOTE: no lighting measures so no 'like spillover' questions)

Recent Program Participation (Section 5)

5.5 Which of the following phrases or messages have you heard before today? (ROTATE STARTING POINT)

A. Energy Star

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

B. Don't Trash California

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

C. Energy Hog

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

D. Click it or Ticket

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

E. Flex Your Power

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

F. Flex Alert

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

G. Spare the Air

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 6)

NOTE: ALL QUESTIONS STARTING WITH THE LETTER 'C' ARE QUESTIONS THAT WOULD BE ASKED ONLY IF A BILLING ANALYSIS IS BEING DONE FOR DISHWASHERS, CLOTHES WASHERS, WATER HEATER (STORAGE AND TANKLESS) CENTRAL GAS FURNACE, AND ATTIC/WALL INSULATION.

The last questions ask about household characteristics to make sure we're getting a representative sample of [utility] residents.

6.1 Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6.2 In what type of building do you live? (READ LIST IF NEEDED; PROBE IF SAYS CONDO: How many units are in your building?)

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Boat, RV, Van, etc.
- 8 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6.3 About when was this building first built? (READ LIST IF NEEDED)

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 7 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

6.3a Were you living in this same home around [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

6.4a How many full or half bathrooms do you have in your home? (PROBE: A full bathroom is one that has a sink with running water, and a toilet, and either a bathtub or shower. A half bathroom has either a toilet or a bathtub or a shower?)

- _____ Bathrooms
- D (DON'T KNOW)
 - R (REFUSED)

6.4b How many bedrooms do you have in your home (If a one-room efficiency, or studio apartment, bedrooms=0)

- _____ bedrooms
- D (DON'T KNOW)
 - R (REFUSED)

6.4c Other than bedrooms and bathrooms, how many other rooms are there in your home? Do not count laundry rooms, foyers, unfinished storage spaces, porches, or garages.

- _____ Other rooms
- D (DON'T KNOW)
 - R (REFUSED)

[If 6.3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.5a]

C6.4d Did you do any remodeling, renovation or additions since January 1, 2005?

- 1 Yes
- 2 No (SKIP TO 6.5a)
- D (DON'T KNOW) (SKIP TO 6.5a)
- R (REFUSED) (SKIP TO 6.5a)

C6.4e How many remodels, renovations or additions have you done since then?

- _____ Remodels, renovations or additions
- D (DON'T KNOW)
 - R (REFUSED)

C6.4f I'm going to ask you several questions regarding the timeframe of your remodels, renovations or additions. We will try to run through them quickly. (ASK A-C FOR EACH REMODEL THAT TOOK PLACE SINCE JANUARY 1, 2005).

- a. In what month and year did it start?
- b. Did this increase or decrease your home's square footage, not counting unfinished storage spaces, porches or garages,
- c. In what month and year did it finish?

	a. START (mm/yyyy)	b. Increase or decrease? 1 Increase 2 Decrease 3 Same D (DK) R (REFUSED)	C. FINISH (mm/yyyy)
1			
2			
3			
4			

6.5a Including yourself, how many people currently live in your home year-round?

- _____ people
 D (DON'T KNOW)
 R (REFUSED)

6.5b (IF 6.5a=1) Which of the following best describes your age?

- 1 Less than 18 years old
- 2 18-24 years old
- 3 25-34 years old
- 4 35-44 years old
- 5 45-54 years old
- 6 55-64 years old
- 7 65 or older
- D (DON'T KNOW)
- R (REFUSED)

6.5c (IF 6.5a>1) Including yourself, how many people currently living in your home year-round are in the following age groups?

- _____ Less than 18 years old
- _____ 18-24 years old
- _____ 25-34 years old
- _____ 35-44 years old
- _____ 45-54 years old
- _____ 55-64 years old
- _____ 65 or older
- _____ TOTAL SHOULD EQUAL 6.5a
- R (REFUSED)

[If 6.3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.7]

C6.5d Has the total number of people living in your home year-round changed since [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No (SKIP TO 6.6)
- D (DON'T KNOW) (SKIP TO 6.6)
- R (REFUSED) (SKIP TO 6.6)

C6.5e Do more people or less people live in your home now?

- 1 More→How many more? ____
- 2 Less→How many less? ____
- D (DON'T KNOW)
- R (REFUSED)

C6.5f In what year(s) did the number of people in your household change? (RECORD ALL YEARS OF CHANGE—NET CHANGE IS CALCULATED FROM C6.5e)

- 1st NET CHANGE: _____ MONTH _____ YEAR
- 2nd NET CHANGE: _____ MONTH _____ YEAR
- 3rd NET CHANGE: _____ MONTH _____ YEAR
- D (DON'T KNOW)
- R (REFUSED)

6.7 This next question asks about other changes you have made that we haven't already talked about. Since January 1, 2005 have you made any other changes to the appliances, equipment or other characteristics of your home that would affect how much energy you are using?

- 1 Yes [ASK 6.7a-NSP5 FOR EACH MEASURE INSTALLED BEFORE ASKING 6.7i]
- 2 No [SKIP TO 6.7i]
- D DK [SKIP TO 6.7i]
- R REFUSED [SKIP TO 6.7i]

a. What types of changes did you make? (DO NOT READ. RECORD EACH TYPE OF CHANGE MADE. PROBE: Anything else?)

Heating and air conditioning measures

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Furnace
- 5 Programmable thermostat

Lighting measures

- 6 Fluorescent indoor fixture
- 7 Fluorescent outdoor fixture
- 8 Compact fluorescent bulb
- 9 Compact fluorescent fixture
- 10 Motion sensor
- 11 Dimmer switch

Laundry measures

- 12 Clothes washer
- 13 Clothes dryer

Water using measures

- 14 Water heater
- 15 Low Flow showerheads
- 16 Faucet aerators

Kitchen appliances

- 17 Refrigerator
- 18 Freezer
- 19 Range/oven
- 20 Dishwasher

Pool/spa/jacuzzi

- 21 Swimming pool
- 22 Swimming pool pump
- 23 Swimming pool cover
- 24 Spa/jacuzzi

Insulation/weatherstripping/sealing

- 25 Floor, wall, ceiling, or attic insulation
- 26 Weatherstripping/caulking/weatherization
- 27 Water heater/pipe wrapping/insulation
- 28 Duct sealing/repair (not cleaning)

Windows

- 29 Windows
- 30 Other (SPECIFY)
- 00 No other changes (SKIP TO C6.7i)
- D DK
- R REFUSED

b. Did this equipment replace existing equipment/measures or was it new to your home?

- 1 Replaced existing equipment
- 2 New to home
- D DK
- R REFUSED

c. When did this occur? (RECORD MONTH AND YEAR)

____/____ MM/YYYY

D DK --→Was this before or after you participated in the [program]?

- 1 Before
 - 2 After
 - D DK
 - R REFUSED
- R REFUSED

(ASK 6.7Cd and 6.7Ce ONLY IF BILLING ANALYSIS BEING DONE AND IF 6.7a = 4, 13, 14, 19, 24)

Cd. What type of fuel does the new [equipment] use?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D DK
- R REFUSED

Ce. (ASK IF 6.7b = REPLACED) What was the fuel type of the [equipment] you replaced?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D DK
- R REFUSED

f. Did you receive a rebate for this [equipment] through a [utility] program?

- 1 Yes [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- 2 No
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]

(ASK 6.7g and 6.7h IF 1-4, 12, 13, 14, 17, 18, 19, 20, 22, 24, 29 IN 6.7a; ELSE SKIP TO NSP4)

g. Is the new [equipment] energy efficient?

- 1 Yes
- 2 No [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]

- h. How do you know that this equipment is energy efficient? (PROBE: IS IT ENERGY STAR® RATED?)
-

(ASK NSP4-5 ONLY IF 6.7f = NO AND 6.7g = YES AND 6.7c = AFTER DATE OF PARTICIPATION)

NSP4. I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the [utility] [program] in [2006, 2007, 2008] influenced my decision to install different types of high efficiency equipment on my own.

{RECORD RESPONSE (0-10)} _____

D DON'T KNOW
R REFUSED

NSP5. Why did you purchase this high efficiency equipment without going through a [utility] program? {DO NOT READ; INDICATE ALL THAT APPLY}

1. Too much paperwork
 2. Takes too long to get approval
 3. No time to participate, needed equipment immediately
 4. The program had ended
 5. The equipment would not qualify {PROBE: WHY NOT?} _____
 6. The amount of the rebate wasn't important enough
 7. Did not know program was available
 8. There was no program available
 9. Other {SPECIFY} _____
- D DON'T KNOW
R REFUSED

(ASK C6.7i=c6.7m ONLY IF BILLING ANALYSIS BEING DONE)

C6.7i [IF FURNACE WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have gas or electric space heating?

- 1 Gas
 - 2 Electric
 - 3 Both
 - 4 Other (Specify) _____
- D (DON'T KNOW)
R (REFUSED)

C6.7j [IF WATER HEATER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

C6.7k [IF CLOTHES DRYER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric clothes dryer?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

C6.7l [IF RANGE/OVEN WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric range/oven?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

C6.7m [IF ROOM, CENTRAL AC, OR EVAPORATIVE COOLER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] What type of air conditioning system, if any, do you use in your home? (INDICATE ALL THAT APPLY)

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

6.8a Do you receive a natural gas bill directly from SCG?

- 1 Yes
- 2 No (SKIP TO 6.9)
- D (DON'T KNOW) (SKIP TO 6.9)
- R (REFUSED) (SKIP TO 6.9)

6.8b Does this bill only include your home's natural gas use, or does it include the use of other households?

- 1 Only 1 household
- 2 Multiple households
- D (DON'T KNOW)
- R (REFUSED)

6.13 What is the primary language spoken in your home? (DO NOT READ; PROBE IF R SAYS CHINESE: Would this be Mandarin or Cantonese)

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

On-site Recruiting (Section 7)

(ONLY ASK IF 6.8a and 6.8b=1, HOUSEHOLD HAS OWN INDIVIDUAL METER, AND FOR THE FOLLOWING MEASURES: DISHWASHERS, CLOTHES WASHERS, WATER HEATER (STORAGE AND TANKLESS) CENTRAL GAS FURNACE, AND ATTIC/WALL INSULATION.)

7.1 We would like to offer you \$25 to participate in the on-site component of this evaluation we are doing for Southern California Gas Company. We are NOT interested in selling anything. We would like to have one of our auditors visit your home at your convenience to look at the measures you installed through the program and how they are operating. The on-site visit would only take about 15 minutes (will vary slightly depending on measures installed). Would that be alright with you?

- 1 Yes→Great! Someone from [**firm**] will give you a call back to determine when they can schedule an appointment with one of our auditors in your area. Thank you for your cooperation with this important effort.
- 2 No

Thank and Terminate

SDGE 3024 Residential Incentive Program Participant Survey Draft

The following measures will be asked about in the survey: Pool pumps and motor(s), pool pump reset agreement, whole house fan, storage water heater(s), attic insulation, wall insulation, ENERGY STAR® refrigerator, ENERGY STAR® dishwasher(s), ENERGY STAR® central natural gas furnace(s), and ENERGY STAR® room air conditioner(s).

Instrument-specific variables-- The CATI software will automatically fill the appropriate description in the questions.

[Product Type]

- Attic insulation
- Wall insulation
- Pool pump
- Pool pump reset agreement
- Refrigerator
- Room air conditioner
- Dishwasher
- Furnace
- Water heater
- Whole house fan

[Measure]

- Attic insulation
- Wall insulation
- Multi-speed pool pump
- Single-speed pool pump
- Pool pump reset agreement
- Energy Star refrigerator
- Energy Star room air conditioner
- Energy Star dishwasher
- Energy Star central natural gas furnace
- Storage water heater
- Whole house fan

[Assistance]

- Rebate/\$25 check

[Program]

- Residential Energy Efficiency Incentive Program

[Utility]

- SDGE

[Program Incentive]

- Dollar amount/\$25 check

[Quantity]

- Quantity exchanged/installed

[Incremental efficiency measures]

- Multi-speed pool pump
- Single-speed pool pump
- Energy Star refrigerator
- Energy Star room air conditioner
- Energy Star dishwasher
- Energy Star central natural gas furnace
- Storage water heater
- Whole house fan

[Efficiency enhancement measures]

- Insulation
- Pool pump reset agreement

Introduction

Hello, my name is [interviewer name], and I'm calling on behalf of the California Public Utilities Commission regarding San Diego Gas and Electric's Residential Incentive Program. May I speak with [contact name]?

- 1 Yes
- 2 No [attempt to convert; if R not available, ask for an adult who makes decisions on how household uses energy]

I'm with [data collection firm], an independent research firm. I am calling to learn about your experiences with the [IF REBATE: [measures] you purchased and the rebate you received from the retailer/IF RESET AGREEMENT: pool pump reset agreement you signed and received a \$25 incentive for] through SDGE's Residential Incentive Program.

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and SDGE better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about (non-billing analysis=15/billing analysis=20) minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-XXX-XXXX)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the [measures] you purchased and received a rebate through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call Mikhail Haramati at 415-703-1458, or visit their website: www.cpuc.ca.gov/evaluation.)

(NOTE: For all questions, "DON'T KNOW" and "REFUSED" will be coded if offered as a response.)

Recall of Participation/Identification of Decision Maker (Section 1)

(QUANTITY REFERS TO THE NUMBER RECEIVED WITHIN THE MEASURE CATEGORY--E.G., 1 POOL PUMP)

1.1a (IF RESET AGREEMENT) Our records show that your household signed an agreement about how often you would use your pool pump. You would have received \$25 from SDGE for signing this agreement. Do you recall signing this agreement?

- 1 Yes (SKIP TO 1.3)
- 2 No (SKIP TO 1.2)
- D (DON'T KNOW) (SKIP TO 1.2)
- R (REFUSED) (TERMINATE)

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1.1b (IF REBATE) Program records indicate that you purchased and received a mail-in or instant rebate for the following energy efficient equipment through the Residential Incentive Program around **[insert date of participation]**. (RECORD FOR EACH MEASURE INSTALLED)

MEASURES	Do you recall purchasing ?	(IF QUANTITY > 1) Is this the correct quantity?
A. [quantity] Pool pump and motor	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
B. [quantity] Whole house fan	1 Yes 2 No D (DK) R (REFUSED)	--
C. [quantity] Storage water heater	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
D. Attic insulation	1 Yes 2 No D (DK) R (REFUSED)	--
E. Wall insulation	1 Yes 2 No D (DK) R (REFUSED)	--
F. Energy Star refrigerator	1 Yes 2 No D (DK) R (REFUSED)	--
G. [quantity] Energy Star Dishwasher	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
H. [quantity] Central natural gas furnace	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)
I. [quantity] Room air conditioner	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY __) D (DK) R (REFUSED)

(ASK 1.1c-1.1d ONLY IF MEASURE = WATER HEATER)

1.1c How many gallons does your water heater hold?

_____ gallons (SKIP to 1.1e)
 D (DK)
 R (REFUSED)

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1.1d (IF DON'T KNOW WATER HEATER SIZE) Is your water heater? (READ LIST)

- 1 Very small: Less than 30 gallons
- 2 Small: 30-39 gallons
- 3 Medium: 40-59 gallons
- 4 Large: 60 gallons or more
- D (DK)
- R (REFUSED)

(ASK 1.1e ONLY IF MEASURE = DISHWASHER)

1.1e Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (SPECIFY)
- D (DK)
- R (REFUSED)

(ASK 1.1f-1.1g ONLY IF MEASURE = REFRIGERATOR)

1.1f Where is the Freezer located (mounted) on the refrigerator?

- 1 Freezer is on the bottom of the refrigerator
- 2 Freezer is on the top of the refrigerator
- 3 Freezer is on the side of the refrigerator
- 4 Refrigerator does not have an attached freezer
- D (DK)
- R (REFUSED)

1.1g Does your refrigerator have a through the door ice machine?

- 1 Yes
- 2 No
- D (DK)
- R (REFUSED)

(IF RECALLS MEASURES, SKIP TO 1.4)

1.2 (ASK IF DOESN'T RECALL ANY OF THESE MEASURES) Is it possible that someone else in your household would know about (IF REBATE: purchasing this/these [**measures**] and applying for a mail-in or instant rebate from the retailer/IF RESET AGREEMENT: signing this agreement)? (RECORD ONE NUMBER)

- 1 Yes (SKIP TO 1.3)
- 2 No (TERMINATE IF RESET ONLY)
- D (DON'T KNOW) (TERMINATE IF RESET ONLY)
- R (REFUSED) (TERMINATE)

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1.2b (IF REBATE AND Q1.2 = NO OR DON'T KNOW) San Diego Gas and Electric is offering mail-in or instant rebates for replacing less efficient electric and natural gas-fired appliances, heating and cooling, and water heating equipment with more energy-efficient equipment. The program also provides rebates for attic and wall insulation, pool pumps, and whole house fans. Rebates are paid in two ways—either in response to a mail-in application for a rebate or through an instant rebate at the retailer. The rebate program is referred to as the Residential Incentive Program. Are you sure you don't recall purchasing the/these [measures] and applying for a rebate? (RECORD ONE NUMBER)

- 1 Don't remember -> [TERMINATE, RECORD ANY COMMENTS MADE BY RESPONDENT BEFORE EXITING]
- 2 Remember -> [READ, "GREAT, THEN LET'S CONTINUE", SKIP TO 1.4]
- R (REFUSED) (TERMINATE)

1.3 May I please speak with that person? (RECORD ONE NUMBER)

- 1 Yes (BEGIN THE SURVEY AGAIN WITH THIS NEW RESPONDENT)
- 2 No (TERMINATE)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

1.4 Are you the person in your household who decided to (IF REBATE: purchase this/these [measures] and receive a rebate through SDGE's Residential Incentive Program/IF RESET AGREEMENT: sign this agreement with SDGE)?

- 1 Yes
- 2 No (SKIP BACK TO 1.3)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

Sources of Program Information (Section 2)

2.1 How did you hear about the (IF REBATE: rebate offered on the [measures] available as part of/IF RESET AGREEMENT: pool pump reset agreement) SDGE's Residential Incentive Program? (PROBE: Did you hear about the program from any other sources?) (DO NOT READ LIST, RECORD ALL THAT APPLY)

Utility provided information

- 1 (Advertising—radio, newspaper, trade journal, billboard, TV)
- 2 (Bill insert, newsletter, or other mailing)
- 3 (Website)
- 4 (Email)
- 5 (Other utility) (SPECIFY)

Local Government/Community event/Nonprofit

- 6 (Meeting, event, workshop, training) (SPECIFY)
- 7 (School)
- 8 (Local government/community agency) (SPECIFY)
- 9 (City/county Energy Center such as Pacific Energy Center, Stockton, Food Service) (SPECIFY)
- 10 (Advertising—radio, newspaper, trade journal, billboard, TV)

Other

- 11 (Home or building audit or assessment) (SPECIFY)
- 12 (Meeting, event, workshop training) (SPECIFY)
- 13 (Flex your Power TV or radio advertising)
- 14 (Other advertising, don't recall)
- 15 (Friend/Relative/Neighbor)
- 16 (Other, Specify: _____)
- D (DON'T KNOW) (SKIP TO SECTION 3)
- R (REFUSED) (SKIP TO SECTION 3)

Installation Behavior—REBATE MEASURES (Section 3)

(REPEAT 3.0-3.8 FOR EACH REBATE MEASURE R RECALLS)

3.0 (IF REBATE) How did you receive the rebate for this [measure]? Did you mail in the rebate application to SDGE, or receive an instant rebate at the store when you made your purchase?

- 1 Mail in rebate
- 2 Instant rebate at store
- D (DON'T KNOW)
- R (REFUSED)

3.1a (IF QUANTITY=1) Now, I would like to understand what you did with the [measure]. Is this [measure] currently installed at your home (either indoors or outdoors)? (RECORD ONE NUMBER)

- 1 Yes (SKIP TO 3.12)
- 2 No
- D (DON'T KNOW) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)
- R (REFUSED) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)

3.1b (IF QUANTITY=1) Which of the following best describes what happened with the [measure]? (READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location (SKIP TO 3.3a)
- 2 It was installed at your home but is now permanently removed (example: broke, burned out, don't fit, don't like, etc.) (SKIP TO 3.6)
- 3 It is in storage because it is only needed during certain months of the year
- 4 It is in storage for some other reason (SKIP TO SECTION 3.8)
- 5 It was sold or given away (SKIP TO 3.3a)
- 6 Something else (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

3.2 (IF QUANTITY>1) Now, I would like to understand what you did with the [quantity] [measure]. (READ LIST, RECORD NUMBER)

- a ___ How many are currently installed at your home (either indoors or outdoors) (IF RESPONSE=QUANTITY, SKIP TO 3.4)
- b ___ How many are installed at some other location?
- c ___ How many were installed at your home (either indoors or outdoors) but are now permanently removed (example: broke, burned out, don't fit, don't like, etc.)
- d ___ How many are in storage because they are only needed during certain months of the year?
- e ___ How many are in storage for some other reason?
- f ___ How many were sold or given away?
- g ___ Something else? (SPECIFY)

3.3a (ASK IF 3.1b=1, 3.1b=5, 3.2b>0, 3.2f>0) Is the/Are these [measure] located in **SDGE's** service territory?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

(SKIP TO 5.3 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY) AND THAT LOCATION IS **OUTSIDE** OF SCE'S SERVICE TERRITORY (3.3A NE 1).
SKIP TO W1 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY) AND THAT LOCATION IS **INSIDE** OF SCE'S SERVICE TERRITORY (3.3A = 1).

Removed Measures (ASK ONLY IF THEY SAY THEY REMOVED A MEASURE AFTER INSTALLED, 3.1b=2 or 3.2c>0)

3.6 Now let's talk about [measure] you said you installed but have since removed. Why was this removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 (Equipment failed)
- 2 (Didn't work properly)
- 3 (Wrong size—too small or too large)
- 4 (Low water flow)
- 5 (Didn't like the color)
- 6 (Didn't like appearance/unattractive)
- 7 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

3.7 What did you replace [measure] with? (DO NOT READ LIST; PROBE FOR EFFICIENCY, RECORD ALL THAT APPLY)

- 1 (With a new high efficiency [measure])
- 2 (With a less efficient [product type])
- 3 (Re-installed old equipment)
- 4 (Did not replace)
- 5 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

Measures in Storage (ASK ONLY IF THEY SAY MEASURE IS IN STORAGE FOR SOME OTHER REASON, 3.1b=4 or 3.2e>0)

3.8 When do you think you will install the [measure]? Would you say within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

- 1 Within the next 3 months
- 2 3 to 6 months from now
- 3 6 to 12 months from now
- 4 More than a year from now
- 5 Never
- D (DON'T KNOW)
- R (REFUSED)

(ASK 3.12-3.17 ONLY FOR POOL PUMP RESET AGREEMENT)

3.12 Since participating in Residential Incentive Program on [insert date of participation], what hours of the day do you typically run your pool pump on Monday-Friday during the summer months (May-September)?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (OTHER, specify)
- 97 (DON'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.13 Since participating in Residential Incentive Program on [insert date of participation], what hours of the day do you typically run your pool pump on Monday-Friday during the winter months (October-April)?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (OTHER, specify)
- 97 (DON'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.14 Before participating in Residential Incentive Program on **[insert date of participation]**, what hours of the day did you typically run your pool pump on Monday-Friday during the summer months?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 95 No prior pool pump (SKIP TO W1)
- 96 (OTHER, specify)
- 97 (DIDN'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.15 Before participating in Residential Incentive Program on **[insert date of participation]**, what hours of the day did you typically run your pool pump on Monday-Friday during the winter months?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (OTHER, specify)
- 97 (DIDN'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.16 (IF 3.14C <> 3.12C) Why do you run your pool pump differently in the summer than you did before participation in the program?

SPECIFY: _____
D (DON'T KNOW)
R (REFUSED)

3.17 (IF 3.15C <> 3.13C) Why do you run your pool pump differently in the winter than you did before participation in the program?

SPECIFY: _____
D (DON'T KNOW)
R (REFUSED)

Free Ridership and Spillover (Section 4)

Warm-up Questions/Background Context¹

W1. Please think back to the time when you were deciding to (REBATE: buy the energy saving [product types]/RESET AGREEMENT: sign the pool pump reset agreement), perhaps recalling things that occurred in your household shortly before and after [timeframe]. What factors motivated you to (REBATE: purchase energy saving [product types]/RESET AGREEMENT: sign this agreement)? {DO NOT READ; INDICATE ALL THAT APPLY; ONCE THEY RESPONDENT HAS FINISHED, PROBE: Are there any other factors?}

1. Old equipment didn't work
2. Old equipment working poorly
3. The program incentive
4. The program technical assistance
5. Wanted to save energy
6. Wanted to reduce energy costs
7. The information provided by the Program
8. Past experience with this program
9. Because of past experience with another [utility] program
10. Recommendation from other utility program (Probe: What program? _____)
11. Recommendation of dealer/retailer
12. Recommendation of someone else (Probe: Who?_____)
13. Advertisement in newspaper (Probe: For what program? _____)
14. Radio advertisement (Probe: For what program? _____)
15. Other (SPECIFY)
16. Environmental concerns
17. Global warming
18. Liked the appearance of the [measure] more than the old one
19. Keeping up with the latest trends and fashions
- D DON'T KNOW
- R REFUSED

{REPEAT W2-C2 FOR FIRST MEASURE. REPEAT SERIES IF IS A SECOND MEASURE}

{ASK W2a-W6 ONLY FOR INCREMENTAL EFFICIENCY REBATE MEASURES}

W2a. Did you get this [measure] to replace [a/an] existing [product type]? }

1. Yes {SKIP TO W3}
2. No
- D. Don't Know {SKIP TO FR1}
- R. Refused {SKIP TO FR1}

W2b. Did you get this [measure] because you wanted to add another/more [product type] to your home?

1. Yes {SKIP TO FR1}

¹ Individual contract groups may chose to modify the wording of these warm-up questions.

- 2. No
- D. Don't Know {SKIP TO FR1}
- R. Refused {SKIP TO FR1}

W2c. Is this [**product type**] the first you have ever had in your home?

- 1. Yes {SKIP TO FR1}
- 2. No {SKIP TO FR1}
- D. Don't Know {SKIP TO FR1}
- R. Refused {SKIP TO FR1}

W4. {IF MEASURE NOT CFL} About how old was the [**product type**] you replaced? {READ CATEGORIES IF NEEDED}

- 1. Less than 5 years old
- 2. 5 to less than 10 years old
- 3. 10 to less than 20 years old
- 4. 20 years to less than 30 years old
- 5. 30 or more years old
- D DON'T KNOW
- R REFUSED

W5. Was the old [**product type**] working or not working?

- 1. Working
- 2. Not working {SKIP TO FR1}
- D DON'T KNOW {SKIP TO FR1}
- R REFUSED {SKIP TO FR1}

W6. Was the old [**product type**] in good, fair, or poor working condition?

- 1. Good
- 2. Fair
- 3. Poor
- D DON'T KNOW
- R REFUSED

W7. (INSULATION) Was the [product type] you received a rebate for installed in areas where no prior insulation existed?

- 1. Yes
- 2. No
- D. Don't Know
- R. Refused

Free-Ridership Questions – REBATED MEASURES MODULE

FR1. At the time that you first heard about the **[assistance]** from **[utility]** for **[measure]**, had you...?
{READ LIST}

1. Already been thinking about purchasing **[product type]**? {IF NO, SKIP TO FR2}
 2. Already begun collecting information about **[product type]**? {IF NO, SKIP TO FR2}
 - 3a. **{FOR INCREMENTAL EFFICIENCY MEASURES}** Already selected the **[measure]** you were going to get? {IF NO, SKIP TO FR2}
 - 3b. **{FOR EFFICIENCY ENHANCEMENT MEASURES}** Already decided to buy the **[product type]**? {IF NO, SKIP TO FR2}
 4. Already installed the energy efficient **[measure]**? {IF YES, SKIP TO FR1B; ELSE FR2}
 5. {DON'T READ} Other: _____ {SKIP TO FR2}
- D DON'T KNOW {SKIP TO FR2}
R REFUSED {SKIP TO FR2}

FR1B.

So, the **[measure]** was installed before you learned about the **[assistance]** from **[utility]**?

- 1 Yes {SKIP FR5}
 - 2 No
- D Don't know
R Refused

FR2. Just to be sure I understand, did you have specific plans to install a(n) **[product type]** before learning about the **[assistance]** available through the **[program]**?

1. Yes
 2. No {SKIP TO FR4}
- D DON'T KNOW {SKIP TO FR4}
R REFUSED {SKIP TO FR4}

FR3. Did you have to make any changes to your existing plans in order to receive this **[assistance]** through the **[program]**?

1. Yes
 2. No
- D DON'T KNOW
R REFUSED

FR4. {REPEAT AS NEEDED FOR FR4 PARTS A – D} If the **[assistance]** from the **[utility] [program]** had not been available, would you still have:

FR4A. Purchased a(n)_ **[product type]** ?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW
- R REFUSED

FR4B. Purchased the **[product type]** at the same time as you did? (PROBE: That would be around [date of participation])

- 1. Yes {SKIP TO FR4C}
- 2. No
- D DON'T KNOW {SKIP TO FR4C}
- R REFUSED {SKIP TO FR4C}

FR4B1. Bought the **[product type]** earlier than you did, or later?

- 1. Earlier
- 2. Same Time {REPEAT QUESTION FR4B}
- 3. Later
- D DON'T KNOW {SKIP TO FR4C}
- R REFUSED {SKIP TO FR4C}

FR4B2. How much **[earlier/later]** would you have bought the **[product type]**?

- _____ Years {AND/OR} _____ Months
- D DON'T KNOW
 - R REFUSED

FR4C. {IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM, OR MEASURE IS OF VARIABLE AMOUNT} Without the program, would you have purchased the same quantity as you did?

- 1. Yes {SKIP TO FR4D}
- 2. No
- D DON'T KNOW {SKIP TO FR4D}
- R REFUSED {SKIP TO FR4D}

FR4C1. How many/much would you have purchased without the program?

- _____ {RECORD NUMBER}
- D DON'T KNOW
 - R REFUSED

FR4D. **{FOR INCREMENTAL EFFICIENCY MEASURES AND INSULATION}** Purchased the same [INSULATION = R value/OTHER=efficiency] of **[product type]**?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4E. If the **[assistance]** from the **[utility] [program]** had not been available, would you have done anything else differently?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW {SKIP TO FR5}
- R REFUSED {SKIP TO FR5}

FR4E1 What would you have done differently?

{RECORD RESPONSE}: _____

FR5. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same **[measure]** if you had not received any **[assistance]** from the program?

- {RECORD RESPONSE (0-10)} _____ {SKIP TO FR7}
- D DON'T KNOW {SKIP TO FR7}
 - R REFUSED {SKIP TO FR7}

{SKIP TO FR10 IF PROGRAM DOES NOT PROVIDE A FINANCIAL INCENTIVE/SUBSIDY OR DATABASE DOES NOT CONTAIN THAT INFORMATION}

FR7. Our records indicate you received about **[amount of program incentive/subsidy]** from the **[utility] [program]** either directly or at the time of purchase to offset the cost of the **[product type]**. Does this amount sound about right?

- 1. Yes {SKIP TO FR9}
- 2. No
- D DON'T KNOW {SKIP TO FR9}
- R REFUSED {SKIP TO FR9}

FR8. What would you estimate to be the actual amount?

- {RECORD RESPONSE} _____ {SET = NEW AMOUNT OF PROGRAM INCENTIVE/SUBSIDY}
- D DON'T KNOW
 - R REFUSED

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I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR9. If I had not had any assistance from the program, I would have paid the additional **[amount of program incentive/subsidy]** to buy the **[measure]** on my own.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

{READ ONLY IF FR7-FR9 WAS SKIPPED}: I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR10. There may have been several reasons for my purchase decision. But the **[assistance]** from the **[utility] [program]** was a critical factor in my decision to purchase the high efficiency/energy efficient product.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

FR11. I would have bought a(n) **[product type]** within a **year** of when I did even without the **[assistance]** from the **[utility] [program]**.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

Free-Ridership Questions – Pool Pump Reset Agreement Module

{ONLY ASK OF POOL PUMP RESET AGREEMENTS}

FR1. At the time that you first heard about the **incentive** from **SDG&E** for the Pool Pump Reset Agreement, had you...? {READ LIST}

1. Already been thinking about resetting your pool filtering times? (IF NO, SKIP TO FR2)
 2. Already begun collecting information about resetting your pool filtering times? (IF NO, SKIP TO FR2)
 3. Already selected new pool filtering times? (IF NO, SKIP TO FR2)
 4. Already changed your pool filtering times {IF YES, SKIP TO FR5; ELSE FR2}
 5. {DON'T READ} Other: _____ (SKIP TO FR2)
- D DON'T KNOW (SKIP TO FR2)
R REFUSED (SKIP TO FR2)

FR2. Just to be sure I understand, did you have specific plans to reset your pool filtering times before learning about the **incentive** available through the **Residential Incentive Program**?

1. Yes

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- 2. No {SKIP TO FR4}
- D DON'T KNOW {SKIP TO FR4}
- R REFUSED {SKIP TO FR4}

FR3. Did you have to make any changes to your existing plans in order to receive this **incentive** through the **Residential Incentive Program**?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4. If the **incentive** from the **SDG&E Residential Incentive Program** had not been available, would you still have:

FR4A. Changed your pool filtering times ?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW
- R REFUSED

FR4B1. Changed your pool filtering times at an earlier date than you did or a later date?

- 1. Earlier
- 2. Same Time {REPEAT QUESTION FR4A}
- 3. Later
- D DON'T KNOW {SKIP TO FR4C}
- R REFUSED {SKIP TO FR4C}

FR4B2. How much **[earlier/later]** would you have reset your filtering times?

- _____ Years {AND/OR} _____ Months
- D DON'T KNOW
 - R REFUSED

FR4E. If the **incentive** from the **SDG&E Residential Incentive Program** had not been available, would you have done anything else differently?

- 1. Yes
- 2. No {SKIP TO FR5}
- D DON'T KNOW {SKIP TO FR5}
- R REFUSED {SKIP TO FR5}

FR4E1 What would you have done differently?

{RECORD RESPONSE}: _____

FR5. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have reset your filtering times if you had not received any **incentive** from the program?

{RECORD RESPONSE (0-10)} _____ {SKIP TO FR7}
D DON'T KNOW {SKIP TO FR7}
R REFUSED {SKIP TO FR7}

{SKIP TO FR10 IF PROGRAM DOES NOT PROVIDE A FINANCIAL INCENTIVE/SUBSIDY OR DATABASE DOES NOT CONTAIN THAT INFORMATION}

FR7. Our records indicate you received about **\$25** from the **SDG&E Residential Incentive Program**. Does this amount sound about right?

- 1. Yes {SKIP TO FR9}
- 2. No
- D DON'T KNOW {SKIP TO FR9}
- R REFUSED {SKIP TO FR9}

FR8. What would you estimate to be the actual amount?

{RECORD RESPONSE} _____ {SET = NEW AMOUNT OF PROGRAM INCENTIVE/SUBSIDY}
D DON'T KNOW
R REFUSED

I'm going to read several statements about how you came to participate in the Pool Pump Reset Agreement. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR9. If I had not had any assistance from the program, I would have reset my filtering times on my own?

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

FR10. There may have been several reasons to reset my pool filter times. But the **incentive** from the **SDG&E Residential Incentive Program** was a critical factor in my decision to reset my pool filtering times.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

FR11. I would have reset my pool filtering times within a **year** of when I did even without the **incentive** from the **SDG&E Residential Incentive Program**.

{RECORD RESPONSE (0-10)} _____
D DON'T KNOW
R REFUSED

1.1.1 Consistency Check & Resolution

{C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

FR4A (efficiency enhancement measures) OR FR4D (incremental efficiency measures)
FR5
FR10
FR11

{IF FR4A/D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the [measure] without the program'}

{IF FR4A/D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would not have purchased the [measure] without the program'}

{IF FR5 = 0,1 AND FR4A/D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the [measure] without the program'}

{IF FR5 = 9,10 AND FR4A/D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the [measure] without the program'}

{IF FR10 = 0,1 AND FR4A/D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program'}

{IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program'}

{IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the [product type] within [a year/2 years] even without the program'}

{IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the [product type] within [a year/2 years] even without the program'}

C1. Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **[measure]** at the time you did? **{RECORD VERBATIM RESPONSE BELOW}**

C2. **[fill with wording and response categories to the one question which was inconsistent]** **{INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE}**

Recent Program Participation (Section 5)

5.3 Have you participated in any other programs offered by SDGE because of your experience with the Residential Incentive Program.

- 1 Yes
- 2 No (SKIP TO 5.5)
- D (DON'T KNOW) (SKIP TO 5.5)
- R (REFUSED) (SKIP TO 5.5)

5.4 Which programs?

5.5 Which of the following phrases or messages have you heard before today? (ROTATE STARTING POINT)

A. Energy Star

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

B. Don't Trash California

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

C. Energy Hog

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

D. Click it or Ticket

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

E. Flex Your Power

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

F. Flex Alert

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

G. Spare the Air

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 6)

NOTE: ALL QUESTIONS STARTING WITH THE LETTER 'C' ARE QUESTIONS THAT WOULD BE ASKED ONLY IF A BILLING ANALYSIS IS BEING DONE FOR POOL PUMPS, POOL PUMP AGREEMENTS, AND INSULATION.

The last questions ask about household characteristics to make sure we're getting a representative sample of [utility] residents.

6.1 Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6.2 In what type of building do you live? (READ LIST IF NEEDED; PROBE IF SAYS CONDO: How many units are in your building?)

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Boat, RV, Van, etc.
- 8 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6.3 About when was this building first built? (READ LIST IF NEEDED)

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 7 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

6.3a Were you living in this same home around [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

6.4a How many full or half bathrooms do you have in your home? (PROBE: A full bathroom is one that has a sink with running water, and a toilet, and either a bathtub or shower. A half bathroom has either a toilet or a bathtub or a shower?)

____ Bathrooms
 D (DON'T KNOW)
 R (REFUSED)

6.4b How many bedrooms do you have in your home (If a one-room efficiency, or studio apartment, bedrooms=0)

____ bedrooms
 D (DON'T KNOW)
 R (REFUSED)

6.4c Other than bedrooms and bathrooms, how many other rooms are there in your home? Do not count laundry rooms, foyers, unfinished storage spaces, porches, or garages.

____ Other rooms
 D (DON'T KNOW)
 R (REFUSED)

[If 6.3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.5a]

C6.4d Did you do any remodeling, renovation or additions since January 1, 2005?

1 Yes
 2 No (SKIP TO 6.5a)
 D (DON'T KNOW) (SKIP TO 6.5a)
 R (REFUSED) (SKIP TO 6.5a)

C6.4e How many remodels, renovations or additions have you done since then?

____ Remodels, renovations or additions
 D (DON'T KNOW)
 R (REFUSED)

C6.4f I'm going to ask you several questions regarding the timeframe of your remodels, renovations or additions. We will try to run through them quickly. (ASK A-C FOR EACH REMODEL THAT TOOK PLACE SINCE JANUARY 1, 2005).

- a. In what month and year did it start?
- b. Did this increase or decrease your home's square footage, not counting unfinished storage spaces, porches or garages,
- c. In what month and year did it finish?

	a. START (mm/yyyy)	b. Increase or decrease? 1 Increase 2 Decrease 3 Same D (DK) R (REFUSED)	C. FINISH (mm/yyyy)
1			
2			
3			
4			

6.5a Including yourself, how many people currently live in your home year-round?

- _____ people
D (DON'T KNOW)
R (REFUSED)

6.5b (IF 6.5a=1) Which of the following best describes your age?

- 1 Less than 18 years old
2 18-24 years old
3 25-34 years old
4 35-44 years old
5 45-54 years old
6 55-64 years old
7 65 or older
D (DON'T KNOW)
R (REFUSED)

6.5c (IF 6.5a>1) Including yourself, how many people currently living in your home year-round are in the following age groups?

- _____ Less than 18 years old
_____ 18-24 years old
_____ 25-34 years old
_____ 35-44 years old
_____ 45-54 years old
_____ 55-64 years old
_____ 65 or older
TOTAL SHOULD EQUAL 6.5a
R (REFUSED)

[If 6.3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.7]

C6.5d Has the total number of people living in your home year-round changed since [insert date 12 months prior to time of participation]?

- 1 Yes
2 No (SKIP TO 6.6)
D (DON'T KNOW) (SKIP TO 6.6)
R (REFUSED) (SKIP TO 6.6)

C6.5e Do more people or less people live in your home now?

- 1 More→How many more? _____
2 Less→How many less? _____
D (DON'T KNOW)
R (REFUSED)

C6.5f In what year(s) did the number of people in your household change? (RECORD ALL YEARS OF CHANGE—NET CHANGE IS CALCULATED FROM C6.5e)

1st NET CHANGE: _____ MONTH _____ YEAR
2nd NET CHANGE: _____ MONTH _____ YEAR
3rd NET CHANGE: _____ MONTH _____ YEAR
D (DON'T KNOW)
R (REFUSED)

6.7 This next question asks about other changes you have made that we haven't already talked about. Since January 1, 2005 have you made any other changes to the appliances, equipment or other characteristics of your home that would affect how much energy you are using?

1 Yes [ASK 6.7a-NSP5 FOR EACH MEASURE INSTALLED BEFORE ASKING 6.7i]
2 No [SKIP TO 6.7i]
D DK [SKIP TO 6.7i]
R REFUSED [SKIP TO 6.7i]

a. What types of changes did you make? (DO NOT READ. RECORD EACH TYPE OF CHANGE MADE. PROBE: Anything else?)

Heating and air conditioning measures

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Furnace
- 5 Programmable thermostat

Lighting measures

- 6 Fluorescent indoor fixture
- 7 Fluorescent outdoor fixture
- 8 Compact fluorescent bulb
- 9 Compact fluorescent fixture
- 10 Motion sensor
- 11 Dimmer switch

Laundry measures

- 12 Clothes washer
- 13 Clothes dryer

Water using measures

- 14 Water heater
- 15 Low Flow showerheads
- 16 Faucet aerators

Kitchen appliances

- 17 Refrigerator
- 18 Freezer
- 19 Range/oven
- 20 Dishwasher

Pool/spa/jacuzzi

- 21 Swimming pool
- 22 Swimming pool pump
- 23 Swimming pool cover
- 24 Spa/jacuzzi

Insulation/weatherstripping/sealing

- 25 Floor, wall, ceiling, or attic insulation
- 26 Weatherstripping/caulking/weatherization

- 27 Water heater/pipe wrapping/insulation
- 28 Duct sealing/repair (not cleaning)

Windows

29 Windows

- 30 Other (SPECIFY)
- 00 No other changes (SKIP TO C6.7i)
- D DK
- R REFUSED

b. Did this equipment replace existing equipment/measures or was it new to your home?

- 1 Replaced existing equipment
- 2 New to home
- D DK
- R REFUSED

c. When did this occur? (RECORD MONTH AND YEAR)

____/____ MM/YYYY

- D DK -->Was this before or after you participated in the [program]?
 - 1 Before
 - 2 After
 - D DK
 - R REFUSED
- R REFUSED

(ASK 6.7Cd and 6.7Ce ONLY IF BILLING ANALYSIS BEING DONE AND IF 6.7a = 4, 13, 14, 19, 24)

Cd. What type of fuel does the new [equipment] use?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D DK
- R REFUSED

Ce. (ASK IF 6.7b = REPLACED) What was the fuel type of the [equipment] you replaced?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- D DK
- R REFUSED

f. Did you receive a rebate for this [equipment] through a [utility] program?

- 1 Yes [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- 2 No
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]

(ASK 6.7g and 6.7h IF 1-4, 12, 13, 14, 17, 18, 19, 20, 22, 24, 29 IN 6.7a; ELSE SKIP TO NSP4)

g. Is the new [equipment] energy efficient?

- 1 Yes
- 2 No [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]

h. How do you know that this equipment is energy efficient? (PROBE: IS IT ENERGY STAR[®] RATED?)

(ASK NSP4-5 ONLY IF 6.7f = NO AND 6.7g = YES AND 6.7c = AFTER DATE OF PARTICIPATION)

NSP4. I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the [utility] [program] in [2006, 2007, 2008] influenced my decision to install different types of high efficiency equipment on my own.

{RECORD RESPONSE (0-10)} _____

- D DON'T KNOW
- R REFUSED

NSP5. Why did you purchase this high efficiency equipment without going through a [utility] program? {DO NOT READ; INDICATE ALL THAT APPLY}

- 1. Too much paperwork
- 2. Takes too long to get approval
- 3. No time to participate, needed equipment immediately
- 4. The program had ended
- 5. The equipment would not qualify {PROBE: WHY NOT?} _____
- 6. The amount of the rebate wasn't important enough
- 7. Did not know program was available
- 8. There was no program available
- 9. Other {SPECIFY} _____
- D DON'T KNOW
- R REFUSED

(ASK C6.7i=c6.7m ONLY IF BILLING ANALYSIS BEING DONE)

C6.7i [IF FURNACE WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have gas or electric space heating?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

C6.7j [IF WATER HEATER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

C6.7k [IF CLOTHES DRYER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric clothes dryer?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

C6.7l [IF RANGE/OVEN WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric range/oven?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

C6.7m [IF ROOM, CENTRAL AC, OR EVAPORATIVE COOLER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] What type of air conditioning system, if any, do you use in your home? (INDICATE ALL THAT APPLY)

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Other (Specify) _____
- 9 None
- D (DON'T KNOW)
- R (REFUSED)

6.8a Do you receive an electric or natural gas bill directly from SDGE?

- 1 Yes
- 2 No (SKIP TO 6.9)
- D (DON'T KNOW) (SKIP TO 6.9)
- R (REFUSED) (SKIP TO 6.9)

6.8b Does this bill only include your home's electric or natural gas use, or does it include the use of other households?

- 1 Only 1 household
- 2 Multiple households
- D (DON'T KNOW)
- R (REFUSED)

6.13 What is the primary language spoken in your home? (DO NOT READ; PROBE IF R SAYS CHINESE: Would this be Mandarin or Cantonese)

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

On-site Recruiting (Section 7)

(RECRUIT FOR SINGLE AND MULTIPLE SPEED POOL PUMPS AND POOL PUMP RESET AGREEMENTS ONLY)

7.1 We would like to offer you \$25 to participate in the on-site component of this evaluation. We are NOT interested in selling anything. We would like to have one of our auditors visit your home at your convenience to look at the pool pump you installed through the program and how it/they are operating. The on-site visit would only take about 20 minutes. Would that be alright with you?

- 1 Yes→Great! Someone will give you a call back to determine when they can schedule an appointment with one of our auditors in your area. Thank you for your cooperation with this important effort.
- 2 No

Thank and Terminate

Site Verification Form - Insulation HIM

Inspection Date		Cadmus ID	#REF!
Inspection Start Time		Program IOU	#REF!
Inspection End Time		Account / Site Number	#REF!
Inspector Name / Initials			
Primary Contact Name	#REF!	Original Site Visit Date	
Phone 1	#REF!	Original Site Visit Time	
Phone 2			
Phone 3		New Confirmed Date	
email		New Confirmed Time	
Alternate Contact Name	#REF!	Incentive Paid	
Phone 1	#REF!	Initials or Signature	
Phone 2			
Phone 3		Notes	
email		#REF!	
Address 1	#REF!		
Address 2			
City	#REF!		
State	#REF!		
Zip Code	#REF!		

Complete for Each Insulation Measure that Received Incentive (per Tracking Database)

Home and HVAC	Onsite	Notes
Estimated Home Size (Sq. Ft. Cond. Space)		
Number of Occupants		
Year home was built		
Weather Conditions		
Outdoor Temperature		
Indoor Temperature		
Air Cond in use	Yes / No	
Cooling System Type		
Yr Cooling Syst Installed		
Cooling Set Points (Sum)		
Method of Determination	Cust SR / Insp / Other	
Heating Fuel Type	Electric / Gas / Other	
Heating System Type		
Yr Heating Syst Installed		
Heating Set Point (Wint)		
Method of Determination	Cust SR / Insp / Other	

Camera Information	Camera 1	Camera 2	Notes
Manufacturer			
Model Number			
Serial Number			

Attic Insulation	Database	Onsite	Notes
Incentive Received	#REF!		
Incentive Date	#REF!		
Unit Quantity (Sq feet)	#REF!		
Sq feet installed over conditioned living area			
Method of determination		Cust SR / Insp Estimate / Other	
Location(s) rebated			
Insulation material			
Method of determination		Cust SR / Insp / Invoice / Printed on Insul / Other	

R-Value Information

Thickness of Insulation
 Minimum Thickness
 Maximum Thickness
 Method of determination
 Total R-value present
 Method of determination

Cust SR / Measurement / Invoice / Printed / Other
Cust SR / Calculation / Invoice / Printed / Other

Required	Note: Full depth between Studs
Required	
Required	
Required	
Required	
Required	

Pre-Existing Insulation

Was insulation present
 Thickness of Insulation
 Method of determination
 Pre-Existing R-Value
 Method of determination
 Access Panel Insulated

Not Relevant if Attic Doorway...

Yes / No
Cust SR / Measurement / Invoice / Printed / Other
Cust SR / Calculation / Invoice / Printed / Other
Yes / No / NA

Required
Required, Note N/As

Wall Insulation

Incentive Received
 Incentive Date
 Unit Quantity (Sq feet)
 Sq feet installed between conditioned living area and unconditioned space
 Method of determination
 Location(s) rebated
 Insulation material
 Method of determination

Database
#REF!
#REF!
#REF!

Onsite
Cust SR / Insp Estimate / Other
Cust SR / Insp / Other
Cust SR / Insp / Invoice / Printed on Insul / Other

Notes
#REF!
Required
Required
Required
Required
Required

R-Value Information

Thickness of Insulation
 Method of determination
 Total R-value present
 Method of determination

Cust SR / Measurement / Invoice / Printed / Other
Cust SR / Calculation / Invoice / Printed / Other

Required
Required
Required
Required

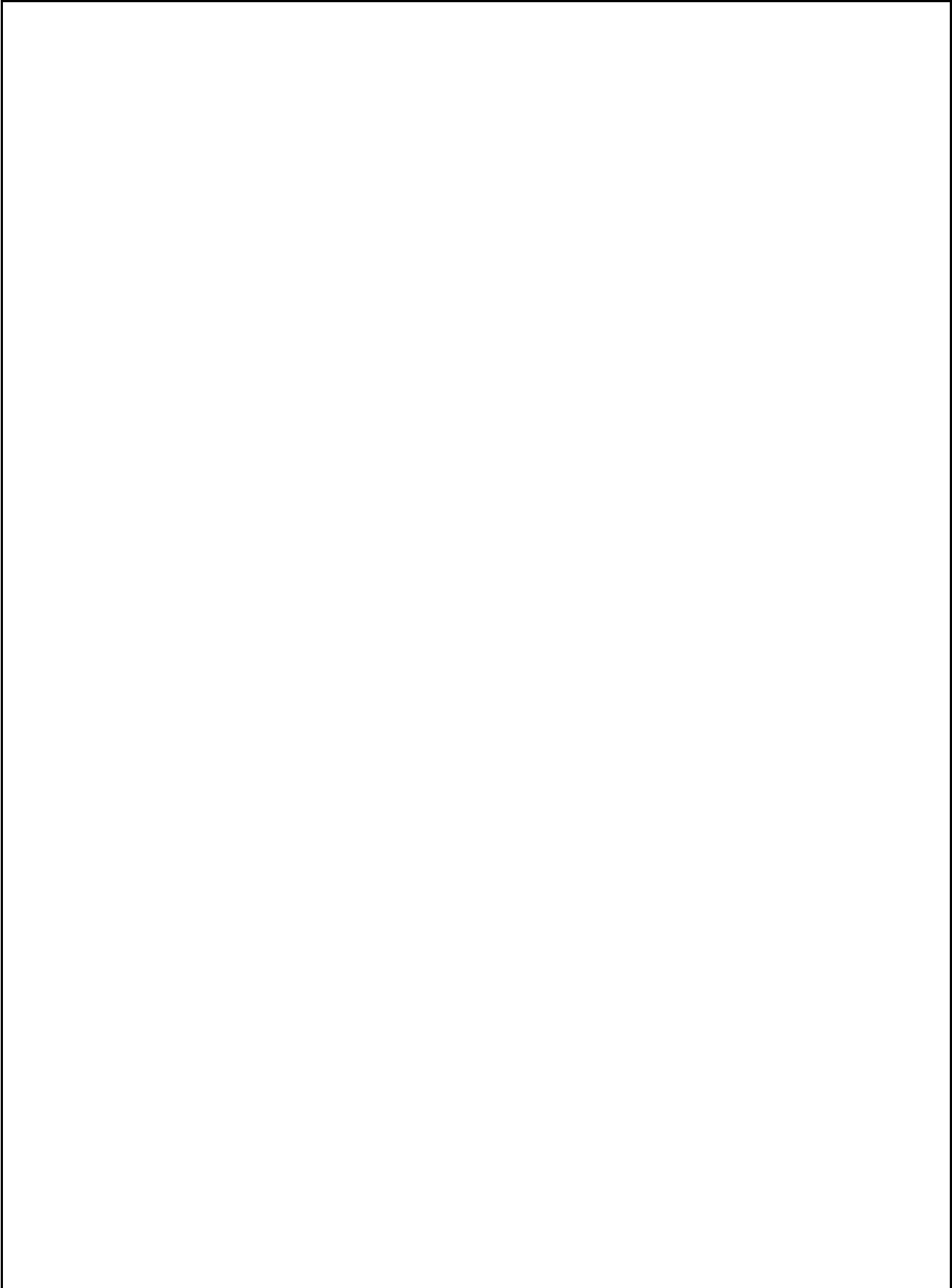
Pre-Existing Insulation

Was insulation present
 Thickness of Insulation
 Method of determination
 Pre-Existing R-Value
 Method of determination

Yes / No
Cust SR / Measurement / Invoice / Printed / Other
Cust SR / Calculation / Invoice / Printed / Other

Required

Floor Plan Sketch. Note Measurements



Site Verification Form - Single Family Energy Efficient Retrofit (SFEER) (SCG 3517)

Inspection Date	<input type="text"/>	Telephone Survey ID	<input type="text"/>
Inspection Start Time	<input type="text"/>	SCG Account	<input type="text"/>
Inspection End Time	<input type="text"/>	SCE/Electric Account	<input type="text"/>
Inspector Name / Initials	<input type="text"/>		
Primary Contact Name	<input type="text"/>	Original Site Visit Date	<input type="text"/>
Phone 1	<input type="text"/>	Original Site Visit Time	<input type="text"/>
Phone 2	<input type="text"/>		
Phone 3	<input type="text"/>	New Confirmed Date	<input type="text"/>
email	<input type="text"/>	New Confirmed Time	<input type="text"/>
Alternate Contact Name	<input type="text"/>	Confirmation Call Date	<input type="text"/>
Phone 1	<input type="text"/>	Confirmation Call Time	<input type="text"/>
Phone 2	<input type="text"/>		
Phone 3	<input type="text"/>		
email	<input type="text"/>		
Address 1	<input type="text"/>	Notes <div style="border: 1px solid black; height: 80px; width: 100%;"></div>	
Address 2	<input type="text"/>		
City	<input type="text"/>		
State	<input type="text"/>		
Zip Code	<input type="text"/>		

Complete for Each Measure that Received Appliance Incentive (per Tracking Database)

	Database	Onsite	Notes	
Dishwasher				
Incentive Received	<input type="text"/>		<div style="border: 1px solid black; height: 100%; width: 100%;"></div>	
Incentive Date	<input type="text"/>			
Unit Quantity	<input type="text"/>			
Operational		Yes / No / Other		
Manufacturer	<input type="text"/>	<input type="text"/>		
Brand	<input type="text"/>	<input type="text"/>		
Model Number	<input type="text"/>	<input type="text"/>		
Efficiency (EF, if avail)	<input type="text"/>	<input type="text"/>		
Energy Star Label	<input type="text"/>	<input type="text"/>		
Water Heater Fuel		Electric / Gas / Other		
Method of Determination		Cust SR / Insp / Other		
Clotheswasher				
Incentive Received	<input type="text"/>			<div style="border: 1px solid black; height: 100%; width: 100%;"></div>
Incentive Date	<input type="text"/>			
Unit Quantity	<input type="text"/>			
Operational		Yes / No / Other		
Manufacturer	<input type="text"/>	<input type="text"/>		
Brand	<input type="text"/>	<input type="text"/>		
Model Number	<input type="text"/>	<input type="text"/>		
Efficiency (MEF, if avail.)	<input type="text"/>	<input type="text"/>		
Efficiency (WF, if avail.)	<input type="text"/>	<input type="text"/>		
Energy Star Label	<input type="text"/>	<input type="text"/>		
Water Heater Fuel		Electric / Gas / Other		
Method of Determination		Cust SR / Insp / Other		

Gas Water Heater	Database	Onsite	Notes
Incentive Received			
Incentive Date			
Unit Quantity			
Operational		Yes / No / Other	
Manufacturer			
Brand			
Model Number			
Capacity (gallons)			
Efficiency (EF, if avail.)			

Central Gas Furnace	Database	Onsite	Notes
Incentive Received			
Incentive Date			
Unit Quantity			
Operational		Yes / No / Other	
Manufacturer			
Brand			
Model Number			
Efficiency (AFUE %)			
Energy Star Label			

Complete for Each Insulation Measure that Received Incentive (per Tracking Database)

HVAC Information	Database	Onsite	Notes
Heating Fuel Type		Electric / Gas / Other	
Method of Determination		Cust SR / Insp / Other	

Attic Insulation	Database	Onsite	Notes
Incentive Received			Required
Incentive Date			
Unit Quantity (Sq feet)			
Sq feet installed over conditioned living area			
Method of determination		Cust SR / Insp Estimate / Other	
Location(s) rebated			
Insulation material			
Method of determination		Cust SR / Insp / Invoice / Printed on Insul / Other	Required

R-Value Information	Database	Onsite	Notes
Thickness of Insulation			Required
Method of determination		Cust SR / Measurement / Invoice / Printed / Other	Required
Total R-value present			Required
Method of determination		Cust SR / Calculation / Invoice / Printed / Other	Required

Pre-Existing Insulation	Database	Onsite	Notes
Was insulation present		Yes / No	Required
Thickness of Insulation			
Method of determination		Cust SR / Measurement / Invoice / Printed / Other	
Pre-Existing R-Value			
Method of determination		Cust SR / Calculation / Invoice / Printed / Other	

	Database	Onsite	Notes
Wall Insulation			
Incentive Received			
Incentive Date			
Unit Quantity (Sq feet)			Required
Sq feet installed between conditioned living area and unconditioned space		Cust SR / Insp Estimate / Other	Required
Method of determination		Cust SR / Insp / Other	Required
Location(s) rebated			
Insulation material			Required
Method of determination		Cust SR / Insp / Invoice / Printed on Insul / Other	Required
R-Value Information			
Thickness of Insulation			Required
Method of determination		Cust SR / Measurement / Invoice / Printed / Other	Required
Total R-value present			Required
Method of determination		Cust SR / Calculation / Invoice / Printed / Other	Required
Pre-Existing Insulation			
Was insulation present		Yes / No	Required
Thickness of Insulation			
Method of determination		Cust SR / Measurement / Invoice / Printed / Other	
Pre-Existing R-Value			
Method of determination		Cust SR / Calculation / Invoice / Printed / Other	

Complete for Household Reported Spillover Measures

	From Survey	Onsite	Notes
Spillover Measure #1			
Type of Measure			
Description			
Quantity			
Manufacturer / Brand			
Model Number			
Energy Star Label			
Fuel Type (if applicable)			
Location(s)			
Efficiency (EF, MEF, WF, AFUE%)			
Spillover Measure #2			
Type of Measure			
Description			
Quantity			
Manufacturer / Brand			
Model Number			
Energy Star Label			
Fuel Type (if applicable)			
Location(s)			
Efficiency (EF, MEF, WF, AFUE%)			

Appendix G – Appliance Recycling

G1 – Telephone Surveys

- ARP Participant Survey
- Large Appliance Retailer Interview Guide
- Large Appliance Retailer Hauler Questions
- SCE SDGE PGE ARP Non-Participant Survey
- Used Appliance Dealer Guide

G2 – Data Collection Instruments

- Site Data Collection Form

Participant Survey - Refrigerator Recycling (HIM)

ARP Participant Survey¹

INTRODUCTION

May I please speak with [contact name]?

INTRODUCTION: Hello, my name is _____ calling on behalf of the California Public Utilities Commission regarding [Pacific Gas & Electric Company's, Southern California Edison's, San Diego Gas & Electric's] appliance recycling program. We are contacting customers who removed their refrigerator through their utility's appliance pick-up and recycling program. Are you the person who was most involved and most familiar with deciding to have your refrigerator picked up and recycled through this program?

IF NO, NOT RIGHT PERSON: May I please speak to the person who would know the most about having the refrigerator picked up? REPEAT INTRODUCTION AND CONTINUE

IF NO, NO REFRIGERATOR PICKED UP: THANK AND TERMINATE

IF YES, RIGHT PERSON: We are conducting a study to evaluate [Pacific Gas & Electric Company, Southern California Edison, San Diego Gas & Electric]'s appliance pick-up and recycling program and would like to include your opinions. This is required by the California Public Utilities Commission and will be used to verify the effectiveness of the program and to make improvements.

This call may be monitored or recorded for quality purposes.

(Who are you? I'm from PA Consulting Group, an independent data collection firm)

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and [Pacific Gas & Electric Company, Southern California Edison, San Diego Gas & Electric] better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about 15 minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-454-5070)

(Sales concern: I am not selling anything; we would simply like to learn about your experience participating in the [Pacific Gas & Electric Company, Southern California Edison, San Diego Gas & Electric]'s program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call Mikhail Haramati at 415-703-1458, or visit their website: www.cpuc.ca.gov/eevalidation.)

(NOTE: For all questions, "DON'T KNOW" and "REFUSED" will be coded if offered as a response.)

¹ Based on 2005-04 RARP PARTICIPANT QUESTIONNAIRE FINAL

Participant Survey - Refrigerator Recycling (HIM)

SECTION 1: Recall of Participation/Identification of Decision Maker

1.1 Program records indicate that you received an incentive of [amount of program incentive/subsidy] for having [quantity] refrigerator[s] disposed of by the recycling program around [date of pickup]. Do you recall having your refrigerator[s] picked up by the recycling program? Is this the correct quantity? (RECORD ONE NUMBER)

MEASURES	Do you recall having this/these picked up?	IF QUANTITY DIFFERENT, RECORD NUMBER HERE
A. [quantity, product type 1]	01 Yes 02 No D Don't know 99 Refused	
B. [quantity, product type 2]	01 Yes 02 No D Don't know 99 Refused	
C. [quantity, product type 3]	01 Yes 02 No D Don't know 99 Refused	

1.2 (ASK IF DOESN'T RECALL RECYCLING ANY EQUIPMENT THROUGH PROGRAM). Is it possible that someone else in your household would know about picking up and recycling [quantity] refrigerator[s] and receiving an incentive of [rebate] through [utility]? (RECORD ONE NUMBER)

- 01 Yes..... (SKIP TO 1.3)
- 02 No
- D DON'T KNOW
- R REFUSED

1.2b [Utility] offers an incentive to pick up and recycle old, operating refrigerators. [Removal contractor] would have picked this up for your home. Are you sure you don't recall having the/these [product type] picked up and receiving a rebate from the utility? (RECORD ONE NUMBER)

- 01 Don't remember -> [TERMINATE, RECORD ANY COMMENTS MADE BY RESPONDENT BEFORE EXITING]
- 02 Remember -> [READ, "GREAT, THEN LET'S CONTINUE", SKIP TO 1.4]
- R REFUSED.....(TERMINATE)

Participant Survey - Refrigerator Recycling (HIM)

1.3 May I please speak with that person? (*RECORD ONE NUMBER*)

- 1 Yes (*BEGIN THE SURVEY AGAIN WITH THIS NEW RESPONDENT*)
- 2 No (*TERMINATE*)
- D DON'T KNOW (*TERMINATE*)
- R REFUSED (*TERMINATE*)

1.4 Are you the person in your household who decided to have your old refrigerator[s] picked up through [Pacific Gas & Electric Company's, Southern California Edison's, San Diego Gas & Electric's] appliance recycling program?

- 1 Yes
- 2 No (*SKIP BACK TO 1.3*)
- D DON'T KNOW (*TERMINATE*)
- R REFUSED (*TERMINATE*)

SECTION 2: SOURCE OF PROGRAM INFORMATION

2.1 How did you first learn about [Pacific Gas & Electric Company's, Southern California Edison's, San Diego Gas & Electric's] appliance pick up and recycling program? (*PROBE: Did you hear about the program from any other sources?*) (*DO NOT READ LIST, RECORD ONE NUMBER*)

Utility provided information

- 1 (Advertising—radio, newspaper, trade journal, billboard, TV)
- 2 (Bill insert, newsletter, or other mailing)
- 3 (Website)
- 4 (Email)
- 5 (Other utility) (*SPECIFY*)

Local Government/Community event/Nonprofit

- 6 (Meeting, event, workshop, training) (*SPECIFY*)
- 7 (School)
- 8 (Local government/community agency) (*SPECIFY*)
- 9 (City/county Energy Center such as Pacific Energy Center, Stockton, Food Service) (*SPECIFY*)
- 10 (Advertising—radio, newspaper, trade journal, billboard, TV)

Other

- 11 (Appliance Retailer)
- 12 (Home or building audit or assessment) (*SPECIFY*)
- 13 (Meeting, event, workshop training) (*SPECIFY*)
- 14 (Flex your Power TV or radio advertising)
- 15 (Other advertising, don't recall)
- 16 (Friend/Relative/Neighbor)
- 17 (Other, Specify: _____)
- D DON'T KNOW
- R REFUSED

Participant Survey - Refrigerator Recycling (HIM)

SECTION 3: APPLIANCE DESCRIPTIONS

3.1 ASK IF [QUANTITY] = 1

Now I'm going to ask you some specific questions about the refrigerator that was picked up and recycled.

During the time just before you decided to get rid of the refrigerator was it being used as your main refrigerator, or had it been a secondary or spare?

(Interviewer: a main refrigerator is typically in the kitchen, a secondary or spare is usually kept someplace else and might or might not be running. If the person recently bought a new main refrigerator and was just waiting for the old one to be picked up, it should be classified as "main.")

- 1 Main
- 2 Secondary or Spare
- D DON'T KNOW
- R REFUSED

3.1a ASK IF [QUANTITY] > 1

Now I'm going to ask you some specific questions about the refrigerators that were picked up and recycled.

During the time just before you decided to get rid of the refrigerators, how many of the refrigerators, were being used as your main refrigerator?

(Interviewer: a main refrigerator is typically in the kitchen, a secondary or spare is usually kept someplace else and might or might not be running. If the person recently bought a new main refrigerator and was just waiting for the old one to be picked up, it should be classified as "main.")

___ Enter number of MAIN [refrigerator]

3.1b ASK IF [QUANTITY] > 1 AND [QUANTITY] DOES NOT EQUAL NUMBER OF MAIN REFRIGERATOR

(During the time just before you decided to get rid of the refrigerators)

How many were being used as your secondary/spare refrigerator?

(Interviewer: a main refrigerator is typically in the kitchen, a secondary or spare is usually kept someplace else and might or might not be running. If the person recently bought a new main refrigerator and was just waiting for the old one to be picked up, it should be classified as "main.")

... ___ Enter number of SECONDARY/SPARE refrigerators

For the rest of the questions, please think about the [main, secondary/spare] refrigerator you used most often.

Participant Survey - Refrigerator Recycling (HIM)

ASK 3.2-3.4b ONLY IF 3.1=2 OR 3.1b > =1 AND SECONDARY QUOTA HAS NOT BEEN MET

3.2 How long had it been a secondary or spare? GET MONTHS/YEARS (If respondent is confused, reinforce that "how long had it been a spare when you decided to get rid of it.")

- 1 MONTHS _____ (1-11)
- 2 YEARS _____ (1-50, HALF = 0.5)
- D DON'T KNOW
- R REFUSED

3.3 Thinking about the (last 12 months (IF 1 YEAR OR MORE)/months (ALL OTHER)) you had it as a spare prior to getting it picked up, was it plugged in and running ...

- 1 All the time
- 2 For special occasions only
- 3 During certain months of the year only, or
- 4 Never plugged in or running
- D DON'T KNOW
- R REFUSED

ASK 3.4 ONLY IF 3.3=02 OR 03

3.4 IF you were to add up the total time it was running as a spare in the last 12 months, how many months would that be? Your best estimate is okay. (GET NEAREST MONTH OR HALF MONTH)

- 1 MONTHS _____ (1-11, half = 0.5)
- 96 All the time
- 77 DON'T KNOW
- 99 REFUSED

3.5 Where was it located?

- 1 Kitchen
- 2 Garage
- 3 Porch/Patio
- 4 Basement
- 5 Other (SPECIFY:)
- D DON'T KNOW
- R REFUSED

3.6 Was the space heated?

- 1 Yes
- 2 No
- D DON'T KNOW
- R REFUSED

3.7 Was the space air-conditioned?

- 1 Yes
- 2 No
- D DON'T KNOW

Participant Survey - Refrigerator Recycling (HIM)

R REFUSED

3.8 At the time of the pick-up, how old was the refrigerator? RECORD MONTHS OR YEARS, 12 MONTHS = 1 YEAR

- 1 MONTHS _____ (1-11)
- 2 YEARS _____ (1-50, HALF = 0.5)
- 97 Don't remember
- D DON'T KNOW
- R REFUSED

3.9 Did you decide to get rid of it because you... (READ)

- 1 Got a brand new refrigerator to replace it
- 2 Got a used refrigerator to replace it
- 3 Or to get rid of a refrigerator you no longer wanted without replacing it SKIP TO 3.11
- 4 Other (specify)
- D DON'T KNOW SKIP TO 3.11
- R REFUSED SKIP TO 3.11

3.10new Is the unit ENERGY STAR labeled?

- 1 Yes
- 2 No
- D DON'T KNOW
- R REFUSED

3.10 Had you already considered disposing of this refrigerator before hearing about [Pacific Gas & Electric Company, Southern California Edison, San Diego Gas & Electric]'s Appliance Recycling Program? By dispose we mean getting rid of it either by selling it, giving it away, having someone pick it up, or taking it to the dump or a recycling center.

- 1 Yes
- 2 No
- D DON'T KNOW
- R REFUSED

3.11 Without this program, what would you most likely have done with your old refrigerator? (READ)

- 1 Gotten rid of it
- 2 Kept it
- D DON'T KNOW
- R REFUSED

3.12 (ASK IF 3.11=1) How soon would you have disposed of your old refrigerator? Would you have disposed of it within a year of when the Program took it, or more than a year later?

- 1 Within a year of when the program took it
- 2 More than a year later
- D DON'T KNOW
- R REFUSED

Participant Survey - Refrigerator Recycling (HIM)

3.13 What was the condition of this appliance? Would you say ...? (READ LIST; INDICATE ONE RESPONSE)

- 1 It worked and was in good physical condition
- 2 It worked but needed minor repairs (like a door seal or handle)
- 3 It worked but had some problems (like it wouldn't defrost)
- 4 Or, it didn't work (SKIP TO 4.1)
- D DON'T KNOW
- R REFUSED

3.14 (IF 3.11 =2) If you had kept the refrigerator would it have been used full time as either your primary unit or a spare, stored unplugged, or used occasionally (example: at holidays)? (DO NOT READ) IF NEEDED: Your best estimate is fine.

- 1 Used Full Time
- 2 Store it unplugged
- 3 Use it Occasionally
- D DON'T KNOW
- R REFUSED

SECTION 4: CONSIDERATION OF ALTERNATIVES SECTION

4.1 I am now going to read a list of alternative ways that you could have disposed of this appliance. For each, tell me if this is a method you had considered using or doing. (PROGRAMMER: ITEMS E ONLY IF 3.9 = 01 OR 02. RANDOMIZE a-k, j, k and l ALWAYS LAST.)

- a. Sell it to a private party, either by running an ad or to someone you know
- b. Sell it to an appliance dealer
- c. Give it away to a private party, such as a friend, relative, or neighbor
- d. Give it away to a charity organization, such as Goodwill Industries or a church
- e. Have it removed by the dealer you got your new or replacement appliance from
- g. Haul it to the dump yourself
- h. Haul it to a recycling center yourself
- i. Hire someone else haul it away for junking or dumping
- j. Keep it and use it
- k. Keep it and store it unplugged
- l. Or something else I've not mentioned

FOR EACH:

- 1 Yes – considered using/doing
- 2 No – did not consider or did not know about
- D DON'T KNOW
- R REFUSED

4.2 Now suppose that the [Pacific Gas & Electric Company, Southern California Edison, San Diego Gas & Electric] service that you used to dispose of this appliance had not been available. Which one of these other alternatives that we've just discussed would you have been most likely to do? (DO NOT READ; INDICATE ONE RESPONSE ONLY) IF NEEDED: Your best estimate is okay.

- 1 Sell it to a private party, either by running an ad or to someone you know

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- 2 Sell it to an used appliance dealer
- 3 Give it away to a private party, such as a friend or neighbor
- 4 Give it away to a charity organization, such as Goodwill Industries or a church
- 5 Have it removed by the dealer you got your new or replacement appliance from
- 7 Haul it to the dump yourself
- 8 Haul it to a recycling center yourself
- 9 Hire someone else to haul it away for junking or dumping
- 10 Keep it and use it
- 11 Keep it and store it unplugged
- 12 Some Other Way (SPECIFY:____)
- D DON'T KNOW
- R REFUSED

4.3 Which alternative would have been your second choice? (DO NOT READ; ONE RESPONSE ONLY)

- 1 Sold it to a private party, either by running an ad or to someone you know
- 2 Sold it to an used appliance dealer
- 3 Given it away to a private party, such as a friend, relative or neighbor
- 4 Given it away to a charity organization, such as Goodwill Industries or a church
- 5 Had it removed by the dealer you got your new or replacement appliance from
- 6 Traded it in for the new appliance or replacement appliance
- 7 Hauled it to the dump yourself
- 8 Hauled it to a recycling center yourself
- 9 Hire someone else to haul it away for junking or dumping
- 10 Keep it and use it
- 11 Keep it and store it unplugged
- 12 Some Other Way (SPECIFY :____)
- 13 None – No Second Choice
- D DON'T KNOW
- R REFUSED

4.5 Did you attempt to trade in or sell the refrigerator before deciding to participate in the program?

- 1 Yes, to a dealer
- 2 Yes, to a non-dealer (friend, family member, neighbor, etc.)
- 3 No (SKIP TO 4.7)
- D DON'T KNOW (SKIP TO 4.7)
- R REFUSED..... (SKIP TO 4.7)

4.6 Why did you not follow through with this transaction?

- 1 Couldn't find an interested dealer/non-dealer at the price I wanted
- 2 Couldn't find an interested dealer/non-dealer because of the unit's condition
- 3 Decided recycling unit was more important than selling it
- 4 Other (SPECIFY :____)
- D DON'T KNOW
- R REFUSED

ASK 4.7 AND 4.8 IF 4.5 = 3 (NO), D, R

4.7 If you had sold this appliance to someone, how much money do you think you would have received for it?

Participant Survey - Refrigerator Recycling (HIM)

- 1 Dollars _____ (\$1 - \$2000)
- D DON'T KNOW
- R REFUSED

4.8 If an appliance dealer were to take it away, how much, if anything, do you think you would have to pay for this service?

- 0 Nothing / Free Service
- 1 Dollars _____ (\$1 - \$2000)
- D DON'T KNOW
- R REFUSED

4.9 One factor in disposing of an appliance is being able to physically move and transport it. Do you have the ability to do this yourself, or would you need assistance such as renting or borrowing a truck or having someone other than your immediate family help you?

- 1 Yes, could do it myself
- 2 Would need assistance
- D DON'T KNOW
- R REFUSED

4.10 How much money do you think it would cost each month to run the refrigerator that you disposed of, (if it were running full-time)?

- 1 Nothing
- 2 \$1 to \$5 per month
- 3 \$6 to \$10
- 4 \$11 to \$15
- 5 \$16 to \$20
- 6 \$21 to \$25
- 7 \$26 to \$30
- 8 \$31 to \$35
- 9 \$36 to \$40
- 10 More than \$40
- 97 Don't pay electric bill
- D DON'T KNOW
- R REFUSED

4.11 Now that you have considered some additional factors involved in keeping or disposing of your old refrigerator I'd like you to consider again what you would have done if you had not disposed of it through the [Pacific Gas & Electric Company, Southern California Edison, San Diego Gas & Electric] program. You said you would have (INSERT MOST LIKELY METHOD ANSWER FROM 4.2). Is this still what you would have been most likely to do or something else? (PROBE IF SOMETHING ELSE: What would you have done?) (READ LIST ONLY IF NEEDED)

- 0 Yes, this is still what I would have done
- 1 Sold it to a private party, either by running an ad or to someone you know
- 2 Sold it to an used appliance dealer
- 3 Given it away to a private party, such as a friend or neighbor
- 4 Given it away to a charity organization, such as Goodwill Industries or a church

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- 5 Had it removed by the dealer you got your new or replacement appliance from
- 7 Hauled it to the dump yourself
- 8 Hauled to a recycling center yourself
- 9 Had someone else pick it up for junking or dumping
- 10 Kept it and used it
- 11 Kept it and stored it unplugged
- 12 Some Other Way (SPECIFY:___)
- D DON'T KNOW
- R REFUSED

4.12 What is the MAIN reason you chose this service over other methods of disposing of your appliance? IF MULTIPLE ARE MENTIONED: Of those, which is the main reason? (DO NOT READ) (ACCEPT ONE ANSWER ONLY)

(IF RESPONDENT SAYS SOMETHING LIKE: "I didn't need or want the refrigerator" RE-ASK THE QUESTION)

- 1 Cash/incentive payment
- 3 Free pick-up service/others don't pick up/don't have to take it myself
- 4 Environmentally safe disposal/recycled/good for environment
- 5 Recommendation of a friend/relative
- 6 Recommendation of retailer/dealer
- 7 Utility sponsorship of the program
- 8 Easy way/convenient
- 9 Never heard of any others/only one I know of
- 10 Other (SPECIFY:___)
- D DON'T KNOW (SKIP TO 4.14)
- R REFUSED..... (SKIP TO 4.14)

4.13 Were there any other reasons? IF YES: What were they? (MULTIPLE RESPONSE)

- 1 No/None/No other reasons
- 2 Cash/Incentive payment
- 3 Free pick-up service/others don't pick up/don't have to take it myself
- 4 Environmentally safe disposal/recycled/good for environment
- 5 Recommendation of a friend/relative
- 6 Recommendation of retailer/dealer
- 7 Utility sponsorship of the program
- 8 Easy way/convenient
- 9 Never heard of any others/only one I know of
- 10 Other (SPECIFY:___)
- 77 DON'T KNOW
- 99 REFUSED

Section 5 Program Awareness/Spillover

5.1 Have you participated in any other programs offered by [utility] because of your experience with the Appliance Pick-up and Recycling program?

- 1 Yes
- 2 No (SKIP TO 5.3)
- D DON'T KNOW (SKIP TO 5.3)
- R REFUSED..... (SKIP TO 5.3)

Participant Survey - Refrigerator Recycling (HIM)

5.2 Which programs did you participate in because of your experience with this program?
(RECORD)

-
- D DON'T KNOW
 - R REFUSED

ASK 5.3 - 5.5 IF 3.9 = 2 (USED)

5.3 You indicated that the replacement refrigerator was actually a previously used one.
Where did you get it? (PROBE IF NEEDED: Did you purchase it or was it given to you?)

- 1 Bought it from a friend or relative
- 2 Bought it from a used appliance dealer
- 3 Bought it at garage sale, estate sale, or from a newspaper ad
- 4 Given to me by a friend/neighbor/person
- 5 Previous occupant of this home left it behind
- 6 Given to me by an organization
- 7 (DO NOT READ) Other (SPECIFY:___)
- D DON'T KNOW
- R REFUSED

5.4 How much did you pay for this used replacement?

- 0 Free / Nothing / Didn't Pay
- 1 Dollars (\$____)(\$1 - \$3000)
- D DON'T KNOW
- R REFUSED

5.5 If the refrigerator you acquired had not been available at the time you acquired it, which of the following would you most likely have done...
(READ) (ONE ANSWER)

- 1 Bought a similar used refrigerator somewhere else
- 2 Not purchased a refrigerator at that time
- 3 Purchased a lower quality or less expensive used refrigerator
- 4 Purchased a higher quality or more expensive used refrigerator
- 5 Purchased a new refrigerator
- 6 Repaired an old, non-working refrigerator
- 7 Other (specify)
- D DON'T KNOW
- R REFUSED

5.6 Which of the following phrases or messages have you heard before today? (ROTATE STARTING POINT)

- A. Good Housekeeping
 - 1 Yes
 - 2 No
 - D (DON'T KNOW)
 - R (REFUSED)

B. Click it or Ticket

Participant Survey - Refrigerator Recycling (HIM)

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

C. Ahnu

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

D. Flex Your Power

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

E. Flex Alert

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

F. Energy Hog

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

G. Galley Bay

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

H. Energy Star

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

I. Hollister Co

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Participant Survey - Refrigerator Recycling (HIM)

SECTION 6: Residential Demographic Questions

The last questions ask about household characteristics to make sure we're getting a representative sample of [Pacific Gas & Electric Company's, Southern California Edison's, San Diego Gas & Electric's] residents.

6.1 Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6.2 In what type of building do? (READ LIST IF NEEDED)

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6.3 About when was this building first built? (READ LIST IF NEEDED)

- 1 Before 1970s
- 2 1970s
- 3 1980s
- 4 1990-94
- 5 1995-99
- 6 2000s
- 7 Other (SPECIFY)
- D DON'T KNOW
- R REFUSED

6.3a Were you living in this same home around [insert date 12 months prior to time you recycled the/these appliances]?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

6.4a How many full or half bathrooms did you have in this home? (PROBE: A full bathroom is one that has a sink with running water, and a toilet, and either a bathtub or shower. A half bathroom has either a toilet or a bathtub or a shower?)

- _____ Bathrooms
- D DON'T KNOW
- R REFUSED

Participant Survey - Refrigerator Recycling (HIM)

6.4b How many bedrooms do you have in this home (If a one-room efficiency, or studio apartment, bedrooms=0)

- _____ Bedrooms
 D DON'T KNOW
 R REFUSED

6.4c Other than bedrooms and bathrooms, how many other rooms did you have in this home? Do not count laundry rooms, foyers, unfinished storage spaces, porches, or garages.

- _____ Other rooms
 D DON'T KNOW
 R REFUSED

[IF 6.3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.5a]

C6.4d Did you do any significant remodeling, renovation or additions since January 1, 2005?

- 1 Yes
 2 No (SKIP TO 6.5a)
 D (DON'T KNOW) (SKIP TO 6.5a)
 R (REFUSED) (SKIP TO 6.5a)

C6.4e How many remodels, renovations or additions have you done since then?

- _____ Remodels, renovations or additions
 D (DON'T KNOW)
 R (REFUSED)

C6.4f I'm going to ask you several questions regarding the timeframe of your remodels, renovations or additions. We will try to run through them quickly. (ASK A-C FOR EACH REMODEL THAT TOOK PLACE SINCE JANUARY 1, 2005).

- a. In what month and year did it start?
- b. Did this increase or decrease your home's square footage, not counting unfinished storage spaces, porches or garages,
- c. In what month and year did it finish?

	a. START (mm/yyyy)	b. Increase or decrease? 1 Increase 2 Decrease 3 Same D (DK) R (REFUSED)	C. FINISH (mm/yyyy)
1			
2			
3			
4			

6.5a Including yourself, how many people currently live in your home year-round?

- _____ People
 D DON'T KNOW
 R REFUSED

Participant Survey - Refrigerator Recycling (HIM)

6.5b (IF 6.5a=1) Which of the following best describes your age?

- 1 Less than 18 years old
- 2 18-24 years old
- 3 25-34 years old
- 4 35-44 years old
- 5 45-54 years old
- 6 55-64 years old
- 7 65 or older
- D DON'T KNOW
- R REFUSED

6.5c (IF 6.5a>1) Including yourself, how many people currently living in your home year-round are in the following age groups?

- _____ Less than 18 years old
- _____ 18-24 years old
- _____ 25-34 years old
- _____ 35-44 years old
- _____ 45-54 years old
- _____ 55-64 years old
- _____ 65 or older
- TOTAL SHOULD EQUAL 6.5a
- R REFUSED

[IF 6.3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.7]

C6.5d Has the total number of people living in your home year-round changed since [insert date 12 months prior to time of pick up/drop off]?

- 1 Yes
- 2 No (SKIP TO 6.7)
- D DON'T KNOW (SKIP TO 6.7)
- R REFUSED (SKIP TO 6.7)

C6.5e Do more people or less people live in your home now?

- 1 More→How many more? _____
- 2 Less→How many less? _____
- D DON'T KNOW
- R REFUSED

C6.5f In what year(s) did the number of people in your household change? (RECORD ALL YEARS OF CHANGE—NET CHANGE IS CALCULATED FROM C6.5e)

- 1st NET CHANGE: _____MONTH _____YEAR
- 2nd NET CHANGE: _____MONTH _____YEAR
- 3rd NET CHANGE: _____MONTH _____YEAR
- D DON'T KNOW
- R REFUSED

Participant Survey - Refrigerator Recycling (HIM)

- 6.7** This next question asks about other changes you have made that we haven't already talked about. Since January 1, 2005 have you made any other changes to the appliances, equipment or other characteristics of your home that would affect how much energy you are using?

- 1 Yes [ASK 6.7a-NSP5 FOR EACH MEASURE INSTALLED BEFORE ASKING 6.7i]
2 No [SKIP TO 6.7i]
D DK [SKIP TO 6.7i]
R REFUSED [SKIP TO 6.7i]

- a. What types of changes did you make? (DO NOT READ. RECORD EACH TYPE OF CHANGE MADE. PROBE: Anything else?)

Heating and air conditioning measures

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Furnace
- 5 Programmable thermostat

Lighting measures

- 6 Fluorescent indoor fixture
- 7 Fluorescent outdoor fixture
- 8 Compact fluorescent bulb
- 9 Compact fluorescent fixture
- 10 Motion sensor
- 11 Dimmer switch

Laundry measures

- 12 Clothes washer
- 13 Clothes dryer

Water using measures

- 14 Water heater
- 15 Low Flow showerheads
- 16 Faucet aerators

Kitchen appliances

- 17 Refrigerator
- 18 Freezer
- 19 Range/oven
- 20 Dishwasher

Pool/spa/jacuzzi

- 21 Swimming pool
- 22 Swimming pool pump
- 23 Swimming pool cover
- 24 Spa/jacuzzi

Insulation/weatherstripping/sealing

- 25 Floor, wall, ceiling, or attic insulation
- 26 Weatherstripping/caulking/weatherization
- 27 Water heater/pipe wrapping/insulation
- 28 Duct sealing/repair (not cleaning)

Windows

- 29 Windows
- 30 Other (SPECIFY)
- 00 No other changes (SKIP TO C6.7b)
- D DK
- R REFUSED

Participant Survey - Refrigerator Recycling (HIM)

b. Did this equipment replace existing equipment/measures or was it new to your home?

- 1 Replaced existing equipment
- 2 New to home
- D DK
- R REFUSED

c. When did this occur? (RECORD MONTH AND YEAR)

____/____ MM/YYYY

- D DK -->Was this before or after you participated in the **[program]**?
 - 1 Before
 - 2 After
 - D DK
 - R REFUSED
- R REFUSED

(ASK 6.7Cd and 6.7Ce ONLY IF BILLING ANALYSIS BEING DONE AND IF 6.7a = 4, 13, 14, 19, 23)

Cd.What type of fuel does the new [equipment] use?

- 1 Gas
- 2 Electric
- 3 Other (SPECIFY)
- D DK
- R REFUSED

Ce. (ASK IF 6.7b = REPLACED) What was the fuel type of the [equipment] you replaced?

- 1 Gas
- 2 Electric
- 3 Other (SPECIFY)
- D DK
- R REFUSED

f. Did you receive a rebate for this [equipment] through a [utility] program?

- 1 Yes [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- 2 No
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]

(ASK 6.7g and 6.7h IF 1-4, 12, 13, 14, 17, 18, 19, 20, 22, 24, 29 IN 6.7a; ELSE SKIP TO NSP4)

g. Is the new [equipment] energy efficient?

- 1 Yes
- 2 No [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- D DK [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]
- R REFUSED [SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i]

Participant Survey - Refrigerator Recycling (HIM)

- h. How do you know that this equipment is energy efficient? (PROBE: IS IT ENERGY STAR[®] RATED?)
-

(ASK NSP4-5 ONLY IF 6.7f = NO AND 6.7g = YES AND 6.7c = AFTER DATE OF PARTICIPATION)

- NSP4.** I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the [utility] [program] in [2006, 2007, 2008] influenced my decision to install different types of high efficiency equipment on my own.

{RECORD RESPONSE (0-10)} _____

D DON'T KNOW
R REFUSED

- NSP5.** Why did you purchase this high efficiency equipment without going through a [utility] program? {DO NOT READ; INDICATE ALL THAT APPLY}

1. Too much paperwork
 2. Takes too long to get approval
 3. No time to participate, needed equipment immediately
 4. The program had ended
 5. The equipment would not qualify {PROBE: WHY NOT?} _____
 6. The amount of the rebate wasn't important enough
 7. Did not know program was available
 8. There was no program available
 9. Other {SPECIFY} _____
- D DON'T KNOW
R REFUSED

(ASK C6.7i=c6.7m ONLY IF BILLING ANALYSIS BEING DONE)

- C6.7i** [IF FURNACE WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have gas or electric space heating?

- 1 Gas
 - 2 Electric
 - 3 Both
 - 4 Other (Specify) _____
 - 7 None
- D (DON'T KNOW)
R (REFUSED)

Participant Survey - Refrigerator Recycling (HIM)

C6.7j [IF WATER HEATER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

C6.7k [IF CLOTHES DRYER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric clothes dryer?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

C6.7l [IF RANGE/OVEN WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric range/oven?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

C6.7m [IF ROOM, CENTRAL AC, OR EVAPORATIVE COOLER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] What type of air conditioning system, if any, do you use in your home? (INDICATE ALL THAT APPLY)

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Other (Specify) _____
- 7 None _____
- D (DON'T KNOW)
- R (REFUSED)

Participant Survey - Refrigerator Recycling (HIM)

6.13 What is the primary language spoken in your home? (DO NOT READ)

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 Other (SPECIFY)
- D DON'T KNOW
- R REFUSED

Thank and Terminate

RECORD GENDER

- 1 Male
- 2 Female
- D Don't Know

LANG

THE INTERVIEW WAS DONE IN:

- 1 English
- 2 Spanish

That concludes my questions. Thank you very much for your time and cooperation.

**Interview Guide
National, Regional, or Local Chain Dealers
Residential Appliance Recycling Program (ARP)**

Background

This guide is intended for use with representatives of large national and regional retailers and large multi-store local dealers. Included in this group of retailers are Sears, Home Depot, Lowes, Fry's Electronics, Howard's, Best Buy and other dealers to be identified.

This interview guide is only slightly modified from the guide used by ADM as part of the evaluation of the 2004-2005 ARP, with the intention of allowing longitudinal analysis between the two survey efforts.

Target

The targets for these interviews will be persons who set policy and/or negotiate contracts for the disposal of refrigerators that are removed from customers' premises by the retailer.

Introduction

Hello, my name is _____ .

I am with _____.

I am part of a team that has been asked by the California Investor Owned Utilities, Southern California Edison, Pacific Gas and Electric Company, and SEMPRRA to conduct an evaluation of their Residential Appliance Recycling Program.

One of the goals of this evaluation is to understand how customers dispose of refrigerators and what happens to old refrigerators and freezers when they purchase a new or used appliance.

The used appliance market is an important part of this process. We would like to talk to you about the role your company plays in the appliance market.

1. Establish whether the store:
 - A. Sells used appliances.
 - B. has a removal service of their own, when installing new appliances.
 - C. Contracts the removal and installation out to a contractor (hauler).

REMOVAL

2. If a hauler is used, get contact info.
3. If the firm removes appliances or helps to contract for the removal of appliances ask the following:
 - A. Can you estimate the percentage of refrigerator sales where you remove an old refrigerator?
 - B. Roughly how many refrigerators is that annually? (Is that for the region or California?)
 - C. Do you charge for the delivery of the new refrigerator? (If Yes: How much?)
 - D. Do you charge for the removal of the old refrigerator? (If Yes: How much?)
 - E. Is the amount you charge standard or do you sometimes charge different amounts or not charge at all?
 - F. Under what circumstances does the amount charged for removal vary?
 - G. For roughly what percentage of transactions do you charge for removal?

- H. Does your firm deliver new appliances or do you have a contractor who does that?
- I. Does this same firm remove appliances or is it a different firm?
- J. When a refrigerator or freezer is removed from a household what happens to it?
 - I. Where is it taken?
 - II. Are the doors removed or is it immediately disabled in any way?
- K. For the ones that you remove, do you have any idea what percentage of refrigerators are still working?
- L. Do you know anything about the distribution of ages or sizes for the refrigerators that you remove?
 - I. If so, could you describe that information for me? (If the respondent can get the information, ask to provide it at the end of the interview or off line.)

DISPOSAL

- M. Do you contract for disposal of refrigerators, sell, or dispose of the refrigerators on your own, or some of each?
- N. If you contract for disposal, can you describe how the contract works?
 - I. With whom do you contract? Can you give me the names of contacts at these firm(s)?
 - II. Do you contract with different firms for the removal of working and nonworking refrigerators?
 - III. With respect to the financial aspects of the contract, do you have to pay the contractor to remove the appliances or does the contractor pay you?
 - IV. Overall do you break even, take a loss, or make a profit on refrigerator removals?
 - V. Does your contract specify how the refrigerators are to be disposed? If so, can you tell me generally what the requirements are?
 - VI. Do you monitor how the contractor disposes of the refrigerators?

4. If the retailer disposes of the refrigerators directly ask: how do you dispose of them?

SOLD?

5. Are some of the refrigerators sold? What percentage?
 - A. What are the characteristics of the refrigerators that are sold? [Probe: How do you determine whether to sell or de-manufacturer the refrigerator?]
 - B. Are they sold in batches or individually?
 - I. To whom are they sold? Can you describe the type of customer?
 - II. What do you think happens to these refrigerators after they are sold?
 - a. Are refrigerators de-manufactured? If yes, what percentage?
 - b. Are the CFCs and HCFCs sold or destroyed?
 - i. Which or Both?
 - ii. If they are destroyed how are they destroyed?
 - c. Are the materials in the refrigerators separated and sold for scrap?

POLICY? (Note: many of these questions were probably answered in the above questions.)

6. Do you make decisions about disposing of used refrigerators and freezers or do you help to set policy or contract for disposal services?
 - A. If yes, continue.
 - B. If no, ask who the appropriate person or persons might be. Get contact information including fax and e-mail. If the person to whom you are speaking is someone who was suggested by one of the utilities or another known party and there seems to be good rapport with the utility or the third party, ask if the person can help to make the contact.
7. In California, do you have a company wide policy concerning the removal of refrigerators from customers' premises?
 - A. If not company wide, does it vary by region or by store?

- I. If it is company wide or by region go to question 9, otherwise to question 8.
8. If the respondent indicates that each of the firm's stores has its own policy ask:
 - A. Can you tell me roughly how many stores you have?
 - B. Can you describe the different options that the stores offer?
 - C. Is there a choice of policies established centrally and then the stores choose which policies to follow or do they set their own policies?
 - I. If the policies are set centrally, ask for contacts at stores that have different policies and then go to 9A and follow the questions. Otherwise continue
 - D. If they set their own policies, who sets the policy?
 - E. What types of policies exist?
 - F. For each type of policy, what percentage of the stores offer the option?
 - G. Do some of the stores work together? If so, which ones?
 - H. Can you provide me with the names of contacts at some of the stores so that I could ask them about refrigerator disposal?
 9. If the respondent indicates that the policies are company wide or regional ask:
 - A. Can you tell me roughly how many stores you have in California?
 - I. Are the stores organized by region?
 - II. If so, how many regions and how many stores to the region?
 - B. Could you describe the disposal policy or policies?
 - I. If it varies by region how does it vary by region?
 - II. Can you tell me why it varies by region?
 - C. What options are offered to customers for dealing with an existing refrigerator or freezer?
 - I. Can you describe the different options?
 - II. Roughly what percentage of customers buying refrigerators and freezers take the different options?

- a. Can you describe the characteristics of the customers that take the different options?
- III. Does your firm prefer or promote one option over another?
- IV. Does your staff receive incentives for signing up customers for one or another of the options?
- a. If so, which one(s)?
 - b. Can you tell me why your firm prefers this particular option?
- V. Ask these questions when a contractor disposes of the refrigerators.
- a. Do you know how the contractor disposes of the refrigerators?
 - b. How does the contractor obtain the refrigerators from you?
 - c. Do you know if the contractor(s) sells some of the refrigerators? What percentage?
 - i. Can you characterize the refrigerators that are sold?
 - ii. Are they sold in batches or individually?
 - iii. To whom are they sold?
 - iv. What do you think happens to these refrigerators?
 - d. Are refrigerators de-manufactured? If yes, can you estimate the percentage?
 - i. Are the CFCs and HCFCs sold or destroyed?
 - ii. Which or Both?
 - iii. If they are destroyed how are they destroyed?
 - iv. Are the materials in the refrigerators separated and sold for scrap?
 - e. Do you know if some or all of the refrigerators are sold for use outside of the US?
 - i. If yes, what percentage?

ii. Are both working and nonworking refrigerators sent outside the US?

iii. Do you know where the refrigerators go?

10. Impact of the ARP:

A. Are you aware of the Residential Appliance Recycling Program by PG&E, SCE and SEMPRA?

I. If No, thank and terminate, if Yes continue.

B. Can you estimate what percentage of your customers that purchase new refrigerators are recycling their old refrigerators through ARP?

C. Do you believe ARP has impacted the market for secondary refrigerators in California? How so?

D. Do you believe the Program decreases the total number of used appliances available in CA?

I. Why – why not?

Interview Guide

Questions to ask Hauler to fill in gaps for Retailer Surveys

Who do you haul for besides _____(insert name of store referred by)?

What region/towns/states do you cover?

1. What percent of the customers are purchasing a new fridge, when you come to pick up the old one?
2. Do you know anything about the distribution of ages or sizes for the refrigerators that you remove?
3. With respect to the financial aspects of the contract with _____(store referred), do you have to pay them to pick up and deliver appliances? Or do they pay you?
 - I. Overall do you break even, take a loss, or make a profit on refrigerator removals?
 - II. Does your contract specify how the refrigerators are to be disposed? If so, can you tell me generally what the requirements are?
- B. Could you describe the disposal policy or policies?
 - I. If it varies by region how does it vary by region?
 - II. Can you tell me why it varies by region?

Do you know if some or all of the refrigerators are sold for use outside of the US?

If yes, what percentage?

Are both working and nonworking refrigerators sent outside the US?

Do you know where the refrigerators go?

4. Impact of the ARP:
 - A. Are you aware of the Residential Appliance Recycling Program by PG&E, SCE and SEMPRA?
 - I. If No, thank and terminate, if Yes continue.
 - B. Can you estimate what percentage of your customers that purchase new refrigerators are recycling their old refrigerators through ARP?
 - C. Do you believe ARP has impacted the market for secondary refrigerators in California? How so?
 - D. Do you believe the Program decreases the total number of used appliances available in CA?

SCE SDGE PG&E Non-Participant Appliance Recycling Questions (To Be Added to CFL User Survey¹)

- 1.1 Did you discard an operable **[refrigerator, freezer, room air conditioner]** since January 2006?
- 01 Yes
 - 02 No.....(*THANK AND TERMINATE ARP MODULE*)
 - D DON'T KNOW.....(*THANK AND TERMINATE ARP MODULE*)
 - R REFUSED.....(*THANK AND TERMINATE ARP MODULE*)
- 1.2 When did you discard it?
- 01 DATE _____ (MONTH, YEAR)
 - D DON'T KNOW
 - R REFUSED
- 1.3 At the time you discarded it, how old was the (**refrigerator, freezer, room air conditioner**)?
- 01 YEARS _____ (1-50)
 - D DON'T KNOW
 - R REFUSED
- 1.4 Did you have your **[refrigerator, freezer, room air conditioner]** picked up through a **[utility]** program?
- 01 Yes.....(*THANK AND TERMINATE ARP MODULE*)
 - 02 No.....(*SKIP TO 1.5*)
 - D DON'T KNOW
 - R REFUSED.....(*THANK AND TERMINATE ARP MODULE*)
- 1.5 **[Utility]** offers an incentive to pick up and recycle old, operating refrigerators and room air conditioners. A contractor would have picked this up for your home. Are you sure you don't recall having a **[refrigerator, freezer, room air conditioner]** picked up and receiving a rebate from the utility?
- 01 Don't remember ...(*THANK AND TERMINATE ARP MODULE*)
 - 02 Remember
 - R REFUSED.....(*THANK AND TERMINATE ARP MODULE*)

¹ Based largely on 2005-04 RARP PARTICIPANT QUESTIONNAIRE FINAL

[IF RESPONDENT DISCARDED MORE THAN ONE UNIT, ASK THE RESPONDENT TO SELECT THE ONE USED THE MOST OR USED MOST RECENTLY AND INFORM THE RESPONDENT THAT ALL ENSUING QUESTIONS ARE BEING ASKED WITH REGARD TO ONLY THAT SPECIFIC APPLIANCE]

2.1 During the time just before you decided to get rid of the [**refrigerator, freezer, room air conditioner**], was it being used as your main [**refrigerator, freezer, room air conditioner**], or had it been a secondary or spare?

(Interviewer: a main refrigerator is typically in the kitchen, a secondary or spare is usually kept someplace else and might or might not be running. If the person recently bought a new main refrigerator, it should be classified as "main.")

- 1 Main
- 2 Secondary or Spare
- D DON'T KNOW
- R REFUSED

2.2 (REFRIGERATOR OR FREEZER ONLY) Where was it located?

- 1 Kitchen
- 2 Garage
- 3 Porch/Patio
- 4 Basement
- 5 Other (SPECIFY:)
- D DON'T KNOW
- R REFUSED

2.2b (ROOM AIR CONDITIONER ONLY) Where was it located?

- 1 Kitchen
- 2 Living room
- 3 Dining room
- 4 Bedroom
- 5 Other (SPECIFY:)
- D DON'T KNOW
- R REFUSED

2.3 What was the condition of this appliance? Would you say ...? (READ LIST; INDICATE ONE RESPONSE)

- 1 It worked and was in good physical condition
- 2 It worked but needed minor repairs (REFRIGERATOR: like a door seal or handle)
- 3 It worked but had some problems (REFRIGERATOR: like it wouldn't defrost)
- 4 Or, it didn't work
- D DON'T KNOW
- R REFUSED

2.4 Did you decide to get rid of it because you... (READ)

- 1 Got a brand new [**refrigerator, freezer, room air conditioner**] to replace it
- 2 Got a used [**refrigerator, freezer, room air conditioner**] to replace it
- 3 Or to get rid of a [**refrigerator, freezer, room air conditioner**] you no longer wanted without replacing it
- D DON'T KNOW

R REFUSED

2.5 How did you get rid of this [refrigerator, freezer, room air conditioner] ?

(CLARIFY IF NEEDED TO FIT LIST BELOW. FOR EXAMPLE: Did you give it away or sell it?)

HAULED IT AWAY YOURSELF
Took it to a recycler or scrap dealer 01
Took it to the landfill or threw it away 02

SOLD IT
Sold it to a friend, acquaintance or relative 03
Sold it to a used refrigerator / freezer dealer..... 04
Sold it via garage sale, estate sale, or newspaper ad..... 05
Sold it when you moved to new occupant 13

SOMEONE ELSE HAULED IT AWAY
Hired someone to pick it up (for junking or dumping) 06
Called utility's appliance recycling program 12

DEALER TOOK IT
Traded it for a replacement unit..... 07
Dealer I bought a new one from took it away..... 08

GAVE IT AWAY (NOT SOLD)
Gave it away 09
Left it behind when moved (for new occupant)..... 11

STILL HAVE IT
Still have it, and using 00
Still have it; store it unused 10

SOME OTHER WAY
Other (SPECIFY:___) 97
Don't know 98
Refused..... 99

Interview Guide Used Appliance Dealers Residential Appliance Recycling Program

Background

This guide is intended for use with owners or managers of used appliance stores/firms. The goal of these interviews is to understand the used appliance market.

This interview guide is only slightly modified from the guide used by ADM as part of the evaluation of the 2004-2005 ARP, with the intention of allowing longitudinal analysis between the two survey efforts.

Target

The targets for these interviews will be persons who set policy and/or negotiate contracts for the disposal of refrigerators that are removed from customers' premises by the retailer.

Introduction

Hello. My name is _____ with the Cadmus Group. I am part of a team of energy efficiency consultants that have been asked by the California Investor Owned Utilities, Southern California Edison, Pacific Gas and Electric Company, and SEMPRRA to conduct an evaluation of their Refrigerator Appliance Recycling Program. One of the goals of this evaluation is to understand the process in which customers not participating in the program dispose of their old refrigerators.

Basics

1. Do you pickup/remove used refrigerators? (Yes/No)
2. Do you work directly with customers or on behalf of new appliance retailers? Please explain (both if necessary, as well as the percent of each).

Background

1. Does your company have more than one location? If so, how many, and how do those locations compare to each other in size and sales?
2. Is your primary business used appliances?
3. Do you sell new appliances, used appliances or both?

Acquiring Appliances

4. How do you go about acquiring used appliances? (The following list is for reference only. Use it to probe and as a check list. Make a list for later use.)
 - a. Homeowners pay us to pick-up appliances
 - b. We provide free pick-up from homeowners
 - c. We allow people to drop-off refrigerators
 - d. Scavengers from our company cruise streets on pick-up days
 - e. We work with community waste management programs to obtain refrigerators
 - f. We obtain refrigerators from multifamily operations
 - g. We obtain refrigerators through contracts with new appliance dealers such as Sears, Best Buy, Howard's, Fry's, etc.
 - h. Obtain stock from other used appliance dealers
 - i. Other sources, please identify

Obtains directly from homeowners

5. If customers pay the firm to remove appliances or the firm provides free pick-up, how do customers find out about your services?
 - a. Word-of-mouth
 - b. Yellow pages
 - c. Local advertising such as Penney Saver
 - d. Other media such as cable, TV, radio
 - e. Through new appliance dealers
 - f. The internet
 - g. Other, please identify
6. When you make contact with a homeowner do you screen for certain types of appliances, for example, working appliances, or do you take anything that comes your way? If you screen, what criteria do you use?

Scavenging or Community Pick-ups

7. In about how many communities do you do pick-ups?
8. Do you have contracts with those communities?
9. Do you pay the community for the right to haul, do you provide the hauling removal service for free, or does the community pay you to haul the refrigerators? If the latter, can you tell me approximately how much per unit?
10. Do you take all of the refrigerators you find or just certain ones? If just certain ones, which ones do you take? Do you know what happens to those that are left behind?

Obtain from new appliance dealers [IF APPLICABLE]

11. With roughly how many appliance dealers do you have contracts?
12. Which new appliance retailers?
13. Do you pay for the machines, does the dealer pay you, or do you remove the machines for free?
14. For these dealers, do you resell all the appliances or just certain ones?
15. What percent are resold? Why are they selected for resale?
16. What happens to the other units?

Obtain from new multifamily operators

17. How do multi-family operators find out about your service?
18. Annually, about how many multifamily operators use your service?
19. Do you buy the machines from multifamily operators, remove them for free, or do the operators pay you to remove them?

Quantities by source

20. Can you tell me roughly how many refrigerators you actually acquire annually whether working or not?
21. Thinking about the various sources we have discussed, roughly what percentage come from each source? (The sources were identified in an early question. Use the responses to that question. These responses are for reference purposes.)
 - a. Homeowners pay us to pick-up appliances
 - b. We provide free pick-up from homeowners
 - c. We allow people to drop-off refrigerators
 - d. Scavengers from our company cruise streets on pick-up days
 - e. We work with community waste management programs to obtain refrigerators
 - f. We obtain refrigerators from multifamily operations
 - g. We obtain refrigerators through contracts with new appliance dealers such as Sears, Best Buy, Howard's, Fry's, etc.
 - h. Obtain stock from other used appliance dealers
 - i. Other sources, please identify

What the dealer does with the machines

22. What do you do with the machines that you receive? (probe to make sure you have all of the paths)
- Sell them through a store or stores
 - Sell them to other dealers
 - Sell them to overseas brokers
 - Sell them to operators of multifamily units
 - De-manufacture them and recover resources
 - A landfill
 - Other please identify
23. How do you determine what to do with each of the machines that you receive? (i.e., Sell vs. de-manufacture)
24. Roughly what percentage of the machines that you obtain are disposed of by each method? [Record percent for each option]
- Sell them through a store or stores _____%
 - Sell them to other dealers _____%
 - Sell them to overseas brokers _____%
 - Sell them to operators of multifamily units _____%
 - De-manufacture them and recover resources _____%
 - A landfill _____%
 - Other please identify [Other _____] _____%
25. If you sell through stores or to other dealers, who are the customers likely to be?
26. What percentage of the machines that you sell do you think are likely to be used as a primary unit? A secondary unit?

How the dealer/operator process the machines that are obtained

27. When you receive machines how do you process them?
- Do you screen them for working, repairable, or unfixable?
 - Roughly what percentage come in each condition?
 - Do you assess what to do with machines based on market value?
 - If so what criteria, do you use? Size, color, age, configuration
 - What percentage of machines that are working or repairable do you dispose of if they don't meet your market criteria?
 - How do you dispose of these machines?
28. Do you de-manufacture machines and sell the insulation, plastics and metals?

The Used appliance Market

29. Are you able to sell all of the refrigerators that you obtain?

30. Could you sell more refrigerators if you could get more?
31. If you could sell more, roughly how many more could you sell?
32. Do you purchase refrigerators in other states or localities?
33. What are the most important market segments for the used market?
34. What do you think those customers would do if they were not able to obtain refrigerators from companies such as yours?
35. What do you think the future of the used refrigerator market may be?

Awareness of the IOU Residential Appliance Recycling Program

36. Are you aware of the IOU Residential Appliance Recycling Program?
37. Do you think that that program is influencing your business? If so, how?
38. Are there ways in which you think your business might be able to cooperate with the program? If so, how?
39. Do you believe ARP has impacted the market for secondary refrigerators in California? How so?

Given everything we have discussed, is there anything else that you would like to tell us or talk about?

Fields	Unit	Use
Customer Name	Text	Contact Info
Address	Text	Contract Info
Customer Phone	Text	Contact Info
Times Appliance Opened in test period	Table	Energy Use
Freezer Temp	Table	Energy Use
Refrigerator Temp	Table	Energy Use
Room Temp	Table	Energy Use
Coil Temp	Table	Energy Use
Type of appliance	Text	Type Stratum
Primary AC or Secondary no AC	Text	Use Stratum
Location of unit	Text	Use Stratum
Time Appliance in Location	Years	Use Stratum
Food Storage (full moderate sparse empty)	Text	Use Stratum
Manufacturer	Text	Type Stratum
Model No.	Alphanumeric	Type Stratum
Voltage	Number	Type Stratum
Amps	Number	Type Stratum
Age	years	Type Stratum
capacity	Sqft	Type Stratum
General Condition	Text	Type Stratum
Manufacture Date	Text	Type Stratum
Full Load Amperage	Text	Energy Usage
Replacing Manufacture / Model	Text	Energy Savings
Head of Household Education Level	Chart	Use Stratum
Number of Occupants with age stratum	Chart	Use Stratum
Amp Meter Data	Table	Energy Use
Utility Service Account Number	Number	Service Territory Stratum

Fields	Source
Customer Name	ARCO/JACO
Address	ARCO/JACO
Customer Phone	ARCO/JACO
Times Appliance Opened in test period	Hobo Meter
Freezer Temp	Hobo Meter
Refrigerator Temp	Hobo Meter
Room Temp	Hobo Meter
Coil Temp	Hobo Meter
Type of appliance	Survey
Primary AC or Secondary no AC	Survey
Location of unit	Survey
Time Appliance in Location	Survey
Food Storage (full moderate sparse empty)	Survey
Manufacturer	Survey
Model No.	Survey
Voltage	Survey
Amps	Survey
Age	Survey
capacity	Survey
General Condition	Survey
Manufacture Date	Survey
Full Load Amperage	Survey
Replacing Manufacture / Model	Survey
Head of Household Education Level	Survey
Number of Occupants with age stratum	Survey
Amp Meter Data	Watts up?
Utility Service Account Number	ARCO/JACO

Fields	Options
Customer Name	
Address	
Customer Phone	
Times Appliance Opened in test period	
Freezer Temp	
Refrigerator Temp	
Room Temp	
Coil Temp	
Type of appliance	Freezer, Refridgerator
Primary AC or Secondary no AC	
Location of unit	Basement, Dining Room, Kitchen, Laundry, Porch, Utility, Garage, Outside
Time Appliance in Location	
Food Storage (full moderate sparse empty)	full, moderate, sparse, empty
Manufacturer	
Model No.	
Voltage	
Amps	
Age	
capacity	
General Condition	
Manufacture Date	
Full Load Amperage	
Replacing Manufacture / Model	
Head of Household Education Level	C-2 pervious study
Number of Occupants with age stratum	C-2 pervious study
Amp Meter Data	
Utility Service Account Number	

On-site Data Collection Form

Appliance Recycling Program Dual Metering Study

	Date		Time				
Installation	/	/	← ENTER	:	AM	PM	← ENTER
Removal	/	/	← ENTER	:	AM	PM	← ENTER
Installer Name			← ENTER				
Homeowner Name			← CONFIRM/CORRECT →				
Phone			← CONFIRM/CORRECT →				
Appliance			← CONFIRM/CORRECT →	<input type="checkbox"/> Refrigerator <input type="checkbox"/> Freezer			
Primary/Secondary Unit			← CONFIRM/CORRECT →	<input type="checkbox"/> Primary <input type="checkbox"/> Secondary			
StudyID							
ATO							
Street Address							
Apartment/Suite							
City							
State							
Zip Code							
Configuration (Refrigerator)	<input type="checkbox"/> Top Freezer <input type="checkbox"/> Bottom Freezer <input type="checkbox"/> Side by Side <input type="checkbox"/> Single Door					← ENTER	
Configuration (Freezer)	<input type="checkbox"/> Chest <input type="checkbox"/> Upright					← ENTER	
Location	<input type="checkbox"/> Kitchen <input type="checkbox"/> Garage <input type="checkbox"/> Basement <input type="checkbox"/> Outside <input type="checkbox"/> Other: _____					← ENTER	
Conditioned Space (HVAC)	<input type="checkbox"/> Conditioned <input type="checkbox"/> Unconditioned					← ENTER	
Frost-Free/Manual Defrost	<input type="checkbox"/> Frost-Free <input type="checkbox"/> Manual Defrost					← ENTER	
Through Door Features	<input type="checkbox"/> Water and/or Ice <input type="checkbox"/> None					← ENTER	
Manufacturer			← ENTER				
Model Number			← ENTER				
Estimated Age			← ENTER				
Internal Capacity (Cubic Feet)			← ENTER				
Full Load AMP			← ENTER				
Provided Exit Letter	<input type="checkbox"/> Yes <input type="checkbox"/> No		← ENTER				
Metering Equipment	Serial Number	Sent	Received	Installed	Returned		
Site Verification Form		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Temperature Gauge (Refrigerator)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Temperature Gauge (Freezer)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Light Sensor		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
External Data Logger (Temp/RH)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Temperature Meter Cord		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Watts Up? Pro (Power Meter)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Return FedEx Box with Label		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Bag of meter fasteners for installation		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Please contact Meghan Lee at The Cadmus Group, Inc. at (503) 228-2992 with any questions.							

On-site Metering Data Form - Appliance Recycling Program Dual Metering - Site Visit Protocol

	Meter Installer		CADMUS ONLY	
Meter Installation Date / Time	\ \ :	← ENTER	Customer ID#	Cadmus Test Case
Meter Removal Date / Time	\ \ :	← ENTER	Freezer (20)	# of 20
Inspector Name [print]		← ENTER	Refrigerator (180)	# 1 of 180
Homeowner Contact Name	Tammy Farmer			
Phone 1	503.228.2992			
Address 1	720 SW Washington St. Suite 400			
Address 2				
City	Portland			
State	OR			
Zip Code	97205			

Type	Refrigerator	Confirm →	<input type="checkbox"/> Yes - <input type="checkbox"/> No - Specify _____.
Make / Model		← ENTER	NOTES:
Door Style		← ENTER	
Frost free or Manual defrost		← ENTER	
through-the-door water and/or ice		← ENTER	
Manufacture Date		← ENTER	
Full Load AMP		← ENTER	
Inside Capacity "Cubic Feet"		← ENTER	
Primary of Secondary Unit	primary	Confirm →	<input type="checkbox"/> Yes - <input type="checkbox"/> No - Specify _____.
Location (air-conditioned or not)	garage - no A/C	Confirm →	<input type="checkbox"/> Yes - <input type="checkbox"/> No - Specify _____.

Temperature gauges are labeled with a "F" and "R" to Designate Refrigerator and Freezer

Meter Package Items List	Serial Number	Packing Slip	Returned
Bag of meter fasteners for installation	NA	<input type="checkbox"/>	→ <input type="checkbox"/>
HOBO UA-002-XX Temperature Gauge (F reezer)	#2023738	<input type="checkbox"/>	→ <input type="checkbox"/>
HOBO UA-002-XX Temperature Gauge (R efrigerator)	#2023736	<input type="checkbox"/>	→ <input type="checkbox"/>
HOBO U12-012 External Data Logger (Temp/RH)	#1273554	<input type="checkbox"/>	→ <input type="checkbox"/>
HOBO U9-002 Light Sensor (says in plastic bag)	#2011998	<input type="checkbox"/>	→ <input type="checkbox"/>
HOBO TMC6-HD 6' Temperature Meter Cord	yes	<input type="checkbox"/>	→ <input type="checkbox"/>
Watts Up? Pro (Power Meter)	no	<input type="checkbox"/>	→ <input type="checkbox"/>
Return FedEx Box with Label	Yes	<input type="checkbox"/>	→ <input type="checkbox"/>
Site Verification Form	Yes	<input type="checkbox"/>	→ <input type="checkbox"/>
		<input type="checkbox"/>	→ <input type="checkbox"/>

On-site Metering Data Form - Appliance Recycling Program Dual Metering - Site Visit Protocol

	Meter Installer	CADMUS ONLY	
Meter Installation Date / Time	\ \ : ← ENTER	Customer ID#	Cadmus Test Case
Meter Removal Date / Time	\ \ : ← ENTER	Freezer (20)	# of 20
Inspector Name [print]	← ENTER	Refrigerator (180)	# 1 of 180
Homeowner Contact Name	Tammy Farmer		
Phone 1	503.228.2992		
Address 1	720 SW Washington St. Suite 400		
Address 2			
City	Portland		
State	OR		
Zip Code	97205		

Type	Refrigerator	Confirm →	<input type="checkbox"/> Yes - <input type="checkbox"/> No - Specify _____.
Make / Model	← ENTER	NOTES:	
Door Style	← ENTER		
Frost free or Manual defrost	← ENTER		
through-the-door water and/or ice	← ENTER		
Manufacture Date	← ENTER		
Full Load AMP	← ENTER		
Inside Capacity "Cubic Feet"	← ENTER		
Primary of Secondary Unit	primary	Confirm →	<input type="checkbox"/> Yes - <input type="checkbox"/> No - Specify _____.
Location (air-conditioned or not)	garage - no A/C	Confirm →	<input type="checkbox"/> Yes - <input type="checkbox"/> No - Specify _____.

Temperature gauges are labeled with a "F" and "R" to Designate Refrigerator and Freezer

Meter Package Items List	Serial Number	Packing Slip	Returned
Bag of meter fasteners for installation	NA	<input type="checkbox"/>	→ <input type="checkbox"/>
HOBO UA-002-XX Temperature Gauge (F reezer)	#2023738	<input type="checkbox"/>	→ <input type="checkbox"/>
HOBO UA-002-XX Temperature Gauge (R efrigerator)	#2023736	<input type="checkbox"/>	→ <input type="checkbox"/>
HOBO U12-012 External Data Logger (Temp/RH)	#1273554	<input type="checkbox"/>	→ <input type="checkbox"/>
HOBO U9-002 Light Sensor (says in plastic bag)	#2011998	<input type="checkbox"/>	→ <input type="checkbox"/>
HOBO TMC6-HD 6' Temperature Meter Cord	yes	<input type="checkbox"/>	→ <input type="checkbox"/>
Watts Up? Pro (Power Meter)	no	<input type="checkbox"/>	→ <input type="checkbox"/>
Return FedEx Box with Label	Yes	<input type="checkbox"/>	→ <input type="checkbox"/>
Site Verification Form	Yes	<input type="checkbox"/>	→ <input type="checkbox"/>

On-site Metering Data Form - Appliance Recycling Program Dual Metering - Site Visit Protocol

	Meter Installer	CADMUS ONLY	
Meter Installation Date / Time	\ \ : ← ENTER	Customer ID#	Cadmus Test Case
Meter Removal Date / Time	\ \ : ← ENTER	Freezer (20)	# of 20
Inspector Name [print]	← ENTER	Refrigerator (180)	# 1 of 180
Homeowner Contact Name	Tammy Farmer		
Phone 1	503.228.2992		
Address 1	720 SW Washington St. Suite 400		
Address 2			
City	Portland		
State	OR		
Zip Code	97205		

Type	Refrigerator	Confirm →	<input type="checkbox"/> Yes - <input type="checkbox"/> No - Specify _____.
Make / Model	← ENTER		NOTES:
Door Style	← ENTER		
Frost free or Manual defrost	← ENTER		
through-the-door water and/or ice	← ENTER		
Manufacture Date	← ENTER		
Full Load AMP	← ENTER		
Inside Capacity "Cubic Feet"	← ENTER		
Primary of Secondary Unit	primary	Confirm →	<input type="checkbox"/> Yes - <input type="checkbox"/> No - Specify _____.
Location (air-conditioned or not)	garage - no A/C	Confirm →	<input type="checkbox"/> Yes - <input type="checkbox"/> No - Specify _____.

Temperature gauges are labeled with a "F" and "R" to Designate Refrigerator and Freezer

Meter Package Items List	Serial Number	Packing Slip	Returned
Bag of meter fasteners for installation	NA	<input type="checkbox"/>	→ <input type="checkbox"/>
HOBO UA-002-XX Temperature Gauge (F reezer)	#2023738	<input type="checkbox"/>	→ <input type="checkbox"/>
HOBO UA-002-XX Temperature Gauge (R efrigerator)	#2023736	<input type="checkbox"/>	→ <input type="checkbox"/>
HOBO U12-012 External Data Logger (Temp/RH)	#1273554	<input type="checkbox"/>	→ <input type="checkbox"/>
HOBO U9-002 Light Sensor (says in plastic bag)	#2011998	<input type="checkbox"/>	→ <input type="checkbox"/>
HOBO TMC6-HD 6' Temperature Meter Cord	yes	<input type="checkbox"/>	→ <input type="checkbox"/>
Watts Up? Pro (Power Meter)	no	<input type="checkbox"/>	→ <input type="checkbox"/>
Return FedEx Box with Label	Yes	<input type="checkbox"/>	→ <input type="checkbox"/>
Site Verification Form	Yes	<input type="checkbox"/>	→ <input type="checkbox"/>

Appendix H – Room ACs

H1 – Telephone Surveys

- Retailer Survey
- Room AC Survey
- Room AC Survey Codebook
- SCE 2501 Room AC Survey

H2 – Data Collection Instruments

- Meter Removal Form
- Participant Contract
- Site Verification Form
- SCE 2501 Room AC Meter Site Visit Form

The Cadmus Group

CPUC Room Air Conditioner - Retailer Survey

A. RESPONDENT'S CONTACT INFORMATION (COMPLETE BEFORE INTERVIEW)

Retailer Name: _____ Survey Date: _____

Contact Name: _____ Interviewer Initials: _____

Contact Phone Number: _____ Contact Title: _____

Participating Retailer: Yes No

Retailer Segment

- Discount Store (e.g., 99 cent store, Big Lots, Kmart)
- Drug store (e.g., CVS, Walgreens)
- Grocery store (e.g., Vons, Ralphs)
- Hardware store (e.g., Ace, True Value)
- Large home improvement store (e.g., Home Depot, Lowe's)
- Mass Merchandiser (e.g., Ikea, Walmart, Target)
- Membership store (e.g., Costco, Sam's Club)

B. INTRODUCTION

Hello, my name is _____ and I'm calling on behalf of the California Public Utilities Commission. We are conducting a study with retailers about Room Air Conditioners.

If you have a few minutes, I'd like to ask you some questions about Room Air Conditioners your store carries. The information we'll be discussing will be used to determine the opportunity for the utilities in California to improve their energy efficiency programs, and help consumers save more on their bills. As an independent research firm, we do not intend to report your responses in any way that would reveal your identity or the identity of your company.

Potential Questions

Who is doing this study? The California Public Utilities Commission, which regulates the utilities and oversees California's energy efficiency programs.

Why are you conducting this study? Studies like this help the State of California and the electric utilities better understand the energy savings that result from energy efficiency programs.

If accused of sales call. I am not selling anything. I would simply like to learn about your experience with different room air conditioner types. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call Mikhail Haramati at 415-703-1458, or visit their website: www.cpuc.ca.gov/evaluation.

B1. Do you carry room air conditioners at your store? I would like to know about Room Air Conditioners that can be installed in a window or through an opening in the wall, we are not interested in central or portable A/C units.

- 1 Yes
- 2 No (CONFIRM, THANK, AND TERMINATE)

B2. Are you the person who is most familiar with the room air conditioner lines you carry?

- 1 Yes → Go to B3
- 2 ***IF NO, ASK***, Can you provide me with a contact name and phone number for a person at your store who might be more familiar with the room a/c's you carry? ***[WRITE NAME AND NUMBER IN SPACE BELOW.]***

Name: _____

Phone: (____)_____ ext. _____

[THANK AND REPEAT WITH NEW CONTACT]

B3. This research effort will take approximately 5 minutes to complete. Do you have a few minutes so that we can proceed over the phone now?

- 1 Yes → Go to C1
- 2 No → Can I schedule a time to call back?

IF YES, WRITE IN SCHEDULED DATE AND TIME.

C. ENERGY STAR AND UTILITY PROGRAM QUESTIONS

C1. Are you familiar with the ENERGY STAR logo?

- 1 Yes
- 2 No
- 99 Don't Know

C2. Of all the Room A/C *models* you carry at your store, approximately what percent are Energy Star labeled?

C3. Of all the Room A/C *units sold* at your store, approximately what percent are Energy Star labeled?

C4. How often do customers ask specifically for energy star rated room a/c units? Would you say it is:

- 1 Very often
- 2 Somewhat often
- 3 Not very often
- 4 Never
- 99 Don't Know

C5. Do you find that the Energy Star logo influences customer's purchasing decisions?

1 Yes

How so? _____

2 No

-99 Don't Know

C6. Some of the California utilities offer rebates to customers for purchasing Energy Star rated room air conditioners. Are you familiar with these utility programs in your area?

1 Yes

2 No

C7. Does your store advertise or display if a utility rebate is available for room a/c's?

1 Yes

2 No (Skip to D1)

-99 Don't Know

C8. Do you find that the utility incentive programs influence customer's room a/c purchasing decisions?

1 Yes

How so? _____

2 No

-99 Don't Know

C9. Do the sales of utility rebated room a/c's differ from non-rebated units?

1 Yes, rebated room a/c's have higher sales

2 Yes, rebated room a/c's have lower sales

3 No, the sales do not differ

-99 Don't Know

C10. How often do customers ask specifically for utility rebated room a/c units? Would you say it is:

1 Very often

2 Somewhat often

3 Not very often

4 Never

-99 Don't Know

D. POPULAR MODEL QUESTIONS

D1. Approximately how many models of Room A/C's do you carry at your store per year? (SPECIFY MODELS CARRIED DURING SUMMER OR WINTER MONTHS, IF RESPONDANT DIFFERENTIATES)

D2. Approximately how many Room A/C units does your store sell per year?

D3. What is the size, efficiency, make & model of the most popular, or highest selling Room A/C at your store?

_____ BTU's (size)

_____ EER (efficiency)

_____ Make

_____ Model

A. Is this model Energy Star rated?

1 Yes

2 No

-99 Don't Know

B. What percent of your total room ac sales does this model represent?

D4. What is the size, efficiency, make & model of the second most popular, or second highest selling Room AC at your store?

_____ BTU's (size)

_____ EER (efficiency)

_____ Make

_____ Model

A. Is this model Energy Star rated?

1 Yes

2 No

-99 Don't Know

B. What percent of your total room ac sales does this model represent?

E. CONCLUSION

That is all of the questions I have for you; however I would like to ask one favor: if I have a quick follow-up question at a later date would it be alright if I was to call back at that time?

1 Yes

2 No

-99 Don't Know

Thank you for your time.

Residential Room Air Conditioner Incentive Program Participant Survey

The following measures will be asked about in the survey:

ENERGY STAR® room air conditioner(s)

Instrument-specific variables-- The CATI software will automatically fill the appropriate description in the questions.

[Product Type]

Room air conditioner

[Measure]

Energy Star room air conditioner

[Assistance]

Rebate

[Program]

Residential Energy Efficiency Incentive Program

[Utility]

SCE

SDGE

PG&E

[Program Incentive]

\$50

[Quantity]

Quantity exchanged/installed

[Incremental efficiency measures]

Room air conditioner

Introduction

INTRO Hello, my name is **[interviewer name]**, and I'm calling on behalf of the California Public Utilities Commission regarding **[Utility]**'s Residential Energy Efficiency Incentive Program. May I speak with **[contact name]**?

1 Yes

2 No [attempt to convert; if R not available, ask for an adult who makes decisions on how household uses energy]

I'm with **[data collection firm]**, an independent research firm. I am calling to learn about your experiences with the **[measures]** you purchased and the rebate you received from **[Utility]** through Residential Energy Efficiency Incentive Program.

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

High Impact Measures – Room Air Conditioner Survey Final

(Why are you conducting this study: Studies like this help the State of California and **[Utility]** better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about 15 minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-XXX-XXXX)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the room air conditioner you purchased and received a rebate through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call 415 703-2782, or visit their website: www.cpuc.ca.gov/evaluation.)

(NOTE: For all questions, "DON'T KNOW" and "REFUSED" will be coded if offered as a response.)

Recall of Participation/Identification of Decision Maker (Section 1)

(QUANTITY REFERS TO THE NUMBER RECEIVED WITHIN THE MEASURE CATEGORY--E.G., 5 LIGHTING FIXTURES)

Q1_1b Program records indicate that you purchased and received a mail-in, on-line or instant rebate for energy efficient equipment through the Residential Energy Efficiency Incentive Program around **[insert date of participation]**. (RECORD FOR EACH MEASURE INSTALLED)

Q1_1ba Do you recall purchasing a/an [#] room air conditioner(s)?

- 1 Yes
- 2 No (SKIP TO Q1_2)
- D (DON'T KNOW) (SKIP TO Q1_2)

Q1_1bb Is this the correct quantity?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q1_1bc (IF QUANTITY > 1) What is the correct quantity?

- _____Quantity
- D (DON'T KNOW)
- R (REFUSED)

(IF RECALLS MEASURES, SKIP TO Q1_4)

High Impact Measures – Room Air Conditioner Survey Final

Q1_2 (ASK IF DOESN'T RECALL THE MEASURES) Is it possible that someone else in your household would know about the **room air conditioners** you purchased and applied for a mail-in or on-line rebate or received an instant rebate from the retailer through **[Utility]'s** Residential Energy Efficiency Incentive Program. (RECORD ONE NUMBER)

- 1 Yes (SKIP TO Q1_3)
- 2 No
- D (DON'T KNOW)
- R (REFUSED) (TERMINATE)

Q1_2b **[Utility]** is offering mail-in, on-line or instant rebates for replacing less efficient **room air conditioner** with more energy-efficient equipment. Rebates are paid in two ways—either in response to a mail-in application for a rebate or through an instant rebate at the retailer. This program is referred to as the Residential Energy Efficiency Incentive Program. Are you sure you don't recall purchasing the/these **room air conditioners** and applying for a rebate? (RECORD ONE NUMBER)

- 1 Don't remember (TERMINATE, RECORD ANY COMMENTS MADE BY RESPONDENT BEFORE EXITING)
- 2 Remember (READ, "GREAT, THEN LET'S CONTINUE", SKIP TO Q1_4)
- R (REFUSED) (TERMINATE)

Q1_3 May I please speak with that person? (RECORD ONE NUMBER)

- 1 Yes (BEGIN THE SURVEY AGAIN WITH THIS NEW RESPONDENT)
- 2 No (TERMINATE)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

Q1_4 Are you the person in your household who decided to purchase this/these **room air conditioners** and receive a rebate through **[Utility]** Residential Energy Efficiency Incentive Program?

- 1 Yes
- 2 No (SKIP BACK TO Q1_3)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

Sources of Program Information (Section 2)

Q2_1 How did you hear about the rebate offered on the **room air conditioners** available as part of **[Utility]** Residential Energy Efficiency Incentive Program? (PROBE: Did you hear about the program from any other sources?) (*DO NOT READ LIST, RECORD ALL THAT APPLY*)

For Q2_1_1 to Q2_1_20:

0 Not mentioned

1 Mentioned

Utility provided information

Q2_1_1 (Advertising—radio, newspaper, trade journal, billboard, TV)

Q2_1_2 (Bill insert, newsletter, or other mailing)

Q2_1_3 (Website)

Q2_1_4 (Email)

Q2_1_5 (Other utility) (*SPECIFY*)

Local Government/Community event/Nonprofit

Q2_1_6 (Meeting, event, workshop, training) (*SPECIFY*)

Q2_1_7 (School)

Q2_1_8 (Local government/community agency) (*SPECIFY*)

Q2_1_9 (City/county Energy Center - Pacific Energy Center, Stockton, Food Service) (*SPECIFY*)

Q2_1_10 (Advertising—radio, newspaper, trade journal, billboard, TV)

Other

Q2_1_11 (Home or building audit or assessment) (*SPECIFY*)

Q2_1_12 (Meeting, event, workshop training) (*SPECIFY*)

Q2_1_13 (Flex your Power TV or radio advertising)

Q2_1_14 (Other advertising, don't recall)

Q2_1_15 (Friend/Relative/Neighbor)

Q2_1_16 (Other, Specify: _____)

Q2_1_17 (DON'T KNOW)

Q2_1_18 (REFUSED)

Q2_1_19 Salesperson/Sales Rep

Q2_1_20 Installer/Contractor

Installation Behavior (Section 3)

Q3_0 How did you receive the rebate for this ENERGY STAR room air conditioner? Did you mail in the rebate application to **[Utility]**, fill out an online rebate form, or receive an instant rebate at the store when you made your purchase?

- 1 Mail in rebate
- 2 Instant rebate at store
- 3 Online Rebate
- D (DON'T KNOW)
- R (REFUSED)

Q3_1a (IF QUANTITY=1) Now, I would like to understand what you did with the ENERGY STAR room air conditioner. Is this ENERGY STAR room air conditioner currently installed at your home? (RECORD ONE NUMBER)

- 1 Yes (SKIP TO 3.12)
- 2 No
- D (DON'T KNOW) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)
- R (REFUSED) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)

Q3_1b (IF QUANTITY=1) Which of the following best describes what happened with the ENERGY STAR room air conditioner? (READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location (SKIP TO 3.3a)
- 2 It was installed at your home but is now permanently removed (example: broke, burned out, don't fit, don't like, etc.) (SKIP TO 3.6)
- 3 It is in storage because it is only needed during certain months of the year
- 4 It is in storage for some other reason (SKIP TO SECTION 3.8)
- 5 It was sold or given away (SKIP TO 3.3a)
- 6 Something else (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

Q3_2 (IF QUANTITY>1) Now, I would like to understand what you did with the **[quantity]** ENERGY STAR room air conditioner. (READ LIST, RECORD NUMBER)

- a___ How many are currently installed at your home (either indoors or outdoors) (IF RESPONSE=QUANTITY, SKIP TO 3.4)
- b___ How many are installed at some other location?
- c___ How many were installed at your home (either indoors or outdoors) but are now permanently removed (example: broke, burned out, don't fit, don't like, etc.)
- d___ How many are in storage because they are only needed during certain months of the year?
- e___ How many are in storage for some other reason?
- f___ How many were sold or given away?

High Impact Measures – Room Air Conditioner Survey Final

g____ Something else? (SPECIFY)

Q3_3a (ASK IF 3.1b=1, 3.1b=5, 3.2b>0, 3.2f>0)

Is the/Are these ENERGY STAR room air conditioner located in **[Utility]** service territory?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

(SKIP TO 5.3 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY) AND THAT LOCATION IS **OUTSIDE** OF **[Utility]** SERVICE TERRITORY (3.3A NE 1).
SKIP TO W1 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY) AND THAT LOCATION IS **INSIDE** OF **[Utility]** SERVICE TERRITORY (3.3A = 1).

Removed Measures

(ASK ONLY IF THEY SAY THEY REMOVED A MEASURE AFTER INSTALLED, 3.1b=2 or 3.2c>0)

Q3_6 Now let's talk about ENERGY STAR room air conditioner you said you installed but have since removed. Why was this removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 (Equipment failed)
- 2 (Didn't work properly)
- 3 (Wrong size—too small or too large)
- 5 (Didn't like the color)
- 6 (Didn't like appearance/unattractive)
- 7 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

Q3_7 What did you replace ENERGY STAR room air conditioner with? (DO NOT READ LIST; PROBE FOR EFFICIENCY, RECORD ALL THAT APPLY)

- 1 (With a new high efficiency ENERGY STAR room air conditioner)
- 2 (With a less efficient room air conditioner)
- 3 (Re-installed old equipment)
- 4 (Did not replace)
- 5 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

Measures in Storage

(ASK ONLY IF THEY SAY MEASURE IS IN STORAGE FOR SOME OTHER REASON, 3.1b=4 or 3.2e>0)

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Q3_8 When do you think you will install the ENERGY STAR room air conditioner? Would you say within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

- 1 Within the next 3 months
- 2 3 to 6 months from now
- 3 6 to 12 months from now
- 4 More than a year from now
- 5 Never
- D (DON'T KNOW)
- R (REFUSED)

Free Ridership and Spillover (Section 4)

Warm-up Questions/Background Context

W1 Please think back to the time when you were deciding to buy the energy saving room air conditioner, perhaps recalling things that occurred in your household shortly before and after **[timeframe]**. What factors motivated you to purchase energy saving **[product types]**? (DO NOT READ; INDICATE ALL THAT APPLY; ONCE THEY RESPONDENT HAS FINISHED, PROBE: Are there any other factors?)

- 1. Old equipment didn't work
- 2. Old equipment working poorly
- 3. The program incentive
- 4. The program technical assistance
- 5. Wanted to save energy
- 6. Wanted to reduce energy costs
- 7. The information provided by the Program
- 8. Past experience with this program
- 9. Because of past experience with another **[utility]** program
- 10. Recommendation from other utility program (Probe: What program? _____)
- 11. Recommendation of dealer/retailer
- 12. Recommendation of someone else (Probe: Who? _____)
- 13. Advertisement in newspaper (Probe: For what program? _____)
- 14. Radio advertisement (Probe: For what program? _____)
- 15. Other (SPECIFY)
- 16. Environmental concerns
- 17. Global warming
- 18. Liked the appearance of the **ENERGY STAR room air conditioner** more than the old one
- 19. Keeping up with the latest trends and fashions
- D (DON'T KNOW)
- R REFUSED

W2a Did you get this ENERGY STAR room air conditioner to replace [a/an] existing room air conditioner?)

High Impact Measures – Room Air Conditioner Survey Final

- 1 Yes (SKIP TO W4)
- 2 No
- D (DON'T KNOW) (SKIP TO FR1)
- R (REFUSED) (SKIP TO FR1)

W2b Did you get this ENERGY STAR room air conditioner because you wanted to add another/more room air conditioner to your [home/business]?

- 1 Yes (SKIP TO FR1)
- 2 No
- D DON'T KNOW (SKIP TO FR1)
- R (REFUSED) (SKIP TO FR1)

W2c Is this room air conditioner the first you have ever had in your [home/business]?

- 1 Yes (SKIP TO FR1)
- 2 No (SKIP TO FR1)
- D (DON'T KNOW) (SKIP TO FR1)
- R (REFUSED) (SKIP TO FR1)

W4 (IF MEASURE NOT CFL) About how old was the room air conditioner you replaced? (READ CATEGORIES IF NEEDED)

- 1 Less than 5 years old
- 2 5 to less than 10 years old
- 3 10 to less than 20 years old
- 4 20 years to less than 30 years old
- 5 30 or more years old
- D (DON'T KNOW)
- R (REFUSED)

W5 Was the old room air conditioner working or not working?

- 1 Working
- 2 Not working (SKIP TO FR1)
- D (DON'T KNOW) (SKIP TO FR1)
- R (REFUSED) (SKIP TO FR1)

W6 Was the old room air conditioner in good, fair, or poor working condition?

- 1 Good
- 2 Fair
- 3 Poor
- D (DON'T KNOW)
- R (REFUSED)

FREE-RIDERSHIP QUESTIONS

FR7 Our records indicate you received about **[amount of program incentive/subsidy]** from the **[utility] [program]** either directly or at the time of purchase to offset the cost of the **room air conditioner**. Does this amount sound about right?

- 1 Yes (SKIP TO FR1)
- 2 No
- D (DON'T KNOW) (SKIP TO FR1)
- R (REFUSED) (SKIP TO FR1)

FR8 What would you estimate to be the actual amount?

- _____ (RECORD RESPONSE) (SET=NEW AMOUNT OF PROGRAM INCENTIVE/SUBSIDY)
- D (DON'T KNOW)
 - R (REFUSED)

FR1 At the time that you first heard about the **[assistance]** from **[utility]** for **ENERGY STAR room air conditioner**, had you...? (READ LIST)

- 1 Already been thinking about purchasing **room air conditioner**? (IF NO, SKIP TO FR2)
- 2 Already begun collecting information about **room air conditioner**? (IF NO, SKIP TO FR2)
- 3a Already selected the **ENERGY STAR room air conditioner** you were going to get? (IF NO, SKIP TO FR2)
- 4 Already installed the energy efficient **ENERGY STAR room air conditioner**? (IF YES, SKIP TO FR1B; ELSE FR2)
- 5. (DON'T READ) Other: _____ (SKIP TO FR2)
- D (DON'T KNOW) (SKIP TO FR2)
- R REFUSED (SKIP TO FR2)

FR1B So, the **ENERGY STAR room air conditioner** was installed before you learned about the **[assistance]** from **[utility]**?

- 1 Yes (SKIP FR5)
- 2 No
- D (DON'T KNOW)
- R Refused

FR2 Just to be sure I understand, did you have specific plans to install a(n) **room air conditioner** before learning about the **[assistance]** available through the **[program]**?

- 1 Yes
- 2 No (SKIP TO FR4)
- D (DON'T KNOW) (SKIP TO FR4)
- R (REFUSED) (SKIP TO FR4)

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FR3 Did you have to make any changes to your existing plans in order to receive this **[assistance]** through the **[program]**?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

FR4 (REPEAT AS NEEDED FOR FR4 PARTS A – D) If the **[assistance]** from the **[utility]** **[program]** had not been available, would you still have:

FR4A Purchased any **room air conditioner** ?

- 1 Yes
- 2 No (*SKIP TO FR5*)
- D (DON'T KNOW)
- R (REFUSED)

FR4B Purchased the **room air conditioner** at the same time as you did?

- 1 Yes (*SKIP TO FR4C*)
- 2 No
- D (DON'T KNOW) (*SKIP TO FR4C*)
- R (REFUSED) (*SKIP TO FR4C*)

FR4B1 Bought the **room air conditioner** earlier than you did, or later?

- 1 Earlier
- 2 Same Time (*REPEAT QUESTION FR4B*)
- 3 Later
- D (DON'T KNOW) (*SKIP TO FR4C*)
- R (REFUSED) (*SKIP TO FR4C*)

FR4B2 How much **[earlier/later]** would you have bought the **room air conditioner**?

- ____ Years (AND/OR) ____ Months
- D (DON'T KNOW)
 - R (REFUSED)

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FR4C (IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM, OR MEASURE IS OF VARIABLE AMOUNT) Without the program, would you have purchased the same quantity as you did?

- 1 Yes (SKIP TO FR4D)
- 2 No
- D (DON'T KNOW) (SKIP TO FR4D)
- R (REFUSED) (SKIP TO FR4D)

FR4C1 How many/much would you have purchased without the program?

_____ (RECORD NUMBER)

- D (DON'T KNOW)
- R (REFUSED)

FR4C2 (IF PURCHASED AMOUNT IS GREATER THAN SAMPLE QUANTITY) Let me make sure I understand. You said you would have purchased more **room air conditioner** if you hadn't participated in the program. Why would you have purchased a greater number of **room air conditioner** if you hadn't participated in the program?

(RECORD RESPONSE): _____

FR4D (FOR INCREMENTAL EFFICIENCY MEASURES) Purchased the same efficiency of **room air conditioner**?

- 1 Yes
- 2 No
- D DON'T KNOW
- R REFUSED

FR4E If the [assistance] from the [utility] [program] had not been available, would you have done anything else differently?

- 1 Yes
- 2 No (SKIP TO FR5)
- D (DON'T KNOW) (SKIP TO FR5)
- R (REFUSED) (SKIP TO FR5)

FR4E1 What would you have done differently?

(RECORD RESPONSE): _____

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FR5 On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same **ENERGY STAR room air conditioner** if you had not received any **[assistance]** from the program?

_____ (RECORD RESPONSE (0-10))
-8 DON'T KNOW
-9 REFUSED

FR9 I'm going to read several statements about how you came to choose your **room air conditioner**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

If I had not had any assistance from the program, I would have paid the additional **[amount of program incentive/subsidy]** to buy the **ENERGY STAR room air conditioner** on my own?

_____ (RECORD RESPONSE (0-10))
D (DON'T KNOW)
R (REFUSED)

FR10 (READ ONLY IF FR7-FR9 WAS SKIPPED): I'm going to read several statements about how you came to choose your **room air conditioner**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

There may have been several reasons for my purchase decision. But the [assistance] from the [utility] [program] was a critical factor in my decision to purchase the high efficiency/energy efficient product.

_____ (RECORD RESPONSE (0-10))
D (DON'T KNOW)
R (REFUSED)

FR11 I would have bought a(n) **room air conditioner** within a **year** of when I did even without the **[assistance]** from the **[utility] [program]**.

_____ (RECORD RESPONSE (0-10))
D (DON'T KNOW)
R (REFUSED)

CONSISTENCY CHECK & RESOLUTION

(C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

FR4D
FR5
FR10
FR11

(IF FR4D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the ENERGY STAR room air conditioner without the program')

(IF FR4D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would not have purchased the ENERGY STAR room air conditioner without the program')

(IF FR5 = 0,1 AND FR4D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the ENERGY STAR room air conditioner without the program')

(IF FR5 = 9,10 AND FR4D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would likely have purchased the ENERGY STAR room air conditioner without the program')

(IF FR10 = 0,1 AND FR4D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient room air conditioner without the program')

(IF FR10 = 9,10 AND FR4D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient room air conditioner without the program')

(IF FR11 = 9,10 AND FR4D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would have bought the room air conditioner within [a year] even without the program')

(IF FR11 = 0,1 AND FR4D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the room air conditioner within [a year] even without the program')

C1. Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **ENERGY STAR room air conditioner** at the time you did? (RECORD VERBATIM RESPONSE BELOW)

C2. [fill with wording and response categories to the one question which was inconsistent]
(INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE)

PARTICIPANT LIKE AND UNLIKE SPILLOVER QUESTIONS

Recent Program Participation (Section 5)

Q5_3 Have you participated in any other programs offered by [utility] because of your experience with the Residential Energy Efficiency Incentive Program?

- 1 Yes
- 2 No (SKIP TO Q5_5)
- D (DON'T KNOW) (SKIP TO Q5_5)
- R (REFUSED) (SKIP TO Q5_5)

Q5_4 Which programs?

Q5_5 Which of the following phrases or messages have you heard before today? (ROTATE STARTING POINT)

- 1 Continue

Q5_5A Good Housekeeping

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5B Click it or Ticket

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5C Ahnu

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

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Q5_5D Flex Your Power

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5E Flex Alert

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5F Energy Hog

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5G Galley Bay

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5H Energy Star

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5I Hollister Co

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 6)

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Q6_1 The last questions ask about household characteristics to make sure we're getting a representative sample of [utility] residents.

Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

Q6_2 In what type of building do you live? (READ LIST IF NEEDED)
(PROBE FOR 'Condo': "How many units are in your building?")

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Other (SPECIFY)
- 8 Boat/RV/Van/Etc.
- D (DON'T KNOW)
- R (REFUSED)

Q6_3 About when was this building first built? (READ LIST IF NEEDED)

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 7 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

Q6_3a Were you living in this same home around IF REBATE: [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q6_4a How many full or half bathrooms do you have in your home? (PROBE: A full bathroom is one that has a sink with running water, and a toilet, and either a bathtub or shower. A half bathroom has either a toilet or a bathtub or a shower?)

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_____ Bathrooms
D (DON'T KNOW)
R (REFUSED)

Q6_4b How many bedrooms do you have in your home (If a one-room efficiency, or studio apartment, open loft, bedrooms=0)

_____ bedrooms
D (DON'T KNOW)
R (REFUSED)

Q6_4c Other than bedrooms and bathrooms, how many other rooms are there in your home? Do not count laundry rooms, foyers, unfinished storage spaces, porches, or garages.

_____ Other rooms
D (DON'T KNOW)
R (REFUSED)

[If Q6_3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO Q6_5a]

Q6_5a Including yourself, how many people currently live in your home year-round?

_____ people
D (DON'T KNOW)
R (REFUSED)

Q6_5b (IF Q6_5a=1) Which of the following best describes your age?

- 1 Less than 18 years old
 - 2 18-24 years old
 - 3 25-34 years old
 - 4 35-44 years old
 - 5 45-54 years old
 - 6 55-64 years old
 - 7 65 or older
- D (DON'T KNOW)
R (REFUSED)

Q6_5c (IF Q6_5a>1) Including yourself, how many people currently living in your home year-round are in the following age groups?

For Q6_5c1 to Q6_5c7:

_____ Number of people
R Refused

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- Q6_5c1 Less than 18 years old
 - Q6_5c2 18-24 years old
 - Q6_5c3 25-34 years old
 - Q6_5c4 35-44 years old
 - Q6_5c5 45-54 years old
 - Q6_5c6 55-64 years old
 - Q6_5c7 65 or older
- (TOTAL SHOULD EQUAL Q6_5a)

[If Q6_3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO Q6_7]

Spillover (ONLY ASK ONCE)

NSP1 Since you participated in **[program]** have you purchased and installed any other type of high efficiency equipment or made energy efficiency improvements (READ THE FOLLOWING ONLY FOR SMALL COMMERCIAL: at this facility or at other locations)?

- 1 Yes, only at this home/facility
- 2 No (SKIP TO Q6_8a)
- D (DON'T KNOW) (SKIP TO Q6_8a)
- R. (REFUSED) (SKIP TO Q6_8a)

NSP2 What type and quantity of high efficiency equipment did you install on your own? (PROBE TO GET EXACT TYPE AND QUANTITY AND LOCATION/BUILDING IF SMALL COMMERCIAL)

- Type 1: _____ Quantity 1: _____
- Type 2: _____ Quantity 2: _____
- Type 3: _____ Quantity 3: _____
- Type 4: _____ Quantity 4: _____

NSP3 (ASK FOR EACH TYPE OF EQUIPMENT IN NSP2) How do you know that this equipment is high efficiency? (PROBE: WAS IT ENERGY STAR® RATED?)

- Type 1: _____
- Type 2: _____
- Type 3: _____
- Type 4: _____

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NSP4 I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the **[utility] [program]** in **[2006, 2007, 2008]** influenced my decision to install different types of high efficiency equipment on my own.

- 1 (RECORD RESPONSE (0-10))
- D (DON'T KNOW)
- R (REFUSED)

NSP5 Why did you purchase this high efficiency equipment without going through a **[utility]** program?
(DO NOT READ; INDICATE ALL THAT APPLY)

For NSP5_1 to NSP5_11:

- 0 Not mentioned
- 1 Mentioned

- NSP5_1** Too much paperwork
- NSP5_2** Takes too long to get approval
- NSP5_3** No time to participate, needed equipment immediately
- NSP5_4** The program had ended
- NSP5_5** The equipment would not qualify (PROBE: WHY NOT?) _____
- NSP5_6** The amount of the rebate wasn't important enough
- NSP5_7** Did not know program was available
- NSP5_8** There was no program available
- NSP5_9** Other (SPECIFY) _____
- NSP5_10** (DON'T KNOW)
- NSP5_11** REFUSED

Q6_8a Do you receive an electric bill directly from SCE?

- 1 Yes
- 2 No (SKIP TO Q6_9)
- D (DON'T KNOW) (SKIP TO Q6_9)
- R (REFUSED) (SKIP TO Q6_9)

Q6_8b Does this bill only include your home's electric use, or does it include the electric use of other households?

- 1 Only 1 household
- 2 Multiple households
- D (DON'T KNOW)
- R (REFUSED)

Q6_13 What is the primary language spoken in your home? (DO NOT READ)

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- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

On-site Recruiting (Section 7)

Q7_2 (ROOM AC AND IOU= SCE OR SDGE) Does the new room air conditioner you purchased through the program plug directly into an outlet, or is it hard wired into the wall?

- 1 Plugs into outlet *(CONTINUE WITH RECRUITMENT)*
- 2 Hard wired *(THANK AND TERMINATE)*
- D (DON'T KNOW) *(THANK AND TERMINATE)*
- R (REFUSED) *(THANK AND TERMINATE)*

Q7_3 (IF ROOM AC PLUGS INTO WALL) We would like to offer you \$25 to participate in the on-site component of this evaluation. We are NOT interested in selling anything. We would like to have one of our auditors visit your home at your convenience to attach a device to track how often your room air conditioner is running. This device would be left on for 3-4 months and it will not interfere with your use of your air conditioner. The on-site visit would only take 20 minutes to install this. Would that be alright with you?

(IF UNINSTALLED, PROBE “Will this unit be installed this summer?”)

- 1 Yes→ Great! Someone will give you a call back to determine when they can schedule an appointment with one of our auditors in your area. Thank you for your cooperation with this important effort.
- 2 No

Thank and Terminate

Residential Incentive Program Participant Survey – HIM Room Air Conditioner

NOTE:
 1. Variable names are in bold type.
 2. Questions were asked of all respondents unless indicated otherwise.
 3. Open-ended responses are located in “HIM Room AC open-ends.xls”
 4. Categories with an “*” were coded as part of cleaning.

Sample variables

- ADDRESS** Address
- CITY** City
- STATE** State
- ZIP4** Zip code
- AREA** Area code
- PHONE** Phone
- CASEID** PA internal case ID
- P_DATE** Date of participation
- REBATE** Rebate
- QTY** Quantity of room air conditioners
- P_MN** Participation Month
- P_YR** Participation Year
- CZ** Climate Zone
- IOU** Utility
- CADMUSID** Cadmus assigned ID
- ALTPHONE** Alternate phone number
- UTILCODE** Utility code
- SITE_NBR** Sample: site_nbr
- ACCOUNT** Account number
- AAPOR** Disposition
- RECFNAME** First name given during interview
- RECLNAME** Last name given during interview
- RECPHONE** Phone given during interview

Identification Questions (Section 2)

Q1_1a Program records indicate that you purchased and received a mail-in rebate for a [measure] from [utility] around [insert date of participation].

Do you recall purchasing a [measure]?

- 1 Yes
- 2 No
- 8 DON'T KNOW {SKIP TO Q1_2}
- 9 REFUSED

Q1_1b Is this the correct quantity?

- 1 Yes
- 2 No
- 8 DON'T KNOW {SKIP TO Q1_2}
- 9 REFUSED

Q1_1b2 (IF QUANTITY > 1) What is the correct quantity?

_____Quantity

- 8 DON'T KNOW
- 9 REFUSED

Q1_1c Is this the right date?

- 1 Yes {SKIP TO Q1_4}
- 2 No
- 8 DON'T KNOW {SKIP TO Q1_2}
- 9 REFUSED

Q1_1c1 Correct month
Q1_1c2 Correct date
Q1_1c3 Correct year

Q1_2 (ASK IF DOESN'T RECALL THE MEASURES) Is it possible that someone else in your household would know about the [measure] you purchased and applied for a mail-in or on-line rebate or received an instant rebate from the retailer through [Utility]'s Residential Energy Efficiency Incentive Program? (RECORD ONE NUMBER)

- 1 Yes {SKIP TO Q1_3}
- 2 No {THANK & TERMINATE}
- 8 DON'T KNOW {THANK & TERMINATE}
- 9 REFUSED {THANK & TERMINATE}

Q1_2b

[Utility] is offering mail-in, on-line or instant rebates for replacing less efficient room air conditioner with more energy-efficient equipment. Rebates are paid in two ways—either in response to a mail-in application for a rebate or through an instant rebate at the retailer. This program is referred to as the Residential Energy Efficiency Incentive Program. Are you sure you don't recall purchasing the/these room air conditioners and applying for a rebate? (RECORD ONE NUMBER)

- 1 Don't remember
{TERMINATE, RECORD ANY COMMENTS MADE BY RESPONDENT BEFORE EXITING}
- 2 Remember
{READ, "GREAT, THEN LET'S CONTINUE", SKIP TO Q1_4}
- 9 REFUSED {TERMINATE}

Q1_3

May I please speak with that person?

- 1 Yes {RESTART INTERVIEW}
- 2 No {SCHEDULE CALLBACK AND TERMINATE}
- 8 DON'T KNOW {SCHEDULE CALLBACK AND TERMINATE}
- 9 REFUSED {SCHEDULE CALLBACK AND TERMINATE}

Q1_4

Are you the person in your household who decided to purchase this/these room air conditioners and receive a rebate through [utility] Residential Energy Efficiency Incentive Program?

- 1 Yes
- 2 No {SKIP BACK TO Q1_3}
- 8 DON'T KNOW {TERMINATE}
- 9 REFUSED {TERMINATE}

Sources of Program Information (Section 2)

Q2_1 How did you hear about the rebate offered on the room air conditioners available as part of [Utility] Residential Energy Efficiency Incentive Program? (PROBE: Did you hear about the program from any other sources?) (DO NOT READ LIST, RECORD ALL THAT APPLY)

For Q2_1_1 to Q2_1_20:

- 0 Not mentioned
- 1 Mentioned

- Utility provided information
- Q2_1_1 Advertising—radio, newspaper, trade journal, billboard, TV
- Q2_1_2 Bill insert, newsletter, or other mailing
- Q2_1_3 Website
- Q2_1_4 Email
- Q2_1_5 Other utility {SPECIFY}
- Local Government/Community event/Nonprofit
- Q2_1_6 Meeting, event, workshop, training {SPECIFY}
- Q2_1_7 School
- Q2_1_8 Local government/community agency {SPECIFY}
- Q2_1_9 City/county Energy Center - Pacific Energy Center, Stockton, Food Service {SPECIFY}
- Q2_1_10 Advertising—radio, newspaper, trade journal, billboard, TV
- Other
- Q2_1_11 Home or building audit or assessment {SPECIFY}
- Q2_1_12 Meeting, event, workshop training {SPECIFY}
- Q2_1_13 Flex your Power TV or radio advertising
- Q2_1_14 Other advertising, don't recall
- Q2_1_15 Friend/Relative/Neighbor
- Q2_1_16 Other {SPECIFY}
- Q2_1_17 DON'T KNOW
- Q2_1_18 REFUSED
- Q2_1_19 Salesperson/Sales Rep
- Q2_1_20 Installer/Contractor
- Q2_1_21* Store advertisement

Installation Behavior (Section 3)

Q3_0 How did you receive the rebate for this ENERGY STAR room air conditioner? Did you mail in the rebate application to [Utility], fill out an online rebate form, or receive an instant rebate at the store when you made your purchase?

- 1 Mail in rebate
- 2 Instant rebate at store
- 3 Online Rebate
- 8 DON'T KNOW
- 9 REFUSED

Q3_1a (IF QUANTITY=1) Now, I would like to understand what you did with the ENERGY STAR room air conditioner. Is this ENERGY STAR room air conditioner currently installed at your home? (RECORD ONE NUMBER)

- 1 Yes {SKIP TO Q3_12}
- 2 No
- 8 DON'T KNOW
{IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY}
- 9 REFUSED
{IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY}

Q3_1b (IF QUANTITY=1) Which of the following best describes what happened with the ENERGY STAR room air conditioner? (READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location {SKIP TO Q3_3a}
- 2 It was installed at your home but is now permanently removed (example: broke, burned out, don't fit, don't like, etc.) {SKIP TO Q3_6}
- 3 It is in storage because it is only needed during certain months of the year
- 4 It is in storage for some other reason {SKIP TO SECTION Q3_8}
- 5 It was sold or given away {SKIP TO Q3_3a}
- 6 Something else {SPECIFY}
- 8 DON'T KNOW
- 9 REFUSED

Q3_1b_6 {SPECIFY}

[SEE RESPONSES IN OPEN ENDS SPREADSHEET]

- Q3_2 (IF QUANTITY>1) Now, I would like to understand what you did with the [quantity] ENERGY STAR room air conditioner. (READ LIST, RECORD NUMBER)
- Q3_2a How many are currently installed at your home
{IF RESPONSE=QUANTITY, SKIP TO NEXT MEASURE OR SECTION IF NO OTHER MEASURES}
- Q3_2b How many are installed at some other location?
- Q3_2c How many were installed at your home (either indoors or outdoors) but are now permanently removed (example: broke, burned out, don't fit, don't like, etc.)
- Q3_2d How many are in storage because they are only needed during certain months of the year?
- Q3_2e How many are in storage for some other reason?
- Q3_2f How many were sold or given away?
- Q3_2g Something else? *{SPECIFY}*

[SEE RESPONSES IN OPEN ENDS SPREADSHEET]

Q3_3a (ASK IF 3.1b=1, 3.1b=5, 3.2b>0, 3.2f>0)
Is the/Are these ENERGY STAR room air conditioner located in [Utility] service territory?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

{SKIP TO 5.3 IF ALL MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY) AND THAT LOCATION IS OUTSIDE OF [Utility] SERVICE TERRITORY (3.3A NE 1).}

{SKIP TO W1 IF ALL MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY) AND THAT LOCATION IS INSIDE OF [Utility] SERVICE TERRITORY (3.3A = 1).}

Removed Measures

(ASK ONLY IF THEY SAY THEY REMOVED A MEASURE AFTER INSTALLED, 3.1b=2 or 3.2c>0)

Q3_6 Now let's talk about ENERGY STAR room air conditioner you said you installed but have since removed. Why was this removed?
(DO NOT READ LIST, RECORD ALL THAT APPLY)

For Q3_6_1 through Q3_6_8

- 0 Not mentioned
- 1 Mentioned

- Q3_6_1** Equipment failed
- Q3_6_2** Didn't work properly
- Q3_6_3** Wrong size—too small or too large
- Q3_6_4** Didn't like the color
- Q3_6_5** Didn't like appearance/unattractive
- Q3_6_6** Other {SPECIFY}
- Q3_6_7** DON'T KNOW
- Q3_6_8** REFUSED

Q3_6_6 Other {SPECIFY}

[SEE RESPONSES IN OPEN ENDS SPREADSHEET]

Q3_7 What did you replace ENERGY STAR room air conditioner with?
(DO NOT READ LIST; PROBE FOR EFFICIENCY, RECORD ALL THAT APPLY)

For Q3_7_1 through Q3_7_7

- 0 Not mentioned
- 1 Mentioned

- Q3_7_1** With a new high efficiency ENERGY STAR room air conditioner
- Q3_7_2** With a less efficient room air conditioner
- Q3_7_3** Re-installed old equipment
- Q3_7_4** Did not replace
- Q3_7_5** Other {SPECIFY}
- Q3_7_6** DON'T KNOW
- Q3_7_7** REFUSED

Q3_7_5 Other {SPECIFY}

[SEE RESPONSES IN OPEN ENDS SPREADSHEET]

Measures in Storage

(ASK ONLY IF THEY SAY MEASURE IS IN STORAGE FOR SOME OTHER REASON, 3.1b=4 or 3.2e>0)

Q3_8 When do you think you will install the ENERGY STAR room air conditioner? Would you say within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

- 1 Within the next 3 months
- 2 3 to 6 months from now
- 3 6 to 12 months from now
- 4 More than a year from now
- 5 Never
- 8 DON'T KNOW
- 9 REFUSED

Free Ridership and Spillover (Section 4)

Warm-up Questions/Background Context

W1 Please think back to the time when you were deciding to buy the energy saving room air conditioner, perhaps recalling things that occurred in your household shortly before and after [timeframe]. What factors motivated you to purchase energy saving [product types]? (DO NOT READ; INDICATE ALL THAT APPLY; ONCE THEY RESPONDENT HAS FINISHED, PROBE: Are there any other factors?)

For W1_1 to W1_21:

- 0 Not mentioned
- 1 Mentioned

- W1_1 Old equipment didn't work
- W1_2 Old equipment working poorly
- W1_3 The program incentive
- W1_4 The program technical assistance
- W1_5 Wanted to save energy
- W1_6 Wanted to reduce energy costs
- W1_7 The information provided by the Program
- W1_8 Past experience with this program
- W1_9 Because of past experience with another [utility] program
- W1_10 Recommendation from other utility program (Probe: What program?)
- W1_11 Recommendation of dealer/retailer
- W1_12 Recommendation of someone else (Probe: Who?)
- W1_13 Advertisement in newspaper (Probe: For what program?)
- W1_14 Radio advertisement (Probe: For what program?)
- W1_15 Environmental concerns
- W1_16 Global warming
- W1_17 Liked the appearance of the **ENERGY STAR room air conditioner** more than the old one
- W1_18 Keeping up with the latest trends and fashions
- W1_19 Increase comfort
- W1_20 Better quality product
- W1_21 Other
- W1_22 (DON'T KNOW)
- W1_23 REFUSED

W1_10 What program

[SEE RESPONSES IN OPEN ENDS SPREADSHEET]

W1_12 Who?

[SEE RESPONSES IN OPEN ENDS SPREADSHEET]

W2a Did you get this ENERGY STAR room air conditioner to replace [a/an] existing room air conditioner?

- 1 Yes {SKIP TO W4}
- 2 No
- 8 DON'T KNOW {SKIP TO FR1}
- 9 REFUSED {SKIP TO FR1}

W2b Did you get this ENERGY STAR room air conditioner because you wanted to add another/more room air conditioner to your [home/business]?

- 1 Yes {SKIP TO FR1}
- 2 No
- 8 DON'T KNOW {SKIP TO FR1}
- 9 REFUSED {SKIP TO FR1}

W2c Is this room air conditioner the first you have ever had in your [home/business]?

- 1 Yes {SKIP TO FR1}
- 2 No {SKIP TO FR1}
- 8 DON'T KNOW {SKIP TO FR1}
- 9 REFUSED {SKIP TO FR1}

W4 (IF MEASURE NOT CFL) About how old was the room air conditioner you replaced? (READ CATEGORIES IF NEEDED)

- 1 Less than 5 years old
- 2 5 to less than 10 years old
- 3 10 to less than 20 years old
- 4 20 years to less than 30 years old
- 5 30 or more years old
- 8 DON'T KNOW
- 9 REFUSED

W5 Was the old room air conditioner working or not working?

- 1 Working
- 2 Not working {SKIP TO FR1}
- 8 DON'T KNOW {SKIP TO FR1}
- 9 REFUSED {SKIP TO FR1}

W6 Was the old room air conditioner in good, fair, or poor working condition?

- 1 Good
- 2 Fair
- 3 Poor
- 8 DON'T KNOW
- 9 REFUSED

Free-Ridership Questions

FR7 Our records indicate you received about [amount of program incentive/subsidy] from the [utility] [program] either directly or at the time of purchase to offset the cost of the room air conditioner. Does this amount sound about right?

- 1 Yes {SKIP TO FR1}
- 2 No
- 8 DON'T KNOW {SKIP TO FR1}
- 9 REFUSED {SKIP TO FR1}

FR8 What would you estimate to be the actual amount?

- _____ (Record Response) {Set=New amount of program incentive/subsidy}
- 8 DON'T KNOW
 - 9 REFUSED

FR1_1 At the time that you first heard about the **rebate** from **ENERGY STAR room air conditioner**, had you...? (READ LIST UNTIL R SAYS 'NO')

Already been thinking about purchasing a **room air conditioner**?

- 1 Yes
- 2 No (SKIP TO FR2)
- 3 Other (SPECIFY) (SKIP TO FR2)
- 8 DON'T KNOW (SKIP TO FR2)
- 9 REFUSED (SKIP TO FR2)

FR1_2 Already began collecting information about a **room air conditioner**?

- 1 Yes
- 2 No (SKIP TO FR2)
- 3 Other (SPECIFY) (SKIP TO FR2)
- 8 DON'T KNOW (SKIP TO FR2)
- 9 REFUSED (SKIP TO FR2)

FR1_3a Already selected the ENER G STAR **room air conditioner** you were going to get?

- 1 Yes
- 2 No (*SKIP TO FR2*)
- 3 Other (SPECIFY) (*SKIP TO FR2*)
- 8 DON'T KNOW (*SKIP TO FR2*)
- 9 REFUSED (*SKIP TO FR2*)

FR1_4 Already installed the energy efficient **ENERGY STAR room air conditioner**?

- 1 Yes
- 2 No (*SKIP TO FR2*)
- 3 Other (SPECIFY) (*SKIP TO FR2*)
- 8 DON'T KNOW (*SKIP TO FR2*)
- 9 REFUSED (*SKIP TO FR2*)

[SEE RESPONSES IN OPEN ENDS SPREADSHEET]

FR1B So, the ENERGY STAR® room air conditioner was installed before you learned about the [assistance] from [utility]?

- 1 Yes {SKIP TO FR5}
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

FR2 Just to be sure I understand, did you have specific plans to install a(n) room air conditioner before learning about the [assistance] available through the [program]?

- 1 Yes
- 2 No {SKIP TO FR4}
- 8 DON'T KNOW {SKIP TO FR4}
- 9 REFUSED {SKIP TO FR4}

FR3 Did you have to make any changes to your existing plans in order to receive this [assistance] through the [program]?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

FR4 (Repeat as needed for FR4 parts A – D) If the [assistance] from the [utility] [program] had not been available, would you still have:

FR4A Purchased any room air conditioner?

- 1 Yes
- 2 No {SKIP TO FR5}
- 8 DON'T KNOW
- 9 REFUSED

FR4B Purchased the room air conditioner at the same time as you did?

- 1 Yes {SKIP TO FR4C}
- 2 No
- 8 DON'T KNOW {SKIP TO FR4C}
- 9 REFUSED {SKIP TO FR4C}

FR4B1 Bought the room air conditioner earlier than you did, or later?

- 1 Earlier
- 2 Same Time {REPEAT QUESTION FR4B}
- 3 Later
- 8 DON'T KNOW {SKIP TO FR4C}
- 9 REFUSED {SKIP TO FR4C}

FR4B2 How much [earlier/later] would you have bought the room air conditioner?

FR4B2yr ____ Years (and/or)
 -8 DON'T KNOW
 -9 REFUSED

FR4B2mn ____ Months
 -8 DON'T KNOW
 -9 REFUSED

FR4C (IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM, OR MEASURE IS OF VARIABLE AMOUNT) Without the program, would you have purchased the same quantity as you did?

- 1 Yes {skip to FR4d}
- 2 No
- 8 DON'T KNOW {skip to FR4d}
- 9 REFUSED {skip to FR4d}

FR4C1 How many/much would you have purchased without the program?

- _____ (RECORD NUMBER)
 -8 DON'T KNOW
 -9 REFUSED

FR4C2 (IF PURCHASED AMOUNT IS GREATER THAN SAMPLE QUANTITY)
 Let me make sure I understand. You said you would have purchased more room air conditioner if you hadn't participated in the program. Why would you have purchased a greater number of room air conditioner if you hadn't participated in the program?

[SEE RESPONSES IN OPEN ENDS SPREADSHEET]

FR4D (FOR INCREMENTAL EFFICIENCY MEASURES) Purchased the same efficiency of room air conditioner?

- 1 Yes
 2 No
 -8 DON'T KNOW
 -9 REFUSED

FR4E If the [assistance] from the [utility] [program] had not been available, would you have done anything else differently?

- 1 Yes
 2 No {skip to FR5}
 -8 DON'T KNOW {skip to FR5}
 -9 REFUSED {skip to FR5}

FR4E1 What would you have done differently?

[SEE RESPONSES IN OPEN ENDS SPREADSHEET]

FR5 On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same ENERGY STAR room air conditioner if you had not received any [assistance] from the program?

- _____ (RECORD RESPONSE (0-10))
 -8 DON'T KNOW
 -9 REFUSED

FR9 I'm going to read several statements about how you came to choose your room air conditioner. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

If I had not had any assistance from the program, I would have paid the additional [amount of program incentive/subsidy] to buy the ENERGY STAR room air conditioner on my own?

_____ (RECORD RESPONSE (0-10))
 -8 DON'T KNOW
 -9 REFUSED

FR10 (Read only if FR7-fr9 was skipped): I'm going to read several statements about how you came to choose your room air conditioner. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

There may have been several reasons for my purchase decision. But the [assistance] from the [utility] [program] was a critical factor in my decision to purchase the high efficiency/energy efficient product.

_____ (RECORD RESPONSE (0-10))
 -8 DON'T KNOW
 -9 REFUSED

FR11 I would have bought a(n) room air conditioner within a year of when I did even without the [assistance] from the [utility] [program].

_____ (RECORD RESPONSE (0-10))
 -8 DON'T KNOW
 -9 REFUSED

Consistency Check & Resolution

(C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

(IF FR4D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the ENERGY STAR room air conditioner without the program')

(IF FR4D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would not have purchased the ENERGY STAR room air conditioner without the program')

(IF FR5 = 0,1 AND FR4D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the ENERGY STAR room air conditioner without the program')

(IF FR5 = 9,10 AND FR4D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the ENERGY STAR room air conditioner without the program')

(IF FR10 = 0,1 AND FR4D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient room air conditioner without the program')

(IF FR10 = 9,10 AND FR4D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient room air conditioner without the program')

(IF FR11 = 9,10 AND FR4D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the room air conditioner within [a year] even without the program')

(IF FR11 = 0,1 AND FR4D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the room air conditioner within [a year] even without the program')

C1 Let me make sure I understand you. Earlier, you said [fill with inconsistency 1], but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the ENERGY STAR room air conditioner at the time you did? (RECORD VERBATIM RESPONSE BELOW)

[SEE RESPONSES IN OPEN ENDS SPREADSHEET]

C2 [fill with wording and response categories to the one question which was inconsistent] (INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE)

[SEE RESPONSES IN OPEN ENDS SPREADSHEET]

Recent Program Participation (Section 5)

Q5_3 Have you participated in any other programs offered by [utility] because of your experience with the Residential Energy Efficiency Incentive Program?

- 1 Yes
- 2 No {SKIP TO Q5_5}
- 8 DON'T KNOW {SKIP TO Q5_5}
- 9 REFUSED {SKIP TO Q5_5}

Q5_4 Which programs?

[SEE RESPONSES IN OPEN ENDS SPREADSHEET]

Q5_5 Which of the following phrases or messages have you heard before today? (ROTATE STARTING POINT)

For Q5_5a through Q5_5k

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

- Q5_5a ENERGY STAR
- Q5_5b Don't Trash California
- Q5_5c Energy Hog
- Q5_5d Click it or Ticket
- Q5_5e Flex Your Power
- Q5_5f Flex Alert
- Q5_5g Spare the Air
- Q5_5h Good Housekeeping
- Q5_5i Ahnu ("A – new)
- Q5_5j Galley Bay
- Q5_5k Hollister Co

Residential Demographic Questions (Section 6)

Q6_1 The last questions ask about household characteristics to make sure we're getting a representative sample of [utility] residents.

Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other {SPECIFY}
- 8 DON'T KNOW
- 9 REFUSED

Q6_1_3 Other (SPECIFY)

[SEE RESPONSES IN OPEN ENDS SPREADSHEET]

Q6_2 In what type of building do you live? (READ LIST IF NEEDED)
(PROBE FOR 'Condo': "How many units are in your building?")

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Other {SPECIFY}
- 8 Boat/RV/Van/Etc.
- 8 DON'T KNOW
- 9 REFUSED

Q6_2_7 Other (SPECIFY)

[SEE RESPONSES IN OPEN ENDS SPREADSHEET]

Q6_3 About when was this building first built? (READ LIST IF NEEDED)

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 7 OTHER {SPECIFY}
- 8 DON'T KNOW
- 9 REFUSED

Q6_3_7 Other (SPECIFY)

[SEE RESPONSES IN OPEN ENDS SPREADSHEET]

Q6_3a Were you living in this same home around IF REBATE: [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

Q6_4a How many full or half bathrooms do you have in your home? (PROBE: A full bathroom is one that has a sink with running water, and a toilet, and either a bathtub or shower. A half bathroom has either a toilet or a bathtub or a shower?)

- _____ Bathrooms
- 8 DON'T KNOW
- 9 REFUSED

Q6_4b How many bedrooms do you have in your home (If a one-room efficiency, or studio apartment, open loft, bedrooms=0)

- _____ Bedrooms
- 8 DON'T KNOW
- 9 REFUSED

Q6_4c Other than bedrooms and bathrooms, how many other rooms are there in your home? Do not count laundry rooms, foyers, unfinished storage spaces, porches, or garages.

- _____ Other rooms
- 8 DON'T KNOW
- 9 REFUSED

[If Q6_3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO Q6_5a]

Q6_5a Including yourself, how many people currently live in your home year-round?

- _____ People
- 8 DON'T KNOW
- 9 REFUSED

Q6_5b (IF Q6_5a=1) Which of the following best describes your age?

- 1 Less than 18 years old
- 2 18-24 years old
- 3 25-34 years old
- 4 35-44 years old
- 5 45-54 years old
- 6 55-64 years old
- 7 65 or older
- 8 DON'T KNOW
- 9 REFUSED

Q6_5c (IF Q6_5a>1) Including yourself, how many people currently living in your home year-round are in the following age groups?

For Q6_5c1 to Q6_5c7:

_____ Number of people
 -9 Refused

- Q6_5c1 Less than 18 years old
 - Q6_5c2 18-24 years old
 - Q6_5c3 25-34 years old
 - Q6_5c4 35-44 years old
 - Q6_5c5 45-54 years old
 - Q6_5c6 55-64 years old
 - Q6_5c7 65 or older
- (TOTAL SHOULD EQUAL Q6_5a)

[If Q6_3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO Q6_7]

Spillover (ONLY ASK ONCE)

NSP1 Since you participated in [program] have you purchased and installed any other type of high efficiency equipment or made energy efficiency improvements (read the following only for SMALL COMMERCIAL: at this facility or at other locations)?

- 1 Yes, only at this home/facility
- 2 No {SKIP TO Q6_8a}
- 8 DON'T KNOW {SKIP TO Q6_8a}
- 9 REFUSED {SKIP TO Q6_8a}

NSP2 What type and quantity of high efficiency equipment did you install on your own? (PROBE TO GET EXACT TYPE AND QUANTITY AND LOCATION/BUILDING IF SMALL COMMERCIAL)

Type 1: _____	Quantity 1: _____
Type 2: _____	Quantity 2: _____
Type 3: _____	Quantity 3: _____
Type 4: _____	Quantity 4: _____

NSP3 (ASK FOR EACH TYPE OF EQUIPMENT IN NSP2) How do you know that this equipment is high efficiency? (PROBE: Was it Energy Star® rated?)

Type 1: _____
 Type 2: _____
 Type 3: _____
 Type 4: _____

NSP4 I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the [utility] [program] in [2006, 2007, 2008] influenced my decision to install different types of high efficiency equipment on my own.

- _____ (Record Response (0-10))
 -8 DON'T KNOW
 -9 REFUSED

NSP5 Why did you purchase this high efficiency equipment without going through a [utility] program?
 (DO NOT READ; INDICATE ALL THAT APPLY)

For NSP5_1 to NSP5_11:

- 0 Not mentioned
 1 Mentioned

- NSP5_1** Too much paperwork
- NSP5_2** Takes too long to get approval
- NSP5_3** No time to participate, needed equipment immediately
- NSP5_4** The program had ended
- NSP5_5** The equipment would not qualify {PROBE: Why not?}
- NSP5_6** The amount of the rebate wasn't important enough
- NSP5_7** Did not know program was available
- NSP5_8** There was no program available
- NSP5_9** Other {SPECIFY}
- NSP5_10** DON'T KNOW
- NSP5_11** REFUSED

NSP5_9 Other {SPECIFY}

[SEE RESPONSES IN OPEN ENDS SPREADSHEET]

Q6_8a Do you receive an electric bill directly from SCE?

- 1 Yes
- 2 No {SKIP TO Q6_9}
- 8 DON'T KNOW {SKIP TO Q6_9}
- 9 REFUSED {SKIP TO Q6_9}

Q6_8b Does this bill only include your home's electric use, or does it include the electric use of other households?

- 1 Only 1 household
- 2 Multiple households
- 8 DON'T KNOW
- 9 REFUSED

Q6_13 What is the primary language spoken in your home? (DO NOT READ)

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 Other {SPECIFY}
- 8 DON'T KNOW
- 9 REFUSED

Q6_13 Other (SPECIFY)

[SEE RESPONSES IN OPEN ENDS SPREADSHEET]

On-site Recruiting (Section 7)

Q7_2 (ROOM AC AND IOU= SCE OR SDGE) Does the new room air conditioner you purchased through the program plug directly into an outlet, or is it hard wired into the wall?

- 1 Plugs into outlet {CONTINUE WITH RECRUITMENT}
- 2 Hard wired {THANK AND TERMINATE}
- 8 DON'T KNOW {THANK AND TERMINATE}
- 9 REFUSED {THANK AND TERMINATE}

Q7_3 (IF ROOM AC PLUGS INTO WALL) We would like to offer you \$50 to participate in the on-site component of this evaluation. We are NOT interested in selling anything. We would like to have one of our auditors visit your home at your convenience to attach a device to track how often your room air conditioner is running. This device would be left on for 3-4 months and it will not interfere with your use of your air conditioner. The on-site visit would only take 20 minutes to install this. Would that be alright with you?

(IF UNINSTALLED, PROBE "Will this unit be installed this summer?")

- 1 Yes {Great! Someone will give you a call back to determine when they can schedule an appointment with one of our auditors in your area. Thank you for your cooperation with this important effort.}
- 2 No

SCE 2501 Residential Energy Efficiency Incentive Program Participant Survey Pretest Version

The following measures will be asked about in the survey: pool pumps and motor(s), whole house fan, electric storage water heater(s), attic insulation, wall insulation, ENERGY STAR® refrigerator, ENERGY STAR® room air conditioner(s), cool roof, evaporative cooler, energy efficient lighting fixture.

Instrument-specific variables-- The CATI software will automatically fill the appropriate description in the questions.

[Product Type]

Roof
Air conditioner
Wall Insulation
Attic insulation
Lighting fixture
Pool pump
Refrigerator
Room air conditioner
Water heater
Whole house fan

[Measure]

1 Cool Roof
2 Evaporative coolers
3 Wall/Attic insulation
4 Energy efficient lighting fixture
5 Multi-speed pool pump
6 Single-speed pool pump
7 Energy Star refrigerator
8 Energy Star room AC
9 Electric storage water heater
10 Whole house fan

[Assistance]

Rebate
Lighting exchange

[Program]

Residential Energy Efficiency Incentive Program

[Utility]

SCE

[Program Incentive]

Dollar amount of rebate

[Quantity]

Quantity exchanged/installed

[Incremental efficiency measures]

Evaporative coolers
Lighting fixture
Multi-speed pool pump
Single-speed pool pump
Refrigerator
Room AC
Water heater

Whole house fan
[Efficiency enhancement measures]
Cool Roof
Insulation

Introduction

Dialscr Hello, my name is [interviewer name], and I'm calling on behalf of the California Public Utilities Commission regarding Southern California Edison's Residential Energy Efficiency Incentive Program. May I speak with [contact name]?

- 1 Yes
- 2 No [attempt to convert; if R not available, ask for an adult who makes decisions on how household uses energy]

Intro1 I'm with [data collection firm], an independent research firm. I am calling to learn about your experiences with the [IF REBATE: [measures] you purchased and the rebate you received from Southern California Edison or the retailer/IF LIGHTING EXCHANGE: lighting you turned in and exchanged] through SCE's Residential Energy Efficiency Incentive Program.

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

Intro2 (Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California's energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and SCE better understand customers' need for and interest in energy programs and services.)

(Timing: This survey should take about (non-billing analysis=15/billing analysis=20) minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-XXX-XXXX)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the [measures] you purchased and received a rebate through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call Mikhail Haramati at 415-703-1458, or visit their website: www.cpuc.ca.gov/evaluation.)

(NOTE: For all questions, "DON'T KNOW" and "REFUSED" will be coded if offered as a response.)

(Measure –specific data represented as suffix as follows: _1=Cool roof, _2=Evaporative coolers, _3=Attic/Wall insulation, _4=Energy efficient lighting fixture, _5=Multi-speed pool pump, _6=Single-speed pool pump, _7=Energy Star refrigerator, _8=Energy Star room AC, _9=Electric storage water heater, & 10=Whole house fan)

Recall of Participation/Identification of Decision Maker (Section 1)

(QUANTITY REFERS TO THE NUMBER RECEIVED WITHIN THE MEASURE CATEGORY--E.G., 5 LIGHTING FIXTURES)

Q1_1aa (LIGHTING) Program records indicate that you exchanged [quantity] lighting fixtures at a community event through the Residential Energy Efficiency Incentive Program.

Do you recall exchanging these?

- 1 Yes
- 2 No
- 8 Don't know

Q1_1ab Is this the correct quantity?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

Q1_1ac (IF QUANTITY > 1) What is the correct quantity?

- _____ Quantity
- 8 Don't know
- 9 Refused

Q1_1b (NON-LIGHTING) Program records indicate that you purchased and received a mail-in, on-line or instant rebate for energy efficient equipment through the Residential Energy Efficiency Incentive Program around [insert date of participation]. (RECORD FOR EACH MEASURE INSTALLED)

Q1_1ba_1 – Q1_1ba10 Do you recall purchasing a/an [# of measure] [measure – see footnote below]?

- 1 Yes
- 2 No
- 8 Don't know

Q1_1bb_1 – Q1_1bb10 Is this the correct quantity?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

(Measure –specific data represented as suffix as follows: _1=Cool roof, _2=Evaporative coolers, _3=Attic/Wall insulation, _4=Energy efficient lighting fixture, _5=Multi-speed pool pump, _6=Single-speed pool pump, _7=Energy Star refrigerator, _8=Energy Star room AC, _9=Electric storage water heater, & 10=Whole house fan)

Q1_1bc_1 – Q1_1bc10 (IF QUANTITY > 1) What is the correct quantity?

- _____ Quantity
- 8 Don't know
- 9 Refused

(ASK Q1_1c to Q1_1d ONLY IF MEASURE = WATER HEATER)

Q1_1ci How many gallons does your water heater hold?

- 1 **Q1_1c** _____ # of gallons (SKIP to Q1_1e)
- 8 (DK)
- 9 (REFUSED)

Q1_1d (IF DON'T KNOW WATER HEATER SIZE) Is your water heater? (READ LIST)

- 1 Very Small – less than 30 gallons
- 2 Small: 30-39 gallons
- 3 Medium: 40-59 gallons
- 4 Large: 60 gallons or more
- 8 (DK)
- 9 (REFUSED)

(REMOVED Q1_1e – not asked for SCE2501) (ASK Q1_1f to Q1_1g ONLY IF MEASURE = REFRIGERATOR)

Q1_1f Where is the Freezer located (mounted) on the refrigerator?

- 1 Freezer is on the bottom of the refrigerator
- 2 Freezer is on the top of the refrigerator
- 3 Freezer is on the side of the refrigerator
- 4 Refrigerator does not have an attached freezer
- 8 (DK)
- 9 (REFUSED)

Q1_1g Does your refrigerator have a through the door ice machine?

- 1 Yes
- 2 No
- 8 (DK)
- 9 (REFUSED)

(IF RECALLS MEASURES, SKIP TO Q1_4)

(Measure –specific data represented as suffix as follows: _1=Cool roof, _2=Evaporative coolers, _3=Attic/Wall insulation, _4=Energy efficient lighting fixture, _5=Multi-speed pool pump, _6=Single-speed pool pump, _7=Energy Star refrigerator, _8=Energy Star room AC, _9=Electric storage water heater, & 10=Whole house fan)

Q1_2 (ASK IF DOESN'T RECALL ANY OF THESE MEASURES) Is it possible that someone else in your household would know about [IF REBATE: the **[measures]** you purchased and applied for a mail-in or on-line rebate or received an instant rebate from the retailer/IF LIGHTING EXCHANGE: the lighting you turned in and exchanged] through SCE's Residential Energy Efficiency Incentive Program. (RECORD ONE NUMBER)

- 1 Yes (SKIP TO Q1_3)
- 2 No
- 8 (DON'T KNOW)
- 9 (REFUSED) (TERMINATE)

Q1_2b Southern California Edison is [IF REBATE: offering mail-in, on-line or instant rebates for replacing less efficient electric and natural gas-fired appliances, cooling, and water heating equipment with more energy-efficient equipment. The program also provides rebates for attic and wall insulation, pool pumps, cool roofs, and whole house fans. Rebates are paid in two ways—either in response to a mail-in application for a rebate or through an instant rebate at the retailer.] [IF LIGHTING EXCHANGE: letting customers exchange less efficient lighting fixtures with energy efficient lighting fixtures as local community events.] This program is referred to as the Residential Energy Efficiency Incentive Program. Are you sure you don't recall [IF REBATE: purchasing the/these **[measures]** and applying for a rebate/IF LIGHTING EXCHANGE: exchanging lighting fixtures for energy efficient fixtures]? (RECORD ONE NUMBER)

- 1 Don't remember -> [TERMINATE, RECORD ANY COMMENTS MADE BY RESPONDENT BEFORE EXITING]
- 2 Remember -> [READ, "GREAT, THEN LET'S CONTINUE", SKIP TO Q1_4]
- 9 (REFUSED) (TERMINATE)

Q1_3 May I please speak with that person? (RECORD ONE NUMBER)

- 1 Yes (BEGIN THE SURVEY AGAIN WITH THIS NEW RESPONDENT)
- 2 No (TERMINATE)
- 8 (DON'T KNOW) (TERMINATE)
- 9 (REFUSED) (TERMINATE)

Q1_4 Are you the person in your household who decided to [IF REBATE: purchase this/these **[measures]** and receive a rebate through SCE's Residential Energy Efficiency Incentive Program/IF LIGHTING EXCHANGE: exchange your lighting fixtures for more efficient fixtures as a local community event]?

- 1 Yes
- 2 No (SKIP BACK TO Q1_3)
- 8 (DON'T KNOW) (TERMINATE)
- 9 (REFUSED) (TERMINATE)

Sources of Program Information (Section 2)

Q2_1 How did you hear about the (IF REBATE: rebate offered on the [measures]/IF LIGHTING: the lighting exchange) available as part of SCE's Residential Energy Efficiency Incentive Program? (PROBE: Did you hear about the program from any other sources?) (DO NOT READ LIST, RECORD ALL THAT APPLY)

For Q2_1_1 to Q2_1_20:

- 0 Not mentioned
- 1 Mentioned

Utility provided information

- Q2_1_1 (Advertising—radio, newspaper, trade journal, billboard, TV)
- Q2_1_2 (Bill insert, newsletter, or other mailing)
- Q2_1_3 (Website)
- Q2_1_4 (Email)
- Q2_1_5 (Other utility) (SPECIFY)

Local Government/Community event/Nonprofit

- Q2_1_6 (Meeting, event, workshop, training) (SPECIFY)
- Q2_1_7 (School)
- Q2_1_8 (Local government/community agency) (SPECIFY)
- Q2_1_9 (City/county Energy Center such as Pacific Energy Center, Stockton, Food Service) (SPECIFY)
- Q2_1_10 (Advertising—radio, newspaper, trade journal, billboard, TV)

Other

- Q2_1_11 (Home or building audit or assessment) (SPECIFY)
- Q2_1_12 (Meeting, event, workshop training) (SPECIFY)
- Q2_1_13 (Flex your Power TV or radio advertising)
- Q2_1_14 (Other advertising, don't recall)
- Q2_1_15 (Friend/Relative/Neighbor)
- Q2_1_16 (Other, Specify: _____)
- Q2_1_17 (DON'T KNOW) (SKIP TO SECTION 3)
- Q2_1_18 (REFUSED) (SKIP TO SECTION 3)
- Q2_1_19 Salesperson/Sales Rep
- Q2_1_20 Installer/Contractor

(Measure –specific data represented as suffix as follows: _1=Cool roof, _2=Evaporative coolers, _3=Attic/Wall insulation, _4=Energy efficient lighting fixture, _5=Multi-speed pool pump, _6=Single-speed pool pump, _7=Energy Star refrigerator, _8=Energy Star room AC, _9=Electric storage water heater, & 10=Whole house fan)

Installation Behavior (Section 3)

(QUESTIONS IN THIS SECTION WILL BE REPEATED FOR EACH MEASURE R RECALLS.)

Q3_0_1 to Q3_0_10 (IF REBATE) How did you receive the rebate for this [measure]?
(IF NECESSARY: Did you mail in the rebate application to SCE, fill out the rebate application online, or receive an instant rebate at the store when you made your purchase?)

- 1 Mail in rebate
- 2 Online rebate
- 3 Instant rebate at store
- 4 Other (SPECIFY)
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q3_1a_1 to Q3_1a_10 (IF QUANTITY=1) Now, I would like to understand what you did with the [measure]. Is this [measure] currently installed at your home (either indoors or outdoors)? (RECORD ONE NUMBER)

- 1 Yes (IF LIGHTING, SKIP TO Q3_4, ELSE SKIP TO Q3_12)
- 2 No
- 8 (DON'T KNOW) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)
- 9 (REFUSED) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)

Q3_1b_1 to Q3_1b_10 (IF QUANTITY=1) Which of the following best describes what happened with the [measure]? (READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location (SKIP TO Q3_3a)
- 2 It was installed at your home but is now permanently removed (example: broke, burned out, don't fit, don't like, etc.) (SKIP TO Q3_6)
- 3 It is in storage because it is only needed during certain months of the year
- 4 It is in storage for some other reason (SKIP TO Q3_8)
- 5 It was sold or given away (SKIP TO Q3_3a)
- 6 Something else (SPECIFY)
- 8 (DON'T KNOW)
- 9 (REFUSED)

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Q3_2 (IF QUANTITY>1) Now, I would like to understand what you did with the [quantity] [measures]. (READ LIST, RECORD NUMBER)

Q3_2a_1 to Q3_2a_10 How many are currently installed at your home (either indoors or outdoors) (IF RESPONSE=QUANTITY, SKIP TO Q3_4)

Q3_2b_1 to Q3_2b_10 How many are installed at some other location?

Q3_2c_1 to Q3_2c_10 How many were installed at your home (either indoors or outdoors) but are now permanently removed (example: broke, burned out, don't fit, don't like, etc.)

Q3_2d_1 to Q3_2d_10 How many are in storage because they are only needed during certain months of the year?

Q3_2e_1 to Q3_2e_10 How many are in storage for some other reason?

Q3_2f_1 to Q3_2f_10 How many were sold or given away?

Q3_2g_1 to Q3_2g_10 Something else? (SPECIFY)

Q3_3a_1 to Q3_3a_10 (ASK IF 3.1b=1, 3.1b=5, 3.2b>0, 3.2f>0) Is the/Are these [measure] located in SCE's service territory?

- 1 Yes
- 2 No
- 8 (DON'T KNOW)
- 9 (REFUSED)

(SKIP TO Q5_3 IF ALL MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (Q3_2B + Q3_2F = QTY) AND THAT LOCATION IS **OUTSIDE** OF SCE'S SERVICE TERRITORY (Q3_3A NE 1). SKIP TO W1 IF ALL MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (Q3_2B + Q3_2F = QTY) AND THAT LOCATION IS **INSIDE** OF SCE'S SERVICE TERRITORY (Q3_3A = 1).

INSTALLED MEASURES (ASK ONLY FOR LIGHTING)

Now let's talk about the energy efficient lighting equipment you currently have installed.

Q3_4 (LIGHTING ONLY) Where [is this/are the] lighting you received through the program installed in your residence? (READ LIST, FILL IN BLANKS)

- Q3_4a_1 to Q3_4a_10 Living/family room
- Q3_4b_1 to Q3_4b_10 Dining room
- Q3_4c_1 to Q3_4c_10 Den/Office
- Q3_4d_1 to Q3_4d_10 Kitchen
- Q3_4e_1 to Q3_4e_10 Bedrooms
- Q3_4f_1 to Q3_4f_10 Bathrooms
- Q3_4g_1 to Q3_4g_10 Closets
- Q3_4h_1 to Q3_4h_10 Hallways
- Q3_4i_1 to Q3_4i_10 Attic
- Q3_4j_1 to Q3_4j_10 Basement
- Q3_4k_1 to Q3_4k_10 Garage
- Q3_4l_1 to Q3_4l_10 Yard/Outside
- Q3_4m_1 to Q3_4m_10 Other (specify: _____)
- Q3_4n_1 to Q3_4n_10 (DON'T KNOW)

(Measure –specific data represented as suffix as follows: _1=Cool roof, _2=Evaporative coolers, _3=Attic/Wall insulation, _4=Energy efficient lighting fixture, _5=Multi-speed pool pump, _6=Single-speed pool pump, _7=Energy Star refrigerator, _8=Energy Star room AC, _9=Electric storage water heater, & 10=Whole house fan)

[PROGRAMMING: MUST TOTAL TO **NUMBER INSTALLED** BEFORE MOVING ON]

REMOVED MEASURES (ASK ONLY IF THEY SAY THEY REMOVED A MEASURE AFTER INSTALLED, 3.1B=2 OR 3.2C>0)

Q3_6 Now let's talk about [measure] you said you installed but have since removed. Why was this removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

(See footnote below. Q3_6_x_1 to Q3_6_x – "x" represents each measure)

- Q3_6_1_1 to Q3_6_110 (Equipment failed)
- Q3_6_2_1 to Q3_6_210 (Didn't work properly)
- Q3_6_3_1 to Q3_6_310 (Wrong size—too small or too large)
- Q3_6_4_1 to Q3_6_410 (Low water flow)
- Q3_6_5_1 to Q3_6_510 (Didn't like the color)
- Q3_6_6_1 to Q3_6_610 (Didn't like appearance/unattractive)
- Q3_6_7_1 to Q3_6_710 (Other, Specify: _____)
- Q3_6_8_1 to Q3_6_810 (DON'T KNOW)
- Q3_6_9_1 to Q3_6_910 (REFUSED)

Q3_7 What did you replace [measure] with? (DO NOT READ LIST; PROBE FOR EFFICIENCY, RECORD ALL THAT APPLY)

(See footnote below. Q3_7_x_1 to Q3_7_x – "x" represents each measure)

- Q3_7_1_1 to Q3_7_110 (With a new high efficiency [measure])
- Q3_7_2_1 to Q3_7_210 (With a less efficient [product type])
- Q3_7_3_1 to Q3_7_310 (Re-installed old equipment)
- Q3_7_4_1 to Q3_7_410 (Did not replace)
- Q3_7_5_1 to Q3_7_510 (Other, Specify: _____)
- Q3_7_6_1 to Q3_7_610 (DON'T KNOW)
- Q3_7_7_1 to Q3_7_710 (REFUSED)

MEASURES IN STORAGE (ASK ONLY IF THEY SAY MEASURE IS IN STORAGE FOR SOME OTHER REASON, 3.1B=4 OR 3.2E>0)

Q3_8_1 to Q3_8_10 When do you think you will install the [measure]? Would you say within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

- 1 Within the next 3 months
- 2 3 to 6 months from now
- 3 6 to 12 months from now
- 4 More than a year from now
- 5 Never
- 8 (DON'T KNOW)
- 9 (REFUSED)

(Measure –specific data represented as suffix as follows: _1=Cool roof, _2=Evaporative coolers, _3=Attic/Wall insulation, _4=Energy efficient lighting fixture, _5=Multi-speed pool pump, _6=Single-speed pool pump, _7=Energy Star refrigerator, _8=Energy Star room AC, _9=Electric storage water heater, & 10=Whole house fan)

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(ASK Q3_12 to Q3_17 ONLY FOR INSTALLED SINGLE SPEED POOL PUMPS)

Q3_12_1 to Q3_12_10 Since participating in Residential Energy Efficiency Incentive Program on **[insert date of participation]**, what hours of the day do you typically run your pool pump on Monday-Friday during the summer months? (SUMMER MONTHS ARE MAY – SEPTEMBER)

- 1 Enter times
- 96 (OTHER, specify)
- 97 (DON'T USE)
- 98 (DON'T KNOW)
- 99 (REFUSED)

Q3_12a_1 to Q3_12a_10 Start time: _____ [**ampm1_1 to ampm1_10** INDICATE AM OR PM]
Q3_12a_1 to Q3_12a_10 End time: _____ [**ampm2_1 to ampm2_10** INDICATE AM OR PM]
Q3_12a_1 to Q3_12a_10 [CONFIRM TOTAL NUMBER OF HOURS: _____]

Q3_13_1 to Q3_13_10 Since participating in Residential Energy Efficiency Incentive Program on **[insert date of participation]**, what hours of the day do you typically run your pool pump on Monday-Friday during the winter months? (WINTER MONTHS ARE OCTOBER – APRIL)

- 1 Enter times
- 96 (OTHER, specify)
- 97 (DON'T USE)
- 98 (DON'T KNOW)
- 99 (REFUSED)

Q3_13a_1 to Q3_13a_10 Start time: _____ [**ampm3_1 to ampm3_10** INDICATE AM OR PM]
Q3_13a_1 to Q3_13a_10 End time: _____ [**ampm4_1 to ampm4_10** INDICATE AM OR PM]
Q3_13a_1 to Q3_13a_10 [CONFIRM TOTAL NUMBER OF HOURS: _____]

Q3_14_1 to Q3_14_10 Before participating in Residential Energy Efficiency Incentive Program on **[insert date of participation]**, what hours of the day did you typically run your pool pump on Monday-Friday during the summer months?

- 1 Enter times
- 96 (OTHER, specify)
- 97 (DON'T USE)
- 98 (DON'T KNOW)
- 99 (REFUSED)

Q3_14a_1 to Q3_14a_10 Start time: _____ [**ampm5_1 to ampm5_10** INDICATE AM OR PM]
Q3_14a_1 to Q3_14a_10 End time: _____ [**ampm6_1 to ampm6_10** INDICATE AM OR PM]
Q3_14a_1 to Q3_14a_10 [CONFIRM TOTAL NUMBER OF HOURS: _____]

(Measure –specific data represented as suffix as follows: _1=Cool roof, _2=Evaporative coolers, _3=Attic/Wall insulation, _4=Energy efficient lighting fixture, _5=Multi-speed pool pump, _6=Single-speed pool pump, _7=Energy Star refrigerator, _8=Energy Star room AC, _9=Electric storage water heater, & 10=Whole house fan)

Q3_15_1 to Q3_15_10 Before participating in Residential Energy Efficiency Incentive Program on **[insert date of participation]**, what hours of the day did you typically run your pool pump on Monday-Friday during the winter months?

- 1 Enter times
- 96 (OTHER, specify)
- 97 (DON'T USE)
- 98 (DON'T KNOW)
- 99 (REFUSED)

Q3_15a_1 to Q3_15a_10 Start time: _____ [**ampm7_1 to ampm7_10** INDICATE AM OR PM]
Q3_15a_1 to Q3_15a_10 End time: _____ [**ampm8_1 to ampm8_10** INDICATE AM OR PM]
Q3_15a_1 to Q3_15a_10 [CONFIRM TOTAL NUMBER OF HOURS: ____]

Q3_16_1 to Q3_16_10 (IF Q3_14C <> Q3_12C) Why do you run your pool pump differently in the summer than you did before participation in the program?

- 1 SPECIFY: _____
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q3_17_1 to Q3_17_10 (IF Q3_15C <> Q3_13C) Why do you run your pool pump differently in the winter than you did before participation in the program?

- 1 SPECIFY: _____
- 8 (DON'T KNOW)
- 9 (REFUSED)

Free Ridership and Spillover (Section 4)

Warm-up Questions/Background Context¹

W1int_2 Please think back to the time when you were deciding to (REBATE: buy the energy saving **[product types]**/LIGHTING EXCHANGE: exchange your lighting fixture), perhaps recalling things that occurred in your household shortly before and after **[timeframe]**.

- 1 Continue

¹ Individual contract groups may chose to modify the wording of these warm-up questions.

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W1 What factors motivated you to (REBATE: purchase energy saving [**product types**]/LIGHTING EXCHANGE: exchange your lighting fixture)? {DO NOT READ; INDICATE ALL THAT APPLY; ONCE THEY RESPONDENT HAS FINISHED, PROBE: Are there any other factors?}

For W1_1 to W1_21:

- 0 Not mentioned
- 1 Mentioned

- W1_1 Old equipment didn't work
- W1_2 Old equipment working poorly
- W1_3 The program incentive
- W1_4 The program technical assistance
- W1_5 Wanted to save energy
- W1_6 Wanted to reduce energy costs
- W1_7 The information provided by the Program
- W1_8 Past experience with this program
- W1_9 Because of past experience with another [**utility**] program
- W1_10 Recommendation from other utility program (Probe: What program? _____)
- W1_11 Recommendation of dealer/retailer
- W1_12 Recommendation of someone else (Probe: Who? _____)
- W1_13 Advertisement in newspaper (Probe: For what program? _____)
- W1_14 Radio advertisement (Probe: For what program? _____)
- W1_15 Other (SPECIFY)
- W1_16 Environmental concerns
- W1_17 Global warming
- W1_18 Liked the appearance of the [**measure**] more than the old one
- W1_19 Keeping up with the latest trends and fashions
- W1_20 DON'T KNOW
- W1_21 REFUSED

{REPEAT W2-C2 FOR FIRST MEASURE. REPEAT SERIES IF IS A SECOND MEASURE}

{ASK W2a-W6 ONLY FOR INCREMENTAL EFFICIENCY REBATE MEASURES}

W2a to W2a_2 Did you get this [**measure**] to replace [a/an] existing [**product type**]? }

- 1 Yes {SKIP TO W3}
- 2 No
- 8 Don't Know (SKIP TO FR1)
- 9 Refused (SKIP TO FR1)

W2b to W2b_2 Did you get this [**measure**] because you wanted to add another/more [**product type**] to your [home/business]?

- 1 Yes (SKIP TO FR1)
- 2 No
- 8 Don't Know (SKIP TO FR1)
- 9 Refused (SKIP TO FR1)

(Measure –specific data represented as suffix as follows: _1=Cool roof, _2=Evaporative coolers, _3=Attic/Wall insulation, _4=Energy efficient lighting fixture, _5=Multi-speed pool pump, _6=Single-speed pool pump, _7=Energy Star refrigerator, _8=Energy Star room AC, _9=Electric storage water heater, & 10=Whole house fan)

W2c to W2c_2 Is this [**product type**] the first you have ever had in your [home/business]?

- 1 Yes (SKIP TO FR1)
- 2 No (SKIP TO FR1)
- 8 Don't Know (SKIP TO FR1)
- 9 Refused (SKIP TO FR1)

W3 to W3_2 {IF MEASURE=LIGHTING} What type of lighting did this replace? {DO NOT READ}

- 1 Incandescent
- 2 CFL
- 3 Other (SPECIFY)
- 8 DON'T KNOW
- 9 REFUSED

W4 to W4_2 {IF MEASURE NOT CFL} About how old was the [**product type**] you replaced? {READ CATEGORIES IF NEEDED}

- 1 Less than 5 years old
- 2 5 to less than 10 years old
- 3 10 to less than 20 years old
- 4 20 years to less than 30 years old
- 5 30 or more years old
- 8 DON'T KNOW
- 9 REFUSED

W5 to W5_2 Was the old [**product type**] working or not working?

- 1 Working
- 2 Not working (SKIP TO FR1)
- 8 DON'T KNOW (SKIP TO FR1)
- 9 REFUSED (SKIP TO FR1)

W6 to W6_2 Was the old [**product type**] in good, fair, or poor working condition?

- 1 Good
- 2 Fair
- 3 Poor
- 8 DON'T KNOW
- 9 REFUSED

W7 to W7_2 (INSULATION) Was the [product type] you received a rebate for installed in areas where no prior insulation existed?

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

FREE-RIDERSHIP QUESTIONS

FR1 At the time that you first heard about the [assistance] from [utility] for [measure], had you...?
{READ LIST UNTIL R SAYS 'NO'}

For FR1_1 to FR1_7_2:

- 1 Yes
- 2 No
- 8 Other (SPECIFY)
- 8 Don't know
- 9 Refused

- FR1_1 to FR1_1_2** Already been thinking about purchasing [product type]? {IF NO, SKIP TO FR2}
- FR1_2 to FR1_2_2** Already begun collecting information about [product type]? {IF NO, SKIP TO FR2}
- FR1_3a to FR1_3a_2** {FOR INCREMENTAL EFFICIENCY MEASURES} Already selected the [measure] you were going to get? {IF NO, SKIP TO FR2}
- FR1_3b to FR1_3b_2** {FOR EFFICIENCY ENHANCEMENT MEASURES} Already decided to buy the [product type]? {IF NO, SKIP TO FR2}
- FR1_4 to FR1_4_2** Already installed the energy efficient [measure]? {IF YES, SKIP TO FR5; ELSE FR2}
- FR1_5 to FR1_5_2** {DON'T READ} Other: _____ {SKIP TO FR2}
- FR1_6 to FR1_6_2** DON'T KNOW {SKIP TO FR2}
- FR1_7 to FR1_7_2** REFUSED {SKIP TO FR2}

FR2 to FR2_2 Just to be sure I understand, did you have specific plans to install a(n) [product type] before learning about the [assistance] available through the [program]?

- 1 Yes
- 2 No {SKIP TO FR4}
- 8 DON'T KNOW {SKIP TO FR4}
- 9 REFUSED {SKIP TO FR4}

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FR3 to FR3_2 Did you have to make any changes to your existing plans in order to receive this [assistance] through the [program]?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

FR4i to FR4i_2 {REPEAT AS NEEDED FOR FR4 PARTS A – D} If the [assistance] from the [utility] [program] had not been available, would you still have:

- 1 Continue

FR4A to FR4A_2 Purchased any [product type] ?

- 1 Yes
- 2 No {SKIP TO FR5}
- 8 DON'T KNOW
- 9 REFUSED

FR4B to FR4B_2 Purchased the [product type] at the same time as you did?

- 1 Yes {SKIP TO FR4C}
- 2 No {SKIP TO FR4C}
- 8 DON'T KNOW {SKIP TO FR4C}
- 9 REFUSED {SKIP TO FR4C}

FR4B1 to FR4B1_2 Bought the [product type] earlier than you did, or later?

- 1 Earlier
- 2 Same Time {REPEAT QUESTION FR4B}
- 3 Later
- 8 DON'T KNOW {SKIP TO FR4C}
- 9 REFUSED {SKIP TO FR4C}

FR4Bx to FR4Bx_2 How much [earlier/later] would you have bought the [product type]?

- 1 **FR4b_yr to FR4b_yr2**____ Years {AND/OR} **FR4b_mn to FR4b_mn2**____ Months
- 8 DON'T KNOW
- 9 REFUSED

(Measure –specific data represented as suffix as follows: _1=Cool roof, _2=Evaporative coolers, _3=Attic/Wall insulation, _4=Energy efficient lighting fixture, _5=Multi-speed pool pump, _6=Single-speed pool pump, _7=Energy Star refrigerator, _8=Energy Star room AC, _9=Electric storage water heater, & 10=Whole house fan)

FR4C to FR4C_2 {IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM, OR MEASURE IS OF VARIABLE AMOUNT} Without the program, would you have purchased the same quantity as you did?

- 1 Yes {SKIP TO FR4D}
- 2 No
- 8 DON'T KNOW {SKIP TO FR4D}
- 9 REFUSED {SKIP TO FR4D}

FR4C1x to FR4C1x_2 How many/much would you have purchased without the program?

- 1 **FR4C1 to FR4C1_2** _____ {RECORD NUMBER}
- 8 DON'T KNOW
- 9 REFUSED

FR4D to FR4D_2 {FOR INCREMENTAL EFFICIENCY MEASURES AND INSULATION} Purchased the same [INSULATION = R value/OTHER=efficiency] of [product type]?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

FR4E to FR4E_2 If the [assistance] from the [utility] [program] had not been available, would you have done anything else differently?

- 1 Yes
- 2 No {SKIP TO FR5}
- 8 DON'T KNOW {SKIP TO FR5}
- 9 REFUSED {SKIP TO FR5}

FR4E1 to FR4E1_2 What would you have done differently?

{RECORD RESPONSE}: _____

Note: two instruments will be created during pre-testing. One using a 1-5 point scale and one using a 0-10 point scale to determine which seems less confusing to customers and if there is an effect on time to complete

*Note: for **incremental efficiency measures**, respondent will be randomly assigned to be read either fr5 or fr6. For **efficiency enhancement measures**, all respondents will be asked fr5.*

(Measure –specific data represented as suffix as follows: _1=Cool roof, _2=Evaporative coolers, _3=Attic/Wall insulation, _4=Energy efficient lighting fixture, _5=Multi-speed pool pump, _6=Single-speed pool pump, _7=Energy Star refrigerator, _8=Energy Star room AC, _9=Electric storage water heater, & 10=Whole house fan)

FR5 to FR5_2 On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same **[measure]** if you had not received any **[assistance]** from the program?

_____	{RECORD RESPONSE (0-10)}	{SKIP TO FR7}
-8	DON'T KNOW	{SKIP TO FR7}
-9	REFUSED	{SKIP TO FR7}

FR6 to FR6_2 On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought a less efficient **[product type]** if you had not received any **[assistance]** from the program?

_____	{RECORD RESPONSE (0-10)}
-8	DON'T KNOW
-9	REFUSED

{Skip to FR10 if program does not provide a financial incentive/subsidy or database does not contain that information}

FR7 to FR7_2 Our records indicate you received about **[amount of program incentive/subsidy]** from the **[utility] [program]** either directly or at the time of purchase to offset the cost of the **[product type]**. Does this amount sound about right?

1	Yes	{SKIP TO FR9}
2	No	
-8	DON'T KNOW	{SKIP TO FR9}
-9	REFUSED	{SKIP TO FR9}

FR8 to FR8_2 What would you estimate to be the actual amount?

_____	{RECORD RESPONSE} {SET=NEW AMOUNT OF PROGRAM INCENTIVE/SUBSIDY}
-8	DON'T KNOW
-9	REFUSED

FR9i to FR9i_2 I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

1	Continue
---	----------

FR9 to FR9_2 If I had not had any assistance from the program, I would have paid the additional **[amount of program incentive/subsidy]** to buy the **[measure]** on my own?

_____ {RECORD RESPONSE (0-10)}
-8 DON'T KNOW
-9 REFUSED

FR10I TO FR10I_2 {READ ONLY IF FR7-FR9 WAS SKIPPED}: I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

1 Continue

FR10 to FR10_2 The **[assistance]** from the **[utility] [program]** was a critical factor in my decision to (REBATE: purchase/LIGHTING EXCHANGE: exchange my old lighting fixtures for) the high efficiency/energy efficient product.

_____ {RECORD RESPONSE (0-10)}
-8 DON'T KNOW
-9 REFUSED

FR11 to FR11_2 I would have bought a(n) **[product type]** within a year of when I did even without the **[assistance]** from the **[utility] [program]**.

_____ {RECORD RESPONSE (0-10)}
-8 DON'T KNOW
-9 REFUSED

FR12A to FR12A_2 {FOR INCREMENTAL EFFICIENCY REBATE MEASURES} The **[assistance]** from the **[utility] [program]** was not necessary to cause me to purchase the higher efficiency product when I bought my new **[product type]**.

_____ {RECORD RESPONSE (0-10)}
-8 DON'T KNOW
-9 REFUSED

FR12B to FR12B_2 {FOR EFFICIENCY ENHANCEMENT REBATE MEASURES} The **[assistance]** from the **[utility] [program]** was not necessary to cause me to purchase the new **[product type]**.

_____ {RECORD RESPONSE (0-10)}
-8 DON'T KNOW
-9 REFUSED

(Measure –specific data represented as suffix as follows: _1=Cool roof, _2=Evaporative coolers, _3=Attic/Wall insulation, _4=Energy efficient lighting fixture, _5=Multi-speed pool pump, _6=Single-speed pool pump, _7=Energy Star refrigerator, _8=Energy Star room AC, _9=Electric storage water heater, & 10=Whole house fan)

CONSISTENCY CHECK & RESOLUTION

{C1 WILL BE ASKED ONLY FOR THOSE RESPONDENTS WHO HAVE A CLEAR INCONSISTENCY BETWEEN RESPONSES (I.E., ALL BUT ONE OF THE QUESTIONS ARE AT ONE END OF THE SPECTRUM FOR FREE RIDERSHIP WHILE ONE QUESTION IS AT THE OTHER SPECTRUM.) AN ALGORITHM WILL BE PROVIDED AFTER PRETESTING. THE QUESTION RESPONSES THAT WILL BE USED TO TRIGGER C1 ARE:

- FR4A (ONLY FOR EFFICIENCY ENHANCEMENT MEASURES)
- FR4D (ONLY FOR INCREMENTAL EFFICIENCY MEASURES)
- FR5 OR FR6 DEPENDING UPON WHICH VERSION OF THE QUESTION THEY RECEIVED
- FR10
- FR11
- FR12A OR FR12B DEPENDING UPON WHICH VERSION OF THE QUESTION THEY RECEIVED}

C1_1 to C1_2 Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **[measure]** at the time you did? {RECORD VERBATIM RESPONSE BELOW}

C2 **[fill with wording and response categories to the one question which was inconsistent]** {INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE}

PARTICIPANT LIKE AND UNLIKE SPILLOVER QUESTIONS

{ONLY ASK LSP1-LSP4 IF RECEIVED LIGHTING MEASURES}

LSP1 Since you received **[assistance]** through **[program]** have you purchased and installed any efficient lighting on your own without any assistance from the **[utility]** **[program]** or another utility program {READ THE FOLLOWING ONLY FOR SMALL COMMERCIAL: either at this facility or at other locations}?

- 1 Yes, only at this home/facility
- 2 Yes, only at other locations {SMALL COMMERCIAL ONLY}
- 3 Yes, at this facility and other locations {SMALL COMMERCIAL ONLY}
- 4 No {SKIP TO Q5_3}
- 8 DON'T KNOW {SKIP TO Q5_3}
- 9 REFUSED {SKIP TO Q5_3}

(Measure –specific data represented as suffix as follows: _1=Cool roof, _2=Evaporative coolers, _3=Attic/Wall insulation, _4=Energy efficient lighting fixture, _5=Multi-speed pool pump, _6=Single-speed pool pump, _7=Energy Star refrigerator, _8=Energy Star room AC, _9=Electric storage water heater, & 10=Whole house fan)

LSP2x How many more high efficiency lighting products did you buy on your own, compared to what you got through the program?

{PROBE FOR PERCENT OR SHARE OF PROGRAM EQUIPMENT. READ THE FOLLOWING IF NEEDED}

For example, was it about one-fourth (25%) of what you installed through the program, one-half (50%) of what your installed through the program, the same amount as what you installed though the program (100%), twice as much as what you installed through the program (200%), or some other amount?

- 1 **LSP2**_____ % at this home/facility
- 8 DON'T KNOW
- 9 REFUSED

LSP3x I'm going to read a statement about the equipment that you purchased on your own, without any assistance from your utility. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement

My experience with the [measure] installed through the **[utility] [program]** in **[2006, 2007, 2008]** influenced my decision to install more high efficiency **[measure]** on my own.

- 1 **LSP3**_____ {RECORD RESPONSE (0-10)}
- 8 DON'T KNOW
- 9 REFUSED

LSP4 Why did you purchase this lighting without the financial assistance available from the **[utility] [program]**? {DO NOT READ; INDICATE ALL THAT APPLY}

For LSP4_1 to LSP4_9:

- 0 Not mentioned
- 1 Mentioned

- LSP4_1** Too much paperwork
- LSP4_2** Takes too long to get approval
- LSP4_3** No time to participate, needed equipment immediately
- LSP4_4** The program had ended
- LSP4_5** The equipment would not qualify {PROBE: WHY NOT?} _____
- LSP4_6** The amount of the rebate wasn't important enough
- LSP4_7** Other {SPECIFY} _____
- LSP4_8** DON'T KNOW
- LSP4_9** REFUSED

(Measure –specific data represented as suffix as follows: _1=Cool roof, _2=Evaporative coolers, _3=Attic/Wall insulation, _4=Energy efficient lighting fixture, _5=Multi-speed pool pump, _6=Single-speed pool pump, _7=Energy Star refrigerator, _8=Energy Star room AC, _9=Electric storage water heater, & 10=Whole house fan)

Recent Program Participation (Section 5)

Q5_3 Have you participated in any other programs offered by SCE because of your experience with the Residential Energy Efficiency Incentive Program?

- 1 Yes
- 2 No (SKIP TO Q5_5)
- 8 (DON'T KNOW) (SKIP TO Q5_5)
- 9 (REFUSED) (SKIP TO Q5_5)

Q5_4 Which programs?

Q5_5 Which of the following phrases or messages have you heard before today? (ROTATE STARTING POINT)

- 1 Continue

Q5_5A Energy Star

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q5_5B Don't Trash California

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q5_5C Energy Hog

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- 8 (DON'T KNOW)
- 9 (REFUSED)

(Measure –specific data represented as suffix as follows: _1=Cool roof, _2=Evaporative coolers, _3=Attic/Wall insulation, _4=Energy efficient lighting fixture, _5=Multi-speed pool pump, _6=Single-speed pool pump, _7=Energy Star refrigerator, _8=Energy Star room AC, _9=Electric storage water heater, & 10=Whole house fan)

Q5_5D Click it or Ticket

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q5_5E Flex Your Power

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q5_5F Flex Alert

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q5_5G Spare the Air

- 1 Yes
- 2 No
- 3 (OTHER, specify)
- 8 (DON'T KNOW)
- 9 (REFUSED)

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 6)

NOTE: ALL QUESTIONS STARTING WITH THE LETTER 'C' ARE QUESTIONS THAT WOULD BE ASKED ONLY IF A BILLING ANALYSIS IS BEING DONE FOR INSULATION AND COOL ROOFS.

Q6_1 The last questions ask about household characteristics to make sure we're getting a representative sample of [**utility**] residents.

Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other (SPECIFY)
- 8 (DON'T KNOW)
- 9 (REFUSED)

(Measure –specific data represented as suffix as follows: _1=Cool roof, _2=Evaporative coolers, _3=Attic/Wall insulation, _4=Energy efficient lighting fixture, _5=Multi-speed pool pump, _6=Single-speed pool pump, _7=Energy Star refrigerator, _8=Energy Star room AC, _9=Electric storage water heater, & 10=Whole house fan)

Q6_2 In what type of building do you live? (READ LIST IF NEEDED)
(PROBE FOR 'Condo': "How many units are in your building?")

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Other (SPECIFY)
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q6_3 About when was this building first built? (READ LIST IF NEEDED)

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 7 (OTHER, specify)
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q6_3a Were you living in this same home around IF REBATE: [insert date 12 months prior to time of participation]/IF LIGHTING: one year before the lighting exchange?

- 1 Yes
- 2 No
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q6_4a How many full or half bathrooms do you have in your home? (PROBE: A full bathroom is one that has a sink with running water, and a toilet, and either a bathtub or shower. A half bathroom has either a toilet or a bathtub or a shower?)

- _____ Bathrooms
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q6_4b How many bedrooms do you have in your home (If a one-room efficiency, or studio apartment, open loft, bedrooms=0)

- _____ bedrooms
- 8 (DON'T KNOW)
- 9 (REFUSED)

(Measure –specific data represented as suffix as follows: _1=Cool roof, _2=Evaporative coolers, _3=Attic/Wall insulation, _4=Energy efficient lighting fixture, _5=Multi-speed pool pump, _6=Single-speed pool pump, _7=Energy Star refrigerator, _8=Energy Star room AC, _9=Electric storage water heater, & 10=Whole house fan)

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Q6_4c Other than bedrooms and bathrooms, how many other rooms are there in your home? Do not count laundry rooms, foyers, unfinished storage spaces, porches, or garages.

- _____ Other rooms
-8 (DON'T KNOW)
-9 (REFUSED)

[If Q6_3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO Q6_5a]

C6_4d Did you do any remodeling, renovation or additions since January 1, 2005?

- 1 Yes
2 No (SKIP TO Q6_5a)
D (DON'T KNOW) (SKIP TO Q6_5a)
R (REFUSED) (SKIP TO Q6_5a)

C6_4en How many remodels, renovations or additions have you done since then?

- 1 **C6_4e** _____ Remodels, renovations or additions
-8 (DON'T KNOW)
-9 (REFUSED)

C6_4fi I'm going to ask you several questions regarding the timeframe of your remodels, renovations or additions. We will try to run through them quickly. (ASK A-C FOR EACH REMODEL THAT TOOK PLACE SINCE JANUARY 1, 2005).

- 1 Continue

C6_4fa1 to C6_4fa4 In what month and year did it start?

- 1 Enter date (C6_4fa1m to C6_4fa4m _____ Start month)
(C6_4fa1y to C6_4fa4y _____ Start year)
-8 Don't know
-9 Refused

C6_4fb1 to C6_4fb4 Did this increase or decrease your home's square footage, not counting unfinished storage spaces, porches or garages?

- 1 Increase
2 Decrease
3 Same
-8 Don't know
-9 Refused

(Measure –specific data represented as suffix as follows: _1=Cool roof, _2=Evaporative coolers, _3=Attic/Wall insulation, _4=Energy efficient lighting fixture, _5=Multi-speed pool pump, _6=Single-speed pool pump, _7=Energy Star refrigerator, _8=Energy Star room AC, _9=Electric storage water heater, & 10=Whole house fan)

C6_4fc1 to C6_4fc4 In what month and year did it finish?

- 1 Enter date (C6_4fc1m to C6_4fc4m ____Finish month)
(C6_4fc1y to C6_4fc4y ____Finish year)
- 8 Don't know
- 9 Refused

Q6_5a Including yourself, how many people currently live in your home year-round?

- _____ people
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q6_5b (IF Q6_5a=1) Which of the following best describes your age?

- 1 Less than 18 years old
- 2 18-24 years old
- 3 25-34 years old
- 4 35-44 years old
- 5 45-54 years old
- 6 55-64 years old
- 7 65 or older
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q6_5c (IF Q6_5a>1) Including yourself, how many people currently living in your home year-round are in the following age groups?

For Q6_5c1 to Q6_5c7:

- _____ Number of people
- 9 Refused

- Q6_5c1** Less than 18 years old
- Q6_5c2** 18-24 years old
- Q6_5c3** 25-34 years old
- Q6_5c4** 35-44 years old
- Q6_5c5** 45-54 years old
- Q6_5c6** 55-64 years old
- Q6_5c7** 65 or older
(TOTAL SHOULD EQUAL Q6_5a)

[If Q6_3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO Q6_7]

C6_5d Has the total number of people living in your home year-round changed since [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No (SKIP TO Q6_6)
- 8 (DON'T KNOW) (SKIP TO Q6_6)
- 9 (REFUSED) (SKIP TO Q6_6)

C6_5e Do more people or less people live in your home now?

- 1 More → How many more? **C6_5e1**_____
- 2 Less → How many less? **C6_5e2**_____
- 8 (DON'T KNOW)
- 9 (REFUSED)

C6_5fx In what year(s) did the number of people in your household change? (RECORD ALL YEARS OF CHANGE—NET CHANGE IS CALCULATED FROM C6_5e)

- 1 Enter year **C6_5f1**_____ YEAR
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q6_7int This next question asks about other changes you have made that we haven't already talked about.

- 1 Continue

Q6_7x Since January 1, 2005 have you made any other changes to the appliances, equipment or other characteristics of your home that would affect how much energy you are using?

- 1 Yes [ASK Q6_7a-NSP5 FOR EACH MEASURE INSTALLED BEFORE ASKING Q6_7i]
- 2 No [SKIP TO Q6_7i]
- 8 DK [SKIP TO Q6_7i]
- 9 REFUSED [SKIP TO Q6_7i]

Q6_7 What types of changes did you make? (DO NOT READ. RECORD EACH TYPE OF CHANGE MADE. PROBE: Anything else?)

Heating and air conditioning measures

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Furnace
- 5 Programmable thermostat

Lighting measures

- 6 Fluorescent indoor fixture
- 7 Fluorescent outdoor fixture
- 8 Compact fluorescent bulb
- 9 Compact fluorescent fixture
- 10 Motion sensor
- 11 Dimmer switch

Laundry measures

- 12 Clothes washer
- 13 Clothes dryer

Water using measures

- 14 Water heater
- 15 Low Flow showerheads
- 16 Faucet aerators

Kitchen appliances

- 17 Refrigerator
- 18 Freezer
- 19 Range/oven
- 20 Dishwasher

Pool/spa/jacuzzi

- 21 Swimming pool
- 22 Swimming pool pump
- 23 Swimming pool cover
- 24 Spa/jacuzzi

Insulation/weatherstripping/sealing

- 25 Floor, wall, ceiling, or attic insulation
- 26 Weatherstripping/caulking/weatherization
- 27 Water heater/pipe wrapping/insulation
- 28 Duct sealing/repair (not cleaning)

Windows

- 29 Windows
- 30 Other (SPECIFY)

Q6_7b Did this equipment replace existing equipment/measures or was it new to your home?

For Q6_7b_1 to Q6_7b_30:

- 1 Replaced existing equipment
- 2 New to home
- 8 DK
- 9 REFUSED

Q6_7b_1 Central air conditioner

Q6_7b_2 Room/wall air conditioner

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- Q6_7b_3 Evaporative cooler
- Q6_7b_4 Furnace
- Q6_7b_5 Programmable thermostat
- Q6_7b_6 Fluorescent indoor fixture
- Q6_7b_7 Fluorescent outdoor fixture
- Q6_7b_8 Compact fluorescent bulb
- Q6_7b_9 Compact fluorescent fixture
- Q6_7b_10 Motion sensor
- Q6_7b_11 Dimmer switch
- Q6_7b_12 Clothes washer
- Q6_7b_13 Clothes dryer
- Q6_7b_14 Water heater
- Q6_7b_15 Low Flow showerheads
- Q6_7b_16 Faucet aerators
- Q6_7b_17 Refrigerator
- Q6_7b_18 Freezer
- Q6_7b_19 Range/oven
- Q6_7b_20 Dishwasher
- Q6_7b_21 Swimming pool
- Q6_7b_22 Swimming pool pump
- Q6_7b_23 Swimming pool cover
- Q6_7b_24 Spa/jacuzzi
- Q6_7b_25 Floor, wall, ceiling, or attic insulation
- Q6_7b_26 Weatherstripping/caulking/weatherization
- Q6_7b_27 Water heater/pipe wrapping/insulation
- Q6_7b_28 Duct sealing/repair (not cleaning)
- Q6_7b_29 Windows
- Q6_7b_30 Other (SPECIFY)

Q6_7ci_1 to Q6_7ci_30 When did this occur? (RECORD MONTH AND YEAR)

- 1 Enter date Q6_7cm_1 to Q6_7cm_30 ____MM
Q6_7cy_1 to Q6_7cy_30 ____YYYY
- 8 Don't know
- 9 Refused

Q6_7cd_1 to Q6_7cd_30 Was this before or after you participated in the [program]?

- 1 Before
- 2 After
- 8 DK
- 9 REFUSED

(ASK 6.7Cd and 6.7Ce ONLY IF BILLING ANALYSIS BEING DONE AND IF 6.7a = 4, 13, 14, 19, 23)

Q6_7d_1 to Q6_7d_30 What type of fuel does the new [equipment] use?

- 1 gas

(Measure –specific data represented as suffix as follows: _1=Cool roof, _2=Evaporative coolers, _3=Attic/Wall insulation, _4=Energy efficient lighting fixture, _5=Multi-speed pool pump, _6=Single-speed pool pump, _7=Energy Star refrigerator, _8=Energy Star room AC, _9=Electric storage water heater, & 10=Whole house fan)

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- 2 electric
- 3 other (SPECIFY)
- 8 DK
- 9 REFUSED

Q6_7e_1 to Q6_7e_30 (ASK IF 6.7b = REPLACED) What was the fuel type of the [equipment] you replaced?

- 1 gas
- 2 electric
- 3 other (SPECIFY)
- 8 DK
- 9 REFUSED

Q6_7f_1 to Q6_7f_30 Did you receive a rebate for this [equipment] through a [utility] program?

- 1 Yes *[SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6_7i]*
- 2 No
- 8 DK *[SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6_7i]*
- 9 REFUSED *[SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6_7i]*

(ASK Q6_7g and Q6_7h IF 1-4, 12, 13, 14, 17, 18, 19, 20, 22, 24, 29 IN Q6_7a; ELSE SKIP TO NSP4)

Q6_7g_1 to Q6_7g_30 Is the new [equipment] energy efficient?

- 1 Yes
- 2 No *[SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6_7i]*
- 8 DK *[SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6_7i]*
- 9 REFUSED *[SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6_7i]*

Q6_7h_1 to Q6_7h_30 How do you know that this equipment is energy efficient? (PROBE: IS IT ENERGY STAR[®] RATED?)

(ASK NSP4-5 ONLY IF Q6_7f = NO AND Q6_7g = YES AND Q6_7c = AFTER DATE OF PARTICIPATION) (RANDOMIZE BETWEEN 1-5 & 0-10)

(Measure –specific data represented as suffix as follows: _1=Cool roof, _2=Evaporative coolers, _3=Attic/Wall insulation, _4=Energy efficient lighting fixture, _5=Multi-speed pool pump, _6=Single-speed pool pump, _7=Energy Star refrigerator, _8=Energy Star room AC, _9=Electric storage water heater, & 10=Whole house fan)

NSP4x I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the **[utility] [program]** in **[2006, 2007, 2008]** influenced my decision to install different types of high efficiency equipment on my own.

- 1 {RECORD RESPONSE (0-10)} **NSP4**____
- 8 DON'T KNOW
- 9 REFUSED

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NSP5 Why did you purchase this high efficiency equipment without going through a **[utility]** program?
{DO NOT READ; INDICATE ALL THAT APPLY}

For NSP5_1 to NSP5_11:

- 0 Not mentioned
- 1 Mentioned

- NSP5_1 Too much paperwork
- NSP5_2 Takes too long to get approval
- NSP5_3 No time to participate, needed equipment immediately
- NSP5_4 The program had ended
- NSP5_5 The equipment would not qualify {PROBE: WHY NOT?} _____
- NSP5_6 The amount of the rebate wasn't important enough
- NSP5_7 Did not know program was available
- NSP5_8 There was no program available
- NSP5_9 Other {SPECIFY} _____
- NSP5_10 DON'T KNOW
- NSP5_11 REFUSED

(ASK C6.7i=c6.7m ONLY IF BILLING ANALYSIS BEING DONE)

C6_7i [IF FURNACE WAS NOT REPLACED IN Q6_7a OR THROUGH PROGRAM] Do you have gas or electric space heating?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- 8 (DON'T KNOW)
- 9 (REFUSED)

C6_7j [IF WATER HEATER WAS NOT REPLACED IN Q6_7a OR THROUGH PROGRAM] Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 8 (DON'T KNOW)
- 9 (REFUSED)

(Measure –specific data represented as suffix as follows: _1=Cool roof, _2=Evaporative coolers, _3=Attic/Wall insulation, _4=Energy efficient lighting fixture, _5=Multi-speed pool pump, _6=Single-speed pool pump, _7=Energy Star refrigerator, _8=Energy Star room AC, _9=Electric storage water heater, & 10=Whole house fan)

C6_7k [IF CLOTHES DRYER WAS NOT REPLACED IN Q6_7a OR THROUGH PROGRAM] Do you have a gas or electric clothes dryer?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 8 (DON'T KNOW)
- 9 (REFUSED)

C6_7l [IF RANGE/OVEN WAS NOT REPLACED IN Q6_7a OR THROUGH PROGRAM] Do you have a gas or electric range/oven?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 8 (DON'T KNOW)
- 9 (REFUSED)

C6_7m [IF ROOM, CENTRAL AC, OR EVAPORATIVE COOLER WAS NOT REPLACED IN Q6_7a OR THROUGH PROGRAM] What type of air conditioning system, if any, do you use in your home? *(INDICATE ALL THAT APPLY)*

For C6_7m_1 to C6_7m_6:

- 0 Not mentioned
- 1 Mentioned

- Q6_7m_1** Central air conditioner
- Q6_7m_2** Room/wall air conditioner
- Q6_7m_3** Evaporative cooler
- Q6_7m_4** Other (Specify) _____
- Q6_7m_5** (DON'T KNOW)
- Q6_7m_6** (REFUSED)

Q6_8a Do you receive an electric bill directly from SCE?

- 1 Yes
- 2 No *(SKIP TO Q6_9)*
- 8 (DON'T KNOW) *(SKIP TO Q6_9)*
- 9 (REFUSED) *(SKIP TO Q6_9)*

(Measure –specific data represented as suffix as follows: _1=Cool roof, _2=Evaporative coolers, _3=Attic/Wall insulation, _4=Energy efficient lighting fixture, _5=Multi-speed pool pump, _6=Single-speed pool pump, _7=Energy Star refrigerator, _8=Energy Star room AC, _9=Electric storage water heater, & 10=Whole house fan)

Q6_8b Does this bill only include your home's electric use, or does it include the electric use of other households?

- 1 Only 1 household
- 2 Multiple households
- 8 (DON'T KNOW)
- 9 (REFUSED)

Q6_13 What is the primary language spoken in your home? (*DO NOT READ*)

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 (OTHER, specify)
- 8 (DON'T KNOW)
- 9 (REFUSED)

On-site Recruiting (Section 7)

(RECRUIT FOR SINGLE SPEED POOL PUMPS AND ROOM AC)

Q7_1 (SINGLE SPEED POOL PUMPS) We would like to offer you \$25 to participate in the on-site component of this evaluation. We are NOT interested in selling anything. We would like to have one of our auditors visit your home at your convenience to look at the pool pump you installed through the program and how it/they are operating. The on-site visit would only take 20 minutes. Would that be alright with you?

- 1 Yes → Great! Someone will give you a call back to determine when they can schedule an appointment with one of our auditors in your area. Thank you for your cooperation with this important effort.
- 2 No

Q7_2 (ROOM AC) Does the new room air conditioner you purchased through the program plug directly into an outlet, or is it hard wired into the wall?

- 1 Plugs into wall *(CONTINUE WITH RECRUITMENT)*
- 2 Hard wired *(THANK AND TERMINATE)*
- 8 (DON'T KNOW) *(THANK AND TERMINATE)*
- 9 (REFUSED) *(THANK AND TERMINATE)*

Q7_3 (IF ROOM AC PLUGS INTO WALL) We would like to offer you \$25 to participate in the on-site component of this evaluation. We are NOT interested in selling anything. We would like to have one of our auditors visit your home at your convenience to attach a device to track how often your room air conditioner is running. This device would be left on for 3-4 months and it will not interfere with your use of your air conditioner. The on-site visit would only take 20 minutes to install this. Would that be alright with you?

(IF UNINSTALLED, PROBE "Will this unit be installed this summer?")

- 1 Yes→ Great! Someone will give you a call back to determine when they can schedule an appointment with one of our auditors in your area. Thank you for your cooperation with this important effort.
- 2 No

Thank and Terminate

CPUC Room AC Meter Removal Form

Section 1

Customer Name		In-Home Contact	
Customer ID		Site Address	
Main Phone			
Alternate Phone		Scheduled Appointment	Date Time
Field Representative			

Section 2

HomeOwner Questions	Responses	
1	Have you moved the Room AC or Metering Equipment since it was installed?	If yes: Where did you move it from/to? When did this move take place?
2	Have there been any whole house power outages since the meter was installed?	If yes: When did this power outage occur? How long did the outage last?
3	Have you noticed any abnormalities with the meter?	

Section 3

Meter Information					
M	1	Type of Meter	Room Type	Time Of Removal	Serial Number
				Time of Download	File Name
M	2	Type of Meter	Room Type	Time Of Removal	Serial Number
				Time of Download	File Name
M	3	Type of Meter	Room Type	Time Of Removal	Serial Number
				Time of Download	File Name
M	4	Type of Meter	Room Type	Time Of Removal	Serial Number
				Time of Download	File Name

Additional Notes:	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Room Type Codes</th> <th colspan="2" style="text-align: center;">Meter Type Codes</th> </tr> </thead> <tbody> <tr> <td>Dinning Room</td> <td>D</td> <td>Watt's UP</td> <td>WU</td> </tr> <tr> <td>Bathroom</td> <td>BA</td> <td>HOBO U12</td> <td>HOBO</td> </tr> <tr> <td>Laundry</td> <td>LD</td> <td>Onset CTV-A</td> <td>Onset</td> </tr> <tr> <td>Living Room</td> <td>L</td> <td></td> <td></td> </tr> <tr> <td>Primary living space</td> <td>P</td> <td></td> <td></td> </tr> <tr> <td>Bedroom</td> <td>BD</td> <td></td> <td></td> </tr> <tr> <td>Secondary Bedroom</td> <td>BD2</td> <td></td> <td></td> </tr> <tr> <td>Dinning Room</td> <td>D</td> <td></td> <td></td> </tr> <tr> <td>Secondary living space</td> <td>S</td> <td></td> <td></td> </tr> <tr> <td>Office/Den</td> <td>OF</td> <td></td> <td></td> </tr> <tr> <td>Kitchen</td> <td>K</td> <td></td> <td></td> </tr> <tr> <td>Other</td> <td>O</td> <td></td> <td></td> </tr> </tbody> </table>	Room Type Codes		Meter Type Codes		Dinning Room	D	Watt's UP	WU	Bathroom	BA	HOBO U12	HOBO	Laundry	LD	Onset CTV-A	Onset	Living Room	L			Primary living space	P			Bedroom	BD			Secondary Bedroom	BD2			Dinning Room	D			Secondary living space	S			Office/Den	OF			Kitchen	K			Other	O		
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Thank you for participating in the metering study of the California Public Utilities Commission (CPUC). Your participation will help us understand the energy use associated with room air-conditioners, thereby helping us design better energy-efficiency programs in the future.

The data logger that the representative is installing is collecting information about the energy use of your room air-conditioner and the temperature settings; no other information is being collected. The information is confidential and will be combined with data from 100 households. Your individual household data will not be publically reported. The consolidated results of the study will be published in a report and presented to the California Public Utilities Commission.

The Cadmus Group, Inc. and Jai John Mitchell are installing and removing the data loggers. You will be contacted again in September to set up a convenient time to remove the data loggers. At that time *you will be paid \$50 for your participation.*

The Cadmus Group, Inc., based in Watertown, MA, is managing the study. You may receive a call from a representative of The Cadmus Group during the summer to verify that the logger is still working properly.

In order to receive the \$50 incentive, please remember to:

- Leave the data logger in the same air-conditioner it is being plugged into today
- Leave the temperature logger in the same location as it was placed today
- Not open, crush, or in any way tamper with the data loggers

If you have any question or concerns about the study, please contact Katie Parkinson at (303) 998-0102 extension 11. Thank you again for your participation in this important research effort.

By signing below, I agree that I have read the above letter and understand the terms of participation in the study.

Head of household or other representative of household:

Name: _____

Signature: _____ Date: _____

Representative from The Cadmus Group, Inc:

Name: _____

Signature: _____ Date: _____

Onsite Verification Form - Room AC (SCE 2501)

Pre-Complete

Confirmation Call

Primary Contact: **Sample Name**

Address 1: 3824 Reeder **Phone 1:** 626 938 1093

Address 2: **Phone 2:**

City: Covina **State:** CA **Zip:** 91722 **Phone 3:**

Account Number: **Electric Meter:** **Email:**

Install Date: **Alternate Contact:**

Measure Name: **Phone 1:**

Phone 2:

Phone 3:

Email:

NOTES:

Original Site Visit Date: 6/4/2009

Original Site Visit Time: 10:00 AM

New Confirmed Date: / /

New Confirmed Time: : AM / PM

Other:
(No Answer, Refused Visit, Call Back - Note Date Time)

Confirmation Call Date: / /

Confirmation Call Time: : AM / PM

NOTES:

Inspector Initials: **Inspection Date:** **Inspection Time** **Start:** : AM / PM **End:** : AM / PM

Unit information

Units (Quant) installed: **Units (Quant) Eligible:** **Units Eligible and Operational:**

Household Characteristics

Single family: Yes **Size:** 2400 sqft. **Occupancy:** 2

Multifamily: **Vintage:** 2001

Room AC 1 Details	Room AC 2 Details	Room AC 3 Details
-------------------	-------------------	-------------------

Comments:

Room AC 1 Details	Room AC 2 Details	Room AC 3 Details
Location/Room type: Bathroom	Location/Room type:	Location/Room type:
Room SQFT: 12' x 7'	Room SQFT:	Room SQFT:
Primary Yes	Primary Yes/No	Primary Yes/No
Secondary	Secondary Yes/No	Secondary Yes/No
Side of House	Side of House N/S/E/W	Side of House N/S/E/W
Date of Manufacture	Date of Manufacture	Date of Manufacture
Make Haier	Make	Make
Model HWF05XC7-T	Model	Model
EER 9.7	EER	EER
Size (BTUH) 5,200	Size (BTUH)	Size (BTUH)
Is this a replacement unit or a new unit?	Is this a replacement unit or a new unit? Replaced / New	Is this a replacement unit or a new unit? Replaced / New

Comments:

Watt's Up Meter Information	HOBO Meter Information
-----------------------------	------------------------

Meter serial number WNET-0116610986	Meter serial number HOB02318681
Time of meter installation 10:10 AM	Time of meter installation 10:10 AM

Location/Room type KEY

Dinning Room	D	Primary living space	P	Secondary living space	S
Bathroom	BA	Bedroom	BD	Office/Den	OF
Laundry	LD	Secondary Bedroom	BD2	Kitchen	K
Living Room	L	Dinning Room	D	Other	O

Complete during site visit

Appendix I – Pool Pumps

I1 – Telephone Surveys

- Pool Pump and Motor Residential Incentive Program Participant Survey

I2 – Data Collection Instruments

- Pool Pump Site Visit Form
- SDGE 3024 Pool Pump and Motor Site Visit Form

Pool Pump & Motors Residential Incentive Program Participant Survey Draft

The following measures will be asked about in the survey: Pool pumps and motor(s) & pool pump reset agreement

Instrument-specific variables-- The CATI software will automatically fill the appropriate description in the questions.

[Product Type]

Pool pump
Pool pump reset agreement

[Measure]

Energy efficient multi-speed pool pump
Energy efficient single-speed pool pump
Pool pump reset agreement

[Assistance]

Rebate/\$25 check

[Program]

Residential Energy Efficiency Incentive Program

[Utility]

SDGE

[Program Incentive]

Dollar amount/\$25 check

[Quantity]

Quantity exchanged/installed

[Incremental efficiency measures]

Multi-speed pool pump
Single-speed pool pump

[Efficiency enhancement measures]

Pool pump reset agreement

Introduction

Hello, my name is **[interviewer name]**, and I'm calling on behalf of the California Public Utilities Commission regarding San Diego Gas and Electric's Residential Incentive Program. May I speak with **[contact name]**?

- 1 Yes
- 2 No [attempt to convert; if R not available, ask for an adult who makes decisions on how household uses energy]

I'm with **[data collection firm]**, an independent research firm. I am calling to learn about your experiences with the [IF REBATE: **[measures]** you purchased and the rebate you received /IF RESET AGREEMENT: pool pump reset agreement you signed and received a \$25 incentive for] through SDGE's Residential Incentive Program.

I'm not selling anything; I'd just like to ask your opinion about this program. I'd like to assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

High Impact Measures – Pool Pump and Motors Survey Final

(Who is doing this study: The California Public Utilities Commission, which regulates the utilities, is overseeing evaluations of most of California’s energy efficiency programs.)

(Why are you conducting this study: Studies like this help the State of California and **SDGE** better understand customers’ need for and interest in energy programs and services.)

(Timing: This survey should take about 20 minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT OR OFFER TO LET THEM CALL US BACK AT 1-800-XXX-XXXX)

(Sales concern: I am not selling anything; we would simply like to learn about your experience with the [measures] you purchased and received a rebate through the program. Your responses will be kept confidential. If you would like to talk with someone from the California Public Utilities Commission about this study, feel free to call Mikhail Haramati at 415 703-2782, or visit their website: www.cpuc.ca.gov/evaluation.)

(NOTE: For all questions, “DON’T KNOW” and “REFUSED” will be coded if offered as a response.)

Recall of Participation/Identification of Decision Maker (Section 1)

(QUANTITY REFERS TO THE NUMBER RECEIVED WITHIN THE MEASURE CATEGORY--E.G., 1 POOL PUMP)

1.1a (IF RESET AGREEMENT) Our records show that your household signed an agreement about how often you would use your pool pump. You would have received \$25 from SDGE for signing this agreement. Do you recall signing this agreement?

- 1 Yes (SKIP TO 1.3)
- 2 No (SKIP TO 1.2)
- D (DON'T KNOW) (SKIP TO 1.2)
- R (REFUSED) (TERMINATE)

1.1b (IF REBATE) Program records indicate that you purchased and received a mail-in or instant rebate for the following energy efficient equipment through the Residential Incentive Program around [insert date of participation]. (RECORD FOR EACH MEASURE INSTALLED)

MEASURES	Do you recall purchasing . . . ?	(IF QUANTITY > 1) Is this the correct quantity?
A. [quantity] Pool pump and motor	1 Yes 2 No D (DK) R (REFUSED)	1 Yes 2 No (SPECIFY QTY ___) D (DK) R (REFUSED)

(IF RECALLS MEASURES, SKIP TO 1.4)

1.2 (ASK IF DOESN'T RECALL ANY OF THESE MEASURES) Is it possible that someone else in your household would know about (IF REBATE: purchasing this/these [measures] and applying for a mail-in or instant rebate from the retailer/IF RESET AGREEMENT: signing this agreement)? (RECORD ONE NUMBER)

- 1 Yes (SKIP TO 1.3)
- 2 No (TERMINATE IF RESET ONLY)
- D (DON'T KNOW) (TERMINATE IF RESET ONLY)
- R (REFUSED) (TERMINATE)

High Impact Measures – Pool Pump and Motors Survey Final

1.2b (IF REBATE AND Q1.2 = NO OR DON'T KNOW) San Diego Gas and Electric is offering mail-in or instant rebates for replacing less efficient pool pumps with more energy-efficient equipment. The program also provides rebates for attic and wall insulation, pool pumps, and whole house fans. Rebates are paid in two ways—either in response to a mail-in application for a rebate or through an instant rebate at the retailer. The rebate program is referred to as the Residential Incentive Program. Are you sure you don't recall purchasing the/these [measures] and applying for a rebate? (RECORD ONE NUMBER)

- 1 Don't remember -> [TERMINATE, RECORD ANY COMMENTS MADE BY RESPONDENT BEFORE EXITING]
- 2 Remember -> [READ, "GREAT, THEN LET'S CONTINUE", SKIP TO 1.4]
- R (REFUSED) (TERMINATE)

1.3 May I please speak with that person? (RECORD ONE NUMBER)

- 1 Yes (BEGIN THE SURVEY AGAIN WITH THIS NEW RESPONDENT)
- 2 No (TERMINATE)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

1.4 Are you the person in your household who decided to (IF REBATE: purchase this/these [measures] and receive a rebate through SDGE's Residential Incentive Program/IF RESET AGREEMENT: sign this agreement with SDGE)?

- 1 Yes
- 2 No (SKIP BACK TO 1.3)
- D (DON'T KNOW) (TERMINATE)
- R (REFUSED) (TERMINATE)

Sources of Program Information (Section 2)

2.1 How did you hear about the (IF REBATE: rebate offered on the [measures] available as part of/IF RESET AGREEMENT: pool pump reset agreement) SDGE's Residential Incentive Program? (PROBE: Did you hear about the program from any other sources?) (DO NOT READ LIST, RECORD ALL THAT APPLY)

Utility provided information

- 1 (Advertising—radio, newspaper, trade journal, billboard, TV)
- 2 (Bill insert, newsletter, or other mailing)
- 3 (Website)
- 4 (Email)
- 5 (Other utility) (SPECIFY)

Local Government/Community event/Nonprofit

- 6 (Meeting, event, workshop, training) (SPECIFY)
- 7 (School)
- 8 (Local government/community agency) (SPECIFY)
- 9 (City/county Energy Center such as Pacific Energy Center, Stockton, Food Service) (SPECIFY)
- 10 (Advertising—radio, newspaper, trade journal, billboard, TV)

Other

- 11 (Home or building audit or assessment) (SPECIFY)
- 12 (Meeting, event, workshop training) (SPECIFY)
- 13 (Flex your Power TV or radio advertising)
- 14 (Other advertising, don't recall)
- 15 (Friend/Relative/Neighbor)
- 16 (Other, Specify: _____)
- D (DON'T KNOW) (SKIP TO SECTION 3)
- R (REFUSED) (SKIP TO SECTION 3)

Installation Behavior—REBATE MEASURES (Section 3)

(REPEAT 3.0-3.8 FOR EACH REBATE MEASURE R RECALLS)

3.0 (IF REBATE) How did you receive the rebate for this [measure]? Did you mail in the rebate application to SDGE, or receive an instant rebate at the store when you made your purchase?

- 1 Mail in rebate
- 2 Instant rebate at store
- D (DON'T KNOW)
- R (REFUSED)

3.15D For what type of pool did you (IF RESET: alter your filtering times/IF POOL PUMP: install this pool pump)? (READ RESPONSES)

- 1 In Ground Pool
- 2 Above ground pool
- 3 in ground spa/hot tub
- 4 above ground spa/hot tub
- D (DON'T KNOW)
- R (REFUSED)

(IF RESET AGREEMENT, SKIP TO Q3.12)

High Impact Measures – Pool Pump and Motors Survey Final

3.1a (IF QUANTITY=1) Now, I would like to understand what you did with the [measure]. Is this [measure] currently installed at your home (either indoors or outdoors)? (RECORD ONE NUMBER)

- 1 Yes (SKIP TO 3.12)
- 2 No
- D (DON'T KNOW) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)
- R (REFUSED) (IF NO OTHER KNOWLEDGEABLE R, TERMINATE OR GO TO NEXT MEASURE CATEGORY)

3.1b (IF QUANTITY=1) Which of the following best describes what happened with the [measure]? (READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location (SKIP TO 3.3a)
- 2 It was installed at your home but is now permanently removed (example: broke, burned out, don't fit, don't like, etc.) (SKIP TO 3.6)
- 3 It is in storage because it is only needed during certain months of the year
- 4 It is in storage for some other reason (SKIP TO SECTION 3.8)
- 5 It was sold or given away (SKIP TO 3.3a)
- 6 Something else (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

3.2 (IF QUANTITY>1) Now, I would like to understand what you did with the [quantity] [measure]. (READ LIST, RECORD NUMBER)

- a___ How many are currently installed at your home (either indoors or outdoors) (IF RESPONSE=QUANTITY, SKIP TO 3.4)
- b___ How many are installed at some other location?
- c___ How many were installed at your home (either indoors or outdoors) but are now permanently removed (example: broke, burned out, don't fit, don't like, etc.)
- d___ How many are in storage because they are only needed during certain months of the year?
- e___ How many are in storage for some other reason?
- f___ How many were sold or given away?
- g___ Something else? (SPECIFY)

3.3a (ASK IF 3.1b=1, 3.1b=5, 3.2b>0, 3.2f>0) Is the/Are these [measure] located in **SDGE's** service territory?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

(SKIP TO 5.3 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY) AND THAT LOCATION IS **OUTSIDE** OF SCE'S SERVICE TERRITORY (3.3A NE 1).

SKIP TO W1 IF **ALL** MEASURES WERE INSTALLED AT ANOTHER LOCATION AND/OR SOLD/GIVEN AWAY (3.2B + 3.2F = QTY) AND THAT LOCATION IS **INSIDE** OF SCE'S SERVICE TERRITORY (3.3A = 1).

High Impact Measures – Pool Pump and Motors Survey Final

Removed Measures (ASK ONLY IF THEY SAY THEY REMOVED A MEASURE AFTER INSTALLED, 3.1b=2 or 3.2c>0)

3.6 Now let's talk about [measure] you said you installed but have since removed. Why was this removed? (DO NOT READ LIST, RECORD ALL THAT APPLY)

- 1 (Equipment failed)
- 2 (Didn't work properly)
- 3 (Wrong size—too small or too large)
- 4 (Low water flow)
- 5 (Didn't like the color)
- 6 (Didn't like appearance/unattractive)
- 7 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

3.7 What did you replace [measure] with? (DO NOT READ LIST; PROBE FOR EFFICIENCY, RECORD ALL THAT APPLY)

- 1 (With a new high efficiency [measure])
- 2 (With a less efficient [product type])
- 3 (Re-installed old equipment)
- 4 (Did not replace)
- 5 (Other, Specify: _____)
- D (DON'T KNOW)
- R (REFUSED)

Measures in Storage (ASK ONLY IF THEY SAY MEASURE IS IN STORAGE FOR SOME OTHER REASON, 3.1b=4 or 3.2e>0)

3.8 When do you think you will install the [measure]? Would you say within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

- 1 Within the next 3 months
- 2 3 to 6 months from now
- 3 6 to 12 months from now
- 4 More than a year from now
- 5 Never
- D (DON'T KNOW)
- R (REFUSED)

High Impact Measures – Pool Pump and Motors Survey Final

(ASK 3.12-3.20 ONLY FOR POOL PUMP RESET AGREEMENT)

3.12 Since participating in Residential Incentive Program on **[insert date of participation]**, what hours of the day do you typically run your pool pump on Monday-Friday during the summer months (May-September)?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (OTHER, specify)
- 97 (DON'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.13 Since participating in Residential Incentive Program on **[insert date of participation]**, what hours of the day do you typically run your pool pump on Monday-Friday during the winter months (October-April)?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (OTHER, specify)
- 97 (DON'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.13F1 (ASK IF POOL PUMP IS RUN DURING PEAK HOURS, I.E., RESPONDENT HAS NOT MET THE REQUIREMENTS OF THE PROGRAM) Since participating in Residential Incentive Program on **[insert date of participation]**, did you at any time set your pool pump timer to run before noon or after 6 PM on Monday through Friday?

- 1 Yes
- 2 No (SKIP TO 3.14)
- D (DON'T KNOW) (SKIP TO 3.14)
- R (REFUSED) (SKIP TO 3.14)

3.13F2 For how many days or months did you set your pool pump to run before noon or after 6 PM on Monday-Friday During the summer months?

- ___ DAYS
- ___ MONTHS
- D (DON'T KNOW)
- R (REFUSED)

3.13F3 For how many days or months did you set your pool pump to run before noon or after 6 PM on Monday-Friday during the winter months?

- ___ DAYS
- ___ MONTHS

High Impact Measures – Pool Pump and Motors Survey Final

- D (DON'T KNOW)
- R (REFUSED)

3.14 Before participating in Residential Incentive Program on [insert date of participation], what hours of the day did you typically run your pool pump on Monday-Friday during the summer months?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 95 No prior pool pump (SKIP TO 3.15D)
- 96 (OTHER, specify)
- 97 (DIDN'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.15 Before participating in Residential Incentive Program on [insert date of participation], what hours of the day did you typically run your pool pump on Monday-Friday during the winter months?

- A. Start time: _____ [INDICATE AM OR PM]
- B. End time: _____ [INDICATE AM OR PM]
- C. [CONFIRM TOTAL NUMBER OF HOURS: ____]

- 96 (OTHER, specify)
- 97 (DIDN'T USE)
- D (DON'T KNOW)
- R (REFUSED)

3.16 (IF 3.14C <> 3.12C) Why do you run your pool pump differently in the summer than you did before participation in the program?

SPECIFY: _____

- D (DON'T KNOW)
- R (REFUSED)

3.17 (IF 3.15C <> 3.13C) Why do you run your pool pump differently in the winter than you did before participation in the program?

SPECIFY: _____

- D (DON'T KNOW)
- R (REFUSED)

(Asked of all respondents with reset agreements)

3.18 Do you have any plans to change the hours that you currently run your pool pump?

- 1 Yes
- 2 No [SKIP TO W1]
- D (DON'T KNOW) [SKIP TO W1]
- R (REFUSED) [SKIP TO W1]

High Impact Measures – Pool Pump and Motors Survey Final

3.19 When do you plan to change the hours that you run your pool pump?

___ Month
___ Year

3.20 Why do you plan to make this change?

RECORD VERBATIM RESPONSE

Free Ridership and Spillover (Section 4)

Warm-up Questions/Background Context

W1 Please think back to the time when you were deciding to (REBATE: buy the energy saving [product types]/RESET AGREEMENT: sign the pool pump reset agreement), perhaps recalling things that occurred in your household shortly before and after [timeframe]. What factors motivated you to (REBATE: purchase energy saving [product types]/RESET AGREEMENT: sign this agreement)? (DO NOT READ; INDICATE ALL THAT APPLY; ONCE THEY RESPONDENT HAS FINISHED, PROBE: Are there any other factors?)

1. Old equipment didn't work
2. Old equipment working poorly
3. The program incentive
4. The program technical assistance
5. Wanted to save energy
6. Wanted to reduce energy costs
7. The information provided by the Program
8. Past experience with this program
9. Because of past experience with another [utility] program
10. Recommendation from other utility program (Probe: What program? _____)
11. Recommendation of dealer/retailer
12. Recommendation of someone else (Probe: Who? _____)
13. Advertisement in newspaper (Probe: For what program? _____)
14. Radio advertisement (Probe: For what program? _____)
15. Other (SPECIFY)
16. Environmental concerns
17. Global warming
18. Liked the appearance of the [measure] more than the old one
19. Keeping up with the latest trends and fashions
- D (DON'T KNOW)
- R (REFUSED)

(REPEAT W2-C2 FOR FIRST MEASURE. REPEAT SERIES IF IS A SECOND MEASURE. IF RESET AGREEMENT ONLY, SKIP TO RESET AGREEMENT SECTION)

(ASK W2a-W6 ONLY FOR INCREMENTAL EFFICIENCY REBATE MEASURES)

W2a Did you get this [measure] to replace [a/an] existing [product type]?)

- 1 Yes (SKIP TO W4)
- 2 No
- D (DON'T KNOW) (SKIP TO FR7)
- R (REFUSED) (SKIP TO FR7)

W2b Did you get this [measure] because you wanted to add another/more [product type] to your home?

- 1 Yes (SKIP TO FR7)
- 2 No
- D (DON'T KNOW) (SKIP TO FR7)
- R. (REFUSED) (SKIP TO FR7)

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W2c Is this [**product type**] the first you have ever had in your home?

- 1. Yes (*SKIP TO FR7*)
- 2. No (*SKIP TO FR7*)
- D. Don't Know (*SKIP TO FR7*)
- R. Refused (*SKIP TO FR7*)

W4 About how old was the [**product type**] you replaced? (READ CATEGORIES IF NEEDED)

- 1. Less than 5 years old
- 2. 5 to less than 10 years old
- 3. 10 to less than 20 years old
- 4. 20 years to less than 30 years old
- 5. 30 or more years old
- D (DON'T KNOW)
- R (REFUSED)

W5 Was the old [**product type**] working or not working?

- 1. Working
- 2. Not working (*SKIP TO FR7*)
- D (DON'T KNOW) (*SKIP TO FR7*)
- R (REFUSED) (*SKIP TO FR7*)

W6 Was the old [**product type**] in good, fair, or poor working condition?

- 1. Good
- 2. Fair
- 3. Poor
- D (DON'T KNOW)
- R (REFUSED)

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Free-Ridership Questions – REBATED MEASURES MODULE

FR7 Our records indicate you received about **[amount of program incentive/subsidy]** from the **[utility] [program]** either directly or at the time of purchase to offset the cost of the **[product type]**. Does this amount sound about right?

- 1 Yes (SKIP TO FR1)
- 2 No
- D (DON'T KNOW) (SKIP TO FR1)
- R (REFUSED) (SKIP TO FR1)

FR8 What would you estimate to be the actual amount?

- (RECORD RESPONSE) _____ (SET = NEW AMOUNT OF PROGRAM INCENTIVE/SUBSIDY)
- D (DON'T KNOW)
 - R (REFUSED)

FR1 At the time that you first heard about the **[assistance]** from **[utility]** for **[measure]**, had you...? (READ LIST)

- 1 Already been thinking about purchasing **[product type]**? (IF NO, SKIP TO FR2)
- 2 Already begun collecting information about **[product type]**? (IF NO, SKIP TO FR2)
- 3a (FOR INCREMENTAL EFFICIENCY MEASURES) Already selected the **[measure]** you were going to get? (IF NO, SKIP TO FR2)
- 4 Already installed the energy efficient **[measure]**? (IF YES, SKIP TO FR1B; ELSE FR2)
- 5 (DON'T READ) Other: _____ (SKIP TO FR2)
- D (DON'T KNOW) (SKIP TO FR2)
- R (REFUSED) (SKIP TO FR2)

FR1B So, the **[measure]** was installed before you learned about the **[assistance]** from **[utility]**?

- 1 Yes (SKIP FR5)
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

FR2 Just to be sure I understand, did you have specific plans to install a(n) **[product type]** before learning about the **[assistance]** available through the **[program]**?

- 1 Yes
- 2 No (SKIP TO FR4)
- D (DON'T KNOW) (SKIP TO FR4)
- R (REFUSED) (SKIP TO FR4)

FR3 Did you have to make any changes to your existing plans in order to receive this **[assistance]** through the **[program]**?

- 1 Yes
- 2 No
- D (DON'T KNOW)

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R (REFUSED)

FR4 (REPEAT AS NEEDED FOR FR4 PARTS A – D) If the [assistance] from the [utility] [program] had not been available, would you still have:

FR4A Purchased a(n) [product type] ?

- 1 Yes
- 2 No (SKIP TO FR5)
- D (DON'T KNOW)
- R (REFUSED)

FR4B Purchased the [product type] at the same time as you did? (PROBE: That would be around [date of participation])

- 1 Yes (SKIP TO FR4C)
- 2 No
- D (DON'T KNOW) (SKIP TO FR4C)
- R (REFUSED) (SKIP TO FR4C)

FR4B1 Bought the [product type] earlier than you did, or later?

- 1 Earlier
- 2 Same Time (REPEAT QUESTION FR4B)
- 3 Later
- D (DON'T KNOW) (SKIP TO FR4C)
- R (REFUSED) (SKIP TO FR4C)

FR4B2 How much [earlier/later] would you have bought the [product type]?

- _____ Years (AND/OR) _____ Months
- D (DON'T KNOW)
 - R (REFUSED)

FR4C (IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM, OR MEASURE IS OF VARIABLE AMOUNT) Without the program, would you have purchased the same quantity as you did?

- 1 Yes (SKIP TO FR4D)
- 2 No
- D (DON'T KNOW) (SKIP TO FR4D)
- R (REFUSED) (SKIP TO FR4D)

FR4C1 How many would you have purchased without the program?

- _____ (RECORD NUMBER)
- D (DON'T KNOW)
 - R (REFUSED)

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FR4C2 (IF PURCHASED AMOUNT IS GREATER THAN SAMPLE QUANTITY) Let me make sure I understand. You said you would have purchased more **[product type]** if you hadn't participated in the program. Why would you have purchased a greater number of **[product type]** if you hadn't participated in the program?

(RECORD RESPONSE): _____

FR4D Purchased the same efficiency of **[product type]**?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

FR4E If the **[assistance]** from the **[utility] [program]** had not been available, would you have done anything else differently?

- 1. Yes
- 2. No (SKIP TO FR5)
- D (DON'T KNOW) (SKIP TO FR5)
- R (REFUSED) (SKIP TO FR5)

FR4E1 What would you have done differently?

(RECORD RESPONSE): _____

FR5 On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same **[measure]** if you had not received any **[assistance]** from the program?

(RECORD RESPONSE (0-10)) _____
D (DON'T KNOW)
R (REFUSED)

(SKIP TO FR10 IF PROGRAM DOES NOT PROVIDE A FINANCIAL INCENTIVE/SUBSIDY OR DATABASE DOES NOT CONTAIN THAT INFORMATION)

I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR9 If I had not had any assistance from the program, I would have paid the additional **[amount of program incentive/subsidy]** to buy the **[measure]** on my own.

(RECORD RESPONSE (0-10)) _____
D (DON'T KNOW)
R (REFUSED)

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(READ ONLY IF FR7-FR9 WAS SKIPPED): I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR10 There may have been several reasons for my purchase decision. But the **[assistance]** from the **[utility] [program]** was a critical factor in my decision to purchase the high efficiency/energy efficient product.

(RECORD RESPONSE (0-10)) _____
D (DON'T KNOW)
R (REFUSED)

FR11 I would have bought a(n) **[product type]** within a year of when I did even without the **[assistance]** from the **[utility] [program]**.

(RECORD RESPONSE (0-10)) _____
D (DON'T KNOW)
R (REFUSED)

Free-Ridership Questions – Pool Pump Reset Agreement Module

(ONLY ASK OF POOL PUMP RESET AGREEMENTS)

FR7 Our records indicate you received about \$25 from the **SDG&E Residential Incentive Program**. Does this amount sound about right?

1 Yes (*SKIP TO FR1*)
2 No
D (DON'T KNOW) (*SKIP TO FR1*)
R (REFUSED) (*SKIP TO FR1*)

FR8 What would you estimate to be the actual amount?

(RECORD RESPONSE) _____ (SET = NEW AMOUNT OF PROGRAM INCENTIVE/SUBSIDY)
D (DON'T KNOW)
R (REFUSED)

FR1 At the time that you first heard about the **incentive** from **SDG&E** for the Pool Pump Reset Agreement, had you...? (READ LIST)

1 Already been thinking about resetting your pool filtering times? (*IF NO, SKIP TO FR2*)
2 Already begun collecting information about resetting your pool filtering times? (*IF NO, SKIP TO FR2*)
3 Already selected new pool filtering times? (*IF NO, SKIP TO FR2*)
4 Already changed your pool filtering times (*IF YES, SKIP TO FR1B; ELSE FR2*)
5 (DON'T READ) Other: _____ (*SKIP TO FR2*)
D (DON'T KNOW) (*SKIP TO FR2*)
R (REFUSED) (*SKIP TO FR2*)

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FR1B So, you had already changed your pool filtering times before you learned about the **[assistance]** through the **[utility]**?

- 1 Yes (*SKIP FR5*)
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

FR2 Just to be sure I understand, did you have specific plans to reset your pool filtering times before learning about the **incentive** available through the **Residential Incentive Program**?

- 1 Yes
- 2 No (*SKIP TO FR4*)
- D (DON'T KNOW) (*SKIP TO FR4*)
- R (REFUSED) (*SKIP TO FR4*)

FR3 Did you have to make any changes to your existing plans in order to receive this **incentive** through the **Residential Incentive Program**?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

FR4 If the **incentive** from the **SDG&E Residential Incentive Program** had not been available, would you still have:

FR4A Changed your pool filtering times?

- 1 Yes
- 2 No (*SKIP TO FR5*)
- D (DON'T KNOW)
- R (REFUSED)

FR4B1 Changed your pool filtering times at an earlier date than you did or a later date?

- 1 Earlier
- 2 Same Time (*REPEAT QUESTION FR4A*)
- 3 Later
- D (DON'T KNOW) (*SKIP TO FR4C*)
- R (REFUSED) (*SKIP TO FR4C*)

FR4B2 How much **[earlier/later]** would you have reset your filtering times?

- _____ Years (AND/OR) _____ Months
- D (DON'T KNOW)
 - R (REFUSED)

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FR4E If the **incentive** from the **SDG&E Residential Incentive Program** had not been available, would you have done anything else differently?

- 1 Yes
- 2 No (*SKIP TO FR5*)
- D (DON'T KNOW) (*SKIP TO FR5*)
- R (REFUSED) (*SKIP TO FR5*)

FR4E1 What would you have done differently?

(RECORD RESPONSE): _____

FR5 On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have reset your filtering times if you had not received any **incentive** from the program?

(RECORD RESPONSE (0-10)) _____

- D (DON'T KNOW)
- R (REFUSED)

FR9 I'm going to read several statements about how you came to participate in the Pool Pump Reset Agreement. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

If I had not had any assistance from the program, I would have reset my filtering times on my own.

(RECORD RESPONSE (0-10)) _____

- D (DON'T KNOW)
- R (REFUSED)

FR10 There may have been several reasons to reset my pool filter times. But the **incentive** from the **SDG&E Residential Incentive Program** was a critical factor in my decision to reset my pool filtering times.

(RECORD RESPONSE (0-10)) _____

- D (DON'T KNOW)
- R (REFUSED)

FR11 I would have reset my pool filtering times within **a year** of when I did even without the **incentive** from the **SDG&E Residential Incentive Program**.

(RECORD RESPONSE (0-10)) _____

- D (DON'T KNOW)
- R (REFUSED)

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Consistency Check & Resolution

(C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

FR4A (efficiency enhancement measures) OR FR4D (incremental efficiency measures)
FR5
FR10
FR11

(IF FR4A/D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the [measure] without the program')

(IF FR4A/D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would not have purchased the [measure] without the program')

(IF FR5 = 0,1 AND FR4A/D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the [measure] without the program')

(IF FR5 = 9,10 AND FR4A/D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the [measure] without the program')

(IF FR10 = 0,1 AND FR4A/D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program')

(IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program')

(IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the [product type] within [a year] even without the program')

(IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the [product type] within [a year] even without the program')

C1 Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **[measure]** at the time you did?
(RECORD VERBATIM RESPONSE BELOW)

C2 **[fill with wording and response categories to the one question which was inconsistent]**
(INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE)

Recent Program Participation (Section 5)

5.3 Have you participated in any other programs offered by SDGE because of your experience with the Residential Incentive Program.

- 1 Yes
- 2 No (SKIP TO 5.5)
- D (DON'T KNOW) (SKIP TO 5.5)
- R (REFUSED) (SKIP TO 5.5)

5.4 Which programs?

5.5 Which of the following phrases or messages have you heard before today? (ROTATE STARTING POINT)

Q5_5A Good Housekeeping

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5B Click it or Ticket

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5C Ahnu

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5D Flex Your Power

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

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Q5_5E Flex Alert

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5F Energy Hog

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5G Galley Bay

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5H Energy Star

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

Q5_5I Hollister Co

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

RESIDENTIAL DEMOGRAPHIC QUESTIONS (Section 6)

The last questions ask about household characteristics to make sure we're getting a representative sample of [utility] residents.

6.1 Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

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6.2 In what type of building do you live? (READ LIST IF NEEDED; PROBE IF SAYS CONDO: How many units are in your building?)

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Boat, RV, Van, etc.
- 8 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6.3 About when was this building first built? (READ LIST IF NEEDED)

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 7 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

6.3a Were you living in this same home around [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No
- D (DON'T KNOW)
- R (REFUSED)

6.4a How many full or half bathrooms do you have in your home? (PROBE: A full bathroom is one that has a sink with running water, and a toilet, and either a bathtub or shower. A half bathroom has either a toilet or a bathtub or a shower?)

- _____ Bathrooms
- D (DON'T KNOW)
 - R (REFUSED)

6.4b How many bedrooms do you have in your home (If a one-room efficiency, or studio apartment, bedrooms=0)

- _____ bedrooms
- D (DON'T KNOW)
 - R (REFUSED)

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6.4c Other than bedrooms and bathrooms, how many other rooms are there in your home? Do not count laundry rooms, foyers, unfinished storage spaces, porches, or garages.

____ Other rooms
D (DON'T KNOW)
R (REFUSED)

[If 6.3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.5a]

C6.4d Did you do any remodeling, renovation or additions since January 1, 2005?

1 Yes
2 No (*SKIP TO 6.5a*)
D (DON'T KNOW) (*SKIP TO 6.5a*)
R (REFUSED) (*SKIP TO 6.5a*)

C6.4e How many remodels, renovations or additions have you done since then?

____ Remodels, renovations or additions
D (DON'T KNOW)
R (REFUSED)

C6.4f I'm going to ask you several questions regarding the timeframe of your remodels, renovations or additions. We will try to run through them quickly. (ASK A-C FOR EACH REMODEL THAT TOOK PLACE SINCE JANUARY 1, 2005).

- a. In what month and year did it start?
- b. Did this increase or decrease your home's square footage, not counting unfinished storage spaces, porches or garages,
- c. In what month and year did it finish?

a. START (mm/yyyy)	b. Increase or decrease?	C. FINISH (mm/yyyy)
	1 Increase	
	2 Decrease	
	3 Same	
	D (DK)	
	R (REFUSED)	

1
2
3
4

6.5a Including yourself, how many people currently live in your home year-round?

____ people
D (DON'T KNOW)
R (REFUSED)

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6.5b (IF 6.5a=1) Which of the following best describes your age?

- 1 Less than 18 years old
- 2 18-24 years old
- 3 25-34 years old
- 4 35-44 years old
- 5 45-54 years old
- 6 55-64 years old
- 7 65 or older
- D (DON'T KNOW)
- R (REFUSED)

6.5c (IF 6.5a>1) Including yourself, how many people currently living in your home year-round are in the following age groups?

- ___ Less than 18 years old
- ___ 18-24 years old
- ___ 25-34 years old
- ___ 35-44 years old
- ___ 45-54 years old
- ___ 55-64 years old
- ___ 65 or older
- TOTAL SHOULD EQUAL 6.5a
- R (REFUSED)

[If 6.3a = NO, SKIP BILLING ANALYSIS SERIES. GO TO 6.7]

C6.5d Has the total number of people living in your home year-round changed since [insert date 12 months prior to time of participation]?

- 1 Yes
- 2 No (SKIP TO 6.6)
- D (DON'T KNOW)(SKIP TO 6.6)
- R (REFUSED) (SKIP TO 6.6)

C6.5e Do more people or less people live in your home now?

- 1 More→How many more? ___
- 2 Less→How many less? ___
- D (DON'T KNOW)
- R (REFUSED)

C6.5f In what year(s) did the number of people in your household change? (RECORD ALL YEARS OF CHANGE—NET CHANGE IS CALCULATED FROM C6.5e)

- 1st NET CHANGE: _____ MONTH _____ YEAR
- 2nd NET CHANGE: _____ MONTH _____ YEAR
- 3rd NET CHANGE: _____ MONTH _____ YEAR
- D (DON'T KNOW)
- R (REFUSED)

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6.7 This next question asks about other changes you have made that we haven't already talked about. Since January 1, 2005 have you made any other changes to the appliances, equipment or other characteristics of your home that would affect how much energy you are using?

- 1 Yes (*ASK 6.7a-NSP5 FOR EACH MEASURE INSTALLED BEFORE ASKING 6.7i*)
- 2 No (SKIP TO 6.7i)
- D (DON'T KNOW) (SKIP TO 6.7i)
- R (REFUSED) (SKIP TO 6.7i)

a. What types of changes did you make? (DO NOT READ. RECORD EACH TYPE OF CHANGE MADE. PROBE: Anything else?)

Heating and air conditioning measures

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Furnace
- 5 Programmable thermostat

Lighting measures

- 6 Fluorescent indoor fixture
- 7 Fluorescent outdoor fixture
- 8 Compact fluorescent bulb
- 9 Compact fluorescent fixture
- 10 Motion sensor
- 11 Dimmer switch

Laundry measures

- 12 Clothes washer
- 13 Clothes dryer

Water using measures

- 14 Water heater
- 15 Low Flow showerheads
- 16 Faucet aerators

Kitchen appliances

- 17 Refrigerator
- 18 Freezer
- 19 Range/oven
- 20 Dishwasher

Pool/spa/jacuzzi

- 21 Swimming pool
- 22 Swimming pool pump
- 23 Swimming pool cover
- 24 Spa/jacuzzi

Insulation/weatherstripping/sealing

- 25 Floor, wall, ceiling, or attic insulation
- 26 Weatherstripping/caulking/weatherization
- 27 Water heater/pipe wrapping/insulation
- 28 Duct sealing/repair (not cleaning)

Windows

- 29 Windows

- 30 Other (SPECIFY)
- 00 No other changes
- D (DON'T KNOW)
- R (REFUSED)

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6.7b Did this equipment replace existing equipment/measures or was it new to your home?

- 1 Replaced existing equipment
- 2 New to home
- D (DON'T KNOW)
- R (REFUSED)

6.7c When did this occur? (RECORD MONTH AND YEAR)

_____/_____/____ MM/YYYY

- D (DON'T KNOW)
- R (REFUSED)

6.7Cd (IF Q6.7c = DK) Was this before or after you participated in the [program]?

- 1 Before
- 2 After
- D (DON'T KNOW)
- R (REFUSED)

(ASK 6.7Cd and 6.7Ce ONLY IF BILLING ANALYSIS BEING DONE AND IF 6.7a = 4, 13, 14, 19, 24)

C6.7d What type of fuel does the new [equipment] use?

- 1 Gas
- 2 Electric
- 3 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

C6.7e (ASK IF 6.7b = REPLACED) What was the fuel type of the [equipment] you replaced?

- 1 Gas
- 2 Electric
- 3 Other (SPECIFY)
- D (DON'T KNOW)
- R (REFUSED)

6.7f Did you receive a rebate for this [equipment] through a [utility] program?

- 1 Yes (SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i)
- 2 No
- D (DON'T KNOW)(SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i)
- R (REFUSED) (SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i)

(ASK 6.7g and 6.7h IF 1-4, 12, 13, 14, 17, 18, 19, 20, 22, 24, 29 IN 6.7a; ELSE SKIP TO NSP4)

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6.7g Is the new [equipment] energy efficient?

- 1 Yes
- 2 No (*SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i*)
- D (DON'T KNOW) (*SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i*)
- R (REFUSED) (*SKIP TO NEXT EQUIPMENT, IF NONE SKIP TO C6.7i*)

6.7h How do you know that this equipment is energy efficient? (PROBE: IS IT ENERGY STAR® RATED?)

(ASK NSP4-5 ONLY IF 6.7f = NO AND 6.7g = YES AND 6.7c = AFTER DATE OF PARTICIPATION)

NSP4 I'm going to read a statement about the energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.
My experience with the [utility] [program] in [2006, 2007, 2008] influenced my decision to install different types of high efficiency equipment on my own.

- (RECORD RESPONSE (0-10)) _____
- D (DON'T KNOW)
 - R (REFUSED)

NSP5 Why did you purchase this high efficiency equipment without going through a [utility] program? (DO NOT READ; INDICATE ALL THAT APPLY)

- 1. Too much paperwork
- 2. Takes too long to get approval
- 3. No time to participate, needed equipment immediately
- 4. The program had ended
- 5. The equipment would not qualify (PROBE: WHY NOT?) _____
- 6. The amount of the rebate wasn't important enough
- 7. Did not know program was available
- 8. There was no program available
- 9. Other (SPECIFY) _____
- D (DON'T KNOW)
- R (REFUSED)

(ASK C6.7i=c6.7m ONLY IF BILLING ANALYSIS BEING DONE)

C6.7i [IF FURNACE WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have gas or electric space heating?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

High Impact Measures – Pool Pump and Motors Survey Final

C6.7j [IF WATER HEATER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric water heater?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- D (DON'T KNOW)
- R (REFUSED)

C6.7k [IF CLOTHES DRYER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric clothes dryer?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

C6.7l [IF RANGE/OVEN WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] Do you have a gas or electric range/oven?

- 1 Gas
- 2 Electric
- 3 Both
- 4 Other (Specify) _____
- 7 None
- D (DON'T KNOW)
- R (REFUSED)

C6.7m [IF ROOM, CENTRAL AC, OR EVAPORATIVE COOLER WAS NOT REPLACED IN 6.7a OR THROUGH PROGRAM] What type of air conditioning system, if any, do you use in your home? (INDICATE ALL THAT APPLY)

- 1 Central air conditioner
- 2 Room/wall air conditioner
- 3 Evaporative cooler
- 4 Other (Specify) _____
- 9 None
- D (DON'T KNOW)
- R (REFUSED)

6.8a Do you receive an electric or natural gas bill directly from SDGE?

- 1 Yes
- 2 No (SKIP TO 6.9)
- D (DON'T KNOW) (SKIP TO 6.9)
- R (REFUSED) (SKIP TO 6.9)

High Impact Measures – Pool Pump and Motors Survey Final

6.8b Does this bill only include your home’s electric or natural gas use, or does it include the use of other households?

- 1 Only 1 household
- 2 Multiple households
- D (DON'T KNOW)
- R (REFUSED)

6.13 What is the primary language spoken in your home? (DO NOT READ; PROBE IF R SAYS CHINESE: Would this be Mandarin or Cantonese)

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 (OTHER, specify)
- D (DON'T KNOW)
- R (REFUSED)

On-site Recruiting (Section 7)

(RECRUIT FOR SINGLE AND MULTIPLE SPEED POOL PUMPS AND POOL PUMP RESET AGREEMENTS ONLY)

7.1 We would like to offer you \$25 to participate in the on-site component of this evaluation. We are NOT interested in selling anything. We would like to have one of our auditors visit your home at your convenience to look at the pool pump you installed through the program and how it/they are operating. The on-site visit would only take about 20 minutes. Would that be alright with you?

- 1 Yes→Great! Someone will give you a call back to determine when they can schedule an appointment with one of our auditors in your area. Thank you for your cooperation with this important effort.
- 2 No

Thank and Terminate

Onsite Verification Form - Single & Multi-Speed Pool Pumps & Motors (SDGE3024)

Pre Complete	Telephone Survey ID: Address 1: Address 2: City: State: CA Zip:	Primary Contact: Phone 1: Type Phone 2: Type Phone 3: Type Email:		Original Site Visit Date: / / Original Site Visit Time: : AM / PM New Confirmed Date: / / New Confirmed Time: : AM / PM Other: (No Answer, Refused Visit, Call Back - Note Date Time)	Confirmation Call
	Account Number: Install Date: / / Application ID: Quantity: Annual Savings: Measure Name: Alternate Contact:	Phone 1: Type Phone 2: Type Phone 3: Type Email:		Confirmation Call Date: / / Confirmation Call Time: : AM / PM NOTES:	
	NOTES: <div style="border: 1px solid black; height: 40px; width: 100%;"></div>				

Inspector Initials:	Inspection Date: / /	Inspection Time	Start: :	AM / PM	End: :	AM / PM
---------------------	----------------------------------------------------------------	-----------------	-------------------------------	---------	-----------------------------	---------

Units (Quant) Installed:	Units (Quant) Eligible:	Units Eligible and Operational:	Note: If quantities to left are greater than 1, question on additional should probably be "Y"
--------------------------	-------------------------	---------------------------------	-----------------------------------------------------------------------------------------------

Filter/Pump 1 Details

Location Pool/Spa 1: Make: Model: Model Number: Service Factor: Date Mfg: / / Amperage: Horsepower: VSD Setting: VSD Amps: Controller Make: Controller Model: Pump On / Off	Location Pool/Spa Filter/Pump 1:
------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-----------------------------------------

Filter/Pump Schedule							NOTES:
	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Start 1	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM
End 1	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM
Start 2	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM
End 2	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM
Start 3	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM
End 3	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM
Start 4	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM
End 4	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM
Total Run Time	: :	: :	: :	: :	: :	: :	: :

Pool Cover Present: Y / N	Pool Cover Type:	Pool Size (Gal):	In Ground: Y / N													
Dimensions Length:	Width:	Depth (Max):	Depth (Min):													
NOTES:				<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="2" style="text-align: center;">Spillover</th> </tr> <tr> <th style="width: 70%;">Name</th> <th>Efficiency Check</th> </tr> </thead> <tbody> <tr> <td>Measure 1:</td> <td></td> </tr> <tr> <td>Measure 2:</td> <td></td> </tr> <tr> <td>Measure 3:</td> <td></td> </tr> <tr> <td>Measure 4:</td> <td></td> </tr> </tbody> </table>	Spillover		Name	Efficiency Check	Measure 1:		Measure 2:		Measure 3:		Measure 4:	
Spillover																
Name	Efficiency Check															
Measure 1:																
Measure 2:																
Measure 3:																
Measure 4:																
Additional Pools/Spas/Pumps Present: Y / N ←																

Onsite Form For Multiple Pool Pumps & Motors

Additional Pools/Spas/Pumps

Location Pool/Spa 2:
Location Pool/Spa 3:

Location Pool/Spa Filter/Pump 2:
Location Pool/Spa Filter/Pump 3:

Filter/Pump 2 Details Affiliated with Pool/Spa 1 / 2 / 3

Make: _____ **Model:** _____ **Model Number:** _____ **Service Factor:** _____ **Date Mfg:** / /
Amperage: _____ **Horsepower:** _____ **VSD Setting:** _____ **VSD Amps:** _____ **Controller Make:** _____ **Controller Model:** _____ **Pump On / Off**

Filter/Pump Schedule

NOTES:

	<u>Monday</u>	<u>Tuesday</u>	<u>Wednesday</u>	<u>Thursday</u>	<u>Friday</u>	<u>Saturday</u>	<u>Sunday</u>	
Start 1	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	
End 1	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	
Start 2	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	
End 2	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	
Start 3	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	
End 3	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	
Start 4	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	
End 4	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	
Total Run Time	:	:	:	:	:	:	:	

Pool Cover Present: Y / N **Pool Cover Type:** _____ **Pool Size (Gal):** _____ **In Ground:** Y / N
Dimensions **Length:** _____ **Width:** _____ **Depth (Max):** _____ **Depth (Min):** _____

Filter/Pump 3 Details Affiliated with Pool/Spa 1 / 2 / 3

Make: _____ **Model:** _____ **Model Number:** _____ **Service Factor:** _____ **Date Mfg:** / /
Amperage: _____ **Horsepower:** _____ **VSD Setting:** _____ **VSD Amps:** _____ **Controller Make:** _____ **Controller Model:** _____ **Pump On / Off**

Filter/Pump Schedule

NOTES:

	<u>Monday</u>	<u>Tuesday</u>	<u>Wednesday</u>	<u>Thursday</u>	<u>Friday</u>	<u>Saturday</u>	<u>Sunday</u>	
Start 1	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	
End 1	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	
Start 2	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	
End 2	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	
Start 3	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	
End 3	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	
Start 4	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	
End 4	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	: AM / PM	
Total Run Time	:	:	:	:	:	:	:	

Pool Cover Present: Y / N **Pool Cover Type:** _____ **Pool Size (Gal):** _____ **In Ground:** Y / N
Dimensions **Length:** _____ **Width:** _____ **Depth (Max):** _____ **Depth (Min):** _____

Onsite Form For Multiple Pool Pumps & Motors

Appendix J – Downstream Lighting

J1 – Telephone Surveys

- DLP Lighting Exchange Codebook
- Downstream Lighting Survey
- Downstream Lighting MF Survey
- Multifamily Participant Survey

J2 – Data Collection Instruments

- VR1 Onsite Data Collection Form
- VR2 Site Visit Form

Downstream Lighting – Light Exchange Program Survey

- NOTES:**
1. Variable names are in bold type.
 2. A code of -8 means the respondent answered don't know.
 3. A code of -9 means the respondent refused to answer the question.
 4. Response categories are never read unless the question has an instruction to specifically read the response categories.
 5. Items with an "*" were created during coding.

Sample variables

CITY	City
ZIPCO	Zip/Postal Code
CADMUSID	Cadmus- assigned ID
CUSTID	Customer ID
UTILCODE	Utility code
CASEID	PA-assigned ID
MEASURE	Measure
QTY	Quantity received
PDATE	Date of participation
PMONTH	Month of participation
PYEAR	Year of participation
ACCT_NBR	Account number
SITE_NBR	Site number
PROGRAM	Program
PRODUCT	Product type

SECTION 1. PARTICIPANT RECALL OF MEASURE

PR1 Our records indicate that you exchanged [quantity] [product type] at a community event through [utility]'s [program]. Do you recall exchanging this/these?

- 1 Yes
- 2 No (*SKIP TO PR3*)
- 8 Don't know (*SKIP TO PR3*)
- 9 Refused

PR2 Is this the correct quantity?
(Provide again if necessary: [quantity] [product type])

- 1 Yes (*If quantity =1, SKIP TO IB1, otherwise SKIP to IB3*)
- 2 No (*SPECIFY QTY*)
(*If quantity =1, SKIP TO IB1, otherwise SKIP to IB3*)
- 8 Don't know
- 9 Refused

PR2_2 *Specify quantity*

[SEE RESPONSES LOCATED IN "DLP Light Exchange Open Ends.xls"]

PR3 [Utility] ran a program that allowed customers to exchange less efficient lighting fixtures and bulbs with energy efficient lighting at local community events. Does this sound more familiar?

- 1 No, I Don't Remember
- 2 Yes, I Remember, Great, then let's continue (*SKIP TO PR2*)
- 9 Refused

PR3b Is it possible that someone else in your household would know about the lighting you exchanged through [utility]'s light exchange program?

- 1 Yes
- 2 No (*TERMINATE*)
- 8 Don't know (*TERMINATE*)
- 9 Refused (*TERMINATE*)

PR4 May I please speak with that person?

- 1 Yes
(BEGIN SURVEY AGAIN WITH PERSON OR SCHEDULE CALL BACK)
- 2 No (*ATTEMPT TO RESCHEDULE OR TERMINATE*)
- 8 Don't know (*TERMINATE*)
- 9 Refused (*TERMINATE*)

SECTION 2. INSTALLATION BEHAVIOR

[IF [quantity]=1]

IB1 Next, I'm interested in what you did with the energy efficient lighting you received. Is the [product type] you received at the exchange currently installed at your home (either indoors or outdoors)?

- 1 Yes (*SKIP TO IB8*)
- 2 No
- 8 Don't know
(IF NO OTHER KNOWLEDGEABLE RESPONDENT, TERMINATE)
- 9 Refused
(IF NO OTHER KNOWLEDGEABLE RESPONDENT, TERMINATE)

[IF [quantity] = 1]

IB2 Which of the following best describes what happened with the lighting? Is it/has it been... (READ LIST AND RECORD ONE RESPONSE)

- 1 installed at some other location? (SKIP TO IB4)
- 2 permanently removed after having been installed?
(example: broke, burned out, didn't like it, etc.) (SKIP TO IB5)
- 3 in storage because it is only needed during certain months in the year? (SKIP TO IB7)
- 4 in storage for some other reason? (SKIP TO IB7)
- 5 sold or given away? (SKIP TO W1)
- 6 Something else (SPECIFY) (SKIP TO W1)
- 8 Don't know
- 9 Refused

IB2_6 Something else (SPECIFY)

[SEE RESPONSES LOCATED IN "DLP Light Exchange Open Ends.xls"]

(IF [quantity]>1)

IB3 I would like to understand what you did with the [quantity][product type] you received at the exchange. (READ LIST; RECORD NUMBER)

For IB3a through IB3g

- _____ Quantity
- 8 Don't know
- 9 Refused

IB3a How many are currently installed at your home (indoors or outdoors).
(IF RESPONSE = "All" SKIP TO IB8)

IB3b How many are installed at some other location?

IB3c How many were installed at your home (either indoors or outdoors) but are now permanently removed (e.g. broke, burned out, didn't like, etc.)
(IF RESPONSE = "All", SKIP TO IB5)

IB3d How many are in storage because they are only needed during certain months of the year? (IF RESPONSE = "All", SKIP TO IB7)

IB3e How many are in storage for some other reason?
(IF RESPONSE = "All", SKIP TO IB7)

IB3f How many were sold or given away?

IB3g Something else? (SPECIFY) (SKIP TO W1)

[SEE RESPONSES LOCATED IN "DLP Light Exchange Open Ends.xls"]

[Ask if IB2 = 1 or 5; IB3b>0 or IB3f>0]

IB4 Is the [product type]/Are these [product type] installed in [utility]'s territory?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused
- 3 Skip Error

[Ask if IB2 = 2; IB3c>0]

IB5 Now let's talk about the [measure](s) you said you installed but have since removed. Why were these/was this removed?
[DO NOT READ; RECORD ALL THAT APPLY]

For IB5_1 through IB5_13

- 0 Not mentioned
- 1 Mentioned

- IB5_1** Equipment failed - Burned out
- IB5_2** Didn't work properly
- IB5_3** Wrong size – too small or too large/didn't fit
- IB5_4** Didn't like the appearance
- IB5_5** Didn't like color of the light/made things look green...
- IB5_6** Not bright enough
- IB5_7** Made noise/buzzed
- IB5_8** Didn't work with dimmer switch
- IB5_9** Wasn't available in 3-way
- IB5_10** Took too long to start up
- IB5_11** Other (*SPECIFY*)
- IB5_12** Don't know
- IB5_13** Refused
- IB5_14*** Broke/burnt out

IB_11 Other (*SPECIFY*)

[SEE RESPONSES LOCATED IN "DLP Light Exchange Open Ends.xls"]

[Ask if IB2 = 2; IB3c>0]

IB6 What did you replace the [measure] with?
[DO NOT READ; PROBE FOR EFFICIENCY; RECORD ALL THAT APPLY]

For IB6_1 through IB6_7

- 0 Not mentioned
- 1 Mentioned

- IB6_1** With a new high efficiency light
- IB6_2** With a less efficient lighting product
- IB6_3** Re-installed previous lighting equipment
- IB6_4** Did not replace
- IB6_5** Other (*SPECIFY*)
- IB6_6** Don't know
- IB6_7** Refused

- IB6_5** Other (*SPECIFY*)

[SEE RESPONSES LOCATED IN "DLP Light Exchange Open Ends.xls"]

[Ask if IB2=3,4 or IB3d>0 or IB3e>0]

- IB7** For the [measure] in storage, when do you think you will install them?
Would you say within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

- 1 Within the next 3 months
- 2 3 to 6 months from now
- 3 6 to 12 months from now
- 4 More than a year from now
- 5 Never
- 8 Don't know
- 9 Refused

[Ask if IB1=1, or IB3a>0]

IB8 Where is the lighting you received through the exchange program installed in your residence?
(READ LIST IF NECESSARY; FILL IN WITH QUANTITY)

For IB8_1 through IB8_14

0 Not mentioned
1 Mentioned
-3 Skip Error

- IB8_1 Living/Family Room
- IB8_2 Dining Room
- IB8_3 Kitchen
- IB8_4 Bedrooms
- IB8_5 Bathrooms
- IB8_6 Closets
- IB8_7 Hallways
- IB8_8 Attic
- IB8_9 Basement
- IB8_10 Garage
- IB8_11 Outside/Yard
- IB8_12 Other (SPECIFY)
- IB8_13 Don't know
- IB8_14 Refused

For IB8a through IB8l

_____ Quantity
-3 Skip Error

- IB8a Living/Family Room
- IB8b Dining Room
- IB8c Kitchen
- IB8d Bedrooms
- IB8e Bathrooms
- IB8f Closets
- IB8g Hallways
- IB8h Attic
- IB8i Basement
- IB8j Garage
- IB8k Outside/Yard
- IB8l Other (SPECIFY)

[SEE RESPONSES LOCATED IN "DLP Light Exchange Open Ends.xls"]

IB8_12 Other (SPECIFY)

[SEE RESPONSES LOCATED IN "DLP Light Exchange Open Ends.xls"]

SECTION 3. FREE-RIDERSHIP AND SPILLOVER

W1 Please think back to the time when you were deciding to exchange your lighting, perhaps recalling things that occurred in your household shortly before and after [timeframe]. What factors motivated you to exchange your lighting fixture?
[DO NOT READ; INDICATE ALL THAT APPLY; ONCE THEY RESPONDENT HAS FINISHED, PROBE: Are there any other factors?]

For W1_1 through W1_21

- 0 Not mentioned
- 1 Mentioned

- W1_1 Old equipment (light fixture) didn't work
- W1_2 Old equipment (light fixture) working poorly
- W1_3 The program incentive
- W1_4 The program technical assistance
- W1_5 Wanted to save energy
- W1_6 Wanted to reduce energy costs
- W1_7 The information provided by the Program
- W1_8 Past experience with this program
- W1_9 Because of past experience with another [utility] program
- W1_10 Recommendation from other utility program (*Probe: What program?*)
- W1_11 Recommendation of dealer/retailer
- W1_12 Recommendation of someone else (*Probe: Who?*)
- W1_13 Advertisement in newspaper (*Probe: For what program?*)
- W1_14 Radio advertisement (*Probe: For what program?*)
- W1_15 Other (*SPECIFY*)
- W1_16 Environmental concerns
- W1_17 Global warming
- W1_18 Liked the appearance of the [measure] more than the old one
- W1_19 Keeping up with the latest trends and fashions
- W1_20 Don't know
- W1_21 Refused

W1_10 Recommendation from other utility program (*Probe: What program?*)
[SEE RESPONSES LOCATED IN "DLP Light Exchange Open Ends.xls"]

W1_12 Recommendation of someone else (*Probe: Who?*)
[SEE RESPONSES LOCATED IN "DLP Light Exchange Open Ends.xls"]

W1_13 Advertisement in newspaper (*Probe: For what program?*)
[SEE RESPONSES LOCATED IN "DLP Light Exchange Open Ends.xls"]

W1_14 Radio advertisement (*Probe: For what program?*)
[SEE RESPONSES LOCATED IN "DLP Light Exchange Open Ends.xls"]

W1_15 Other (*SPECIFY*)
[SEE RESPONSES LOCATED IN "DLP Light Exchange Open Ends.xls"]

W2 Is this [product type] the first you have ever had in your [home/business]?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

W2a Did you get the [measure] to replace an existing [product type]?

- 1 Yes
- 2 No (*SKIP TO FR1*)
- 8 Don't know (*SKIP TO FR1*)
- 9 Refused (*SKIP TO FR1*)

(IF MEASURE IS CFL)

W3 What type of light bulb did this replace?

- 1 Incandescent
- 2 CFL
- 3 Other (*SPECIFY*)
- 8 Don't know
- 9 Refused

W3_3 Other (*SPECIFY*)
[SEE RESPONSES LOCATED IN "DLP Light Exchange Open Ends.xls"]

(IF MEASURE IS NOT A CFL)

W4 About how old was the light fixture you replaced?
(READ CATEGORIES IF NEEDED)

- 1 Less than 5 years old
- 2 5 to less than 10 years old
- 3 10 to less than 20 years old
- 4 20 years to less than 30 years old
- 5 30 or more years old
- 8 Don't know
- 9 Refused

W5 Was the old light working or not working?

- 1 Working
- 2 Not working (SKIP TO FR1)
- 8 Don't know (SKIP TO FR1)
- 9 Refused (SKIP TO FR1)

W6 Was the old light in good, fair, or poor working condition?

- 1 Good
- 2 Fair
- 3 Poor
- 8 Don't know
- 9 Refused

Free-Ridership Questions

FR1 At the time that you first heard about the light exchange from [utility], had you...? (READ LIST UNTIL RESPONDENT SAYS 'NO')

For FR1_1 through FR1_4

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

FR1_1 Already been thinking about purchasing [a/an] [product type]?
(IF NO, SKIP TO FR2)

FR1_2 Already begun collecting information about [product type]?
(IF NO, SKIP TO FR2)

FR1_3 (ASK ONLY IF MEASURE = LIGHT FIXTURE) Already selected the [measure] you were going to get? (IF NO, SKIP TO FR2)

- FR1_4¹** Already installed?
- FR1b²** So the [measure] was already installed before you learned about the [program] from [utility]? **
- 1 Yes (*Skip to FR5*)
- 2 No
- 8 Don't know
- 9 Refused
- FR2** Just to be sure I understand, did you have specific plans to install a(n) [product type] before learning about the light exchange available through [utility]?
- 1 Yes
- 2 No (*Skip to FR4*)
- 8 Don't know (*Skip to FR4*)
- 9 Refused (*Skip to FR4*)
- FR3** Did you have to make any changes to your existing plans in order to participate in the light exchange?
- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused
- FR4** If the light exchange from [utility] had not been available, would you still have:
- FR4A** Purchased a [product type]?
- 1 Yes
- 2 No (*Skip to FR5*)
- 8 Don't know
- 9 Refused
- FR4B** Purchased the [product type] at the same time as you exchanged a light from the light exchange?
- 1 Yes (*SKIP TO FR4C*)
- 2 No
- 8 Don't know (*SKIP TO FR4C*)
- 9 Refused (*SKIP TO FR4C*)

¹ This question was removed mid-field. The skip pattern may affect some cases.

² This question was removed mid-field. The skip pattern may affect some cases.

FR4B1 Bought the [product type] earlier than you did, or later?

- 1 Earlier
- 2 Same Time (*REPEAT QUESTION FR4B*)
- 3 Later
- 8 Don't know (*SKIP TO FR4C*)
- 9 Refused (*SKIP TO FR4C*)

FR4B2 How much [FR4B1: earlier/later] would you have bought the [product type]?

- _____ Years
- 8 Don't know
- 9 Refused

FR4B2m (and/or) _____ Months

- 8 Don't know
- 9 Refused

(IF EXCHANGED MULTIPLE UNITS THROUGH THE PROGRAM)

FR4C Without the program, would you have purchased the same quantity as you received through the exchange?

- 1 Yes (*Skip to FR4d*)
- 2 No
- 8 Don't know (*Skip to FR4d*)
- 9 Refused (*Skip to FR4d*)

FR4C1 How many/much would you have purchased without the program?

- _____ Record number
- 8 Don't know
- 9 Refused

[IF PURCHASED AMOUNT IS GREATER THAN SAMPLE QUANTITY]

FR4C2 Let me make sure I understand. You said you would have purchased more [product type] if you hadn't participated in the program. Why would you have purchased a greater number of [product type] if you hadn't participated in the program?

[SEE RESPONSES LOCATED IN "DLP Light Exchange Open Ends.xls"]

FR4D Purchased the same efficiency of [product type]?

- 1 Yes
- 2 No
- 8 Don't know
- 9 Refused

FR4E If the [utility] light exchange program had not been available, would you have done anything else differently?

- 1 Yes
- 2 No (*Skip to FR5*)
- 8 Don't know (*Skip to FR5*)
- 9 Refused (*Skip to FR5*)

FR4E1 What would you have done differently?

[SEE RESPONSES LOCATED IN "DLP Light Exchange Open Ends.xls"]

FR5 On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same [measure] if you had not received one through the light exchange program?

- _____ (RECORD RESPONSE (0-10))
- 8 Don't know
- 9 Refused

I'm going to read several statements about your participation in the program. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR9 If I had not had any assistance from the program, I would have bought the [measure] on my own?

_____ (RECORD RESPONSE (0-10))
-8 Don't know
-9 Refused

FR11 On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with the following statement: I would have bought a(n) [measure] within a year of when I did even without the free light from the [utility] light exchange program.

_____ (RECORD RESPONSE (0-10))
-8 Don't know
-9 Refused

Consistency Check & Resolution

(C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

FR4A (efficiency enhancement measures) OR FR4D (incremental efficiency measures)
FR5
FR11

*(IF FR4A/D = 1 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would have purchased the [measure] without the program')*

*(IF FR4A/D = 2 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would not have purchased the [measure] without the program')*

*(IF FR5 = 0,1 AND FR4A/D = 1 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would likely not have purchased the [measure] without the program')*

*(IF FR5 = 9,10 AND FR4A/D = 2 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would likely have purchased the [measure] without the program')*

*(IF FR4A/D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program')*

*(IF FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program')*

*(IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would have bought the [product type] within a year even without the program')*

*(IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would not have bought the [product type] within a year even without the program')*

C1 Let me make sure I understand you. Earlier, you said [fill with inconsistency 1], but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the [measure] at the time you did? (RECORD VERBATIM RESPONSE BELOW)

[SEE RESPONSES LOCATED IN "DLP Light Exchange Open Ends.xls"]

LSP1 Since you received a free light through the light exchange program have you purchased and installed any efficient lighting on your own without any assistance from [utility] or another utility program?

- 1 Yes, only at this home
- 2 No (SKIP TO Q5_3)
- 8 Don't know (SKIP TO Q5_3)
- 9 Refused (SKIP TO Q5_3)

LSP2 How many more high efficiency lighting products did you buy on your own, compared to what you got through the program? (PROBE FOR PERCENT OR SHARE OF PROGRAM EQUIPMENT. READ THE FOLLOWING IF NEEDED) For example, was it about one-fourth (25%) of what you installed through the program, one-half (50%) of what you installed through the program, the same amount as what you installed through the program (100%), twice as much as what you installed through the program (200%), or some other amount?

- _____ % at this home
- 8 Don't know
- 9 Refused

LSP3cfl, LSP3fix

I'm going to read a statement about the equipment that you purchased on your own, without any assistance from your utility. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement

My experience with the [measure] installed through the light exchange program in [timeframe] influenced my decision to install more high efficiency lighting on my own.

- _____ (RECORD RESPONSE (0-10))
- 8 Don't know
- 9 Refused

SECTION 4. RECENT PROGRAM PARTICIPATION

Q5_3 Have you participated in any other programs offered by [utility] because of your experience with the Light Exchange Program?

- 1 Yes
- 2 No (*SKIP TO Q5_5*)
- 8 Don't know (*SKIP TO Q5_5*)
- 9 Refused (*SKIP TO Q5_5*)

Q5_4 Which programs?

[SEE RESPONSES LOCATED IN "DLP Light Exchange Open Ends.xls"]

Q5_5 Which of the following phrases or messages have you heard before today? (*ROTATE STARTING POINT*)

For Q5_5a through Q5_5k

- 1 Yes
- 2 No
- 8 Don't Know
- 9 Refused

- Q5_5a** ENERGY STAR®
- Q5_5b** Don't Trash California
- Q5_5c** Energy Hog
- Q5_5d** Click it or Ticket
- Q5_5e** Flex Your Power
- Q5_5f** Flex Alert
- Q5_5g** Spare the Air
- Q5_5h** Good Housekeeping
- Q5_5i** Ahnu ("A – new)
- Q5_5j** Galley Bay
- Q5_5k** Hollister Co



SECTION 5. DEMOGRAPHIC QUESTIONS

Q6_1 The last questions ask about household characteristics to make sure we're getting a representative sample of [utility] residents.

Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other (*SPECIFY*)
- 8 Don't know
- 9 Refused

Q6_1_3 Other (*SPECIFY*)

[SEE RESPONSES LOCATED IN "DLP Light Exchange Open Ends.xls"]

Q6_2 In what type of building do you live? (*READ LIST IF NEEDED*)
(*PROBE FOR 'Condo': "How many units are in your building?"*)

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Other (*SPECIFY*)
- 8 Boat/RV/Van/Etc.
- 8 Don't know
- 9 Refused

Q6_2_7 Other (*SPECIFY*)

[SEE RESPONSES LOCATED IN "DLP Light Exchange Open Ends.xls"]

Q6_3 About when was this building first built? (*READ LIST IF NEEDED*)

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 7 Other (*SPECIFY*)
- 8 Don't know
- 9 Refused

Q6_3_7 Other (*SPECIFY*)

[SEE RESPONSES LOCATED IN "DLP Light Exchange Open Ends.xls"]

Q6_8a Do you receive an electric bill directly from [utility]?

- 1 Yes
- 2 No (*SKIP TO Q6_13*)
- 8 Don't know (*SKIP TO Q6_13*)
- 9 Refused (*SKIP TO Q6_13*)

Q6_8b Does this bill only include your home's electric use, or does it include the electric use of other households?

- 1 Only 1 household
- 2 Multiple households
- 8 Don't know
- 9 Refused

Q6_13 What is the primary language spoken in your home? (*DO NOT READ*)

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 Other (*SPECIFY*)
- 8 Don't know
- 9 Refused

Q6_13_10 Other (*SPECIFY*)

[SEE RESPONSES LOCATED IN "DLP Light Exchange Open Ends.xls"]

COMMENTS Those are all of my questions. Do you have any questions or comments for me?

- 1 Yes
- 2 No

Downstream Lighting – Light Exchange Program

Hello, my name is [interviewer name], and I'm calling on behalf of the California Public Utilities Commission regarding [utility]'s light exchange program. May I speak with [CONTACT NAME]?

1 Yes

2 No [Attempt to get respondent; if respondent not available, ask if anyone else at the establishment makes energy decisions for the common and unit living areas.]

I am calling to learn about your experiences with [measure] you received as part of [utility]'s light exchange program. I'm not selling anything; I'd just like to ask your opinion about this program. I can assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

Potential Questions

Who is doing this study? The California Public Utilities Commission, which regulates the utilities and is overseeing evaluations of most of California's energy efficiency programs.

Why are you conducting this study? Studies like this help the State of California and the electric and gas utilities better understand customers' need for and interest in energy programs and services.

I don't want to buy anything. I am not selling anything. I would simply like to learn about your experience with the [LIGHTING MEASURE] you purchased and received a rebate through the program.

CONTACT for CPUC?

[Contact name]

First name

[product type]

Light bulb

Light bulbs

Light fixture

Light fixtures

[measure]

Energy efficient fixture

CFL

[utility]

SCE

SDG&E

[quantity]

of light bulbs or light fixtures

[program]

??? specific name? I'm just generically referring to the programs as [utility]'s light exchange program

Section 1. Participant Recall of Measure

PR1. Program records indicate that you exchanged [quantity] [product type] at a community event through [utility]'s light exchange program. Do you recall exchanging these?

- 1. Yes
- 2. No
- D (Don't Know) (Skip to PR3)
- R (Refused)

PR2. Is this the correct quantity? (provide again if necessary: [quantity])

- 1 Yes
- 2 No (SPECIFY QTY _____)
- D
- R

PR3. [ASK IF DOESN'T RECALL LIGHT EXCHANGE] Is it possible that someone else in your household would know about the lighting you exchanged through [utility]'s light exchange program?

- 1 Yes (Skip to IB1 if [quantity]=1 else skip to IB3 if [quantity]>1)
- 2 No
- D (Don't Know)
- R (Refused) (TERMINATE)

PR3b. [Utility] ran a program that allowed customers to exchange less efficient lighting with energy efficient lighting. Are you sure you don't recall exchanging [product type] for a more energy efficient product?

- 1 Don't Remember (TERMINATE AND RECORD ANY COMMENTS MADE BY RESPONDENT)
- 2 Remember → Great, then let's continue (Skip to IB1)
- R (Refused) (TERMINATE)

PR4. May I please speak with that person?

- 1 Yes (BEGIN SURVEY AGAIN WITH PERSON OR SCHEDULE CALL BACK)
- 2 No (TERMINATE)
- D (Don't Know) (TERMINATE)
- R (Refused) (TERMINATE)

Section 2. Installation Behavior

IB1. [If [quantity]=1] Next, I'm interested in what you did with the energy efficient lighting. Is the [product type] you received at the exchange currently installed at your home (either indoors or outdoors)?

- 1 Yes (Skip to IB8)
- 2 No
- D (Don't Know) (IF NO OTHER KNOWLEDGEABLE RESPONDENT, TERMINATE)
- R (Refused) (IF NO OTHER KNOWLEDGEABLE RESPONDENT, TERMINATE)

IB2. [If [quantity] = 1] Which of the following best describes what happened with the lighting? (READ LIST AND RECORD ONE RESPONSE)

- 1 It is installed at some other location
- 2 It was installed but was permanently removed (example: broke, burned out, didn't like it, etc.) (Skip to IB5)
- 3 It is in storage because it is only needed during certain months in the year
- 4 It is in storage for some other reason
- 5 It was sold or given away
- 6 Something else SPECIFY _____
- D (Don't Know)
- R (Refused)

IB3. (If [quantity]>1) Now, I would like to understand what you did with the [quantity][product type] you received at the exchange. (READ LIST; RECORD NUMBER)

- a. ____ How many are currently installed at your home (indoors or outdoors). (IF RESPONSE = "ALL" or [quantity] SKIP TO IB8)
- b. ____ How many are installed at some other location?
- c. ____ How many were installed at your home (either indoors or outdoors) but are now permanently removed (e.g. broke, burned out, didn't like, etc.) (Skip to IB5)
- d. ____ How many are in storage because they are only needed during certain months of the year? (Skip to IB7)
- e. ____ How many are in storage for some other reason? (Skip to IB7)
- f. ____ How many were sold or given away?
- g. ____ Something else? SPECIFY _____ (Skip to W1)
- D (Don't Know)

[Ask if IB2 = 1 or 5; IB3b>0; IB3f>0]

IB4. Is the [product type]/Are these [product type] installed in [utility]'s territory?

- 1 Yes
- 2 No
- D (Don't Know)
- R (Refused)

[Ask if IB2 = 2; IB3c>0]

IB5. Now let's talk about the [product type] you said you installed but have since removed. Why were these removed? [DO NOT READ; RECORD ALL THAT APPLY]

- 1 (Equipment failed)
- 2 (Didn't work properly)
- 3 (Wrong size – too small or too large)
- 4 (Didn't like the appearance)

5 (Other) SPECIFY _____
D (Don't Know)
R (Refused)

IB6. What did you replace the [product type] with? [DO NOT READ; PROBE FOR EFFICIENCY; RECORD ALL THAT APPLY]

1 (With a new high efficiency light)
2 (With a less efficient lighting product)
3 (Re-installed previous lighting equipment)
4 (Did not replace)
5 (Other) SPECIFY _____
D (Don't Know)
R (Refused)

[Ask if IB3d>0 or IB3e>0]

IB7. For the [product type] in storage, when do you think you will install them? Would you say within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

1 Within the next 3 months
2 3 to 6 months from now
3 6 to 12 months from now
4 More than a year from now
5 Never
D (Don't Know)
R (Refused)

IB8. Where is the lighting you received through the exchange program installed in your residence?
(READ LIST IF NECESSARY; FILL IN WITH QUANTITY)

____ Living/Family Room
____ Dining Room
____ Kitchen
____ Bedrooms
____ Bathrooms
____ Closets
____ Hallways
____ Attic
____ Basement
____ Garage
____ Outside/Yard
____ Other SPECIFY _____
D (Don't Know)
R (Refused)

(AMOUNT MUST TOTAL TO NUMBER INSTALLED)

Section 3: Free-ridership and Spillover

W1. Please think back to the time when you were deciding to exchange your lighting fixture, perhaps recalling things that occurred in your household shortly before and after [timeframe]. What factors motivated you to exchange your lighting fixture)? [DO NOT READ; INDICATE ALL THAT APPLY; ONCE THEY RESPONDENT HAS FINISHED, PROBE: Are there any other factors?]

1. Old equipment (light fixture) didn't work
2. Old equipment (light fixture) working poorly
3. The program incentive
4. The program technical assistance
5. Wanted to save energy
6. Wanted to reduce energy costs
7. The information provided by the Program
8. Past experience with this program
9. Because of past experience with another [utility] program
10. Recommendation from other utility program (Probe: What program? _____)
11. Recommendation of dealer/retailer
12. Recommendation of someone else (Probe: Who? _____)
13. Advertisement in newspaper (Probe: For what program? _____)
14. Radio advertisement (Probe: For what program? _____)
15. Other (SPECIFY)
16. Environmental concerns
17. Global warming
18. Liked the appearance of the [measure] more than the old one
19. Keeping up with the latest trends and fashions
- D (Don't know)
- R (Refused)

W2a. Did you get the [measure] to replace an existing light?

1. Yes (SKIP TO W3)
2. No
- D. (Don't know) (SKIP TO FR1)
- R. (Refused) (SKIP TO FR1)

W2c. Is this [measure] the first you have ever had in your [home/business]?

1. Yes (SKIP TO FR1)
2. No (SKIP TO FR1)
- D. (Don't know) (SKIP TO FR1)
- R. (Refused) (SKIP TO FR1)

W3. What type of lighting did this replace? (DO NOT READ)

1. (Incandescent)
2. (CFL)
3. (Other) SPECIFY _____
- D (Don't know)
- R (Refused)

W4. (IF MEASURE IS A LIGHT FIXTURE) About how old was the light fixture you replaced? (READ CATEGORIES IF NEEDED)

1. Less than 5 years old
2. 5 to less than 10 years old
3. 10 to less than 20 years old
4. 20 years to less than 30 years old
5. 30 or more years old
- D DON'T KNOW
- R REFUSED

W5. Was the old light working or not working?

1. Working
2. Not working (SKIP TO FR1)
- D DON'T KNOW (SKIP TO FR1)
- R REFUSED (SKIP TO FR1)

W6. Was the old light in good, fair, or poor working condition?

1. Good
2. Fair
3. Poor
- D DON'T KNOW
- R REFUSED

Free-Ridership Questions

FR1. At the time that you first heard about the light exchange from [utility], had you...? (READ LIST UNTIL RESPONDENT SAYS 'NO')

1. Already been thinking about purchasing [a/an] [measure]? (IF NO, SKIP TO FR2)
2. Already begun collecting information about [measure]? (IF NO, SKIP TO FR2)
3. (ASK ONLY IF MEASURE = LIGHT FIXTURE) Already selected the light fixture you were going to get? (IF NO, SKIP TO FR2)

- 5. (Other) SPECIFY _____ (SKIP TO FR2)
- D (Don't Know) (SKIP TO FR2)
- R (Refused) (SKIP TO FR2)

FR2. Just to be sure I understand, did you have specific plans to install an energy efficient light before learning about the light exchange available through [utility]?

- 1. Yes
- 2. No (SKIP TO FR4)
- D DON'T KNOW (SKIP TO FR4)
- R REFUSED (SKIP TO FR4)

FR3. Did you have to make any changes to your existing plans in order to participate in the light exchange?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4. If the light exchange from [utility] had not been available, would you still have:

FR4A. Purchased a [product type]?

- 1. Yes
- 2. No (SKIP TO FR5)
- D DON'T KNOW
- R REFUSED

FR4B. Purchased the [product type] at the same time as you did?

- 1. Yes (SKIP TO FR4C)
- 2. No
- D DON'T KNOW (SKIP TO FR4C)
- R REFUSED (SKIP TO FR4C)

FR4B1. Bought the [product type] earlier than you did, or later?

- 1. Earlier
- 2. Same Time (REPEAT QUESTION FR4B)
- 3. Later
- D DON'T KNOW (SKIP TO FR4C)
- R REFUSED (SKIP TO FR4C)

FR4B2. How much [FR4B1: earlier/later] would you have bought the [product type]?

- _____ Years (AND/OR) _____ Months
- D DON'T KNOW

R REFUSED

FR4C. (IF EXCHANGED MULTIPLE UNITS THROUGH THE PROGRAM) Without the program, would you have exchanged the same quantity as you did?

- 1. Yes (SKIP TO FR4D)
- 2. No
- D DON'T KNOW (SKIP TO FR4D)
- R REFUSED (SKIP TO FR4D)

FR4C1. How many/much would you have purchased without the program?

_____ (RECORD NUMBER)

- D DON'T KNOW
- R REFUSED

FR4D. Purchased the same efficiency of [product type]?

- 1. Yes
- 2. No
- D DON'T KNOW
- R REFUSED

FR4E. If the [utility] light exchange program had not been available, would you have done anything else differently?

- 1. Yes
- 2. No (SKIP TO FR5)
- D DON'T KNOW (SKIP TO FR5)
- R REFUSED (SKIP TO FR5)

FR4E1 What would you have done differently?

(RECORD RESPONSE): _____

FR5. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same [measure] if you had not received one from the light exchange program?

(RECORD RESPONSE (0-10)) _____ (SKIP TO FR7)

- D DON'T KNOW (SKIP TO FR7)
- R REFUSED (SKIP TO FR7)

FR11. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with the following statement: I would have bought a(n) [measure] within a year of when I did even without the free light from the [utility] light exchange program.

(RECORD RESPONSE (0-10)) _____

D DON'T KNOW

R REFUSED

Consistency Check & Resolution

(C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

FR4A (efficiency enhancement measures) OR FR4D (incremental efficiency measures)

FR5

FR11

(IF FR4A/D = 1 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the [measure] without the program')

(IF FR4A/D = 2 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would not have purchased the [measure] without the program')

(IF FR5 = 0,1 AND FR4A/D = 1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the [measure] without the program')

(IF FR5 = 9,10 AND FR4A/D = 2 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the [measure] without the program')

(IF FR4A/D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program')

(IF FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program')

(IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have bought the [product type] within a year even without the program')

(IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would not have bought the [product type] within a year even without the program')

C1. Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **[measure]** at the time you did? **(RECORD VERBATIM RESPONSE BELOW)**

C2. **[fill with wording and response categories to the one question which was inconsistent]**
(INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE)

Participant Like and Unlike Spillover Questions

LSP1. Since you received **a free light** through the light exchange program have you purchased and installed any efficient lighting on your own without any assistance from **[utility]** or another utility program

- 1. Yes, only at this home
- 2. Yes, only at other locations
- 3. Yes, at this facility and other locations
- 4. No **(SKIP TO 5.3)**
- D DON'T KNOW **(SKIP TO 5.3)**
- R REFUSED **(SKIP TO 5.3)**

LSP2. How many more high efficiency lighting products did you buy on your own, compared to what you got through the program?
(PROBE FOR PERCENT OR SHARE OF PROGRAM EQUIPMENT. READ THE FOLLOWING IF NEEDED) For example, was it about one-fourth (25%) of what you installed through the program, one-half (50%) of what your installed through the program, the same amount as what you installed though the program (100%), twice as much as what you installed through the program (200%), or some other amount?

- _____ % at this home/facility
- _____ % at another facility **(SMALL COMMERCIAL ONLY)**
- D DON'T KNOW
- R REFUSED

LSP3. I'm going to read a statement about the equipment that you purchased on your own, without any assistance from your utility. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement

My experience with the **[measure]** installed through the **light exchange program** in **[2006, 2007, 2008]** influenced my decision to install more high efficiency lighting on my own.

(RECORD RESPONSE (0-10)) _____

D DON'T KNOW

R REFUSED

Downstream Lighting – Multifamily Lighting Measures: Interior Fixtures, Outdoor Fixtures, Linear Fluorescent, and Interior CFL

Hello, my name is [interviewer name], and I'm calling on behalf of the California Public Utilities Commission regarding [program]. May I speak with [Contact Name]?

1 Yes

2 No [Attempt to get respondent; if respondent not available, ask if anyone else at the establishment makes energy decisions for the common and unit living areas.]

I am calling to learn about your experiences with the [measures] you purchased and the rebate you received from [utility]. I'm not selling anything; I'd just like to ask your opinion about this program. I can assure you that your responses will be kept confidential and your individual responses will not be revealed to anyone.

Potential Questions

Who is doing this study? The California Public Utilities Commission, which regulates the utilities and is overseeing evaluations of most of California's energy efficiency programs.

Why are you conducting this study? Studies like this help the State of California and the electric and gas utilities better understand customers' need for and interest in energy programs and services.

If accused of sales call. I am not selling anything. I would simply like to learn about your experience with the [measures] you purchased and received a rebate through the program.

CONTACT for CPUC?

Database References/Piping

[program]

Multifamily Rebate Program

[Contact Name]

Applicant's first name

[product type]

Light bulbs

Light fixtures

Light bulbs and fixtures

[measures]

Energy efficient indoor fixtures

Energy efficient outdoor fixtures

Linear fluorescents

CFLs

Energy efficient fixtures and linear fluorescents

Energy efficient fixtures and CFLs
Energy efficient fixtures, linear fluorescents, and CFLs
Linear fluorescents and CFLs

[measure#] (where # =1-4)

Indoor light fixtures
Outdoor light fixtures
Linear fluorescent bulbs
CFLs

[quantity#] (where #=1-4)
(of each measure)?

[utility]

PG&E
SCE
SDG&E

[incentive]

\$ amount

[timeframe]

Mo/year?

Year?

Section 1. Participant Recall

PR1. According to our records, we show that you installed [measures] in [timeframe] as part of [utility]'s [program]. Is that correct?

1 Yes

2 No SPECIFY _____

3 (Don't Know) [Where do we send these people? Should we terminate?]

PR2. We also show you installed the following quantities of each lighting type:

Type	Quantity
[measure1]	[quantity1]
[measure2]	[quantity2]
[measure3]	[quantity3]
[measure4]	[quantity4]

Is this the correct quantity/Are these the correct quantities?

1 Yes

2 No SPECIFY CORRECT QUANTITY _____

D (Don't Know)

R (Refused)

Section 2. Installation Behavior

[Ask Section 2 questions for each measure. Max of four times/measures possible.]

IB1. Now I would like to understand what you did with the lighting products you received.
(If Respondent has more than one lighting measure) I'm going to ask about each of the different lighting types you received.
For the [quantity#][measure#].... {READ LIST; RECORD NUMBER}

- a. ____ How many are currently installed at the [address] location. (IF RESPONSE = "ALL" or [quantity#] SKIP TO W1)
- b. ____ How many are installed at some other location?
- c. ____ How many were installed at this location (either indoors or outdoors) but are now permanently removed (e.g. broke, burned out, didn't like, etc.)
- d. ____ How many are in storage because they are only needed during certain months of the year?
- e. ____ How many are in storage for some other reason?
- f. ____ How many were sold or given away?
- g. ____ Something else? SPECIFY _____

(Ask if IB1b>0)

IB2. Are these [measure#] installed in [utility]'s territory?

- 1 Yes
- 2 No
- D (Don't Know)
- R (Refused)

(Ask if IB1c>0)

IB3. Now let's talk about the [measure#] you said you installed but have since removed. Why were these removed? {DO NOT READ; RECORD ALL THAT APPLY}

- 1 (Equipment failed)
- 2 (Didn't work properly)
- 3 (Wrong size – too small or too large)
- 4 (Didn't like the appearance)
- 5 (Other) SPECIFY _____
- D (Don't Know)
- R (Refused)

IB4. What did you replace the [measure#] with? {DO NOT READ; PROBE FOR EFFICIENCY; RECORD ALL THAT APPLY}

- 1 (With a new high efficiency light)
- 2 (With a less efficient lighting product)
- 3 (Re-installed previous lighting equipment)
- 4 (Did not replace)

5 (Other) SPECIFY _____
D (Don't Know)
R (Refused)

(Ask if IB1d>0 or IB1e>0)

IB5. For the [measure#] in storage, when do you think you will install them? Would you say within the next 3 months, 3 to 6 months from now, 6 to 12 months from now, more than a year from now, or never?

1 Within the next 3 months
2 3 to 6 months from now
3 6 to 12 months from now
4 More than a year from now
5 Never
D (Don't Know)
R (Refused)

IB6. Were the [measure#] installed in... {READ LIST}

1 Common Areas
2 Tenant Units
3 Common Areas and Tenant Units
4 Other SPECIFY _____
D (Don't Know)
R (Refused)

IB7. Approximately what percent were installed in common areas?

_____%
D (Don't Know) (Prompt if don't know; e.g. "Your best guess is fine.")
R (Refused)

[Should we ask about rooms/spaces lighting installed? I didn't include it because it would be a messy question with the multifamily respondents. I'm including it in the other two though.]

Section 3: Free-ridership and Spillover

[Asking free-ridership and spillover questions for aggregate measures (not specifically CFLs, linear fluorescents, fixtures), to prevent respondent fatigue...and lighting measures are all pretty similar.]

Now I have a few questions regarding your decision to purchase the lighting products.

W1. Please think back to the time when you were deciding to buy the energy efficient lights, perhaps recalling things that occurred shortly before and after [timeframe] when you installed the lights. What factors motivated you to purchase energy saving lighting equipment? {DO NOT READ; INDICATE ALL THAT APPLY; ONCE THEY RESPONDENT HAS FINISHED, PROBE: Are there any other factors?}

1. (Old equipment didn't work)
 2. (Old equipment working poorly)
 3. (The program incentive)
 4. (The program technical assistance)
 5. (Wanted to save energy)
 6. (Wanted to reduce energy costs)
 7. (The information provided by the Program)
 8. (Past experience with this program)
 9. (Because of past experience with another [utility] program)
 10. (Recommendation from other utility program) (Probe: What program? _____)
 11. (Recommendation of dealer/retailer)
 12. (Recommendation of someone else) (Probe: Who? _____)
 13. (Advertisement in newspaper) (Probe: For what program? _____)
 14. (Radio advertisement) (Probe: For what program? _____)
 15. (Other) SPECIFY _____
 16. (Environmental concerns)
 17. (Global warming)
 18. (Liked the appearance of the energy efficient light more than the old one)
 19. (Keeping up with the latest trends and fashions)
- D (Don't Know)
- R (Refused)

W2a. Did you get the energy efficient lights to replace existing lights?

1. Yes {SKIP TO W3}
2. No
- D (Don't Know) (SKIP TO FR1)
- R (Refused) (SKIP TO FR1)

W2b. Did you get the energy efficient lights because you wanted to add another fixture or more lighting to tenant or common area spaces?

1. Yes (SKIP TO FR1)
2. No
- D. (Don't Know) (SKIP TO FR1)
- R. (Refused) (SKIP TO FR1)

W2c. Are these the first energy efficient lights you have ever installed at this location?

1. Yes (SKIP TO FR1)
2. No (SKIP TO FR1)
- D. (Don't Know) (SKIP TO FR1)
- R. (Refused) (SKIP TO FR1)

W3. What type of lighting did this replace? {DO NOT READ}

1. Incandescent
2. CFL
3. Other (SPECIFY) _____
- D (Don't Know)
- R (Refused)

W4. {IF MEASURE NOT CFL} About how old was the light you replaced? {READ CATEGORIES IF NEEDED}

1. Less than 5 years old
2. 5 to less than 10 years old
3. 10 to less than 20 years old
4. 20 years to less than 30 years old
5. 30 or more years old
- D (Don't Know)
- R (Refused)

W5. Was the old light working or not working?

1. Working
2. Not working {SKIP TO FR1}
- D (Don't Know) {SKIP TO FR1}
- R (Refused) {SKIP TO FR1}

W6. Was the old light in good, fair, or poor working condition?

1. Good
2. Fair
3. Poor
- D (Don't Know)
- R (Refused)

Free-Ridership Questions

FR1. At the time that you first heard about the rebate from [utility] for the energy efficient lighting products, had you...? {READ LIST UNTIL RESPONDENT SAYS 'NO'}

1. Already been thinking about purchasing lighting products? {IF NO, SKIP TO FR2}
2. Already begun collecting information about lighting products? {IF NO, SKIP TO FR2}
3. Already selected the lighting products you were going to get? {IF NO, SKIP TO FR2}
4. Already installed the energy efficient light bulbs and or fixtures? {IF YES, SKIP TO FR1B; ELSE FR2}
5. (Other) SPECIFY _____ {SKIP TO FR2}

- D (Don't Know) {SKIP TO FR2}
- R (Refused) {SKIP TO FR2}

FR1B. So, the energy efficient lighting products were installed before you learned about the rebate from [utility]?

- 1 Yes {SKIP FR5}
- 2 No
- D (Don't Know)
- R (Refused)

FR2. Just to be sure I understand, did you have specific plans to install energy efficient [product type] before learning about the rebate available through [utility]?

- 1. Yes
- 2. No {SKIP TO FR4}
- D (Don't Know) {SKIP TO FR4}
- R (Refused) {SKIP TO FR4}

FR3. Did you have to make any changes to your existing plans in order to receive the rebate through [utility]'s program?

- 1. Yes
- 2. No
- D (Don't Know)
- R (Refused)

FR4. {REPEAT AS NEEDED FOR FR4 PARTS A – D} If the rebate from [utility] had not been available, would you still have:

FR4A. Purchased [product type]?

- 1. Yes
- 2. No {SKIP TO FR5}
- D (Don't Know)
- R (Refused)

FR4B. Purchased the lighting products at the same time as you did?

- 1. Yes {SKIP TO FR4C}
- 2. No
- D (Don't Know) {SKIP TO FR4C}
- R (Refused) {SKIP TO FR4C}

FR4B1. Bought the [product type] earlier than you did, or later?

- 1. Earlier
- 2. Same Time {REPEAT QUESTION FR4B}

- 3. Later
- D (Don't Know) {SKIP TO FR4C}
- R (Refused) {SKIP TO FR4C}

FR4B2. How much [FR4B1. earlier/later] would you have bought the [product type]?

- _____ Years {AND/OR} _____ Months
- D (Don't Know)
 - R (Refused)

FR4C. {IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM} Without the program, would you have purchased the same quantity as you did?

- 1. Yes {SKIP TO FR4D}
- 2. No
- D (Don't Know) {SKIP TO FR4D}
- R (Refused) {SKIP TO FR4D}

FR4C1. How many/much would you have purchased without the program?

- _____ {RECORD NUMBER}
- D (Don't Know)
 - R (Refused)

FR4D. Purchased the same efficiency of [product type] ?

- 1. Yes
- 2. No
- D (Don't Know)
- R (Refused)

FR4E. If the rebate from [utility] had not been available, would you have done anything else differently?

- 1. Yes
- 2. No {SKIP TO FR5}
- D (Don't Know) {SKIP TO FR5}
- R (Refused) {SKIP TO FR5}

FR4E1 What would you have done differently?

{RECORD RESPONSE}: _____

FR5. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same energy efficient [product type] if you had not received any rebates from the program?

{RECORD RESPONSE (0-10)} _____ {SKIP TO FR7}
D (Don't Know) {SKIP TO FR7}
R (Refused) {SKIP TO FR7}

{SKIP TO FR10 IF PROGRAM DATABASE DOES NOT CONTAIN INCENTIVE INFORMATION}

FR7. Our records indicate you received about [incentive] from the [utility] [program] either directly or at the time of purchase to offset the cost of the [product type]. Does this amount sound about right?

1. Yes {SKIP TO FR9}
 2. No
- D (Don't Know) {SKIP TO FR9}
R (Refused) {SKIP TO FR9}

FR8. What would you estimate to be the actual amount?

{RECORD RESPONSE} _____ {SET = NEW AMOUNT OF [INCENTIVE]}
D (Don't Know)
R (Refused)

I'm going to read several statements about how you came to choose your [product type]. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR9. If I had not had any assistance from the program, I would have paid the additional [incentive] to buy the energy efficient [product type] on my own?

{RECORD RESPONSE (0-10)} _____
D (Don't Know)
R (Refused)

{READ ONLY IF FR7-FR9 WAS SKIPPED}: I'm going to read several statements about how you came to choose your [product type]. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR10. There may have been several reasons for my purchase decision. But the rebate from [utility] was a critical factor in my decision to purchase the high efficiency/energy efficient product.

{RECORD RESPONSE (0-10)} _____
D (Don't Know)
R (Refused)

FR11. I would have bought energy efficient [product type] within a year of when I did even without the rebate from [utility].

{RECORD RESPONSE (0-10)} _____

D (Don't Know)

R (Refused)

Consistency Check & Resolution

{C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

FR4A (efficiency enhancement measures) OR FR4D (incremental efficiency measures)

FR5

FR10

FR11

{IF FR4A/D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the energy efficient [product type] without the program'}

{IF FR4A/D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would not have purchased the energy efficient [product type] without the program'}

{IF FR5 = 0,1 AND FR4A/D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the energy efficient [product type] without the program'}

{IF FR5 = 9,10 AND FR4A/D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the energy efficient [product type] without the program'}

{IF FR10 = 0,1 AND FR4A/D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program'}

{IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient [product type] without the program'}

{IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the [product type] within a year even without the program'}

{IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the [product type] within a year even without the program'}

C1. Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **[product type]** at the time you did? **{RECORD VERBATIM RESPONSE BELOW}**

C2. **[fill with wording and response categories to the one question which was inconsistent]**
{INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE}

Participant Like and Unlike Spillover Questions

LSP1. Since you received a rebate from the **[program]** have you purchased and installed any efficient lighting on your own without any assistance from the **[utility]** **[program]** or another utility program either at this facility or at other locations?

1. Yes, only at this multifamily complex
2. Yes, only at other locations
3. Yes, at this facility and other locations
4. No **{SKIP TO 5.3}**
- D (Don't Know) **{SKIP TO 5.3}**
- R (Refused) **{SKIP TO 5.3}**

LSP2. How many more high efficiency lighting products did you buy on your own, compared to what you got through the program at this facility and/or at another location?
{PROBE FOR PERCENT OR SHARE OF PROGRAM EQUIPMENT. READ THE FOLLOWING IF NEEDED} For example, was it about one-fourth (25%) of what you installed through the program, one-half (50%) of what your installed through the program, the same amount as what you installed though the program (100%), twice as much as what you installed through the program (200%), or some other amount?

- _____% at this multifamily complex
_____% at another facility
D (Don't Know)
R (Refused)

LSP3. I'm going to read a statement about the equipment that you purchased on your own, without any assistance from your utility. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement

My experience with the lighting products installed through the [utility] [program] in [timeframe] influenced my decision to install more high efficiency lighting products on my own.

{RECORD RESPONSE (0-10)} _____

D (Don't Know)

R (Refused)

LSP4. Why did you purchase this lighting without the financial assistance available from [utility]?
{DO NOT READ; INDICATE ALL THAT APPLY}

1. (Too much paperwork)
 2. (Takes too long to get approval)
 3. (No time to participate, needed equipment immediately)
 4. (The program had ended)
 5. (The equipment would not qualify) {PROBE: WHY NOT?} _____
 6. (The amount of the rebate wasn't important enough)
 7. (Other) SPECIFY _____
- D (Don't Know)
R (Refused)

Section 3. Site Visit Recruitment

Lastly, we would like to offer you \$25 to participate in an on-site component of this evaluation. I want to reassure you we are NOT selling anything. We would like to have one of our auditors visit the multifamily complex to look at some of the light fixtures and install meters on some of them. The visit would take _____. Would that be alright with you?

IF ASKS ABOUT SITE VISIT PURPOSE: The meters will help us more accurately estimate how much energy the light bulbs and light fixtures save for you and other electricity customers.

Yes→ Great! Someone will give you a call back to determine when they can schedule an appointment with one of our auditors. Would you be the best person to contact?

Yes→ Great. Thanks for your cooperation with this important study.

No → Who would be the appropriate person to contact?

Name _____

Phone _____

No → Thank you for answering my questions. Have a great day.

**PARTICIPANT/NTG/RECRUITING SURVEY OF
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PG&E2000(MF), SCE2502, SDG&E3017, AND SCG3510**

INTRODUCTION AND FINDING CORRECT RESPONDENT

IF KEMA_CONTACT = 1, USE OUTCOME2

Hello, this is <INTERVIEWER NAME>, calling from Itron, Incorporated on behalf of the California Public Utilities

OUTCOME1 Commission. This is not a sales call or service call. I am calling to learn about your energy efficiency improvements and your experience with the program at your multifamily property.

This is a fact-finding survey only, authorized by the California Public Utilities Commission.

Hello, this is <INTERVIEWER NAME> calling from Itron, Incorporated on behalf of the California Public Utilities

OUTCOME2 Commission. Recently, you were contacted by someone at KEMA who asked about your property's participation in PG&E's 2006-2008 Multifamily Energy Efficiency Rebate Program. We are now conducting a more formal survey on behalf of the CPUC to better understand how multifamily properties like your's think about and manage their energy consumption. Your input will allow the California Public Utilities Commission to build and maintain better energy savings programs.

This is a fact-finding survey and responses will not be connected with your firm in any way.

May I please speak with the person at your organization that is the most familiar with your participation in &UTILITY's 2006-2008 &PROG_LONG?

1	No, that person is not available right now
2	Unable to refer someone who can help
3	Yes, that would be me
4	Yes, let me transfer you to _____.
77	No, other reason (specify)
88	Refused
99	Don't know

Appoint [IF RECOMMENDED CONTACT IS NOT CURRENTLY AVAILABLE]
When would be a good day and time for us to call back?

77	Record day of the week, time of day and date to call back, as &APPOINT
88	Refused
99	Don't know

Ext Is there a phone extension or phone number you recommend we use when we call back?

77	Record Extension or Phone Number, &PHONE
88	Refused
99	Don't know

PERSON According to our records, your multifamily property participated in the &UTILITY &PROGRAM and received rebates totaling &REBATE_TOTAL.

Through this program your multifamily property installed

<&EXCFL_QTY> EXTERIOR LIGHTS

<&INCF_L_QTY> INTERIOR LIGHTS

<&CFL_QTY> SCREW-IN CFLs

<&EXIT_QTY> LED EXIT SIGNS

<&LIN_QTY> LINEAR FLUORESCENT T8s or T5s

<&BOIL_QTY> WATER HEATERS/BOILERS

<&FAUC_QTY> FAUCET AERATORS

<&SHOW_QTY> LOW FLOW SHOWERHEADS

<&WHEAT_QTY> HOT WATER HEATER/BOILER CONTROLLERS

<&WINDQTY> square feet of Energy Efficiency Windows

Are you the person most knowledgeable about your multifamily property's participation in &UTILITY's &PROG_LONG?

1	Yes
2	No
3	No one knows about the program.

If Person(3)

Intro3(99) Thank you for your time. We need to speak with the person at your property that is most familiar with the property's participation in the &UTILITY &PROGRAM. Those are all of the questions I have for you today.

Hi Who would be the person at this location who is most knowledgeable about your organizations' participation in the &UTILITY &PROGRAM? [Enter technical Contact Name and move on.]

77	Record Name, as &TCONTACT
88	Refused
99	Don't know

May_I May I speak with him/her?

77	Yes
88	No, not available right now.

Intro3:s

[AFTER TRANSFERRED TO CORRECT PERSON] Hello, this is <INTERVIEWER NAME>, calling from Itron, Consulting on behalf of the California Public Utilities Commission. This is not a sales call. We are interested in speaking with the person most knowledgeable about your multifamily property's participation in &UTILITY's &PROG_LONG. I was told that would be you.

According to our records, your multifamily property participated in the &UTILITY &PROGRAM and received rebates totaling &REBATE_TOTAL.

Through this program your multifamily property installed

<&EXCFL_QTY> EXTERIOR LIGHTS

<&INCFL_QTY> INTERIOR LIGHTS

<&CFL_QTY> SCREW-IN CFLs

<&EXIT_QTY> LED EXIT SIGNS

<&LIN_QTY> LINEAR FLUORESCENT T8s or T5s

<&BOIL_QTY> WATER HEATERS/BOILERS

<&FAUC_QTY> FAUCET AERATORS

<&SHOW_QTY> LOW FLOW SHOWERHEADS

<&WHEAT_QTY> HOT WATER HEATER/BOILER CONTROLLERS

<&WINDQTY> square feet of Energy Efficiency Windows

Is this correct?

1	Yes
2	No, there is someone else
99	No and I have no one to refer you to.

Thank &
Terminate

Thank you for your time and help today.

Before we start, I would like to inform you that for quality control purposes, this call may be monitored by my supervisor.

S1 To help save time and keep things moving along, we will be referring to the full program name &PROG_LONG as 'the multifamily rebate program' or simply 'the program.'

SCREENER FOR ADDRESS AND MEASURES INSTALLED

Scrn_Addr Our records show your multifamily property is located at &ADDRESS in &CITY. Is that correct?

[CONTINUE IF ADDRESS REPORTED BY RESPONDENT IS SIMILAR ENOUGH]

1	Yes
2	No
88	Refused
99	Don't know

COMMENT We were attempting to reach &UTILITY's customer at &ADDRESS and since you cannot confirm this address, those are all the questions that we have for you today, on behalf of &UTILITY, thank you for your time.

CORRECT May I have your correct address?

&CORRECT	Corrected Address
----------	-------------------

{Are these addresses similar or totally different?

COMPARE Computer Address - &ADDRESS

Corrected Address - &CORRECT}

1	Similar
2	Totally Different

COMMENT1 The questions in this survey will refer to your "property," which means ALL of the buildings and tenants serviced by &UTILITY on &CORRECT. [INTERVIEWERS SHOULD RE-READ THIS STATEMENT AS NEEDED THROUGHOUT THE SURVEY TO REMIND THE RESPONDENTS]

COMMENT2 We were attempting to reach &UTILITY's customer at &ADDRESS in &CITY and since that does not match your address, then we must have mis-dialed the telephone number. Those are all the questions that we have for you today, on behalf of &UTILITY. Thank you for your time and cooperation.

GO TO R1 ONCE CORRECT INDIVIDUAL IS ON THE PHONE

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PROPERTY MANAGER AND SITE CHARACTERISTICS

Now, I'd like to get some background information about you and the multifamily property at &ADDRESS.

R1 What is your position or job title?

1	Owner
2	Property/leasing manager/associate
3	Senior property manager
4	Maintenance supervisor
5	Senior /regional maintenance supervisor
6	Purchasing manager
77	Other [RECORD]
88	Refused
99	Don't know

How many years have you been in the business of multifamily property ownership and/or multifamily property management?

R2

77	Record &MNGYRS
88	Refused
99	Don't know

R3 How many years have you been in your current position at this property?

77	Record &YRSHERE
88	Refused
99	Don't know

R4 How many buildings are there at this multifamily location?

77	Record &NUMBLDGS
88	Refused
99	Don't know

R5 About how many apartment units are located in the building or buildings at the multifamily property?

77	Record &NUNITS
88	Refused
99	Don't know

R6 Do you or your firm own the property only, manage the property only, or do you both own and manage the property?

1	Own it only
2	Manage it only
3	Both own and manage it
88	Refused
99	Don't know

Do you have one or more centralized systems at the property that provides heating to all tenant units? By a centralized **R7** system, I mean a system that provides heat to more than one tenant unit.

1	Yes
2	No
88	Refused
99	Don't know

R8 Do you have a one or more centralized systems at the property that provides cooling to all units?

1	Yes
2	No
88	Refused
99	Don't know

R9 Do you have one or more centralized systems at the property that provides hot water to all units?

1	Yes
2	No
88	Refused
99	Don't know

R10 Are the tenants responsible for paying their own utility bills or are the utilities included in the rent?

1	Tenants pay their own bills
2	Utilities are included in rent
3	Tenants pay some utilities while others are included in rent
77	Other [SPECIFY]
88	Refused
99	Don't know

Is the electricity for the tenant units at this property individually metered or master-metered? In other words, is there one electric meter for several tenants?

1	Individually metered
2	Master metered
77	Other [SPECIFY]
88	Refused
99	Don't know

R12 Is the natural gas for the tenant units at this property individually metered or master-metered?

1	Individually metered
2	Master metered
66	No natural gas at this property
77	Other [SPECIFY]
88	Refused
99	Don't know

LT1 Now I would like to ask a couple of questions about the lighting in common areas at your property. Is the common area lighting controlled automatically, manually, or both? Automatic control refers to the use of timers, sensors, or photocells to control when lighting turns on and off.

1	Automatically only
2	Manually only
3	Some controlled automatically, some controlled manually
88	Refused
99	Don't know

LT2 What percentage of the common area lighting, would you say, is controlled automatically?

%COM_LT	Record percentage of automatically controlled common area lighting.
101	Refused
102	Don't know

LT3 Which of the following automatic lighting controls are used? Do you use... [READ LIST; ACCEPT MULTIPLES]

1	Timers
2	Occupancy sensors
3	Photocells
77	Some other form of lighting controls. [RECORD ANSWER]
88	Refused
99	Don't know

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EXTERIOR CFL FIXTURES

[ASK EXCFL2 IF EXCFL = 1; ELSE SKIP TO INCFL2]

EXCFL2 According to our records, we show that your property installed &EXCFL_QTY CFL exterior fixtures. Is this correct?

1	Yes, correct as stated	EXCFL4
2	That is the wrong quantity	EXCFL3
3	Did not install any CFL exterior fixtures	INCFL2
88	Refused	INCFL2
99	Don't know	INCFL2

EXCFL3 Could you give me the correct quantity? An approximation would be fine.

&CQ_EXCFL	[RECORD CORRECT QTY]	EXCFL4
88	Refused	INCFL2
99	Don't know	INCFL2

EXCFL4 Were these CFL exterior fixtures installed [READ LIST]

1	in outdoor common areas	INCFL2
2	immediately outside tenant units (for example, outside front doors or in patio areas)	INCFL2
3	in both area types	EXCFL5
77	Other [RECORD]	INCFL2
88	Refused	INCFL2
99	Don't know	INCFL2

EXCFL5 Approximately what percentage of these fixtures were installed in common areas?

&&_EXCOM	[RECORD PERCENTAGE IN COMMON AREAS]	EX_W1
101	Refused	EX_W1
102	Don't know	EX_W1

Please think back to the time when you were deciding to buy energy efficient exterior CFL fixtures, perhaps recalling things that occurred at your multifamily property shortly before and after YOUR INSTALLATION. What factors motivated you to purchase energy saving exterior CFL fixtures [DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE RESPONDENT HAS FINISHED, PROBE WITH "Are there any other factors?"]

EX_W1

1	Old equipment didn't work	EX_W2a
2	Old equipment working poorly	EX_W2a
3	The program incentive	EX_W2a
4	The program technical assistance	EX_W2a
5	Wanted to save energy costs	EX_W2a
6	Wanted to reduce energy costs	EX_W2a
7	The information provided by the program	EX_W2a
8	Past experience with this program	EX_W2a
9	Because of past experience with another &UTILITY program	EX_W2a
10	Recommendation from other utility program [PROBE: "What was the other utility program name or description?" and record as &EX_W1_10]	EX_W2a
11	Recommendation of dealer/retailer	EX_W2a
12	Recommendation of someone else [PROBE: "Who else recommended installing the exterior CFL fixtures?" and record as &EX_W1_12]	EX_W2a
13	Advertisement in newspaper [PROBE: "What was the program name in the NEWSPAPER advertisement?" and record as &EX_W1_13]	EX_W2a
14	Radio advertisement [PROBE: "What was the program name in the RADIO advertisement?" and record as &EX_W1_14]	EX_W2a
15	Environmental concerns	EX_W2a
16	Global warming/carbon footprint	EX_W2a
17	Like appearance better	EX_W2a
18	Keeping up with the latest trends and fashions	EX_W2a
77	Other [SPECIFY]	EX_W2a
88	Refused	EX_W2a
99	Don't know	EX_W2a

[ASK EX_W2a - EX_W6 IF EXCFL = 1; ELSE SKIP TO W7]

Did these exterior CFL fixtures replace existing lighting equipment or were they installed to add additional lighting to your

EX_W2a multifamily property?

1	Replaced existing lighting	EX_W2c
2	To provide additional lighting	EX_W2c
3	Both replacing and adding	EX_W2c
88	Refused	EX_W2c
99	Don't know	EX_W2c

EX_W2c Are these exterior CFL fixtures the first exterior CFL fixtures you have ever had at your facility?

1	Yes	EX_W3
2	No	EX_W3
88	Refused	EX_W3
99	Don't know	EX_W3

[ASK IN_W3 IF EX_W2a = 1 or 3; ELSE SKIP TO W5]

EX_W3 What type of lighting did these fixtures replace?

1	Incandescent	EX_W5
2	CFL	EX_W5
3	Both	EX_W5
77	Other (SPECIFY)	EX_W5
88	Refused	EX_W5
99	Don't know	EX_W5

EX_W5 Was this replaced lighting equipment working when you removed it?

1	Yes, Working	EX_W6
2	Not working	EX_FR1
77	Other (SPECIFY)	EX_FR1
88	Refused	EX_FR1
99	Don't know	EX_FR1

EX_W6 Was this replaced lighting equipment in good, fair, or poor condition?

1	Good	EX_FR1
2	Fair	EX_FR1
3	Poor	EX_FR1

88	Refused	EX_FR1
99	Don't know	EX_FR1

At the time that you first heard about the assistance from &UTILITY for these exterior CFL fixtures, had you...? [READ

EX_FR1 LIST]

1	Already been thinking about purchasing this LIGHTING EQUIPMENT	EX_FR2
2	Already begun collecting information about LIGHTING EQUIPMENT	EX_FR2
3	{ASK IF EX_INCEFF = 1} Already selected the LIGHTING EQUIPMENT you were going to get	EX_FR2
4	{ASK IF EX_ENHEFF = 1} Already decided to buy the LIGHTING EQUIPMENT	EX_FR2
5	Already installed the energy efficient LIGHTING EQUIPMENT	EX_FR1b
6	Or, did you hear about the assistance first	EX_FR2
88	Refused	EX_FR2
99	Don't know	EX_FR2

[ASK EX_FR1b IF EX_FR1 QUESTION 5 = YES; ELSE SKIP TO EX_FR2]

Just to be sure, you had already installed the EXTERIOR CFL FIXTURES before you learned about the rebate from

EX_FR1b &UTILITY?

1	Yes	EX_FR5
2	No	COMMENT
88	Refused	COMMENT
99	Don't know	COMMENT

IF IN_FR1(5) & IN_FR1b(2|99) DISPLAY FOLLOWING MESSAGE AND ADJUST ANSWERS TO EX_FR1 AND

COMMENT EX_FR1B

I must have coded something wrong. First I recorded that you purchased this equipment before you heard about the program, then I recorded that you did not install the equipment before you heard about the program. Can you help me clear this up?

ASK EX_FR2 IF EX_FR1(1|4|88|99)

Just to be sure I understand, did you have specific plans to install this LIGHTING EQUIPMENT before learning about the

EX_FR2 rebate available through the &PROGRAM?

1	Yes	EX_FR3
2	No	EX_FR4a
88	Refused	EX_FR4a
99	Don't Know	EX_FR4a

EX_FR3 Did you have to make any changes to your existing plans in order to receive this rebate through the program?

1	Yes	EX_FR3a
2	No	EX_FR4a
88	Refused	EX_FR4a
99	Don't Know	EX_FR4a

EX_FR3a What changes did you need to make?

77	Open	EX_FR4a
88	Refused	EX_FR4a
89	Don't Know	EX_FR4a

If the rebate from the &UTILITY program had not been available, would you still have purchased these Exterior CFL

EX_FR4a Fixtures?

1	Yes	EX_FR4b
2	No	EX_FR5
88	Refused	EX_FR4b
99	Don't Know	EX_FR4b

EX_FR4b Would you have purchased these FIXTURES at the same time as you did?

1	Yes	EX_FR4c
2	No	EX_FR4b1
88	Refused	EX_FR4c
99	Don't Know	EX_FR4c

EX_FR4b1 Would you have purchased these FIXTURES earlier than you did or later?

1	Earlier	EX_FR4b_E
2	Same Time	EX_FR4c
3	Later	EX_FR4b_L
88	Refused	EX_FR4c
99	Don't Know	EX_FR4c

EX_FR4b_E How much earlier would you have purchased these FIXTURES

	{RECORD RESPONSE} _____ Years (and/or) _____ Months	EX_FR4c
88	Refused	EX_FR4c
99	Don't know	EX_FR4c

EX_FR4b_L How much later would you have purchased these FIXTURES

	{RECORD RESPONSE} _____ Years (and/or) _____ Months	EX_FR4c
88	Refused	EX_FR4c
99	Don't know	EX_FR4c

[IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM OR MEASURE IS OF VARIABLE AMOUNT] Without the program, would you have purchased the same quantity of EXTERIOR CFL FIXTURES as you did? (Probe for more or

EX_FR4c less)

1	Same	EX_FR4d
2	More	EX_FR4c_M
3	Less	EX_FR4c_L
88	Refused (SKIP TO FR4d)	EX_FR4d
99	Don't Know (SKIP TO FR4d)	EX_FR4d

EX_FR4c_M How many more fixtures would you have if you had purchased these fixtures outside of the program?

	{RECORD RESPONSE}	EX_FR4d
88	Refused	EX_FR4d
99	Don't know	EX_FR4d

EX_FR4c_L How many fewer fixtures would you have if you had purchased these fixtures outside of the program?

	{RECORD RESPONSE}	EX_FR4d
88	Refused	EX_FR4d
99	Don't know	EX_FR4d

[ASK EX_FR4d IF EX_INCEFF = 1]

Without the assistance from the program, would you have purchased the same energy efficiency level of EXTERIOR CFL

EX_FR4d FIXTURES?

1	Yes	EX_FR4e
2	No	EX_FR4e
88	Refused	EX_FR4e
99	Don't Know	EX_FR4e

EX_FR4e If the rebate from the program had not been available, would you have done anything else differently?

1	Yes	EX_FR4e1
2	No	EX_FR5
77	Other	EX_FR5
88	Refused	EX_FR5
99	Don't Know	EX_FR5

EX_FR4e1 What would you have done differently?

77	{RECORD RESPONSE}: _____	EX_FR5
88	Refused	EX_FR5
89	Don't Know	EX_FR5

On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same EXTERIOR CFL FIXTURES if you had not received any assistance from the program?

EX_FR5

77	{RECORD RESPONSE}: _____	EX_FR7
88	Refused	EX_FR7
89	Don't Know	EX_FR7

Our records indicate you received about &EX_REBATE from the &UTILITY program either directly or at the time of purchase to offset the cost of this LIGHTING EQUIPMENT. Does this sound about right?

EX_FR7

1	Yes	EX_FR9
2	No	EX_FR8
88	Refused	EX_FR9
99	Don't Know	EX_FR9

EX_FR8 What would you estimate to be the actual amount?

	{RECORD RESPONSE} _____ {SET &EX_REBATE = NEW AMOUNT OF PROGRAM INCENTIVE	EX_FR9
88	Refused	EX_FR9
99	Don't know	EX_FR9

I'm going to read three statements about how you came to choose these EXTERIOR CFL FIXTURES. Using a scale of 0 to 10, where 0 is YOU DO NOT AT ALL AGREE and 10 is YOU AGREE COMPLETELY, how much do you agree with each of these statements?

EX_FR9 If I had not had any assistance from the program, I would have paid the full price to buy these FIXTURES on my own.

	{Record Response (0-10)} _____	EX_FR10
88	Refused	EX_FR10
99	Don't know	EX_FR10

There may have been several reasons for my purchase decision. But the rebate from the &UTILITY &PROGRAM was a critical factor in my decision to purchase these energy efficient LIGHTING FIXTURES.

EX_FR10

	{Record Response (0-10)} _____	EX_FR11
88	Refused	EX_FR11
99	Don't know	EX_FR11

I would have purchased the LIGHTING EQUIPMENT within two years of when I did even without the rebate from the program.

EX_FR11

	{Record Response (0-10)} _____	Cons Check
11	Do not at all agree	Cons Check
88	Refused	Cons Check
99	Don't know	Cons Check

CONSISTENCY CHECK & RESOLUTION FOR CFL INTERIOR FIXTURES

C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other end of the spectrum.) An algorithm will be provided after pretesting. The question responses that will be used to trigger C1 are:

FR4a (only for efficiency enhancement measures)

FR4d (only for incremental efficiency measures)

FR5

FR10

FR11

{IF FR4a/d = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the &MEASURE without the program'}

{IF FR4a/d = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the &MEASURE without the program'}

{IF FR5 = 0,1 AND FR4a/d = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the &MEASURE without the program'}

{IF FR5 = 9,10 AND FR4a/d = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the &MEASURE without the program'}

{IF FR10 = 0,1 AND FR4a/d = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient &PRODUCT without the program'}

{IF FR10 = 9,10 AND FR4a/d = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient &PRODUCT without the program'}

{IF FR11 = 9,10 AND FR4a/d = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the &PRODUCT within [a year/2 years] even without the program'}

{IF FR11 = 0,1 AND FR4a/d = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the &PRODUCT within [a year/2 years] even without the program'}

Let me make sure I understand you. In your own words, could you please describe how the program influenced your

C1A_EX decision to purchase and install your new LIGHTING EQUIPMENT at the time you did?

77	{RECORD RESPONSE}: _____	INCFL2
88	Refused	INCFL2
89	Don't Know	INCFL2

PARTICIPANT/NTG/RECRUITING SURVEY OF
MULTIFAMILY DWELLING PROPERTY OWNERS/MANAGERS
FOR CPUC EVALUATION OF CA MULTIFAMILY REBATE PROGRAMS
PG&E2000(MF), SCE2502, SDG&E3017, AND SCG3510

INTERIOR CFL FIXTURES

[ASK INCFL2 IF INCFL = 1; ELSE SKIP TO CFL2]

INCFL2 According to our records, we show that your property installed &CFL_QTY CFL interior FIXTURES. Is this correct?

1	Yes, correct as stated	INCFL4
2	That is the wrong quantity	INCFL3
3	Did not install any CFL interior FIXTURES	CFL2
88	Refused	CFL2
99	Don't know	CFL2

INCFL3 Could you give me the correct quantity? An approximation would be fine.

&CQ_INCFL	[RECORD CORRECT QTY]	INCFL4
88	Refused	CFL2
99	Don't know	CFL2

INCFL4 Were these CFL interior FIXTURES installed [READ LIST]

1	in common areas	CFL2
2	in tenant units	CFL2
3	in both area types	INCFL5
77	Other [RECORD]	INCFL5
88	Refused	CFL2
99	Don't know	CFL2

INCFL5 Approximately what percentage of these FIXTURES were installed in common areas?

&%_INCOM	[RECORD PERCENTAGE IN COMMON AREAS]	IN_W1
101	Refused	IN_W1
102	Don't know	IN_W1

Please think back to the time when you were deciding to buy energy efficient INTERIOR CFL FIXTURES, perhaps recalling things that occurred at your multifamily property shortly before and after your installation. What factors motivated you to purchase energy saving INTERIOR CFL FIXTURES [DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE

IN_W1 RESPONDENT HAS FINISHED, PROBE WITH "Are there any other factors?"]

1	Old equipment didn't work	IN_W2a
2	Old equipment working poorly	IN_W2a
3	The program incentive	IN_W2a
4	The program technical assistance	IN_W2a
5	Wanted to save energy	IN_W2a
6	Wanted to reduce energy costs	IN_W2a
7	The information provided by the program	IN_W2a
8	Past experience with this program	IN_W2a
9	Past experience with another utility program	IN_W2a
10	Recommendation from other utility program [PROBE: "What was the other utility program name or description?" and record as &IN_W1_10]	IN_W2a
11	Recommendation of dealer/retailer	IN_W2a
12	Recommendation of someone else [PROBE: "Who else recommended installing the INTERIOR CFL FIXTURES?" and record as &IN_W1_12]	IN_W2a
13	Advertisement in newspaper [PROBE: "What was the program name in the NEWSPAPER advertisement?" and record as &IN_W1_13]	IN_W2a
14	Radio advertisement [PROBE: "What was the program name in the RADIO advertisement?" and record as &IN_W1_14]	IN_W2a
15	Environmental concerns	IN_W2a
16	Global warming/carbon footprint	IN_W2a
17	Like appearance better	IN_W2a
18	Keeping up with the latest trends and fashions	IN_W2a
77	Other [SPECIFY]	IN_W2a
88	Refused	IN_W2a
99	Don't know	IN_W2a

[ASK IN_W2a - IN_W6 IF INCFL = 1; ELSE SKIP TO IN_W7]

Did these INTERIOR CFL FIXTURES replace existing lighting equipment or were they installed to add additional lighting to your multifamily property?

IN_W2a

1	Replaced existing lighting	IN_W2c
2	To provide additional lighting	IN_W2c
3	Both replacing and adding	IN_W2c
88	Refused	IN_W2c
99	Don't know	IN_W2c

IN_W2c Are these INTERIOR CFL FIXTURES the first INTERIOR CFL FIXTURES you have ever had at your facility?

1	Yes	IN_W3
2	No	IN_W3
88	Refused	IN_W3
99	Don't know	IN_W3

[ASK IN_W3 IF IN_W2a = 1 or 3; ELSE SKIP TO W5]

IN_W3 What type of lighting did these FIXTURES replace? Were they...

1	Incandescent	IN_W5
2	CFL	IN_W5
3	Both	IN_W5
77	Other (SPECIFY)	IN_W5
88	Refused	IN_W5
99	Don't know	IN_W5

IN_W5 Was this replaced lighting equipment working when you removed it?

1	Yes, Working	IN_W6
2	Not working	IN_FR1
77	Other (SPECIFY)	IN_FR1
88	Refused	IN_FR1
99	Don't know	IN_FR1

IN_W6 Was this replaced lighting equipment in good, fair, or poor condition?

1	Good	IN_FR1
2	Fair	IN_FR1
3	Poor	IN_FR1

88	Refused	IN_FR1
99	Don't know	IN_FR1

At the time that you first heard about the assistance from %UTILITY for these INTERIOR CFL FIXTURES, had you...?

IN_FR1 (READ LIST)		
1	Already been thinking about purchasing this LIGHTING EQUIPMENT	IN_FR2
2	Already begun collecting information about LIGHTING EQUIPMENT	IN_FR2
3	[ASK IF IN_INCEFF = 1] Already selected the LIGHTING EQUIPMENT you were going to get	IN_FR2
4	[ASK IF IN_ENHEFF = 1] Already decided to buy the LIGHTING EQUIPMENT	IN_FR2
5	Already installed the energy efficient LIGHTING EQUIPMENT	IN_FR1b
6	Or, did you hear about the assistance first	IN_FR2
88	Refused	IN_FR2
99	Don't know	IN_FR2

[ASK IN_FR1b IF IN_FR1 QUESTION 5 = YES; ELSE SKIP TO IN_FR2]

Just to be sure, you had already installed the INTERIOR CFL FIXTURES before you learned about the rebate from

IN_FR1b %UTILITY?

1	Yes	IN_FR5
2	No	COMMENT
88	Refused	COMMENT
99	Don't know	COMMENT

IF IN_FR1(5) & IN_FR1b(2|99) DISPLAY FOLLOWING MESSAGE AND ADJUST ANSWERS TO IN_FR1 AND

COMMENT IN_FR1B

I must have coded something wrong. First I recorded that you purchased this equipment before you heard about the program, then I recorded that you did not install the equipment before you heard about the program. Can you help me clear this up?

Just to be sure I understand, did you have specific plans to install this LIGHTING EQUIPMENT before learning about the

IN_FR2 rebate available through the &PROGRAM?

1	Yes	IN_FR3
2	No	IN_FR4
88	Refused	IN_FR4
99	Don't Know	IN_FR4

IN_FR3 Did you have to make any changes to your existing plans in order to receive this rebate through the program?

1	Yes	IN_FR3a
2	No	IN_FR4
88	Refused	IN_FR4
99	Don't Know	IN_FR4

IN_FR3a What changes did you need to make?

77	Open	IN_FR4a
88	Refused	IN_FR4a
89	Don't Know	IN_FR4a

If the rebate from the &UTILITY program had not been available, would you still have purchased these INTERIOR CFL

IN_FR4a FIXTURES?

1	Yes	IN_FR4b
2	No	IN_FR5
88	Refused	IN_FR4b
99	Don't Know	IN_FR4b

IN_FR4b Would you have purchased these FIXTURES at the same time as you did?

1	Yes	IN_FR4c
2	No	IN_FR4b1
88	Refused	IN_FR4c
99	Don't Know	IN_FR4c

IN_FR4b1 Would you have purchased these FIXTURES earlier than you did or later?

1	Earlier	IN_FR4b_E
2	Same Time	IN_FR4c
3	Later	IN_FR4b_L
88	Refused	IN_FR4c
99	Don't Know	IN_FR4c

IN_FR4b_E How much earlier would you have purchased these FIXTURES

	(RECORD RESPONSE) _____ Years (and/or) _____ Months	IN_FR4c
88	Refused	IN_FR4c
99	Don't know	IN_FR4c

IN_FR4b_L How much later would you have purchased these FIXTURES

	(RECORD RESPONSE) _____ Years (and/or) _____ Months	IN_FR4c
88	Refused	IN_FR4c
99	Don't know	IN_FR4c

[IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM OR MEASURE IS OF VARIABLE AMOUNT] Without the program, would you have purchased the same quantity of INTERIOR CFL FIXTURES as you did? (Probe for more or less)

IN_FR4c less)

1	Same	IN_FR4d
2	More	IN_FR4c_M
3	Less	IN_FR4c_L
88	Refused (SKIP TO FR4d)	IN_FR4d
99	Don't Know (SKIP TO FR4d)	IN_FR4d

IN_FR4c_M How many more FIXTURES would you have if you had purchased these FIXTURES outside of the program?

77	(RECORD RESPONSE)	IN_FR4d
88	Refused	IN_FR4d
99	Don't know	IN_FR4d

IN_FR4c_L How many fewer FIXTURES would you have if you had purchased these FIXTURES outside of the program?

77	(RECORD RESPONSE)	IN_FR4d
88	Refused	IN_FR4d
99	Don't know	IN_FR4d

[ASK IN_FR4d IF IN_INCEFF = 1]

Without the assistance from the program, would you have purchased the same energy efficiency level of INTERIOR CFL

IN_FR4d FIXTURES?

1	Yes	IN_FR4e
2	No	IN_FR4e
88	Refused	IN_FR4e
99	Don't Know	IN_FR4e

IN_FR4e If the rebate from the %UTILITY %PROGRAM had not been available, would you have done anything else differently?

1	Yes	IN_FR4e1
2	No	IN_FR5
77	Other	IN_FR5
88	Refused	IN_FR5
99	Don't Know	IN_FR5

IN_FR4e1 What would you have done differently?

77	(RECORD RESPONSE): _____	IN_FR5
88	Refused	IN_FR5
89	Don't Know	IN_FR5

On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same lighting equipment if you had not received any assistance from the program?

77	(RECORD RESPONSE): _____	IN_FR7
88	Refused	IN_FR7
89	Don't Know	IN_FR7

Our records indicate you received about %IN_REBATE from the %UTILITY program either directly or at the time of purchase to offset the cost of this LIGHTING EQUIPMENT. Does this sound about right?

1	Yes	IN_FR9
2	No	IN_FR8
88	Refused	IN_FR9
99	Don't Know	IN_FR9

IN_FR8 What would you estimate to be the actual amount to be?

	(RECORD RESPONSE) _____ {SET %IN_REBATE = NEW AMOUNT OF PROGRAM INCENTIVE}	IN_FR9
88	Refused	IN_FR9
99	Don't know	IN_FR9

I'm going to read three statements about how you came to choose these INTERIOR CFL FIXTURES. Using a scale of 0 to 10, where 0 is YOU DO NOT AT ALL AGREE and 10 is YOU AGREE COMPLETELY, how much do you agree with each statement?

If I had not had any assistance from the program, I would have paid the full price to buy these INTERIOR CFL FIXTURES on my own.

IN_FR9

	(Record Response (0-10)) _____	IN_FR10
11	Do not at all agree	Cons Check
88	Refused	IN_FR10
99	Don't know	IN_FR10

There may have been several reasons for my purchase decision. But the rebate from the &UTILITY &PROGRAM was a critical factor in my decision to purchase these energy efficient LIGHTING FIXTURES.

IN_FR10

	(Record Response (0-10)) _____	IN_FR11
11	Do not at all agree	Cons Check
88	Refused	IN_FR11
99	Don't know	IN_FR11

I would have purchased the LIGHTING EQUIPMENT within two years of when I did even without the rebate from the program.

IN_FR11

	(Record Response (0-10)) _____	Cons Check
11	Do not at all agree	Cons Check
88	Refused	Cons Check
99	Don't know	Cons Check

CONSISTENCY CHECK & RESOLUTION FOR CFL INTERIOR FIXTURES

C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other end of the spectrum.) An algorithm will be provided after pretesting. The question responses that will be used to trigger C1 are:

FR4a (only for efficiency enhancement measures)

FR4d (only for incremental efficiency measures)

FR5

FR10

FR11

{IF FR4a/d = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the &MEASURE without the program'}

{IF FR4a/d = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the &MEASURE without the program'}

{IF FR5 = 0,1 AND FR4a/d = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the &MEASURE without the program'}

{IF FR5 = 9,10 AND FR4a/d = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the &MEASURE without the program'}

{IF FR10 = 0,1 AND FR4a/d = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient &PRODUCT without the program'}

{IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient &PRODUCT without the program'}

{IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the &PRODUCT within [a year/2 years] even without the program'}

{IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the &PRODUCT within [a year/2 years] even without the program'}

Let me make sure I understand you. In your own words, could you please describe how the program influenced your

C1A_IN decision to purchase and install your new LIGHTING EQUIPMENT at the time you did?

77	(RECORD RESPONSE): _____	CFL2
88	Refused	CFL2
89	Don't Know	CFL2

PARTICIPANT/NTG/RECRUITING SURVEY OF
MULTIFAMILY DWELLING PROPERTY OWNERS/MANAGERS
FOR CPUC EVALUATION OF CA MULTIFAMILY REBATE PROGRAMS
PG&E2000(MF), SCE2502, SDG&E3017, AND SCG3510

SCREW-IN CFL BULBS

[ASK CFL2 IF CFL = 1; ELSE SKIP TO EX2]

CFL2 According to our records, we show that your property installed %CFL_QTY screw-in bulbs. Is this correct?

1	Yes, correct as stated	CFL4
2	That is the wrong quantity	CFL3
3	Did not install any CFL interior CFL BULBS	EX2
88	Refused	EX2
99	Don't know	EX2

CFL3 Could you give me the correct quantity? An approximation would be fine.

&CQ_CFL	[RECORD CORRECT QTY]	CFL4
88	Refused	EX2
99	Don't know	EX2

CFL4 Were these screw-in CFL BULBS installed... [READ LIST; ACCEPT MULTIPLES]

1	in common areas only	CFL5
2	in tenant units	CFL5
3	in both area types	CFL5
77	Other [RECORD]	CFL5
88	Refused	EX2
99	Don't know	EX2

IF ANY OF THE ANSWERS TO CFL4 IN (1,3) THEN ASK CFL5; ELSE SKIP TO EX1

CFL5 Approximately what percentage of these bulbs were installed in common areas?

&%_CFLCOM	[RECORD PERCENTAGE IN COMMON AREAS]	CFL_W1
101	Refused	CFL_W1
102	Don't know	CFL_W1

Please think back to the time when you were deciding to buy energy efficient CFL BULBS, perhaps recalling things that occurred at your multifamily property shortly before and after your installation. What factors motivated you to purchase energy saving CFL BULBS [DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE RESPONDENT HAS FINISHED,

CFL_W1 PROBE WITH "Are there any other factors?"]

1	Old equipment didn't work	CFL_W2a
2	Old equipment working poorly	CFL_W2a
3	The program incentive	CFL_W2a
4	The program technical assistance	CFL_W2a
5	Wanted to save energy	CFL_W2a
6	Wanted to reduce energy costs	CFL_W2a
7	The information provided by the program	CFL_W2a
8	Past experience with this program	CFL_W2a
9	Past experience with another utility program	CFL_W2a
10	Recommendation from other utility program [PROBE: "What was the other utility program name or description?" and record as &CFL_W1_10]	CFL_W2a
11	Recommendation of dealer/retailer	CFL_W2a
12	Recommendation of someone else [PROBE: "Who else recommended installing the CFL BULBS?" and record as &CFL_W1_12]	CFL_W2a
13	Advertisement in newspaper [PROBE: "What was the program name in the NEWSPAPER advertisement?" and record as &CFL_W1_13]	CFL_W2a
14	Radio advertisement [PROBE: "What was the program name in the RADIO advertisement?" and record as &CFL_W1_14]	CFL_W2a
15	Environmental concerns	CFL_W2a
16	Global warming/carbon footprint	CFL_W2a
17	Like appearance better	CFL_W2a
18	Keeping up with the latest trends and fashions	CFL_W2a
77	Other [SPECIFY]	CFL_W2a
88	Refused	CFL_W2a
99	Don't know	CFL_W2a

[ASK CFL_W2a - CFL_W6 IF CFL = 1; ELSE SKIP TO CFL_W7]

Did these CFL BULBS replace existing lighting equipment or were they installed to add additional lighting to your multifamily property?

CFL_W2a

1	Replaced existing lighting	CFL_W2c
2	To provide additional lighting	CFL_W2c
3	Both replacing and adding	CFL_W2c
88	Refused	CFL_W2c
99	Don't know	CFL_W2c

CFL_W2c Are these CFL BULBS the first CFL BULBS you have ever had at your facility?

1	Yes	CFL_W3
2	No	CFL_W3
88	Refused	CFL_W3
99	Don't know	CFL_W3

[ASK CFL_W3 IF CFL_W2a = 1 or 3; ELSE SKIP TO W5]

CFL_W3 What type of lighting did these CFL BULBS replace? Were they...

1	Incandescent	CFL_W5
2	CFL	CFL_W5
3	Both	CFL_W5
77	Other (SPECIFY)	CFL_W5
88	Refused	CFL_W5
99	Don't know	CFL_W5

CFL_W5 Was this replaced lighting equipment working when you removed it?

1	Yes, Working	CFL_W6
2	Not working	CFL_FR1
77	Other (SPECIFY)	CFL_FR1
88	Refused	CFL_FR1
99	Don't know	CFL_FR1

CFL_W6 Was this replaced lighting equipment in good, fair, or poor condition?

1	Good	CFL_FR1
2	Fair	CFL_FR1
3	Poor	CFL_FR1

88	Refused	CFL_FR1
99	Don't know	CFL_FR1

CFL_FR1 At the time that you first heard about the assistance from %UTILITY for these CFL BULBS, had you...? (READ LIST)

1	Already been thinking about purchasing this LIGHTING EQUIPMENT	CFL_FR2
2	Already begun collecting information about LIGHTING EQUIPMENT	CFL_FR2
3	(ASK IF CFL_INCEFF = 1) Already selected the LIGHTING EQUIPMENT you were going to get	CFL_FR2
4	(ASK IF CFL_ENHEFF = 1) Already decided to buy the LIGHTING EQUIPMENT	CFL_FR2
5	Already installed the energy efficient LIGHTING EQUIPMENT	CFL_FR1b
6	Or, did you hear about the assistance first	CFL_FR2
88	Refused	CFL_FR2
99	Don't know	CFL_FR2

[ASK CFL_FR1b IF CFL_FR1 QUESTION 5 = YES; ELSE SKIP TO CFL_FR2]

CFL_FR1b Just to be sure, you had already installed the CFL BULBS before you learned about the rebate from %UTILITY?

1	Yes	CFL_FR5
2	No	COMMENT
88	Refused	COMMENT
99	Don't know	COMMENT

IF CFL_FR1(5) & CFL_FR1b(2||99) DISPLAY FOLLOWING MESSAGE AND ADJUST ANSWERS TO CFL_FR1 AND COMMENT CFL_FR1B

I must have coded something wrong. First I recorded that you purchased this equipment before you heard about the program, then I recorded that you did not install the equipment before you heard about the program. Can you help me clear this up?

Just to be sure I understand, did you have specific plans to install this LIGHTING EQUIPMENT before learning about the

CFL_FR2 rebate available through the %PROGRAM?

1	Yes	CFL_FR3
2	No	CFL_FR4
88	Refused	CFL_FR4
99	Don't Know	CFL_FR4

CFL_FR3 Did you have to make any changes to your existing plans in order to receive this rebate through the program?

1	Yes	CFL_FR3a
2	No	CFL_FR4
88	Refused	CFL_FR4
99	Don't Know	CFL_FR4

CFL_FR3a What changes did you need to make?

77	Open	CFL_FR4
88	Refused	CFL_FR4
89	Don't Know	CFL_FR4

CFL_FR4 If the rebate from the %UTILITY program had not been available, would you still have purchased these CFL BULBS?

1	Yes	CFL_FR4b
2	No	CFL_FR5
88	Refused	CFL_FR4b
99	Don't Know	CFL_FR4b

CFL_FR4b Would you have purchased these CFL BULBS at the same time as you did?

1	Yes	CFL_FR4c
2	No	CFL_FR4b1
88	Refused	CFL_FR4c
99	Don't Know	CFL_FR4c

CFL_FR4b1 Would you have purchased these CFL BULBS earlier than you did or later?

1	Earlier	CFL_FR4b_E
2	Same time	CFL_FR4c
3	Later	CFL_FR4b_L
88	Refused	CFL_FR4c
99	Don't Know	CFL_FR4c

CFL_FR4b_E How much earlier would you have purchased these CFL BULBS

77	(RECORD RESPONSE) _____ Years (and/or) _____ Months	CFL_FR4c
88	Refused	CFL_FR4c
99	Don't know	CFL_FR4c

CFL_FR4b_L How much later would you have purchased these CFL BULBS

77	(RECORD RESPONSE) _____ Years (and/or) _____ Months	CFL_FR4c
88	Refused	CFL_FR4c
99	Don't know	CFL_FR4c

[IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM OR MEASURE IS OF VARIABLE AMOUNT] Without the program, would you have purchased the same quantity of CFL BULBS as you did? (Probe for more or less)

1	Same	CFL_FR4d
2	More	CFL_FR4c_M
3	Less	CFL_FR4c_L
88	Refused (SKIP TO FR4d)	CFL_FR4d
99	Don't Know (SKIP TO FR4d)	CFL_FR4d

CFL_FR4c_M How many more CFL BULBS would you have if you had purchased these CFL BULBS outside of the program?

77	(RECORD RESPONSE)	CFL_FR4d
88	Refused	CFL_FR4d
99	Don't know	CFL_FR4d

CFL_FR4c_L How many fewer CFL BULBS would you have if you had purchased these CFL BULBS outside of the program?

77	(RECORD RESPONSE)	CFL_FR4d
88	Refused	CFL_FR4d
99	Don't know	CFL_FR4d

[ASK CFL_FR4d IF CFL_INCEFF = 1]

CFL_FR4d Without the assistance from the program, would you have purchased the same energy efficiency level of CFL BULBS?

1	Yes	CFL_FR4e
2	No	CFL_FR4e
88	Refused	CFL_FR4e
99	Don't Know	CFL_FR4e

CFL_FR4e If the rebate from the %UTILITY %PROGRAM had not been available, would you have done anything else differently?

1	Yes	CFL_FR4e1
2	No	CFL_FR5

77	Other	CFL_FR5
88	Refused	CFL_FR5
99	Don't Know	CFL_FR5

CFL_FR4e1 What would you have done differently?

77	(RECORD RESPONSE): _____	CFL_FR5
88	Refused	CFL_FR5
89	Don't Know	CFL_FR5

On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the CFL_FR5 same lighting equipment if you had not received any assistance from the program?

77	(RECORD RESPONSE): _____	CFL_FR5
88	Refused	CFL_FR5
89	Don't Know	CFL_FR5

Our records indicate you received about %CFL_REBATE from the %UTILITY program either directly or at the time of CFL_FR7 purchase to offset the cost of this LIGHTING EQUIPMENT. Does this sound about right?

1	Yes	CFL_FR9
2	No	CFL_FR8
88	Refused	CFL_FR9
99	Don't Know	CFL_FR9

CFL_FR8 What would you estimate to be the actual amount to be?

	(RECORD RESPONSE) _____ (SET %CFL_REBATE = NEW AMOUNT OF PROGRAM INCENTIVE)	CFL_FR9
88	Refused	CFL_FR9
99	Don't know	CFL_FR9

I'm going to read three statements about how you came to choose these CFL BULBS. Using a scale of 0 to 10, where 0 is YOU DO NOT AT ALL AGREE and 10 is YOU AGREE COMPLETELY, how much do you agree with each statement?

CFL_FR9 If I had not had any assistance from the program, I would have paid the full price to buy these CFL BULBS on my own.

	(Record Response (0-10)) _____	CFL_FR10
11	Do not at all agree	CFL_FR10
88	Refused	CFL_FR10
99	Don't know	CFL_FR10

There may have been several reasons for my purchase decision. But the rebate from the &UTILITY &PROGRAM was a CFL_FR10 critical factor in my decision to purchase these energy efficient LIGHTING CFL BULBS.

	(Record Response (0-10)) _____	CFL_FR11
11	Do not at all agree	CFL_FR11
88	Refused	CFL_FR11
99	Don't know	CFL_FR11

I would have purchased the LIGHTING EQUIPMENT within two years of when I did even without the rebate from the CFL_FR11 program.

	(Record Response (0-10)) _____	Cons Check
11	Do not at all agree	Cons Check
88	Refused	Cons Check
99	Don't know	Cons Check

CONSISTENCY CHECK & RESOLUTION FOR CFL INTERIOR CFL BULBS

C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other end of the spectrum.) An algorithm will be provided after pretesting. The question responses that will be used to trigger C1 are:

FR4a (only for efficiency enhancement measures)

FR4d (only for incremental efficiency measures)

FR5

FR10

FR11

{IF FR4a/d = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the &MEASURE without the program'}

{IF FR4a/d = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the &MEASURE without the program'}

{IF FR5 = 0,1 AND FR4a/d = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the &MEASURE without the program'}

{IF FR5 = 9,10 AND FR4a/d = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the &MEASURE without the program'}

{IF FR10 = 0,1 AND FR4a/d = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient &PRODUCT without the program'}

{IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient &PRODUCT without the program'}

{IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the &PRODUCT within [a year/2 years] even without the program'}

{IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the &PRODUCT within [a year/2 years] even without the program'}

Let me make sure I understand you. In your own words, could you please describe how the program influenced your CFL decision to purchase and install these CFL Bulbs at the time you did?

77	(RECORD RESPONSE): _____	EX2
88	Refused	EX2
89	Don't Know	EX2

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FOR CPUC EVALUATION OF CA MULTIFAMILY REBATE PROGRAMS
PG&E2000(MF), SCE2502, SDG&E3017, AND SCG3510**

LINEAR FLUORESCENTS

[ASK LIN1 IF LIN = 1; ELSE SKIP TO DEL5]

According to our records, we show that your property installed %LINEAR_QTY linear fluorescent T8s or T5s. Is this correct?

LINEAR2 correct?

1	Yes, correct as stated	LIN4
2	That is the wrong quantity	LIN3
3	Did not install any LINEAR FLUORESCENT T8s or T5s fixtures	BOIL2
88	Refused	BOIL2
99	Don't know	BOIL2

LINEAR3 Could you give me the correct quantity? An approximation would be fine.

&CQ LIN3	[RECORD CORRECT QTY]	LIN4
88	Refused	BOIL2
99	Don't know	BOIL2

LINEAR4 Were these linear fluorescent T8s or T5s installed in [READ LIST]

1	common areas	LINW1
2	tenant units	LINW1
3	both	LIN5
77	Other [RECORD]	LINW1
88	Refused	LINW1
99	Don't know	LINW1

LINEAR5 Approximately what percentage of these linear fluorescent lamps were installed in common areas?

&% LINCOM	[RECORD PERCENTAGE IN COMMON AREAS]	LINW1
101	Refused	LINW1
102	Don't know	LINW1

Please think back to the time when you were deciding to buy energy efficient LINEAR FLUORESCENT T8s or T5s, perhaps recalling things that occurred at your multifamily property shortly before and after your installation. What factors motivated you to purchase energy saving LINEAR FLUORESCENT T8s or T5s [DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE RESPONDENT HAS FINISHED, PROBE WITH "Are there any other factors?"]

LINW1

1	Old equipment didn't work	LINW2a
2	Old equipment working poorly	LINW2a
3	The program incentive	LINW2a
4	The program technical assistance	LINW2a
5	Wanted to save energy	LINW2a
6	Wanted to reduce energy costs	LINW2a
7	The information provided by the program	LINW2a
8	Fast experience with this program	LINW2a
9	Fast experience with another utility program	LINW2a
10	Recommendation from other utility program [PROBE: "What was the other utility program name or description?" and record as &LINW1_10]	LINW2a
11	Recommendation of dealer/retailer	LINW2a
12	Recommendation of someone else [PROBE: "Who else recommended installing the LINEAR FLUORESCENT T8s or T5s?" and record as &LINW1_12]	LINW2a
13	Advertisement in newspaper [PROBE: "What was the program name in the NEWSPAPER advertisement?" and record as &LINW1_13]	LINW2a
14	Radio advertisement [PROBE: "What was the program name in the RADIO advertisement?" and record as &LINW1_14]	LINW2a
15	Environmental concerns	LINW2a
16	Global warming/carbon footprint	LINW2a
17	Like appearance better	LINW2a
18	Keeping up with the latest trends and fashions	LINW2a
77	Other [SPECIFY]	LINW2a
88	Refused	LINW2a
99	Don't know	LINW2a

[ASK LINW2a - LINW6 IF LINEAR = 1; ELSE SKIP TO LINW7]

Did these LINEAR FLUORESCENT T8s or T5s replace existing LINEAR FLUORESCENT T8s or T5s or were they installed to add additional LIGHTING to your multifamily property?

LINW2a

1	Replaced existing lighting	LINW3
2	To provide additional lighting	LINW2c
3	Both replacing and adding	LINW3
88	Refused	LINW2c
99	Don't know	LINW2c

LINW2c Are these LINEAR FLUORESCENT T8s or T5s the first LINEAR FLUORESCENT T8s or T5s you have ever had at your facility?

1	Yes	LINW3
2	No	LINW3
88	Refused	LINW3
99	Don't know	LINW3

[ASK LINW3 IF LINW2a = 1 or 3; ELSE SKIP TO W5]

LINW3

What type of lighting did these LINEAR FLUORESCENT T8s or T5s replace? Were they...

1	Incandescent	LINW5
2	Fluorescent	LINW5
3	Both	LINW5
77	Other [SPECIFY]	LINW5
88	Refused	LINW5
99	Don't know	LINW5

LINW5 Was this replaced LIGHTING EQUIPMENT working when you removed it?

1	Yes, Working	LINW6
2	Not working	LINFR1
88	Refused	LINFR1
99	Don't know	LINFR1

LINW6 Was this replaced LIGHTING EQUIPMENT in good, fair, or poor condition?

1	Good	LINFR1
2	Fair	LINFR1
3	Poor	LINFR1
88	Refused	LINFR1
99	Don't know	LINFR1

At the time that you first heard about the assistance from %UTILITY for these LINEAR FLUORESCENT T8s or T5s, had you?

LINFR1

1	Already been thinking about purchasing these LINEAR FLUORESCENT T8s or T5s	LINFR2
2	Already begun collecting information about LINEAR FLUORESCENT T8s or T5s	LINFR2
3	[ASK IF LININCEFF = 1] Already selected the LINEAR FLUORESCENT T8s or T5s you were going to get	LINFR2
4	[ASK IF LININHEFF = 1] Already decided to buy the LINEAR FLUORESCENT T8s or T5s	LINFR2
5	Already installed the energy efficient LINEAR FLUORESCENT T8s or T5s	LINFR1b
6	Or, did you hear about the assistance first	LINFR2
88	Refused	LINFR2
99	Don't know	LINFR2

[ASK LINFR1b IF LINFR1 = 5; ELSE SKIP TO LINFR2]

Just to be sure, you had already installed the LINEAR FLUORESCENT T8s or T5s before you learned about the rebate from %UTILITY?

LINFR1b

1	Yes	LINFR5
2	No	COMMENT

88	Refused	COMMENT
99	Don't know	COMMENT

IF LINFR1(5) & LINFR1B(2)|99) DISPLAY FOLLOWING MESSAGE AND ADJUST ANSWERS TO LINFR1 AND COMMENT LINFR1B

I must have coded something wrong. First I recorded that you purchased this equipment before you heard about the program, then I recorded that you did not install the equipment before you heard about the program. Can you help me clear this up?

Just to be sure I understand, did you have specific plans to install these LINEAR FLUORESCENT T8s or T5s before

LINFR2 Learning about the rebate available through the %PROGRAM?

1	Yes	LINFR3
2	No	LINFR4
88	Refused	LINFR4
99	Don't Know	LINFR4

LINFR3 Did you have to make any changes to your existing plans in order to receive this rebate through the program?

1	Yes	LINFR3a
2	No	LINFR4
88	Refused	LINFR4
99	Don't Know	LINFR4

LINFR3a What changes did you need to make?

77	Open	LINFR4
88	Refused	LINFR4
89	Don't Know	LINFR4

If the rebate from the %UTILITY program had not been available, would you still have purchased these LINEAR

LINFR4 FLUORESCENT LAMPS?

1	Yes	LINFR4b
2	No	LINFR5
88	Refused	LINFR4b
99	Don't Know	LINFR4b

LINFR4b Would you have purchased these LAMPS at the same time as you did?

1	Yes	LINFR4c
2	No	LINFR4b1
88	Refused	LINFR4c
99	Don't Know	LINFR4c

LINFR4b1 Would you have purchased these LAMPS earlier than you did or later?

1	Earlier	LINFR4b_E
2	Same Time	LINFR4c
3	Later	LINFR4b_L
88	Refused	LINFR4c
99	Don't Know	LINFR4c

LINFR4b_E How much earlier would you have purchased these LAMPS

(RECORD RESPONSE)	_____ Years (and/or) _____ Months	LINFR4c
88	Refused	LINFR4c
99	Don't know	LINFR4c

LINFR4b_L How much later would you have purchased these LAMPS

(RECORD RESPONSE)	_____ Years (and/or) _____ Months	LINFR4c
88	Refused	LINFR4c
99	Don't know	LINFR4c

[IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM OR MEASURE IS OF VARIABLE AMOUNT] Without the program, would you have purchased the same quantity of LINEAR FLUORESCENT T8s or T5s as you did? (Probe for more or less)

LINFR4c

1	Same	LINFR4d
2	More	LINFR4c_M
3	Less	LINFR4c_L
88	Refused (SKIP TO FR4d)	LINFR4d
99	Don't Know (SKIP TO FR4d)	LINFR4d

LINFR4c_M How many more LAMPS would you have if you had purchased these LAMPS outside of the program?

77	(RECORD RESPONSE)	LINFR4d
88	Refused	LINFR4d
99	Don't know	LINFR4d

LINFR4c_L How many fewer LAMPS would you have if you had purchased these LAMPS outside of the program?

77	(RECORD RESPONSE)	LINFR4d
88	Refused	LINFR4d
99	Don't know	LINFR4d

[ASK LINFR4d IF LININCEFF = 1]

Without the assistance from the program, would you have purchased the same energy efficiency level of LIGHTING

LINFR4d EQUIPMENT?

1	Yes	LINFR4e
2	No	LINFR4e
88	Refused	LINFR4e
99	Don't Know	LINFR4e

LINFR4e If the rebate from the %UTILITY %PROGRAM had not been available, would you have done anything else differently?

1	Yes	LINFR4e1
2	No	LINFR5
77	Other [Record]	LINFR5
88	Refused	LINFR5
99	Don't Know	LINFR5

LINFR4e1 What would you have done differently?

77	(RECORD RESPONSE):	LINFR5
88	Refused	LINFR5
89	Don't Know	LINFR5

On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same lighting equipment if you had not received any assistance from the program?

LINFR5

77	(RECORD RESPONSE):	LINFR7
88	Refused	LINFR7
89	Don't Know	LINFR7

Our records indicate you received about %LINREBATE from the %UTILITY program either directly or at the time of purchase to offset the cost of this LIGHTING EQUIPMENT. Does this sound about right?

LINFR7

1	Yes	LINFR9
2	No	LINFR9
88	Refused	LINFR9
99	Don't Know	LINFR9

LINFR8 What would you estimate to be the actual amount to be?

(RECORD RESPONSE)	_____ (SET %LINREBATE = NEW AMOUNT OF PROGRAM INCENTIVE)	LINFR9
88	Refused	LINFR9
99	Don't know	LINFR9

I'm going to read three statements about how you came to choose these LINEAR FLUORESCENT T8s or T5s. Using a scale of 0 to 10, where 0 is YOU DO NOT AT ALL AGREE and 10 is YOU AGREE COMPLETELY, how much do you agree with each statement?

If I had not had any assistance from the program, I would have paid the full price to buy these LINEAR FLUORESCENT

LINFR9 T8 OR T5s on my own.

(Record Response (0-10))	_____	LINFR10
11	Do not at all agree	LINFR10

88	Refused	LINFR10
99	Don't know	LINFR10

LINFR10 critical factor in my decision to purchase these energy efficient LINEAR FLUORESCENT T8s or T5s.

	(Record Response (0-10))	LINFR11
11	Do not at all agree	LINFR11
88	Refused	LINFR11
99	Don't know	LINFR11

I would have purchased the LINEAR FLUORESCENT T8s or T5s within two years of when I did even without the rebate from the program.

	(Record Response (0-10))	Cons Check
11	Do not at all agree	Cons Check
88	Refused	Cons Check
99	Don't know	Cons Check

CONSISTENCY CHECK & RESOLUTION FOR CFL INTERIOR LINEAR FLUORESCENT T8s or T5s

C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other end of the spectrum.) An algorithm will be provided after pretesting. The question responses that will be used to trigger C1 are:

- FR4a (only for efficiency enhancement measures)
- FR4d (only for incremental efficiency measures)
- FR5
- FR10
- FR11
- {IF FR4a/d = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the &MEASURE without the program'}
- {IF FR4a/d = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the &MEASURE without the program'}
- {IF FR5 = 0,1 AND FR4a/d = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the &MEASURE without the program'}
- {IF FR5 = 9,10 AND FR4a/d = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the &MEASURE without the program'}
- {IF FR10 = 0,1 AND FR4a/d = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient &PRODUCT without the program'}
- {IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient &PRODUCT without the program'}
- {IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the &PRODUCT within [a year/2 years] even without the program'}
- {IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the &PRODUCT within [a year/2 years] even without the program'}

C1A LIN Let me make sure I understand you. In your own words, could you please describe how the program influenced your decision to purchase and install this LIGHTING EQUIPMENT at the time you did?

77	(RECORD RESPONSE):	LSP1
88	Refused	LSP1
89	Don't Know	LSP1

at FR1, if say 5 and then next they say no. then I must have coded something wrong. First I recorded 5 then fix.

PARTICIPANT LIKE AND UNLIKE SPILLOVER QUESTIONS

[ASK LSP1 - LSP4 ONLY IF INSTALLED LIGHTING MEASURES]

Since you received a rebate through &PROGRAM have you purchased and installed any efficient lighting on your own without any assistance from the &UTILITY &PROGRAM or another utility program [READ THE FOLLOWING ONLY FOR PROPERTY MANAGEMENT COMPANIES WITH MORE THAN ONE LOCATION: either at this property or at other

LSP1 properties?]

1	Yes, only at this property	LSP2
2	Yes, only at other properties	LSP2
3	Yes, at this property and other locations	LSP2
4	No	NSP1
88	Refused	NSP1
99	Don't know	NSP1

How many more high efficiency lighting products did you buy on your own, compared to what you got through the program[READ THE FOLLOWING ONLY FOR PROPERTY MANAGEMENT COMPANIES: at this property and/or at another properties]? (PROBE FOR PERCENT OR SHARE OF PROGRAM EQUIPMENT. READ THE FOLLOWING IF NEEDED) For example, was it about one-fourth (25%) of what you installed through the program, one-half (50%) of what you installed through the program, the same amount as what you installed through the program (100%), twice as much as

LSP2 what you installed through the program (200%), or some other amount?

1	(Record Percentage) at this property	LSP3
2	(Record Percentage) at another property	LSP3
88	Refused	LSP3
99	Don't know	LSP3

I'm going to read a statement about this equipment that you purchased on your own, without any assistance from your utility. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement

LSP3 My experience with the &MEASURE installed through the &UTILITY &PROGRAM in [2006, 2007, 2008] influenced my decision to install more high efficiency &MEASURE on my own.

	(Record Response (0-10))	LSP4
88	Refused	LSP4
99	Don't Know	LSP4

Why did you purchase this lighting without the financial assistance available from the &UTILITY &PROGRAM? (DO NOT

LSP4 READ: INDICATE ALL THAT APPLY)

1	Too much paperwork	NSP1
2	Takes too long to get approval	NSP1
3	No time to participate, needed equipment immediately	NSP1
4	The program had ended	NSP1
5	The equipment would not qualify (PROBE: Why not?)	NSP1
6	The amount of the rebate wasn't important enough	NSP1
77	Other (SPECIFY)	NSP1
88	Refused	NSP1
99	Don't know	NSP1

PARTICIPANT/NTG/RECRUITING SURVEY OF
MULTIFAMILY DWELLING PROPERTY OWNERS/MANAGERS
FOR CPUC EVALUATION OF CA MULTIFAMILY REBATE PROGRAMS
PG&E2000(MF), SCE2502, SDG&E3017, AND SCG3510

EXIT SIGNS

[ASK EX2 IF EX = 1; ELSE SKIP TO LIN2]

EX2 According to our records, we show that your property installed %EXITQTY LED EXIT SIGNS. Is this correct?

1	Yes, correct as stated	EX4
2	That is the wrong quantity	EX3
3	Did not install any EXIT SIGNS	LIN2
88	Refused	LIN2
99	Don't know	LIN2

EX3 Could you give me the correct quantity? An approximation would be fine.

&CQ; EX	[RECORD CORRECT QTY]	EX4
88	Refused	LIN2
99	Don't know	LIN2

EX4 Were these LED EXIT SIGNS installed [READ LIST]

1	in indoor common areas	EXITW1
2	in outdoor common areas	EXITW1
3	in both	EXITW1
77	Other [RECORD]	EXITW1
88	Refused	EXITW1
99	Don't know	EXITW1

Please think back to the time when you were deciding to buy energy efficient LED EXIT SIGNS, perhaps recalling things that occurred at your multifamily property shortly before and after your installation. What factors motivated you to purchase energy saving LED EXIT SIGNS [DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE RESPONDENT HAS FINISHED, PROBE WITH "Are there any other factors?"]

EXITW1 HAS FINISHED, PROBE WITH "Are there any other factors?"]

1	Old equipment didn't work	EXITW2a
2	Old equipment working poorly	EXITW2a
3	The program incentive	EXITW2a
4	The program technical assistance	EXITW2a
5	Wanted to save energy	EXITW2a
6	Wanted to reduce energy costs	EXITW2a
7	The information provided by the program	EXITW2a
8	Past experience with this program	EXITW2a
9	Past experience with another utility program	EXITW2a
10	Recommendation from other utility program [PROBE: "What was the other utility program name or description?" and record as &EXITW1_10]	EXITW2a
11	Recommendation of dealer/retailer	EXITW2a
12	Recommendation of someone else [PROBE: "Who else recommended installing the LED EXIT SIGNS?" and record as &EXITW1_12]	EXITW2a
13	Advertisement in newspaper [PROBE: "What was the program name in the NEWSPAPER advertisement?" and record as &EXITW1_13]	EXITW2a
14	Radio advertisement [PROBE: "What was the program name in the RADIO advertisement?" and record as &EXITW1_14]	EXITW2a
15	Environmental concerns	EXITW2a
16	Global warming/carbon footprint	EXITW2a
17	Like appearance better	EXITW2a
18	Keeping up with the latest trends and fashions	EXITW2a
77	Other [SPECIFY]	EXITW2a
88	Refused	EXITW2a
99	Don't know	EXITW2a

[ASK EXITW2a - EXITW6 IF EXIT = 1; ELSE SKIP TO EXITW7]

Did these LED EXIT SIGNS replace existing EXIT SIGNS or were they installed to add additional EXIT SIGNS to your multifamily property?

EXITW2a

1	Replaced existing lighting	EXITW2c
2	To provide additional lighting	EXITW2c
3	Both replacing and adding	EXITW2c
88	Refused	EXITW2c
99	Don't know	EXITW2c

EXITW2c Are these LED EXIT SIGNS the first LED EXIT SIGNS you have ever had at your facility?

1	Yes	EXITW3
2	No	EXITW3
88	Refused	EXITW3
99	Don't know	EXITW3

[ASK EXITW3 IF EXITW2a = 1 or 3; ELSE SKIP TO W5]

EXITW3 What type of lighting did these LED EXIT SIGNS replace? Were they...

1	Incandescent	EXITW5
2	CFL	EXITW5
3	Both	EXITW5
66	Replaced non electric exit signs	EXITW5
77	Other (SPECIFY)	EXITW5
88	Refused	EXITW5
99	Don't know	EXITW5

EXITW5 Were these replaced EXIT SIGNS working when you removed them?

1	Yes, Working	EXITW6
2	Not working	EXITFR1
3	They were paper	EXITFR1
88	Refused	EXITFR1
99	Don't know	EXITFR1

EXITW6 Were these EXIT SIGNS in good, fair, or poor condition?

1	Good	EXITFR1
2	Fair	EXITFR1
3	Poor	EXITFR1
88	Refused	EXITFR1
99	Don't know	EXITFR1

EXITFR1 At the time that you first heard about the assistance from %UTILITY for these LED EXIT SIGNS, had you...? [READ LIST]

1	Already been thinking about purchasing these EXIT SIGNS	EXITFR2
2	Already begun collecting information about EXIT SIGNS	EXITFR2
3	(ASK IF EXITINCEFF = 1) Already selected the EXIT SIGNS you were going to get	EXITFR2
4	(ASK IF EXITENHEFF = 1) Already decided to buy the EXIT SIGNS	EXITFR2
5	Already installed the energy efficient EXIT SIGNS	EXITFR1b
6	Or, did you hear about the assistance first	EXITFR2
88	Refused	EXITFR2
99	Don't know	EXITFR2

[ASK EXITFR1b IF EXITFR1 QUESTION 5 = YES; ELSE SKIP TO EXITFR2]

EXITFR1b Just to be sure, you had already installed the LED EXIT SIGNS before you learned about the rebate from %UTILITY?

1	Yes	EXITFR5
2	No	COMMENT
88	Refused	COMMENT
99	Don't know	COMMENT

IF EXITFR1(5) & EXITFR1B(2)[99] DISPLAY FOLLOWING MESSAGE AND ADJUST ANSWERS TO EXITFR1 AND

COMMENT EXITFR1B

I must have coded something wrong. First I recorded that you purchased this equipment before you heard about the program, then I recorded that you did not install the equipment before you heard about the program. Can you help me clear this up?

Just to be sure I understand, did you have specific plans to install these LED EXIT SIGNS before learning about the rebate available through the %PROGRAM?

EXITFR2

1	Yes	EXITFR3
2	No	EXITFR4
88	Refused	EXITFR4
99	Don't Know	EXITFR4

EXITFR3 Did you have to make any changes to your existing plans in order to receive this rebate through the program?

1	Yes	EXITFR3a
2	No	EXITFR4
88	Refused	EXITFR4
99	Don't Know	EXITFR4

EXITFR3a What changes did you need to make?

77	Open	EXITFR4
88	Refused	EXITFR4
89	Don't Know	EXITFR4

EXITFR4 If the rebate from the %UTILITY program had not been available, would you still have purchased these LED EXIT SIGNS?

1	Yes	EXITFR4b
2	No	EXITFR5
88	Refused	EXITFR4b
99	Don't Know	EXITFR4b

EXITFR4b Would you have purchased these LED EXIT SIGNS at the same time as you did?

1	Yes	EXITFR4c
2	No	EXITFR4b1
88	Refused	EXITFR4c
99	Don't Know	EXITFR4c

EXITFR4b1 Would you have purchased these LED EXIT SIGNS earlier than you did or later?

1	Earlier	EXITFR4b E
2	Same Time	EXITFR4c
3	Later	EXITFR4b L
88	Refused	EXITFR4c
99	Don't Know	EXITFR4c

EXITFR4b E How much earlier would you have purchased these LED EXIT SIGNS

	(RECORD RESPONSE) _____ Years (and/or) _____ Months	EXITFR4c
88	Refused	EXITFR4c
99	Don't know	EXITFR4c

EXITFR4b L How much later would you have purchased these LED EXIT SIGNS

	(RECORD RESPONSE) _____ Years (and/or) _____ Months	EXITFR4c
88	Refused	EXITFR4c
99	Don't know	EXITFR4c

[IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM OR MEASURE IS OF VARIABLE AMOUNT] Without

EXITFR4c the program, would you have purchased the same quantity of LED EXIT SIGNS as you did? (Probe for more or less)

1	Same	EXITFR4d
2	More	EXITFR4c_M
3	Less	EXITFR4c_L
88	Refused (SKIP TO FR4d)	EXITFR4d
99	Don't Know (SKIP TO FR4d)	EXITFR4d

EXITFR4c_M How many more LED EXIT SIGNS would you have if you had purchased these LED EXIT SIGNS outside of the program?

77	(RECORD RESPONSE)	EXITFR4d
88	Refused	EXITFR4d
99	Don't know	EXITFR4d

How many fewer LED EXIT SIGNS would you have if you had purchased these LED EXIT SIGNS outside of the program?

EXITFR4c_L

77	(RECORD RESPONSE)	EXITFR4d
88	Refused	EXITFR4d
99	Don't know	EXITFR4d

[ASK EXITFR4d IF EXITINCEFF = 1]

Without the assistance from the program, would you have purchased the same energy efficiency level of LED EXIT SIGNS?

EXITFR4d

1	Yes	EXITFR4e
2	No	EXITFR4e
88	Refused	EXITFR4e
99	Don't Know	EXITFR4e

EXITFR4e If the rebate from the %UTILITY %PROGRAM had not been available, would you have done anything else differently?

1	Yes	EXITFR4e1
2	No	EXITFR5
77	Other [Record]	EXITFR5

88	Refused	EXITFR5
99	Don't Know	EXITFR5

EXITFR4e1 What would you have done differently?

77	(RECORD RESPONSE): _____	EXITFR5
88	Refused	EXITFR5
89	Don't Know	EXITFR5

On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought these exit signs if you had not received any assistance from the program?

EXITFR5

77	(RECORD RESPONSE): _____	EXITFR5
88	Refused	EXITFR5
89	Don't Know	EXITFR5

Our records indicate you received about %EXITREBATE from the %UTILITY program either directly or at the time of purchase to offset the cost of this EXIT SIGNS. Does this sound about right?

EXITFR7

1	Yes	EXITFR9
2	No	EXITFR8
88	Refused	EXITFR9
99	Don't Know	EXITFR9

EXITFR8 What would you estimate to be the actual amount to be?

	(RECORD RESPONSE) _____ (SET %EXITREBATE = NEW AMOUNT OF PROGRAM INCENTIVE)	EXITFR9
88	Refused	EXITFR9
99	Don't know	EXITFR9

I'm going to read three statements about how you came to choose these LED EXIT SIGNS. Using a scale of 0 to 10, where 0 is YOU DO NOT AT ALL AGREE and 10 is YOU AGREE COMPLETELY, how much do you agree with each statement?

EXITFR9 If I had not had any assistance from the program, I would have paid the full price to buy these EXIT SIGNS on my own.

	(Record Response (0-10)) _____	EXITFR10
11	Do not at all agree	EXITFR10
88	Refused	EXITFR10
99	Don't know	EXITFR10

There may have been several reasons for my purchase decision. But the rebate from the &UTILITY &PROGRAM was a critical factor in my decision to purchase these energy efficient LED EXIT SIGNS.

EXITFR10

	(Record Response (0-10)) _____	EXITFR11
11	Do not at all agree	EXITFR11
88	Refused	EXITFR11
99	Don't know	EXITFR11

EXITFR11 I would have purchased the LED EXIT SIGNS within two years of when I did even without the rebate from the program.

	(Record Response (0-10)) _____	Cons Check
11	Do not at all agree	Cons Check
88	Refused	Cons Check
99	Don't know	Cons Check

CONSISTENCY CHECK & RESOLUTION FOR CFL INTERIOR LED EXIT SIGNS

C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other end of the spectrum.) An algorithm will be provided after pretesting. The question responses that will be used to trigger C1 are:

FR4a (only for efficiency enhancement measures)

FR4d (only for incremental efficiency measures)

FR5

FR10

FR11

{IF FR4a/d = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the &MEASURE without the program'}

{IF FR4a/d = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the &MEASURE without the program'}

{IF FR5 = 0,1 AND FR4a/d = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the &MEASURE without the program'}

{IF FR5 = 9,10 AND FR4a/d = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the &MEASURE without the program'}

{IF FR10 = 0,1 AND FR4a/d = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient &PRODUCT without the program'}

{IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient &PRODUCT without the program'}

{IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the &PRODUCT within [a year/2 years] even without the program'}

{IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the &PRODUCT within [a year/2 years] even without the program'}

Let me make sure I understand you. In your own words, could you please describe how the program influenced your decision to purchase and install these LED EXIT SIGNS at the time you did?

C1A_EXIT

77	(RECORD RESPONSE): _____	LINEAR2
88	Refused	LINEAR2
89	Don't Know	LINEAR2

PARTICIPANT/NTG/RECRUITING SURVEY OF
MULTIFAMILY DWELBL_G PROPERTY OWNERS/MANAGERS
FOR CPUC EVALUATION OF CA MULTIFAMILY REBATE PROGRAMS
PG&E2000(MF), SCE2502, SDG&E3017, AND SCG3510

WATER HEATERS/BOILERS

[ASK BOIL2 IF BOIL = 1; ELSE SKIP TO FAUC2]

BOIL2 According to our records, we show that your property installed %QTY_BOIL water heaters/boilers. Is this correct?

1	Yes, correct as stated	BOIL4
2	That is the wrong quantity	BOIL3
3	Did not install any WATER HEATERS/BOILERS	FAUC2
88	Refused	FAUC2
99	Don't know	FAUC2

BOIL3 Could you give me the correct quantity? An approximation would be fine.

&CQ_BOIL	[RECORD CORRECT QTY]	BOIL4
88	Refused	FAUC2
99	Don't know	FAUC2

BOIL4 Were these water heaters/boilers installed [READ LIST]

1	for hot water use in common areas	BL_W1
2	for hot water use in tenant units	BL_W1
4	for both	BL_W1
77	Other [RECORD]	BL_W1
88	Refused	BL_W1
99	Don't know	BL_W1

Please think back to the time when you were deciding to buy energy efficient WATER HEATERS/BOILERS, perhaps recalling things that occurred at your multifamily property shortly before and after your installation. What factors motivated you to purchase energy saving WATER HEATERS/BOILERS [DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE

BL_W1 RESPONDENT HAS FINISHED, PROBE WITH "Are there any other factors?"]

1	Old equipment didn't work	BL_W2a
2	Old equipment working poorly	BL_W2a
3	The program incentive	BL_W2a
4	The program technical assistance	BL_W2a
5	Wanted to save energy	BL_W2a
6	Wanted to reduce energy costs	BL_W2a
7	The information provided by the program	BL_W2a
8	Past experience with this program	BL_W2a
9	Past experience with another utility program	BL_W2a
10	Recommendation from other utility program [PROBE: "What was the other utility program name or description?" and record as &BL_W1_10]	BL_W2a
11	Recommendation of dealer/retailer	BL_W2a
12	Recommendation of someone else [PROBE: "Who else recommended installing the WATER HEATERS/BOILERS?" and record as &BL_W1_12]	BL_W2a
13	Advertisement in newspaper [PROBE: "What was the program name in the NEWSPAPER advertisement?" and record as &BL_W1_13]	BL_W2a
14	Radio advertisement [PROBE: "What was the program name in the RADIO advertisement?" and record as &BL_W1_14]	BL_W2a
15	Environmental concerns	BL_W2a
16	Global warming/carbon footprint	BL_W2a
17	Like appearance better	BL_W2a
18	Keeping up with the latest trends and fashions	BL_W2a
77	Other [SPECIFY]	BL_W2a
88	Refused	BL_W2a
99	Don't know	BL_W2a

[ASK BL_W2a - BL_W6 IF BOIL = 1; ELSE SKIP TO BL_W7]

Did these WATER HEATERS/BOILERS replace existing equipment or were they installed to add additional HOT WATER to your multifamily property?

BL_W2a

1	Replaced existing EQUIPMENT	BL_W3
2	To provide additional HOT WATER	BL_W3
3	Both replacing and adding	BL_W3
88	Refused	BL_W3
99	Don't know	BL_W3

[ASK BL_W4 IF BL_W2a = 1 or 3; ELSE SKIP TO BL_W5]

BL_W4 About how old was the equipment that you replaced?

1	Less than 5 years old	BL_W5
2	5 to 10 years old	BL_W5
3	10 to 20 years old	BL_W5
4	20 to 30 years old	BL_W5
5	More than 30 years old	BL_W5
88	Refused	BL_W5
99	Don't know	BL_W5

BL_W5 Was this EQUIPMENT working when you removed it?

1	Yes, Working	BL_W6
2	Not working	BL_FR1
88	Refused	BL_FR1
99	Don't know	BL_FR1

BL_W6 Was this replaced EQUIPMENT in good, fair, or poor condition?

1	Good	BL_FR1
2	Fair	BL_FR1
3	Poor	BL_FR1
88	Refused	BL_FR1
99	Don't know	BL_FR1

BL_FR1 At the time that you first heard about the assistance from %UTILITY for these WATER HEATERS/BOILERS, had you...? [READ LIST]

1	Already been thinking about purchasing this HOT WATER EQUIPMENT	BL_FR2
2	Already begun collecting information about HOT WATER EQUIPMENT	BL_FR2
3	[ASK IF BL_INCEFF = 1] Already selected the HOT WATER EQUIPMENT you were going to get	BL_FR2
4	[ASK IF BL_ENHEFF = 1] Already decided to buy the HOT WATER EQUIPMENT	BL_FR2
5	Already installed the energy efficient HOT WATER EQUIPMENT	BL_FR1b
6	Or, did you hear about the assistance first	BL_FR1b
77	Something other [SPECIFY]	BL_FR2

88	Refused	BL_FR2
99	Don't know	BL_FR2

[ASK BL_FR1b IF BL_FR1 QUESTION 5 = YES; ELSE SKIP TO BL_FR2]

Just to be sure, you had already installed the WATER HEATERS/BOILERS before you learned about the rebate from

BL_FR1b %UTILITY?

1	Yes	BL_FR5
2	No	COMMENT
88	Refused	COMMENT
99	Don't know	COMMENT

IF BL_FR1(5) & BL_FR1B(2)[99] DISPLAY FOLLOWING MESSAGE AND ADJUST ANSWERS TO BL_FR1 AND

COMMENT BL_FR1B

I must have coded something wrong. First I recorded that you purchased this equipment before you heard about the program, then I recorded that you did not install the equipment before you heard about the program. Can you help me clear this up?

Just to be sure I understand, did you have specific plans to install these WATER HEATERS/BOILERS before learning about the rebate available through the %PROGRAM?

BL_FR2

1	Yes	BL_FR3
2	No	BL_FR4
88	Refused	BL_FR4
99	Don't Know	BL_FR4

BL_FR3 Did you have to make any changes to your existing plans in order to receive this rebate through the program?

1	Yes	BL_FR3a
2	No	BL_FR4
88	Refused	BL_FR4
99	Don't Know	BL_FR4

BL_FR3a What changes did you need to make?

77	Open	BL_FR4
88	Refused	BL_FR4
89	Don't Know	BL_FR4

If the rebate from the %UTILITY program had not been available, would you still have purchased this HOT WATER

BL_FR4A EQUIPMENT?

1	Yes	BL_FR4b
2	No	BL_FR5
88	Refused	BL_FR4b
99	Don't Know	BL_FR4b

BL_FR4b Would you have purchased this EQUIPMENT at the same time as you did?

1	Yes	BL_FR4c
2	No	BL_FR4b1
88	Refused	BL_FR4c
99	Don't Know	BL_FR4c

BL_FR4b1 Would you have purchased this EQUIPMENT earlier than you did or later?

1	Earlier	BL_FR4b_E
2	Same Time	BL_FR4c
3	Later	BL_FR4b_L
88	Refused	BL_FR4c
99	Don't Know	BL_FR4c

BL_FR4b_E How much earlier would you have purchased this EQUIPMENT

	(RECORD RESPONSE) _____ Years (and/or) _____ Months	BL_FR4c
88	Refused	BL_FR4c
99	Don't know	BL_FR4c

BL_FR4b_L How much later would you have purchased this EQUIPMENT

	(RECORD RESPONSE) _____ Years (and/or) _____ Months	BL_FR4c
88	Refused	BL_FR4c
99	Don't know	BL_FR4c

[IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM OR MEASURE IS OF VARIABLE AMOUNT] Without the program, would you have purchased the same quantity of WATER HEATERS/BOILERS as you did? (Probe for more

BL_FR4c or less)

1	Same	BL_FR4d
2	More	BL_FR4c_M
3	Less	BL_FR4c_L
88	Refused (SKIP TO FR4d)	BL_FR4d
99	Don't Know (SKIP TO FR4d)	BL_FR4d

How many more WATER HEATING EQUIPMENT would you have if you had purchased this EQUIPMENT outside of the

BL_FR4c_M program?

77	(RECORD RESPONSE)	BL_FR4d
88	Refused	BL_FR4d
99	Don't know	BL_FR4d

How many fewer WATER HEATING EQUIPMENT would you have if you had purchased this EQUIPMENT outside of the

BL_FR4c_L program?

77	(RECORD RESPONSE)	BL_FR4d
88	Refused	BL_FR4d
99	Don't know	BL_FR4d

[ASK BL_FR4d IF BL_INCEFF = 1]

BL_FR4d Without the assistance from the program, would you have purchased the same energy efficiency level of EQUIPMENT?

1	Yes	BL_FR4e
2	No	BL_FR4e
88	Refused	BL_FR4e
99	Don't Know	BL_FR4e

BL_FR4e If the rebate from the %UTILITY %PROGRAM had not been available, would you have done anything else differently?

1	Yes	BL_FR4e1
2	No	BL_FR5
77	Other (Record)	BL_FR5
88	Refused	BL_FR5
99	Don't Know	BL_FR5

BL_FR4e1 What would you have done differently?

77	(RECORD RESPONSE): _____	BL_FR5
----	--------------------------	--------

88	Refused	BL_FR5
89	Don't Know	BL_FR5

On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the BL_FR5 same lighting equipment if you had not received any assistance from the program?

77	(RECORD RESPONSE): _____	BL_FR7
88	Refused	BL_FR7
89	Don't Know	BL_FR7

Our records indicate you received about %BL_REBATE from the %UTILITY program either directly or at the time of BL_FR7 purchase to offset the cost of this WATER HEATING EQUIPMENT. Does this sound about right?

1	Yes	BL_FR9
2	No	BL_FR8
88	Refused	BL_FR9
99	Don't Know	BL_FR9

BL_FR8 What would you estimate to be the actual amount to be?

	(RECORD RESPONSE): _____ (SET %BL_REBATE = NEW AMOUNT OF PROGRAM INCENTIVE)	BL_FR9
88	Refused	BL_FR9
99	Don't know	BL_FR9

I'm going to read three statements about how you came to choose these WATER HEATERS/BOILERS. Using a scale of 0 to 10, where 0 is YOU DO NOT AT ALL AGREE and 10 is YOU AGREE COMPLETELY, how much do you agree with each statement?

If I had not had any assistance from the program, I would have paid the full price to buy these WATER

BL_FR9 HEATERS/BOILERS on my own.

	(Record Response (0-10)) _____	BL_FR10
11	Do not at all agree	BL_FR10
88	Refused	BL_FR10
99	Don't know	BL_FR10

There may have been several reasons for my purchase decision. But the rebate from the &UTILITY &PROGRAM was a BL_FR10 critical factor in my decision to purchase these energy efficient WATER HEATERS/BOILERS.

	(Record Response (0-10)) _____	BL_FR11
11	Do not at all agree	BL_FR11
88	Refused	BL_FR11
99	Don't know	BL_FR11

I would have purchased the WATER HEATERS/BOILERS within two years of when I did even without the rebate from the BL_FR11 program.

	(Record Response (0-10)) _____	Cons Check
11	Do not at all agree	Cons Check
88	Refused	Cons Check
99	Don't know	Cons Check

CONSISTENCY CHECK & RESOLUTION FOR CFL INTERIOR WATER HEATERS/BOILERS

C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other end of the spectrum.) An algorithm will be provided after pretesting. The question responses that will be used to trigger C1 are:

FR4a (only for efficiency enhancement measures)

FR4d (only for incremental efficiency measures)

FR5

FR10

FR11

{IF FR4a/d = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the &MEASURE without the program'}

{IF FR4a/d = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the &MEASURE without the program'}

{IF FR5 = 0,1 AND FR4a/d = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the &MEASURE without the program'}

{IF FR5 = 9,10 AND FR4a/d = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the &MEASURE without the program'}

{IF FR10 = 0,1 AND FR4a/d = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient &PRODUCT without the program'}

{IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient &PRODUCT without the program'}

{IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the &PRODUCT within [a year/2 years] even without the program'}

{IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the &PRODUCT within [a year/2 years] even without the program'}

Let me make sure I understand you. In your own words, could you please describe how the program influenced your C1A BL decision to purchase and install your new HOT WATER/BOILER EQUIPMENT at the time you did?

77	(RECORD RESPONSE): _____	FAUC2
88	Refused	FAUC2
89	Don't Know	FAUC2

PARTICIPANT/NTG/RECRUITING SURVEY OF
MULTIFAMILY DWELLING PROPERTY OWNERS/MANAGERS
FOR CPUC EVALUATION OF CA MULTIFAMILY REBATE PROGRAMS
PG&E2000(MF), SCE2502, SDG&E3017, AND SCG3510

FAUCET AERATORS

[ASK FAUC2 IF FAUC = 1; ELSE SKIP TO SHOW2]

FAUC2 According to our records, we show that your property installed %FAUC_QTY faucet aerators. Is this correct?

1	Yes, correct as stated	FAUC4
2	That is the wrong quantity	FAUC3
3	Did not install any FAUCET AERATORS	SHOW2
88	Refused	SHOW2
99	Don't know	SHOW2

FAUC3 Could you give me the correct quantity? An approximation would be fine.

&CQ_FAUC3	[RECORD CORRECT QTY]	FAUC4
88	Refused	FAUC4
99	Don't know	FAUC4

FAUC4 Were these faucet aerators installed [READ LIST]

1	for use in common areas	FC_W1
2	for use in tenant units	FC_W1
3	both for tenant and common areas	FAUC5
77	Other [RECORD]	FC_W1
88	Refused	FC_W1
99	Don't know	FC_W1

FAUC5 Approximately what percentage of these faucet aerators were installed in common areas?

&%_FAUCOM	[RECORD PERCENTAGE IN COMMON AREAS]	FC_W1
101	Refused	FC_W1
102	Don't know	FC_W1

Please think back to the time when you were deciding to buy energy efficient FAUCET AERATORS, perhaps recalling things that occurred at your multifamily property shortly before and after your installation. What factors motivated you to purchase these FAUCET AERATORS [DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE RESPONDENT HAS FINISHED, PROBE WITH "Are there any other factors?"]

FC_W1

1	Old equipment didn't work	FC_W2a
2	Old equipment working poorly	FC_W2a
3	The program incentive	FC_W2a
4	The program technical assistance	FC_W2a
5	Wanted to save energy	FC_W2a
6	Wanted to reduce energy costs	FC_W2a
7	The information provided by the program	FC_W2a
8	Past experience with this program	FC_W2a
9	Past experience with another utility program	FC_W2a
10	Recommendation from other utility program [PROBE: "What was the other utility program name or description?" and record as &FC_W1_10]	FC_W2a
11	Recommendation of dealer/retailer	FC_W2a
12	Recommendation of someone else [PROBE: "Who else recommended installing the FAUCET AERATORS?" and record as &FC_W1_12]	FC_W2a
13	Advertisement in newspaper [PROBE: "What was the program name in the NEWSPAPER advertisement?" and record as &FC_W1_13]	FC_W2a
14	Radio advertisement [PROBE: "What was the program name in the RADIO advertisement?" and record as &FC_W1_14]	FC_W2a
15	Environmental concerns	FC_W2a
16	Global warming/carbon footprint	FC_W2a
17	Like appearance better	FC_W2a
18	Keeping up with the latest trends and fashions	FC_W2a
77	Other [SPECIFY]	FC_W2a
88	Refused	FC_W2a
99	Don't know	FC_W2a

Did these FAUCET AERATORS replace existing equipment or were they installed to add additional FAUCET AERATORS to your multifamily property?

FC_W2a

1	Replaced existing FAUCET AERATORS	FC_FR1
2	To provide additional FAUCET AERATORS	FC_W2c
3	Both replacing and adding	FC_FR1
88	Refused	FC_W2c
99	Don't know	FC_W2c

FC_W2c Are these FAUCET AERATORS the first FAUCET AERATORS you have ever had at your facility?

1	Yes	FC_FR1
2	No	FC_FR1
88	Refused	FC_FR1
99	Don't know	FC_FR1

[ASK FC_W4 IF FC_W2a = 1 or 3; ELSE SKIP TO FC_W5]

FC_W4 About how old was the equipment that you replaced?

1	Less than 5 years old	FC_W5
2	5 to 10 years old	FC_W5
3	10 to 20 years old	FC_W5
4	20 to 30 years old	FC_W5
5	More than 30 years old	FC_W5
88	Refused	FC_W5
99	Don't know	FC_W5

FC_W5 Was this EQUIPMENT working when you removed it?

1	Yes, Working	FC_W6
2	Not working	FC_FR1
88	Refused	FC_FR1
99	Don't know	FC_FR1

FC_W6 Was this replaced EQUIPMENT in good, fair, or poor condition?

1	Good	FC_FR1
2	Fair	FC_FR1
3	Poor	FC_FR1
88	Refused	FC_FR1

99	Don't know	FC_FR1
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At the time that you first heard about the assistance from %UTILITY for these FAUCET AERATORS, had you...? [READ

FC_FR1 LIST

1	Already been thinking about purchasing FAUCET AERATORS	FC_FR2
2	Already begun collecting information about FAUCET AERATORS	FC_FR2
3	[ASK IF FC_INCEFF = 1] Already selected the FAUCET AERATORS you were going to get	FC_FR2
4	[ASK IF FC_ENHEFF = 1] Already decided to buy the FAUCET AERATORS	FC_FR2
5	Already installed the energy efficient FAUCET AERATORS	FC_FR1b
6	Or, did you hear about the assistance first	FC_FR2
77	Something other [SPECIFY]	FC_FR2
88	Refused	FC_FR2
99	Don't know	FC_FR2

[ASK FC_FR1b IF FC_FR1 QUESTION 5 = YES; ELSE SKIP TO FC_FR2]

FC_FR1b Just to be sure, you had already installed the FAUCET AERATORS before you learned about the rebate from %UTILITY?

1	Yes	FC_FR5
2	No	COMMENT
88	Refused	COMMENT
99	Don't know	COMMENT

IF FC_FR1(5) & FC_FR1b(2)[99] DISPLAY FOLLOWING MESSAGE AND ADJUST ANSWERS TO FC_FR1 AND

COMMENT FC_FR1b

I must have coded something wrong. First I recorded that you purchased this equipment before you heard about the program, then I recorded that you did not install the equipment before you heard about the program. Can you help me clear this up?

Just to be sure I understand, did you have specific plans to install these FAUCET AERATORS before learning about the **FC_FR2** rebate available through the %PROGRAM?

1	Yes	FC_FR3
2	No	FC_FR4
88	Refused	FC_FR4
99	Don't Know	FC_FR4

FC_FR3 Did you have to make any changes to your existing plans in order to receive this rebate through the program?

1	Yes	FC_FR3a
2	No	FC_FR4
88	Refused	FC_FR4
99	Don't Know	FC_FR4

FC_FR3a What changes did you need to make?

77	Open	FC_FR4
88	Refused	FC_FR4
89	Don't Know	FC_FR4

If the rebate from the %UTILITY program had not been available, would you still have purchased these FAUCET

FC_FR4 AERATORS?

1	Yes	FC_FR4b
2	No	FC_FR5
88	Refused	FC_FR4b
99	Don't Know	FC_FR4b

FC_FR4b Would you have purchased these FAUCET AERATORS at the same time as you did?

1	Yes	FC_FR4c
2	No	FC_FR4b1
88	Refused	FC_FR4c
99	Don't Know	FC_FR4c

FC_FR4b1 Would you have purchased these FAUCET AERATORS earlier than you did or later?

1	Earlier	FC_FR4b_E
2	Same Time	FC_FR4c
3	Later	FC_FR4b_L
88	Refused	FC_FR4c
99	Don't Know	FC_FR4c

FC_FR4b_E How much earlier would you have purchased this equipment

77	(RECORD RESPONSE) _____ Years (and/or) _____ Months	FC_FR4c
88	Refused	FC_FR4c
99	Don't know	FC_FR4c

FC_FR4b_L How much later would you have purchased this equipment

77	(RECORD RESPONSE) _____ Years (and/or) _____ Months	FC_FR4c
88	Refused	FC_FR4c
99	Don't know	FC_FR4c

[IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM OR MEASURE IS OF VARIABLE AMOUNT] Without

FC_FR4c the program, would you have purchased the same quantity of FAUCET AERATORS as you did? (Probe for more or less)

1	Same	FC_FR4d
2	More	FC_FR4c_M
3	Less	FC_FR4c_L
88	Refused (SKIP TO FR4d)	FC_FR4d
99	Don't Know (SKIP TO FR4d)	FC_FR4d

FC_FR4c_M How many more FAUCET AERATORS would you have if you had purchased these outside of the program?

77	(RECORD RESPONSE)	FC_FR4d
88	Refused	FC_FR4d
99	Don't know	FC_FR4d

FC_FR4c_L How many fewer FAUCET AERATORS would you have if you had purchased these outside of the program?

77	(RECORD RESPONSE)	FC_FR4d
88	Refused	FC_FR4d
99	Don't know	FC_FR4d

[ASK FC_FR4d IF FC_INCEFF = 1]

Without the assistance from the program, would you have purchased the same energy efficiency level of FAUCET

FC_FR4d AERATORS?

1	Yes	FC_FR4e
2	No	FC_FR4e
88	Refused	FC_FR4e
99	Don't Know	FC_FR4e

FC_FR4e If the rebate from the %UTILITY %PROGRAM had not been available, would you have done anything else differently?

1	Yes	FC_FR5
2	No	FC_FR5
77	Other [Record]	FC_FR5
88	Refused	FC_FR5
99	Don't Know	FC_FR5

FC_FR4e1 What would you have done differently?

77	{RECORD RESPONSE}: _____	FC_FR5
88	Refused	FC_FR5
89	Don't Know	FC_FR5

On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same faucet aerators if you had not received any assistance from the program?

FC_FR5

77	{RECORD RESPONSE}: _____	FC_FR7
88	Refused	FC_FR7
89	Don't Know	FC_FR7

Our records indicate you received about %FC_REBATE from the %UTILITY program either directly or at the time of purchase to offset the cost of these FAUCET AERATORS. Does this sound about right?

FC_FR7

1	Yes	FC_FR9
2	No	FC_FR8
88	Refused	FC_FR9
99	Don't Know	FC_FR9

FC_FR8 What would you estimate to be the actual amount to be?

	{RECORD RESPONSE} _____ (SET %FC_REBATE = NEW AMOUNT OF PROGRAM INCENTIVE)	FC_FR9
88	Refused	FC_FR9
99	Don't know	FC_FR9

I'm going to read three statements about how you came to choose these FAUCET AERATORS. Using a scale of 0 to 10, where 0 is YOU DO NOT AT ALL AGREE and 10 is YOU AGREE COMPLETELY, how much do you agree with each statement?

If I had not had any assistance from the program, I would have paid the full price to buy these FAUCET AERATORS on my own.

FC_FR9

	{Record Response (0-10)} _____	FC_FR10
11	Do not at all agree	FC_FR10
88	Refused	FC_FR10
99	Don't know	FC_FR10

There may have been several reasons for my purchase decision. But the rebate from the &UTILITY &PROGRAM was a critical factor in my decision to purchase these energy efficient FAUCET AERATORS.

FC_FR10

	{Record Response (0-10)} _____	FC_FR11
11	Do not at all agree	FC_FR11
88	Refused	FC_FR11
99	Don't know	FC_FR11

FC_FR11 I would have purchased the FAUCET AERATORS within two years of when I did even without the rebate from the program.

	{Record Response (0-10)} _____	Cons Check
11	Do not at all agree	Cons Check
88	Refused	Cons Check
99	Don't know	Cons Check

CONSISTENCY CHECK & RESOLUTION FOR CFL INTERIOR FAUCET AERATORS

C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other end of the spectrum.) An algorithm will be provided after pretesting. The question responses that will be used to trigger C1 are:

FR4a (only for efficiency enhancement measures)

FR4d (only for incremental efficiency measures)

FR5

FR10

FR11

{IF FR4a/d = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the &MEASURE without the program'}

{IF FR4a/d = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the &MEASURE without the program'}

{IF FR5 = 0,1 AND FR4a/d = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the &MEASURE without the program'}

{IF FR5 = 9,10 AND FR4a/d = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the &MEASURE without the program'}

{IF FR10 = 0,1 AND FR4a/d = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient &PRODUCT without the program'}

{IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient &PRODUCT without the program'}

{IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the &PRODUCT within [a year/2 years] even without the program'}

{IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the &PRODUCT within [a year/2 years] even without the program'}

Let me make sure I understand you. In your own words, could you please describe how the program influenced your

C1A_FC decision to purchase and install your new FAUCET AERATORS at the time you did?

77	{RECORD RESPONSE}: _____	SHOW2
88	Refused	SHOW2
89	Don't Know	SHOW2

PARTICIPANT/NTG/RECRUITING SURVEY OF
MULTIFAMILY DWELLING PROPERTY OWNERS/MANAGERS
FOR CPUC EVALUATION OF CA MULTIFAMILY REBATE PROGRAMS
PG&E2000(MF), SCE2502, SDG&E3017, AND SCG3510

LOW-FLOW SHOWERHEADS

[ASK SHOW1 IF SHOW = 1; ELSE SKIP TO WHCON1]

SHOW2 According to our records, we show that your property installed %SHOW_QTY low flow showerheads. Is this correct?

1	Yes, correct as stated	SHOW4
2	That is the wrong quantity	SHOW3
3	Did not install any LOW FLOW SHOWERHEADS	WHCON2
88	Refused	WHCON2
99	Don't know	WHCON2

SHOW3 Could you give me the correct quantity? An approximation would be fine.

&CQ_SHOW	[RECORD CORRECT QTY]	SHOW4
88	Refused	WHCON2
99	Don't know	WHCON2

SHOW4 Were these LOW FLOW SHOWERHEADS installed [READ LIST]

1	at common area showers (for example, in a fitness center or near a pool)	SH_W1
2	for use in tenant units	SH_W1
4	Both for tenants and common areas	SHOW5
77	Other [RECORD]	SH_W1
88	Refused	SH_W1
99	Don't know	SH_W1

SHOW5 Approximately what percentage of these flow flow showerheads were installed in common areas?

&%_SHOCOM	[RECORD PERCENTAGE IN COMMON AREAS]	SH_W1
101	Refused	SH_W1
102	Don't know	SH_W1

Please think back to the time when you were deciding to buy energy efficient LOW FLOW SHOWERHEADS, perhaps recalling things that occurred at your multifamily property shortly before and after your installation. What factors motivated you to purchase these energy saving LOW FLOW SHOWERHEADS [DO NOT READ; INDICATE ALL THAT APPLY;

SH_W1 ONCE THE RESPONDENT HAS FINISHED, PROBE WITH "Are there any other factors?"]

1	Old equipment didn't work	SH_W2a
2	Old equipment working poorly	SH_W2a
3	The program incentive	SH_W2a
4	The program technical assistance	SH_W2a
5	Wanted to save energy	SH_W2a
6	Wanted to reduce energy costs	SH_W2a
7	The information provided by the program	SH_W2a
8		SH_W2a
9	Past experience with another utility program	SH_W2a
10	Recommendation from other utility program [PROBE: "What was the other utility program name or description?" and record as &SH_W1_10]	SH_W2a
11	Recommendation of dealer/retailer	SH_W2a
12	Recommendation of someone else [PROBE: "Who else recommended installing the LOW FLOW SHOWERHEADS?" and record as &SH_W1_12]	SH_W2a
13	Advertisement in newspaper [PROBE: "What was the program name in the NEWSPAPER advertisement?" and record as &SH_W1_13]	SH_W2a
14	Radio advertisement [PROBE: "What was the program name in the RADIO advertisement?" and record as &SH_W1_14]	SH_W2a
15	Environmental concerns	SH_W2a
16	Global warming/carbon footprint	SH_W2a
17	Like appearance better	SH_W2a
18	Keeping up with the latest trends and fashions	SH_W2a
77	Other [SPECIFY]	SH_W2a
88	Refused	SH_W2a
99	Don't know	SH_W2a

Did these LOW FLOW SHOWERHEADS replace existing equipment or were they installed to add additional showerheads to your multifamily property?

SH_W2a

1	Replaced existing equipment	SH_FR1
2	To provide additional showerheads	SH_W2c
3	Both replacing and adding	SH_FR1
88	Refused	SH_W2c
99	Don't know	SH_W2c

SH_W2c Are these LOW FLOW SHOWERHEADS the first LOW FLOW SHOWERHEADS you have ever had at your facility?

1	Yes	SH_FR1
2	No	SH_FR1
88	Refused	SH_FR1
99	Don't know	SH_FR1

[ASK SH_W4 IF SH_W2a = 1 or 3; ELSE SKIP TO SH_W5]

SH_W4 About how old was the equipment that you replaced?

1	Less than 5 years old	SH_W5
2	5 to 10 years old	SH_W5
3	10 to 20 years old	SH_W5
4	20 to 30 years old	SH_W5
5	More than 30 years old	SH_W5
88	Refused	SH_W5
99	Don't know	SH_W5

SH_W5 Was this EQUIPMENT working when you removed it?

1	Yes, Working	SH_W6
2	Not working	SH_FR1
88	Refused	SH_FR1
99	Don't know	SH_FR1

SH_W6 Was this replaced EQUIPMENT in good, fair, or poor condition?

1	Good	SH_FR1
2	Fair	SH_FR1
3	Poor	SH_FR1
88	Refused	SH_FR1

99	Don't know	SH_FR1
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SH_FR1 At the time that you first heard about the assistance from %UTILITY for these LOW FLOW SHOWERHEADS, had you...? [READ LIST]

1	Already been thinking about purchasing LOW FLOW SHOWERHEADS	SH_FR2
2	Already begun collecting information about LOW FLOW SHOWERHEADS	SH_FR2
3	{ASK IF SH_INCEFF = 1} Already selected the LOW FLOW SHOWERHEADS you were going to get	SH_FR2
4	{ASK IF SH_ENHEFF = 1} Already decided to buy the LOW FLOW SHOWERHEADS	SH_FR2
5	Already installed the energy efficient LOW FLOW SHOWERHEADS	SH_FR1b
6	Or, did you hear about the assistance first	SH_FR2
77	Something other [SPECIFY]	SH_FR2
88	Refused	SH_FR2
99	Don't know	SH_FR2

[ASK SH_FR1b IF SH_FR1 QUESTION 5 = YES; ELSE SKIP TO SH_FR2]

Just to be sure, you had already installed the LOW FLOW SHOWERHEADS before you learned about the rebate from

SH_FR1b %UTILITY?

1	Yes	SH_FR5
2	No	COMMENT
88	Refused	COMMENT
99	Don't know	COMMENT

IF SH_FR1(5) & SH_FR1b(2)[99] DISPLAY FOLLOWING MESSAGE AND ADJUST ANSWERS TO SH_FR1 AND

COMMENT SH_FR1B

I must have coded something wrong. First I recorded that you purchased this equipment before you heard about the program, then I recorded that you did not install the equipment before you heard about the program. Can you help me clear this up?

Just to be sure I understand, did you have specific plans to install these LOW FLOW SHOWERHEADS before learning about the rebate available through the %PROGRAM?

SH_FR2 about the rebate available through the %PROGRAM?

1	Yes	SH_FR3
2	No	SH_FR4
88	Refused	SH_FR4
99	Don't Know	SH_FR4

SH_FR3 Did you have to make any changes to your existing plans in order to receive this rebate through the program?

1	Yes	SH_FR3a
2	No	SH_FR4
88	Refused	SH_FR4
99	Don't Know	SH_FR4

SH_FR3a What changes did you need to make?

77	Open	SH_FR4
88	Refused	SH_FR4
89	Don't Know	SH_FR4

If the rebate from the %UTILITY program had not been available, would you still have purchased these LOW FLOW

SH_FR4 SHOWERHEADS?

1	Yes	SH_FR4b
2	No	SH_FR5
88	Refused	SH_FR4b
99	Don't Know	SH_FR4b

SH_FR4b Would you have purchased these LOW FLOW SHOWERHEADS at the same time as you did?

1	Yes	SH_FR4c
2	No	SH_FR4b1
88	Refused	SH_FR4c
99	Don't Know	SH_FR4c

SH_FR4b1 Would you have purchased these LOW FLOW SHOWERHEADS earlier than you did or later?

1	Earlier	SH_FR4b_E
2	Same Time	SH_FR4c
3	Later	SH_FR4b_L
88	Refused	SH_FR4c
99	Don't Know	SH_FR4c

SH_FR4b_E How much earlier would you have purchased this equipment

(RECORD RESPONSE)	_____ Years (and/or) _____ Months	SH_FR4c
88	Refused	SH_FR4c
99	Don't know	SH_FR4c

SH_FR4b_L How much later would you have purchased this equipment

(RECORD RESPONSE)	_____ Years (and/or) _____ Months	SH_FR4c
88	Refused	SH_FR4c
99	Don't know	SH_FR4c

[IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM OR MEASURE IS OF VARIABLE AMOUNT] Without the program, would you have purchased the same quantity of LOW FLOW SHOWERHEADS as you did? (Probe for more or less)

SH_FR4c

1	Same	SH_FR4d
2	More	SH_FR4c_M
3	Less	SH_FR4c_L
88	Refused (SKIP TO FR4d)	SH_FR4d
99	Don't Know (SKIP TO FR4d)	SH_FR4d

SH_FR4c_M How many more LOW FLOW SHOWERHEADS would you have if you had purchased these outside of the program?

77	(RECORD RESPONSE)	SH_FR4d
88	Refused	SH_FR4d
99	Don't know	SH_FR4d

SH_FR4c_L How many fewer LOW FLOW SHOWERHEADS would you have if you had purchased these outside of the program?

77	(RECORD RESPONSE)	SH_FR4d
88	Refused	SH_FR4d
99	Don't know	SH_FR4d

[ASK SH_FR4d IF SH_INCEFF = 1]

Without the assistance from the program, would you have purchased the same energy efficiency level of LOW FLOW

SH_FR4d SHOWERHEADS?

1	Yes	SH_FR4e
2	No	SH_FR4e
88	Refused	SH_FR4e
99	Don't Know	SH_FR4e

SH_FR4e If the rebate from the %UTILITY %PROGRAM had not been available, would you have done anything else differently?

1	Yes	SH_FR4e1
2	No	SH_FR5
77	Other [Record]	SH_FR5
88	Refused	SH_FR5
99	Don't Know	SH_FR5

SH_FR4e1 What would you have done differently?

77	(RECORD RESPONSE): _____	SH_FR5
88	Refused	SH_FR5
89	Don't Know	SH_FR5

On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same low flow showerheads if you had not received any assistance from the program?

77	(RECORD RESPONSE): _____	SH_FR7
88	Refused	SH_FR7
89	Don't Know	SH_FR7

Our records indicate you received about %SH_REBATE from the %UTILITY program either directly or at the time of purchase to offset the cost of these LOW FLOW SHOWERHEADS. Does this sound about right?

1	Yes	SH_FR9
2	No	SH_FR8
88	Refused	SH_FR9
99	Don't Know	SH_FR9

SH_FR8 What would you estimate to be the actual amount to be?

	(RECORD RESPONSE) _____ (SET %SH_REBATE = NEW AMOUNT OF PROGRAM INCENTIVE)	SH_FR9
88	Refused	SH_FR9
99	Don't know	SH_FR9

I'm going to read three statements about how you came to choose these LOW FLOW SHOWERHEADS. Using a scale of 0 to 10, where 0 is YOU DO NOT AT ALL AGREE and 10 is YOU AGREE COMPLETELY, how much do you agree with each statement?

SH_FR9 If I had not had any assistance from the program, I would have paid the full price to buy these FIXTURES on my own.

	(Record Response (0-10)) _____	SH_FR10
11	Do not at all agree	SH_FR10
88	Refused	SH_FR10
99	Don't know	SH_FR10

There may have been several reasons for my purchase decision. But the rebate from the &UTILITY &PROGRAM was a critical factor in my decision to purchase these energy efficient LOW FLOW SHOWERHEADS.

	(Record Response (0-10)) _____	SH_FR11
11	Do not at all agree	SH_FR11
88	Refused	SH_FR11
99	Don't know	SH_FR11

I would have purchased the LOW FLOW SHOWERHEADS within two years of when I did even without the rebate from the program.

	(Record Response (0-10)) _____	Cons Check
11	Do not at all agree	Cons Check
88	Refused	Cons Check
99	Don't know	Cons Check

CONSISTENCY CHECK & RESOLUTION FOR CFL INTERIOR LOW FLOW SHOWERHEADS

C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other end of the spectrum.) An algorithm will be provided after pretesting. The question responses that will be used to trigger C1 are:

FR4a (only for efficiency enhancement measures)

FR4d (only for incremental efficiency measures)

FR5

FR10

FR11

{IF FR4a/d = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the &MEASURE without the program'}

{IF FR4a/d = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the &MEASURE without the program'}

{IF FR5 = 0,1 AND FR4a/d = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the &MEASURE without the program'}

{IF FR5 = 9,10 AND FR4a/d = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the &MEASURE without the program'}

{IF FR10 = 0,1 AND FR4a/d = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient &PRODUCT without the program'}

{IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient &PRODUCT without the program'}

{IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the &PRODUCT within [a year/2 years] even without the program'}

{IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the &PRODUCT within [a year/2 years] even without the program'}

Let me make sure I understand you. In your own words, could you please describe how the program influenced your decision to purchase and install your new LOW FLOW SHOWERHEADS at the time you did?

77	(RECORD RESPONSE): _____	WHBC2
88	Refused	WHBC2
89	Don't Know	WHBC2

PARTICIPANT/NTG/RECRUITING SURVEY OF
MULTIFAMILY DWELLING PROPERTY OWNERS/MANAGERS
FOR CPUC EVALUATION OF CA MULTIFAMILY REBATE PROGRAMS
PG&E2000(MF), SCE2502, SDG&E3017, AND SCG3510

WATER HEATER/BOILER CONTROLLER

WATER HEATER/BOILER CONTROLLER
[ASK WHBC2 IF WHBC = 1; ELSE SKIP TO INS2]

According to our records, we show that your property installed %WHBC_QTY hot water heater/boiler controllers. Is this

WHBC2 correct?

1	Yes, correct as stated	WHBC4
2	That is the wrong quantity	WHBC3
3	Did not install WATER HEATER CONTROLLERS	WIND2
88	Refused	WIND2
99	Don't know	WIND2

WHBC3 Could you give me the correct quantity? An approximation would be fine.

&CQ_WHBC	[RECORD CORRECT QTY]	WHBC4
88	Refused	WIND2
99	Don't know	WIND2

WHBC4 Were these water heater/boiler controls installed [READ LIST]

1	for use in common areas	CT_W1
2	for use in tenant units	CT_W1
4	for use in both area types	WHBC5
77	Other [RECORD]	CT_W1
88	Refused	CT_W1
99	Don't know	CT_W1

WHBC5 Approximately what percentage of these WATER HEATER CONTROLLERS were installed in common areas?

&%_WHBCOM	[RECORD PERCENTAGE IN COMMON AREAS]	CT_W1
101	Refused	CT_W1
102	Don't know	CT_W1

Please think back to the time when you were deciding to buy energy efficient WATER HEATER CONTROLLERS, perhaps recalling things that occurred at your multifamily property shortly before and after your installation. What factors motivated you to purchase these energy saving WATER HEATER CONTROLLERS. [DO NOT READ; INDICATE ALL THAT APPLY;

CT_W1 ONCE THE RESPONDENT HAS FINISHED, PROBE WITH "Are there any other factors?"]

1	Old equipment didn't work	CT_W2a
2	Old equipment working poorly	CT_W2a
3	The program incentive	CT_W2a
4	The program technical assistance	CT_W2a
5	Wanted to save energy	CT_W2a
6	Wanted to reduce energy costs	CT_W2a
7	The information provided by the program	CT_W2a
8	Past experience with this program	CT_W2a
9	Past experience with another utility program	CT_W2a
10	Recommendation from other utility program [PROBE: "What was the other utility program name or description?" and record as &CT_W1_10]	CT_W2a
11	Recommendation of dealer/retailer	CT_W2a
12	Recommendation of someone else [PROBE: "Who else recommended installing the WATER HEATER CONTROLLERS?" and record as &CT_W1_12]	CT_W2a
13	Advertisement in newspaper [PROBE: "What was the program name in the NEWSPAPER advertisement?" and record as &CT_W1_13]	CT_W2a
14	Radio advertisement [PROBE: "What was the program name in the RADIO advertisement?" and record as &CT_W1_14]	CT_W2a
15	Environmental concerns	CT_W2a
16	Global warming/carbon footprint	CT_W2a
17	Like appearance better	CT_W2a
18	Keeping up with the latest trends and fashions	CT_W2a
77	Other [SPECIFY]	CT_W2a
88	Refused	CT_W2a
99	Don't know	CT_W2a

CT_W2a Did these WATER HEATER CONTROLLERS replace existing equipment or were they installed to add additional CONTROLLERS to your multifamily property?

1	Replaced existing CONTROLLERS	CT_FR1
2	To provide additional CONTROLLERS	CT_W2c
3	Both replacing and adding	CT_FR1
88	Refused	CT_W2c
99	Don't know	CT_W2c

CT_W2c Are these WATER HEATER CONTROLLERS the first WATER HEATER CONTROLLERS you have ever had at your facility?

1	Yes	CT_FR1
2	No	CT_FR1
88	Refused	CT_FR1
99	Don't know	CT_FR1

CT_W4 About how old were the CONTROLLERS that you replaced?

1	Less than 5 years old	CT_W5
2	5 to 10 years old	CT_W5
3	10 to 20 years old	CT_W5
4	20 to 30 years old	CT_W5
5	More than 30 years old	CT_W5
88	Refused	CT_W5
99	Don't know	CT_W5

CT_W5 Were these replaced CONTROLLERS working when you removed them?

1	Yes, Working	CT_W6
2	Not working	CT_FR1
88	Refused	CT_FR1
99	Don't know	CT_FR1

CT_W6 Were these CONTROLLERS in good, fair, or poor condition?

1	Good	CT_FR1
---	------	--------

2	Fair	CT_FR1
3	Poor	CT_FR1
88	Refused	CT_FR1
99	Don't know	CT_FR1

CT_FR1 At the time that you first heard about the assistance from %UTILITY for these WATER HEATER CONTROLLERS, had you...? (READ LIST)

1	Already been thinking about purchasing WATER HEATER CONTROLLERS	CT_FR2
2	Already begun collecting information about WATER HEATER CONTROLLERS	CT_FR2
3	(ASK IF CT_INCEFF = 1) Already selected the WATER HEATER CONTROLLERS you were going to get	CT_FR2
4	(ASK IF CT_ENHEFF = 1) Already decided to buy the WATER HEATER CONTROLLERS	CT_FR2
5	Already installed the energy efficient WATER HEATER CONTROLLERS	CT_FR1b
6	Or, did you hear about the assistance first	CT_FR2
77	Something other [SPECIFY]	CT_FR2
88	Refused	CT_FR2
99	Don't know	CT_FR2

[ASK CT_FR1b IF CT_FR1 QUESTION 5 = YES; ELSE SKIP TO CT_FR2]

Just to be sure, you had already installed the WATER HEATER CONTROLLERS before you learned about the rebate from %UTILITY?

CT_FR1b

1	Yes	CT_FR5
2	No	COMMENT
88	Refused	COMMENT
99	Don't know	COMMENT

IF CT_FR1(5) & CT_FR1b(2|[99]) DISPLAY FOLLOWING MESSAGE AND ADJUST ANSWERS TO CT_FR1 AND COMMENT CT_FR1b

I must have coded something wrong. First I recorded that you purchased this equipment before you heard about the program, then I recorded that you did not install the equipment before you heard about the program. Can you help me clear this up?

CT_FR2 Just to be sure I understand, did you have specific plans to install these WATER HEATER CONTROLLERS before learning about the rebate available through the %PROGRAM?

1	Yes	CT_FR3
2	No	CT_FR4
88	Refused	CT_FR4
99	Don't Know	CT_FR4

CT_FR3 Did you have to make any changes to your existing plans in order to receive this rebate through the program?

1	Yes	CT_FR3a
2	No	CT_FR4
88	Refused	CT_FR4
99	Don't Know	CT_FR4

CT_FR3a What changes did you need to make?

77	Open	CT_FR4
88	Refused	CT_FR4
89	Don't Know	CT_FR4

If the rebate from the %UTILITY program had not been available, would you still have purchased these WATER HEATER CONTROLLERS?

CT_FR4

1	Yes	CT_FR4b
2	No	CT_FR5
88	Refused	CT_FR4b
99	Don't Know	CT_FR4b

CT_FR4b Would you have purchased these WATER HEATER CONTROLLERS at the same time as you did?

1	Yes	CT_FR4c
2	No	CT_FR4b1
88	Refused	CT_FR4c
99	Don't Know	CT_FR4c

CT_FR4b1 Would you have purchased these WATER HEATER CONTROLLERS earlier than you did or later?

1	Earlier	CT_FR4b_E
2	Same time	CT_FR4c
3	Later	CT_FR4b_L
88	Refused	CT_FR4c
99	Don't Know	CT_FR4c

CT_FR4b_E How much earlier would you have purchased this equipment

	(RECORD RESPONSE) _____ Years (and/or) _____ Months	CT_FR4c
88	Refused	CT_FR4c
99	Don't know	CT_FR4c

CT_FR4b_L How much later would you have purchased this equipment

	(RECORD RESPONSE) _____ Years (and/or) _____ Months	CT_FR4c
88	Refused	CT_FR4c
99	Don't know	CT_FR4c

[IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM OR MEASURE IS OF VARIABLE AMOUNT] Without the program, would you have purchased the same quantity of WATER HEATER CONTROLLERS as you did? (Probe for more or less)

CT_FR4c

1	Same	CT_FR4d
2	More	CT_FR4c_M
3	Less	CT_FR4c_L
88	Refused (SKIP TO FR4d)	CT_FR4d
99	Don't Know (SKIP TO FR4d)	CT_FR4d

CT_FR4c_M How many more WATER HEATER CONTROLLERS would you have if you had purchased these outside of the program?

77	(RECORD RESPONSE)	CT_FR4d
88	Refused	CT_FR4d
99	Don't know	CT_FR4d

CT_FR4c_L How many fewer WATER HEATER CONTROLLERS would you have if you had purchased these outside of the program?

77	(RECORD RESPONSE)	CT_FR4d
88	Refused	CT_FR4d
99	Don't know	CT_FR4d

[ASK CT_FR4d IF CT_INCEFF = 1]

CT_FR4d Without the assistance from the program, would you have purchased the same energy efficiency level of WATER HEATER CONTROLLERS?

1	Yes	CT_FR4e
2	No	CT_FR4e
88	Refused	CT_FR4e
99	Don't Know	CT_FR4e

CT_FR4e If the rebate from the %UTILITY %PROGRAM had not been available, would you have done anything else differently?

1	Yes	CT_FR4e1
2	No	CT_FR5
77	Other [Record]	CT_FR5
88	Refused	CT_FR5
99	Don't Know	CT_FR5

CT_FR4e1 What would you have done differently?

77	{RECORD RESPONSE}: _____	CT_FR5
88	Refused	CT_FR5
89	Don't Know	CT_FR5

On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same water heater controllers if you had not received any assistance from the program?

77	{RECORD RESPONSE}: _____	CT_FR7
88	Refused	CT_FR7
89	Don't Know	CT_FR7

CT_FR7 Our records indicate you received about %CT_REBATE from the %UTILITY program either directly or at the time of purchase to offset the cost of these WATER HEATER CONTROLLERS. Does this sound about right?

1	Yes	CT_FR9
2	No	CT_FR8
88	Refused	CT_FR9
99	Don't Know	CT_FR9

CT_FR8 What would you estimate to be the actual amount to be?

	{RECORD RESPONSE} _____ (SET %CT_REBATE = NEW AMOUNT OF PROGRAM INCENTIVE)	CT_FR9
88	Refused	CT_FR9
99	Don't know	CT_FR9

I'm going to read three statements about how you came to choose these WATER HEATER CONTROLLERS. Using a scale of 0 to 10, where 0 is YOU DO NOT AT ALL AGREE and 10 is YOU AGREE COMPLETELY, how much do you agree with each statement?

CT_FR9 If I had not had any assistance from the program, I would have paid the full price to buy these FIXTURES on my own.

	{Record Response (0-10)} _____	CT_FR10
11	Do not at all agree	CT_FR10
88	Refused	CT_FR10
99	Don't know	CT_FR10

CT_FR10 There may have been several reasons for my purchase decision. But the rebate from the program was a critical factor in my decision to purchase these energy efficient WATER HEATER CONTROLLERS.

	{Record Response (0-10)} _____	CT_FR11
11	Do not at all agree	CT_FR11
88	Refused	CT_FR11
99	Don't know	CT_FR11

CT_FR11 I would have purchased the WATER HEATER CONTROLLERS within two years of when I did even without the rebate from the program.

	{Record Response (0-10)} _____	Cons Check
11	Do not at all agree	Cons Check
88	Refused	Cons Check
99	Don't know	Cons Check

CONSISTENCY CHECK & RESOLUTION FOR CFL INTERIOR WATER HEATER CONTROLLERS

C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other end of the spectrum.) An algorithm will be provided after pretesting. The question responses that will be used to trigger C1 are:

FR4a (only for efficiency enhancement measures)
FR4d (only for incremental efficiency measures)

FR5
FR10
FR11

{IF FR4a/d = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the &MEASURE without the program'}

{IF FR4a/d = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the &MEASURE without the program'}

{IF FR5 = 0,1 AND FR4a/d = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the &MEASURE without the program'}

{IF FR5 = 9,10 AND FR4a/d = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the &MEASURE without the program'}

{IF FR10 = 0,1 AND FR4a/d = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient &PRODUCT without the program'}

{IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient &PRODUCT without the program'}

bought the &PRODUCT within [a year/2 years] even without the program')

{IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the &PRODUCT within [a year/2 years] even without the program'}

C1A_CT Let me make sure I understand you. In your own words, could you please describe how the program influenced your decision to purchase and install your new WATER HEATER CONTROLLERS at the time you did?

77	{RECORD RESPONSE}: _____	WIND2
88	Refused	WIND2
89	Don't Know	WIND2

PARTICIPANT/NTG/RECRUITING SURVEY OF
MULTIFAMILY DWELLING PROPERTY OWNERS/MANAGERS
FOR CPUC EVALUATION OF CA MULTIFAMILY REBATE PROGRAMS
PG&E2000(MF), SCE2502, SDG&E3017, AND SCG3510

WINDOWS

[ASK WIND2 IF WIND1 = 1; ELSE SKIP TO NSP1

According to our records, we show that your property installed %WIND_QTY square feet of high efficiency windows. Is this WIND2 correct?

1	Yes, correct as stated	WIND4
2	That is the wrong quantity	WIND3
3	Did not install any WINDOWS	WIND2
88	Refused	WIND2
99	Don't know	WIND2

WIND3 Could you give me the correct quantity? An approximation would be fine.

&CQ_WIND	[RECORD CORRECT QTY]	WIND4
88	Refused	WIND2
99	Don't know	WIND2

WIND4 Were these WINDOWS installed [READ LIST]

1	for use in common areas	WINW1
2	for use in tenant units	WINW1
4	for use in both area types	WIND5
77	Other [RECORD]	WINW1
88	Refused	WINW1
99	Don't know	WINW1

WIND5 Approximately what percentage of these HIGH EFFICIENCY WINDOWS were installed in common areas?

&%_WINDOW	[RECORD PERCENTAGE IN COMMON AREAS]	WINW1
101	Refused	WINW1
102	Don't know	WINW1

Please think back to the time when you were deciding to buy energy efficient HIGH EFFICIENCY WINDOWS, perhaps recalling things that occurred at your multifamily property shortly before and after your installation. What factors motivated you to purchase these energy saving WINDOWS [DO NOT READ; INDICATE ALL THAT APPLY; ONCE THE RESPONDENT HAS FINISHED, PROBE WITH "Are there any other factors?"]

WINW1

1	Old equipment didn't work	WINW2a
2	Old equipment working poorly	WINW2a
3	The program incentive	WINW2a
4	The program technical assistance	WINW2a
5	Wanted to save energy	WINW2a
6	Wanted to reduce energy costs	WINW2a
7	The information provided by the program	WINW2a
8	Past experience with this program	WINW2a
9	Past experience with another utility program	WINW2a
10	Recommendation from other utility program [PROBE: "What was the other utility program name or description?" and record as &WINW1_10]	WINW2a
11	Recommendation of dealer/retailer	WINW2a
12	Recommendation of someone else [PROBE: "Who else recommended installing the HIGH EFFICIENCY WINDOWS?" and record as &WINW1_12]	WINW2a
13	Advertisement in newspaper [PROBE: "What was the program name in the NEWSPAPER advertisement?" and record as &WINW1_13]	WINW2a
14	Radio advertisement [PROBE: "What was the program name in the RADIO advertisement?" and record as &WINW1_14]	WINW2a
15	Environmental concerns	WINW2a
16	Global warming/carbon footprint	WINW2a
17	Like appearance better	WINW2a
18	Keeping up with the latest trends and fashions	WINW2a
77	Other [SPECIFY]	WINW2a
88	Refused	WINW2a
99	Don't know	WINW2a

WINW2a Did these HIGH EFFICIENCY WINDOWS replace existing equipment?

1	Yes	WINW4
2	No	WINW2c
88	Refused	WINW2c
99	Don't know	WINW2c

WINW2c Are these HIGH EFFICIENCY WINDOWS the first HIGH EFFICIENCY WINDOWS you have ever had at your facility?

1	Yes	WINFR1
2	No	WINFR1
88	Refused	WINFR1
99	Don't know	WINFR1

WINFR1 At the time that you first heard about the assistance from %UTILITY for these HIGH EFFICIENCY WINDOWS, had you...? [READ LIST]

1	Already been thinking about purchasing WINDOWS	WINFR2
2	Already begun collecting information about WINDOWS	WINFR2
3	{ASK IF WININCEFF = 1} Already selected the WINDOWS you were going to get	WINFR2
4	{ASK IF WINENHEFF = 1} Already decided to buy the WINDOWS	WINFR2
5	Already installed the energy efficient WINDOWS	WINFR1b
6	Or, did you hear about the assistance first	WINFR2
77	Something other [SPECIFY]	WINFR2
88	Refused	WINFR2
99	Don't know	WINFR2

[ASK WINFR1b IF WINFR1 QUESTION 5 = YES; ELSE SKIP TO WINFR2]

Just to be sure, you had already installed the HIGH EFFICIENCY WINDOWS before you learned about the rebate from

WINFR1b %UTILITY?

1	Yes	WINFR5
2	No	COMMENT
88	Refused	COMMENT
99	Don't know	COMMENT

IF WINFR1(5) & WINFR1B(2)[99] DISPLAY FOLLOWING MESSAGE AND ADJUST ANSWERS TO WINFR1 AND

COMMENT WINFR1B

I must have coded something wrong. First I recorded that you purchased this equipment before you heard about the program, then I recorded that you did not install the equipment before you heard about the program. Can you help me clear this up?

Just to be sure I understand, did you have specific plans to install these HIGH EFFICIENCY WINDOWS before learning

WINFR2 about the rebate available through the %PROGRAM?

1	Yes	WINFR3
2	No	WINFR4
88	Refused	WINFR4
99	Don't Know	WINFR4

WINFR3 Did you have to make any changes to your existing plans in order to receive this rebate through the program?

1	Yes	WINFR3a
2	No	WINFR4
88	Refused	WINFR4
99	Don't Know	WINFR4

WINFR3a What changes did you need to make?

77	Open	WINFR4
88	Refused	WINFR4
89	Don't Know	WINFR4

If the rebate from the %UTILITY program had not been available, would you still have purchased these HIGH EFFICIENCY

WINFR4 WINDOWS?

1	Yes	WINFR4b
2	No	WINFR5
88	Refused	WINFR4b
99	Don't Know	WINFR4b

WINFR4b Would you have purchased these HIGH EFFICIENCY WINDOWS at the same time as you did?

1	Yes	WINFR4c
2	No	WINFR4b1
88	Refused	WINFR4c
99	Don't Know	WINFR4c

WINFR4b1 Would you have purchased these HIGH EFFICIENCY WINDOWS earlier than you did or later?

1	Earlier	WINFR4b_E
2	Same Time	WINFR4c
3	Later	WINFR4b_L
88	Refused	WINFR4c
99	Don't Know	WINFR4c

WINFR4b_E How much earlier would you have purchased this equipment

	(RECORD RESPONSE) _____ Years (and/or) _____ Months	WINFR4c
88	Refused	WINFR4c
99	Don't know	WINFR4c

WINFR4b_L How much later would you have purchased this equipment

	(RECORD RESPONSE) _____ Years (and/or) _____ Months	WINFR4c
88	Refused	WINFR4c
99	Don't know	WINFR4c

[IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM OR MEASURE IS OF VARIABLE AMOUNT] Without the program, would you have purchased the same quantity of HIGH EFFICIENCY WINDOWS as you did? (Probe for more or

WINFR4c less)

1	Same	WINFR4d
2	More	WINFR4c_M
3	Less	WINFR4c_L
88	Refused (SKIP TO FR4d)	WINFR4d
99	Don't Know (SKIP TO FR4d)	WINFR4d

How many more square feet of HIGH EFFICIENCY WINDOWS would you have if you had purchased these outside of the

WINFR4c_M program?

77	(RECORD RESPONSE)	WINFR4d
88	Refused	WINFR4d
99	Don't know	WINFR4d

How many fewer square feet of HIGH EFFICIENCY WINDOWS would you have if you had purchased these outside of the

WINFR4c_L program?

77	(RECORD RESPONSE)	WINFR4d
88	Refused	WINFR4d
99	Don't know	WINFR4d

[ASK WINFR4d IF WININCEFF = 1]

WINFR4d Without the assistance from the program, would you have purchased the same energy efficiency level of WINDOWS?

1	Yes	WINFR4e
2	No	WINFR4e
88	Refused	WINFR4e
99	Don't Know	WINFR4e

WINFR4e If the rebate from the %UTILITY %PROGRAM had not been available, would you have done anything else differently?

1	Yes	WINFR4e1
2	No	WINFR5

77	Other [Record]	WINFR5
88	Refused	WINFR5
99	Don't Know	WINFR5

WINFR4e1 What would you have done differently?

77	{RECORD RESPONSE}: _____	WINFR5
88	Refused	WINFR5
89	Don't Know	WINFR5

On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same

WINFR5 windows if you had not received any assistance from the program?

77	{RECORD RESPONSE}: _____	WINFR7
88	Refused	WINFR7
89	Don't Know	WINFR7

Our records indicate you received about %WINREBATE from the %UTILITY program either directly or at the time of

WINFR7 purchase to offset the cost of these HIGH EFFICIENCY WINDOWS. Does this sound about right?

1	Yes	WINFR9
2	No	WINFR8
88	Refused	WINFR9
99	Don't Know	WINFR9

WINFR8 What would you estimate to be the actual amount to be?

	{RECORD RESPONSE}: _____ (SET %WINREBATE = NEW AMOUNT OF PROGRAM INCENTIVE)	WINFR9
88	Refused	WINFR9
99	Don't know	WINFR9

I'm going to read three statements about how you came to choose these HIGH EFFICIENCY WINDOWS. Using a scale of 0 to 10, where 0 is YOU DO NOT AT ALL AGREE and 10 is YOU AGREE COMPLETELY, how much do you agree with each statement?

WINFR9 If I had not had any assistance from the program, I would have paid the full price to buy these WINDOWS on my own.

	{Record Response (0-10)}: _____	WINFR10
11	Do not at all agree	WINFR10
88	Refused	WINFR10
99	Don't know	WINFR10

There may have been several reasons for my purchase decision. But the rebate from the program was a critical factor in my decision to purchase these energy efficient WINDOWS.

WINFR10

	{Record Response (0-10)}: _____	WINFR11
11	Do not at all agree	WINFR11
88	Refused	WINFR11
99	Don't know	WINFR11

WINFR11 I would have purchased these WINDOWS within two years of when I did even without the rebate from the program.

	{Record Response (0-10)}: _____	Cons Check
11	Do not at all agree	Cons Check
88	Refused	Cons Check
99	Don't know	Cons Check

CONSISTENCY CHECK & RESOLUTION FOR CFL INTERIOR HIGH EFFICIENCY WINDOWS

C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other end of the spectrum.) An algorithm will be provided after pretesting. The question responses that will be used to trigger C1 are:

FR4a (only for efficiency enhancement measures)
FR4d (only for incremental efficiency measures)
FR5
FR10
FR11

{IF FR4a/d = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would have purchased the &MEASURE without the program'}

{IF FR4a/d = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the &MEASURE without the program'}

{IF FR5 = 0,1 AND FR4a/d = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would likely not have purchased the &MEASURE without the program'}

{IF FR5 = 9,10 AND FR4a/d = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would likely have purchased the &MEASURE without the program'}

{IF FR10 = 0,1 AND FR4a/d = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY 1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy efficient &PRODUCT without the program'}

{IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1. INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high efficiency/energy efficient &PRODUCT without the program'}

{IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1. INCONSISTENCY 1 = 'you would have bought the &PRODUCT within [a year/2 years] even without the program'}

{IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1. INCONSISTENCY 1 = 'you would not have bought the &PRODUCT within [a year/2 years] even without the program'}

Let me make sure I understand you. In your own words, could you please describe how the program influenced your decision to purchase and install your new HIGH EFFICIENCY WINDOWS at the time you did?

C1AWIN

77	{RECORD RESPONSE}: _____	NSP1
88	Refused	NSP1
89	Don't Know	NSP1

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SPILLOVER

Since your participation in %PROGRAM have you purchased and installed any other type of high efficiency equipment or
NSP1 made energy efficiency improvements outside of any utility programs ?

1	Yes, only at this multifamily property
2	Yes, only at other multifamily properties
3	Yes, at this property and other locations
4	No other EE improvements
88	Refused
99	Don't know

NSP2_1A What was the first energy efficiency improvement?

77	Open {Record}
88	Refused
99	Don't Know

NSP2_1B What quantity of %NSP2_1A did you install?

	{Record}
--	----------

NSP2_1C Was this equipment installed in common areas, in tenant areas or both?

1	In common areas
2	In tenant areas
3	Both common and tenant areas
88	Refused
99	Don't Know

NSP2_1D How did you know that this equipment is HIGH EFFICIENCY?

1	ENERGY STAR label
2	Sales rep told me
3	Contractor told me
77	Open {Record}
88	Refused
99	Don't Know

NSP2_2A What other energy efficiency improvements did you make?

1	No other improvement
77	Open {Record measure description}
88	Refused
99	Don't know

NSP2_2B What quantity of %NSP2_2A did you install?

	{Record}
--	----------

NSP2_2C Was this equipment installed in common areas, in tenant areas or both?

1	In common areas
2	In tenant areas
3	Both common and tenant areas
88	Refused
99	Don't Know

NSP2_2D How did you know that this equipment is HIGH EFFICIENCY?

1	ENERGY STAR label
2	Sales rep told me
3	Contractor told me
77	Open {Record}
88	Refused
99	Don't Know

NSP2_3A What other energy efficiency improvement did you make?

1	No other improvement
77	Open {Record measure description}
88	Refused
99	Don't know

NSP2_3B What quantity of %NSP2_3A did you install?

	{Record}
--	----------

NSP2_3C Was this equipment installed in common areas, in tenant areas or both?

1	In common areas
2	In tenant areas
3	Both common and tenant areas
88	Refused
99	Don't Know

NSP2_3D How did you know that this equipment is HIGH EFFICIENCY?

1	ENERGY STAR label
2	Sales rep told me
3	Contractor told me
77	Open {Record}
88	Refused
99	Don't Know

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RECRUITING FOR ONSITES

As we have discussed, the &PROGRAM is an important component of the CPUC's ongoing efforts to save energy and reduce emissions affecting climate change. In order to improve this program's performance, the CPUC would like to make an accurate measurement of the energy savings associated with the energy efficient equipment installed by collecting and analyzing information from selected customers.

Your input into this research is extremely important. By receiving a rebate through the %PROGRAM your property has agreed to allow verification of the installation of the equipment rebated through the program. Our verification technician will need to see a facilities representative of your property. This should be either the manager of the facility or part of the facilities staff.

OS_NAME1 May I please have the name of the person who our technician can call to set up a verification appointment?

&OS_NAME1	NAME OF PRIMARY CONTACT
88	Refused
99	Don't know

OS_PHONE1 May I also have the best phone number for the technician to reach you?

&OS_PHONE1	PHONE FOR PRIMARY CONTACT
88	Refused
99	Don't know

OTHER Is there another person that the engineer might speak with at your multifamily property, if you are not available?

1	Yes
2	No

OS_NAME2 May I please have their name so our technician can call them if necessary?

&OS_NAME2	Get name
88	Refused
99	Don't know

OS_PHONE2 May I also have the best phone number for the technician to reach them?

&OS_PHONE2	Get phone number
88	Refused
99	Don't know

VERIFY For verification purposes only, may I please have your name?

	Get name
88	Refused
99	Don't know

Do you have any questions that I may be able to answer at this time?

END Those are all the questions I have for today. Thank you for your time and help in this important study.

Variable	Definition
%STRATA	Name of strata
%PHONE	Contact phone number
%CONTACT	Contact name
%BUSINESS	Business name
%UTILITY	PG&E, SCE, SDG&E, SoCalGas
%PROG_LONG	Program Name - long version If &UTILITY = PG&E, then &PROGRAM = multifamily rebate component of the Residential Mass Marke If &UTILITY = SCE, then &PROGRAM = Multi-family Energy Efficiency Rebate Program If &UTILITY = SDG&E, then &PROGRAM = Multi-family Rebate Program If &UTILITY = SoCalGas, then &PROGRAM = Multi-family Energy Efficiency Retrofit Program
%REBATE_TOTAL	Total Amount of Rebate
%EXCFL_QTY	Exterior CFL Fixture Quantity
%INCFL_QTY	Interior CFL Fixture Quantity
%CFL_QTY	Screw-in CFL bulb Quantity
%EXIT_QTY	LED Exit Sign Quantity
%LIN_QTY	Linear Fluorescent T8 or T5 Quantity
%BOIL_QTY	Water Heater or Boiler Quantity
%FAUC_QTY	Faucet Aerator Quantity
%SHOW_QTY	Low Flow Showerhead Quantity
%WHEAT_QTY	Hot Water Heater or Boiler Controller Quantity
%PROGRAM	Program Name - short version - Richard can hard code this as the "multifamily rebate program"
%ADDRESS	Site Address
%CITY	Site City
EXCFL	1 if participant installed exterior CFL fixtures, 0 otherwise
EX_NTG	1 if CATI should go through free ridership battery for exterior CFL fixtures, 0 otherwise
EX_INCEFF	1 if exterior CFL fixtures are a replacement measure, 0 otherwise
EX_ENHEFF	1 if exterior CFL fixtures are a retrofit measure, 0 otherwise
%EX_REBATE	Rebate associated with Exterior Fixtures
INCFL	1 if participant installed interior CFL fixtures, 0 otherwise
IN_NTG	1 if CATI should go through free ridership battery for interior CFL fixtures, 0 otherwise
IN_INCEFF	1 if interior CFL fixtures are a replacement measure, 0 otherwise
IN_ENHEFF	1 if interior CFL fixtures are a retrofit measure, 0 otherwise
%IN_REBATE	Rebate associated with Interior Fixtures
CFL	1 if participant installed CFLs, 0 otherwise
CFL_NTG	1 if CATI should go through free ridership battery for CFLs, 0 otherwise
CFL_INCEFF	1 if CFLs are a replacement measure, 0 otherwise
CFL_ENHEFF	1 if CFLs are a retrofit measure, 0 otherwise
%CFL_REBATE	Rebate associated with Screw-in CFLs
EXIT	1 if participant installed EXIT signs, 0 otherwise
EXITNTG	1 if CATI should go through free ridership battery for EXIT signs, 0 otherwise
EXITINCEFF	1 if EXIT signs are a replacement measure, 0 otherwise
EXITENHEFF	1 if EXIT signs are a retrofit measure, 0 otherwise
%EXITREBATE	Rebate associated with LED Exit Signs
%LINEAR_QTY	Linear Fluorescent T8 or T5 Quantity
LINEAR	1 if participant installed linear T8s or T5s, 0 otherwise
LIN_NTG	1 if CATI should go through free ridership battery for linear T8s or T5s, 0 otherwise
LININCEFF	1 if linear T8s or T5s are a replacement measure, 0 otherwise
LINENHEFF	1 if linear T8s or T5s are a retrofit measure, 0 otherwise
%LINREBATE	Rebate associated with Linear Fluorescent T8 or T5
LT_CONTROLS	1 if participant installed lighting controls, 0 otherwise
%LTCON_QTY	Lighting Controls Quantity
BOILER	1 if participant installed water heaters or boilers, 0 otherwise
BL_NTG	1 if CATI should go through free ridership battery for water heaters or boilers, 0 otherwise
BL_INCEFF	1 if water heaters or boilers are a replacement measure, 0 otherwise
BL_ENHEFF	1 if water heaters or boilers are a retrofit measure, 0 otherwise
%BL_REBATE	Rebate associated with Boiler
FAUCET	1 if participant installed faucet aerators, 0 otherwise
FAUC_NTG	1 if CATI should go through free ridership battery for faucet aerators, 0 otherwise
FC_INCEFF	1 if faucet aerators are a replacement measure, 0 otherwise
FC_ENHEFF	1 if faucet aerators are a retrofit measure, 0 otherwise
%FC_REBATE	Rebate associated with Faucet Aerators
SHOWER	1 if participant installed low flow showerheads, 0 otherwise
SHOW_NTG	1 if CATI should go through free ridership battery for low flow showerheads, 0 otherwise

SH_INCEFF	1 if low flow showerheads are a replacement measure, 0 otherwise
SH_ENHEFF	1 if low flow showerheads are a retrofit measure, 0 otherwise
%SH_REBATE	Rebate associated with Low-Flow Showerhead
%WHBC_QTY	Hot Water Heater or Boiler Controller Quantity
CONTROLLER	1 if participant installed water heater or boiler controllers, 0 otherwise
WHBC_NTG	1 if CATI should go through free ridership battery for water heater or boiler controllers, 0 otherwise
CT_INCEFF	1 if water heater or boiler controllers are a replacement measure, 0 otherwise
CT_ENHEFF	1 if water heater or boiler controllers are a retrofit measure, 0 otherwise
%CT_REBATE	Rebate associated with Hot Water Heater or Boiler Controllers
%WIND_QTY	Window Quantity
WINDOWS	1 if participant installed high efficiency windows, 0 otherwise
WIND_NTG	1 if CATI should go through free ridership battery for high efficiency windows, 0 otherwise
WININCEFF	1 if high efficiency windows are a replacement measure, 0 otherwise
WINENHEFF	1 if high efficiency windows are a retrofit measure, 0 otherwise
%WINREBATE	Rebate associated with Windows
%o<%NSP2_1A>	
%o<%NSP2_2A>	
%o<%NSP2_3A>	
LOGGER	1 if trying to recruit site for lighting logger study, 0 otherwise - based on measures installed
%length_min	Time length of interview (minutes)
%over_sec	Time length of interview (remaining seconds)

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LOGGER

In order to improve this program's performance, the CPUC would also like to make an accurate measurement of the energy savings associated with fluorescent lighting by collecting and analyzing information from selected customers.

If you agree to participate, ITRON, on behalf of the CPUC will come to your business to install lighting logger-devices on your lights to record when each light is in use. The lighting loggers would be installed in an unobtrusive place and would be removed by us at the end of the research project. We expect the site visit to take about two hours. We will come back and remove the logger devices after about one month. NOTE: The electric use data will be used strictly for the study and the %PROGRAM, and will not affect your electric service at all. You will need to sign a brief participation agreement.

LOG_REC Are you interested in participating in this project?

1	Yes
2	No

Our installation technician will also need to meet a facilities representative of your organization, this should be either the manager of the facility or part of the facilities staff.

LOG_NAME1 May I please have your name so our technician can call you to set up an installation appointment?

&LOG_NAME1 {Record}

--

LOG_PHONE1 May I also have the best phone number for the technician to reach you?

&LOG_PHONE1 {Record}

--

LOG_OTHER Is there another person that the engineer might speak with at your organization, if you are not available?

1	Yes
2	No

LOG_NAME2 May I have their name so our technician can call them at another time?

%LOG_NAME2 {Record Name}

--

LOG_PHONE2 May I also have the best phone number for the technician to reach them?

%LOG_PHONE2 {Record Name}

--

VERIFY For verification purposes only, may I please have your name?

	Get name
88	Refused
99	Don't know

On behalf of the CPUC, I would like to thank you very much for your kind cooperation. Have a good day.

GENDER [By observation only]

1	Male
2	Female

FINI Press 1 to finish this case

1	
---	--

This interview took %LENGTH_MIN minutes and %OVER_SEC seconds.

END

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V1 Next, I'd like to confirm the types of rebated equipment you purchased through the &UTILITY &PROGRAM.

Program records indicate that you purchased the following rebated energy efficient equipment through the &UTILITY &PROGRAM around &TIMEFRAME.

**CFL EXTERIOR FIXTURES
[ASK EXCFL2 IF EXCFL = 1; ELSE SKIP TO INCFL2]**

EXCFL2 According to our records, we show that your property installed [EXCFL_QTY] CFL exterior fixtures. Is this correct?

1	Yes, correct as stated	EXCFL4
2	That is the wrong quantity	EXCFL3
3	Did not install any CFL exterior fixtures	INCFL2
88	Refused	INCFL2
99	Don't know	INCFL2

EXCFL3 Could you give me the correct quantity? An approximation would be fine.

&CQ_EXCFL	[RECORD CORRECT QTY]	EXCFL4
88	Refused	INCFL2
99	Don't know	INCFL2

EXCFL4 Were these CFL exterior fixtures installed [READ LIST]

1	in outdoor common areas only	INCFL2
2	immediately outside tenant units (for example, outside front doors or in patio areas)	INCFL2
3	in both area types	EXCFL5
77	Other [RECORD]	INCFL2
88	Refused	INCFL2
99	Don't know	INCFL2

EXCFL5 Approximately what percentage of these fixtures were installed in common areas?

&%_EXCOM	[RECORD PERCENTAGE IN COMMON AREAS]	INCFL2
88	Refused	INCFL2
99	Don't know	INCFL2

GO TO SR_NTG IF INDICATED

**CFL INTERIOR FIXTURES
[ASK INCFL2 IF INCFL = 1; ELSE SKIP TO CFL2]**

INCFL2 According to our records, we show that your property installed [INCFL_QTY] CFL interior fixtures. Is this correct?

1	Yes, correct as stated	INCFL4
2	That is the wrong quantity	INCFL3
3	Did not install any CFL interior fixtures	CFL2
88	Refused	CFL2
99	Don't know	CFL2

INCFL3 Could you give me the correct quantity? An approximation would be fine.

&CQ_INCFL	[RECORD CORRECT QTY]	INCFL4
88	Refused	CFL2
99	Don't know	CFL2

INCFL4 Were these CFL interior fixtures installed [READ LIST]

1	in common areas	CFL2
2	in tenant units	CFL2
4	in both area types	INCFL5
77	Other [RECORD]	CFL2
88	Refused	CFL2
99	Don't know	CFL2

INCFL5 Approximately what percentage of these fixtures were installed in common areas?

&%_INCOM	[RECORD PERCENTAGE IN COMMON AREAS]	CFL2
88	Refused	CFL2
99	Don't know	CFL2

GO TO SR_NTG IF INDICATED

**SCREW-IN CFLs
[ASK CFL2 IF CFL = 1; ELSE SKIP TO EX2]**

CFL2 According to our records, we show that your property installed [CFL_QTY] CFL interior fixtures. Is this correct?

1	Yes, correct as stated	CFL4
2	That is the wrong quantity	CFL3
3	Did not install any CFL interior fixtures	EX2
88	Refused	EX2
99	Don't know	EX2

CFL3 Could you give me the correct quantity? An approximation would be fine.

&CQ_CFL	[RECORD CORRECT QTY]	CFL4
88	Refused	EX2
99	Don't know	EX2

CFL4 Were these screw-in CFLs installed [READ LIST; ACCEPT MULTIPLES]

1	in outdoor common areas	CFL5
2	immediately outside tenant units (for example, outside front doors or in patio areas)	CFL5
3	in indoor common areas	CFL5
4	in tenant units	CFL5

77	Other [RECORD]	CFL5
88	Refused	EX2
99	Don't know	EX2

IF ANY OF THE ANSWERS TO CFL4 IN (1,3) THEN ASK CFL5; ELSE SKIP TO EX1

CFL5 Approximately what percentage of these screw-in CFLs were installed in common areas?

&%_CFLCOM	[RECORD PERCENTAGE IN COMMON AREAS]	EX2
88	Refused	EX2
99	Don't know	EX2

GO TO SR_NTG IF INDICATED

EXIT SIGNS

[ASK EX2 IF EX = 1; ELSE SKIP TO LIN2]

EX2 According to our records, we show that your property installed [CFL_QTY] CFL interior fixtures. Is this correct?

1	Yes, correct as stated	EX4
2	That is the wrong quantity	EX3
3	Did not install any CFL interior fixtures	LIN2
88	Refused	LIN2
99	Don't know	LIN2

EX3 Could you give me the correct quantity? An approximation would be fine.

&CQ_EX	[RECORD CORRECT QTY]	EX4
88	Refused	LIN2
99	Don't know	LIN2

EX4 Were these exit signs installed [READ LIST]

1	in indoor common areas	LIN2
2	in outdoor common areas	LIN2
3	in both	LIN2
77	Other [RECORD]	LIN2
88	Refused	LIN2
99	Don't know	LIN2

GO TO SR_NTG IF INDICATED

LINEAR FLUORESCENT T8/T5s

[ASK LIN1 IF LIN = 1; ELSE SKIP TO DEL5]

LIN2 According to our records, we show that your property installed [LIN_QTY] linear fluorescent lamps. Is this correct?

1	Yes, correct as stated	LIN4
2	That is the wrong quantity	LIN3
3	Did not install any CFL interior fixtures	DEL5
88	Refused	DEL5
99	Don't know	DEL5

LIN3 Could you give me the correct quantity? An approximation would be fine.

&CQ_LIN	[RECORD CORRECT QTY]	LIN4
88	Refused	DEL5
99	Don't know	DEL5

LIN4 Were these linear fluorescent T8s or T5s installed [READ LIST]

1	in common areas	DEL5
2	in tenant units	DEL5
3	in both	LIN5
77	Other [RECORD]	DEL5
88	Refused	DEL5
99	Don't know	DEL5

LIN5 Approximately what percentage of these linear fluorescent lamps were installed in common areas?

&%_LINCOM	[RECORD PERCENTAGE IN COMMON AREAS]	DEL5
88	Refused	DEL5
99	Don't know	DEL5

GO TO SR_NTG IF INDICATED

WATER HEATER/BOILER

[ASK BOIL2 IF BOIL = 1; ELSE SKIP TO FAUC2]

BOIL2 According to our records, we show that your property installed [QTY_BOIL] water heaters/boilers. Is this correct?

1	Yes, correct as stated	BOIL4
2	That is the wrong quantity	BOIL3
3	Did not install any CFL interior fixtures	FAUC2
88	Refused	FAUC2
99	Don't know	FAUC2

BOIL3 Could you give me the correct quantity? An approximation would be fine.

&CQ_BOIL	[RECORD CORRECT QTY]	BOIL4
88	Refused	FAUC2
99	Don't know	FAUC2

BOIL4 Were these water heaters/boilers installed [READ LIST]

1	for hot water use in common areas	FAUC2
2	for hot water use in tenant units	FAUC2
4	for both	FAUC2
77	Other [RECORD]	FAUC2
88	Refused	FAUC2
99	Don't know	FAUC2

GO TO SR_NTG IF INDICATED

FAUCET AERATORS

[ASK FAUC2 IF FAUC = 1; ELSE SKIP TO SHOW2]

FAUC2 According to our records, we show that your property installed [FAUC_QTY] high efficiency faucet aerators. Is this correct?

1	Yes, correct as stated	EXCFL3
2	That is the wrong quantity	EXCFL3
3	Did not install any CFL exterior fixtures	INCFL2
88	Refused	INCFL2
99	Don't know	INCFL2

FAUC3 Could you give me the correct quantity? An approximation would be fine.

&CQ_FAUC	[RECORD CORRECT QTY]	FAUC4
88	Refused	SHOW1
99	Don't know	SHOW1

FAUC4 Were these faucet aerators installed [READ LIST]

1	at common area faucets	SHOW1
2	at tenant unit faucets	SHOW1
4	at both	FAUC5
77	Other [RECORD]	SHOW1
88	Refused	SHOW1
99	Don't know	SHOW1

FAUC5 Approximately what percentage of these faucet aerators were installed in common areas?

&%_FAUCOM	[RECORD PERCENTAGE IN COMMON AREAS]	SHOW1
88	Refused	SHOW1
99	Don't know	SHOW1

GO TO SR_NTG IF INDICATED

LOW FLOW SHOWERHEADS

[ASK SHOW1 IF SHOW = 1; ELSE SKIP TO WHCON1]

SHOW2 According to our records, we show that your property installed [SHOW_QTY] low flow showerheads. Is this correct?

1	Yes, correct as stated	SHOW4
2	That is the wrong quantity	SHOW3
3	Did not install any CFL exterior fixtures	WHCON2
88	Refused	WHCON2
99	Don't know	WHCON2

SHOW3 Could you give me the correct quantity? An approximation would be fine.

&CQ_SHOW	[RECORD CORRECT QTY]	SHOW4
88	Refused	WHCON2
99	Don't know	WHCON2

SHOW4 Were these low flow showerheads installed [READ LIST]

1	at common area showers (for example, in a fitness center or near a pool)	WHCON2
2	in tenant unit showers	WHCON2
4	in both	SHOW5
77	Other [RECORD]	WHCON2
88	Refused	WHCON2
99	Don't know	WHCON2

SHOW5 Approximately what percentage of these flow flow showerheads were installed in common areas?

&%_SHOCOM	[RECORD PERCENTAGE IN COMMON AREAS]	WHCON2
88	Refused	WHCON2
99	Don't know	WHCON2

GO TO SR_NTG IF INDICATED

WATER HEATER/BOILER CONTROLLER

[ASK WHCON2 IF WHCON = 1; ELSE SKIP TO INS2]

According to our records, we show that your property installed [WHCON_QTY] water heater/boiler controllers. Is this correct?

WHCON2

1	Yes, correct as stated	INS2
2	That is the wrong quantity	WHCON3
3	Did not install any CFL exterior fixtures	INS2
88	Refused	INS2
99	Don't know	INS2

WHCON3 Could you give me the correct quantity? An approximation would be fine.

&CQ_WHCON	[RECORD CORRECT QTY]	WHCON4
88	Refused	INS2
99	Don't know	INS2

WHCON4 Were these water heater/boiler controls installed [READ LIST]

1	for use in common areas	INS2
2	for use in tenant units	INS2
4	for use in both area types	INS2
77	Other [RECORD]	INS2
88	Refused	INS2
99	Don't know	INS2

GO TO SR_NTG IF INDICATED

WINDOWS

[ASK INS1 IF INS = 1; ELSE SKIP TO OM1]

INS2 Do you recall purchasing and installing attic or wall insulation?

1	Yes	OM1
2	No	OM1
88	Refused	OM1
99	Don't know	OM1

GO TO SR_NTG IF INDICATED

Site Contact Information

Survey Tracking

Notes/Comments

Program - Circle One	PG&E 2000 SCE 2502 SDG&E 3017	Survey Team	Cadmus
Telephone Survey ID		Inspection Date	
Phone survey completion date		Inspection Start Time	
Phone survey respondent		Inspection End Time	
		Inspector Name / Initials	
Primary Contact Name	GOLDIE HANSFORD	Scheduled Site Visit Date	
Phone 1	5593229308	Scheduled Site Visit Time	
Phone 2			
email		Survey received from surveyor:	
		Initial QC check completed	
Alternate Contact Name		Survey received at Cadmus	
Phone 1		Cadmus QC completed	
Phone 2		Returned to surveyor	
email		Data entry completed	
Other Contact Name			
Phone 1			
Special Instructions for Site Visit:			

General Site Information

Corrections to Site Information

Logger Installation Notes

Corporate (Multi-Site) Name		Corporate (Multi-Site) Name	
Actual Complex Name	APARTMENTS/FREMON T MGMT CORP	Actual Complex Name	
Address 1	#REF!	Address 1	
Address 2	#REF!	Address 2	
City	CLOVIS	City	
State	CA	State	
Zip Code	93611	Zip Code	
Year built?		Gas Service Provider	
Total number of buildings	1	Electric Service Provider	
Total Number of apartments	72		

*majority of building, year of completion

Number and Location of Incented Measures

No.	Control Type	Location	Fixture Make & Model	No. Present	No. of Loggers
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					

Data from Participant Application								Data observed on Site						Timer			HVAC	Meter Information			
Address	complexBuildingID	Apt #	Room Code	Fixture Type	Make	Model Number	# of Units (database)	# of Units (on-site)	# of Bulbs in Unit	Watts per Bulb	# Bulbs Not in Operation	# Empty Sockets	Control Type	Days on Timer Schedule	Timer On (24 Hour)	Timer Off (24 Hour)	HVAC area # (table)	Meter Installed?	Eye Installed?	Meter Serial #	Install Time (24 Hour)
#REF!	12	0	C - clubh	MF-T-5 OR T-8 INT LAMPS W ELEC BALLASTS-4 FT 2 LAMPS - COM	SUNPARK	SUNPARK	19											<input type="checkbox"/>	<input type="checkbox"/>		
#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!											<input type="checkbox"/>	<input type="checkbox"/>		
																		<input type="checkbox"/>	<input type="checkbox"/>		
																		<input type="checkbox"/>	<input type="checkbox"/>		
																		<input type="checkbox"/>	<input type="checkbox"/>		
																		<input type="checkbox"/>	<input type="checkbox"/>		
																		<input type="checkbox"/>	<input type="checkbox"/>		
																		<input type="checkbox"/>	<input type="checkbox"/>		
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																		<input type="checkbox"/>	<input type="checkbox"/>		
																		<input type="checkbox"/>	<input type="checkbox"/>		
																		<input type="checkbox"/>	<input type="checkbox"/>		
																		<input type="checkbox"/>	<input type="checkbox"/>		
																		<input type="checkbox"/>	<input type="checkbox"/>		
																		<input type="checkbox"/>	<input type="checkbox"/>		

HVAC Table (Connects to Measure Verification Table)

			Heating			Cooling		
HVAC Area (number)	Conditioned ?	Heated/Cooled Square	Fuel Type	Make	Model	Fuel Type	Make	Model
	H C B							
	H C B							
	H C B							
	H C B							
	H C B							
	H C B							
	H C B							
	H C B							
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	H C B							
	H C B							
	H C B							
	H C B							
	H C B							

H = Heated
 C= Cooled
 B = Both

Sample Disposition

Street Address	Apt. Unit #	Gained Access ¹	Not Home	Home and Refused	Street Address	Apt. Unit #	Gained Access	Not Home	Home and Refused
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>

¹ O = Occupied; V = Vacant

Replaced Units

Baseline Q1. Do you still have any of the fixtures or bulb types that are similar to those replaced when you installed the energy efficient program lights? These may be installed or in storage. (If yes) May I see them? What is the approximate age of these? (If bulbs or fixtures are in storage) What are you planning on doing with these bulbs/fixtures in the future?

Lighting Type (Linear, CFL, Interior or Exterior Fixture)	Wattage	Number of Units of Type	Age	Make	Model #	Installed? (Y/N)	Keep as Spare/ Install at this site/ Install at other site/ Other (describe)

Baseline Q2. When you upgraded the lighting in the complex, did the hours of use (the time the fixtures are ON) change at all?

(Circle One) Yes No Don't Know Refused

Baseline Q2. Which fixture hours changed? By how much?

Spillover

SPILLOVER Q1. Since you received a rebate from the [program] have you purchased and installed any efficient lighting on your own without any assistance from the [utility] [program] or another utility program either at this facility or at other locations?

- 1 Yes, only at this multifamily complex
- 2 Yes, only at other locations
- 3 Yes, at this facility and other locations
- 4 No (skip Q2)
- D (Don't Know) (skip Q2)
- R (Refused) (skip Q2)

SPILLOVER Q2. How many more high efficiency lighting products did you buy on your own, compared to what you got through the program at this facility and/or at another location? (PROBE FOR PERCENT OR SHARE OF PROGRAM EQUIPMENT. Read the following if needed) For example, was it about one-fourth (25%) of what you installed through the program, one-half (50%) of what your installed through the program, the same amount as what you installed though the program (100%), twice as much as what you installed through the program (200%), or some other amount?

- _____ % at this multifamily complex
- _____ % at another facility
- D (Don't Know)
- R (Refused)

Room Codes

K = Kitchen	O = Outside
BA = Bathroom	LD = Laundry
H = Hall	OF = Office
L = Living room	C = Common Area
BD = Bedroom	D = Dining Room
M = Mechanical or Boiler Room	

Fixture Type Codes

HC = Hard Wired Ceiling
HW = Hard Wired Wall
RC = Recessed Can
TL = Table or Desk Lamp
TC = Torchiere
NIGHT = Night Light
EXIT = Exit Sign
OTH = Other

Lighting Control Type Codes

C = Continuous/24 hour
B = Bi-level Switch
S = Manual on/off-switch
TC = Timeclock
E = EMS
PC = Photocell
PT = Photocell/Timeclock
DM = Dimmer Switch
MS = Motion Sensor
TW = Twist-timer
DL = Daylighting controls

Lamp Type Codes

INC = Incandescent	NIT = Night Light	MH = Metal Halide	OTH = Other
LF = Linear Fluorescent	CC = Cold Cathode	MV = Mercury Vapor	
CFL = Compact Fluorescent	LED = Light Emitting Diode	LPS = Low Pressure Sodium	

Disposition Sheet for Apartment Survey Attempts

This form should be used whenever apartments must be accessed to verify energy efficiency measures. The target number of units that must be accessed and subsampling approach to be used is based on the configuration of the complex, as shown in the table below. A minimum of 40 doors must be attempted for the largest sites.

The survey administrator will need to work with property manager to determine the best way to access the tenant space. In most cases these will be escorted visits to the apartments, but in some cases it will be a random door-to-door solicitation. Note in comments which of these approaches was used, especially if inspections are limited to specific buildings by the site contact. Record a disposition in the table below for all apartments in which attempts are made to solicit entrance, including empty/vacant apartments.

Common Area Verification Protocol: Target Number of Completes and Subsampling Approach

Complex Configuration	Protocol
< 5 common areas	Attempt verification for all common areas
5 to 20 common areas	Attempt verification in 25% of common areas (1 out of every 4)
More than 20 common areas	Approach 25%, no more than 40 common areas. If more than two floors, attempt from every other floor.
More than 20 common areas, Multiple buildings	Approach 25%, no more than 40 common areas. Attempt from every other building and every other floor if more than two floors per building.

Apartment Verification Protocol: Target Number of Completes and SubSampling Approach

Complex Configuration	Protocol
< 5 common areas	Attempt surveys in all apartments
5 to 20 common areas	Attempt surveys in 25% of apartments (1 out of every 4)
More than 20 common areas	Approach 25%, no more than 10 apartments. If more than two floors, attempt from every other floor.
More than 20 common areas, Multiple buildings	Approach 25%, no more than 10 apartments. Attempt from every other building and every other floor if more than two floors per building.

CPUC 0608 Residential MF Evaluation On-Site Verification Survey Form (Rev: 6/16/08)

General Site Information (from phone survey & IOU tracking database)

Itron SiteID		EEGA Program #	PGE2000
Sample Strata	1	Evaluation Phase	PH01

Corporate (Multi-Site) Name			
Actual Complex Name (on storefront)			
Service Address			
City		Zip Code	

CORRECTIONS TO SITE INFORMATION

Revised Corporate (Multi-Site) Name			
Revised Complex Name			
Revised Service Address			
Revised City		Rev. Zip	

Survey Tracking Information

Survey Team:	KEMA
Assigned Surveyor's Initials:	_____
Survey Travel Mileage:	_____ miles
Survey Duration (24 hr clock)	Start: _____ End: _____
Total Time Onsite/QC/Travel	_____ hrs

	Date:	Initials
Scheduled date of onsite survey:	___ / ___ / ___	___
Field survey completed:	___ / ___ / ___	___
Survey received from surveyor:	___ / ___ / ___	___
Initial QC check completed:	___ / ___ / ___	___
Survey received at Itron:	___ / ___ / ___	___
Itron QC completed:	___ / ___ / ___	___
Returned to Surveyor	___ / ___ / ___	___
Data entry completed:	___ / ___ / ___	___

Site Contact Information

Phone Survey (PS) Completion Date:

Phone Survey Respondent:

	Contact Name	Phone Number	Alternate Phone	Email Address	Survey Contact
OS Primary					<input type="checkbox"/>
OS Back-up					<input type="checkbox"/>
OS Other					<input type="checkbox"/>

Special Instructions for On-site Visit: _____

Additional Site/Complex Characteristics

Electric Service Utility	
Gas Service Utility	
What <u>year</u> was the majority of the facility built?	
Total number of buildings	
Total number of apartments	
CEC Standards Climate Zone (from City/Zip)	

Complex Level CFLs from Retailers (ask site management)

Do you have any CFLs that you purchased at a retail store to be installed at this property?	Y N
-- How many CFLs were purchased?	
-- Were these CFLs installed in the common areas?	Y N
-- How many of these CFLs were installed in the common area?	

Comments:

IOU Tracking Data Measure Summary Sheet

This is a summary of all of the measures implemented at this site as extracted from the IOU tracking database. It will be printed out separately from the survey form, but is included here for reference.

Measure Category	Engineering EstMethod	Measure Code	IOU MeasureName	Unit Basis	Rebated # of Units	Item Summary	Apartment - Common Area
Res Exterior lighting	Workpapers	L811	Exterior Fixture - APT	UNIT	19		Common
Res Interior lighting	Workpapers	L809	Interior Fixture - APT	UNIT	19		Apartment

Common Area and Apartment Area Type Codes

K = Kitchen	O = Outside
BA = Bathroom	LD = Laundry
H = Hall	OF = Office
L = Living room	C = Common Area
BD = Bedroom	M = Mechanical or Boiler Room
D = Dining Room	

Tracking Data Verification Codes

Status Codes
O = Operational
B = System in Backup Mode
F = Non-Op, Measure broken/failed
T = Non-Op, System temporarily disabled
P = Non-Op, System permanently disabled

Lighting Field Codes

Ltg Control Type Codes	CFL Lamp Type Codes
C = Continuous/24 hour	TW = Bare-MiniTwist/Screw
B = Bi-level Switch	TU = Bare-Tube
S = Manual on/off-switch	AL = Covered-ALine
TC = Timeclock	GL = Covered-Globe
E = EMS	BU = Covered-Bullet/Post/Candelabra
PC = Photocell	CIR = Circline
PT = Photocell/Timelock	DM = Dimmer
MS = Motion Sensor	TW = Twist-timer
DL = Daylighting controls	RF = Reflector

Water Heater Measure Codes

Water Heater Type Codes	Condition Codes	Status Type
B = Boiler (Central System)	N = New	TH = Thermostat
ET = Electric Tank	G = Good	TI = Timers
GT = Gas Tank	P = Partially Blocked	ST = Step Controls
EL = Electric Tankless	M = Mostly Blocked	CE = Computer environment controls
GL = Gas Tankless	N = Missing/None	MA = Manual on/off
S = Solar	OT = Other _____	OT = Other (describe) _____
O = Other _____		

Hot Water/Boiler Control Measure Codes

Fuel Code	Configuration/Type Code	Temperature Control Type
G = Gas	ME = Mechanical	TH = Thermostat
O = Oil	TS = Thermostatic	TI = Timers
P = Propane	TD = Thermodynamic	ST = Step Controls
OT = Other _____	OT = Other _____	CE = Computer environment controls
		MA = Manual on/off
		OT = Other (describe) _____

Disposition Sheet for Apartment Survey Attempts

This form should be used whenever apartments must be accessed to verify energy efficiency measures. The target number of units that must be accessed and subsampling approach to be used is based on the configuration of the complex, as shown in the table below. A minimum of 40 doors must be attempted for the largest sites.

Apartment Verification Protocol: Target Number of Completes and SubSampling Approach

Complex Configuration	Protocol
< 5 units	Attempt surveys in all apartments
5 to 20 units	Attempt surveys in 25% of apartments (1 out of every 4)
More than 20 units	Approach 25%, no more than 20 apartments. If more than two floors, attempt from every other floor.
Multiple buildings	Approach 25%, no more than 20 apartments. Attempt from every other building and every other floor if more than two floors per building.

The surveyor will need to work with property manager to determine the best way to access the tenant space. In most cases these will be escorted visits to the apartments, but in some cases it will be a random door-to-door solicitation. Note in comments which of these approaches was used, especially if inspections are limited to specific buildings by the site contact. Record a disposition in the table below for all apartments in which attempts are made to solicit entrance, including empty/vacant apartments.

Apartment Access Dispositions

Street Address	Apt. Unit #	Gained Access¹	Not Home	Home and Refused	Street Address	Apt. Unit #	Gained Access	Not Home	Home and Refused
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>
		O V	<input type="checkbox"/>	<input type="checkbox"/>			O V	<input type="checkbox"/>	<input type="checkbox"/>

¹ O=Occupied V=Vacant

Common Area or Apartment Lighting Measures

Street Address _____

Residence Code # _____

Area Type Code:					
Item Number					
Apartment Occupied or Empty		O E	O E	O E	O E
Common Area or Apartment		C A	C A	C A	C A
Measure Code					
# of Units on Application for this Res Code #.					
IOU Unit Basis					
Correct Unit Basis (only if incorrect above)					
Can Rebated measures be clearly identified?		Y N	Y N	Y N	Y N
Visual Verification Data					
Inside, outside, or both lighting?		I O B	I O B	I O B	I O B
Total number of fixtures					
Number of lamps per fixture					
Total number of lamps					
Tube diameter (T5, T8, T12)					
Tube length					
Verification Counts					
(A) Installed & Operable # of units (ex post)					
-- # of lamps burned out					
(B) # of Non-Operable (broken/disconnected) Units in place					
(C) # of rebated units removed or missing.					
--- # of High Efficiency technologies replaced by incandescent technology					
--- # of High Efficiency technologies replaced by non-program rebated CFL technologies					
--- Why were rebated techs replaced? (failed/burnout, noise/start-up, flickering, quality, unknown)		FB NS FL LQ UNK	FB NS FL LQ UNK	FB NS FL LQ UNK	FB NS FL LQ LQ UNK
--- When were rebated technologies replaced (month and year)?					
--- Who replaced the rebated technologies (tenant, maintenance staff, other or unknown)					
(D) # of Spare High Efficiency Units:	Left by Contractor				
	Purchased by Tenant				
-- Utility rebate sticker on spare packages?		Y N	Y N	Y N	Y N
Physical Inspection Data					
Lamps/fixtures are NOT accessible (Check box & explain in comments)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of units physically inspected					
Lamp Wattage					
Make/Manufacturer					
Model/Lamp Code					
Energy Star Label?		Y N	Y N	Y N	Y N
CFL Lamp Type Code					
Reflector lamp type (i.e. R20, BR30, etc.)?		Y N	Y N	Y N	Y N
Screw-base size: M=Med. C=Candelabra		M C	M C	M C	M C
Baseline Summary Data (Self-Report)					
Is post-installation operation the same as pre?					
-- If pre-retrofit operation was different, specify					

Common Area or Apartment Lighting Measures

Street Address _____ **Residence Code #** _____

Activity Area Assignment Table

Use this table to associate number of units to Apartment and Common Areas. The values in the "Observed # of Units" column must add up to the total # of installed and operational units in the table above.

Item Number (from page one of the lighting apartment page)	Measure Code	Area Type Code (See Code Key)	Observed # of Units	Application # of Units	Control Type	Baseline Lamp Type	Baseline Lamp per Fixture

Comments:

My signature acknowledges that I received a participation incentive in the form of a \$10 gift card for the CPUC sponsored verification effort regarding the Residential Multifamily On-site M&V.
 Print Name: _____ Gift Card Type: Walmart Albertson's Last 6 digits: _____
 Signature: _____ Date: _____

Mi firma reconoce que e recibido un regalo de cortesía en la forma de una tarjeta prepagada de \$10 por participar en la encuesta patrocinada por CPUC en relación a la visita de hogares multi-familiares.
 Nombre (Name): _____ Gift Card Type: Walmart Albertson's Last 6 digits: _____
 Firma (Signature): _____ Fecha (Date): _____

Common Area or Apartment Lighting Measures

Street Address _____ **Residence Code #** _____

Common Area or Apartment Lighting Measures

Street Address _____

Residence Code # _____

Area Type Code:					
Item Number					
Apartment Occupied or Empty		O E	O E	O E	O E
Common Area or Apartment		C A	C A	C A	C A
Measure Code					
# of Units on Application for this Res Code #.					
IOU Unit Basis					
Correct Unit Basis (only if incorrect above)					
Can Rebated measures be clearly identified?		Y N	Y N	Y N	Y N
Visual Verification Data					
Inside, outside, or both lighting?		I O B	I O B	I O B	I O B
Total number of fixtures					
Number of lamps per fixture					
Total number of lamps					
Tube diameter (T5, T8, T12)					
Tube length					
Verification Counts					
(A) Installed & Operable # of units (ex post)					
-- # of lamps burned out					
(B) # of Non-Operable (broken/disconnected) Units in place					
(C) # of rebated units removed or missing.					
--- # of High Efficiency technologies replaced by incandescent technology					
--- # of High Efficiency technologies replaced by non-program rebated CFL technologies					
--- Why were rebated techs replaced? (failed/burnout, noise/start-up, flickering, quality, unknown)		FB NS FL LQ UNK	FB NS FL LQ UNK	FB NS FL LQ UNK	FB NS FL LQ UNK
--- When were rebated technologies replaced (month and year)?					
--- Who replaced the rebated technologies (tenant, maintenance staff, other or unknown)					
(D) # of Spare High Efficiency Units:	Left by Contractor				
	Purchased by Tenant				
-- Utility rebate sticker on spare packages?		Y N	Y N	Y N	Y N
Physical Inspection Data					
Lamps/fixtures are NOT accessible (Check box & explain in comments)		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Number of units physically inspected					
Lamp Wattage					
Make/Manufacturer					
Model/Lamp Code					
Energy Star Label?		Y N	Y N	Y N	Y N
CFL Lamp Type Code					
Reflector lamp type (i.e. R20, BR30, etc.)?		Y N	Y N	Y N	Y N
Screw-base size: M=Med. C=Candelabra		M C	M C	M C	M C
Baseline Summary Data (Self-Report)					
Is post-installation operation the same as pre?					
-- If pre-retrofit operation was different, specify					

Common Area or Apartment Lighting Measures

Street Address _____ Residence Code # _____

Activity Area Assignment Table

Use this table to associate number of units to Apartment and Common Areas. The values in the "Observed # of Units" column must add up to the total # of installed and operational units in the table above.

Item Number (from page one of the lighting apartment page)	Measure Code	Area Type Code (See Code Key)	Observed # of Units	Application # of Units	Control Type	Baseline Lamp Type	Baseline Lamp per Fixture

Comments:

My signature acknowledges that I received a participation incentive in the form of a \$10 gift card for the CPUC sponsored verification effort regarding the Residential Multifamily On-site M&V.
 Print Name: _____ Gift Card Type: Walmart Albertson's Last 6 digits: _____
 Signature: _____ Date: _____

Mi firma reconoce que e recibido un regalo de cortesía en la forma de una tarjeta prepagada de \$10 por participar en la encuesta patrocinada por CPUC en relación a la visita de hogares multi-familiares.
 Nombre (Name): _____ Gift Card Type: Walmart Albertson's Last 6 digits: _____
 Firma (Signature): _____ Fecha (Date): _____

Common Area or Apartment Lighting Measures

Street Address _____ **Residence Code #** _____

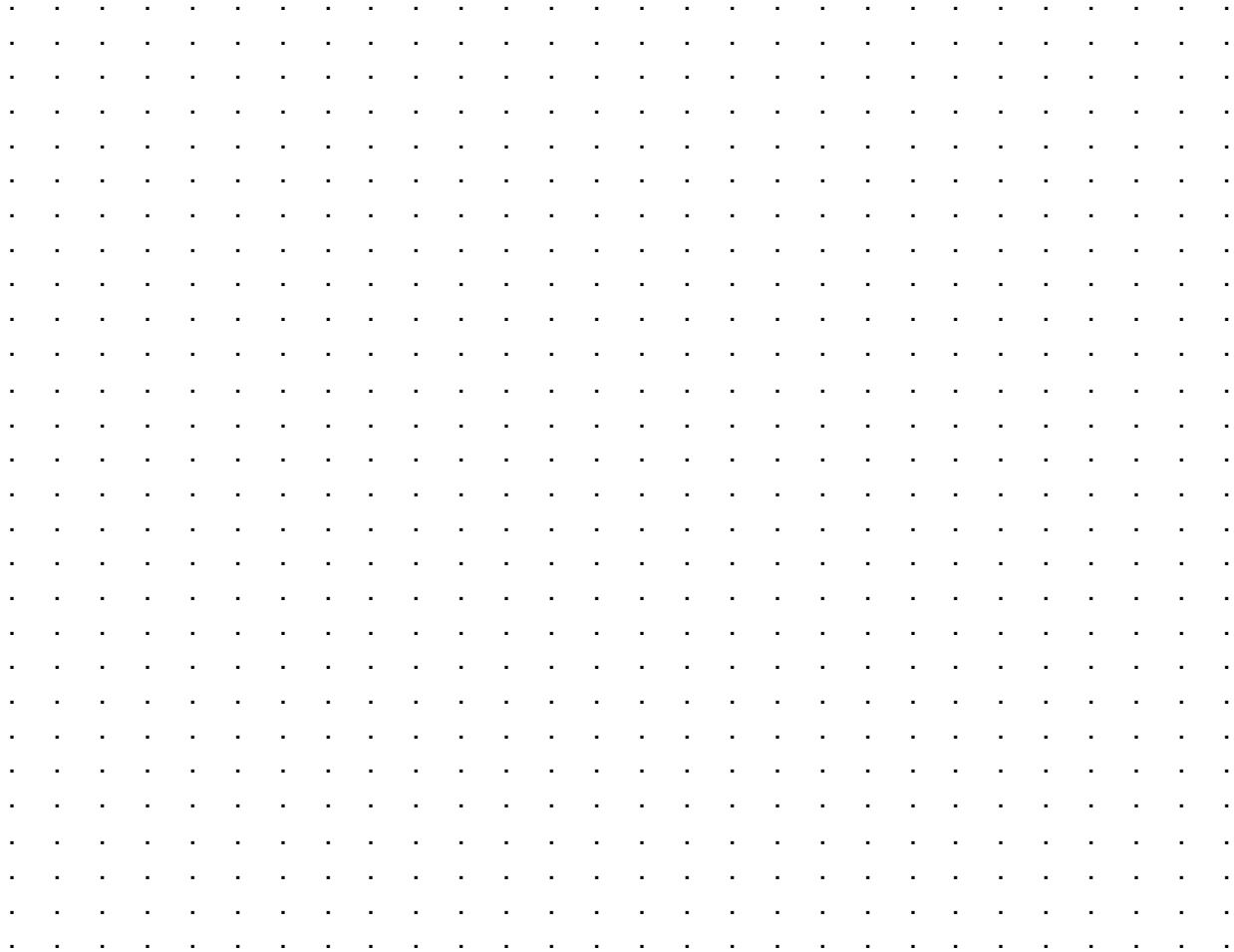
Site Photo Log

Record site photo information here including the PhotoID (i.e. digital file name) and a brief description of the photo where needed. Site Photos should include the site entrance and entire building, rebated measures, and close-up photos of nameplates, lamp codes, and other make/model identification. Refer to the training manual for more on what photos to take. Photo/file naming conventions is SiteID_Item# (e.g. PGE056789_1.jpg).

Item #	Description/Comments/Measure Code (no data entry)
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	
11	
12	
13	
14	
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17	
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29	
30	

Site-Plan Sketch

This sketch sheet must be used for the lighting logger installation plan and can also be used to indicate where the rebated measures are located. Activity Areas used for subsampling and counting should also be noted on this sketch, using the appropriate Activity Area code from Form ACTAREAS. Also indicate the orientation of the building and the primary entry/exit.

A large grid of dots for sketching a site plan. The grid consists of 20 columns and 20 rows of small, evenly spaced dots, providing a guide for drawing a site plan.

Site-Plan sketch comments:

Incentive Payment Confirmation

Residential On-Site Survey**Incentive Payment**

My signature acknowledges that I received a participation incentive in the form of a \$10 gift card for the CPUC sponsored verification effort regarding the Residential Multifamily On-site M&V.

Print Name: _____ Gift Card Type: Walmart Albertson's

Signature: _____ Gift Card Last 6 digits: _____

Address: _____

Date: _____

Confirmación del pago del regalo de cortesía

Encuesta Residencial En Casa**Regalo De Cortesía**

Mi firma reconoce que e recibido un regalo de cortesía en la forma de una tarjeta prepagada de \$10 por participar en la encuesta patrocinada por CPUC en relación a la visita de hogares multi-familiares.

Nombre (Name): _____ Gift Card Type: Walmart Albertson's

Firma (Signature): _____ Gift Card Last 6 digits: _____

Domicilio (Address): _____

Fecha (Date): _____

Appendix K – NTG Discussion and Stability Analysis

- K1 – Appendix Guidelines for SRA and Resident
- K2 – NTG 90% Confidence Intervals
- K3 – FR Stability Indicators
- K4 – Response to Overarching Comments on the Res-Small CI SRA NTG Method

Guidelines for Estimating Net-To-Gross Ratios Using the Self-Report Approaches

October 15, 2007

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1. Introduction

The California Public Utilities Commission (CPUC) recently adopted the *California Energy Efficiency Evaluation Protocols: Technical, Methodological, and Reporting Requirements for Evaluation Professionals* (TecMarket Works, 2006) (referred to by the CPUC as the *Evaluator's Protocols*) for the measurement and evaluation (M&E) of energy efficiency (EE) programs. These guidelines focus on the critical elements of M&E such as impact evaluation, measurement and verification, process evaluation and sampling and uncertainty. These standards are understood to be minimal and are, in many cases, quite general.

A central objective of the California energy efficiency program evaluations is to identify that portion of the gross load impacts associated with a program-supported measure installation or behavior change that would not have been accomplished in the absence of the program. That portion is the net load impacts. In certain situations, the *Evaluator Protocols* allow for the use of the self-report approach (SRA) to estimate the net-to-gross ratio (NTGR) for the basic and standard levels of impact evaluation rigor (see Table 3 of the *Evaluator's Protocols*). The SRA can also be used in the enhanced level of impact evaluation rigor if used in conjunction with a second approach such as participant and non-participant analysis of utility consumption data that addresses the issue of self-selection or econometric or discrete choice with participant and non-participant comparison that addresses the issue of self-selection. The SRA is a mixed methods approach that uses, to varying degrees, both quantitative and qualitative data and analysis to assess causality¹.

However, while the Protocols allow for the use of the SRA, they are silent regarding basic methodological guidelines that are considered best practice.² The primary use of these SRA guidelines, which apply to assessing the influence of the program on both the direct impacts as well any participant spillover impacts, are to make sure that evaluators working under contract to the CPUC's Energy Division are adhering to these best practices.

Of course, while one could simply ask analysts to guarantee that they adhered to the methodological guidelines contained in standard textbooks, this may not be sufficiently

¹ There is wide agreement on the value of *both* qualitative and quantitative data in the evaluation of many kinds of programs. Moreover, it is inappropriate to cast either approach in an inferior position. The complexity of any decision regarding the purchase of efficient equipment can be daunting, especially in large organizations for which the savings are often among the largest. In such situations, the reliance on only quantitative data can miss some important elements of the decision. The collection and interpretation of qualitative data can be especially useful in broadening our understanding of a program's role in this decision.

² These Protocols are also silent regarding methodological guidelines for conducting surveys in general. This is considered appropriate since there is general agreement (contained in numerous textbooks) regarding best methodological practices for designing and implementing surveys but relatively little agreement on what constitutes best methodological practices regarding the estimation of the NTGR using the SRA.

reassuring either to the CPUC or other stakeholders. Thus, rather than simply trust analysts to follow the guidance contained in the standard methodological textbooks, the CPUC has chosen to develop the *Guidelines for Self-Report Methods for Estimating Net DSM Program Impacts* (GSR) (a summary of which has also been prepared) that requires analysts to address certain key issues rather than to require analysts to address these issues in a specific way. This is the sort of guidance that occupies a position somewhere between the minimal standards represented by the Protocols and the highly detailed guidelines contained in basic methodological texts.

It follows that the GSR must focus on those methodological issues on which there is general agreement regarding their importance within the social science and engineering communities. The GSR will also refer analysts to texts in which more detailed guidance can be found regarding all the issues addressed. Adherence to such guidelines still allows the results to be shaped by the interaction of the situation, the data and the analyst. It is this very interaction and the resulting plethora of legitimate methodological choices that prohibited the creation of a more detailed and prescriptive set of guidelines.

Earlier, the *Protocols and Procedures for the Verification of Costs, Benefits, and Shareholder Earnings from Demand-Side Management Programs (1998)* (1998 Protocols) provided quality control guidelines in Appendix J (*Quality Assurance Guidelines For Statistical, Engineering, and Self-Report Methods for Estimating DSM Program Impacts*) that addressed, among other methodological issues, the self-report method for estimating NTGRs. More recently, the *California Evaluation Framework* (TecMarket Works et al., 2004) also addressed many of the same issues associated with the self-report approach. This GSR attempts to draw upon both of these documents.

There are two features of these GSR that merit discussion. First, the issues addressed are issues that a variety of basic social science and engineering methodological texts also address. That is, there appears to be a consensus that these issues are important. Second, because some respondents may not be familiar with some of the issues addressed or the terms used, references have been provided that should provide reasonably clear explanations.

2. Issues Surrounding the Validity and Reliability of Self-Report Techniques

The SRA deviates from the standard approach to assessing causality, i.e., internal validity. The standard approach to assessing causality is to conduct an experiment or quasi-experiment³ in which data are collected from both participants and nonparticipants with the data being subjected to a variety of statistical analyses (Shadish, Cook, and Campbell, 2002). In the early 1970s, many began to realize that such evaluation designs were not always desirable or possible (Weiss, 1972; Weiss and Rein, 1972). As a result, many evaluators began to explore alternatives that would allow them to generate causal conclusions (Guba, 1981, 1990; Cronbach, 1986). Such approaches as the modus

³ In the literature, evaluations of energy efficiency and conservation programs that involve the use of a true experimental design are very rare.

operandi method (Scriven, 1976), intensive case studies (Yin 1994), theory-based evaluations (Chen, 1990; Rogers, et al., 2000), and mixed methods (Tashakkori and Teddlie, 1998) have been explored as alternative ways to generate causal conclusions. The SRA fits well with this tradition.

The SRA is useful in a variety of situations. For example, in some cases, the expected magnitude of the savings for a given program might not warrant the investment in an expensive evaluation design that could involve a billing analysis or a discrete choice analysis of both participants and nonparticipants. Or, key stakeholders might not want to wait for a billing analysis to be completed. Also, if the relationship of the savings to the normal monthly variation in energy use is too small, then a billing analysis should not even be attempted owing to a lack of statistical power. Finally, in some cases, it might not be possible to identify a group of customers to serve as a comparison group since they have been exposed through prior participation or are in some other ways contaminated. So, for budgetary, timing, statistical, and research design issues, the more traditional designs and analyses must sometimes be replaced with the SRA.

More specifically, the SRA is a mixed method approach that involves asking one or more key participant decision-makers a series of structured and open-ended questions about whether they would have installed the same EE equipment in the absence of the program as well as questions that attempt to rule out rival explanations for the installation (Weiss, 1972; Scriven, 1976; Shadish, 1991; Wholey et al., 1994; Yin, 1994; Mohr, 1995). In the simplest case (e.g., residential customers), the SRA is based primarily on quantitative data while in more complex cases the SRA is strengthened by the inclusion of additional quantitative and qualitative data which can include, among others, in-depth, open-ended interviews, direct observation, and review of customer and program records⁴. Many evaluators believe that additional *qualitative* data regarding the economics of the customer's decision and the decision process itself can be very useful in supporting or modifying *quantitatively*-based results (Britan, 1978; Weiss and Rein, 1972; Patton, 1987; Tashakkori and Teddlie, 1998).

Having presented a very brief history of these alternatives approaches, we move on to discuss a number of special challenges associated with the SRA that merit mentioning.

One of the problems inherent in asking program participants if they would have installed the same equipment or adopted the same energy-saving practices without the program is that we are asking them to recall what has happened in the past. Worse than that is the fact that what we are really asking them to do is report on a hypothetical situation, what they would have done in the absence of the program. In many cases, the respondent may simply not know and/or cannot know what would have happened in the absence of the program. Even if the customer has some idea of what would have happened, there is, of necessity, uncertainty about it.

⁴ Of course, even in the simplest cases, an evaluator is free to supplement the analysis with additional quantitative and qualitative data such as interviews with architects and engineers involved in residential new construction or HVAC installers and a review of available market share data.

The situation just described is a circumstance ripe for invalid answers (low construct validity) and answers with low reliability, where reliability is defined as the likelihood that a respondent will give the same answer to the same question whenever or wherever it is asked. It is well known in the interview literature that the more factual and concrete the information the survey requests, the more accurate responses are likely to be. Where we are asking for motivations and processes in hypothetical situations that occurred one or two years ago, there is room for bias. Bias in responses is commonly thought to stem from three origins. First is the fact that some respondents may believe that claiming no impact for the program is likely to cause the program to cease, thus removing future financial opportunities from the respondent. Closely related to this is the possibility that the respondents may want to give an answer that they think will be pleasing to the interviewer. The direction of the first bias would be to increase the NTG ratio, and the second would have an unclear effect – up or down, depending on what the respondent thinks the interviewer wants to hear.

The second commonly recognized motivation for biased answers is that some people will like to portray themselves in a positive light; *e.g.*, they might like to think that they would have installed energy-efficient equipment without any incentive (the socially desirable response). This type of motivation could result in an artificially low net-to-gross ratio.

The third hypothesized source of bias involves an interaction between the positive perception of taking energy efficiency actions, the often observed difference between stated intentions and actual behaviors, and the fact that the counter-factual outcome can not be viewed, by the participant or outsiders. Using a series of survey questions to ask a participant about the actions they would have taken if there had been no program to derive a free-ridership estimate is referred to as the self-report approach (SRA). More specifically, this is asking the respondent to state their intentions with respect to purchasing the relevant equipment absent the program. Bias creeps in because people may intend many things that they do not eventually accomplish.

Beyond the fact that the situations of interest have occurred in the past and judgments about them involve hypothetical circumstances, they are often complex. No one set of questions can apply to all decision processes that result in a program-induced course of action. Some installations are simple, one-unit measures, while others involve many units, many different measures, and installations taking place over time. The decision to install may be made by one person or several people in a household, an individual serving as owner/operator of a small business, or, in the case of large commercial, industrial, or agricultural installations by multiple actors at multiple sites. Some measures may have been recommended by the utility for years before the actual installation took place, and others may have been recommended by consultants and/or vendors, making degree of utility influence difficult to establish. Finally, some efficiency projects may involve reconfiguration of systems rather than simple installations of energy-efficient equipment.

Another factor that can complicate the SRA is that, in certain situations, the estimated NTGR combines (more often implicitly than explicitly) the probability of a decision/action occurring and whether the *quantity* of the equipment installed would have been the same. This can complicate the interpretation of the responses and the way in which to combine these types of questions in order to estimate the NTGR.

This type of complexity and variation across sites requires thoughtful design of survey instruments. Following is a listing and discussion of the essential issues that should be considered by evaluators using SRA, together with some recommendations on reporting the strategies used to address each issue.

These should be regarded as recommendations for minimum acceptable standards for the use of the SRA to estimate net-to-gross ratios. Much of this chapter focuses on self-report methodologies for developing NTGRs for energy efficiency improvements in all sectors regardless of the size of the expected savings and the complexity of the decision making processes. However, in a given year, energy efficiency programs targeted for industrial facilities are likely to achieve a relatively small number of installations with the potential for extremely large energy savings at each site. Residential programs often have a large number of participants in a given year, but the energy savings at each home, and often for the entire residential sector, are small in comparison to savings at non-residential sites. Moreover, large industrial customers have more complex decision making processes than residential customers. As a result, evaluators are significantly less likely to conduct interviews with multiple actors at a single residence or to construct detailed case studies for each customer – methods that are discussed in detail in the following sections. *It may not be practical or necessary to employ the more complex techniques (e.g., multiple interviews at the same site, case-specific NTGR development) in all evaluations. Specifically, Sections 2.16 and 2.17 are probably more appropriate for customers with large savings and more complex decision making processes.* Of course, evaluators are free to apply the guidelines in these sections even to customers with smaller savings and relatively simple decision making processes.

2.1 Timing of the Interview

In order to minimize the problem of recall, SRA interviews should be conducted with the decision maker(s) as soon after the installation of equipment as possible (Stone et al., 2000).

2.2 Identifying the Correct Respondent

Recruitment procedures for participation in an interview involving self-reported net-to-gross ratios must address the issue of how the correct respondent(s) will be identified. Complexities to be addressed include situations commonly encountered in large commercial and industrial facilities, such as:

1. Different actors have different and complementary pieces of information about the decision to install, e.g., the CEO, CFO, facilities manager, etc.;

2. Decisions are made in locations such as regional or national headquarters that are away from the installation site;
3. Significant capital decision-making power is lodged in commissions, committees, boards, or councils; and
4. There is a need for both a technical decision-maker and a financial decision-maker to be interviewed (and in these cases, how the responses are combined will be important).

An evaluation using self-report methods should employ and document rules and procedures to handle all of these situations in a way that assures that the person(s) with the authority and the knowledge to make the installation decision are interviewed.

2.3 Set-Up Questions

The decisions that the net-to-gross questions are addressing may have occurred from 1 month to as long as 24 months prior to the interview. Regardless of the magnitude of the savings or the complexity of the decision-making process, questions may be asked about the motivations for making the decisions that were made, as well as the sequence of events surrounding the decision. Sequence and timing are important elements in assessing motivation and program influence on it. Unfortunately, sequence and timing will be difficult for many respondents to recall. This makes it essential that the interviewer guide the respondent through a process of establishing benchmarks against which to remember the events of interest (Stone et al., 2000). Failure to do so could well result in, among other things, the respondent “telescoping” some events of interest to him into the period of interest to the evaluator. Set-up questions that set the mind of the respondent into the train of events that led to the installation, and that establish benchmarks, can minimize these problems. However, one should be careful to avoid wording the set-up questions in such a way so as to bias the response in the desired direction.

Set-up questions should be used at the beginning of the interview, but they can be useful in later stages as well. Respondents to self-report surveys frequently are individuals who participated in program decisions and, therefore, may tend to provide answers *ex post* that validate their position in those decisions. Such biased responses are more likely to occur when the information sought in questions is abstract, hypothetical, or based on future projections, and are less likely to occur when the information sought is concrete. To the extent that questions prone to bias can incorporate concrete elements, either by set-up questions or by follow-up probes, the results of the interview will be more persuasive.

An evaluation using self-report methods should employ and document a set of questions that adequately establish the set of mind of the respondent to the context and sequence of events that led to decision(s) to adopt a DSM measure or practice, including clearly identified benchmarks in the customer’s decision-making process.

2.4 Use of Multiple Questions

Regardless of the magnitude of the savings or the complexity of the decision-making process, one should assume that using multiple questionnaire items (both quantitative and qualitative) to measure a construct such as free-ridership is preferable to using only one item since reliability is increased by the use of multiple items (Blalock, 1970; Crocker & Algina; 1986; Duncan, 1984).

2.5 Validity and Reliability

The validity and reliability of *each question* used in estimating the NTGR must be assessed (Lyberg, et al., 1997). In addition, the internal consistency (reliability) of multiple-item NTGR *scales* should not be assumed and should be tested. Testing the reliability of scales includes such techniques as split-half correlations, Kuder-Richardson, and Cronbach's alpha (Netemeyer, Bearden, and Sharma, 2003; Nunnally, 1978; Crocker & Algina, 1986; Cronbach, 1951; DeVellis, 1991). An evaluation using self-report methods should employ and document some or all of these tests or other suitable tests to evaluate reliability, including a description of why particular tests were used and others were considered inappropriate.

For those sites with relatively large savings and more complex decision-making processes, both quantitative and qualitative data may be collected from a variety of sources (*e.g.*, telephone interviews with the decision maker, telephone interviews with others at the site familiar with the decision to install the efficient equipment, paper and electronic program files, and on-site surveys). These data must eventually be integrated in order to produce a final NTGR.⁵ Of course, it is essential that all such sites be evaluated consistently using the same instrument. However, in a situation involving both quantitative and qualitative data, interpretations of the data may vary from one evaluator to another, which means that, in effect, the measurement result may vary. Thus, the central issue here is one of reliability, which can be defined as obtaining consistent results over repeated measurements of the same items.

To guard against such a threat at those sites with relatively large savings and more complex decision-making processes, the data for each site should be evaluated by more than one member of the evaluation team. Next, the resulting NTGRs for the projects should be compared, with the extent of agreement being a preliminary measure of the so-called inter-rater reliability. Any disagreements should be examined and resolved and all procedures for identifying and resolving inconsistencies should be thoroughly described and documented (Sax, 1974; Patton, 1987).

2.6 Consistency Checks

When multiple questionnaire items are used to calculate a free-ridership probability there is always the possibility of apparently contradictory answers. Contradictory answers indicate problems of validity and/or reliability (internal consistency). Occasional inconsistencies indicate either that the respondent has misunderstood one or more questions, or is answering according to an unanticipated logic.

⁵ For a discussion of the use of qualitative data see Section 2.14.

Another potential problem with self-report methods is the possibility of answering the questions in a way that conforms to the perceived wishes of the interviewer, or that shows the respondent in a good light (consciously or unconsciously done). One of the ways of mitigating these tendencies is to ask one or more questions specifically to check the consistency and plausibility of the answers given to the core questions. Inconsistencies can highlight efforts to “shade” answers in socially desirable directions. While consistency checking won’t overcome a deliberate and well-thought-out effort to deceive, it will often help where the process is more subtle or where there is just some misunderstanding of a question.

An evaluation using self-report methods should employ a process for setting up checks for inconsistencies when developing the questionnaire items, and describe and document the methods chosen as well as the rationales for using or not using the techniques for mitigating inconsistencies. Before interviewing begins, one should establish rules to handle inconsistent responses. Such rules should be consistently applied to all respondents.

Based on past experience one should anticipate which questions are more likely to result in inconsistent responses (e.g., questions of what participants would have done in the absence of the program and reported importance of the program to their taking action could). For such questions, specific checks for inconsistencies along with interviewer instructions could be built into the questionnaire. Any, apparent inconsistencies can then be identified and, whenever possible, resolved before the interview is over. If the evaluator waits until the interview is over to consider these problems, there may be no chance to correct misunderstandings on the part of the respondent or to detect situations where the evaluator brought incomplete understanding to the crafting of questions. In some cases, the savings at stake may be sufficiently large to warrant a follow-up telephone call to resolve the inconsistency.

However, despite the best efforts of the interviewers, some inconsistencies may remain. When this occurs, evaluator could decide which of the two answers, in their judgment has less error, and discard the other. Or, one could weight the two inconsistent responses in a way that reflects the evaluator’s estimate of the error associated with each, i.e., a larger weight could be assigned to the response that, in their judgment, contains less error.

However any inconsistencies are handled, rules for resolving inconsistencies should be established, to the extent feasible, *before* interviewing begins.⁶ An evaluation plan using self-report methods should describe the approach to identifying and resolving apparent inconsistencies. The plan should include: 1) the key questions that will be used to check for consistency, 2) whether and how it will be determined that the identified inconsistencies are significant enough to indicate problems of validity and/or reliability

⁶ One might not always be able to anticipate all possible inconsistencies before interviewing begins. In such cases, rules for resolving such unanticipated inconsistencies should be established before the analysis begins.

(internal consistency), and 3) how the indicated problems will be mitigated. The final report should include: 1) a description of contradictory answers that were identified, 2) whether and how it was determined that the identified inconsistencies were significant enough to indicate problems of validity and/or reliability (internal consistency), and 3) how the indicated problems were mitigated.

However, the rules themselves have sometimes been found to produce biased results, eliminating these respondents (treating them as missing data) has at times been the selected course of action. Thus, whenever any of these methods are used, one must report the proportion of responses affected. One must also report the mean NTGR with and without these responses in order to assess the potential for bias.

2.7 Making the Questions Measure-Specific

It is important for evaluators to tailor the wording of central free-ridership questions to the specific technology or measure that is the subject of the question. It is not necessarily essential to incorporate the specific measure into the question, but some distinctions must be made if they would impact the understanding of the question and its potential answers. For instance, when the customer has installed equipment that is efficiency rated so that increments of efficiency are available to the purchaser, asking that respondent to indicate whether he would have installed the same equipment without the program could yield confusing and imprecise answers. The respondent will not necessarily know whether the evaluator means the exact same efficiency, or some other equipment at similar efficiency, or just some other equipment of the same general type. Some other possibilities are:

1. Installations that involve removal more than addition or replacement (e.g., delamping or removal of a second refrigerator or freezer in a residence);
2. Installations that involve increases in productivity rather than direct energy load impacts;
3. Situations where the energy-efficiency aspect of the installation could be confused with a larger installation; and
4. Installation of equipment that will result in energy load impacts, but where the equipment itself is not inherently energy-efficient.

An evaluation using self-report methods should include and document an attempt to identify and mitigate problems associated with survey questions that are not measure-specific, and an explanation of whether and how those distinctions are important to the accuracy of the resulting estimate of free-ridership.

In large facilities or with decision-makers across multiple buildings or locations care must be taken to ensure that the specific pieces of equipment, or group of equipment/facility decisions, are properly identified. The interviewer and respondent need to be referring to the same things.

As part of survey development, an assessment needs to be made of whether there are important subsets within the participant pool that need to be handled differently. For example, any program that contains corporate decision-makers managing

building/renovation of dozens of buildings per year requires some type of special treatment. In this case, a standard survey might ask about three randomly selected projects/buildings. Or, a case study type of interview could focus on the factors affecting their decisions in general, for what percentage of their buildings do they take certain actions, and what actions do they take in cases where no incentives are available (if a regional or national decision-making), etc. Such an approach might offer better information to apply to all the buildings they have in the program. The point is that without special attention and a customized survey instrument, such customers might find the interview too confusing and onerous.

2.8 Partial Free-ridership

Partial free-ridership can occur when, in the absence of the program, the participant would have installed something more efficient than the program-assumed baseline efficiency but not as efficient as the item actually installed as a result of the program. When there is a likelihood that this is occurring, an evaluation using self-report methods should include and document attempts to identify and quantify the effects of such situations on net savings. Partial free-ridership should be explored for those customers with large savings and complex decision making processes.

In such a situation, it is essential to develop appropriate and credible information to establish precisely the participant's alternative choice. The likelihood that the participant would really have chosen a higher efficiency option is directly related to their ability to clearly describe that option.

An evaluation using self-report methods should include and document attempts to identify and mitigate problems associated with partial free-ridership, when applicable.

2.9 Deferred Free-ridership

Deferred free riders are those customers who would, in the absence of the program, have installed exactly the same equipment that they installed through the utility DSM program, but the utility induced them to install the equipment earlier than they would have otherwise. That is, the utility *accelerated* the timing installation of the equipment. Because determining the extent of utility influence on the timing of the installation is a complex process, an evaluator should avoid relying on a single question asked of the key decision-maker. Rather, an evaluator should examine all available data and determine whether the preponderance of evidence supports the conclusion of deferred free-ridership. The point at which the length of the deferral is interpreted as meaning no free-ridership needs to be explicitly developed in the evaluation plan and should be justified given the length of the measure life (the effective useful life or EUL) and the decision-making process of that type of customer.

Data from such sources as additional closed- and open-ended questions asked of the key decision-maker, information obtained from other people at the site familiar with the decision to install the efficient equipment, and information gathered from the program paper files should also be collected and analyzed. Rules for integrating the responses to closed- and open-ended questions should be established, to the extent feasible, before the

analysis begins. Details regarding the establishment and use of such rules are provided in Section 2.14.

Unfortunately, evaluation budgets may only permit such data to be collected and analyzed for those customers with larger savings. For those customers with the smaller savings, the NTGR may be based only on the responses from close-ended questions obtained from the key decision-maker. In such cases, closed-ended questions regarding utility influence on both *what* was installed and *when* it was installed could be asked. These answers could be analyzed mechanically using an algorithm. However, to the extent that closed-ended questions are unable to capture fully the complexity of the decision-making process, any resulting conclusions regarding deferred free-ridership may be biased, with the direction of the bias unknown.

2.10 Scoring Algorithms

A consequence of using multiple questionnaire items to assess the probability of free-ridership (or its complement, the NTGR) is that decisions must be made about how to combine them. Do all items have equal weight or are some more important indicators than others? How are probabilities of free-ridership assigned to each response category? Answers to these questions can have a profound effect on the final NTGR estimate. These decisions are incorporated into the algorithm used to combine all pieces of information to form a final estimate of the NTGR. All such decisions must be described and justified by evaluators.

In some cases, each of the responses in the series of questions is assigned an ad hoc probability for the expected net savings. These estimates are then combined (additively or multiplicatively) into a participant estimate. The participant estimates are subsequently averaged (or weighted averaged given expected savings) to calculate the overall free-ridership estimate. The assignments of the probabilities are critical in the final outcome. At the same time, there is little evidence of what these should be and they are often assigned and justified given a logical argument. With this, however, a multiple number of different probability assignments have been shown to be justified and accepted by various evaluations and regulators. However, we recognize that this can make the comparability and reliability of survey-based estimates problematic.

Finally, evaluators must also conduct sensitivity analyses (e.g., changing weights, changing the questions used in estimating the NTGR, changing the probabilities assigned to different response categories, etc.) to assess the stability and possible bias of the estimated NTGR. A preponderance of evidence approach is always better than relying solely on a weighted algorithm and sophisticated weighting that is not transparent and logically conclusive should be avoided.

2.11 Handling Non-Responses and “Don’t Knows”

In some cases, some customers selected for the evaluation sample refuse to be interviewed (unit nonresponse). In other cases, some customers do not complete an attempted interview, complete the interview but refuse to answer all of the questions, or provide a “don’t know” response to some questions (item nonresponse). Insoluble

contradictions fall into the latter category. Evaluators must explain in advance how they will address each type of problem.

Consider those who choose not to respond to the questionnaire or interview (unit nonresponse). Making no attempt to understand and correct for nonresponse in effect assumes that the non-respondents would have answered the questions at the mean. Thus, their net-to-gross ratios would assume the mean NTGR value. Because this might not always be a reasonable assumption, one should always assess the possibility of non-response bias. To assess the possibility of non-response bias, one should, at a minimum, using information available on the population, describe any differences between those who responded and those who didn't and attempt to explain whether any of these differences are likely to affect one's answers to the NTGR battery of questions. If non-response bias is suspected, one should, whenever possible, explore the possibility of correcting for non-response bias. When not possible, one should explain why not (e.g., timing or budget constraints) and provide one's best estimate of the magnitude of the bias.

When some respondents terminate the interview, complete the interview but refuse to answer all the questions, or who provide a "don't know" response to some questions (item nonresponse), decisions must be made as to whether one should treat such cases as missing data or whether one should employ some type of missing data imputation. For example, early methods to handle responses of "Don't Know," missing data, and inconsistent answers involved assuming a 35% or 50% free-ridership rate for these participants (as they might be less likely to have taken actions if they hadn't thought about it or made opposing reactions). These methods, however, were found to create a centrality tendency (the tendency to avoid extremely low scores or extremely high scores) in the overall free-ridership estimate, i.e., driving it towards 35% or 50%.

In all cases, one should always make a special effort to avoid "don't know" responses when conducting interviews. However, some survey methods and procedures have been used that do not allow a "don't know" response where that might be the best response a respondent can provide. Forcing a response can distort the respondent's answer and introduce bias. Such a possibility needs to be recognized and avoided to extent possible.

2.12 Weighting the NTGR

The Protocols require estimates of the NTGR at the program or program component levels (as determined by the CPUC). Of course, such an NTGR must take into account the size of the impacts at the customer or project level. Consider two large industrial sites with the following characteristics. The first involves a customer whose self-reported NTGR is .9 and whose estimated annual savings are 200,000 kWh. The second involves a customer whose self-reported NTGR is .15 and whose estimated savings are 1,000,000 kWh. One could calculate an unweighted NTGR across both customers of .53. Or, one could calculate a weighted NTGR of .28. Clearly, the latter calculation is the appropriate one.

2.13 Ruling Out Rival Hypotheses

An evaluator should attempt to rule out rival hypotheses regarding the reasons for installing the efficient equipment (Scriven, 1976). For example, to reduce the possibility of socially desirable responses, one could ask an *open-ended question* (i.e., a list of possible reasons is **not** read to the respondent) regarding other possible reasons for installing the efficient equipment. A listing by the interviewer of such reasons such as global warming, Flex Your Power, the price of electricity, concern for future generations, and the need for the US to reduce oil dependency might elicit socially desirable responses which would have the effect of artificially reducing the NTGR. The answers to such questions about other possible influences can be factored into the estimation of the NTGR.

In addition to obtaining the respondent's assess of other possible causes, the evaluator can independently assesses the evidence supporting any alternative hypotheses. For example, if there is a corporate policy regarding the purchase of efficient equipment, the evaluator should examine this document to verify its contents and the date on which this policy was established and also attempt to assess compliance with this policy. In addition, they could decide to interview industry experts to determine whether certain equipment has become standard practice in an industry. Or, they could review available market share data to determine whether a particular market for a specific technology has been transformed or is on its way to being transformed.

2.14 Precision of the Estimated NTGR

Most of the discussion thus far has been focused on the accuracy of the NTGR estimate and not the precision of the estimate. The calculation of the achieved relative precision of the NTGRs (for program-related measures and practices and non-program measures and practices) is usually straightforward, relying on the standard error and the level of confidence. For example, when estimating NTGRs in the residential sector, one typically interviews one decision maker in each household with the NTGR estimate based on multiple questions. In such a situation, one could report the mean, standard deviation, the standard error, and the relative precision of the NTGR based on the sample at the 90 percent levels of confidence.

However, in the nonresidential sector, things can get much more complicated since the NTGR at a given site can be based on such information as: 1) multiple interviews (end users as well as those upstream from the end user that might have been involved in the decision), 2) other more qualitative information such as standard purchasing policies that require a specific corporate rate of return or simple payback (*e.g.*, the rate of return for the investment in the energy efficiency measure can be calculated with and without the rebate to obtain another point estimate of the influence of the program), or 3) a vendor, involved in the installation of the efficient equipment, who might have been influenced by a utility training programs. In such a situation, a NTGR will be estimated that uses all of this information. However, one must recognize that the propagation of errors across multiple respondents and other sources of quantitative and qualitative data cannot adequately be reflected in the resulting standard error of NTGR estimate.

2.15 Pre-Testing Questionnaire

Of course, as with any survey, a pre-test should be conducted to reveal any problems such as ambiguous wording, faulty skip patterns, leading questions, faulty consistency checks, and incorrect sequencing of questions. Modifications should be made prior to the official launch of the survey.

2.16 The Incorporation of Additional Quantitative and Qualitative Data in Estimating the NTGR

When one chooses to complement a mixed methods (quantitative and qualitative) analysis of free-ridership with additional data, there are a few very basic concerns that one must keep in mind.

2.16.1 Data Collection

2.16.1.1 Use of Multiple Respondents

In situations with relatively large savings and more complex decision-making processes, one should use, to the extent possible, information from more than one person familiar with the decision to install the efficient equipment or adopt energy-conserving practices or procedures (Patten, 1987; Yin, 1994).

It is important to inquire about the decision-making process and the roles of those involved for those cases with relatively large savings and with multiple steps or decision-makers. If the customer has a multi-step process where there are go/no-go decisions made at each step, then this process should be considered when using the responses to estimate the firm's NTGR. There have been program evaluations whose estimates have been called into question when these factors were not considered, tested and found to be important. For example, a municipal program serving cities with financial issues where a department's facility engineer could say without bias that he definitely intended to install the same measure in the absence of the program and that he had requested that the city manager request the necessary funds from the City Council. However, one might discover that in the past the city manager, due to competing needs, only very rarely include the engineer's requests in his budget submitted to the City Council. Similarly, there are cases where a facility engineer continues to recommend efficiency improvements but never manages to get management approval until the efficiency program provides the information in a way that meets the financial decision-makers needs in terms of information or independent verification or leverage by obtaining "free" funds.

These interviews might include interviews with third parties who were involved in the decision to install the energy efficient equipment. Currently, there is no standard method for capturing the influence of third parties on a customer's decision to purchase energy efficient equipment. Third parties who may have influence in this context include market actors such as store clerks, manufacturers (through promotional literature, demonstrations, and in-person marketing by sales staff), equipment distributors, installers, developers, engineers, energy consultants, and architects. Yet, these influences can be important and possibly more so in the continually changing environment with greater attention on global warming and more overlapping interventions. When one

chooses to measure the effect of third parties, one should keep the following principles in mind: 1) the method chosen should be balanced. That is, the method should allow for the possibility that the third-party influence can increase or decrease the NTGR that is based on the customer's self report, 2) the rules for deciding which customers will be examined for potential third party influence should be balanced. That is, the pool of customers selected for such examination should not be biased towards ones for whom the evaluator believes the third-party influence will have the effect of influencing the NTGR in only one direction, 3) the plan for capturing third-party influence should be based on a well-conceived causal framework. The onus is on the evaluator to build a compelling case using a variety of quantitative and/or qualitative data for estimating a customer's NTGR

2.16.1.2 Other Site- and Market-Level Data

Information relevant to the purchase and installation decision can include:

1. Program paper files (correspondence between DSM program staff and the customer, evidence of economic feasibility studies conducted by the utility or the customer, correspondence among the customer staff, other competing capital investments planned by the customer)
2. Program electronic files (*e.g.*, program tracking system data, past program participation)
3. Interviews with other people at the site who are familiar with the program and the choice (*e.g.*, operations staff)
4. Open-ended questions on structured interviews with the key decision-maker and other staff who may have been involved with the decision.
5. Incremental costs of the equipment
6. Estimates of the equipment's market share
7. The diffusion (saturation) of the equipment in the market place

Where appropriate, for example, in the case of large-scale commercial and industrial sites, these data should be organized and analyzed in the form of a case study.

2.16.2 Establishing Rules for Data Integration

In cases where multiple interviews are conducted eliciting both quantitative and qualitative data and a variety of program documentation has been collected, one will need to integrate all of this information into an internally consistent and coherent story that supports a specific NTGR.

Before the analysis begins, one should establish, to the extent feasible, rules for the integration of the quantitative and qualitative data. These rules should be as specific as possible and be strictly adhered to throughout the analysis. Such rules might include instructions regarding when the NTGR based on the quantitative data should be overridden based on qualitative data, how much qualitative data is needed to override the NTGR based on quantitative data, how to handle contradictory information provided by more than one person at a given site, how to handle situations when there is no decision-maker interview, when there is no appropriate decision-maker interview, or when there is critical missing data on the questionnaire, and how to incorporate qualitative information

on deferred free-ridership.

One must recognize that it is difficult to anticipate all the situations that one may encounter during the analysis. As a result, one may refine existing rules or even develop new ones during the initial phase of the analysis. One must also recognize that it is difficult to develop algorithms that effectively integrate the quantitative and qualitative data. It is therefore necessary to use judgment in deciding how much weight to give to the quantitative versus qualitative data and how to integrate the two. The methodology and estimates, however, must contain methods to support the validity of the integration methods through preponderance of evidence or other rules/procedures as discussed above.

2.16.3 Analysis

A case study is one method of assessing both quantitative and qualitative data in estimating a NTGR. A case study is an organized presentation of all these data available about a particular customer site with respect to all relevant aspects of the decision to install the efficient equipment. When a case study approach is used, the first step is to pull together the data relevant to each case and write a discrete, holistic report on it (the case study). In preparing the case study, redundancies are sorted out, and information is organized topically. *This information should be contained in the final report.*

The next step is to conduct a content analysis of the qualitative data. This involves identifying coherent and important examples, themes, and patterns in the data. The analyst looks for quotations or observations that go together and that are relevant to the *customer's decision to install the efficient equipment*. Guba (1978) calls this process of figuring out what goes together "convergence," *i.e.*, the extent to which the data hold together or dovetail in a meaningful way. Of course, the focus here is on evidence related to the degree of program influence in installing the efficient equipment. Identifying and ruling out rival explanations for the installation of the efficient equipment is a critical part of the analysis (Scriven, 1976).

Sometimes, *all* the quantitative and qualitative data will clearly point in the same direction while, in others, the *preponderance* of the data will point in the same direction. Other cases will be more ambiguous. In all cases, in order to maximize reliability, it is essential that more than one person be involved in analyzing the data. Each person must analyze the data separately and then compare and discuss the results. Important insights can emerge from the different ways in which two analysts look at the same set of data. Ultimately, differences must be resolved and a case made for a particular NTGR.

Finally, it must be recognized that there is no single right way to conduct qualitative data analysis:

The analysis of qualitative data is a creative process. There are no formulas, as in statistics. It is a process demanding intellectual rigor and a great deal of hard, thoughtful work. Because different people manage their creativity, intellectual endeavors, and hard work in different ways,

there is no one right way to go about organizing, analyzing, and interpreting qualitative data. (p. 146)

Ultimately, if the data are systematically collected and presented in a well-organized manner, and if the arguments are clearly presented, any independent reviewer can understand and judge the data and the logic underlying any NTGR. Equally important, any independent reviewers will have all the essential data to enable them to replicate the results, and if necessary, to derive their own estimates.

2.17 Qualified Interviewers

For the basic SRA in the residential and small commercial sectors, the technologies discussed during the interview are relatively straightforward (e.g., refrigerators, CFLS, T-8 lamps, air conditioners). In such situations, using the trained interviewers working for companies that conduct telephone surveys is adequate. However, in more complicated situations such as industrial process and large commercial HVAC systems, the level of technical complexity is typically beyond the abilities of such interviewers. In such situations, engineers familiar with these more complicated technologies should be trained to collect the data by telephone or in person.

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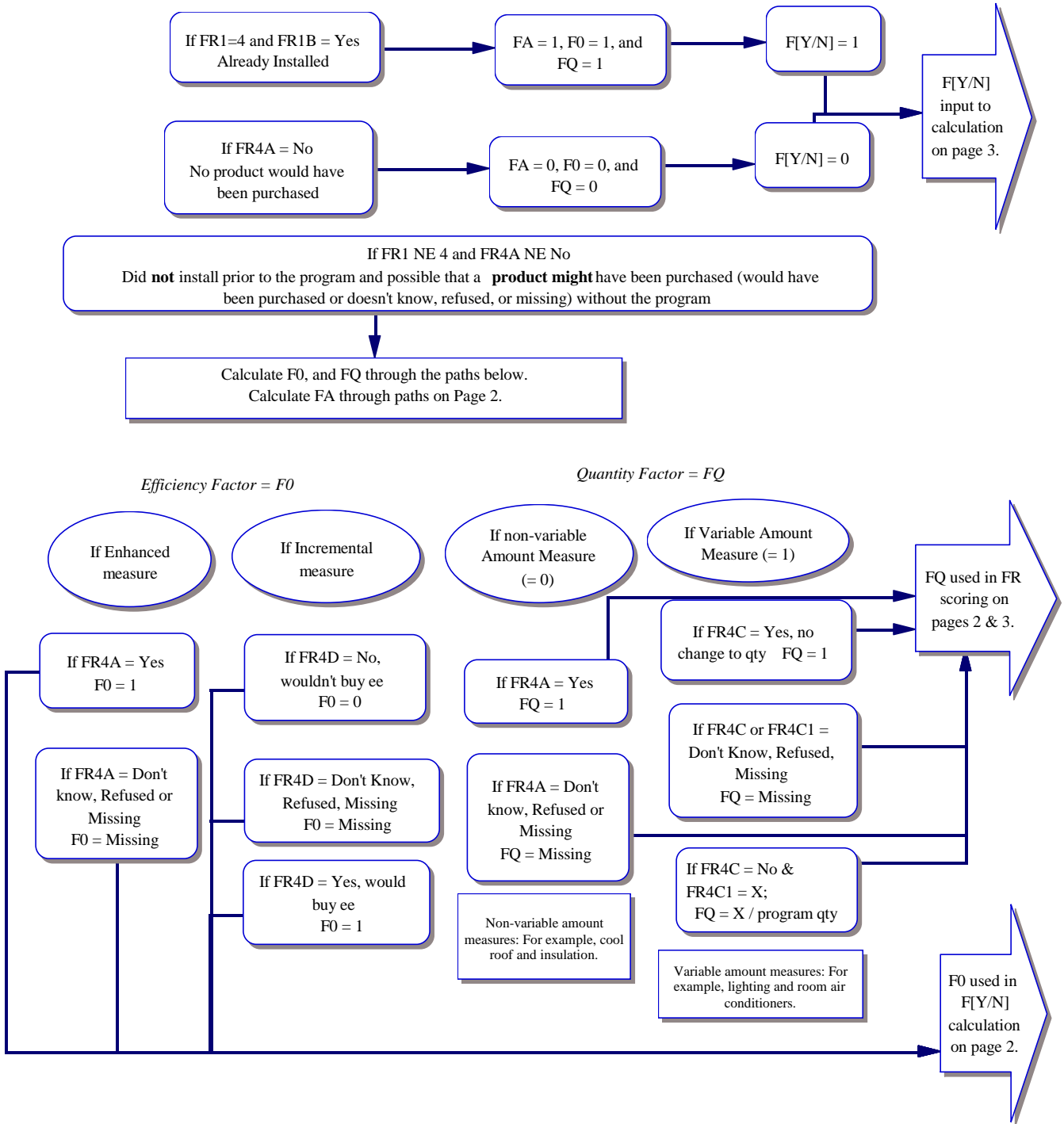
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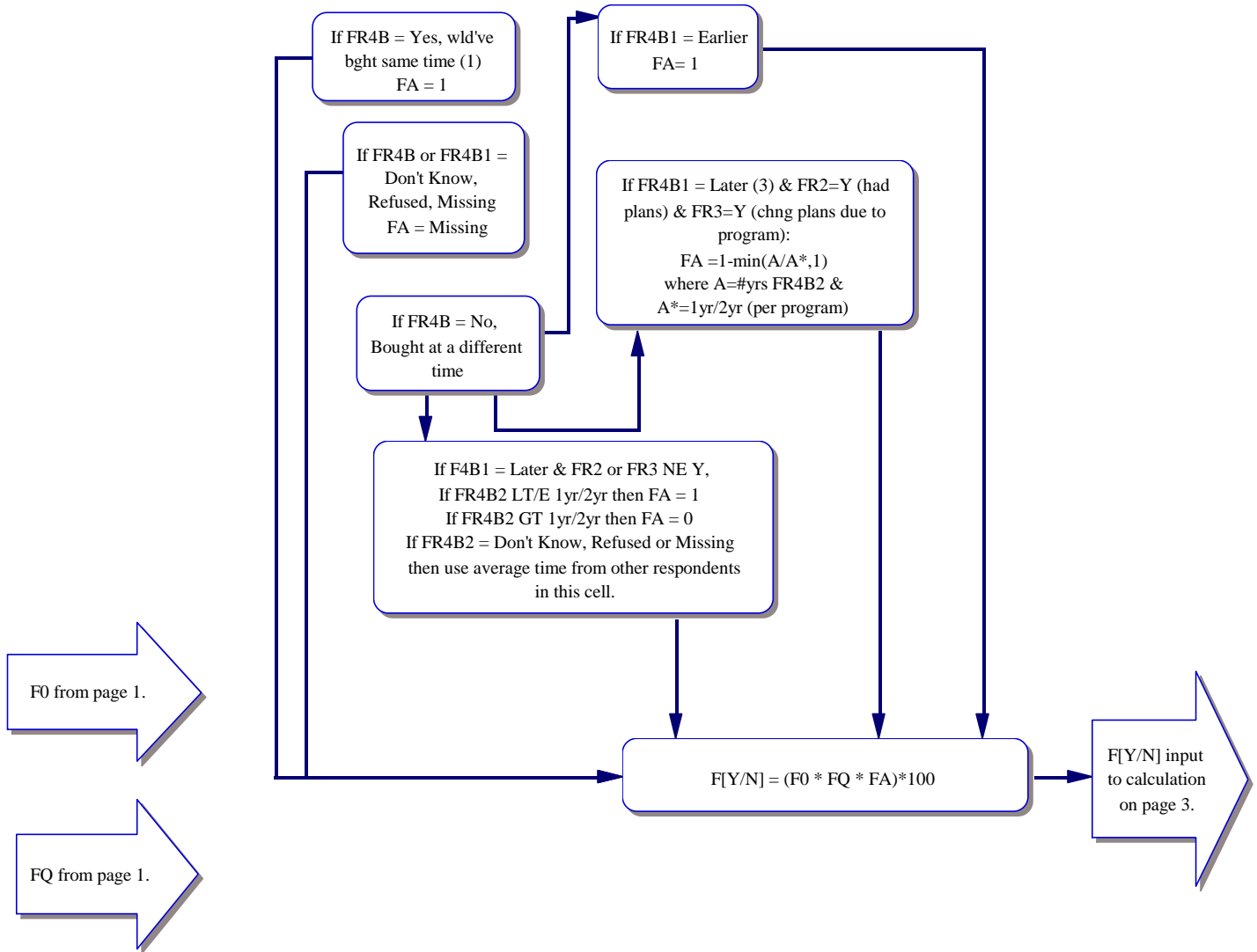
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Simple Res./Small Commercial Free-Ridership Algorithm, November 2009
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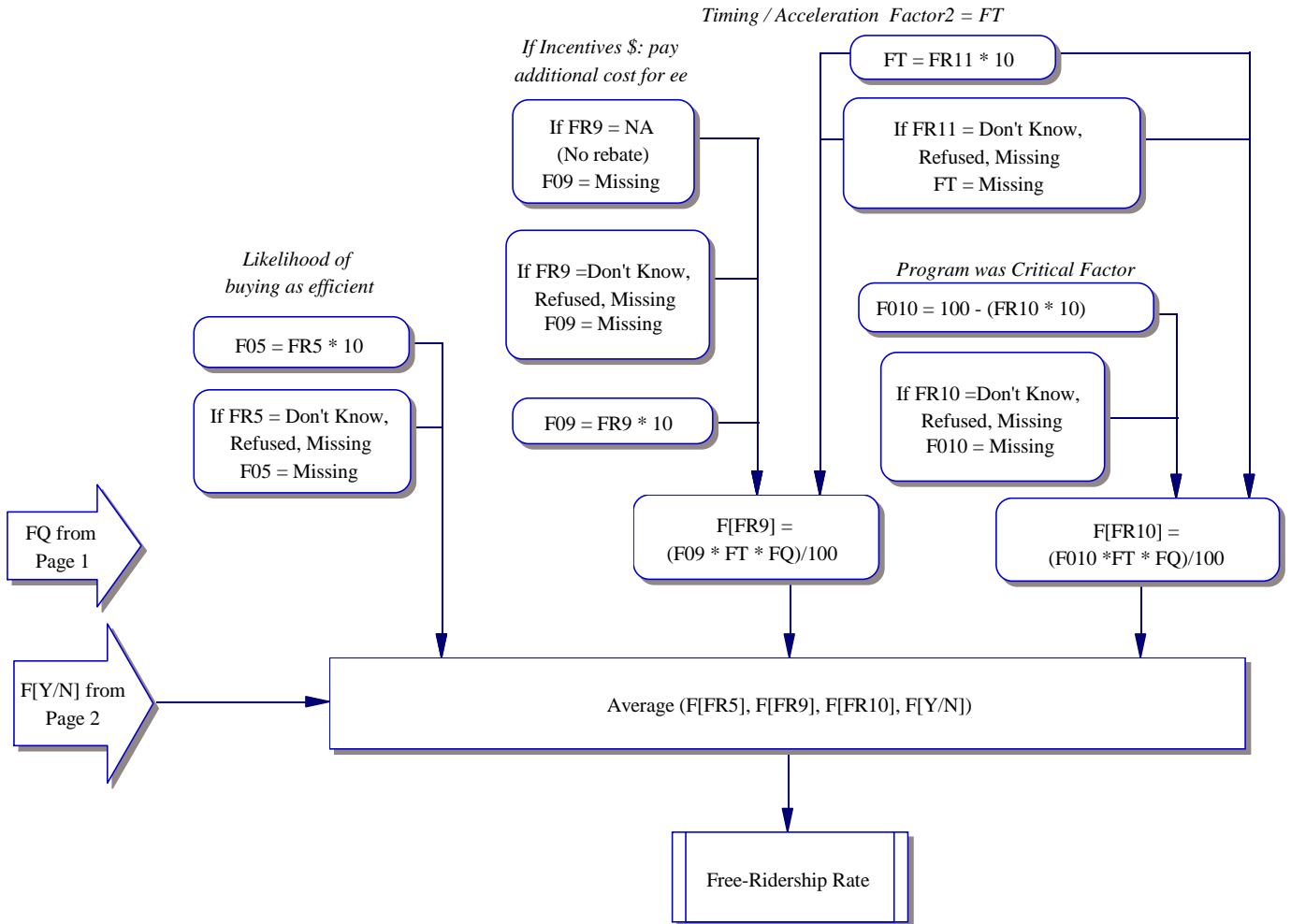


Simple Res./Small Commercial Free-Ridership Algorithm, November 2009
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Timing / Acceleration
Factor = FA



Simple Res./Small Commercial Free-Ridership Algorithm, November 2009
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NTG 90% Confidence Intervals

Measure Chapter	Utility	Measure	Weighting	Lower	Mean	Upper
Furnace (Chapter 5)	PGE2000		Therms	.15	.18	.21
Clothes Washer (Chapter 6)	SDGE3023		Therms	.29	.31	.34
	PGE2000		Therms	.29	.31	.33
	SCG3517		Therms	.25	.29	.34
Dishwasher (Chapter 7)	SDGE3024		Therms	.22	.24	.26
High Efficiency Gas Water Heaters (Chapter 8)	SDGE3024		Therms	.20	.22	.25
	PGE2000		Therms	.15	.17	.19
Low Flow Showerhead/ Aerator (Chapter 9)	SDGE3035	Showerhead	Therms	.64	.72	.80
		Aerator	Therms	.71	.75	.79
	SDGE3017	Showerhead	Therms	.48	.68	.88
		Aerator	Therms	.52	.59	.66
	SCG3517	Showerhead	Therms	.66	.70	.73
Insulation (Chapter 10)	PGE2000		Therms	.23	.26	.29
	SCG3517		Therms	.27	.30	.32
	SDGE3024		Therms	.23	.25	.28
Refrigerator Recycling (Chapter 11)	PGE2000		kWh	.46	.51	.56
	SCE2500		kWh	.49	.56	.63
	SDGE3028		kWh	.52	.58	.64
Room Air Conditioner (Chapter 12)	PGE2000		kW	.37	.41	.46
	SDGE3024		kW	.28	.31	.34
	SCE2501		kW	.34	.36	.39
Pool Pumps (Chapter 13)	SDGE3024	Single speed	kW	.28	.32	.35
		Multispeed	kW	.28	.34	.40
		Reset	kW	.70	.73	.76
Downstream Lighting (Chapter 14)	PGE2000	Interior	kWh	.73	.80	.88
		Exterior	kWh	.76	.80	.85
		Linear	kWh	.77	.81	.86
		CFL	kWh	.52	.59	.65
	SCE2502	Interior	kWh	.71	.77	.83
		Exterior	kWh	.70	.75	.80
		Linear	kWh	.71	.77	.83
		CFL	kWh	.72	.78	.83
	SDGE3017	Linear	kWh	.63	.72	.82
		CFL	kWh	.62	.75	.88
	SDGE3006	Exchange	kWh	.38	.44	.50
SCE2501	Exchange	kWh	.62	.66	.70	

Residential Retrofit NTG Stability Indicators

Number of Survey responses overview	SDGE3024 Dishwasher	PGE2000 Water Heater	SDGE3024 Water Heater	PGE2000 Clothes Washer	SDGE3024 Clothes Washer	SCG3517 Clothes Washer	PGE2000 Insulation	SDGE3024 Insulation	SCG3517 Insulation	SDGE3017 MF Showerhead	SDGE3017 MF Aerator	SDGE3024 SF Showerhead
Total # of Surveys (n)	303	392	492	568	323	116	505	530	781	49	49	271
Total with no FR Data	1	10	16	78	24	0	7	6	14	34	6	114
Total with FR Data	302	382	476	490	299	116	498	524	767	15	43	157
Total # inconsistent Responses	6	18	14	9	29	0	15	16	28	1	0	55

Number of Respondents with ___ FR measurements	SDGE3024 Dishwasher	PGE2000 Water Heater	SDGE3024 Water Heater	PGE2000 Clothes Washer	SDGE3024 Clothes Washer	SCG3517 Clothes Washer	PGE2000 Insulation	SDGE3024 Insulation	SCG3517 Insulation	SDGE3017 MF Showerhead	SDGE3017 MF Aerator	SDGE3024 SF Showerhead
No FR data	1	10	16	78	24	0	7	6	14	34	6	114
One	9	341	275	13	7	5	24	29	61			15
Two	14	1	8	12	9	3	7	16	26			27
Three	43	1	24	48	22	14	63	51	109	2	3	97
Four	232	32	162	412	247	94	395	419	559	12	40	

Note: respondents with no FR measurements were not used in the analysis. Total n does not include inconsistent responses.

Proportion of respondents with an extreme FR ratio	SDGE3024 Dishwasher	PGE2000 Water Heater	SDGE3024 Water Heater	PGE2000 Clothes Washer	SDGE3023 Clothes Washer	SCG3517 Clothes Washer	PGE2000 Insulation	SDGE3024 Insulation	SCG3517 Insulation	SDGE3017 MF Showerhead	SDGE3017 MF Aerator	SDGE3024 SF Showerhead
Proportion with 0 - 0.1 FR ratio	1.0%	4.5%	3.6%	3.9%	4.6%	6.0%	5.7%	4.7%	9.1%	28.6%	18.6%	31.7%
Proportion with 0.9 - 1 FR ratio	37.6%	61.6%	47.8%	29.9%	35.8%	32.8%	38.2%	41.8%	34.6%	0.0%	4.7%	4.3%

Note: Respondents with no FR measurements not included

Proportion of respondents where changes were made to the FR ratio due to inconsistent responses	SDGE3024 Dishwasher (n=303)	PGE2000 Water Heater (n=392)	SDGE3024 Water Heater (n=492)	PGE2000 Clothes Washer (n=568)	SDGE3023 Clothes Washer (n=323)	SCG3517 Clothes Washer (n=N/A)	PGE2000 Insulation (n=505)	SDGE3024 Insulation (n=530)	SCG3517 Insulation (n=781)	SDGE3017 MF Showerhead (n=49)	SDGE3017 MF Aerator (n=49)	SDGE3024 SF Showerhead (n=271)
Proportion	2.0%	4.6%	2.9%	1.6%	9.0%	N/A	3.0%	3.0%	3.6%	2.0%	0.0%	20.3%

Note: no consistency check data given on 2008 survey results. Total n represents entire sample population with inconsistent responses added back in and those with zero FR measurements.

Residential Retrofit NTG Stability Indicators

FR Ratio without those that had inconsistent responses corrected average %	SDGE3024 Dishwasher(n=297)	PGE2000 Water Heater(n=374)	SDGE3024 Water Heater(n=478)	PGE2000 Clothes Washer(n=559)	SDGE3023 Clothes Washer(n=294)	SCG3517 Clothes Washer(n=N/A)	PGE2000 Insulation(n=490)	SDGE3024 Insulation(n=514)	SCG3517 Insulation(n=753)	SDGE3017 MF Showerhead(n=48)	SDGE3017 MF Aerator(n=49)	SDGE3024 SF Showerhead(n=216)
	75.6%	83.8%	77.2%	69.0%	70.4%	N/A	71.9%	73.5%	67.6%	32.1%	40.9%	32.6%

Note: Total n represents sample with inconsistent responses removed. Those with no FR measurement responses are included in the n, but not the final FR ratio

Number of respondents answering they already had installed measure before they learned of the program. Final average FR for these:	SDGE3024 Dishwasher(n=6)	PGE2000 Water Heater(n=23)	SDGE3024 Water Heater(n=13)	PGE2000 Clothes Washer(n=34)	SDGE3023 Clothes Washer(n=1)	SCG3517 Clothes Washer(n=6)	PGE2000 Insulation(n=45)	SDGE3024 Insulation(n=34)	SCG3517 Insulation(n=45)	SDGE3017 MF Showerhead(n=1)	SDGE3017 MF Aerator(n=15)	SDGE3024 SF Showerhead(n=4)
	78.9%	83.9%	88.9%	71.7%	50.0%	82.8%	82.6%	87.5%	83.9%	40.0%	57.1%	58.3%

Note: The n represents all respondents that answered this question in that particular way, regardless of the measurement response. However the FR ratio does not include respondents with no FR measurements

Number of respondents answering they never would have purchased equipment type without the program (efficient or inefficient). Final average FR for these:	SDGE3024 Dishwasher(n=8)	PGE2000 Water Heater(n=11)	SDGE3024 Water Heater(n=13)	PGE2000 Clothes Washer(n=27)	SDGE3023 Clothes Washer(n=14)	SCG3517 Clothes Washer(n=10)	PGE2000 Insulation(n=47)	SDGE3024 Insulation(n=32)	SCG3517 Insulation(n=96)	SDGE3017 MF Showerhead(n=5)	SDGE3017 MF Aerator(n=8)	SDGE3024 SF Showerhead(n=68)
	15.8%	12.8%	14.5%	10.5%	11.5%	6.3%	12.7%	10.9%	8.8%	3.5%	1.9%	11.6%

Note: The n represents all respondents that answered this question in that particular way, regardless of the measurement response. However the FR ratio does not include respondents with no FR measurements

	SDGE3024 Dishwasher	PGE2000 Water Heater	SDGE3024 Water Heater	PGE2000 Clothes Washer	SDGE3023 Clothes Washer	SCG3517 Clothes Washer	PGE2000 Insulation	SDGE3024 Insulation	SCG3517 Insulation	SDGE3017 MF Showerhead	SDGE3017 MF Aerator	SDGE3024 SF Showerhead
Final Weighted Free-Rider in Final Report	76%	83%	77%	69%	69%	74%	71%	73%	67%	32%	42%	28%
IOU Reported Free-Rider (1-NTG) per 2008 Filing	20%	20%	11%	20%	20%	20%	20%	11%	11%	11%	11%	11%

Residential Retrofit NTG Stability Indicators

Number of Survey responses overview	SDGE3024 SF Aerator	SCG3517 SF Aerator	SDGE3024 Multi-speed Pool Pump	SDGE3024 Single-speed Pool Pump	SDGE3024 Pool pump reset	SCE2501 Room AC	SDGE3024 Room AC
Total # of Surveys (n)	271	309	108	207	163	628	374
Total with no FR Data	127	4	3	7	7	49	13
Total with FR Data	144	305	105	200	156	579	361
Total # inconsistent Responses	58	82	5	11	0	23	19

Number of Respondents with ___ FR measurements	SDGE3024 SF Aerator	SCG3517 SF Aerator	SDGE3024 Multi-speed Pool Pump	SDGE3024 Single-speed Pool Pump	SDGE3024 Pool pump reset	SCE2501 Room AC	SDGE3024 Room AC
No FR data	127	4	3	7	7	49	13
One	13	16	61	64	22	213	193
Two	23	70	2	9	5	18	7
Three	93	189	6	36	52	85	10
Four			33	84	77	248	141

Free ridership is an average of four components. This table details the number of components that feed into the final average. If a respondent was unable to answer questions feeding into one of the specific components, that component was not included in the final average.

Note: respondents with no FR measurements were not used in the analysis. Total n does not include inconsistent responses.

Proportion of respondents with an extreme FR ratio	SDGE3024 SF Aerator	SCG3517 SF Aerator	SDGE3024 Multi-speed Pool Pump	SDGE3024 Single-speed Pool Pump	SDGE3024 Pool pump reset	SCE2501 Room AC	SDGE3024 Room AC
Proportion with 0 - 0.1 FR ratio	47.3%	35.3%	13.7%	6.7%	44.9%	10.3%	7.4%
Proportion with 0.9 - 1 FR ratio	3.9%	3.6%	39.2%	35.2%	5.8%	29.8%	33.9%

Free ridership ratios range from 0.0 to 1.0. This table details the percentage of respondents that had free ridership rates at the extreme ends of the spectrum. These extremes are defined as the 0.9-1.0 range and the 0.0-0.1 range.

Note: Respondents with no FR measurements not included

Proportion of respondents where changes were made to the FR ratio due to inconsistent responses	SDGE3024 SF Aerator(n=271)	SCG3517 SF Aerator(n=309)	SDGE3024 Multi-speed Pool Pump(n=108)	SDGE3024 Single-speed Pool Pump(n=207)	SDGE3024 Pool pump reset(n=163)	SCE2501 Room AC(n=628)	SDGE3024 Room AC(n=374)
Proportion	20.3%	29.8%	4.6%	5.3%	0.0%	3.7%	5.1%

Inconsistent responses were flagged by the CATI programming and respondents were asked to provide additional explanation regarding the inconsistency. All flagged as inconsistent were reviewed by an analyst. When possible, responses were recoded based on answers to open-ended clarifying questions. This table details the number of respondents that had inconsistent responses recoded.

Note: no consistency check data given on 2008 survey results. Total n represents entire sample population with inconsistent responses added back in and those with zero FR measurements.

Residential Retrofit NTG Stability Indicators

FR Ratio without those that had inconsistent responses corrected average %	SDGE3024 SF Aerator(n=213)	SCG3517 SF Aerator(n=217)	SDGE3024 Multi-speed Pool Pump(n=103)	SDGE3024 Single-speed Pool Pump(n=196)	SDGE3024 Pool pump reset(n=163)	SCE2501 Room AC(n=605)	SDGE3024 Room AC(n=355)	
	29.1%	29.9%	66.4%	68.0%	N/A	63.6%	69.2%	This table details the free ridership ratio excluding those respondents that had inconsistent responses recoded.
<p>Note: Total n represents sample with inconsistent responses removed. Those with no FR measurement responses are included in the n, but not the final FR ratio</p>								
Number of respondents answering they already had installed measure before they learned of the program. Final average FR for these:	SDGE3024 SF Aerator(n=2)	SCG3517 SF Aerator(n=4)	SDGE3024 Multi-speed Pool Pump(n=2)	SDGE3024 Single-speed Pool Pump(n=7)	SDGE3024 Pool pump reset(n=3)	SCE2501 Room AC(n=13)	SDGE3024 Room AC(n=10)	
	83.3%	59.4%	86.3%	74.9%	81.4%	85.3%	77.4%	This table details the free ridership ratio of respondents that stated the measure was already installed when they first heard about the program. This answer is only included in one of the components of the final free ridership ratio. Free ridership should be high among these respondents.
<p>Note: The n represents all respondents that answered this question in that particular way, regardless of the measurement response. However the FR ratio does not include respondents with no FR measurements</p>								
Number of respondents answering they never would have purchased equipment type without the program (efficient or inefficient). Final average FR for these:	SDGE3024 SF Aerator(n=72)	SCG3517 SF Aerator(n=29)	SDGE3024 Multi-speed Pool Pump(n=14)	SDGE3024 Single-speed Pool Pump(n=15)	SDGE3024 Pool pump reset(n=79)	SCE2501 Room AC(n=45)	SDGE3024 Room AC(n=15)	
	5.5%	9.6%	6.8%	11.0%	5.4%	7.1%	6.7%	This table details the free ridership ratio of those respondents that stated they never would have purchased any equipment without the program. Free ridership should be low among these respondents.
<p>Note: The n represents all respondents that answered this question in that particular way, regardless of the measurement response. However the FR ratio does not include respondents with no FR measurements</p>								
	SDGE3024 SF Aerator	SCG3517 SF Aerator	SDGE3024 Multi-speed Pool Pump	SDGE3024 Single-speed Pool Pump	SDGE3024 Pool pump reset	SCE2501 Room AC	SDGE3024 Room AC	
Final Weighted Free-Rider in Final Report	25%	31%	68%	68%	27%	68%	69%	This table details the free ridership ratio of those respondents as reported in the Res. Retro Report and as claimed by the IOU's in the Q4 2008 filing.
IOU Reported Free-Rider (1-NTG) per 2008 Filing	11%	20%	11%	20%	11%	20%	20%	

Response to Overarching Comments Regarding the Use of Self-Reported Net-to-Gross (NTG) and the Residential and Small Commercial Self-Report Approach NTG Method

January 28, 2010

Authorship: Members from Res./Small Commercial Joint Simple NTG (Self-Report) Committee, the Large Nonresidential NTG Committee, and the evaluation contractors

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1. Document Purpose

There are a significant number of comments that are repeated or overlapping that are broad enough to be considered overarching comments regarding the use of the self-report approach (SRA) for net-to-gross ratio (NTGR) estimation. This document is the response developed to efficiently respond to these overarching comments on the consistent SRA for NTGR estimation for the residential and small commercial programs. Identification of topics/issues brought up in comments are referenced in this document as end-notes. This allows evaluation contractors to reference particular areas in this document in their specific responses to particular comments through the end-notes.

2. Summary History of the Residential and Small Commercial & Industrial Self-Report Approach NTGR Method

One objective of the California energy efficiency program evaluations is to identify the portion of savings directly attributable to the program effort and properly account for the effects that would have occurred in the absence of the program. California reporting protocols for the 2006-2008 program require the discounting of savings by a “free-ridership factor” in the estimation of net program savings by applying a net-to-gross ratio (NTGR). The 2006 evaluation protocols allow for the use of a participant self-report approach (SRA) to estimate the NTGR for the basic level of rigor, and additional participant-specific documentation for the standard level of rigor.

The Energy Division convened a committee of evaluators to develop a standard framework for the systematic and consistent measurement of net-to-gross ratios for residential and small commercial programs using the SRA approach. The approach was designed to fully comply with the evaluator protocols. With the assistance of the Master Evaluation Contractor Team (MECT), the Energy Division developed the *Guidelines for Estimating Net-To-Gross Ratios Using the Self-Report Approaches* in October 2007, providing more detailed guidance than was available in the California Evaluator Protocols.

Participants who were involved in the decision-making process at each respondent household (or small business) were interviewed to measure each program’s influence on that person's decision-making. The survey obtained highly structured responses concerning the probability that the household would have installed the same measure(s) at the same time in the absence of the program. The survey also included open- and closed-ended questions that focused on the participant's motivation for installing the efficiency measure. These questions covered all the requirements provided in the *Guidelines*, such as multiple questions, efficiency level, likelihood of adoption, timing and quantity, and consistency checks.^A

The NTGR algorithm derived four separate measurements of free-ridership (FR) from different inquiry routes. These four measurements were averaged to derive the final free-ridership estimate at the measure level.

3. Overview of Alternative Approaches for Measuring Energy Efficiency Net or Intervention Induced Impacts

3.1. *Circumstances When Measuring Net with Other than a Self-Report Approach for Energy Efficiency Net Impacts would Produce Inaccuracy or Inability to Obtain an Estimate*

There are a number of approaches to estimating NTG ratios (e.g., self-report, billing analysis, and discrete choice). There are many circumstances, however, where using an approach other than the self-report approach would increase the likelihood of being unable to obtain an estimate or being more likely to obtain a biased estimate. Some of these are more general in nature and others are specific to the energy savings measure, the program design, or the market where the intervention is occurring. The circumstances where a self-report approach is preferable include the following:^B

- The customers targeted by the program are each very unique, making it unlikely that one could find a group of non-participants that could be matched with participants on critical variables (e.g., insulation).
- A comparison of customers in regions not served by California IOU programs is not possible because there are no non-IOU regions with a sufficiently similar combination of climate, economic conditions, and energy prices.
- Small signal to noise ratio (low statistical power) in a participant/non-participant billing analysis i.e., the expected difference in monthly energy use between participants and non-participants is too small to reliably detect through a billing analysis (e.g., dishwashers, pool pumps).
- Protocol-compliant statistical techniques (e.g., a participant/non-participant discrete choice analysis or a participant/non-participant billing analysis) can prove quite challenging to develop reliable, defensible and stable results.
- The dramatic increase in the number of energy efficiency interventions in California have made it very difficult to model the effects of a single intervention using a variety of statistical techniques that relied on the comparison of participant and non-participant data.
- The expected magnitude of the savings for a given program might not warrant the investment in a perhaps more expensive evaluation design that could involve a billing analysis or a discrete choice analysis of both participants and non-participants (assuming such a group is even available) (e.g., dishwashers, showerheads/aerators).

4. Long History across Many Fields of Science for Determining Causal Connection and Use of a Self-Report Approach^C

4.1. *The Positivist (or Empiricist) Perspective versus the Realist Perspective*

A core feature of the use of any method to determine the impact of a program is the assumption that evaluation efforts have established a causal connection between the program and customer behavior. The establishment of causality is at the core of arguments for and against research methods aimed at establishing program impacts. When we couch our arguments in terms of causality, we benefit from being aware of the rich history of philosophical and methodological thinking and writing about causality that has taken place over the last 30 or 40 years. This awareness allows us to appreciate the issues and their complexity. It is important to establish that we in the energy efficiency field are not the first to address these issues and we can benefit from those who went before us. We therefore spend a few paragraphs of this paper reviewing this literature.

Historically, the social sciences have been heavily influenced by the *positivist* (or empiricist) philosophical approach to causality (Mohr 1995). Positivism asserts that causal relationships are not directly observable and therefore, causality is a matter only of observed regularities in associations of events (Hume 1737; Salmon 1998). According to this view, systematic, quantitative comparisons of events that produce correlations between variables are as close as researchers can get to causal explanation. This approach has sometimes been referred to as *variance theory* by Mohr (1995) and manipulation theory by Yang (2009) and emphasizes variables and the correlations among them. Variance theory is closely associated with statistical testing of hypotheses and, in particular, the regression model.

The randomized controlled trial (RCT), sometimes called the gold standard of the empiricist approach, consists of random assignment of subjects to two or more groups, only one of which receives the treatment. One version of the RCT, the posttest-only control group design, is illustrated below in Figure 1 (Campbell and Stanley 1966). In Figure 1, R represents random assignment, X represents the treatment, O₁ represents the posttest for some variable Y for the treatment group and O₂ represents the posttest for the same variable for the control group.

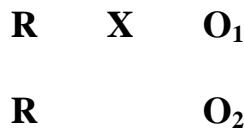


Figure 1. Posttest-Only Control Group Design

The comparison group represents what would have happened in the absence of the treatment. Any differences between the treatment and control group based on the posttests can be attributed to the treatment since all the other possible explanations have been effectively controlled for via randomization. That is, all the threats to internal validity have been addressed.¹ In other words,

¹ The traditional threats to internal validity identified by Campbell and Stanley (1966) are: 1) history, 2) maturation, 3) testing, 4) instrumentation, 5) regression, 6) selection, 7) mortality, and 8) interaction of selection and maturation, etc. However, as some have pointed

did in fact the experimental treatments make a difference in this specific experimental instance, *i.e.*, if not *X* then not *Y*?

Because random assignment is not always possible, researchers have found it necessary to develop a number of other less powerful designs that are referred to as quasi-experimental. In such designs, researchers work with in-tact groups in natural social settings. However, such designs fail to control for all of the threats to internal validity (Campbell & Stanley 1966; Shadish, Cook, & Campbell 2002), particularly self-selection, making *definite* proof of causality impossible.

The *realist* view of causal explanation represents a recent philosophical shift in the social sciences (Sayer 1984; Salmon 1998; Maxwell 2004). Realism defines causality as consisting not of regularities but of real (and in principle observable) causal mechanisms and processes, which may or may not produce regularities. It deals with events and the processes that connect them and analyzes relationships between events using data that retain relevant chronological and contextual connections. This perspective ascribes value to contextual factors and mental processes downplayed by the positivist approach to research. The realist view asserts that sometimes the reasons that people give for their behavior are indeed the causes of their behavior.

Mohr (1995) examines the central argument of the realists that stated reasons can be the causes of intentional behavior, often the focus in program evaluation. When people behave, they do it for reasons that they can “observe” and when interrogated by a researcher, they can report the most important reasons². Of course, as he points out, at any given time we have good reasons for doing a lot of different things, but we do not always act on all of these reasons. We do only one thing, perhaps for only one of the many reasons. The other reasons might not have caused anything. Here, he introduces the concept of the “operative reason” which he defines as: “. . . the reason that actually operates to produce the behavior performed – and to stipulate that the operative reason is different from all the others in that it was the strongest” (265). That is, people undertake a particular action in order to achieve a certain goal because a particular reason was the strongest among all the competing reasons for undertaking that action.

This distinction between the empiricist and realist schools applies not only to the social sciences but also to the natural sciences, separating more experimental fields like physics and chemistry from those that deal with relatively unique situations, including evolutionary biology and geology. Gould (1989) observed:

Historical science is not worse, more restricted, or less capable of achieving firm conclusions because experiment, prediction, and subsumption under invariant laws of nature do not represent its usual working methods. The sciences of history use a different mode of explanation, rooted in the comparative and observational richness of our data. (279)

out, even these designs are not perfect due to differential attrition (experimental mortality) from the experimental groups and the constraints (Shadish, Cook, and Campbell 2002) on external validity (Bickman & Reich 2009).

² Mohr (1995) provides a more detailed analysis of *physical* causality and *factual* causality, with the former associated with the realist position. Unfortunately, space does not permit a full exegesis of this distinction.

We might add to this list of sciences that do not rely on experimental methods evolutionary biology, geology, and paleontology. This realist view of causation is compatible with and supports all the essential characteristics of qualitative research:

- If causal processes can be directly observed, then this supports the emphasis placed by many qualitative researchers on directly observing and interpreting social and psychological processes. It is possible to observe causal process in single cases without requiring comparison of situations in which the presumed cause is present or absent.
- Seeing context as intrinsically involved in causal processes supports the insistence of qualitative researchers on the explanatory importance of context.
- That mental events and processes are real phenomena that can be causes of behavior supports the fundamental role that qualitative researchers assign to meaning and intention in explaining social phenomena and the essentially interpretative nature of our understanding of these.
- In claiming that causal explanation does not inherently depend on pre-established comparison, it legitimizes qualitative researchers' use of flexible and inductive designs and methods.

This distinction between positivist/empiricist and realist approach is very similar to a distinction developed by Mohr (1982; 1995, 1996) between *variance theory* and *process theory*. Variance theory deals with variables and correlation, quantitative measurement, and experimental or correlational designs. Process theory deals with events and the processes that connect them; it is based on an analysis of the causal processes by which some events influence others. Maxwell (2004) also notes that:

Process theory is not merely 'descriptive,' as opposed to 'explanatory' variance theory; it is a different approach to explanation. Experimental and survey methods typically involve a 'black box' approach to the problem of causality; lacking direct information about social and cognitive processes, they must attempt to correlate differences in output. Qualitative methods, on the other hand, can often directly investigate these causal processes. (p. 249)

However, as Maxwell (2004) points out, both the variance theory and the process theory face potential validity threats and each has its particular strengths.

The realist central argument is that qualitative research methods are as valid in determining causal explanation as purely quantitative ones, if they are well-designed to avoid threats to the validity of explanation. There are various research strategies that can be applied to qualitative research to best address these potential threats. The strategies are particularly productive when used in concert with a detailed theory of explanation in a given case, which can inform research design and interpretation of evidence as well as aid in developing alternative theories to be ruled out. Strategies typically associated with variance theory, strategies of intervention and comparison, observation and analysis, strategies to develop and assess all alternative

explanations, and triangulation can all provide important checks on bias and uncertainty in qualitative research. Four such strategies are described below.

- Intervention and comparison, commonly associated with quantitative research methods, are certainly compatible with qualitative research. Mixed-method research makes particular use of intervention to provide a detailed account of the process by which a particular statistical regularity occurs and to confirm statistical conclusions. Comparison without a formal control group but across sites or cases is also very helpful in identifying causal influences by providing evidence of altered or absent presumed influences. Comparisons can also be made between those in the treatment group and typical behavior (i.e., standard practice) within the same industry.
- Strategies can also be applied to the observation and analysis of causation that can help to address threats to validity. These strategies are unique to qualitative research, because they rely on observing processes rather than just end results. Such observations can also provide increased opportunities for developing and eliminating alternate hypotheses. Such “rich data” (also known as “thick description”) give a more complete picture of context and process and therefore help to “counter the twin dangers of respondent duplicity and observer bias” by increasing the amount and varying the type of information necessary to confirm or deny a theory.
- Strategies for developing and assessing rival hypotheses can also guard against such threats. The *modus operandi* approach (Scriven, 1995) to alternative explanations is the most simple, relying on the researcher to identify other hypotheses and search for evidence of them in the data. This method is clearly vulnerable to researcher bias, as it may be difficult for researchers to identify other competitive theories and to detail them sufficiently to be able to test them. A similar strategy is that of identifying discrepant evidence and negative cases, which challenge the prevalent theory, explaining it away or adapting the hypothesis to incorporate the conflicting evidence.
- Triangulation, using a variety of research methods and data sources, is a strategy adopted before the data are collected and reduces the risk of systematic biases. However, there is also a risk that triangulation can make methodological or research bias harder to detect, by employing methods or data sources that are vulnerable to the same biases. Using the feedback of research participants to check conclusions and methods can aid in identifying biases and alternative explanations, but subjects’ inputs are subject to biases and influences of their own, not least of which is the need to reach consensus with the researcher.³ Ultimately, Maxwell (2004) argues, “. . . validity threats are ruled out by evidence, not methods; methods need to be selected for their potential for producing evidence that will adequately assess these threats” (259).

In summary, qualitative and quantitative research methods each have their own threats to internal validity, as well as recourse to research design and implementation strategies to address these

³ See discussion below of socially desirable responses and various strategies that have been developed to minimize this bias.

threats. Common to both methods is the danger of oversimplification of causal processes. Out of context, simple statements of linear relationships may be more distorting than illuminating. Qualitative analysis has an important advantage over quantitative in this respect: by providing insight into the composition of those relationships, it can aid in the strategic design of future research and help to advance practical action in the field studied.

4.2. The Program Evaluation Framework Regarding Alternative Methods for “Net”

The development of the realist position paralleled the recognition on the part of many evaluators that evaluation designs typically associated with the positivist approach were not always possible (Weiss 1972; Weiss & Rein 1972). As a result, many evaluators began to explore alternatives that would allow them to generate causal conclusions (Guba & Lincoln 1981; Cronbach 1982). This approach, consistent with the realist view, argues that qualitative research methods are as valid in determining causal explanation as purely quantitative ones, if they are well-designed to avoid threats to the validity of explanation.

The hallmark of scientific inquiry is the ability to eliminate alternative explanations and contradictory evidence. Research, whether quantitative or qualitative, must be meticulously designed to identify, detail, and test rival hypotheses. The *modus operandi*, introduced earlier, which, Mohr (1996) argued, shows a “distinct basis of efficacy” with respect to causation. Imagine that an outcome has occurred and the task of the evaluator is to demonstrate that the program, A, has caused the observed outcome, B. There are several other possible causes of B, such as C, D, and E. Each of these has a “signature” that has been defined by Mohr (1994) as: either or both (a) a mechanism or a known causal chain of events by which A, C, D, and E would lead to B, and (b) the occurrence of other events in addition to A that are logically associated with or attributable to an active B, or C, or D, or E. The task of the analyst is to show that the signature of A has indeed been actualized, whereas the signature of each of the other possible or plausible causes has not. This basis of determining causality is relied upon heavily in many areas, such as detective work, cause-of death determination, medical diagnosis, and troubleshooting in connection with machinery, as in auto repairs (see *Car Talk*, National Public Radio). Chen (1990) and Rogers (2000) argues that sound program theories and logic models can provide valuable assistance in identifying the plausible set of rival hypotheses.

Most recently, Scriven (2009) has perhaps been one of the most outspoken champions of a process theory approach to causation. Scriven argues that the foundation of what constitutes cause in both science and law is based on the notion that causation is directly and reliably observable in everyday life. He further observes that:

. . . good scientists have been entranced by the paragon of experimental designs, the randomly controlled trial or RCT, and illicitly generalized this into the required standard for all good causal investigation. It is suggested here that this view is completely refuted by a careful look at the way astronomy, epidemiology, engineering, geology, field biology, and many other sciences establish a causal conclusions to the highest standards of scientific (and legal) credibility. (151)

He even quotes Cook and Campbell to good effect: “. . . we do not find it useful to assert that causes are ‘unreal’ and are only inferences drawn by humans from observations that do not themselves directly demonstrate causation” (140).

Other evaluators have developed other approaches to demonstrating causality using non-experimental methods. For example, Yin (1994) provides guidelines for assessing causal relationships using case studies. Tashakkori and Teddlie (1998) also argue that their “. . . conceptualization of internal validity is not limited to experimental studies and causal relationships (p. 67).” Finally, consider Weiss (1997, 2000) who suggests that a theory-driven evaluation can substitute for classical experimental study using random assignment. She suggests that if predicted steps between an activity and an outcome can be confirmed in implementation, this matching of the theory to observed outcomes will lend a strong argument for causality: “If the evaluation can show a series of micro-steps that lead from inputs to outcomes, then causal attribution for all practical purposes seems to be within reach” (Weiss 1997, 43).

Some, such as Tashakkori and Teddlie (1998), recommend a mixed methodology in which quantitative and qualitative approaches are combined to improve internal validity. Or, consider Patton who concludes that: “The field has come to recognize that, where possible, using multiple methods – both quantitative and qualitative – can be valuable since each has its strengths and one approach can often overcome weaknesses of the other (p. 267).”

Applying these ideas to the California energy efficiency evaluation context, the 2005 Protocols provide that the use of both experimental/quasi-experimental and non-experimental methods are available to evaluators at the enhanced level of rigor in the 2005 Protocols.

4.3. *The Energy Efficiency Program Evaluation Framework Regarding Alternative Methods for “Net”*

As mentioned earlier, evaluators of energy efficiency programs also recognized, like evaluators in other fields, that there are situations in which the standard quantitative approaches involving comparison groups are not always possible. For example, in the industrial sector, three barriers are immediately apparent. First, there is an expected very small signal to noise ratio (low statistical power) in a participant/non-participant billing analysis i.e., the expected difference in monthly energy use between participants and non-participants was too small to detect reliably compared to other sources of variation in kWh that vary greatly across individual industrial sites. In addition, large industrial customers targeted by the program have been contaminated by participation in energy efficiency programs in prior years making it very difficult to find true non-participants. Finally, even if the first two problems were absent, the large industrial customers targeted by the program are each unique making it unlikely that one could find a group of non-participants that could be matched with participants on critical variables.

Also, consider new construction programs which also eventually confronted the problem that many of the large residential and nonresidential developers, architects and engineering firms had also been contaminated by participation in energy efficiency programs in prior years making it very difficult to find true non-participants. Over the years, a wide variety of methods such as discrete choice, difference-of-differences, and econometric modeling, had been used to estimate

the net energy and demand impacts of these programs. However, these approaches have become, over time, increasingly unreliable and have produced implausible results. Thus, Chappel et al. (2005) concluded that, based on an assessment of these methodologies and a review of the needs of the 2004-05 Building Efficiency Assessment (BEA) study, the self-report approach is the most appropriate one for evaluating this complex and diverse program and market.

Again, finding a true non-participant who has not been contaminated by exposure to some energy efficiency treatment has become very difficult making it very difficult to model the effects of a single intervention using a variety of statistical techniques that relied on the comparison of participant and non-participant data.

Of course, there are also other budgetary or timing constraints that might prohibit the use of the quantitative approaches. The expected magnitude of the savings for a given program might not warrant the investment in a perhaps more expensive evaluation design that could involve a billing analysis or a discrete choice analysis of both participants and non-participants (assuming such group is even available). Or, key stakeholders might not want to wait for a billing analysis, which typically requires up to 12 months of post-implementation consumption data to be completed. And with a small signal to noise ratio, the sample sizes necessary for the required statistical power can be prohibitively expensive.

In 1993, the recognition that methods involving comparison groups were not always feasible was first formalized in the energy efficiency field in California in the *Procedures for the Verification of Costs, Benefits, and Shareholder Earnings from Demand-Side Management (DSM) Programs* (1993 Protocols). Based on this recognition, the SRA (hereafter referred to as the California SRA (CA-SRA)) was allowed as one way to estimate the NTGR⁴ (a measure of the strength of the causal relationship between the program and the decision to install energy efficient equipment). From 1994 through 1998, the IOUs were responsible for conducting process and impact evaluations, guided by the 1993 Protocols⁵, of their energy efficiency programs. During this time period, all IOUs used the CA-SRA along with other techniques as approved by the California Public Utility Commission (CPUC).⁶ It is important to note that, although not required by the 1993 Protocols, the IOUs often employed triangulation (the use of two or more techniques to increase accuracy) in estimating net impacts. They did this because they, as well as the CPUC, understood that there is error associated with any single method, that the results would be used in integrated resource planning (IRP), and that the results would be used in a very direct way to determine their earnings on their energy efficiency investments.

Beginning in 2006, the Energy Division of the California Public Utilities Commission assumed responsibility for conducting all impact evaluations. In 2005, the *California Energy Efficiency*

⁴ The NTGR typically varies from 0 to 1 and represents the proportion of the gross savings that are attributable to the program.

⁵ Appendix J (*Quality Assurance Guidelines For Statistical, Engineering, and Self-Report Methods for Estimating DSM Program Impacts*) to the 1993 Protocols provided a listing and discussion of the essential issues that should be considered by evaluators using self-report methods, together with some recommendations on reporting the strategies used to address each issue.

⁶ Two additional methods, both of which involved the use of a comparison (not control) group, were discrete-choice analysis and billing analysis.

Evaluation Protocols: Technical, Methodological and Reporting Requirements for Evaluation Professionals (2005 Protocols) were developed to guide the evaluation of the programs in the 2006-08 funding cycle. Again, the California Self-Report Approach (CA-SRA) was permitted with the agreement of the IOUs. However, the 2005 Protocols *explicitly* require (for the same three reasons listed above) triangulation for programs assigned the *enhanced* level of evaluation rigor⁷.

This emphasis on triangulation throughout the last 15 years reflects a desire that the situations in which one was forced to rely solely on any one method would be rare. Of course, whether one is able to use one or more than one method, there will still be uncertainty surrounding the savings estimates owing to such things as sample error, measurement error, and the failure of multiple methods to arrive at the same answer. If the earnings mechanism established by regulators can either penalize or reward a utility if the savings vary by as little as 1 percent either way, then the pressure on evaluators to produce perfectly accurate and precise estimates of savings would be enormous. What policy makers and regulators sometimes forget is that no measurement system, no matter how rigorous, within the broader evaluation community, can meet that standard of accuracy. When evaluators fail to deliver the level of accuracy and precision required by regulators, one should not flog the evaluators and condemn their evaluation methods but assess results according to best evaluation practices.

4.4. View of Validity of Self-Report Approach within Other Areas of Science and Social Science Research^D

The simple presentation of the self-report approach and calculation of NTGR hides the great complexities that need to be addressed within the approach, the inquiries, and the analyses. Its appearance of simplicity is deceiving. All evaluations should require well-trained and experienced evaluators leading or reviewing the evaluations. Other fields often include critical review or independent assessment to minimize the bias and measurement error within their scientific investigation or tools. Licensing and regulations have often been developed as a result of horrific consequences from poor applications by untrained personnel.⁸ It is now standard medical practice to require trained individuals to use the current tools in medical diagnoses and to require double-reading before diagnoses are provided to the patient (HIV, mammograms, cancer tests, etc.). Critical review and independent assessment are also important for the application of the self-report approach to estimate free-ridership.

Estimating free-ridership in an environment where there can be many influences for an efficiency investment has been claimed by some critics to be an unrealistic expectation. Critics of self-report free-ridership measurement also cite that the self-report measures are likely upwardly biased given an increase in social desirability to be “green” and environmentally sensitive. There are many other fields of evaluation that face challenges at least as great and still

⁷ Tashakkori and Teddlie (1998) classify such triangulation as *parallel mixed analysis*, which, they argue, is probably the most widely used mixed data analysis strategy in the social and behavioral sciences.

⁸ An interesting example that few are aware of is that licensing and regulations for professional engineers began as a consequence of the death and destruction caused by a similarly little known unusual disaster – the great molasses flood of 1919 in Boston (Puleo 2003).

depend upon experienced evaluators to use the highest quality science and art to separate program-induced impacts from impacts due to other factors or potential biases. The range of programs with evaluation challenges for assessing causality is quite diverse. It would seem logical that self-report bias due to social desirability in energy efficiency program free-ridership ought to be lower than that for drug abuse or sexual behavioral issues. Validation studies on self-reported drug abuse compared to urinalysis testing have shown a relatively low level of self-report bias. “Overall, there are indications of a small underreporting bias in the National Household Survey on Drug Abuse and the Monitoring the Future Survey, but its overall effects are relatively small” (Harrison 1995). Another example, this one including measuring an underlying construct, that of sexuality acceptance and its relationship to self-efficacy, can be found in evaluations of condom programs for young women (Bryan, Aiken and West 1996). Most evaluations of condom programs rely upon self-reported condom use, with a few studies that tested the validity of self-reported condom use data, such as Shew, et. al., 1997.

Other fields can also offer suggestions on ways to improve the validity of self-report data based upon survey technique and incorporating other related measurement indicators. Again, there is a broad range of fields using self-reports surveys to create valid measurements. These range from reporting of pubertal status among adolescents (Petersen, Crockett, Richardson and Boxer 1988), the validity of self-report strengths and difficulties scores to distinguish youth with mental illness versus the general population as compared to teacher and parent scoring (Goodman, Meltzer and Bailey 2003), and youth self-reports of alcohol and drug abuse (Winters, Stinchfield, Henly, and Schwartz 1990). We can not simply accept any self-report measurement of free-ridership. At the same time, we should not throw out all measurements of free-ridership just because they are self-reports.

There are energy efficiency evaluations and analyses that have been done that make self-reported free-ridership studies an easy target for criticism. These *problem evaluations* are often those performed without experienced and skilled evaluators or those not taking the time to ensure that both art and science is closely monitored with experience and critical thinking.

5. Details within the Method, the New Testing Procedure for Algorithm Validity, and Potential Issues

5.1. Warm-Up Questions within the Free-Ridership Battery

The evaluation of California IOUs’ 2006 -2008 efficiency programs conducted surveys from six months to 18 months after participation.^E Establishing set-up or warm-up questions provides an opportunity for the survey respondent to begin to remember the participation decision before being asked questions that are used in the calculation of the free-ridership estimate. This technique is used to reduce the potential uncertainties introduced by recall error. The Res./Small Commercial SRA NTG instrument includes seven warm-up questions. (See Appendix A for a copy of the final survey battery for this consistent method.)^F

5.2. *Designing the Inquiry to Meet Construct Validity*^G

Ridge, Willems and Fagan (2009) discuss estimating free-ridership as an influence index given the measurement is of a latent or underlying construct. Many other areas of scientific research depend upon measurement of an underlying construct. These include assessments of intelligence, deprivation or mental retardation versus human functioning, or, in the earlier example of young women's condom use, sexuality acceptance and self-efficacy. One of the principals for undertaking quality science when measuring an underlying construct is to include an assessment of construct validity.

Construct validity refers to the extent to which an operating variable/instrument accurately captures an underlying concept/hypothesis, properly measuring an abstract quality or idea. In program evaluations, construct validity enables the researcher to “generalize from the variables and their observed relationships in a program evaluation back to the constructs and their relationships in the program logic” (McDavid & Hawthorne, 109). When conducting an evaluation, one must be sure that what is being measured and how it is measured relates to the construct on which it is based. An evaluation that is based on an unexplored concept can lead to faulty assumptions and invalid evaluation outcomes.

Regardless of the magnitude of the savings or the complexity of the decision-making process, one should assume that using multiple questionnaire items to measure a construct such as free-ridership is preferable to using only one item since reliability is increased by the use of multiple items (Blalock, 1970; Crocker & Algina; 1986; Duncan, 1984).^H

A Recent Evaluation that Assessed Construct Validity and the Need for Multiple Questions to Provide Evidence Supporting Construct Validity^I

Ridge, Willems and Fagan (2009) discuss estimating free-ridership as an influence index given the measurement is of a latent or underlying construct. Many evaluators and implementers would like to minimize the number of types and variety of free-ridership questions asked of the participants. Minimizing the number of these questions could also allow other important inquiries to be made of participants in the same instruments without fatiguing the interviewee. A recent evaluation study for the New York State Energy Research and Development Authority (NYSERDA) included an assessment of the relationship between multiple indicators of free-ridership for each respondent, and the range across these versus the level of variation. That study (Megdal, Patil, Gregoire, Meissner, and Parlin, 2009) included an in-depth mixed method that contained a substantially larger variety of self-report free-ridership questions than is typically employed, and many of these questions could be viewed as providing independent free-ridership estimates. This approach allowed the evaluators to conduct a more detailed comparison of the range of possible questions and testing the consistency of the responses, which is useful for more fully understanding the consequences of restricting the number of free-ridership questions and its link to providing evidence of construct validity.

From this vantage point, the individual responses to the free-ridership-related questions were analyzed as independent implied free-ridership estimates for each participant interview. This

analysis was conducted on a case-by-case basis. This procedure resulted in some participants having implied free-ridership estimates for the variation assessment based on only a few questions while others had estimates based on 10 or more questions.

The full range in indicators of implied free-ridership (FR) for each project was examined (the minimum and maximum indicators for each participant’s responses). Some participants showed little differences between their implied minimum and maximum free-riderships. But most had large differences between their minimum and maximum values, as is shown in Figure 2.

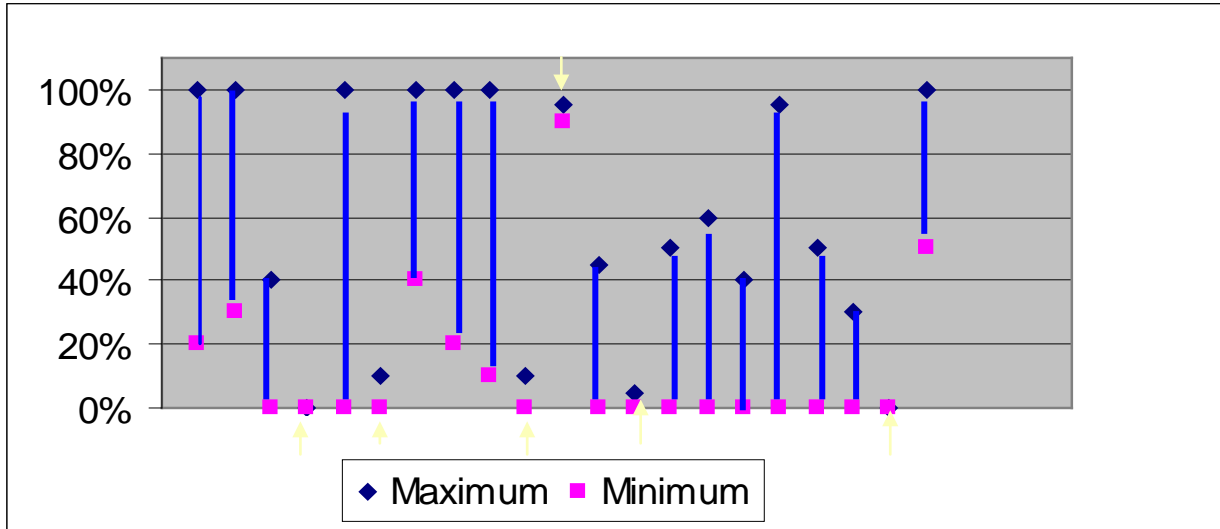


Figure 2. Using FR Implied Estimates: The Range within a Customer’s Responses (Megdal, et. al., 2009)

The extremes shown in Figure 2, however, do not properly represent the level of variability in all of a participant’s responses. Some respondents in this NYSERDA evaluation showed little variability in their responses, contributing to a tight upper and lower bound estimate of their FR estimate. Figure 3 shows all the implied FR estimates for the evaluation participants. (The solid line in Figure 3 presents the mean for these participant-implied FR estimates.) A few projects gave highly consistent responses. One participant answered all questions in a manner that would imply very high free-ridership (Participant 8 in Figure 3), while two answered all questions with indications of very low free-ridership (Participants 4 and 7). However, most participants provided at least some variation in their responses. Over half of the participants provided responses that could vary these implied NTGR estimates by more than a 50% FR score for that participant.

Large differences between any respondent’s minimum and maximum FR equivalent does not, however, necessarily mean that using these questions together provide an unreliable measurement of the underlying construct of free-ridership. The differences between the minimum and maximum FR equivalents are substantial. Yet, these differences only point to the difficulty of measuring the underlying construct – different respondents interpret the same questions differently. Those with a range in responses are also those where it is important to use

the responses together to derive the underlying “story”. This is best illustrated through a few examples of the different scenarios seen within the New York evaluation. These include the following cases:

- A participating decision-maker (DM) says they planned/intended on installing the exact same efficiency equipment at the same time but then other inquiries show that they could not get financing to adopt these plans;
- One DM said the firm definitely would have made the installation but that individual only received information by another DM in that firm’s decision process that included the incentive in the project’s payback information, a case of filtered information, and the DM that provided the filtered information said the firm would not have installed that equipment without the incentive; and
- A DM said they had plans to make the changes (but in context this response was assessed as them having plans to do something but not the exact measure implemented) because they would not have funded the necessary technical assistance, had no knowledge of the measure recommended and implemented, and the entity had difficulty obtaining funds for anything more than basic necessities.

The variation assessment examined the variation and the clustering of each project’s responses. Figure 3 shows significant clustering of responses. While free-ridership questions appear to have been interpreted differently by different respondents, utilizing several inquiries to measure the underlying construct would appear to allow the FR construct to be measured where the clustering occurs. Varying interpretations of question wording or in the context of firm circumstances may be the cause of the range seen in a respondent’s responses.

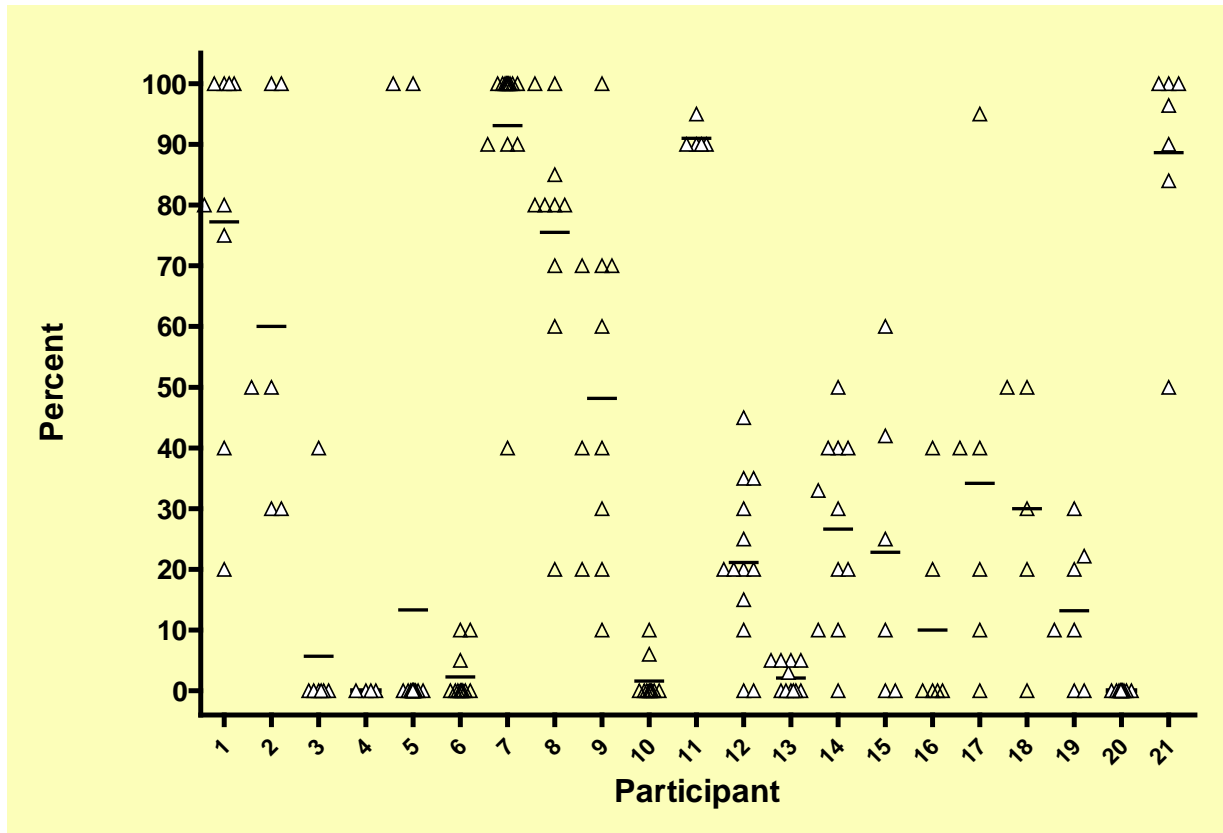


Figure 3. Ranges in a Customer's Responses versus Clustering

The average weighted standard deviation and the coefficient of variation (the standard deviation divided by the mean) of customer responses and of vendor responses within this variation assessment are presented in Table 1. Comparing the results in Table 1 to those seen in the project-specific range estimates (Figure 3) demonstrates that while the minimum and maximum FR equivalents may be distant for a respondent, using several measurements creates clustering of responses around the likely measurement of the construct of free-ridership for that respondent. If this clustering did not occur, then the large differences between minimum and maximums discussed earlier would be replicated as large coefficient of variations in Table 1. That does not happen, which corroborates the simple examination of data that showed this clustering. This comparison provides strong evidence supporting the need to have multiple questions to measure the underlying construct of free-ridership and that doing so can provide defensible estimates of free-ridership.¹

Table 1. Standard Deviation in the Customer and Vendor FR Responses within the NYSERDA Largest Savers Evaluation

	Customer Responses	Vendor Responses
Average weighted standard deviation	18%	13%
Coefficient of Variation	0.52	0.47

The variations in responses and the intertwined inquiries needed to understand the decision strongly support the need for self-reported FR inquiries to include a battery of questions best suited to measure the underlying construct, the need for experienced evaluators that understand both the science and art behind self-report FR measurement, and the need for self-report FR survey methods to recognize and deal with inconsistency and variation in decision-maker responses.

5.3. Four Measurements of FR within the Res./Small CI SRA NTG

The committee of evaluation consultants to the CPUC that constituted the developers of the Res./Small CI SRA NTG started with a review of the requirements needed to obtain the most reliable self-report instrument and method for programs aimed at residential and small commercial customers. This needs assessment included the CPUC's *Guidelines for Estimating Net-To-Gross Ratios Using the Self-Report Approaches* and the scientific literature and principles discussed above.

In order to meet the concerns of measurement error and the difficulty in measuring an underlying latent construct, the target was to create four or five separate free-ridership measurements for each efficiency measure for each respondent.

The final four FR measurements used within the Res./Small CI SRA NTG for every measure and every respondent are:^K

1. Quantity-timing and program was (not) critical factor for purchasing the high efficiency appliance;
2. Quantity-timing and would have paid the additional incentive amount for the high efficiency appliance;
3. Quantity, timing and efficiency all from yes/no questions; and
4. Likelihood (0 to 10 scale) of buying high efficiency appliance without program assistance [when it was purchased].

5.4. The Three Program Influence Dimensions within Each FR Measurement^L

There are three ways in which the program could influence a customer:

1. Increase the efficiency of what was going to be purchased;
2. Speed up the timing of when the efficient item was purchased/installed; and
3. Increase the quantity of the efficient units being bought and used to replace inefficient units.

These are referred to in this document as the three program influence *dimensions*. Each of the four FR measurements must incorporate survey responses for the different dimensions. The FR measurements can be thought of as being a layer below the survey questions that independently measure the program influence dimensions. Specifically designing survey questions to focus on one of the three dimensions was done in order to allow the FR measurement across those three dimensions to use joint probability of the responses to derive the FR measurement. Doing this ensured that the program intervention received credit for influencing any one of the three dimensions and that unless there was no influence on all three would the respondent be a full free-rider.

In order to derive four FR measurements, there had to be multiple survey questions that measured each of the three dimensions. Then the four FR measurements are based upon four different ways to combine the varying survey questions for the three dimensions. Figure 4 presents the concept of the layering of the dimensions, their joint probability, and the creation of multiple FR measurements.

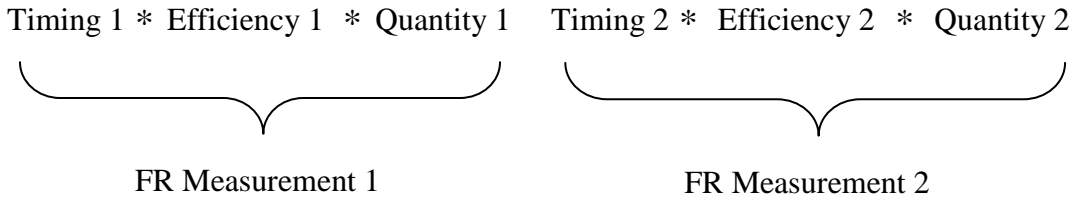


Figure 4. Layering Multiple Inquiries for Each of the 3 Dimensions to Derive Multiple FR Measurements that Include the Joint Probabilities of the Dimensions

The instrument developed and used for the Res./Small Commercial SRA NTG is provided as Appendix A. The algorithm that used the responses to that instrument as generally described above is provided as Appendix B.

5.5. Theory and Practicality of Using Interval versus Ordinal Data^M

Interval data have properties that make them preferred for research data collection. With interval data, relative differences are equal. This allows the proper use of mathematical functions. These are the foundation to allow dependent variables in research to be normally distributed. It is the assumption of normally distributed variables that allows most statistics to be properly carried out and be meaningful.

Within the introduction of an article within the *Review of Educational Research* (2001), Harwell and Gatti state:

“Despite the desirability of interval-scaled variables, we share the view of Clogg and Shihadeh (1994, p. 140) that ‘perhaps most of the variables specified as dependent variables in social research are of this general kind [ordinal].’” (105)

Ordinal data have order, but the interval between measurements is not meaningful (*i.e.*, moving from a 1 to a 2 is not necessarily the same as moving from a 5 to a 6). As a result, it is technically inappropriate to apply basic mathematical operations such as the calculation of means. On the other hand, interval data have meaningful intervals between measurements which support a variety of arithmetic operations. In the self-report approach, what we are attempting to measure, among other things, is a participant’s perception of the influence of the utility program on their decision to implement the energy-efficient measure. Because this is not something that is directly observable and measureable, we must rely on answers to a series of questions regarding the reasons for the installation. To assess the strength of any reason, often we have chosen response categories along a 0-10 scale since the strength of the reasons cannot be adequately captured by a “yes” or “no” response. Making this choice means that we are not certain that moving from a 1 to a 2 is the same increase as moving from a 5 to a 6. However, we

are willing to treat the responses as “sufficiently” interval for our purposes. While the debate over treating ordinal scales as interval has been going on for some time, there is strong support in the social science literature that treating ordinal variables as interval yields results that are both meaningful and useful to decision makers (Velleman & Wilkinson 1993; Tashakkori & Teddlie 1998). The ordinality of the observed data presumably reflects an underlying interval scale that just can’t be measured at that level. Therefore, the lack of consistency in the distance between measured levels (1-2 versus 5-6) constitutes measurement error, something researchers of all kinds live with constantly. There is no reason to think that this measurement is not randomly distributed, and, therefore, of the most benign kind. At the very least, there is no reason to assume that the varying size of intervals biases responses upward or downward.

Measuring the underlying construct of free-ridership with its joint probability of three different elements is a complex task, far more than just an issue of interval versus ordinal data. It is, however, useful to think of these questions, and their complexity, as comprising an index. For example, socio-economic status is an index that might include income, education level, occupation, and dwelling type. Anything short of combining these different elements would be failing to acknowledge the complexity of the situation and properly incorporating all three elements of possible program influence. Since a number is needed, numbers have to be assigned to the three elements to create their joint probability.

5.6. *Anchoring and Scales^N*

The Scale Test for the Res./Small CI SRA NTG Method

The original design of the Res./Small CI SRA NTG Method and its instrument included assessing alternative scales. The survey instrument employed two versions of a scale for several items that ask respondents to indicate the likelihood of engaging in a specific behavior or placement on an agree/disagree continuum. Respondents were randomly assigned to a 1 to 5 scale or a 0 to 10 scale. We examined data from early completed interviews for evidence that one scale performed consistently better (or worse) than the other or presented potential concerns. Three approaches were used to determine 1) if the scales behaved roughly similarly, 2) if we should be concerned about a tendency to (over)use extreme values, and 3) whether all points of the scales were used.

First, we collapsed each scale into approximations of a Low, Midpoint, and High category. Responses of 0 to 5 and 1 or 2 on the 0-10 and 1-5 scale, respectively, were reclassified as “low.” Responses of 6 to 10 and 4 or 5 were reclassified as “high.” A response of 5 (11-point scale) or 3 (5-point) are the midpoints.

The results from this exam suggest the two scales perform similarly, although the collapsed presentation smoothes out unevenness that was apparent in raw frequencies. (Admittedly with only 178 cases for the testing, fewer for each randomly assigned variable, small differences in frequency counts can take on importance.) With the exception of one particular survey question, the 5-point scale exhibited more heaping at the midpoint and there is a greater concentration of responses in the “low” category. With the exception of that particular survey question, there is no sign that responses to the 0-10 scale clustered heavily at the midpoint of 5, which can sometimes occur with this scale.

Second, we examined the occurrence of extreme values for each scale. For the 0-10 scale, values of 0 or 1 were coded “low” and values of 9 or 10 were coded “high.” For the 1-5 scale, we examined the frequency with which a 1 (low) or a 5 (high) was reported. All other values were recoded to a separate category. Responses to the 1 to 5 scale consistently use the extreme high value more than responses to the 0-10 scale. For two of the items, 10 percentage points separate the two distributions. Responses on the 1 to 5 scale also occur at the extreme low value more often than for the 0-10 scale; the differences are notable for two items where a spread of almost 10 percentage points separates the two distributions.

This pattern of responses is not illogical as the 1 to 5 scale provides respondents with a smaller range of values on which to place themselves. If the programs in question are strong drivers of behavior, then heavy use of the extreme values is appropriate. If the same pattern were present in the 0 to 10 scale, we could be more confident that the program or reactions to the program are driving responses rather than simply limiting responses to too narrow a range.

Third, we examined the distribution of responses on the 0 to 10 scale to assess whether respondents use the full range of values. Respondents did use the full range, but they make greater use of the gradations at the upper end of the scale (between 5 and 10) than those at the lower end (0 to 5). While all values were reported at least twice among the 63 available responses, respondents selected values of 0, 5, 8 and, especially, 10 most often.

We also investigated consistency among the survey items using the 1 to 5 and 0 to 10 scales by estimating bi-variate correlations. The results demonstrated that items measured with the 1 to 5 scale generally have weaker relationships and two items fail to correlate significantly with any other measure. To be sure, a 5-point scale does not approximate the continuous distribution assumed by a correlation coefficient, and the relationships might appear stronger (or at least statistically significant) with a larger sample size. However, the pattern of relationships among the 0 to 10 point items is a striking contrast. All but one relationship is statistically significant, attains an absolute value of 0.4 or higher, and is in the expected direction.

Given the results of these exams, the 0 to 10 scale was adopted. The 0 to 10 scale yields distributions with good variability, is less prone to extreme values or overuse of the midpoint, and the individual items show higher internal consistency than items using the 1 to 5 scale.

Appropriate Scaling and the Simulated Dataset Test

The testing of the algorithm with a simulated dataset is fully described below. This simulated dataset did include scenarios of extreme ends of the free-ridership perspective, expected to obtain 100% free-ridership and those expected to obtain 0% FR. There were also a variety of scenarios that fell within different blocks of high, low or middle ranges. The algorithm and computer coding refinement conducted alongside the simulated dataset test ensured an algorithm and computer coding that provided strong evidence for appropriate scaling and anchoring given the accuracy level and lack of bias from the testing. (The simulated dataset scenarios, their expected free-ridership values/ranges and the final test FR are provided in Appendix C.)

5.7. *Handling Inconsistency within Early Instrument Design and Then within Responses*^O

Several tests of the early instrument design were conducted. Besides the tests for scaling discussed above, there were three tests for inconsistency. The consistency tests examined the responses among three groups of respondents: those who had already installed energy efficient measures, those who had specific plans to install measures, and those who neither had installed measures nor had concrete plans to do so. Hypotheses were developed for the expected responses for the other survey questions for each of these three groups. These tests provided information that was used to assess the usefulness and operation of questions as intended.

The final result of the testing was to drop one of the survey questions and to re-order a second survey question.

5.8. *Testing the Algorithm through Use of a Simulated Dataset*

Most prior self-reported free-ridership methods included sensitivity analysis on the algorithm with the purpose of finding potential errors or bias. When inconsistencies in results were seen through the sensitivity analysis, these were used to justify changes in the algorithm. This provided some level of assessment and correction of the algorithm so that results met the expectations from experience. This was better than not conducting these assessments. But these “tests” were not attempting to calibrate the algorithm to “known truths”.^P

This evaluation and use of the Res./Small CI SRA NTG Method has the first test of the operation of an algorithm on whether it accurately produces the actual free-ridership given the survey responses and does so without bias. This was a pure test conducted to ensure the validity of the algorithm. This is not to say that this method automatically produces a known “true” free-ridership estimate. But we can say that if the survey responses provided do reflect the truth (*i.e.*, without any bias or errors in perception), then the algorithm will provide a valid FR estimate from those responses.

Two types of scenarios were developed to provide the basis for creating the simulated dataset. There were motivational scenarios that identified the mindset/behavior characteristics that drove efficiency purchase and program participation. The second set of scenarios was created from a direct set of the various possible combinations of the three elements (efficiency, timing and quantity) rather than the motivation scenarios proposed. The full set of scenarios used within the final simulated test dataset is provided as Appendix C. They are presented as those that were motivation based and then those that were direct element based scenarios.

Two individuals were asked to “play act” assuming the characteristics defined for each scenario and go through the entire survey answering consistently with the information provided by that scenario.

Creation of the simulated free-ridership dataset proved to be significantly more challenging than originally envisioned. As the survey was answered independently by two separate individuals

based on the scenarios described at the end of this memorandum, errors were found in the consistency of their responses within scenarios and the expected free-ridership levels.

Differences between survey responses from the two individuals were examined for each survey question and some corrections were made to ensure consistency. When responses were not the same and slightly different responses seemed reasonable for a scenario, both sets of data were included in the initial simulated test dataset.

The initial simulated test dataset was sorted randomly and provided with TestIDs by the first consultant firm and with no annotation as to which scenario related to each observation in the dataset. This anonymous test dataset was sent to a second evaluation contract firm to run through the SAS Coding for the algorithm.

The second firm calculated the free-ridership estimate for each TestID. These estimates for each TestID by algorithm were sent back to the first firm for scoring and analysis. The free-ridership estimate for each TestID was compared to the expected free-ridership estimate.

For TestIDs where the estimated rate differed from the expected rate, we examined each of the four precursors (FR measurements) that comprise the final estimate, as well as the variables used to construct the four precursors to determine why the final estimate for that observation occurred given the precursors and the survey responses.

The algorithms are complicated to program. The iterative testing with the simulated dataset yielded a significant contribution to the reliability of the algorithm and its computer coding.

The testing process was conducted four times. The first test found one significant coding problem where an F[Y/N] precursor variable was inadvertently used in the other three free-ridership (FR) estimates (and would have resulted in a downward bias in the estimates if this had not been caught).

Additionally, there were three observations dropped from the simulated dataset whose responses were too inconsistent to use as a valid test case, a few where minor adjustments were made to their minimum and maximum expected FR range, and one case where one response within the simulated dataset was revised to be consistent with the expected free-ridership established for that case.

Again, the second test results were examined for each case not within its expected range by following the precursors for each final FR and all its components. This second assessment found most of the remaining issues concerned the handling of “don’t know” and “refused” versus missing. (Recognize that the hand-constructed simulated dataset created a higher level of missing values for the testing than would be expected to occur through a pre-tested CATI survey process.) All of the cases that contained a full set of valid survey answers derived free-ridership estimates within their expected range.

The second test also examined the use of 0.5 for “don’t know” and “refused”. This was compared to a test where missing values were inserted for “don’t know” and “refused” and the

final free-ridership estimate for each case was the average of all non-missing FR measurements (and similarly within their precursors). The use of missing instead of inserting 0.5 appeared to be more accurate for the simulated test dataset. The test with “Don’t know” and “Refused” set to 0.5 resulted in a sample size of 40 and a free-ridership estimate of 39.4%. Setting these two responses to missing (and calculating using all variables that have non-missing values) provided a sample size of 38 and a free-ridership of 41.1%.

Thinking through what setting “Don’t know” and “Refused” to a specific value does is consistent with these examples. Putting a value for these responses allows the analyst to keep that observation. The sample size remains larger contributing to a higher reported sampling precision. But the value is actually unknown. If the program on average has free-ridership below 50%, setting these responses to 0.5 will drive the overall program free-ridership estimate upward. If the program on average has free-ridership above 50%, setting these responses to 0.5 will drive the free-ridership estimate downwards.

From this we conclude that the choice to set answers for these responses to 0.5 increases sampling precision at the expense of accuracy. This is a choice not desired for evaluation and clearly opposed to the language in the California Evaluation Protocols.

The third and fourth round tested refinements in the SAS coding and an alternative algorithm for one of the four FR measurements. It drilled down through all precursors and all possibilities.

The final test with the refined SAS coding on the simulated dataset obtained an average free-ridership of 45.8%. The simulated dataset average expected FR range was 35 – 53%. For the 10 cases that did not fall within their case’s expected FR value, five were higher and five were lower. This is perfectly balanced and we would expect no bias within the algorithm or its SAS coding. The final estimates are provided alongside the expected FR range for each scenario in the first attachment.

A summary of the iterative testing and the test results is provided in Table 2.

Table 2. Iterative Testing with Simulated Dataset and Test Results

	#Observations	#Correct	#Too Low	#Too High
Test 3	45	35	5	5
Test 2	45	29	6	2
Test 1	45	34	5	1

6. Social Desirability, Recall and Related Potential Bias Issues

6.1. *Changes in Social Desirability and Expected Changes in Actual Free-Ridership^Q*

There is a great deal of focus and increased investment in energy efficiency due to the increasing concerns with climate change and the increasing knowledge of the role that energy use has on environmental impacts. In the debate over the concerns and accuracy of self-reported NTG measurement, changes in social desirability is often discussed as a potential contributor to increasing bias within NTG estimates. A full view requires that we step back and recognize that the generally agreed upon average increase in concerns for the environment and greater energy efficiency are socially desirable and these will impact the actual level of free-ridership. As more individuals desire higher efficiency in order to support a group need to protect the environment, more energy efficiency investments will be made whether there are efficiency programs or not. This means that this overall increase in the desire for greater efficiency for a healthier environment will be expected to create higher levels of free-ridership.

6.2. *Changes in Social Desirability and Expected Changes in Potential Bias within Free-Ridership Responses^R*

As mentioned above, a commonly recognized motivation for biased answers is that some people will like to portray themselves in a positive light; *e.g.*, they might like to think that they would have installed energy-efficient equipment without any incentive (the socially desirable response). This type of motivation could result in an artificially low net-to-gross ratio. The existence of the socially desirable response has been a perennial problem for survey researchers. Often this criticism is raised without a full review of the potential to address it. There have been various methods and techniques (Bradburn, Sudman, & Wansink 2004; Lyberg et al. 1997; Groves et al. 2004) that have been developed to address this potential source of bias. For example, Bradburn, Sudman, and Wansink (2004) provide a checklist of 13 techniques for minimizing this bias including using data from knowledgeable informants (*e.g.*, vendors, installers, etc.), attempting to validate the answers, and using both closed and open questions.

Of course, it is possible that a respondent might exaggerate the importance of the program because they want the program and its rebates to continue. Technically, this is not a case of the

socially desirable response bias but does represent a type of biased response that should be mentioned. The same techniques used to reduce the socially desirable response bias can be used to mitigate this other type of bias.

The committees and the evaluation contract groups did follow many of these techniques, including asking questions only of the knowledgeable decision-maker, attempting to validate responses using consistency questions, and using both closed and open questions.

6.3. *Recall and Relationship to Potential Bias within Free-Ridership Responses*^S

Comments were also submitted regarding the amount of time from product purchase to the survey, and potential recall bias. Many evaluators speak pejoratively about recall and assume inquiring about efficiency investment decisions that occurred significantly in the past, such as a year and more later, automatically creates a bias in the responses and free-ridership estimate. Poor recall adds to the uncertainty of the information and, therefore, of the free-ridership estimate. However, uncertainty does not mean bias. Random error creates larger error bounds around an estimate. Evidence is lacking that recall issues actually create a known directional bias (in either direction). Where we are asking for motivations and processes in situations that occurred one or two years ago, there is room for bias but that does not provide an actual indicator or measurement of bias.

To minimize any potential bias, participant surveys were administered no more than 18 months after participation, and, in most cases, less than a year after participation. Furthermore, introductory questions were administered to ensure that (1) the respondent was indeed the one that made the participation decision (if not, the survey was terminated), 2) the respondent remembered participating and remembered acquiring the measure, and 3) recall the situation their household was in at the time of purchase.

Alternatively, conducting surveys very close to the receipt of an incentive may lead respondents to overestimate the importance of the incentive on their purchase decision. Immediate surveys could potentially create a downward bias in the estimate of free-ridership. This too, however, is theoretical and has not been tested.

Furthermore, analysis of the residential and small commercial retrofit data supports minimal recall bias. Analysis of the residential retrofit data revealed that FR ratios did not vary significantly by year, indicating no pattern to suggest a bias that might have been correlated with recall. In addition, “Don’t know” responses for specific items in the FR battery were randomly distributed across years and within participating cohorts. Stability analysis with inconsistencies and “Don’t Knows” eliminated did not change any FR ratio. Where inconsistencies could be resolved, the respondents’ FR scores were reintroduced into the calculation, again, without appreciable changes to the average score.^T

For Small Commercial programs, an example of an assessment for the impact of “Don’t Know” and blank responses is shown below. If the survey data was missing for one of the FR measurements, that FR measurement was set to missing and not included in the final average. If recall were a problem due to the time lag between participation and data collection, we would

have expected this to result in a high number of “Don't know” responses that would affect the FR ratio for 2006 participants. The Small Commercial group’s data for downstream lighting data shows very little difference in the mean number of missing FR measurements across participation years, as seen in Table 3, shows that the lag between participation and the evaluation surveying did not affect recall.^U

Table 3. Small Commercial Downstream Lighting Data – Comparison to Assessment any Differences in Missing Data (“Don’t Know”) Given Lag in Surveying

Year of participation	Mean # of FR measurements in final FR ratio (max = 4)	Unweighted Count	Standard Deviation
2006	3.68	934	0.869
2007	3.73	1,134	0.781
2008	3.74	530	0.778
Total	3.71	2,598	0.813

Most respondents have valid responses across the NTG battery and therefore, use all four FR measurements in the final ratio. These empirical finding reinforce our conclusion that recall and “Don’t know” responses have very little effect on the overall FR rates.

Table 4. Small Commercial Downstream Lighting Data – Missing Data and Free-Ridership Levels

# of FR measurements in final FR ratio (max=4)	Free-ridership ratio – Weighted by kWh	Unweighted Count	Standard Deviation
1	0.680	154	0.321
2	0.386	34	0.424
3	0.340	168	0.165
4	0.212	2,313	0.278
Total	0.252	2,669	0.292

7. Issues when Considering the Use of Primary Data versus Secondary Sales Data^V

The Residential Retrofit report presents, for a number of measures, primary and secondary market share data for efficiency measures. As noted in the report, however, these data may not be indicative of actual NTG ratios. For example, the market share data from the national ENERGY STAR retail partners reflects only a small number of distribution channels, typically the largest “big box” stores, who may have different sales patterns from small, local retailers. Secondly, comparing national (or non-program comparison area) market shares of efficiency measures does not control for household/demographic differences or cost of living in California that may lead to a higher baseline number of sales of efficient products. The market share somewhere else at the same point in time is not necessarily a model of what would have occurred

at that time in California without the program; it is not the “counter-factual”. A third comparative could be using the California Lighting and Appliance Efficiency Saturation Study (CLASS). This provides the cumulative efficiency purchases in California but it does not net out all of those that were program-induced based upon California programs operating at the time of the lighting or appliance purchase.

There are many different variations in the possible relationship between free-ridership and market share. For example, a measure may have few adopters (low market share) due to high incremental cost, yet have high free-ridership due to a low incentive (*i.e.*, the incentive as a percentage of the incremental cost is so low that it does little to motivate purchasers to choose an alternative product). That is, of those who participate in the program, a high percentage of them are free-riders.

In addition, efficiency programs are offered to everyone. Public/IOU programs are not designed (or approved by regulators) to screen out people who are likely to have taken the action absent the program (*e.g.*, have taken that action or a similar one before). Given this, one would expect that the self-selection into a program can drive up free-ridership.

There are also actions that can be available to many but few take that action in the market, such as for insulation. At any one period in time, few take the action of all those eligible. There is no way to know, however, if there is a naturally occurring small continual adoption rate that will, over the long-run, slowly move through the large eligible population. If that were the case, then these individuals/households could also self-select into the program and create high free-ridership. In other words, low market share does not necessarily mean that no actions would be taken.

It is also possible that free-ridership can be higher than the market share of efficient products due to the actions of mid-stream market actors. For example, a participating retailer can aggressively promote the incentive to purchasers of the efficient product to increase the positive affiliation the purchaser has with that store/brand. The retailer’s action in this example would increase free-ridership as a percentage of all purchasers, even when the total number of purchasers is relatively small.

Market share data, in absence of a full market characterization study (as can be seen in the California Evaluators’ Protocols and within the recent California market effect studies), may therefore not be representative of program NTG values. There are many other elements and research needed to derive a well-designed counter-factual argument.

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Appendix A. Res./Small Commercial Free-Ridership Battery

Revised Final—4/19/2008

Suggested Guidance from the JS NTG Committee

[JS NTG Committee: Lori Megdal (MECT), Rick Ridge (MECT), Pam Rathbun (PA Consulting/Res. Retro.), Mimi Goldberg (KEMA/Res. Retro., Small Comm.); Ben Bronfman (Quantec/Res. Retro., Spec. Com.); Stuart Schare (Summit Blue/Govt. Partn.); Nick Hall (MECT); and Ken Keating (MECT)]

The revised final self-report survey battery is provided below. The definitions and descriptions for “fill-in” codes are provided in the next section. In order to have one consistent set of survey questions (all asked exactly the same way, as a substitute of words can provide different meaning and responses), the committee that developed these derived specific fill-in areas so that the same battery could be easily customized for the program being evaluated while maintaining consistency. Any other changes to survey question wording or algorithm scoring would likely result in a “different” method being used. It is our understanding that the final decision to use this method, the Non-Res. NTG method, or another self-report method created by a particular contract group or for a specific program is a decision that rests with the CPUC contract manager. Many alternative forms of question wording and additional or fewer questions or ordering have been discussed at length within this subcommittee during its work that produced this version. The revised version below is the least complex, most transparent form that we were able to derive that still met all of the concerns and requirements from the Guidelines for NTG Self-Report.

One of the valuable comments received is that we all need to be careful where we place this battery within our survey instruments. Its placement needs to be made so we are able to provide warm-up for better respondent recall of their decision-process for the measures/products being discussed. But the placement must also ensure that none of the questions prior to the Self-Report batteries (free-ridership and participant spillover) would be likely to bias the responses. We suggest including these questions immediately after the installation verification questions. When a measure has been removed, the free-ridership questions will not be asked of that measure.

Definitions and Descriptions of Codes

[PRODUCT TYPE]	General type of equipment or material, such as refrigerator, lighting, air conditioner, windows, insulation
[MEASURE]	Specific energy-efficient product obtained through the program, such as high-efficiency air conditioner, CFL, insulation
[ASSISTANCE]	Description of the type of technical, financial or other assistance received
[PROGRAM]	Use terms that would be understandable by customer. Could be program name, rebate from...., etc.

[UTILITY]	Utility or local government program or third-party, as is appropriate
[TIMEFRAME]	Date of participation
[AMOUNT OF PROGRAM INCENTIVE/SUBSIDY]	Amount of financial incentive provided through the program
text in Brackets “{ }”	Coding/instructions for survey administrator, not to be read
INCREMENTAL EFFICIENCY	Measures that consist of an energy-efficient version of a product type, such as high-efficiency refrigerator, air conditioner. These measures provide savings by being used in place of a less efficient alternative. They are typically promoted for natural replacement applications.
EFFICIENCY ENHANCEMENT	Measures that can be added to existing facilities and equipment to improve system efficiency. Examples include insulation, faucet aerators, and controls. These measures are typically promoted for retrofit applications. CFLs, high efficiency lighting fixtures, and LEDs should also be placed in this category for the purpose of these questions and survey wording. In general, most consumers do not differentiate between efficiency levels for these products. For example, few consumers recognize differences between ENERGY STAR CFLs versus other CFLs.

Note: both incremental efficiency and efficiency enhancement measures can be used in new construction contexts.

Warm-up Questions/Background Context⁹

W1. Please think back to the time when you were deciding to buy the [measure], perhaps recalling things that occurred in your household shortly before and after [timeframe]. What factors motivated you to purchase energy saving [product types]? {DO NOT READ; INDICATE ALL THAT APPLY; ONCE THEY RESPONDENT HAS FINISHED, PROBE: Are there any other factors?}

1. Old equipment didn't work
2. Old equipment working poorly
3. The program incentive
4. The program technical assistance
5. Wanted to save energy
6. Wanted to reduce energy costs
7. The information provided by the Program
8. Past experience with this program
9. Because of past experience with another [utility] program
10. Recommendation from other utility program (Probe: What program? _____)
11. Recommendation of dealer/retailer
12. Recommendation of someone else (Probe: Who? _____)
13. Advertisement in newspaper (Probe: For what program? _____)
14. Radio advertisement (Probe: For what program? _____)
15. Other (SPECIFY)
16. Environmental concerns
17. Global warming
18. Liked the appearance of the [measure] more than the old one
19. Keeping up with the latest trends and fashions
- 98. Don't Know
- 99. Refused

{REPEAT W2-C2 FOR FIRST MEASURE. REPEAT SERIES IF IS A SECOND MEASURE}

{ASK W2a-W6 ONLY FOR INCREMENTAL EFFICIENCY REBATE MEASURES}

W2a. Did you get this [measure] to replace [a/an] existing [product type]?

1. Yes {SKIP TO W3}
2. No
- 98. Don't Know {SKIP TO FR1}
- 99. Refused {SKIP TO FR1}

⁹ Individual contract groups may choose to modify the wording of these warm-up questions. These questions are not used in the free-ridership algorithm.

W2b. Did you get this [measure] because you wanted to add another/more [product type] to your [home/business]?

1. Yes {SKIP TO FR1}
2. No
- 98. Don't Know {SKIP TO FR1}
- 99. Refused {SKIP TO FR1}

W2c. Is this [product type] the first you have ever had in your [home/business]?

1. Yes {SKIP TO FR1}
2. No {SKIP TO FR1}
- 98. Don't Know {SKIP TO FR1}
- 99. Refused {SKIP TO FR1}

W3. {IF MEASURE=LIGHTING} What type of lighting did this replace? {DO NOT READ}

1. Incandescent
2. CFL
3. Other (SPECIFY)
- 98. Don't Know
- 99. Refused

W4. {IF MEASURE NOT LIGHTING} About how old was the [product type] you replaced? {READ CATEGORIES IF NEEDED}

1. Less than 5 years old
2. 5 to less than 10 years old
3. 10 to less than 20 years old
4. 20 years to less than 30 years old
5. 30 or more years old
- 98. Don't Know
- 99. Refused

W5. Was the old [product type] working or not working?

1. Working
2. Not working {SKIP TO FR1}
- 98. Don't Know {SKIP TO FR1}
- 99. Refused {SKIP TO FR1}

W6. Was the old **[product type]** in good, fair, or poor working condition?

1. Good
2. Fair
3. Poor
- 98. Don't Know
- 99. Refused

W7. {IF MEASURE = INSULATION} Was the **[product type]** you received a rebate for installed in areas where no prior insulation existed?

1. Yes
2. No
- 98. Don't Know
- 99. Refused

Free-Ridership Questions

FR1. At the time that you first heard about the **[assistance]** from **[utility]** for **[measure]**, had you...? {READ LIST}

1. Already been thinking about purchasing **[product type]**?
2. Already begun collecting information about **[product type]**?
- 3a. **{FOR INCREMENTAL EFFICIENCY MEASURES}** Already selected the **[measure]** you were going to get?
- 3b. **{FOR EFFICIENCY ENHANCEMENT MEASURES}** Already decided to buy the **[product type]**?
4. Already installed the energy efficient **[measure]**? {IF YES, SKIP TO FR1B; ELSE SKIP TO FR2}
5. {DON'T READ} Other: _____
- 98. Don't Know
- 99. Refused

FR1B. **{REBATE MEASURES}** So, the **[measure]** was installed before you learned about the **[assistance]** from **[utility]**?

1. Yes {SKIP TO FR5}
2. No
- 98. Don't Know {SKIP TO FR2}
- 99. Refused {SKIP TO FR2}

FR2. Just to be sure I understand, did you have specific plans to install a(n) **[product type]** before learning about the **[assistance]** available through the **[program]**?

1. Yes
2. No {SKIP TO FR4}
- 98. Don't Know {SKIP TO FR4}
- 99. Refused {SKIP TO FR4}

FR3. Did you have to make any changes to your existing plans in order to receive this **[assistance]** through the **[program]**?

1. Yes
2. No
- 98. Don't Know
- 99. Refused

FR4. {REPEAT AS NEEDED FOR FR4 PARTS A – D} If the **[assistance]** from the **[utility]** **[program]** had not been available, would you still have:

FR4A. Purchased a(n) **[product type]** ?

1. Yes
2. No {SKIP TO FR5}
- 98. Don't Know
- 99. Refused

FR4B. Purchased the **[product type]** at the same time as you did?

1. Yes {SKIP TO FR4C}
2. No
- 98. Don't Know {SKIP TO FR4C}
- 99. Refused {SKIP TO FR4C}

FR4B1. Bought the **[product type]** earlier than you did, or later?

1. Earlier
2. Same Time {REPEAT QUESTION FR4B}
3. Later
- 98. Don't Know {SKIP TO FR4C}
- 99. Refused {SKIP TO FR4C}

FR4B2. How much **[earlier/later]** would you have bought the **[product type]**?

- _____ Years {AND/OR} _____ Months
- 98. Don't Know
 - 99. Refused

FR4C. {IF PURCHASED MULTIPLE UNITS THROUGH THE PROGRAM, OR MEASURE IS OF VARIABLE AMOUNT} Without the program, would you have purchased the same quantity as you did?

- 1. Yes {SKIP TO FR4D}
- 2. No
- 98. Don't Know {SKIP TO FR4D}
- 99. Refused {SKIP TO FR4D}

FR4C1. How many/much would you have purchased without the program?

_____ {RECORD NUMBER}

- 98. Don't Know
- 99. Refused

FR4D. {FOR INCREMENTAL EFFICIENCY MEASURES AND INSULATION} Purchased the same [INSULATION = R value /OTHER = efficiency] of **[product type]**?

- 1. Yes
- 2. No
- 98. Don't Know
- 99. Refused

FR4E. If the **[assistance]** from the **[utility] [program]** had not been available, would you have done anything else differently?

- 1. Yes
- 2. No {SKIP TO FR5}
- 98. Don't Know {SKIP TO FR5}
- 99. Refused {SKIP TO FR5}

FR4E1 What would you have done differently?

{RECORD RESPONSE}: _____

FR5. On a 0 to 10 scale, with 0 being not at all likely and 10 being very likely, how likely is it that you would have bought the same **[measure]** if you had not received any **[assistance]** from the program?

{RECORD RESPONSE (0-10)} _____

- 98. Don't Know
- 99. Refused

{SKIP TO FR10 IF PROGRAM DOES NOT PROVIDE A FINANCIAL INCENTIVE/SUBSIDY OR PARTICIPANT DATA DOES NOT CONTAIN THAT INFORMATION}

FR7. Our records indicate you received about **[amount of program incentive/subsidy]** from the **[utility] [program]** either directly or at the time of purchase to offset the cost of the **[product type]**. Does this amount sound about right?

- 1. Yes {SKIP TO FR9}
- 2. No
- 98. Don't Know {SKIP TO FR9}
- 99. Refused {SKIP TO FR9}

FR8. What would you estimate to be the actual amount?

- {RECORD RESPONSE} _____ {SET = NEW AMOUNT OF PROGRAM INCENTIVE/SUBSIDY}
- 98. Don't Know
 - 99. Refused

I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR9. If I had not had any assistance from the program, I would have paid the additional **[amount of program incentive/subsidy]** to buy the **[measure]** on my own?

- {RECORD RESPONSE (0-10)} _____
- 98. Don't Know
 - 99. Refused

{READ ONLY IF FR7-FR9 WAS SKIPPED}: I'm going to read several statements about how you came to choose your **[product type]**. On a scale of 0 to 10, where 0 is strongly disagree and 10 is strongly agree, how much do you agree with each statement?

FR10. There may have been several reasons for my purchase decision. But the **[assistance]** from the **[utility] [program]** was a critical factor in my decision to purchase the high efficiency/energy efficient product.

- {RECORD RESPONSE (0-10)} _____
- 98. Don't Know
 - 99. Refused

FR11. I would have bought a(n) **[product type]** within **[a year/2 years]** of when I did even without the **[assistance]** from the **[utility] [program]**.

- {RECORD RESPONSE (0-10)} _____
- 98. Don't Know
 - 99. Refused

Consistency Check & Resolution

{C1 will be asked only for those respondents who have a clear inconsistency between responses (i.e., all but one of the questions are at one end of the spectrum for free ridership while one question is at the other spectrum.) The question responses that will be used to trigger C1 are:

FR4A (efficiency enhancement measures) OR FR4D (incremental efficiency measures)
FR5
FR10
FR11

{IF FR4A/D = 1 AND FR5 = 0,1 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would have purchased the [measure] without the program'}

{IF FR4A/D = 2 AND FR5 = 9,10 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would not have purchased the [measure] without the program'}

{IF FR5 = 0,1 AND FR4A/D = 1 AND FR10 = 0,1 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would likely not have purchased the [measure] without the program'}

{IF FR5 = 9,10 AND FR4A/D = 2 AND FR10 = 9,10 AND FR11 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would likely have purchased the [measure] without the program'}

{IF FR10 = 0,1 AND FR4A/D = 2 AND FR5 = 0,1 AND FR11 = 0,1, ASK C1. INCONSISTENCY
1 = 'the program was not a critical factor in your decision to purchase the high efficiency/energy
efficient [product type] without the program'}

{IF FR10 = 9,10 AND FR4A/D = 1 AND FR5 = 9,10 AND FR11 = 9,10, ASK C1.
INCONSISTENCY 1 = 'the program was a critical factor in your decision to purchase the high
efficiency/energy efficient [product type] without the program'}

{IF FR11 = 9,10 AND FR4A/D = 2 AND FR5 = 0,1 AND FR10 = 9,10, ASK C1.
INCONSISTENCY 1 = 'you would have bought the [product type] within [a year/2 years] even
without the program'}

{IF FR11 = 0,1 AND FR4A/D = 1 AND FR5 = 9,10 AND FR10 = 0,1, ASK C1.
INCONSISTENCY 1 = 'you would not have bought the [product type] within [a year/2 years]
even without the program'}

- C1. Let me make sure I understand you. Earlier, you said **[fill with inconsistency 1]**, but that differs from some of your other responses. Please tell me in your own words what influence, if any, the program had on your decision to purchase and install the **[measure]** at the time you did? {RECORD VERBATIM RESPONSE BELOW}
-
-

- C2. **[fill with wording and response categories to the one question which was inconsistent]** {INTERVIEWER; BASED ON VERBATIM RESPONSE TO C1, PLEASE RECORD NEW RESPONSE}

Participant Like and Unlike Spillover Questions

{ONLY ASK LSP1-LSP4 IF INSTALLED LIGHTING MEASURES}

- LSP1. Since you received **[assistance]** through **[program]** have you purchased and installed any efficient lighting on your own without any assistance from the **[utility program]** or another utility program {READ THE FOLLOWING ONLY FOR SMALL COMMERCIAL: either at this facility or at other locations}?

1. Yes, only at this home/facility
2. Yes, only at other locations {SMALL COMMERCIAL ONLY}
3. Yes, at this facility and other locations {SMALL COMMERCIAL ONLY}
4. No {SKIP TO NSP1}
- 98. Don't Know {SKIP TO NSP1}
- 99. Refused {SKIP TO NSP1}

- LSP2. How many more high efficiency lighting products did you buy on your own, compared to what you got through the program {READ THE FOLLOWING ONLY FOR SMALL COMMERCIAL: at this facility and/or at another location}?

{PROBE FOR PERCENT OR SHARE OF PROGRAM EQUIPMENT. READ THE FOLLOWING IF NEEDED} For example, was it about one-fourth (25%) of what you installed through the program, one-half (50%) of what your installed through the program, the same amount as what you installed though the program (100%), twice as much as what you installed through the program (200%), or some other amount?

_____ % at this home/facility

_____ % at another facility {SMALL COMMERCIAL ONLY}

- 98. Don't Know
- 99. Refused

LSP3. I'm going to read a statement about the equipment that you purchased on your own, without any assistance from your utility. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the **[measure]** installed through the **[utility] [program]** in **[2006, 2007, 2008]** influenced my decision to install more high efficiency **[measure]** on my own.

{RECORD RESPONSE (0-10)} _____

- 98. Don't Know
- 99. Refused

LSP4. Why did you purchase this lighting without the financial assistance available from the **[utility] [program]**? {DO NOT READ; INDICATE ALL THAT APPLY}

1. Too much paperwork
 2. Takes too long to get approval
 3. No time to participate, needed equipment immediately
 4. The program had ended
 5. The equipment would not qualify {PROBE: WHY NOT?} _____
 6. The amount of the rebate wasn't important enough
 7. Other {SPECIFY} _____
- 98. Don't Know
 - 99. Refused

Other Spillover {ONLY ASK ONCE}

NSP1. Since you participated in **[program]** have you purchased and installed any other type of high efficiency equipment or made energy efficiency improvements {READ THE FOLLOWING ONLY FOR SMALL COMMERCIAL: at this facility or at other locations}?

1. Yes, only at this home/facility
 2. Yes, only at other locations {SMALL COMMERCIAL ONLY}
 3. Yes, at this facility and other locations {SMALL COMMERCIAL ONLY}
 4. No
- 98. Don't Know
 - 99. Refused

NSP2. What type and quantity of high efficiency equipment did you install on your own? {PROBE TO GET EXACT TYPE AND QUANTITY AND LOCATION/BUILDING IF SMALL COMMERCIAL}

Type 1: _____	Quantity 1: _____	Location 1: _____
Type 2: _____	Quantity 2: _____	Location 2: _____
Type 3: _____	Quantity 3: _____	Location 3: _____
Type 4: _____	Quantity 4: _____	Location 4: _____

NSP3. {ASK FOR EACH TYPE OF EQUIPMENT IN NSP2} How do you know that this equipment is high efficiency? {PROBE: WAS IT ENERGY STAR® RATED?}

Type 1: _____

Type 2: _____

Type 3: _____

Type 4: _____

NSP4. I'm going to read a statement about this energy efficient equipment that you purchased on your own. On a scale from 0-10, with 0 indicating that you strongly disagree, and 10 indicating that you strongly agree, please rate the following statement.

My experience with the **[utility]** **[program]** in **[2006, 2007, 2008]** influenced my decision to install different types of high efficiency equipment on my own.

{RECORD RESPONSE (0-10)} _____

-98. Don't Know

-99. Refused

NSP5. Why did you purchase this high efficiency equipment without going through a **[utility]** program? {DO NOT READ; INDICATE ALL THAT APPLY}

1. Too much paperwork

2. Takes too long to get approval

3. No time to participate, needed equipment immediately

4. The program had ended

5. The equipment would not qualify {PROBE: WHY NOT?} _____

6. The amount of the rebate wasn't important enough

7. Did not know program was available

8. There was no program available

9. Other {SPECIFY} _____

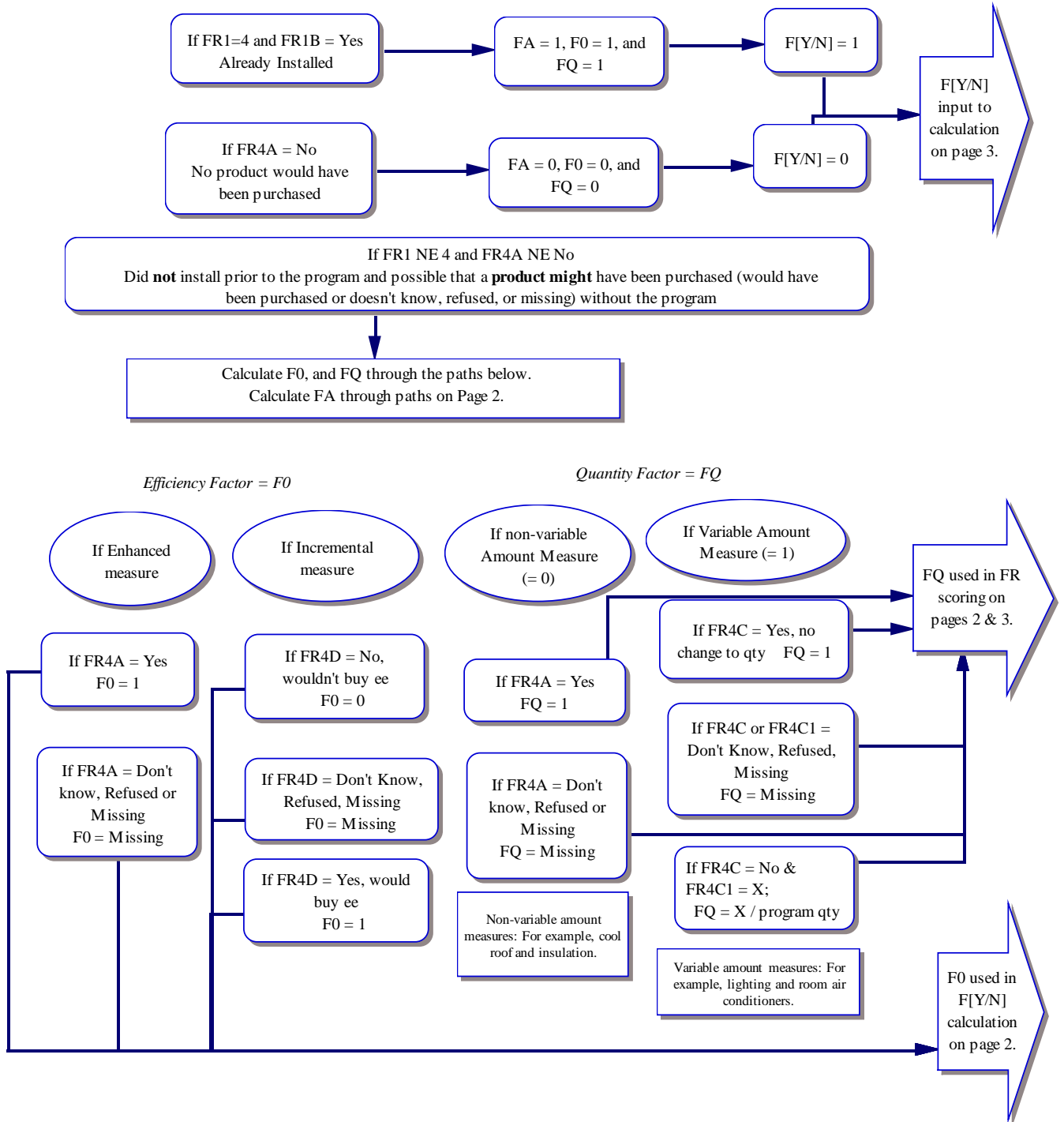
-98. Don't Know

-99. Refused

Appendix B. Res./Small Commercial Free-Ridership Algorithm

Simple Res./Small Commercial Free-Ridership Algorithm, November 2009

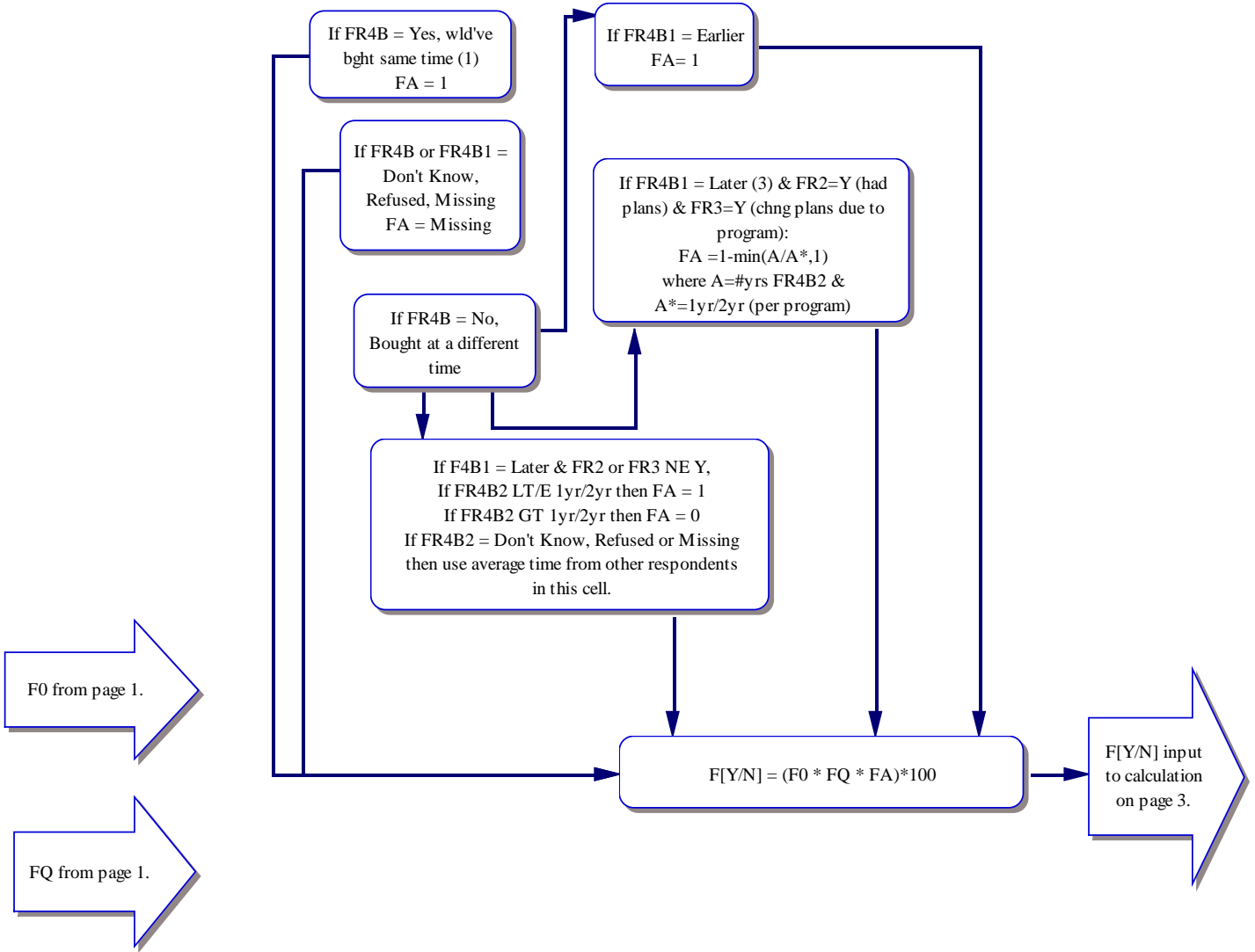
Page 1 of 3 -- Yes/No Series



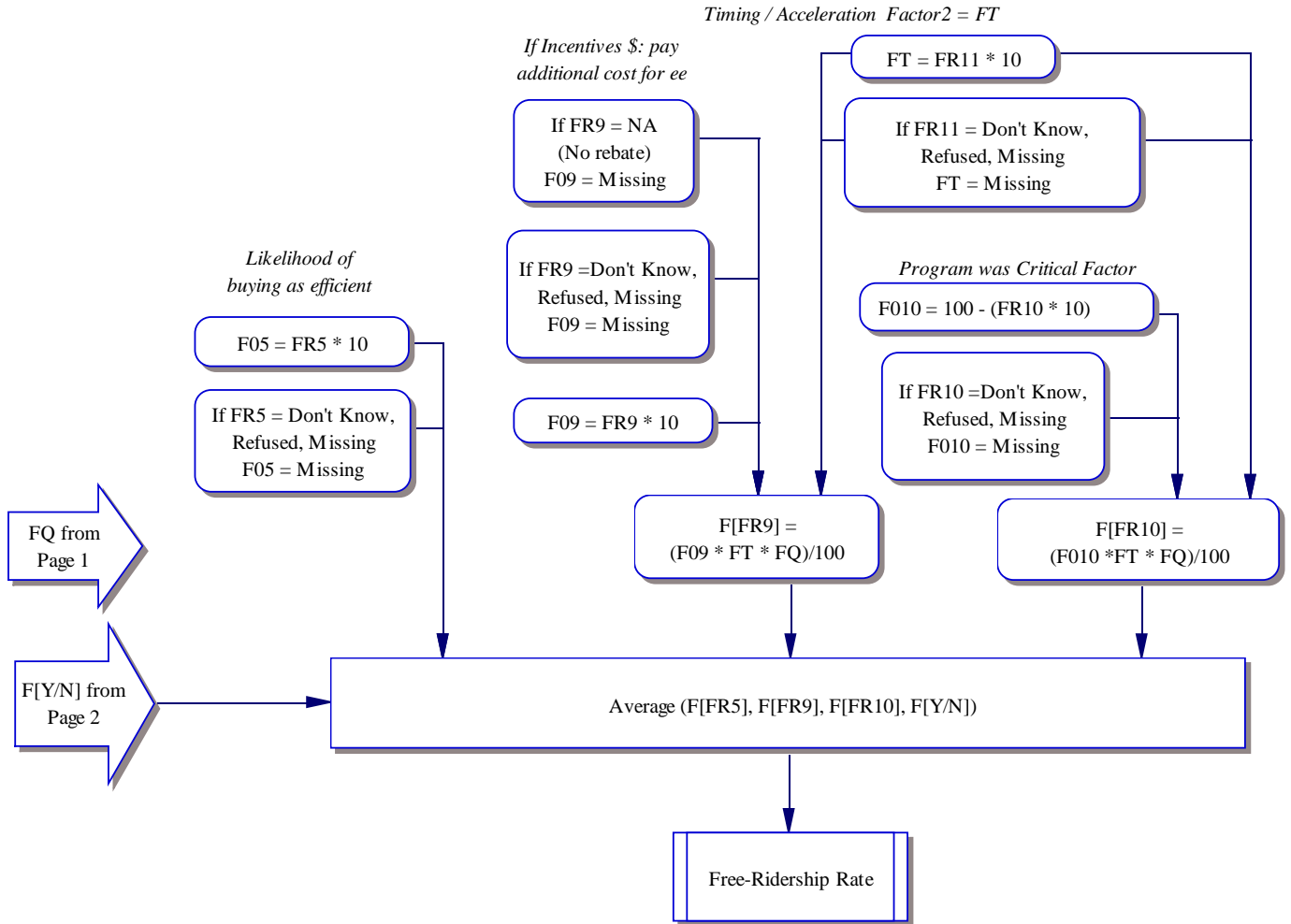
Appendix B. Res./Small Commercial Free-Ridership Algorithm

Simple Res./Small Commercial Free-Ridership Algorithm, November 2009 Page 2 of 3 -- Yes/No Series (Continued)

*Timing / Acceleration
Factor = FA*



Simple Res./Small Commercial Free-Ridership Algorithm, November 2009
Page 3 of 3



Appendix C. Final Set of Free-Ridership Scenarios Used within the Simulated Dataset

Motivation Focused Scenarios								
ID	Scenario	Efficiency Focused Customer	Lifetime Cost – Balance between utility cost & first cost	First Cost Focused Customer	Incentive \$ Value	Product Cost /Unit	Expected Free-Ridership Estimate	Test FR Estimate
1	Purchased single ENERGY STAR CFL to replace incandescent bulb with no regard for utility discount.	Yes	Yes	No	\$2.50/lamp	\$2 - \$10	100%	100%
2	Purchased ENERGY STAR CFL to replace broken CFL.	Yes	Yes	No	\$2.50/lamp	\$2 - \$10	100%	100%
3a & 3b	Purchased ENERGY STAR CFLs to replace incandescent bulbs. Two multi-packs were purchased. Deeply discounted price and Rebate Coupons	Yes	As long as 1 st price difference less than 50%	No	Deeply discounted price and Rebate Coupons	\$2 - \$10	0%	0% and 0%
4	Purchased and Installed ENERGY STAR CFL fixture in office. Found out later about incentive and applied for utility discount	Yes	Yes	Yes	\$20/fixture	\$60	100%	100%
5a & 5b	Business replaced Six multiple 4 lamp T12 fixtures with 4 lamp T8 Fluorescent fixtures in office. Driven by utility rebates. Business essentially paid labor cost, product cost was almost free.	Yes	Yes	Yes	\$75/fixture	\$80	15 – 45%	5% & 0%

Appendix C. Final Set of Free-Ridership Scenarios Used within the Simulated Dataset

ID	Scenario	Efficiency Focused Customer	Lifetime Cost – Balance between utility cost & first cost	First Cost Focused Customer	Incentive \$ Value	Product Cost /Unit	Expected Free-Ridership Estimate	Test FR Estimate
6a & 6b	Business had previously updated to T8 fixtures. Replaced 32W T8 lamps with low wattage 28W T8 Lamps in multiple fixtures for energy savings.	Somewhat	Somewhat	Somewhat	\$1.50/lamp	\$3.00/lamp	5 – 35%	7.5% & 0%
7	Replace broken refrigerator with standard model but with incentive went with ENERGY STAR refrigerator	No	Somewhat	Yes	\$50	\$700+	0%	0%
8	Replace old working refrigerator with ENERGY STAR refrigerator, shopped around for ENERGY STAR refrigerator	Yes	Yes	No	\$50	\$700+	100%	100%
9	Already Installed ENERGY STAR Refrigerator, Found out about incentive later	Yes	Yes	No	\$50	\$700+	100%	100%
10a & 10b	Replace broken room air conditioner	Yes	Yes	Yes	\$50	\$300+	50 – 80%	32.5% & 30%
11a & 11b	Replace old working room air conditioner with ENERGY STAR room Air Conditioner	Yes	Yes	No	\$50	\$300+	70 – 100%	88% & 76.5%

Appendix C. Final Set of Free-Ridership Scenarios Used within the Simulated Dataset

ID	Scenario	Efficiency Focused Customer	Lifetime Cost – Balance between utility cost & first cost	First Cost Focused Customer	Incentive \$ Value	Product Cost /Unit	Expected Free-Ridership Estimate	Test FR Estimate
12	Purchase a new room Air Conditioner for home or office. This person is the type of person who cannot walk away from a deal.	No	Somewhat	Yes	\$50	\$300+	0 – 30%	2%
13	Already Installed ENERGY STAR Air Conditioner, Found out about incentive later	Yes	Yes	No	\$50	\$300+	100%	100%
14	Replacing 2 old working room air conditioners (RAC) with plans to buy ENERGY STAR RAC for high use room & regular RAC for low use room. With rebate bought both as ENERGY STAR.	Somewhat	Yes	No	\$50	\$300+	30 - 50%	88%
15	Replace un-repairable Natural Gas Furnace	No	Doesn't consider	Yes	\$300	\$3000+?	0%	0%
16a & 16b	Replace End of Life working furnace with high efficiency furnace	Yes	Yes	No	\$300	\$3000+?	70 - 100%	100% & 80%
17a & 17b	Replace un-repairable furnace with high efficiency furnace	No	Yes	Yes	\$300	\$3000+?	15 - 65%	60% & 50%
19	Owner remodeled home and added insulation and heard of incentive after remodel.	Yes	Yes	No	\$180	\$1000	100%	100%

Appendix C. Final Set of Free-Ridership Scenarios Used within the Simulated Dataset

Direct Element Scenarios					
	Program impact on Timing	Program impact on Efficiency	Program impact on Quantity	Expected Free-Ridership Estimate	Test FR Estimate
201a & 201b	None	None	None	100%	100% & 100%
202	Accelerated purchase by 9 mos.	None	None	50 – 100%	75%
203	Accelerated purchase by 3 years	None	None	0%	25%
204	Decelerated purchase by 6 mos.	None	None	100% ¹⁰	92.5%
205b	None	Purchased more efficient	None	0%	0%
206	Accelerated purchase by 9 mos.	Purchased more efficient	None	0%	0%
207	Accelerated purchase by 3 years	Purchased more efficient	None	0%	0%
208	Decelerated purchase by 6 mos.	Purchased more efficient	None	0%	0%
209	None	None	Purchased 1 more ¹¹	50%	100%
210a & 210b	Accelerated purchase by 9 mos.	None	Purchased 1 more ²	5 – 50%	19.5% & 37.5%
211	Accelerated purchase by 3 years	None	Purchased 1 more ²	0%	12.5%
212	Decelerated purchase by 6 mos.	None	Purchased 1 more ²	25 – 50%	27.5%

¹⁰ This would create over 100% as increased usage, but none of our algorithms calculate based on increased usage. However, this is a rare circumstance – waiting for rebate program to begin again.

¹¹ Purchased a total of two and would have purchased one.

Appendix C. Final Set of Free-Ridership Scenarios Used within the Simulated Dataset

	Program impact on Timing	Program impact on Efficiency	Program impact on Quantity	Expected Free-Ridership Estimate	Test FR Estimate
214	Accelerated purchase by 9 mos.	Purchased more efficient	Purchased 1 more ²	0%	0%
215	Accelerated purchase by 3 years	Purchased more efficient	Purchased 1 more ²	0%	0%
216	Decelerated purchase by 6 mos.	Purchased more efficient	Purchased 1 more ²	0%	0%
217a & 217b	Don't know	None	None	0 – 75%	50% & 100%
218	Don't know	Purchased more efficient	None	0%	0%

Appendix D. Topic/Issue Links between Response to Overarching Comments on the Res./Small CI SRA NTG Method and Public Comments

- A Comment topic/issues are identified with their links in this document through these end-notes. Overview of instrument design and ability to meet the Energy Division's *Guidelines for Estimating Net-To-Gross Ratios Using the Self-Report Approaches*, October 2007.
- B Circumstances where a self-report approach is preferable to alternative NTG approaches.
- C Theory, causality and measure net effects.
- D Validity of self-report approach to determine impacts as demonstrated and relied upon in other fields of science and social science. These include areas where potential bias could be expected to be a more significant issue than within evaluations of energy efficiency investments.
- E Time from participation to survey for self-report NTG.
- F Warm-up questions.
- G Construct validity. Proper measurement of the underlying construct of free-ridership.
- H Need to use multiple questions to measure the construct, complicated decision-making, for free-ridership.
- I Evidence supporting the need to use multiple questions to measure the construct of free-ridership.
- J Evidence on differences between range within customer responses to FR questions versus variation and standard deviation within measurement of construct of FR.
- K Description of FR measurements where quantity, timing and efficiency are all addressed as joint probability, as independent areas of program influence.
- L Description of FR measurements where quantity, timing and efficiency are all addressed as joint probability, as independent areas of program influence.
- M Theory and use of interval versus ordinal data.
- N Anchoring and scales for the free-ridership survey questions.
- O Inconsistency testing and treatment.
- P Sensitivity analysis versus algorithm testing with simulated dataset for assessing free-ridership method.
- Q Social desirability and potential bias.
- R Discussion of social desirability bias and potential mitigation methods.
- S Recall, time from participation to survey and potential bias.
- T Residential Retrofit group data analysis shows no evidence of recall bias.
- U Small Commercial group data analysis shows no evidence of recall bias.
- V Issues when considering the use of primary data versus secondary sales data.

Appendix L - Sample Sizes

Sample Sizes Proposed and Evaluated ¹							
Cluster	Measure(s)	Sample Size Details					
		Site Visits		Metered Sites		Surveys	
		Proposed	Actual	Proposed	Actual	Proposed	Actual
Upstream Lighting	In home metering and site visits	1,200	1,233	1,200	1,129	NA	NA
Upstream Lighting	Manufacturer/retailer interviews	NA	NA	NA	NA	300 (150 per wave)	364 total (32 in depth interviews with manuf/retail buyers in 2008, and 28 in 2009; plus 155 participating and 149 non-participating retail store managers in 2009).
Upstream Lighting	Consumer In-store Intercept Surveys	NA	NA	NA	NA	1,200 (400 per wave)	1,200 (400 per wave)
Upstream Lighting	Consumer Intercept Telephone Survey Follow-up	NA	NA	NA	NA	76 (38 per wave)	74
Upstream Lighting	Focus Groups	NA	NA	NA	NA	18 Groups	18 Groups (123 total participants)
Upstream Lighting	CFL User Telephone Surveys	NA	NA	NA	NA	1,500 (300 per wave)	3,979 total and 491 recent purchasers (approx 800 and 100 per wave, respectively)

¹ Differences between proposed and actual sample size occurred for a number of reasons including limited numbers from which to pull samples as well as the switch from a program-based approach to a HIM-based approach. More detail is provided in individual chapters of the report, or in the case of HVAC or ULP, in the standalone HVAC or ULP reports.

Sample Sizes Proposed and Evaluated ¹							
Cluster	Measure(s)	Sample Size Details					
		Site Visits		Metered Sites		Surveys	
		Proposed	Actual	Proposed	Actual	Proposed	Actual
Upstream Lighting	CFL User Nested Follow-up Site Visit	250 (50 per way, 5 waves)	222 (approx 50 per wave, no 5 th wave)	NA	NA	NA	NA
Downstream Lighting	CFL fixture, Outdoor CFL fixture, Linear fluorescent, Interior screw lighting	614	614	96	41	2,072	2,072
HVAC	Res RCA	258	228	200	121	950	538 ²
	C&I RCA	50	46	50	42	250	35 ³
	Duct sealing	358	248	40	33	750	539 ⁴
	Furnace	70	70	70	70	900	301
	High Efficiency A/C	90	76	90	76	200	204
Water Heating	Clothes washer	300	164	300	136	1,600	990
	Dishwasher	43	43	0	0	604	604
	Water heater	150	150	0	0	600	600
	Aerators and Showerheads	394	394	0	0	1742	1742
Miscellaneous	Insulation	327	327	0	0	1797	1797
	Recycle Refrigerator	210	210	210	210	1,380	1,380
	Res Room AC	140	103	140	103	1097	1,097
	Pool pumps	90	100	0	0	600	647
Total		4,294	4,006	2,396	1,961	14,542	12,620

² The survey actual to complete rate is approximately 80%, due to few decision makers for number of units treated, not a good call list, and the compressed timeframe.

PGE2000 and SCE2507 had multifamily and single family surveys. The surveys "cover" at least the number of measures equal to the sample size, for example even though there were only 21 unique decision makers for SCE DTS, they accounted for over 100 DTS measures.

³ The survey actual to complete rate is approximately 15%, due to few decision makers for number of units treated, not a good call list, and the compressed timeframe.

⁴ PGE2000 and SCE2507 had multifamily and single family surveys. The surveys "cover" at least the number of measures equal to the sample size, for example even though there were only 21 unique decision makers for SCE DTS, they accounted for over 100 DTS measures.



Appendix M

- Disposition of Residential Retrofit Comments
 - List of HIM measures with corresponding kW, kWh, and therm data
 - Energy Division Decision Framework Document

Res Retro _Less ULP

Comment Number	Party Submitting Comment	Date	Author	Subject	Section/ Page	Attachment	Category	Response
1.01	SCE	1/9/2010	Shahana Samiullah	Res Retrofit HIM Impact Evaluation		view attachment	N/A	
1.02	SCE		Comment:	Part II of SCE comments on Res Retrofit HIM Impact Evaluation			N/A	
1.03	SCE							
1.04	SCE			Summary of Attachment			N/A	
			Comment:	The HIM approach to EM&V by design makes it impossible to evaluate net savings for many of the programs in the IOU portfolio, some of which needed this assessment in order to be well-considered for the IOUs' next program portfolio.			HIM Approach	In Decision 07-09-043, the Commission recognized that its staff may not have the resources to verify each parameter on an ex post basis for every program, and that the EM&V protocols provided staff with the flexibility to establish priorities for the EM&V efforts throughout the program cycle. We believe that the HIM results can provide important gross savings information to program managers, even if tier program was not included in any of the HIM sample frames. The administrative structure set up by Decision 05-01-055, under which these evaluations are still governed, provided the IOUs with authority to conduct process evaluations to provide feedback to third-party programs.
1.05	SCE		Comment:	There also seems to be ad hoc inclusion of HIM measures that don't necessarily fit the description of HIM, perhaps symptomatic of the confusion caused by the approach. SCE is requesting a table of measures with kWh, kW, therm data to help clarify this confusion about HIM determination.			HIM Approach	Please see table of measures with kWh, kW, therm data, below.
1.06	SCE		Comment:	Table ES2 data has errors as the data do not match with the data in other parts of the report, perhaps stemming from the difficulty in tracking the eventual HIMs in the process.			Proof Reading	Table ES-2 has been corrected to match the results in individual chapters.
1.07	SCE		Comment:	We hope that going forward the Energy Division will re-evaluate its 2006-08 approach to impact evaluation as well as plan on getting a wider participation of stakeholders, especially during times of critical decision-making, like that of changing the 2006-08 EM&V approach mid steam.			HIM Approach	We are currently evaluating our EM&V program. We hope that we will have more time to get participation from stakeholders in the future.
1.08	SCE		Comment:	Since a significant portion of SCE's measures in the SFEER program (and perhaps for other utilities, like SCG3517 program which is listed as a point-of-purchase program on page 5, wrong description for SDGE3024 on page 6) are based on Point of Sale rebate, the report does not make it clear how participants were identified and contacted for each of the HIM measure, especially for those in the SFEER program			Sampling	For each HIM, we have addressed the sampling strategy section and how the participants were identified. For example, Room AC respondents were a combination of direct participants (mail-in or Internet rebate) and POS participants that provided their contact information.
1.09	SCE		Comment:	The insulation HIM is the first place in the document where there is some mention of Point of sale issue under the Reliability, Bias, and Uncertainty HIM section.			Sampling	The sampling for POS participants, and potential bias, is now discussed in more detail in the Validity and Reliability Section, as well as in each HIM section where it is relevant
1.10	SCE		Comment:	There is some repetitions going on with different information provided under same HIM section for insulation. See page 75 and 79.			Proof Reading	Not clear what this comment is referring to--material on these pages is not insulation.
1.11	SCE		Comment:	On page 79 under the reliability section, it is quite alarming to read that the plan decides to ignore POS rebate participants and limit the sample to the mail-in rebate participants. Is this how other POS HIM measures were treated? What is going on with the boiler plate language for POS proportion for pool pump and insulation (see page 79 and 96)? This is very disconcerting and needs to be clearly laid out in the final report for each of HIM measure for POS participants.			Sampling	The sampling for POS participants, and potential bias, is now discussed in more detail in the Validity and Reliability Section, as well as in each HIM section where it is relevant.
1.12	SCE		Comment:	For room AC on page 92 of the HIM plan, the plan makes some promising remarks about potential bias in results due to (perhaps inclusion or non inclusion of) POS. However, the impact evaluation neither attempted to address nor reported on the treatment given to POS program population and sampling issues from this population.			Sampling	The sampling for POS participants, and potential bias, is now discussed in more detail in the Validity and Reliability Section, as well as in each HIM section where it is relevant
1.13	SCE							

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1.15	SCE	<p>Comment: Section 4 pages 2- 3 It is not clear why the summary table 1 for HIM in this contract group includes commercial and industrial RCA as well as residential RCA. Especially C/HIM should not belong or be reported as HIM of this or any residential impact evaluation. The same problem persists in table 3 that lists the data collection plan creating confusion for the reviewer what to expect in the report.</p>	Other	Intent was to show all measures classified under Residential Retrofit. A number of these measures (e.g., RCA) were included in residential programs which also served nonresidential customers.
1.16	SCE	<p>Comment: Section 5 – Furnace: This is a good example where the report needs to clearly document in the ex post parameter estimates provided in the summary section some delineation of which utility /HIM parameter was ex post estimated using own sample data, other utility data, or if it was based on DEER ex ante estimate, or updated DEER ex ante estimate. Furnace was deemed as a HIM for PG&E and so one would think that the summary table provides ex post results for PG&E. Yet the table includes evaluated UES for SCG in the summary table 1(pg 2). Again there is a discrepancy in sample size between the HIM plan (page 38) and what the impact evaluation reports. Clearly, this needs to be acknowledged and explained not just for this example HIM but where ever this is the case.</p>	HIM Approach	UES values are provided for each of the utilities (see Table 12). Because furnaces were identified as a HIM for PG&E the majority of the research focused on the PG&E service territories. A table comparing the original evaluation plan sample sizes and achieved sample sizes has been added as an appendix.
1.17	SCE	<p>Comment: NTG The report on page 16 indicates that for furnace the analysis of freeridership diverged from the standard NTG methodology used for other HIMs. It seems the freeridership analysis did some additional discounting, which seems to be arbitrary and leaves one wondering what other types of ad hoc adjustments have occurred in the application of the SR NTG method in this and other evaluations.</p>	SR NTG	Furnaces followed the standard self-report NTG algorithm with no "arbitrary discounting."
1.18	SCE	<p>Comment: Section 6- Clothes Washers: Gross Savings It is not clear what role non participant clothes washers are playing in the gross savings analysis. The methodology compares calculated usage between Energy Star (Tiers) and non Energy Star clothes washers. Is the baseline uses only non energy star clothes washers data from non participant sample? What role Energy Star clothes washer holdings by non participant play in the baseline calculations? Note that there are only 24 non-Energy Star clothes washers, if this is used as the baseline. If some of "in the absence of the program" efficiency includes Energy Star clothes washer holdings of the non participants, then this needs to be adjusted for in the gross savings before applying another ding from NTG.</p>	Measure Specific	All non Energy Star CW's came from the non participant sample. This group is the baseline against which energy star machines were evaluated. Clarified that all Energy Star / CEE Tier 1-3 machines were grouped together in the analysis.
1.19	SCE	<p>Comment: Sample Sizes There is no correspondence between the HIM sampling plan and the sample sizes presented in the report. All contract group reports should clearly specify what the HIM sample size was and if there were any changes to the sample size other than what was achieved, the reports need to specify the reasons for the change and the impact of the change on the sample precisions. For clothes washer sample sizes that satisfy the 90/10 requirement were deemed to be at least 300 or 400 planned for each of the two utilities and participant and non participant surveys (Table 30 page 65 of HIM Plan). Note there is a confusion going on between selected HIM utility between the HIM Plan and report (SCG and PGE in HIM plan and SDG&E and PG&E in the report). This makes it difficult to assess which utility parameter was estimated using its own ex post collected data versus estimated using other utility ex post data.</p>	Sampling	The evaluation changed in several ways between the time when the Residential Retrofit HIM Evaluation Plan (March 10, 2009) was completed and the publication of the Residential Retrofit HIM Evaluation Report (December 7, 2009). One of these was the decision to focus the study on PGE2000 and SDGE3023 since the clothes washer measure represented 4% of total utility gas savings for PGE and nearly 7% for SDGE, both substantially higher than SCG3517 (which represented approximately 1% of total claimed savings). A second difference between the Plan and the Report was that the study was unable to achieve the sample size goals for field work Table 19 provides detail to show the difference between the Plan and the Report. Additional detail on confidence and precision is provided in the Report.
1.20	SCE	<p>Comment: NTG CADMUS's criticizing of the SR results for clothes washers on page 48 is a direct challenge to SR NTG based on the simple grounds of reasonableness given the efficient market share being substantially lower than the SR freeridership estimate. This is another instance of the study results casting doubt on the SR NTG approach utilized in this and other contract groups.</p>	SR NTG	The use of additional primary/secondary data for the NTG estimates is described in the SR NTG Overarching Response. See Section 7, issue link V.

1.21	SCE	<p>Comment: Section 7 Dishwashers: This is an identified HIM only for SDG&E, but yet findings are also provided for PG&E and SCG. Again, if HIM is selected for one utility how does it translate to ex post results for the other utilities whenever these are reported in the report? Perhaps Dishwashers is another instance where data collection for other utilities that started during the verification phase was later abandoned with the HIM approach that again begs the question how partial data for non HIM utility/ HIM measure combination was used in the final ex post analyses.</p>	HIM Approach	The evaluation results will be applied to the measures that comprise that sample population. Results will only be applied across utilities if the results are determined to be comparable based on a review of the data. An outline of the criteria to be used by Energy Division and its consultants was provided in the ED Evaluation Framework Document sent 12/2/09 and included a table (see page 4 of the document). Detailed information about which records got which evaluation updates will be presented in the ED staff report due 4/15/10.
1.22	SCE	<p>Comment: It is heartening to see POS participants acknowledged for this HIM but, disappointingly, the report assumed non-inclusion of POS dishwasher participants as "nonresponse error" deemed to be minimum given the reported access to 79% of the dishwasher participants through available mail-in and on-line participants contacts. This is a population coverage issue affecting generalization of the results as these POS participants never got a chance to be randomly included in the sample, hence cannot be categorized as some form of nonresponse bias.</p>	Sampling	The sampling for POS participants, and potential bias, is now discussed in more detail in the Validity and Reliability Section, as well as in each HIM section where it is relevant
1.23	SCE	<p>Comment: Pool Pumps & Motors: This is specified as HIM for SDG&E but there is no mention of it as a measure for PG&E and SCE in the Table ES2 and in section 13 (even as non-HIM). It is not clear how, and if, the UES from the SDG&E HIM is going to be applied to SCE program, especially since the sample sizes used to collect data to update the engineering algorithm parameters is quite small (33 for single speed and 33 for multispeed pool pumps) to make any generalizations beyond SDG&E program population. Also, SDG&E participants eligibility includes reset agreements, which SCE pool pump rebate participants do not have.</p>	HIM Approach	The application of findings from the HIM evaluations to utility/measure combinations that were not included in the evaluation will be determined during the ERT process. Results will only be applied across utilities if the results are determined to be comparable based on a review of the data. An outline of the criteria to be used by Energy Division and its consultants was provided in the ED Evaluation Framework Document sent 12/2/09 and included above (see page 4 of the document). Detailed information about which records got which evaluation updates will be presented in the ED staff report due 4/15/10.
1.24	SCE	<p>Comment: Faucet Aerators: Footnote 5 says the UES is based on 2004-05 DEER since no 2008 DEER were available. If this is HIM evaluation, then it is expected that identified HIM gets an ex post evaluation with protocol guided rigor. Such and other exceptions should be clearly noted in the main body of the report rather than in footnotes.</p>	Measure Specific	The evaluation team allocated resources as appropriate, typically based on expected savings values. The limited number of measures relying on DEER for UES estimates represented 1% or less (per measure) of utility claimed savings. This is the only measure that relied on 2004-2005 DEER.
1.25	SCE	<p>Comment: Room AC: This study develops gross consumption and demand saving from a combination of 102 metered program A/C's (metered in summer 2009). A four part model is developed to account for hours of use, compressor on time, consumption with compressor off, and consumption with compressor on. Compressor on-time is inferred from a threshold of 250 watts. The model was used to produce annual hourly use and hours of use based on an hourly regression involving temperature and day of week inputs. The four models have very low explained variance except in the case of compressor usage. Hours of use estimated may be low (at 1007 annually in climate zone 10), and the models supporting these annual estimates have Rsquares of .07 and .06, indicating much potential for error. The study indicates that it cannot account for low UES values obtained, claiming that neither utility work papers, nor DEER provide guidance on the basis for claims. This may be disputable.</p>	Measure Specific	Although three of the four models have high potential for error, these models do not represent the large contributors to savings. The fourth model, the compressor usage model, represents the vast majority of both energy use and savings, and the R-squared on this model is 0.72 (or explains 72% of the variance). Regarding the low UES values obtained, the Evaluation Team requested but did not receive the utility work papers that document the assumed energy savings, and Room ACs do not appear in DEER.
1.26	SCE	<p>Comment: Furthermore, the basis for estimating achieved savings from the annualized operation of the 102 efficient appliances is unclear – the observed appliances EER's are assumed to be 10.8, and the base case is an EER of 9.8. Backup in the form of four lab-metered appliances (three non-Energy Star) that were selected based on popularity. How this work translated into any adjustments of the EER-delta-based "savings" estimated from the annualized appliance data is very unclear, if this occurred at all.</p>	Measure Specific	Because of the small sample size, the results from the lab metering were not used to adjust the savings estimates. Instead, the energy savings were calculated based on a combination of the field metering energy usage and engineering estimates.
1.27	SCE	<p>Comment: While very low UES values were obtained, ranging from 20 kWh to 60 kWh (climate zones 6 through 10), precision on these estimates was also terribly low 90/25.</p>	Confidence/Precision	The upper ends of the 90% confidence intervals for both kWh and kW is significantly lower than the claimed UES values for all climate zones researched.

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1.29	SCE	Comment: Verification rates (96% for SCE) appear to confuse retention (related to operability) with first year savings. This is of course a minor point by comparison to the UES issues just mentioned, and the NTGR estimation discussed below.	Verification vs. EUL	The protocols require that a measure be verified as installed and operational during the time the evaluation data collection (telephone or site visit) is conducted, to be counted towards program accomplishment. The Room AC verification rate accounted for seasonal storage.
1.30	SCE	Comment: The NTGR estimates once again rely upon the CPUC's standardized NTGR algorithm, which, as has been mentioned in more detail elsewhere in SCE comments, utterly confuses ordinal ratings with probabilities of taking a particular action, ignores differences in the meaning of ratings between respondents, and ignores differences in one unit changes in an ordinal "scale" for a single respondent. These are only some of the issues with this largely unvalidated effort to turn measurement straw into gold. For SCE, the result implies 66% free riders (which means, effectively, than an average of four ordinal influence items turned out to be 6.6).	SR NTG	The ordinal versus interval data issue is discussed in the SR NTG Overarching Response in Section 5.5, issue link M.
1.31	SCE	Comment: It is not clear why the 615 respondents for SCE are elsewhere indicated to total 1041, but it is clear that the expected precision is calculated assuming a binomial distribution rather than the averaging of ranks.	Proof Reading	The total number of surveys should read 629. This has been corrected in the text and in the appropriate tables.
1.32	SCE	Comment: As in other residential studies, the authors themselves seem to be skeptical of the result, indicating that it is implausible that 66% of customers choosing Energy Star would have done so absent the program, when the Energy Star maximum retail share observed nationally ranged from 36% to 50% over 2006-2008. The gap may well be related to the social desirability and/or cognitive balance/cognitive dissonance effects – ignoring for the moment that the ordinal average has very little to do with the probability of an action anyway.	SR NTG	The use of additional primary/secondary data for the NTG estimates is described in the SR NTG Overarching Response. See Section 7, issue link V. The ordinal versus interval data issue is discussed in the SR NTG Overarching Response in Section 5.5, issue link M.
1.33	SCE	Comment: Downstream Lighting: There are 4 HIMs under this lighting measure category and all the three utilities have the four measures as HIM under various programs. The savings estimation uses the delta watts from the ULP impact study, but does not provide information on how it compared with the on-site collected data on wattage for similar un-retrofitted fixtures. This would have been a valuable comparison.	Measure Specific	This can be discussed for future evaluation activities
1.34	SCE	Comment: Also the time-drift issue is mentioned for 1 % of the installed meters but does not tell us what it means for the hours of operation results.	Measure Specific	We tested each unit for time drift error before deploying any meters in the field, and any units with the error were not used in the field. Therefore we assume no impact from time drift on the HOU estimates
1.35	SCE	Comment: Table 178 is one of the rare places where confidence and precision levels are provided for each utility but again, as customary in this and other evaluation reports, such a table does not specify the parameters for which these are provided.	Confidence/Precision	The confidence and precision levels in table 178 assume a binomial and a 50% proportion, and can be used for a parameter such as installation rate (i.e., does the respondent have or not have the measure installed.)
1.36	SCE	Comment: The verification rates is inclusive of the persistence issues (early burnouts/replacements etc), which is problematic as technically speaking this is part of the EUL estimation.	Verification vs. EUL	The protocols require that a measure be verified as installed and operational during the time the evaluation data collection (telephone or site visit) is conducted, to be counted toward program accomplishments. We acknowledge that this estimate of installed and operational includes early burnouts and replacements.
1.37	SCE	Comment: The on-sites involved cluster sampling, but there is no discussion on appropriate weights used for data analyses. It is not clear what is the source of data (between ULP metering and downstream lighting metering) for the peak coincident factor for each of the four measures in Table 190(page 206).	Sampling	We noted in the table the source of the Peak Coincidence Factors
2.04	SCE	Summary of Attachment	N/A	

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2.06	SCE	<p>Comment: EVALUATION OBJECTIVES p. 115 Freezers. The study identifies refrigerators as the sole subject of the evaluation, essentially orphaning freezers, an integral part of the program and the expectations of the customer population based on past history. It is to be hoped that being orphaned by this study doesn't mean relegation to simulation and its attendant biases and error propagation. The study's later reference to "potential interactive effects" is also concerning given the established history of well-estimated gross savings, and well-designed strategies for extrapolating expected savings to hypothetical program designs and/or new programs, vs. the kind of selective, ad hoc work that so frequently goes into producing DEER estimates.</p>	ARP	The application of findings from the HIM evaluations to utility/measure combinations that were not included in the evaluation will be determined during the ERT process. Results will only be applied across utilities if the results are determined to be comparable based on a review of the data. An outline of the criteria to be used by Energy Division and its consultants was provided in the ED Evaluation Framework Document sent 12/2/09 and included above (see page 4 of the document). Detailed information about which records got which evaluation updates will be presented in the ED staff report due 4/15/10.
2.07	SCE	<p>Comment: PROGRAM OVERVIEW (p 116 ff.) p. 116 We might note that the overarching ARP goal is to prevent the continued operation of appliances in current or would-be transfer locations., where the latter may entail different environmental, household characteristics, or appliance uses.</p>	ARP	Cadmus added language to reflect this sentiment.
2.08	SCE	<p>Comment: p. 117 Table 93. ARP incentive levels are incorrectly described. SCE's refrigerator incentive was never \$25 as given, and rose from \$35 to to \$50 in 2008. The same was true of SDG&E.</p>	Proof Reading	Cadmus corrected the stated incentive levels for both utilities.
2.09	SCE	<p>Comment: METHODOLOGY AND SPECIFIC METHODS USED TO EVALUATE RECYCLED REFRIGERATORS (p. 118 ff.) p. 118 Study claims that it "exceeds required and aligned with methodology undertaken in the previous evaluation." Note that from a gross savings standpoint, this study only partially aligns with the previous study, but relies on that previous study's data for its claim to have achieved critical precision levels from the two disparate UEC models attempted. It will also emerge that the basis for estimating precision is never documented.</p>	Confidence/Precision	Cadmus softened the current language comparing the similarities of the two evaluations and ensure the basis for estimating precision is sufficiently documented.
2.10	SCE	<p>Comment: p. 118 Study claims that its version of the dual metering methodology is similar to that of the previous ARP evaluation – "aligned this evaluation with the methodology undertaken in the previous statewide evaluation." As it turns out the study gains some precision from the contribution of n's from the previous study, but takes very little note of the history of ARP evaluation in California and misrepresents the rationale for some of the previous work, in order to take another, somewhat superficial tack.</p>	Confidence/Precision	Cadmus softened the language comparing the similarities of the two evaluations.
2.11	SCE	<p>Comment: p. 119 "continues the investigation into determining the most accurate approach for estimating the gross energy savings generated by refrigerators recycled through ARP." As noted in our first general comment, the previous study adopted the commonsense view that each source of data was valuable, and that laboratory results in concert with efforts to reliably model the connection between lab an in/situ regressions was an appropriate evaluation strategy going forward.</p>	ARP	Cadmus softened the language comparing the similarities of the two evaluations.
2.12	SCE	<p>Comment: P. 119 There is no evidence on how the lab UEC regression developed by Cadmus was winnowed down to the handful of terms that is determined to "provide a better fit for the aggregated dataset." In general, throughout the study, we find little evidence of how a particular specification was arrived at, why an available data source that we pointed the study authors to very early on was ignored, or where allegations about the bias associated with previous methods received support in the Cadmus work</p>	ARP	Cadmus added language to the report that speaks to each of the three points raised.
2.13	SCE	<p>Comment: p. 120 Re. in situ metering methods. According to the study "in situ metering continued the investigation into the apparent disparity between estimating appliance consumption using the two methods with the intent of determining the most appropriate evaluation method." This was not the previous study's intent, and the "disparities" were already known to be multiple, context dependent, and, appropriately, to be modeled in estimating savings expected in different contexts – leveraging the reliable lab estimates and emerging information on the contingencies or interactions important in determining the relationship between lab and in situ consumption.</p>	ARP	Cadmus changed the words "apparent disparity". However, the comments from SCE talk extensively about the value of in situ and dual metering but never about how - for evaluation purposes - this information should be utilized. While exploring the relationship between the two methods is an interesting exercise, it must be done with the final purpose of identifying the most accurate method for establishing savings. The cost associated with dual metering (The DOE lab budget for this evaluation was nearly \$300k) is too high to justify exploration without end.
2.14	SCE	<p>Comment: p. 120 In situ metering. There is no discussion of the factors that may have been problematic in selecting for particular customers willing to undergo in situ measurement, or, as it turns out, modeling to determine whether selectivity adjustments should be included in in situ impact regressions.</p>	ARP	Cadmus added language to reflect that speaks to the impact of the selection process.

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2.15	SCE	Comment: p. 120 It isn't clear why the five different meters were installed in situ, given that only overall consumption was analyzed. As a simple example, the relationship between household size and door openings could have been investigated within the sample, to help buttress the use of household size as a regressor and extrapolation basis in the Cadmus in situ regression.	ARP	The other meters provided valuable information about how the refrigerators was being used and allowed Cadmus to remove units experiencing changes (unplugged, moved, etc) from the analysis. It should also be noted that SCE did not use any of the same information from the same meters for the 2004-05 analysis. Cadmus specifically explored including a simple analysis regarding household size and door openings.
2.16	SCE	Comment: p. 121 There is not analysis provided which supports the cost-cutting device of having recycling vendors install metering equipment.	ARP	The CPUC determined that this was most appropriate approach to field metering for the ARP evaluation.
2.17	SCE	Comment: p. 124 Sample design methods. The handling of PG&E frame data is problematic. We explained in the previous evaluation, and communicated Cadmus very early on that extensive work had been required using the vendor's data base as well as the PG&E tracking data, in conjunction with model lookup tables, in order to develop appliance configuration data. The report also explained how amperage was imputed for PG&E. The handling of the PG&E frame data leaves one unclear as to how it was possible that the original lab UEC model for 2004-2005 could ever have been used as a starting point. It is also not clear how population estimates of usage scenarios were developed (whether from participation data vs modeled imputations in the tracking data, and so forth).	ARP	The reliability of the lookups is questionable and were avoided for that reason. In addition, Cadmus believes some of the onus for this issue should be placed on the utility managers. Utilities need to make sure their implementers are gathering the data necessary for evaluation. This is not a new issue as it was raised in the previous evaluation as well.
2.18	SCE	Comment: p. 125 Zip3 and weather. The study didn't follow the previous study's more careful connection of measure locations with utility weather stations at the zip code level. In fact, cooling and heating degree data (arbitrarily 65% base on each), are an unweighted average, for any given household of all the NOAA stations "touching" that household via zip codes sharing its first three digits. This adds, conceivably massively, and in an undocumented fashion, to the unreliability of the weather data used in this study, and affects the precision of weather impacts upon both appliance consumption and the development of extrapolation methods.	ARP	The analysis did not use zip3 data, but rather data from the closest weather station. Zip3 data was only used for sample stratification and this was made explicit in report.
2.19	SCE	Comment: p. 127 The study indicates that there were difficulties in recruiting primary appliances in this study. The biases incurred in the achieved primary sub-sample (which was largely recruited by another mechanism in the previous study) may involve factors that influence the measured UEC itself, and no analysis is done to check this. The implementation of the retailer-based alternative used in the previous study was considered at the eleventh hour, from the standpoint of SCE's program manager and generally very adaptable tracking system contractor. The upshot, in an unfortunately roughly obtained way, was that the study achieved a balance favoring SDG&E territory that should be the rule rather than the exception in what are generally population-proportion based statewide studies.	Sampling	Cadmus believes this shortcoming of the evaluation is already sufficiently noted in the report.
2.20	SCE	Comment: p. 128 The study nowhere mentions weighting as the complement to the sample design, or the somewhat different achieved sample – with respect to the gross savings regression work, or other aspects of the study.	Sampling	Cadmus explored whether weighting would impact the analysis.
2.21	SCE	Comment: NET-TO-GROSS METHODS p. 130 As mentioned during study planning, the use of non-participant survey data in order to provide an alternative ("non-counterfactual") version of the NTGR should have included a weighting adjustment to reflect the fact that non-participant appliances that are discarded (destroyed or transferred) have a different level of saleability, possibly well-proxied by age, than participants.	SR NTG	Cadmus added language to the report explicitly stating the potential differences between participant and nonparticipant appliances.
2.22	SCE	Comment: p. 132 Precision and confidence. It is not clear how the precision estimates for the UEC's obtained from the DOE and in situ metering regression exercises were obtained. It should be very clear that in the absence of treasure trove of older appliances (if properly included in the regression specification), the DOE based estimates are if nothing else, imprecise with respect to estimation of UEC's in particular subgroup scenarios. This goes double for the in-situ only regression, where the lack of a variance reduction thanks to inclusion of the lab UEC as a regressor reduces precision.	Confidence/Precision	The commenter is mistaken - the in situ UEC regression does not utilize lab UEC as an independent variable.
2.23	SCE	Comment: VALIDITY AND RELIABILITY p. 133 Validity and reliability discussion. As in most of the CPUC studies, there are procedure descriptions, but no analysis supporting a particular claim to reliability or validity is provided.	ARP	Cadmus added additional detail to this section.

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2.24	SCE	<p>Comment: p. 134 DOE testing findings. The development of the final model is described very superficially. There is no evidence that the historical data, which would have added 1300 data points to the analysis, and in the past has been used to provide unbiased estimates of current year UEC's while incorporating additional information on the relationships between appliances, was ever considered in the analysis. Note that regressions are generally assisted by increasing the variability of samples on various X's. As noted, there is no evidence on how specific sets of interactions were considered, tested, and reduced or rejected. This also applies to the selection of a single dummy for appliance configuration – side-by-side – which appears to have "risen to the top" somehow. Note that the implied comparison in the case of a side-by-side appliance includes top freezers, manual defrost single door, and large bottom freezer models, making the specification atheoretical and highly sample-dependent – one can only speculate, but the likelihood is that regression would have been better served with a specification that incorporated a side-by-side plus bottom freezer term. Note also that the sole age interaction emerging from the exercise involves side-by-side x age – in fact there is a</p>	ARP	Cadmus investigated many of the issues raised and will add language and supporting analysis to the report that speaks explicitly to many of the issues raised.
2.25	SCE	<p>Comment: DOE TESTING FINDINGS p. 134 DOE testing findings. It does not seem appropriate to simply accept the PG&E vs. other appliances age differences, without investigating, for example, whether the program maintained an age restriction into 2006, or some other plausible explanation.</p>	ARP	Cadmus added language noting the potential impact of the age requirement change.
2.26	SCE	<p>Comment: p. 135 DOE –based full year UEC estimates. Note that the precisions for these full year estimates are affected by the truncation of sample at 321 appliances. The role of the massive imputations about the PG&E population (unnecessary given the availability of prior work on this problem and provided data sets including lookup tables) in both the precision of estimates, as well as the inability to reliably provide estimates specific to configuration or other subgroups, is not mentioned. In general, the specification issues bear upon the validity or bias of the full year estimates.</p>	ARP	The reliability of the lookups is questionable and were avoided for that reason. In addition, Cadmus believes some of the onus for this issue should be placed on the utility managers. Utilities need to make sure their implementers are gathering the data necessary for evaluation. This is not a new issue as it was raised in the previous evaluation as well.
2.27	SCE	<p>Comment: IN SITU FINDINGS p. 139 In situ extrapolation. Although undocumented, one must assume that extrapolation-serving temperature data came from the "zip3-averaged" NOAA data that has been reviewed above. Perhaps this unreliability lead to the finding that conditioned and unconditioned space appliances are not differentially affected by ambient temperature.</p>	ARP	The in situ extrapolation did not use "zip-3 averaged" weather data as noted, but rather weather data from the NOAA weather station closest to each metering study participant. Language has been added in the report in Section 11.5 to provide clarification
2.28	SCE	<p>Comment: p. 140 It is inappropriate to argue that the laboratory test "negates" the impact of environmental factors upon the UEC. The laboratory UEC is a standardized estimate which becomes useful in explaining consumption in variable settings when its interactions with key terms are modeled.</p>	ARP	Cadmus removed the word "negates" and instead discussed how the DOE test regulates test conditions.
2.29	SCE	<p>Comment: p 140 The development and definition of terms in the final in situ regression (Rsquare= 0.32) is unclear. The model does not engage the central question posed for fuller investigation by the last evaluation: how does lab UEC translate into various in situ contexts – what contingencies or interactions are important. "Warmer climate zone" is included but it is not clear whether this variable ever "competed" with cooling degree days itself. In general, the approach seems to have been one that approached the in situ UEC as a separate problem, rather than one in which the potential for leveraging the less selection biased DOE estimate was investigated, as some observers of this study had expected.</p>	ARP	Cadmus viewed the central question of the evaluation as "How much savings is generated when a participating appliance is recycled?", not "How do lab UECs translate into various in situ situations". Also, since all appliances were metered both in situ and under lab conditions both approaches are equally exposed to selection bias.
2.30	SCE	<p>Comment: DOE VS In Situ Findings p 141 The discussion of the DOE vs. in situ findings is not firmly based on the data presented. Additionally, the previous evaluation is cited as indicating that in situ consumption is typically 15% to 20% less than the DOE finding. This is taken out of context – the context was one in which the relationship between the two types of consumption were viewed as contingent on factors like in situ ambient temperature and household characteristics/appliance status – scenarios reflecting a variety of conditions including some that might relate to program design were illustrated.</p>	ARP	Cadmus altered the language characterizing the difference between in situ and DOE values reported in the previous evaluation.
2.31	SCE	<p>Comment: p. 142 There is reference to "apparent disparities" between lab and in situ results, while the contingent nature of the relationship is forgotten in favor of table 119's marginally significant results (SCE, for example, shows little difference between lab and in situ results).</p>	ARP	The report clearly indicates that the disparities between in situ and DOE varies according to numerous factor - or "contingencies" - as shown in the table.

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2.32 SCE	<p>Comment: p. 142 The interpretation of coefficients reflecting primary appliances, household size, and climate zone is useful, but doesn't bear directly or systematically upon the moderate observed overall sample differences between lab and in situ – overall differences which were never a point of interest in the previous study. Whether or not "modeled in situ consumption is 9% higher (sic) than the comparable DOE estimate" statewide is not the point – it is how the program impacts in situ consumption, and how the DOE test improves that estimate in interaction with other factors that is important.</p>	ARP	We do agree that the delta between in situ and DOE depends largely on these parameters and overall utility wide values are not that critical. Section 11.5 includes additional language that deemphasizes these estimates.
2.33 SCE	<p>Comment: p. 143 Arriving at the regression context that was of most interest to the previous study, the study did not, apparently entertain any interactions between lab UEC and environmental (or appliance characteristic) variables, producing an "adjustment matrix." The study goes on to state that "(A)ssuming thorough, properly analyzed in situ findings reflect true energy consumption, DOE testing generally overstates annual energy consumption by controlling for these critical environmental variations and typically exaggerates the energy savings generated by ARP." This hangs a responsibility upon the DOE test that the previous study did not: the intent in that study, and the hoped-for continued interest in the current study, was to determine ways to use the two in useful conjunction – combining the usefulness of the DOE in generalizing to an entire population of appliance characteristics without selection bias, with the ability of an accumulated set of in situ data to assist in determining how that result is conditioned by household circumstances.</p>	ARP	Cadmus understands the differences between in situ and DOE, but does not believe both expensive approaches are necessary to evaluate program savings in the future. While the recommendation of this evaluation is to focus on in situ metering, future evaluators are free to explore dual metering if desired.
2.34 SCE	<p>Comment: p 144 The study argues, implicitly, that the enhanced precision and reduction in selection bias, coupled with the potential capacity to provide usefully disaggregate estimates of savings, isn't worth the effort of dual metering – that simply collecting in situ measurements is the appropriate approach going forward. We argue that, having finally achieved the dual metering that we began lobbying for in 1998, it behooves the evaluation community to support continuance of an approach that includes a substantial subsample, in a given evaluation year, of dually metered appliances.</p>	ARP	Cadmus disagrees that continued dual metering is necessary and believes sufficient evidence exists to understand the relationship between in situ and DOE testing. Further, the enhanced precision gained from the inclusion of oldest DOE test data is marginal and bias the findings by including such a significant sample of older appliances. Lastly, since DOE metering occurs after an appliance is metered in situ, DOE units are subject to the same selection bias as in situ meters.
2.35 SCE	<p>Comment: P 144 Note that the increase in Rsquare from the in situ regression (0.32) to the under-specified in situ regression including the lab test as a regressor (.53) is strong evidence for the enhanced precision and reliability that come from adding this term (albeit failing to engage with the interaction issue). This is the argument often used on behalf of expensively obtained engineering simulation results' inclusion in SAE regression models – generally with much less return in explained variation compared to this case.</p>	ARP	The in situ regression model used to calculated gross savings does not include a lab UEC regressor as suggested in the comment.
2.36 SCE	<p>Comment: p. 146 Changes from the 2004-2005 DOE and/or in situ results are not specifically accounted for by decomposing the differences in adjusted means. Clearly the change in age distribution thanks to the relaxation of the age restriction for 2006-2008 is relevant, but it is not explicitly quantified. The switch from DOE to in situ-based reporting, ill advised as it may be if done wholesale, is noted to affect consumption by only 5% (albeit other results were reported earlier). This is a switch that we strongly hope will not be carried through, for reasons pointed out above.</p>	ARP	Cadmus added more language discussing the impact of the relaxation of the age restriction.
2.37 SCE	<p>Comment: p. 144 The leverage provided by the variation in the "wealth of DOE results gathered to support previous evaluations and appliance recycling efforts" is not credited by the study. Instead, the study argues that "the analysis of this evaluation found that the value of including these historic datasets was offset by biased, inapplicable results despite statistical mitigation attempts." There is no evidence of such an analysis, and there are obvious and effective specifications that have been used before in order to capitalize on these data. In principle, variation in regressors across the full range of realizable observations is critical; the covariances associated with these observations' inclusion are more informative; in any case, as the study indicate that over half the appliances currently recycled are pre-1993 vintage – and are very much relevant to estimating UEC's well and with high precision in association with in situ work ("Those data sets included exclusively results for refrigerators manufactured prior to the national standards – standards impacting nearly half of the refrigerators currently recycled by ARP (p. 144, emphasis added). This is hardly a basis for throwing away information that has contributed so heavily to the precision of evaluations in this decade, and</p>	ARP	Cadmus added language and analysis to support the exclusion of the historical data.

2.38	SCE	Comment: DEMAND FINDINGS p. 147 Demand findings. Given the wholesale regression approach to the temperature regression of Table 115 (based on averaged weather station data for "zip3's"; not disaggregate by appliance or conditioned status; not relying upon the wealth of longer term metering data supplied by the previous evaluation team), it is difficult to believe that the demand calculation's use of the regression result is the best that could have been done with available information.	ARP	Cadmus did not use ZIP3 weather data for the analysis - only for sampling.	
2.39	SCE	Comment: NET-TO-GROSS FINDINGS p. 149-150 Free ridership/ntgr work. We are not as convinced as Cadmus that non-participant results are appropriate for this evaluation, but understand the logic, and appreciate the fact that Cadmus has not conflated market effects with participant net-to-gross as other evaluations have. We have some concerns about whether non-participant results were weighted – they ought to have been weighted, as suggested to Cadmus, to properly reflect the relative non-saleability (proxied by age) of appliances that are recycled vs. otherwise discarded (destroyed/transferred).	SR NTG	Cadmus believes the inclusion of nonparticipant data bolsters the analysis. Further, it is the same approach and the same set of assumption regarding saliability as the previous evaluation.	
2.40	SCE	Comment: p. 152 Free ridership. We also have problems with the typing of actions according to whether they are indicative of free ridership, and, although it was part of the previous evaluation, we are leery of the assumption that all ten year old appliances are unsaleable (will be destroyed even if taken by a dealer or charity). The latter finding was based on an opportunity sample of market actors, and not findings for a substantial sample of differently aged appliances, and it is not firmly backed up by any of the research conducted in the current Cadmus study (p. 148). Assuming that the 10 year rule was applied in producing the NTGR findings in table 131, one may question why the following categories of disposition are treated categorically as indicative of free ridership among participants): Had primary removed by dealer (23.0% of SCE primaries) Each of these eventualities may have been affected by the 10 year rule instead (whether or not this is an accurate assessment). It is also not clear that the 10 year rule should be applied to charities (15% of SCE primaries). Turning to the non-participant disposition arrays, it is clearly untrue that for primaries "Sold it to a used dealer," "Sold it via garage sale," "Sold it when you moved" are free ridership (see Table 130). These transfers reportedly happened! If any of these codings actually occurred the net-to-gross should be recalculated.	SR NTG	Cadmus reviewed its analysis and none of the concerns regarding improper categorization - for both parts and nonparts - occurred.	
2.41	SCE	Comment: SUMMARY We disagree strongly with the study proposals regarding lab and in situ metering, and with the study's failure to include (and recommendation to discard) metering data that covers the manufacture years of more than half the 2006-2008 data – on grounds that have to do with the previous study's emphasis on precision, blending of methods, reliability of the DOE estimate as a regressor in estimating in situ consumption, and the capability to generalize results to populations, including tracking populations other than those studied. We feel that the power of the dual metering approach has been given short shrift in this study, and urge that future work continue to entertain this approach as part, but not all, of study designs. We disagree with how weather is handled in this study, and with the documentation and apparent development of regression specifications. We believe that the net-to-gross ratios should be checked based on certain classifications of dispositions as indicative of free ridership.	ARP	Cadmus added language and analysis to support the exclusion of the historical data, as well as to explicitly state the decision's impact on the evaluation's precision. As reported in previous responses, the analysis did not include weather data at the ZIP3 or mistakenly miscategorize NTG options as feared by the commenter.	
3.01	PG&E	1/7/2010 PG&E Company All PG&E Comments	N/A	view attachment	N/A
3.02	PG&E	Comment: Below please find PG&E's cover letter and comments for the Residential Retrofit and Upstream Lighting Draft Reports.			N/A
3.03	PG&E				N/A
3.04	PG&E	<u>Summary of Attachment</u>			N/A

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3.05 PG&E	<p>Comment: The principal weakness of the reports is that, due to methodological weaknesses, the conclusions are not reliable and do not represent an accurate measure of the program's performance. Specifically, (1) findings were based on an over-reliance on DEER values as opposed to direct metering or billing analysis; (2) savings used unreliable comparisons between participants and non-participants; and (3) savings estimates were significantly reduced by net-to-gross ratios (NTGR) based primarily on an unreliable self-reporting methodology which produced counterintuitive results.</p>	N/A	The evaluation team allocated resources as appropriate, typically based on expected savings values. The limited number of measures relying on DEER for UES estimates represented 1% or less (per measure) of utility claimed savings. Nonparticipants were only used for UES estimates for one HIM, clothes washers, in order to estimate the energy use of standard efficiency equipment. NTG is addressed in the NTG Response Memo.
3.06 PG&E	<p>Comment: 1. Insufficient data from direct metering or billing analysis The evaluator's analysis of gross savings of PG&E programs is not based on sufficient measured data, the quality of which often varied by high-impact-measure (HIM). While field measurement of savings and billing analysis was employed for some HIMs, the evaluator applied current modeled energy savings estimates for many others.</p> <p>Current savings estimates developed through building simulation modeling are based on a very small sample of building prototypes and behavioral assumptions that may not adequately mirror the building characteristics and behaviors of participating customers. For example, significant differences between the engineering-based (DEER-based) savings and the billing-analysis based estimates were manifest. Attic insulation savings were much higher than the engineering-based ex ante savings, while the opposite was true for wall insulation. The reliability of savings estimates based on such assumptions, as opposed to actual measured data, is questionable. The evaluators should state which values should be used going forward.</p> <p>In the Residential Retrofit Report, the gross energy savings analysis in some cases relied on comparisons between participant (P) and non-participant cohorts (NP). However, these cohorts often behave differently. Here, significant differences were reported between the two cohorts (e.g. number of clothes washing and drying cycles per week) that reflect different</p>	PG&E Overarching	The evaluation team allocated resources as appropriate, typically based on expected savings values. The limited number of measures relying on DEER for UES estimates represented 1% or less (per measure) of utility claimed savings.
3.07 PG&E	<p>Comment: 2. Changes in Gross Impacts are not Well Supported The upstream lighting gross impact results do raise questions regarding veracity of the efforts undertaken to determine impacts. For example, it is still unclear if sufficient efforts were undertaken by the evaluation team to verify the reasons for the differences between invoice data and tracking system data. The reason for the large disparity between tracking system results and invoice data is unknown and deserves further attention.</p> <p>The hours of operation, a key factor in determining gross impacts estimates, appear well developed, but are substantially lower than estimates prepared during the 2004-05 evaluation cycle. The evaluators were not able to provide a persuasive explanation as to why average usage had dropped so substantially during the last 4 years.</p> <p>Shipment/Sales data, while purporting to adjust for CFLs shipped prior to 12/31/2008, but sold after 12/31/2008, has the effect of undercounting program efforts. The number of lamps in storage also deserves more careful attention since the rate of storage seems to be growing rapidly. It is unclear if similar storage patterns are manifest for incandescent lamps, a useful cross-check on the storage methodology employed in the Upstream Lighting evaluation report.</p>	PG&E Overarching	See the ULP responses

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	Comment:	<p>3. Unreliable NTG calculations To estimate NTGRs, the evaluator relied primarily on a self-report survey developed by a statewide working group. This methodology produced counterintuitive and unreliable NTGRs.</p> <p>In recent testimony before the Public Service Commission of Wisconsin, Cadmus (the firm that led this evaluation) stated: "[s]elf report with multiple influences, especially for residential programs, is pretty unreliable."¹ Despite its unreliability, Cadmus chose to use the self-reporting methodology as the basis for its NTGR estimates here. The CPUC and its evaluation consultants prepared guidelines in an effort to minimize issues associated with the self-response method for determining the NTGR (i.e. delayed interviews). Although the Evaluation Protocols stress the use of multiple methods in order to "triangulate" on appropriate evaluation results, this approach does not appear to have been followed for this evaluation.</p> <p>The upstream lighting NTG assessments are very troubling given that a large number of approaches were undertaken and the results show a range of values from negative 28% (simple contrast model result for Hardware/Home Improvement stores to 100% for discount stores (retail buyer self report). There were many values to choose from in between these extremes, but the most compelling "take away" is that there are no adequate methods to accurately estimate NTG values.</p> <p>Overall, the NTGRs simply do not appear to be accurate. The participant selfreport NTGRs were uniformly very low. This is a confusing and counterintuitive result for many measures. For example, it is difficult to understand how the free ridership rate for high efficiency condensing furnaces could be higher than 80% given that these measures are not routinely stocked nor promoted by HVAC vendors and are significantly more expensive than standard furnaces. From a common-sense economic standpoint, individuals would not routinely be</p>	SR NTG	Dr. M. Sami Khawaja, Vice President of the Cadmus Group, participated in the Public Service Commission of Wisconsin Quadrennial Planning Process in November 2009 (Electronic Regulatory Filing system, reference number 122166). Dr. Khawaja wrote that rather than use a self-report approach, upstream programs should consider the use of sales data and the use of comparison areas. The Residential Retrofit team did use multiple approaches for the ULP evaluation, and did not rely solely on the self-report approach.	
3.08 PG&E					
4.01 PG&E	1/7/2010 PG&E Company	Impacts	x		
	Question:	Please provide the uncertainty ranges in the results. Please also provide the claimed kWh, kW and therms, rather than the % of IOU.		Confidence/Precision	Confidence and precision estimates are included for all HIMs using a sampling approach with estimates of mean/variance. Claimed savings are also provided for each HIM.
4.02 PG&E					
4.03 PG&E					
5.01 PG&E	1/7/2010 PG&E Company	Recommendations	xii		
	Question:	Please specifically identify what IOU you are referring to in each recommendation. This will aid in evaluating portions of the report applicable to PG&E programs. The formative feedback is welcome, but in this case, consists largely of generalizations and don't provide enough details to lead to concrete actions.		Other	Findings/recommendations that are specific to any single utility are identified as such. If no utility is specified the findings/recommendations apply to all utilities.
5.02 PG&E					
5.03 PG&E					
6.01 PG&E	1/7/2010 PG&E Company	Impacts	2		
	Question:	Why didn't you measure flowrates pre- and post-installation for showerheads/aerators when these are crucial to determine energy savings accurately? Absent these measurements, did you try using water billing data instead to estimate water and therefore energy savings?		Measure Specific	The evaluation team allocated resources as appropriate, typically based on expected savings values. The limited number of measures relying on DEER for UES estimates represented 1% or less (per measure) of utility claimed savings. Regarding water billing data - A billing analysis typically requires a savings of 10% or more. We would not expect to see savings in a billing analysis for low flow devices.
6.02 PG&E					
6.03 PG&E					
7.01 PG&E	1/7/2010 PG&E Company	NTG	7		

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7.02 PG&E		Question: The self-report survey used to estimate NTGR was long and complicated and this led to some non-completes. Please explain how many were not completed and what was done with these or other non-respondents? The final NTGR is significantly lower than DEER 2008 - can you explain this? Condensing furnaces still cost significantly more than standard furnaces and are not widely stocked nor promoted, as your vendor surveys pointed out. Would the "free rider" customers have insisted on buying condensing furnaces if the vendors had not had these in-stock, promoted them, and part of their incremental costs have been covered by program incentives? How did you deal with social response bias in the NTGR self-reports? Have you considered doing sensitivity analyses of respondents over time (e.g., today economic concerns are higher than environmental of a few months ago)? NYSERDA did this with CFLs (did in-situ corroborations of self-response results and found ~ 50% under-reporting in 2005, ~ 50% over-reporting in 2008).			SR NTG	See the SR NTG Overarching Response. See Section 7, issue link V, for the use of secondary market or sales data versus free-ridership estimation. Section 6, issue links Q, R and S, address social desirability and other potential bias issues (including issues with recall). In speaking with leading NYSERDA evaluators we were unable to identify and review this site for accuracy and context. Without a specific reference to an available study, we are unable to respond to this comment.
7.03 PG&E						
8.01 PG&E	1/7/2010	PG&E Company	NTG	7 (Footnote 11)		
8.02 PG&E		Question: Did you try to assess spillover? If yes--how large was it? If not, why not?			SR NTG	The policy is to not count spillover in 2006-2008. See Finding of Fact 27 of D. 05-04-051, "27. The speculative nature of any attempts to quantify spillover effects significantly reduces their applicability as an analytical tool at this time."
8.03 PG&E						
9.01 PG&E	1/7/2010	PG&E Company	Gas Savings	14		
9.02 PG&E		Question: What are the gas call signals you refer to here as part of the measurement of gas flow? The metering apparatus was apparently unable to determine total gas use. Is that correct?			Measure Specific	The call signals are the signals from the thermostat which "calls" for heat. This signal triggers a sequence of events in the furnace control circuitry which, among other things opens the solenoid allowing gas to flow. The variability in timing of this the sequence of events from beginning of the call to the opening and eventual closing of the solenoid - even from one "call" to the next on a single furnace - resulted in the inability to correlate the metered call data with the actual gas consumption of the furnaces. Consequently this data was not used to determine the gas consumption of the furnaces
9.03 PG&E						
10.01 PG&E	1/7/2010	PG&E Company	Gas Savings	16		
10.02 PG&E		Question: Did you try to confirm that indeed 3.3% of furnaces were installed before finding out about program? Did you use the fact that AFUE of furnaces taken out was 73% for 3.3% or did you simply take the baseline? Please identify the specific NTGR calculation used and state the basis for doing so.			Measure Specific	The 3.3% was based on the telephone survey responses, and because it was a stated action on units installed in previous years, could not be verified any other way. The savings claimed were based on the assumption that units were "Replaced on Burnout" as opposed to early replacement. Consequently, the AFUE baseline was for new, standard efficiency, furnaces. The validity of this baseline was investigated with furnace dealers as is discussed in the chapter. The NTG algorithm was the SR NTG algorithm as described in Appendix K of the report.
10.03 PG&E						
11.01 PG&E	1/7/2010	PG&E Company	NTG	16		
11.02 PG&E		Question: Did you research the impact of the program on the availability of high efficiency furnaces and how this availability of product influenced responses to free ridership questions?			SR NTG	The research did not focus on stocking/availability, but on sales. Availability is more closely associated with a market effects study. NTG was estimated based on the end-use customer self-report approach, as presented in the evaluation plan.
11.03 PG&E						
12.01 PG&E	1/7/2010	PG&E Company	NTG	16		
12.02 PG&E		Question: Why was the dealer NTG estimate completely discounted in the final NTG estimation for furnaces given that a goal of the protocols was to triangulate results? Dealers may have insights as to what non-participants were purchasing and how easy/difficult it was to get participants to purchase the condensing furnaces.			SR NTG	The use of additional primary/secondary data for the NTG estimates is described in the SR NTG Overarching Response. See Section 7, issue link V.
12.03 PG&E						
13.01 PG&E	1/7/2010	PG&E Company	Thermostat settings	18		

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13.02 PG&E		Question: Were the thermostat settings representative of winter settings? How often did you find the thermostat actually set? Past programmable thermostat evaluations have pointed out that significant portions of customers don't know how to operate programmable thermostats.	Measure Specific	Thermostat data was collected in winter by reading the actual thermostat settings. This data was supplemented by self reported data on usage in order to capture details such as periods when the thermostat or furnace may have been turned off, and whether the programming would have been bypassed on a regular basis. The goal of the data collection effort was to record the furnace usage in order to understand the savings achieved by the program - this was not an independent evaluation of savings from thermostats. Consequently the usage data was recorded for each home but we are unable to state with any reasonable certainty the percent of homes with programmable thermostats that are properly programmed and used according to that programming. For example, a dial thermostat that is turned down every time a person leaves the home and before going to bed would look the same in our data as the home that had a properly programmed - programmable thermostat.
13.03 PG&E				
14.01 PG&E	1/7/2010 PG&E Company	Thermostat settings	19	
14.02 PG&E		Question: How certain are the results by Climate Zone given the very small number of observations (Ns) for most of these? Can you please report results using appropriate number of significant figures? Do you agree that reporting results with 4 significant figures based on an N=4 seems excessive? Can you also include uncertainty bounds in the results?	Measure Specific	Details by climate zone are provided in the report, however confidence and precision numbers are only significant at the overall program level. Uncertainty bounds are provided for all measures with a statistical sampling approach. Only two significant digits are used in the results.
14.03 PG&E				
15.01 PG&E	1/7/2010 PG&E Company	DEER	20	
15.02 PG&E		Question: The evaluators compare ex-ante estimates with DEER 2008. Please confirm which of the various DEER updates values you used. Could these changes reflect others in the markets as well (e.g. increase baseline of AFUE 90? Or reduced hours of use due to increased building shell enhancements?)	Measure Specific	The most recent DEER update was used. DEER documentation addresses the methodology for determining savings estimates.
15.03 PG&E				
16.01 PG&E	1/7/2010 PG&E Company	Impacts	23	
16.02 PG&E		Question: Did you consider adjusting savings for the 41.6% of participants that installed new ducts? The new ducts likely resulted in significant savings compared to pre-existing, leaking ducts. This effect could be seen as participant spillover, yet you report no spillover. Can you explain why the reduced leakage energy savings were not taken into account?	Measure Specific	While as a separate measure it is easy to understand the claim that this is spillover, a more accurate description would be to say that these homes are actually realizing the claimed efficiency on a new unit. Since the savings assume units are Replaced On Burnout (ROB), the efficiency used on the baseline would assume sufficient airflow for the baseline unit to perform at its rated efficiency as well. Without the airflow upgrade, the unit would not achieve the claimed savings. Since not all homes will have properly balanced, sealed ducts, it is likely that this 41.6% actually is short of the level necessary for all of the remaining units to be achieving the savings claimed.
16.03 PG&E				
17.01 PG&E	1/7/2010 PG&E Company	Impacts	32	
17.02 PG&E		Question: What is the accuracy and precision for each of the tiers, especially the Non-Participant (NP) cohort of only 41 sites? There appear to be many cases with only a few data points yet the evaluators compare NP vs. Participants to get average savings and then proceed extrapolate to the entire population. Can you provide uncertainty analyses for these results?	Confidence/Precision	The report has been updated to provide the confidence and precision levels for the nonparticipant group vs. the combination of all ENERGY STAR clothes washers (across all tiers).
17.03 PG&E				
18.01 PG&E	1/7/2010 PG&E Company	Impacts	34	

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18.02 PG&E		Question: The claim that Non-Participants (NP) and Participants (P) are similar seems unreliable. The evaluation reports an average 5.36 vs. 4.76 loads/week respectively. That's approximately a 13% difference on average. This is likely larger by subcohorts where savings are assessed. Errors could propagate and be much larger due to weighing across cohorts and differences in hot water usage (see tables 20-22). Table 23 shows NP vs. P to be about 20% different in dryer cycles. How did you correct for these differences between P and NPs to calculate savings? It also appears as if P were more likely to do line drying? Please specifically identify how you corrected for the differences between P and NPs in developing savings estimates.	Measure Specific	All savings estimates are conducted at the "per load" level, thus normalizing for any differences in washer or dryer usage within and between the respondent groups.
18.03 PG&E				
19.01 PG&E	1/7/2010 PG&E Company	Impacts	37	
19.02 PG&E		Question: Table 24 shows meter characteristics. The evaluation points out that Watt Pro failed in a significant amount of cases. How often did it fail? How does the prevalence of failures affect the credibility of the readings of the rest? The evaluation discusses propagation of error but does not give a value, nor a likely upper limit. Why not? Please provide these values.	Measure Specific	The meters failed 22% of the time. However the portion of energy used by the clothes washer itself is low (6%) and savings provided by this portion of energy use are minimal. Therefore while the meter failure was not desirable it had little if any impact on the analysis.
19.03 PG&E				
20.01 PG&E	1/7/2010 PG&E Company	NTG	39	
20.02 PG&E		Question: How soon after purchase were the NTG telephone surveys conducted? As indicated in the SRA guidelines developed for this effort, the more time that passes, the less likely Self-Reports will be accurate. Also, given that spillover could easily counter most of the FR in this case, why wasn't spillover assessed?	SR NTG	The issue of recall is described in the SR NTG Overarching Response. See Section 6, issue link S. The policy is to not count spillover in 2006-2008. See Finding of Fact 27 of D. 05-04-051, "27. The speculative nature of any attempts to quantify spillover effects significantly reduces their applicability as an analytical tool at this time."
20.03 PG&E				
21.01 PG&E	1/7/2010 PG&E Company	Impacts	41	
21.02 PG&E		Question: Do the results in Table 32 align with in-home examinations (yours or in RASS) of percent of gas vs. electric clothes dryers? Customers may mistakenly believe their clothes dryers are electric without realizing they use natural gas to heat the drying air. How did you ensure this did not happen?	Measure Specific	To validate that the dryer fuel mix reported in telephone surveys, we compared the survey results to the most recent CA RASS results. The results are generally consistent although the RASS survey found a higher share of homes with no dryer. This is logical given that all parties surveyed for the clothes washer HIM had purchased a clothes washer between 2006 and 2008 where the RASS survey did not limit responses in this way. Presumably, many of the households with a washer also had a dryer.
21.03 PG&E				
22.01 PG&E	1/7/2010 PG&E Company	Impacts	43	
22.02 PG&E		Question: Another situation of false precision. Did you really measure average water temperatures to 4 significant figures? Also, the cold water wash values appear much higher than usually assumed. Was this measured and how could this have been affected by long pipes?	Measure Specific	The cold water temperatures were measured during use and the lowest values taken to minimize the impact of long pipe runs equilibrating with ambient temperatures. Cold water temperatures in Southern California are warmer than other regions because of higher average annual and higher ground temperatures. Values are only showed at two significant digits.
22.03 PG&E				
23.01 PG&E	1/7/2010 PG&E Company	Impacts	44	
23.02 PG&E		Question: Results here are odd and could be caused by differences between the groups you were comparing. Could higher energy usage for Tier 3 over Tier 2 also be due to measurement errors, or differences between cohorts? For example, did you contrast how many loads per week were done by Tier 2 vs. Tier 3 to see if the difference might not be due to Tier 3 being much larger and thus drying larger amounts of clothes? Did you correct for other possible differences such as size of family, number of small children or babies, etc?	Measure Specific	We are fairly certain that the increased energy use per load is not due to measurement error, because the change is fairly large, and we don't suspect errors that are systematic to machine type. Tier 3 machines were found to be, on average, 6% larger than the other ENERGY STAR machines, which likely drives much of this increase. The cohorts were assumed to be random, and thus did not adjust for differences in demographic characteristics.
23.03 PG&E				
24.01 PG&E	1/7/2010 PG&E Company	kW	44	

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24.02 PG&E		Question: How confident are you of the peak load assessment? Why? Can you provide more explanation of how it was derived and uncertainty values?		Measure Specific	Peak load was assessed by calculating the coincidence factor based on the time-stamped data for energy use of each laundry system. The main conclusion is that most laundry activity is off peak, and therefore kW demand impacts are low.
24.03 PG&E					
25.01 PG&E	1/7/2010 PG&E Company	Impacts	45		
25.02 PG&E		Question: We were unable to understand how you studied clothes washer electric use. Can you provide more details, perhaps add equations and/or diagram showing the algorithm used?		Measure Specific	Clothes washer electricity use was measured directly using Watt's Up Pro brand plug through 120V meters. The total electricity use was normalized into electricity used per load. It is low compared to the resistance heat used to heat water and dry clothes.
25.03 PG&E					
27.01 PG&E	1/7/2010 PG&E Company	kW	46		
27.02 PG&E		Question: Are the sample sizes underlying the kW results in Table 38 sufficient to infer that non-Energy Star washers create less peak kW than Energy Star models? How should these results be applied moving forward?		Measure Specific	The kW impacts are extremely low because most laundry activity occurs off peak and it does not occur every day. There is also a good deal of load diversity in that the total load by the systems for any given period is low. We don't believe that the non-ENERGY STAR systems have a lower technical peak (use less energy), but because the kW impacts are so low, a very slight shift in schedule among the groups due to non-systematic variability would be enough to shift the kW value to negative values. Statistically they are not significantly different from zero, meaning any technical reduction in kW is well below statistical variability.
27.03 PG&E					
28.01 PG&E	1/7/2010 PG&E Company	Impacts	47		
28.02 PG&E		Question: Savings are highly dependent on customers self report of whether they had electric or gas dryers. As noted earlier, customers can misrepresent the main fuel their clothes dryer uses. Given the huge variation in savings between these, did you contrast the self-report values with those found in recent efforts such as RASS, CLAS or other reports? How did you corroborate the accuracy of the self report data?		Measure Specific	We only metered electric dryers. Therefore, we did fuel type verification as we were unable to meter those that incorrectly reported dryer fuel (i.e., stated they had electric dryers yet, onsite, were found to have gas dryers) during the phone survey. This error was determined to be insignificant as less than 5% of our site visits reported incorrectly. The fuel shares were comparable to the most recent RASS study, but the final estimates were based on the participant fuel shares to reflect any potential differences in participants compared to the general population.
28.03 PG&E					
29.01 PG&E	1/7/2010 PG&E Company	Energy Savings	47		
29.02 PG&E		Question: Were the fuel share data that were derived from the participant phone surveys verified using on site data? It is possible that respondents may have stated they have an electric dryer (since electricity is used to spin the drum), when the heat is actually supplied by gas.		Measure Specific	We only metered electric dryers. Therefore, we did fuel type verification as we were unable to meter those that incorrectly reported dryer fuel (i.e., stated they had electric dryers yet, onsite, were found to have gas dryers) during the phone survey. This error was determined to be insignificant as less than 5% of our site visits reported incorrectly.
29.03 PG&E					
30.01 PG&E	1/7/2010 PG&E Company	NTG	48		
30.02 PG&E		Question: National and CA sales data appear to be at odds with the stated NTGR. How credible do you think the NTGR based on SRA is here? Why didn't you try other methods to estimate NTGR? Why weren't the NTG estimates adjusted using the Energy Star market share data which showed much lower share of Energy Star penetration than the estimated NTG values? Such additional analyses would seem to be in line with the Protocols, which dictate that multiple methods be employed to triangulate on the most appropriate final results.		SR NTG	The use of additional primary/secondary data for the NTG estimates is described in the SR NTG Overarching Response. See Section 7, issue link V.
30.03 PG&E					
31.01 PG&E	1/7/2010 PG&E Company	kW	48		

31.02 PG&E		Question:	The kWh savings in Table 42 are inconsistent with the kW savings in Table 43. Why did the consultant advocate no peak savings for efficient clothes washers? Reduced energy use combined with participant diversity in usage patterns should yield some peak savings given the suggested kWh savings.	Measure Specific	The kW impacts are extremely low because most laundry activity occurs off peak and it does not occur every day. There is also a good deal of load diversity in that the total load by the systems for any given period is low. The kWh impacts are calculated per system and are not reduced by load diversity of scheduling. For example if a laundry system saved 1 kWh over a 3 hour washer and dryer cycle, the maximum kW impact is 0.3 kW. If the laundry is done only 10% of the time during peak hours, the demand impact drops to 0.03kW. In this one example, a 1 kWh impact is equivalent to 0.03 kW. We don't believe that the non-ENERGY STAR systems have a lower technical peak (use less energy), but because the kW impacts are so low, a very slight shift in schedule among the groups due to non-systematic variability would be enough to shift the kW value to negative values. Statistically they are not significantly different from zero, meaning any technical reduction in kW is well below statistical variability
31.03 PG&E					
32.01 PG&E	1/7/2010	PG&E Company	NTG	49	
32.02 PG&E		Question:	The evaluators acknowledge that the NTGR is suspect. In Table 44, do the values shown and differences include NTGR? If they do, then most of the difference between ex-ante and ex-post savings is due to the NTGR, not to the GRR adjustment. Can you clarify exactly what is shown in Table 44? Could you modify the table to clearly show ex-ante, GRR, NTGR? Can you also add uncertainty bounds for both the GRR and the NTGR and NRR values?	SR NTG	The table shows each parameter independently and that NTG has not been factored in to UES values. Confidence intervals have been added to the report where available (i.e., for statistical sampling approaches).
32.03 PG&E					
33.01 PG&E	1/7/2010	PG&E Company	NTG	51	
33.02 PG&E		Question:	Sec 7.1 - not sure why you say only 2008 analyzed for PG&E. Can you clarify? What was done in 2006-07?	HIM Approach	Clarified in Section 7.1 that research done in 2008 covered program years 2006-2007. Since DW for PG&E was not identified as a HIM, no additional research was done in 2009 to cover the program year 2008.
33.03 PG&E					
34.01 PG&E	1/7/2010	PG&E Company	Methodology	Section 7/ pp. 51-63	
34.02 PG&E		Question:	Could you please comment on the cost-effectiveness of this evaluation effort? The savings being reviewed are a tiny portion of portfolio savings, yet the evaluation resources and efforts in Section 7 (Dishwashers) were quite substantial. How would you do this in the future to enhance the cost-effectiveness of the evaluation effort?	Measure Specific	Since dishwashers were considered a lower priority HIM relative to other measures, it received a smaller allocation of evaluation resources. We believe this level of rigor appropriate in regard to the claimed savings from dishwashers.
34.03 PG&E					
35.01 PG&E	1/7/2010	PG&E Company	NTG	69	
35.02 PG&E		Question:	How were the Joint Sample Self Report NTG results for water heaters adjusted for the fact that a high share of water heaters are replaced on burn-out (or leakage in the case of water heaters)? In these situations, the decision on what water heater to buy is made by the installer or the customer with significant installer input into the decision. Did you use any results from vendor/installer interviews? If not, wouldn't this reliance solely on customer self report affect the validity of the self-report NTG?	SR NTG	The evaluation did not perform interviews with retailers or contractors. End-use customers were screened for those that were aware of the program, and thus could answer the self-report NTG questions. The end-use customer self-report approach is consistent with what was proposed in the evaluation plan.
35.03 PG&E					
36.01 PG&E	1/7/2010	PG&E Company	NTG	Section 8/ pp. 65-75	
36.02 PG&E		Question:	SRA for NTG was done possibly 3 years after purchase. Please describe how that fact affects the validity of NTGR. Also, the questions on age of equipment replaced show that these energy efficiency measures last much longer than EUL assumed. Do you recommend changes to the EUL currently assumed? If so, what would you recommend?	SR NTG	See the SR NTG Overarching Response. Our examination does not show SRA NTG being done three years after purchase. See Section 6.3 issue link S.
36.03 PG&E		Answer:			
37.01 PG&E	1/7/2010	PG&E Company	EUL	71	

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37.02 PG&E		Question: Will the EUL results shown in Figure 1 be used to adjust the expected EUL for water heaters? If not, why not?		Verification vs. EUL	The current commission policy is to not use ex-post EUL results for 2006-2008, but the EUL data from the evaluation may be used to update future DEER numbers.
37.03 PG&E					
38.01 PG&E	1/7/2010 PG&E Company	Energy Savings	73		
38.02 PG&E		Question: Why didn't the evaluators provide information on the development of the 2008 DEER simulation estimates for water heaters?		Measure Specific	At the time the DEER 2008 update occurred, suitable data on water heaters was not yet available. How the commission uses the results of its evaluations is outside the scope of this report.
38.03 PG&E					
39.01 PG&E	1/7/2010 PG&E Company	Attic and Wall Insulation NTG	93-113		
39.02 PG&E		Comment: Notwithstanding the long running debate on weaknesses with NTG self report methods, the PG&E NTG finding of approximately 75% free ridership for attic and wall insulation retrofits is surprising. We note that similar NTG results were found for SCG and SDG&E so we conclude either there is likely no utility/region/program/method to implement with low free ridership, or something about the NTG methodology tends to dramatically overestimate free ridership.		SR NTG	See the SR NTG Overarching Response. The comment does not present a clear question or issue to address. It would appear the comment might be indicating market or sales data. If so, then see Section 7, issue link V.
39.03 PG&E		Response:			
40.01 PG&E	1/7/2010 PG&E Company	Insulation Not Installed vs. Ineligible	102 (Table 83)		
40.02 PG&E		Question: Table 83 shows "Units not installed / ineligible". Not installed and ineligible are very different findings to program management and valuable program feedback for improvement. Can the evaluators present the results in the two categories? For the ineligible category, can the evaluators also present the results by category of ineligibility (pre-existing insulation too high vs. insulation installed in ineligible location vs. other)?		Measure Specific	Substantially all of the insulation in these categories was ineligible (vs. not installed). An exact breakdown by reason for ineligibility (e.g., pre-existing too high, ineligible location, and other) was not available.
40.03 PG&E					
41.01 PG&E	1/7/2010 PG&E Company	Insulation Ineligible Savings Credit	103 (Table 83)		
41.02 PG&E		Question: The report says, "[t]he most common reasons ceiling insulation was found to be ineligible are that 1) existing, pre-retrofit insulation levels were too high (greater than R-11) and..." In cases when insulation was ineligible due to pre-retrofit insulation levels greater than R-11, the evaluators are correct that these installations are ineligible for program participation. However added insulation still saves energy. Did the evaluators estimate the energy savings of these installations or were no savings credited to these installations?		Measure Specific	The billing analysis was performed for a census of program participants. Therefore all savings associated with the program were counted (as noted briefly in section 10.3).
41.03 PG&E					
42.01 PG&E	1/7/2010 PG&E Company	Attic and Wall Insulation Savings Estimates	93-116		
42.02 PG&E		Question: Did the evaluators make any gross or net savings estimate for PG&E's attic and wall insulation res retrofit measures?		Measure Specific	From Billing Analysis in Section 10.5: Although the analysis plan included all three utility programs, the analysis for PGE2000 encountered two significant issues: the measure-tracking database was incomplete and the post-installation PG&E billing data had significant gaps. We were able to work around the first problem, but the second prevented us from completing the analysis.
42.03 PG&E					
43.01 PG&E	1/7/2010 PG&E Company	Attic and Wall Insulation Savings Estimates	112-113 (and Table 90)		
43.02 PG&E		Question: The report contains therm UES estimates from the billing analysis for SCG and SDG&E. Were any kW or kWh UES's estimated?		Measure Specific	Since insulation is a HIM for gas, the billing analysis was conducted on gas usage only. This study did not estimate UES values for kW or kWh.
43.03 PG&E					

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44.01	PG&E	1/7/2010	PG&E Company	Attic and Wall Insulation Savings estimates	112-113 (and Table 91)			
				Question: The report contains therm UES estimates from the billing analysis for SCG and SDG&E. Given that the DEER 2005 UES estimates are significantly different; to what do the evaluators attribute the difference? What values do the evaluators recommend using for future utility attic and wall insulation UES's? Can the evaluators also recommend PG&E UES values		Measure Specific	The report did not examine the reasons for the differences, however, differences from DEER can occur for a number of reasons, including differences in actual insulation levels and types of homes participating. Recommendations as to the future use of the results contained in this report are outside the scope of this evaluation.	
44.02	PG&E							
44.03	PG&E							
45.01	PG&E	1/7/2010	PG&E Company	NTG	103			
				Question: Given that insulation is added to older homes (since newer homes do not meet the eligibility requirements) how is it that the free ridership levels are so high given that the occupants have had decades to add insulation?		SR NTG	This is explicitly addressed within the SR NTG Overarching Response. See Section 7, issue link V.	
45.02	PG&E							
45.03	PG&E							
46.01	PG&E	1/7/2010	PG&E Company	Energy Savings	108			
				Question: Given the lack of a billing analysis supporting PG&E insulation savings results, what realization rates are recommended for the PG&E insulation program efforts?		HIM Approach	The application of findings from the HIM evaluations to utility/measure combinations that were not included in the evaluation will be determined during the ERT process. Results will only be applied across utilities if the results are determined to be comparable based on a review of the data. An outline of the criteria to be used by Energy Division and its consultants was provided in the ED Evaluation Framework Document sent 12/2/09 and included here above (see page 4 of the document). Detailed information about which records got which evaluation updates will be presented in the ED staff report due 4/15/10.	
46.02	PG&E							
46.03	PG&E							
47.01	PG&E	1/7/2010	PG&E Company	EUL	137			
				Question: Will the EUL results shown in Table 112 be used to adjust the expected EUL for refrigerators? If not, why not? Will the average energy consumption results be used to recalibrate savings associated with installation of new refrigerators?		Verification vs. EUL	The current commission policy is to not use ex-post EUL results for 2006-2008, but the EUL data from the evaluation may be used to update future DEER numbers.	
47.02	PG&E							
47.03	PG&E							
48.01	PG&E	1/7/2010	PG&E Company	NTG	149			
				Question: The issue of socially desirable response bias is raised by the evaluators specifically with respect to refrigerator recycling specifically and for other energy efficiency efforts in general. The use of non-participant actual behaviors was employed to mitigate the inaccuracy induced by socially desirable response bias. Why was a similar approach to mitigating this type of bias not employed for all measures evaluated?		SR NTG	The unique nature of the appliance recycling program warranted a different approach from the standardized SR NTG algorithm, and nonparticipants could be utilized to help inform the program NTG.	
48.02	PG&E							
48.03	PG&E							
49.01	PG&E	1/7/2010	PG&E Company	NTG	167			
				Question: Why does the PG&E program have a significantly higher level of free ridership than the SCE and SDG&E programs, particularly given that program activity was much less than the SCE and SDG&E programs?		SR NTG	PG&E actually has a lower level of free-ridership (i.e., a higher NTG) than the other utilities. Results are based on the self-report NTG method. Examining the reason for differences by utility were outside the scope of work for this project, but could be addressed in future process evaluations	
49.02	PG&E							
49.03	PG&E							
50.01	PG&E	1/7/2010	PG&E Company	NTG	170			
				Question: Were the retailer survey responses used to derive the final NTG estimates? If not, why not?		SR NTG	The use of additional primary/secondary data for the NTG estimates is described in the SR NTG Overarching Response. See Section 7, issue link V.	
50.02	PG&E							
50.03	PG&E							
51.01	PG&E	1/7/2010	PG&E Company	NTG	177			

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51.02 PG&E		Question:	While the disparity between joint sample self-report NTG estimates and National Energy Star Retailer Partners sales data is noted, it does not appear to have been used to develop the final estimates of NTG values for Room AC units. Why wasn't the sales data used to obtain a "triangulated" estimate of NTG?	SR NTG	The use of additional primary/secondary data for the NTG estimates is described in the SR NTG Overarching Response. See Section 7, issue link V.	
51.03 PG&E						
52.01 PG&E	1/7/2010	PG&E Company	Energy Savings	191		
52.02 PG&E		Question:	Given the results found for SDG&E, what recommendations, if any, do the evaluators have regarding pool pump energy savings values that should be employed by PG&E?	HIM Approach	The application of findings from the HIM evaluations to utility/measure combinations that were not included in the evaluation will be determined during the ERT process. Results will only be applied across utilities if the results are determined to be comparable based on a review of the data. An outline of the criteria to be used by Energy Division and its consultants was provided in the ED Evaluation Framework Document sent 12/2/09 and included above (see page 4 of the document). Detailed information about which records got which evaluation updates will be presented in the ED staff report due 4/15/10.	
52.03 PG&E						
53.01 PG&E	1/7/2010	PG&E Company	Verification Rate	201		
53.02 PG&E		Question:	What methods were employed to adjust verification rates to account for field staff error/inability to locate fixtures that were installed, as opposed to merely assuming that the fixtures were not installed?	Measure Specific	Facility/building managers were asked to help us locate program fixtures, and field staff conducted a comprehensive search to locate program fixtures. If program fixtures were not located they were not considered installed.	
53.03 PG&E						
54.01 PG&E	1/7/2010	PG&E Company	NTG	202		
54.02 PG&E		Question:	Why are the NTG ratios in Table 181 significantly lower than NTG ratios for direct install contractors (Small Commercial study) given that PG&E's downstream multifamily program is operated through approximately 13 direct install contractors?	SR NTG	Results are based on the self-report NTG method. Examining the reason for differences by program were outside the scope of work for this project, but could be addressed in future process evaluations	
54.03 PG&E						
55.01 PG&E	1/7/2010	PG&E Company	Gross Realization Rates	General		
55.02 PG&E		Comment:	PG&E understands that the contractors prioritized certain parameters to evaluate for the High Impact variables. As a result, the study was unable to provide gross realization rates and therefore, difficult for PG&E to assess the impact on savings. While ED was responsive to the data request and engaged in phone conversations to discuss the matter, the lack of this information inhibits PG&E's ability to understand the full impact on energy savings.	HIM Approach	The ED provided a detailed response to the PG&E data request.	
55.03 PG&E						
56.01 SDG&E	1/7/2010	Athena Besa	Overarching Comments	view attachment		
56.02 SDG&E		Comment:	Please see below.			
56.03 SDG&E						
56.04 SDG&E		Summary of Attachment				

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56.05 SDG&E	<p>Comment: 1) The primary conclusions regarding almost every measure (furnaces, clothes washers, dishwashers, insulation, room air conditioners, and pumps and motors) are identical. Specifically, the installation/operation compliance rates are near 100% but the overall values are reduced dramatically by excessive estimates of free ridership. All free ridership estimates for these programs use the same protocol, the self report approach (SRA). In every situation, this approach generates excessive free ridership estimates, in spite of evidence to the contrary. For example, evidence from sales of ENERGY STAR retailers on clothes washers suggests a much lower free ridership rate. As stated in the report (page 48):</p> <p>"The self-report NTGR is also substantially higher than the market share data reported by the Department of Energy (DOE). The National ENERGY STAR Retailer Partners are required to annually provide sales data to the DOE for dishwashers, clothes washers, room air conditioners, and refrigerators. In 2006-2008 the National ENERGY STAR retailer partners reported the market share data for ENERGY STAR clothes washers (which is also inclusive of all the more efficient CEER tiers) was 38% in 2006, 42%, and 24%, respectively. Additionally, the 2007 Iron Market Share Report³⁸ found that 45% of California clothes washer sales were ENERGY STAR rated or higher. While this is not an estimate of free-ridership, it is an indication that sales of ENERGY STAR clothes washers were in the 24%-42% range throughout the U.S., substantially lower than the self-reported estimate of free-ridership in this study".</p> <p>In addition, the SRA results are inconsistent with actual behavior of consumers, particularly in</p>	SR NTG	The use of additional primary/secondary data for the NTG estimates is described in the SR NTG Overarching Response. See Section 7, issue link V.
56.06 SDG&E	<p>Comment: 2) The results for refrigerator recycling deviate from the norm described above. Specifically, the estimated net-to-gross values are equal to or greater than claimed values but the ex post gross savings are significantly less than ex ante gross savings. It should be noted that the NTGR estimates for recycled refrigerators are based on a completely different protocol than the SRA (non-participant behavior is evaluated and the disposal of the old refrigerators is considered). Again, this suggests that the NTG values for the other measures in all of the evaluations that use the SRA methodology may be significantly biased downward.</p>	SR NTG	The unique nature of the appliance recycling program warranted a different approach from the standardized SR NTG algorithm, and nonparticipants could be utilized to help inform the program NTG.
56.07 SDG&E	<p>Comment: 3) The ex post gross savings estimates for refrigerators was done differently than the other measures evaluated and are based on a regression of in situ modeling data rather than a regression of DOE modeling data (the protocol used in previous evaluations). The joint utilities have the following concerns with this type of evaluation.</p>	ARP	Cadmus believes that information obtained through this and the previous evaluation indicate in situ metering, not DOE lab testing, is the most appropriate method for assessing per unit savings. While this may differ from the previous ARP evaluation, the use of in situ metering to determine savings is consistent with the evaluation of other HIMS.
56.08 SDG&E	<p>Comment: a. First, because the participants in the in situ study know they are being evaluated (metered), results of the in situ evaluations are subject to the Hawthorne effect. Specifically, the Hawthorne effect refers to the situation where members of the treatment group act differently because their participation in the study makes them feel special, regardless of the treatment. This will bias the results of the evaluation towards finding smaller energy savings than would otherwise be present.</p>	ARP	Cadmus acknowledges the potential for a Hawthorne Effect when conducting any type of evaluation. However, Cadmus also believes the bias of a Hawthorne effect is lessened when a baseload measure such as a refrigerator is being assessed. Unlike air conditioners or other appliance manually controlled by the participant, the refrigerator is plugged in and operational throughout the evaluation period. Any refrigerators that were unplugged temporarily during the evaluation period were excluded from the analysis. Cadmus added language to the report acknowledging the potential for the Hawthorne Effect (Section 11.4) but also noting difference in bias between baseload/non-baseload measures as well as the quality controls put in place to detect changes made by the participant.
56.09 SDG&E	<p>Comment: b. Second, there is potential for significant sample selection bias, in which households that agreed to participate in the in situ evaluation were not randomly assigned. Thus, the evaluation may suffer because the characteristics of participants in the study (both observed and unobserved) are not representative of the larger population. For example, those that agreed to participate may be "greener" than those that did not agree to participate. This would once again bias the results of the evaluation towards finding smaller energy savings than would otherwise be present. This problem may be particularly acute given that the author's note that: "However, due to difficulty recruiting sufficient participants for the metering study, the final metering sample fell short of its goal. In particular, the evaluation was unable to solicit as many primary appliances as targeted. This was due to participants' unwillingness to postpone delivery of their replacement appliances in order to allow sufficient time for metering. There were also issues related to the timeliness of participation data provided by the utilities or its implementers. In addition, a significant number of metering study participants canceled after initially agreeing to participate. As noted above, this problem was particularly prevalent for primary appliances."</p>	ARP	Cadmus acknowledges the potential for self-selection bias in all evaluation work. Sample stratification were put in place to mitigate this to the greatest extent possible. However, it should be noted that the final analysis is weighted to reflect the actual program distribution of primary/secondary appliance so the impact of the specific issue noted is addressed.

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56.10 SDG&E	<p>Comment: c. Third, none of the work is up to current scientific standards regarding the development and use of empirical models. Further, these standards are not of recent vintage. For example, see the following two papers published in the early to mid-1980s:</p> <p>i. Leamer, Edward E., "Let's Take the Con Out of Econometrics," American Economic Review, 73, pp. 31-43, 1983.</p> <p>ii. Leamer, Edward E., "Sensitivity Analysis Would Help," American Economic Review, 75, pp. 308-313, 1985.</p>	ARP	<p>Cadmus adhered to the California Evaluation Protocols (published in April 2006) in developing the empirical models for all the residential retrofit measures. These are a compilation of the best practices in rigorous evaluation methodology. Cadmus believes the models included in the evaluation accurately and effectively estimate program savings.</p>
56.11 SDG&E	<p>Comment: d. The refrigerator recycling evaluation provides only one regression based on the in situ modeling. Contrary to the standards for conducting econometric analysis, there are no robustness tests, no consideration of alternative functional forms or independent variable sets, and no evaluation of measurement error or alternative estimation techniques. And this one regression is the sole basis for the new evaluation protocol and the ultimate determination that the IOUs fail to achieve the savings goals. This seems premature without additional information about the sensitivity of the results to allowance for the Hawthorne effect, sample selection bias, and a series of robustness tests.</p>	ARP	<p>Cadmus added language to the report in Section 11.5 detailing the different model specifications attempted before identifying the appropriate model.</p>
56.12 SDG&E	<p>Comment: e. Fourth, the regression results produce inconsistent and counter-intuitive results. For example, the model used to forecast yearly refrigerator use from 10 – 14 days of in situ modeling concludes that "no statistically significant difference was found between appliances in conditioned v. unconditioned spaces" (see p. 138). Yet, outdoor temperature is significant (see p.139) and appliances in warmer climate zones use more energy than those in cooler climate zones (see p. 142).</p>	ARP	<p>The model called into question in the comment considered conditioned/unconditioned location and it's interaction with outdoor temperature as candidates for the model, but these terms were not statistically significant after controlling for the appliance's 'base load', or average kWh through the metering period. Theoretically, any impacts that the location of the fridge (geographically by climate zone or in a conditioned/unconditioned space within the home) would have on consumption are already captured in the 'base load' term. Discussion regarding this has been added in Section 11.5.</p>

List of High Impact Measures

With Corresponding kW, kWh, and Therm Data

Measure Name	SumOfGrkWh	SumOfGrkW	SumOfGrTherm	SumOfNetkWh	SumOfNetkW	SumOfNetTherm
Add economizer	4,720,605	352	19,049	3,556,979	280	15,239
ASH control	7,135,284	399	0	5,841,274	326	0
C&S	42,205,000	0	8,560,000	21,102,500	0	4,280,000
Central plant	7,388,015	5,400		5,910,412	4,320	
CFL Fixture	191,191,232	19,914	0	156,590,944	16,606	0
Chiller	53,472,680	12,625	1,307,353	39,493,867	9,617	1,045,882
Clothes dryer	0	0	12,080	0	0	9,925
Clothes washer	51,345,534	26,125	5,332,587	41,147,843	20,930	4,270,625
Coil cleaning	38,931,011	24,675	0	34,454,032	22,015	0
Compressed air	79,596,776	11,160	0	57,381,928	8,040	0
Computer power supply	6,476,289	1,188	0	5,844,059	1,057	0
Cool roof	2,863,353	918	-3,356	2,112,708	716	-2,725
Cooling tower	3,427,731	698		2,410,623	489	
Copier	133,182	10	0	111,260	8	0
Daylighting control	857,131	253	-13	746,427	217	-11
DCV	5,597,891	1,154		5,022,563	1,038	
Desk lamp	4,452,228	332	0	3,561,782	266	0
Dishwasher	11,250,975	3,558	483,213	9,029,334	2,856	387,224
DR lighting control	3,019,375	931		2,717,438	838	
Duct sealing and insul	18,074,024	25,097	1,685,168	15,405,481	21,853	1,356,565
Economizer adjustment	3,111,529	21	0	2,689,955	18	0
EMS	38,503,877	5,402	33,851	28,854,971	4,164	27,081
escalator controls	199,425	45		179,483	41	
Evap cooler	5,333,021	8,026	0	4,344,487	6,506	0
Exit sign	29,405,380	3,375	0	26,062,802	2,978	0
Faucet Aerator	1,523,270	335	736,596	1,227,824	270	600,510
Filter replacment	888,561	125	0	710,849	100	0
Floor lamp	2,035,050	161		1,628,040	129	
Food Service	25,400,100	3,514	6,839,859	22,871,326	3,170	6,827,673
Freezer	391,786	46	0	388,110	46	0
Fume hood controls	1,861,796	108	45,835	1,489,437	86	36,668
Furnace	6,242	0	2,133,825	4,994	0	1,731,894
Greenhouse heat curtain	0	0	3,239,718	0	0	3,089,031
Greenhouse IR film	0	0	1,000,211	0	0	960,203
Heat Recovery	2,767,890	496	7,152,518	2,061,184	368	5,506,477
Heating Boiler	244,905	14	22,560,382	195,712	12	16,081,729

Measure Name	SumOfGrkWh	SumOfGrkW	SumOfGrTherm	SumOfNetkWh	SumOfNetkW	SumOfNetTherm
Heating boiler control	0	0	917,654	0	0	645,916
HID	52,967,745	8,478	0	43,292,019	7,009	0
High bay fluorescent	140,856,205	39,798	0	126,912,458	35,699	0
High perf window	526,200	3,548	106,430	464,920	3,155	94,723
Holiday lights	7,810,499	1,179	0	6,248,399	943	0
HVAC controls	69,520,580	15,742	1,207,891	54,251,971	12,680	997,323
HVAC Other	8,232,182	2,664	6,661	6,524,387	2,118	5,329
HVAC unknown	71,565,179	16,666	820,419	53,864,529	12,639	667,399
Ice machine	6,595,543	751	0	6,087,982	693	0
Induction lighting	403,671	99	0	363,478	89	0
Informational Survey	15,484,660	5,671	1,196	11,290,004	4,114	957
Insulation	8,879,191	9,279	2,515,324	7,493,925	7,675	2,115,756
Interior screw lighting	6,661,179,598	865,942	0	5,455,016,889	720,190	0
Irrigation	16,732,286	6,574	0	14,902,064	5,835	0
Lighting - other	11,356,356	1,889	0	9,234,622	1,536	0
Lighting - unknown	354,907,686	60,013	-29,756	267,964,334	45,594	-24,403
Lighting controls - other	680,127	73	0	544,102	59	0
Lighting controls - unknown	26,612,240	2,634	127,567	19,564,111	1,945	102,054
Lighting power regulator	165,575	38		149,018	34	
Ligthing controls	7,402	272		6,662	245	
Linear fluorescent	593,796,599	126,617	0	530,860,739	112,529	0
Linear fluorescent delamping	126,875,237	29,879	0	114,719,879	27,004	0
Motor	62,779,126	10,243	3,652	53,591,527	8,785	2,921
Night light	90,417,114	0	0	74,030,124	0	0
Occupancy sensor	86,530,966	27,386	-32,826	77,768,430	23,862	-31,335
Office Equipment	5,066,629	499	0	3,759,684	372	0
On-site Audit	158,384,729	30,268		131,450,511	25,120	
Other	63,327,797	5,175	2,780,613	49,575,342	4,049	2,226,865
Outdoor CFL Fixture	205,833,762	126	0	164,837,116	110	0
Outdoor HID	8,416,976	74	0	6,899,148	59	0
Outdoor lighting - other	5,542,908	510	0	4,881,873	449	0
Outdoor lighting - unknown	6,113,297	1,544	0	4,288,686	1,081	0
Outdoor screw lighting	11,252,907	12	0	8,918,952	11	0
Photocell	508,915	0	0	439,689	0	0
Pipe and tank insulation	17,858,868	11,405	18,622,024	17,071,612	10,915	17,755,541
Plug load sensor	30,967,740	1,922	0	26,850,980	1,722	0

Measure Name	SumOfGrkWh	SumOfGrkW	SumOfGrTherm	SumOfNetkWh	SumOfNetkW	SumOfNetTherm
Pool heater	0	0	276,539	0	0	263,529
Pool pump	22,921,181	12,408	0	18,989,677	10,600	0
Pre-rinse spray valve	1,522,099	211	327,550	1,352,837	169	297,521
Process - other	8,912,938	1,008	230,119	7,130,350	806	184,095
Process - unknown	667,920,372	92,491	19,492,521	532,319,680	73,854	16,323,959
Process boiler	230,810	14	13,762,748	186,163	11	10,079,851
PTAC/PTHP	6,727,363	3,879	0	5,588,386	3,318	0
Pump	174,415,042	28,801	21,184	133,158,389	21,728	16,947
Pump off controller	71,318,923	6,961		57,055,139	5,568	
RCA	117,050,217	108,878	43,963	100,843,533	94,740	39,099
Recycle freezer	71,008,650	12,623	0	44,132,835	7,988	0
Recycle refrigerator	561,781,778	94,973	0	278,450,914	48,064	0
Recycle room AC	561,863	823	0	451,604	662	0
Refrigerated case replacement	40,065,272	9,620	19	33,336,916	7,791	18
Refrigeration - other	11,226,765	525	0	9,002,678	433	0
Refrigeration - unknown	55,292,020	5,544	0	41,814,576	4,203	0
Refrigeration compressor	2,189,337	443	-113	1,607,485	324	-90
Refrigeration condenser	15,401,177	1,044	1,710	12,054,147	784	1,368
Refrigeration Door Closer	8,711,309	886	-29	7,447,801	766	-24
Refrigeration Door gasket	135,192,920	14,908	0	117,575,735	12,991	0
Refrigeration evaporator	16,765,829	1,942	-596	13,673,273	1,588	-604
Refrigeration night cover	4,149,020	-247	27,869	3,702,718	-196	22,597
Refrigeration strip curtain	172,717,848	18,970	0	155,489,975	17,092	0
Refrigerator	13,240,363	2,162	5,380	10,887,943	1,768	4,788
Retrocommissioning	76,898,551	16,515	1,387,319	64,840,889	14,466	1,167,270
Rooftop or split system	61,905,605	39,701	15,433	55,276,819	36,089	12,300
Room AC	45,329,769	27,680	0	36,273,213	22,150	0
Server virtualization	4,490,304	507	0	3,724,208	421	0
Showerhead	2,263,428	498	1,153,943	1,842,924	405	932,532
Steam trap	0	0	25,873,207	0	0	24,835,941
Thermostat	1,587,306	5	20,192	1,266,388	4	16,154
Time clock	816,167	0	0	722,879	0	0
Torchiere	8,614,783	799	0	7,013,678	661	0
Traffic signals	936,384	106		749,107	85	
Unknown	55,528,469	7,631	9,342,884	42,393,091	5,838	7,792,975
VAV conversion	10,378,203	998	409,589	7,791,106	750	327,671

Measure Name	SumOfGrkWh	SumOfGrkW	SumOfGrTherm	SumOfNetkWh	SumOfNetkW	SumOfNetTherm
Vending Machine Controller	8,899,338	0	0	7,293,355	0	0
Ventilation fan	2,200,946	1,016		1,738,667	803	
VFD - application unknown	111,905,850	16,521	425,818	81,714,963	11,970	340,654
VFD - HVAC Fan	36,510,408	8,742	14	32,134,664	7,521	11
VFD - HVAC pump	158,573	3		126,858	2	
VFD - non HVAC pumping	28,075,099	4,049	0	22,003,907	3,147	0
Water heater	174,758	35	1,912,096	142,351	29	1,641,586
Water heater control	345,080	332	2,800,130	276,064	266	2,419,207
Water heating - measure unknown	202,112	33	787,088	161,690	26	568,890
Water heating boiler	0	0	682,003	0	0	622,216
WB - NC	150,957,684	49,659	4,197,806	113,887,825	35,158	3,784,815
Window film	16,779,379	6,201	0	15,580,688	5,390	0
WW Fan	4,341,574	5,485	-247	3,473,259	4,388	-198

EDIOU	IOU_Submitted_Report_ID_Number	ED_Measure Name	GrkWh	GrkW	GrTherm	NetkWh	NetkW	NetTherm
PGE	2138	Add economizer	4558932.46	346.8	19061	3417637.008	275.36	15248.8
PGE	2138	ASH control	5957595.612	379.4991	0	4831037.085	307.8781	0
PGE	2138	CFL Fixture	78631697.71	10204.98	0	68711380.51	8942.362	0
PGE	2138	Chiller	20797438.05	5244.233	1307353	15093858.96	3894.77	1045882.4
PGE	2138	Clothes dryer	0	0	12079.98	0	0	9925.128
PGE	2138	Clothes washer	51337962.3	26124.81	3635263	41141762.79	20929.61	2912464.6
PGE	2138	Coil cleaning	133864.3181	96.08382	0	107091.4545	76.86705	0
PGE	2138	Compressed air	68562265.62	9675.014	0	48559166.23	6853.046	0
PGE	2138	Computer power supply	12272611	2287.255	0	11035855.36	2029.045	0
PGE	2138	Cool roof	884772.561	377.6806	-3355.679	673693.3259	292.3188	-2724.704
PGE	2138	Daylighting control	126837	48.21	-13	98322.3	36.999	-10.66
PGE	2138	Dishwasher	10675740.9	3367.698	224852.2	8569147.445	2703.144	180495.11
PGE	2138	Duct sealing and insul	13745519.71	18614.54	1650834	11631984.78	16170.91	1327102.6
PGE	2138	Economizer adjustment	1978311.245	0	0	1582648.996	0	0
PGE	2138	EMS	18599719.25	3906.916	33851	14422076.51	3102.052	27080.8
PGE	2138	Evap cooler	1502821.55	1668.188	0	1280327.674	1420.579	0
PGE	2138	Exit sign	12621786.13	1527.945	0	11344352.92	1373.623	0
PGE	2138	Faucet Aerator	349062.2901	76.79378	76343.778	309525.4788	68.09566	63331.436
PGE	2138	Food Service	11033597	1582.79	674737	11033597	1582.79	674607.8
PGE	2138	Freezer	353086.4	40.30667	0	353086.4	40.30667	0
PGE	2138	Fume hood controls	774207	88	45835	619365.6	70.4	36668
PGE	2138	Furnace	6242	0	1567500.7	4993.6	0	1256479.8
PGE	2138	Greenhouse heat curtain	0	0	998371.4	0	0	937338.58
PGE	2138	Greenhouse IR film	0	0	84149.1	0	0	80783.136
PGE	2138	Heat Recovery	2585910.9	455.49	5733905.1	1924699.73	338.1675	4371586.9
PGE	2138	Heating Boiler	244905	14.4	21904870	195712.2	11.52	15432437
PGE	2138	Heating boiler control	0	0	917654.19	0	0	645916.13
PGE	2138	HID	46893894.86	7214.014	0	38338855.27	5980.567	0
PGE	2138	High bay fluorescent	218706778.7	63028.15	0	208060756.3	60047.38	0
PGE	2138	High perf window	435831.6791	3269.672	106429.97	387890.1944	2910.008	94722.67
PGE	2138	Holiday lights	6893017.868	1179.186	0	5514414.294	943.3489	0
PGE	2138	HVAC controls	64881428.2	15305.12	1196371	50431243.97	12330.02	988107.12
PGE	2138	HVAC Other	949269	115.3	0	759415.2	92.24	0
PGE	2138	HVAC unknown	25638105.2	5120.12	261771	19097604.34	3821.876	220263.65
PGE	2138	Ice machine	3483071	395.3657	0	3483071	395.3657	0
PGE	2138	Induction lighting	253381.2402	63.3242	0	243245.9906	60.79123	0
PGE	2138	Informational Survey	24610	6.9	1196	19688	5.52	956.8
PGE	2138	Insulation	2862254.721	5167.764	1321786.9	2250116.3	4137.356	1062131.3
PGE	2138	Interior screw lighting	4254290294	545101.7	0	3661864399	482129	0
PGE	2138	Irrigation	9987505.96	3825.694	0	9588005.722	3672.666	0
PGE	2138	Lighting - other	2123539.852	223.8086	0	1698831.882	179.0469	0
PGE	2138	Lighting - unknown	148087244.3	25003.01	-26089	114017260.8	19361.15	-21395.68
PGE	2138	Lighting controls - other	422510.3	54.4406	0	339008.24	43.55248	0
PGE	2138	Lighting controls - unknown	15091674.44	1357.425	127567	11487520.24	1048.457	102053.6
PGE	2138	Linear fluorescent	439809656.5	90350.46	0	374950946.2	77354.08	0
PGE	2138	Linear fluorescent delamping	37920353.01	8731.546	0	32386024.58	7535.673	0
PGE	2138	Motor	46489591.72	7636.382	3805	41509358.06	6861.29	3044
PGE	2138	Night light	45396287.46	0	0	38013462.2	0	0
PGE	2138	Occupancy sensor	34384240.07	9967.105	-32826.35	31788844.34	9030.486	-31334.71
PGE	2138	Office Equipment	4865575	484.5534	0	3580709.34	358.753	0
PGE	2138	Other	944063.98	90.39	0	660844.786	63.273	0
PGE	2138	Outdoor CFL Fixture	75897891.64	104.4267	0	64113986.42	91.55776	0
PGE	2138	Outdoor HID	4534637.091	74.123	0	3809119.677	59.15993	0

% kWh	% kW	% therm
0.1%	0.0%	0.0%
0.1%	0.0%	0.0%
1.1%	0.9%	0.0%
0.2%	0.4%	1.6%
0.0%	0.0%	0.0%
0.7%	0.6%	4.6%
0.0%	0.0%	0.0%
0.8%	0.7%	0.0%
0.2%	0.2%	0.0%
0.0%	0.0%	0.0%
0.1%	0.3%	0.3%
0.2%	1.6%	2.0%
0.0%	0.0%	0.0%
0.2%	0.3%	0.0%
0.0%	0.1%	0.0%
0.2%	0.1%	0.0%
0.0%	0.0%	0.1%
0.2%	0.2%	1.0%
0.0%	0.0%	0.0%
0.0%	0.0%	0.1%
0.0%	0.0%	1.9%
0.0%	0.0%	1.4%
0.0%	0.0%	0.1%
0.0%	0.0%	5.6%
0.0%	0.0%	23.3%
0.0%	0.0%	1.0%
0.6%	0.6%	0.0%
3.4%	5.8%	0.0%
0.0%	0.3%	0.1%
0.1%	0.1%	0.0%
0.8%	1.2%	1.5%
0.0%	0.0%	0.0%
0.3%	0.4%	0.3%
0.1%	0.0%	0.0%
0.0%	0.0%	0.0%
0.0%	0.0%	0.0%
0.0%	0.4%	1.6%
59.4%	45.5%	0.0%
0.2%	0.4%	0.0%
0.0%	0.0%	0.0%
1.8%	1.8%	0.0%
0.0%	0.0%	0.0%
0.2%	0.1%	0.2%
0.1%	0.1%	0.0%
0.5%	0.7%	0.0%
0.7%	0.7%	0.0%
0.6%	0.0%	0.0%
0.5%	0.9%	0.0%
0.1%	0.0%	0.0%
0.0%	0.0%	0.0%
1.0%	0.0%	0.0%
0.1%	0.0%	0.0%

EDIOU	IOU_Submitted_Report_ID_Number	ED_Measure Name	GrkWh	GrkW	GrTherm	NetkWh	NetkW	NetTherm
PGE	2138	Outdoor lighting - other	574145.3663	61.266	0	486729.1736	50.2619	0
PGE	2138	Outdoor lighting - unknown	93777.4255	0	0	75021.9404	0	0
PGE	2138	Outdoor screw lighting	575264.0602	3.794196	0	492994.2498	3.165377	0
PGE	2138	Photocell	354422.587	0	0	309592.2411	0	0
PGE	2138	Pipe and tank insulation	17775069.86	11397.19	993652.82	17004574.16	10909.2	953628.18
PGE	2138	Plug load sensor	16473400.6	1916.05	0	14818665.58	1717.575	0
PGE	2138	Pool heater	0	0	116790.91	0	0	110263.44
PGE	2138	Pool pump	8022560	3003.596	0	6420030.5	2403.631	0
PGE	2138	Pre-rinse spray valve	1522098.75	210.6725	327550	1352837.4	168.538	297520.7
PGE	2138	Process - other	10304859	1182.1	0	8093316.6	924.37	0
PGE	2138	Process - unknown	379883694	52095.57	10741712	324406787.1	44819.01	9543397.4
PGE	2138	Process boiler	230810	14.3	13359976	186163.06	11.44	9683620.5
PGE	2138	PTAC/PTHP	1292560.292	1350.401	0	1240543.384	1295.898	0
PGE	2138	Pump	42123286.2	2552.58	0	33488965.94	2019.451	0
PGE	2138	Pump off controller	71318923.42	6960.508	0	57055138.74	5568.406	0
PGE	2138	RCA	50157131.13	48876.78	44319.047	41698842.01	41459.72	39443.952
PGE	2138	Recycle freezer	28583076	4402.688	0	15434861.04	2377.452	0
PGE	2138	Recycle refrigerator	193325370	29803.5	0	67663879.5	10431.23	0
PGE	2138	Recycle room AC	486405	753.948	0	391237.76	606.4348	0
PGE	2138	Refrigerated case replacement	14486603.45	1110.512	0	12668436.43	956.3538	0
PGE	2138	Refrigeration - other	10166484.61	481.9769	0	8132245.206	393.6454	0
PGE	2138	Refrigeration - unknown	29295545.96	3707.856	0	22884881.74	2872.094	0
PGE	2138	Refrigeration compressor	2086936.943	426.2012	-112.6088	1532184.695	311.9585	-90.08704
PGE	2138	Refrigeration condenser	16793327.26	1056.337	3202.9288	13167627.27	793.6464	2562.3414
PGE	2138	Refrigeration Door Closer	10377060.33	1187.618	-26.8488	8667379.985	1000.929	-21.47904
PGE	2138	Refrigeration Door gasket	95233991.16	10882.36	0	80538259.09	9202.772	0
PGE	2138	Refrigeration evaporator	13230051.66	1600.607	196.7847	10704527.1	1296.196	157.42776
PGE	2138	Refrigeration night cover	2712878.112	10.21268	25982.398	2517982.341	10.38215	20785.918
PGE	2138	Refrigeration strip curtain	156685069.5	17814.61	0	141172614.3	16051.01	0
PGE	2138	Refrigerator	350497.85	45.23217	0	330139.85	41.75682	0
PGE	2138	Retrocommissioning	40672747.09	4123.316	1383637.4	34364151.27	3464.513	1164324.5
PGE	2138	Rooftop or split system	107239051.4	70575.19	3370.2351	100969458.5	67607.76	2649.7681
PGE	2138	Room AC	788389	1188.999	0	637146.08	955.8928	0
PGE	2138	Server virtualization	2928197	334.5	0	2342557.6	267.6	0
PGE	2138	Showerhead	342805.989	75.4173	278873.08	305057.6276	67.11266	225356.4
PGE	2138	Steam trap	0	0	9621340.3	0	0	9234148.6
PGE	2138	Thermostat	1518169.583	0	20191.946	1214535.666	0	16153.556
PGE	2138	Time clock	587583.36	0	0	539557.0752	0	0
PGE	2138	Torchiere	2837036.048	336.2815	0	2391480.769	291.147	0
PGE	2138	Unknown	27889583.55	3864.92	72494.69	20234642.7	2825.414	63166.281
PGE	2138	VAV conversion	10008745.83	902.8	409589	7495540.624	673.67	327671.2
PGE	2138	Vending Machine Controller	6533155.94	0	0	5343996.902	0	0
PGE	2138	Ventilation fan	1256538	581.2442	0	1030361.16	476.6202	0
PGE	2138	VFD - application unknown	60740470.81	9760.167	425818	45169110.13	7151.096	340654.4
PGE	2138	VFD - HVAC Fan	18794489.32	6216.561	14.3571	17640640.33	5502.851	11.48568
PGE	2138	VFD - non HVAC pumping	24234468.83	3032.96	0	19076339.26	2379.314	0
PGE	2138	Water heater	123061.2528	23.65114	994092.5	98477.66124	18.92722	809312.54
PGE	2138	Water heater control	0	0	245390.95	0	0	217827.26
PGE	2138	Water heating - measure unknown	202112	32.7	787088.38	161689.6	26.16	568889.81
PGE	2138	Water heating boiler	0	0	358470.61	0	0	327899.55
PGE	2138	WB - NC	30260483.19	15002.35	1088219.7	24760610.13	12252.65	878182.88
PGE	2138	Window film	10896629.2	1786.511	0	10440907.6	1711.512	0
PGE	2138	WW Fan	3414804.852	5297.305	-220.1661	2731843.882	4237.844	-176.1329
			7,334,790,107	1,206,041	83,145,018	6,165,219,497	1,036,639	66,260,502

% kWh	% kW	% therm
0.0%	0.0%	0.0%
0.0%	0.0%	0.0%
0.0%	0.0%	0.0%
0.0%	0.0%	0.0%
0.3%	1.1%	1.4%
0.2%	0.2%	0.0%
0.0%	0.0%	0.2%
0.1%	0.2%	0.0%
0.0%	0.0%	0.4%
0.1%	0.1%	0.0%
5.3%	4.3%	14.4%
0.0%	0.0%	14.6%
0.0%	0.1%	0.0%
0.5%	0.2%	0.0%
0.9%	0.5%	0.0%
0.7%	4.0%	0.1%
0.3%	0.2%	0.0%
1.1%	1.0%	0.0%
0.0%	0.1%	0.0%
0.2%	0.1%	0.0%
0.1%	0.0%	0.0%
0.4%	0.3%	0.0%
0.0%	0.0%	0.0%
0.2%	0.1%	0.0%
0.0%	0.0%	0.0%
2.3%	1.5%	0.0%
0.0%	0.0%	0.0%
0.6%	0.3%	1.8%
1.6%	6.5%	0.0%
0.0%	0.1%	0.0%
0.0%	0.0%	0.0%
0.0%	0.0%	0.0%
0.0%	0.0%	0.0%
0.0%	0.0%	0.0%
0.0%	0.0%	0.0%
0.3%	0.3%	0.1%
0.1%	0.1%	0.5%
0.1%	0.0%	0.0%
0.0%	0.0%	0.0%
0.7%	0.7%	0.5%
0.3%	0.5%	0.0%
0.3%	0.2%	0.0%
0.0%	0.0%	1.2%
0.0%	0.0%	0.3%
0.0%	0.0%	0.9%
0.0%	0.0%	0.5%
0.4%	1.2%	1.3%
0.2%	0.2%	0.0%
0.0%	0.4%	0.0%

Checksum with E3 outputs

EDIOU	IOU_Submitted_Report_ID_Number	GrkWh	GrkW	GrTherm	NetkWh	NetkW	NetTherm
PGE	2138	7,334,790,107	1,206,041	83,145,018	6,165,219,497	1,036,639	66,260,502 OK

EDIUO	Ed_Report	ED_Measure Name	GrkWh	GrkW	GrTherm	NetkWh	NetkW	NetTherm
SCE	2434	Add economizer	100034	5.4		90030.6	4.86	
SCE	2434	ASH control	1003101.536	8.61864125		842633.4284	7.539948325	
SCE	2434	Central plant	7853844.7	5728.368359		6283075.76	4582.694687	
SCE	2434	CFL Fixture	105865448.4	9060.176094		82230483.46	7114.308217	
SCE	2434	Chiller	32675242.05	7381.170202		24400007.75	5722.529226	
SCE	2434	Clothes washer	1028.091324	0.438461538		822.4730595	0.350769231	
SCE	2434	Coil cleaning	34706172.61	23199.83161		30892408.05	20648.93581	
SCE	2434	Compressed air	11034510.14	1484.7247		8822762.24	1187.226625	
SCE	2434	Computer power supply	4218	0.726		3796.2	0.6534	
SCE	2434	Cool roof	1978580.174	540.3941928		1439015.041	424.0330142	
SCE	2434	Cooling tower	3427731.47	697.5821		2410622.529	489.36747	
SCE	2434	Copier	103716.2	5.796		82972.96	4.6368	
SCE	2434	Daylighting control	730294.27	205.1362288		648104.343	180.1566059	
SCE	2434	DCV	5597891	1153.921856		5022562.6	1037.769671	
SCE	2434	Desk lamp	133210224.7	10527.67845		106568179.7	8422.14276	
SCE	2434	Dishwasher	39091	12.391847		31272.8	9.9134776	
SCE	2434	DR lighting control	3019375.114	930.8749		2717437.603	837.78741	
SCE	2434	Duct sealing and insul	3304558.606	5368.927044		2927231.628	4763.302731	
SCE	2434	Economizer adjustment	27000	0		24300	0	
SCE	2434	EMS	19904157.31	1495.500818		14432894.3	1062.440764	
SCE	2434	Escalator controls	199425	45.228		179482.5	40.7052	
SCE	2434	Evap cooler	5372878.322	8765.436881		4298302.657	7012.349505	
SCE	2434	Exit sign	15101525.32	1827.6124		13108216.24	1586.412073	
SCE	2434	Faucet Aerator	428039.9121	94.16878068		321364.4801	70.70018564	
SCE	2434	Floor lamp	223780487.1	17685.49688		179024389.7	14148.3975	
SCE	2434	Food Service	12213211	1665.14		9770568.8	1332.112	
SCE	2434	Freezer	30392	5.16432		27048.88	4.5962448	
SCE	2434	Fume hood controls	1087589	19.5		870071.2	15.6	
SCE	2434	Heat recovery	181979	40.411		136484.25	30.30825	
SCE	2434	HID	5636163.492	1176.584738		4509527.193	941.3965904	
SCE	2434	High bay fluorescent	48902297	14947.054		39295909	11999.7088	
SCE	2434	High perf window	90368.0985	278.0350621		77029.35398	245.2641533	
SCE	2434	Holiday lights	1440150.534	0		1152120.427	0	
SCE	2434	HVAC controls	4605159.691	403		3793533.622	322.4	
SCE	2434	HVAC Other	6792461.412	2011.417854		5372610.673	1595.787483	
SCE	2434	HVAC unknown	12151810.85	2147.851349		9068304.96	1579.998114	
SCE	2434	Ice machine	2394138	273.909		1915310.4	219.1272	
SCE	2434	Induction lighting	150289.9	35.302		120231.92	28.2416	
SCE	2434	Informational Survey	15460049.58	5664.551534		11270315.94	4108.410384	
SCE	2434	Insulation	15128.8163	8.170764374		12185.05951	6.608883281	
SCE	2434	Interior screw lighting	5139177142	697796.0392		3889342305	528989.0459	
SCE	2434	Irrigation	6744780.09	2748.72477		5314057.878	2162.369028	
SCE	2434	Lighting - other	1699359.4	365.24		1359487.52	292.192	
SCE	2434	Lighting - unknown	131262762.6	20952.55987		94750281.65	15222.52374	
SCE	2434	Lighting controls - other	259994.8	18.7		207995.84	14.96	
SCE	2434	Lighting controls - unknown	11520565.96	1276.8437		8076590.831	896.73167	
SCE	2434	Lighting power regulator	165575	38.19347174		149017.5	34.37412457	
SCE	2434	Ligthing controls	7402.3	271.926		6662.07	244.7334	

% kWh	% kW
0.0%	0.0%
0.0%	0.0%
0.1%	0.4%
1.3%	0.6%
0.4%	0.5%
0.0%	0.0%
0.5%	1.7%
0.1%	0.1%
0.0%	0.0%
0.0%	0.0%
0.0%	0.0%
0.0%	0.0%
0.1%	0.1%
1.7%	0.7%
0.0%	0.0%
0.0%	0.1%
0.0%	0.4%
0.0%	0.0%
0.2%	0.1%
0.0%	0.0%
0.1%	0.6%
0.2%	0.1%
0.0%	0.0%
2.8%	1.2%
0.2%	0.1%
0.0%	0.0%
0.0%	0.0%
0.0%	0.0%
0.1%	0.1%
0.6%	1.0%
0.0%	0.0%
0.0%	0.0%
0.1%	0.0%
0.1%	0.1%
0.1%	0.1%
0.0%	0.0%
0.0%	0.0%
0.2%	0.3%
0.0%	0.0%
60.7%	44.1%
0.1%	0.2%
0.0%	0.0%
1.5%	1.3%
0.0%	0.0%
0.1%	0.1%
0.0%	0.0%
0.0%	0.0%

EDIUO	Ed_Report	ED_Measure Name	GrkWh	GrkW	GrTherm	NetkWh	NetkW	NetTherm
SCE	2434	Linear fluorescent	372958181.4	82862.82813		332482773.9	72603.70716	
SCE	2434	Linear fluorescent delamping	22005838.38	5584.466495		17764479.11	4499.493337	
SCE	2434	Motor	16198373.79	2536.603253		12009240.8	1868.158337	
SCE	2434	Night light	55140455.98	0		44112364.78	0	
SCE	2434	Occupancy sensor	25706440.23	11908.20805		20597419.95	9545.819243	
SCE	2434	Office Equipment	201054	14.361		178974.6	12.7839	
SCE	2434	On-site Audit	158384729	30268.1		131450510.8	25119.796	
SCE	2434	Other	69642.24	1.44		55713.792	1.152	
SCE	2434	Outdoor CFL Fixture	125760854	12.41222892		97285972.91	10.33150306	
SCE	2434	Outdoor HID	4008583.9	0		3206867.12	0	
SCE	2434	Outdoor lighting - other	4939995.201	444.278		4367527.079	394.41742	
SCE	2434	Outdoor lighting - unknown	6019519.45	1544.17047		4213663.615	1080.919329	
SCE	2434	Outdoor screw lighting	11085046.69	52.96607016		8751881.321	43.85056613	
SCE	2434	Photocell	114167.2	0		91391.216	0	
SCE	2434	Pipe and tank insulation	0	0		0	0	
SCE	2434	Plug load sensor	11763995.73	5.720625		9411196.58	4.5765	
SCE	2434	Pool heater	0	0		0	0	
SCE	2434	Pool pump	8959024	2254.902		7325398.8	1839.77984	
SCE	2434	Pre-rinse spray valve	0	0		0	0	
SCE	2434	Process - other	113785	38.97		91028	31.176	
SCE	2434	Process - unknown	288036678.4	40395.48287		207912893.2	29034.72641	
SCE	2434	PTAC/PTHP	5287546	2460.592		4230036.8	1968.4736	
SCE	2434	Pump	132291755.5	26248.40176		99669422.85	19708.35788	
SCE	2434	RCA	243705925.5	214616.0227		216311288.3	190686.7832	
SCE	2434	Recycle freezer	34868460	7056.384		24617132.76	4981.807104	
SCE	2434	Recycle refrigerator	309951864	56150.7		190310444.5	34476.5298	
SCE	2434	Recycle room AC	49358.2	33.792		39486.56	27.0336	
SCE	2434	Refrigerated case replacement	24294016.23	8341.472621		19435212.98	6673.178097	
SCE	2434	Refrigeration - other	936079.8	26.195796		771072.768	25.09204896	
SCE	2434	Refrigeration - unknown	25996474.05	1836.159		18929694.49	1330.5055	
SCE	2434	Refrigeration compressor	100400	16.4		75300	12.3	
SCE	2434	Refrigeration condenser	4782867.831	156.4722626		3826294.265	125.1778101	
SCE	2434	Refrigeration Door Closer	1790254.68	178.2499847		1688115.187	168.4668097	
SCE	2434	Refrigeration Door gasket	9272147.08	518.647923		7578164.864	421.3818632	
SCE	2434	Refrigeration evaporator	2660002.266	221.8701913		2128001.813	177.496153	
SCE	2434	Refrigeration night cover	1212252.72	-251.530819		969802.1762	-201.224656	
SCE	2434	Refrigeration strip curtain	27712086.09	1828.281885		25521055.75	1685.961026	
SCE	2434	Refrigerator	9161483	1547.84838		7329186.4	1238.278704	
SCE	2434	Retrocommissioning	41639614.81	12989.45846		34807786.69	11479.95788	
SCE	2434	Rooftop or split system	111669955.2	103122.9936		89194138.94	82425.27874	
SCE	2434	Room AC	41306690	23976.876		33048314.82	19183.14024	
SCE	2434	Server virtualization	1562107	172.8367536		1381650.1	153.3330782	
SCE	2434	Showerhead	224407.5213	49.36965466		170207.9242	37.44574331	
SCE	2434	Thermostat	69136	5.12		51852	3.84	
SCE	2434	Time clock	225737.76	0		180590.208	0	
SCE	2434	Torchiere	4089162.876	298.43298		3271330.301	238.746384	
SCE	2434	Traffic signals	1037540.2	118.0327		830032.16	94.42616	
SCE	2434	Unknown	14323557	1949.114258		11506185.7	1559.526406	

% kWh	% kW
5.2%	6.1%
0.3%	0.4%
0.2%	0.2%
0.7%	0.0%
0.3%	0.8%
0.0%	0.0%
2.0%	2.1%
0.0%	0.0%
1.5%	0.0%
0.1%	0.0%
0.1%	0.0%
0.1%	0.1%
0.1%	0.0%
0.0%	0.0%
0.0%	0.0%
0.1%	0.0%
0.0%	0.0%
0.1%	0.2%
0.0%	0.0%
0.0%	0.0%
3.2%	2.4%
0.1%	0.2%
1.6%	1.6%
3.4%	15.9%
0.4%	0.4%
3.0%	2.9%
0.0%	0.0%
0.3%	0.6%
0.0%	0.0%
0.3%	0.1%
0.0%	0.0%
0.1%	0.0%
0.0%	0.0%
0.1%	0.0%
0.0%	0.0%
0.0%	0.0%
0.4%	0.1%
0.1%	0.1%
0.5%	1.0%
1.4%	6.9%
0.5%	1.6%
0.0%	0.0%
0.0%	0.0%
0.0%	0.0%
0.1%	0.0%
0.0%	0.0%

EDIOU	Ed_Report	ED_Measure Name	GrkWh	GrkW	GrTherm	NetkWh	NetkW	NetTherm
SCE	2434	VAV conversion	369457	95.7		295565.6	76.56	
SCE	2434	Vending Machine Controller	2024889.2	0		1621716.8	0	
SCE	2434	Ventilation fan	944408	435.25		708306	326.4375	
SCE	2434	VFD - application unknown	51165379.08	6760.889213		36545852.53	4819.11724	
SCE	2434	VFD - HVAC Fan	15633509.4	2525.216281		12497790.72	2018.303025	
SCE	2434	VFD - HVAC pump	158573	2.93		126858.4	2.344	
SCE	2434	VFD - non HVAC pumping	3840630.352	1015.948192		2927568.102	767.9283641	
SCE	2434	Water heater	24570.18186	5.405440009		19731.13043	4.340848695	
SCE	2434	WB - NC	109963254.2	18657.83833		80353487.9	13754.427	
SCE	2434	Window film	4891665.381	4244.366427		4188339.5	3515.056236	
SCE	2434	WW Fan	912930.1575	174.1048188		730344.126	139.2838551	

% kWh	% kW
0.0%	0.0%
0.0%	0.0%
0.0%	0.0%
0.6%	0.4%
0.2%	0.2%
0.0%	0.0%
0.0%	0.1%
0.0%	0.0%
1.3%	1.1%
0.1%	0.3%
0.0%	0.0%

6,412,596,679 1,199,841

EDIOU	itted_Report_ID	GrkWh	GrkW	GrTherm	NetkWh	NetkW	NetTherm
SCE	2434	#####	1,523,881		6,412,596,679	1,199,841	

EDIOU	ted_Report	ED_Measure Name	GrkWh	GrkW	GrTherm	NetkWh	NetkW	NetTherm	% kWh	% kW	% therm
SCG	2277	Clothes washer	0	0	1000619.7	0	0	800559.91	0.0%	0.0%	1.2%
SCG	2277	Dishwasher	0	0	165371.07	0	0	132361.99	0.0%	0.0%	0.2%
SCG	2277	Duct sealing and insul	857546.1	939.8818	106340.75	686036.88	751.9054	92676.696	10.5%	17.8%	0.1%
SCG	2277	Faucet Aerator	0	0	306777.22	0	0	248255.17	0.0%	0.0%	0.4%
SCG	2277	Food Service	0	0	770106.08	0	0	760012.48	0.0%	0.0%	1.1%
SCG	2277	Furnace	0	0	465179.98	0	0	392319.44	0.0%	0.0%	0.6%
SCG	2277	Greenhouse heat curtain	0	0	1948107.5	0	0	1870183.2	0.0%	0.0%	2.8%
SCG	2277	Greenhouse IR film	0	0	817383.97	0	0	784688.61	0.0%	0.0%	1.2%
SCG	2277	Heat recovery	0	0	1418613	0	0	1134890.4	0.0%	0.0%	1.7%
SCG	2277	Heating boiler	0	0	667737.83	0	0	657345.18	0.0%	0.0%	1.0%
SCG	2277	HVAC Other	272259.4	298.4573	653.6	217807.488	238.7658	522.88	3.3%	5.7%	0.0%
SCG	2277	Insulation	5469907	3546.811	1024160	4764610.93	3043.115	903621.04	73.2%	72.1%	1.4%
SCG	2277	Other	0	0	4727986.4	0	0	3527140.5	0.0%	0.0%	5.3%
SCG	2277	Pipe and tank insulation	0	0	17397706	0	0	16592851	0.0%	0.0%	24.9%
SCG	2277	Pool heater	0	0	137448.71	0	0	131858.23	0.0%	0.0%	0.2%
SCG	2277	Pre-rinse spray valve	0	0	804112.56	0	0	643290.05	0.0%	0.0%	1.0%
SCG	2277	Process - other	0	0	222271	0	0	177816.8	0.0%	0.0%	0.3%
SCG	2277	Process - unknown	0	0	6681613	0	0	5345290.4	0.0%	0.0%	8.0%
SCG	2277	Process boiler	0	0	402772.08	0	0	396230.23	0.0%	0.0%	0.6%
SCG	2277	Pump	0	0	21184	0	0	16947.2	0.0%	0.0%	0.0%
SCG	2277	RCA			849087			628324.38	0.0%	0.0%	0.9%
SCG	2277	Rooftop or split system	0	0	21615.352	0	0	17292.281	0.0%	0.0%	0.0%
SCG	2277	Showerhead	0	0	405521.39	0	0	328625.57	0.0%	0.0%	0.5%
SCG	2277	Steam trap	0	0	15887920	0	0	15252403	0.0%	0.0%	22.9%
SCG	2277	Unknown	884220.6	132.6331	11678128	707376.458	106.1065	9760512	10.9%	2.5%	14.7%
SCG	2277	Water heater	0	0	867476.74	0	0	787140.35	0.0%	0.0%	1.2%
SCG	2277	Water heater control	12660	0	1952151	10128	0	1691372.2	0.2%	0.0%	2.5%
SCG	2277	Water heating boiler	0	0	307160.85	0	0	279176.92	0.0%	0.0%	0.4%
SCG	2277	WB - NC	150548	99.2	3463823.5	120438.4	79.36	3252380.7	1.9%	1.9%	4.9%
		Total Less C&S	7,647,141	5,017	74,519,029	6,506,398	4,219	66,606,089			
SCG	2277	C&S	0	0	8000000	0	0	4000000			
		Total	7,647,141	5,017	82,519,029	6,506,398	4,219	70,606,089			

Checksum with E3 output sheet

EDIOU	GrkWh	GrkW	GrTherm	NetkWh	NetkW	NetTherm
SCG	7,647,141	5,017	82,519,029	6,506,398	4,219	70,606,089

OK

EDIOU	Ed_Report	ED_Measure Name	GrkWh	GrkW	GrTherm	NetkWh	NetkW	NetTherm	% kWh	% kW	% therm
SDGE	2272	Add economizer	106850.7778	0	-20.908503	85480.6222	0	-16.7268	0.0%	0.0%	0.0%
SDGE	2272	ASH control	510041	32.714	0	489639.36	31.40544	0	0.1%	0.0%	0.0%
SDGE	2272	CFL Fixture	8771201.615	787.288094	0	7535797.59	676.5962	0	0.9%	0.5%	0.0%
SDGE	2272	Clothes washer	92943.46	0.06	777856.852	74377.7216	0.0576	622294.2	0.0%	0.0%	7.8%
SDGE	2272	Coil cleaning	5006566.13	2270.7783	0	4370380.5	2180.837	0	0.5%	1.5%	0.0%
SDGE	2272	Copier	29465.8	3.70539826	0	28287.168	3.557182	0	0.0%	0.0%	0.0%
SDGE	2272	Desk lamp	246480	0	0	197184	0	0	0.0%	0.0%	0.0%
SDGE	2272	Dishwasher	536142.8	178.308424	93266.412	428914.24	142.6467	74613.13	0.1%	0.1%	0.9%
SDGE	2272	Duct sealing and insul	1070308.82	1606.77039	208313.664	965063.779	1442.826	186385.5	0.1%	1.0%	2.3%
SDGE	2272	Economizer adjustment	2040236.71	24.8635	0	2017025.37	21.6763	0	0.2%	0.0%	0.0%
SDGE	2272	Exit sign	2032325.256	38.29216	0	1921297.28	33.16497	0	0.2%	0.0%	0.0%
SDGE	2272	Faucet Aerator	746167.3175	164.15676	297623.185	596933.854	131.3254	252475	0.1%	0.1%	3.2%
SDGE	2272	Filter replacment	888560.8	124.816	0	710848.64	99.8528	0	0.1%	0.1%	0.0%
SDGE	2272	Food Service	2203104	277.4	84149	2114979.84	266.304	80783.04	0.2%	0.2%	1.0%
SDGE	2272	Freezer	8895.05	1.01541667	0	8539.248	0.9748	0	0.0%	0.0%	0.0%
SDGE	2272	Furnace	0	0	24219	0	0	21554.91	0.0%	0.0%	0.3%
SDGE	2272	Greenhouse heat curtain	0	0	300120.35	0	0	288115.5	0.0%	0.0%	3.6%
SDGE	2272	Greenhouse IR film	0	0	389195.28	0	0	373627.5	0.0%	0.0%	4.7%
SDGE	2272	Heating Boiler	0	0	6891	0	0	6615.36	0.0%	0.0%	0.1%
SDGE	2272	HID	848085.7452	180.997791	0	814162.315	173.7579	0	0.1%	0.1%	0.0%
SDGE	2272	High bay fluorescent	29788173.78	6031.94499	0	28594482.2	5790.097	0	3.4%	3.9%	0.0%
SDGE	2272	Holiday lights	124224.2	0	0	99379.36	0	0	0.0%	0.0%	0.0%
SDGE	2272	HVAC controls	33992	33.992	11520	27193.6	27.1936	9216	0.0%	0.0%	0.1%
SDGE	2272	HVAC Other	223375.26	244.869347	6007.515	178700.208	195.8955	4806.012	0.0%	0.1%	0.1%
SDGE	2272	HVAC unknown	33789058.61	9403.10182	558648	25709656	7240.714	447135.7	3.0%	4.9%	5.6%
SDGE	2272	Ice machine	783158	88.6953333	0	751831.68	85.14752	0	0.1%	0.1%	0.0%
SDGE	2272	Insulation	531029.3093	556.162546	169190.31	466237.432	487.9922	149837.3	0.1%	0.3%	1.9%
SDGE	2272	Interior screw lighting	423255627.2	41779.8286	0	344684867	34467.24	0	40.6%	23.4%	0.0%
SDGE	2272	Lighting - other	7533456.5	1300.33312	0	6176302.1	1065.239	0	0.7%	0.7%	0.0%
SDGE	2272	Lighting - unknown	79073670.82	14815.6925	-3667	61946474.7	11613.31	-3006.94	7.3%	7.9%	0.0%
SDGE	2272	Linear fluorescent	94431946.28	22663.8448	0	90432055.9	21472.88	0	10.6%	14.6%	0.0%
SDGE	2272	Linear fluorescent delamping	75663420.89	17180.9922	0	72575271	16477.52	0	8.5%	11.2%	0.0%
SDGE	2272	Motor	343785.7896	273.277077	-624.79431	275028.632	218.6217	-499.8354	0.0%	0.1%	0.0%
SDGE	2272	Occupancy sensor	29198413.37	6024.89768	0	28023747.7	5778.356	0	3.3%	3.9%	0.0%
SDGE	2272	Other	61260297.98	4893.84339	2315975	48015749.3	3832.4	1855154	5.7%	2.6%	23.3%
SDGE	2272	Outdoor CFL Fixture	8075383.164	9.3854376	0	6837208.15	8.353039	0	0.8%	0.0%	0.0%
SDGE	2272	Outdoor HID	794041.6608	0	0	762279.994	0	0	0.1%	0.0%	0.0%
SDGE	2272	Outdoor lighting - other	28767.8	4.12449333	0	27617.088	3.959514	0	0.0%	0.0%	0.0%
SDGE	2272	Photocell	60009.6	0	0	57601.768	0	0	0.0%	0.0%	0.0%
SDGE	2272	Pipe and tank insulation	82537.765	7.658	232467.06	66030.212	6.1264	210625.7	0.0%	0.0%	2.6%
SDGE	2272	Plug load sensor	2730344.001	0.151875	0	2621130.24	0.1458	0	0.3%	0.0%	0.0%
SDGE	2272	Pool heater	0	0	22299.73	0	0	21407.74	0.0%	0.0%	0.3%
SDGE	2272	Pool pump	8131057.4	8906.492	0	7194638.09	7920.057	0	0.8%	5.4%	0.0%
SDGE	2272	Process - unknown	0	0	2200855	0	0	1540599	0.0%	0.0%	19.4%
SDGE	2272	PTAC/PTHP	431134.286	181.012064	0	344907.429	144.8097	0	0.0%	0.1%	0.0%
SDGE	2272	RCA	5882161.015	5406.1929	-627.39164	5639808.43	5174.1	-612.3556	0.7%	3.5%	0.0%
SDGE	2272	Recycle freezer	7557114	1164.032	0	4080841.56	628.5773	0	0.5%	0.4%	0.0%

EDI	IOU	Submitted_Report_ID_Number	ED_Measure Name	GrkWh	GrkW	GrTherm	NetkWh	NetkW	NetTherm	% kWh	% kW	% therm
SDGE	2272	2272	Recycle refrigerator	58504544	9019.2	0	20476590.4	3156.72	0	2.4%	2.1%	0.0%
SDGE	2272	2272	Recycle room AC	26100	35.67		20880	28.536	0	0.0%	0.0%	0.0%
SDGE	2272	2272	Refrigerated case replacement	1284652.688	168.273408	18.90102	1233266.58	161.5425	18.14498	0.1%	0.1%	0.0%
SDGE	2272	2272	Refrigeration - other	124200.32	17.296	0	99360.256	13.8368	0	0.0%	0.0%	0.0%
SDGE	2272	2272	Refrigeration - unknown	8850	1.062		7080	0.8496	0	0.0%	0.0%	0.0%
SDGE	2272	2272	Refrigeration Door Closer	101941.657	14.4598648	-2.8288749	97863.9907	13.88147	-2.71572	0.0%	0.0%	0.0%
SDGE	2272	2272	Refrigeration Door gasket	30686782.06	3507.48011	0	29459310.8	3367.181	0	3.5%	2.3%	0.0%
SDGE	2272	2272	Refrigeration evaporator	875775.2559	119.464047	-792.98513	840744.246	114.6855	-761.2657	0.1%	0.1%	0.0%
SDGE	2272	2272	Refrigeration night cover	223889.4864	-5.79107302	1886.37385	214933.907	-5.55943	1810.919	0.0%	0.0%	0.0%
SDGE	2272	2272	Refrigeration strip curtain	2337555	266.431	0	2244052.8	255.7738	0	0.3%	0.2%	0.0%
SDGE	2272	2272	Refrigerator	3807209.573	577.473639	5380	3307068.31	496.9699	4788.2	0.4%	0.3%	0.1%
SDGE	2272	2272	Retrocommissioning	0	0	37800	0	0	30240	0.0%	0.0%	0.4%
SDGE	2272	2272	Rooftop or split system	5816295.875	5749.52732	1639.35207	4653036.7	4599.622	1311.482	0.5%	3.1%	0.0%
SDGE	2272	2272	Room AC	3234690	2514.00107	0	2587752	2011.201	0	0.3%	1.4%	0.0%
SDGE	2272	2272	Showerhead	1696214.775	373.167251	228346.947	1367658.08	300.8848	192855.9	0.2%	0.2%	2.4%
SDGE	2272	2272	Steam trap	0	0	559570	0	0	537187.2	0.0%	0.0%	6.7%
SDGE	2272	2272	Time clock	2845.44	0	0	2731.6224	0	0	0.0%	0.0%	0.0%
SDGE	2272	2272	Torchiere	1688583.732	164.35386	0	1350866.99	131.4831	0	0.2%	0.1%	0.0%
SDGE	2272	2272	Unknown	13451338	1847.09027	520430.934	10761070.4	1477.672	416344.7	1.3%	1.0%	5.2%
SDGE	2272	2272	Vending Machine Controller	386429	0	0	370971.84	0	0	0.0%	0.0%	0.0%
SDGE	2272	2272	VFD - HVAC Fan	2079409.5	0	0	1996233.12	0	0	0.2%	0.0%	0.0%
SDGE	2272	2272	Water heater	27126.41448	5.96781119	58191.2724	24142.5089	5.311352	51984.13	0.0%	0.0%	0.7%
SDGE	2272	2272	Water heater control	332420	332.42	573625	265936	265.936	473914.3	0.0%	0.2%	6.0%
SDGE	2272	2272	Water heating boiler	0	0	16889.44	0	0	15636.36	0.0%	0.0%	0.2%
SDGE	2272	2272	WB - NC	10336535	3470.6161	113808	8455797.88	2841.873	93021.5	1.0%	1.9%	1.2%
SDGE	2272	2272	Window film	1625717.61	285.7888	0	1560688.91	274.3572	0	0.2%	0.2%	0.0%
SDGE	2272	2272	WW Fan	13838.9625	13.4673	-27.1095	11071.17	10.77384	-21.6876	0.0%	0.0%	0.0%
			Total less C&S	1,033,616,500	175,139	9,810,421	849,357,059	147,367	7,959,436			
			C&S	60,580,000	17,300	560,000	30,290,000	8,650	280,000			
			Total	1,094,196,500	192,439	10,370,421	879,647,059	156,017	8,239,436			

Checksum with E3 output sheets

EDI	IOU	Submitted_Report_ID_Number	GrkWh	GrkW	GrTherm	NetkWh	NetkW	NetTherm
SDGE	2272	2272	1,094,196,500	192,439	10,370,421	879,647,059	156,017	8,239,436

OK

	PGE			SCE						SDGE								
	GrkWh	GrkW	GrTherm	NetkWh	NetkW	NetTherm	GrkWh	GrkW	GrTherm	NetkWh	NetkW	NetTherm	GrkWh	GrkW	GrTherm	NetkWh	NetkW	NetTherm
Rooftop or split system	107,239,051	70,575	3,370	100,969,459	67,608	2,650	111,669,955	103,123	0	89,194,139	82,425	0	5,816,296	5,750	1,639	4,653,037	4,600	1,311

Energy Division

Evaluation Framework Document

Energy Division staff Decision Framework for Updating IOU savings claims with Best Available Data

Energy Division staff was directed to address eight specific parameters in the evaluation of the 2006-2008 portfolio savings, per the *ALJ Ruling Adopting Protocols for Processes and Review of Post 2005 Evaluation Measurement and Verification (EM&V) Activities*, Attachment 2 “Performance Basis Protocol For Verifying Performance Basis Parameters And Joint Staff’s Reporting Schedule,” issued on January 11, 2006 in R.01-08-028 (“1-11-06 ALJ Ruling”). Subsequent Commission direction in D. 07-09-043 allows ED staff to utilize the following options in estimating program and portfolio impacts for the 2006-2008 program cycle:

1. Extrapolate findings from comparable programs to determine net resource benefits for programs that do not receive full impact evaluation; or
2. Accept reported savings values for programs that do not receive impact evaluation; or
3. Extrapolate savings findings from impact evaluations for comparable programs for some net resource benefit parameters and accept reported values for others; or
4. Apply a discount factor to savings or costs from programs that do not receive impact evaluation based upon historic impact evaluation results for comparable programs.

D. 08-01-042 (Ordering Paragraph 3, as modified by D.08-12-059, Ordering Paragraph 10) requires the application of the DEER ex ante updates. Applicable excerpts from these decisions can be found in the appendix. ED staff’s application of Commission directives to updating the IOU savings claims with the best available data is the focus of this document.

Eight specific parameters were identified in the Performance Basis Protocol and basic direction for updating those parameters was provided in Attachment 2 of the ALJ Ruling. This basic direction and modifications to this direction (based on subsequent decisions) are presented in the following sections by specific parameter.

1. Measure Installations

Program Administrators are expected to report on the number of measure installations and associated program costs throughout the 3-year program cycle. Joint Staff plans to have its contractors verify this information on measure installations by performing quality control checks on the measure installation inputs to the data base and verifying actual installations in a sample of customer premises using contact information provided by utilities. We expect Joint Staff verification efforts to lag the measure installation by 1 to 12 months, depending upon the type of project.

We expect that administrators will submit their reports to Energy Division or its EM&V contractors that include cumulative measure installations from the previous program year (2006, 2007, and 2008) on February 28th of each year.2 Joint Staff would plan to make its best effort to verify the installation counts by program and provide this interim estimate to each utility administrator on July 1st of each year and then publish the final estimate as part of its August report. Joint Staff would work with the administrators to resolve any misunderstandings or communication issues that might have led to differences in verified installations before developing an interim estimate of the performance basis for the portfolio in the August 1st report. (1-11-06 ALJ Ruling, Attachment 2, p.3.)

A “verified installation” means that the measure that was installed was the same as what was reported, was program eligible, and is operating as intended. A “verification site” is a site that was selected for a minimal level of evaluation but may include multiple measures, and this term will be used in the evaluation contract reports when describing their work. Evaluation contractors will be verifying installations in accordance with the Evaluator Protocols (pg 56-57) which states:

“The objectives of measure installation verification are to confirm that the measures were actually installed, the installation meets reasonable quality standards, and the measures are operating correctly and have the potential to generate the predicted savings. Installation verification shall be conducted at all sites claiming energy or peak demand impacts where M&V is conducted.”

The evaluations conducted of the 06-08 program cycle have included field and phone verification of measure installations for the majority of the programs and energy savings in the portfolios. The results of much of these evaluation activities have already been presented in the two “Verification Reports” issued by ED staff. The reports provided by contractors will include final results on installation rates on the evaluated program and high impact measures (HIM) populations, and a discussion of the reliability of the results. Results will be reported for the full program cycle and for specific years if available. Measure installation methodologies for Upstream Lighting; Refrigerant Charge and Airflow (RCA) and Duct Test and Seal will be explained in their respective evaluation reports.

Adjustments to utility claims for measure installations that are not being directly evaluated (are not part of a program or HIM evaluation design) will be considered for update based on the availability of reliable evaluation results from comparable programs or measures targeted at similar customers or delivery mechanisms. In the case of updating IOU measure installation claims ED staff will consider¹:

Option 1.) Extrapolate findings from comparable programs to determine net resource benefits for programs that do not receive full impact evaluation; and

Option 2.) Accept reported savings values for programs that do not receive impact evaluation.

Given that measure installation is only one parameter, option 3 does not apply (i.e., 3.) Extrapolate savings findings from impact evaluations for comparable programs for some net resource benefit parameters and accept reported values for others).

Given time constraints to extract results from prior studies and concerns about comparability with prior studies ED will not consider option 4 for measure installations (i.e., 4.) Apply a discount factor to savings or costs from programs that do not receive impact evaluation based upon historic impact evaluation results for comparable programs.)

Direction for applying DEER ex-ante updates does not apply to measure installations, as DEER does not include deemed rates of installation.

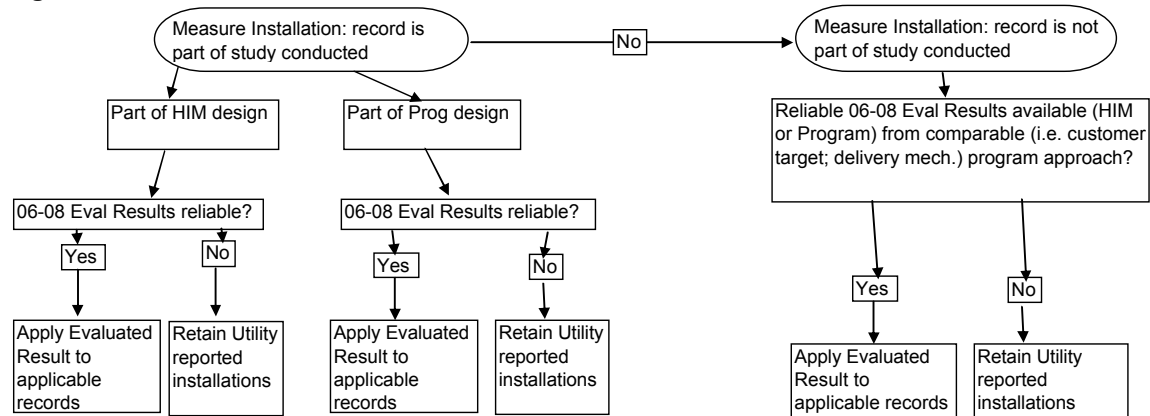
The rules for updating measure installations in the 06-08 utility claims will be applied based on the following chain of decisions. Definitions for conditional terms are provided below.

¹ As noted in the introduction, these options are specified in D. 07-09-043.

Reliable: An evaluated result or value that has met statistical expectations based on the study design and professional evaluators can confidently defend, and have fully documented in their evaluation reports.

Applicable: An evaluated result or value is representative of the population from which it was drawn or is similar in type, application, delivery, and target market. This definition will apply to applicable records and applicable DEER estimates, in both cases the applicability will be documented and deemed defensible by professional evaluators.

Figure 1. Measure Installation Decision Tree



2. Program Costs

On an annual basis, Joint Staff plans to verify program cost estimates reported by each program administrator and will include non-confidential findings as part of its August 1st verification report. (1-11-06 ALJ Ruling, Attachment 2, p.4.)

The final CPUC Audit report is due Nov 2, 2009. Updates to the E3 filed costs will have to be adjusted if expenses are not allowed. If all costs are found to be allowable, there will be no updates or adjustments made to utility reported program costs for the 2006-2008 cycle and will be passed through in the E3 calculators in calculation of the cost effectiveness of the programs and portfolios. A summary of the audit findings will be part of the final ED staff report.

3. Unit Energy Savings/Savings by Program Strategy

Utility program administrators have already provided estimates of the unit energy savings by measure or end-use and then used these estimates combined with forecasts of measure installations to develop program level savings estimates. Joint Staff plans to provide interim measure savings results in the first interim performance basis report in March 2008 and to provide final verification of the measure unit energy savings estimates for the entire program cycle in the final performance basis report in March 2010. (1-11-06 ALJ Ruling, Attachment 2, p.4.)

The evaluations conducted of the 06-08 program cycle have included evaluation of the largest programs and a majority of the key measures (HIM) generating the most energy savings in the portfolios. Evaluation results for unit energy savings for all of the high impact measures will be included in the reports provided by contractors for evaluated program and HIM populations, as well as a discussion of the reliability of the results. Unit energy savings in the Upstream Lighting and realization rates for large commercial and industrial programs will be explained in their respective evaluation reports.

Adjustments to utility claims for unit energy savings that are not being directly evaluated (are not part of a program or HIM evaluation design) will be considered for update based on the availability of reliable² evaluation results from comparable³ programs or measures targeted at similar customers or delivery mechanisms. In the case of updating IOU unit energy savings claims ED staff will consider:

Option 1.) Extrapolate findings from comparable programs to determine net resource benefits for programs that do not receive full impact evaluation; and

Option 2.) Accept reported savings values for programs that do not receive impact evaluation.

Unit energy savings will be treated as a single parameter therefore extrapolation of these unit energy savings to measures found in other programs must ensure that the components of this estimate would also likely be comparable (i.e. delta watts or hours of use). ED staff does not interpret Option 3 (i.e. 3.) Extrapolate savings findings from impact evaluations for comparable programs for some net resource benefit parameters and accept reported values for others;) to mean that components of a parameter estimate can be extrapolated.

Given time constraints to extract results from prior studies and concerns about comparability with prior studies ED will not consider option 4 for unit energy savings (i.e. 4.) Apply a discount factor to savings or costs from programs that do not receive impact evaluation based upon historic impact evaluation results for comparable programs.) Many of the results from the 2004-2005 studies have been reviewed and incorporated into the DEER 2008 update, which will be used to update utility claims as applicable.

If a comparable evaluation result is not available for the unit energy savings for a measure in a given program, a DEER ex-ante update will be considered for DEER measures or customized measures or customized projects that represent aggregated measures in the E3 calculator as outlined in D. 08-01-042 Ordering Paragraph 3 (see appendix B.).

In lieu of any of these options available to Energy Division staff, the utility reported unit energy savings will be passed through

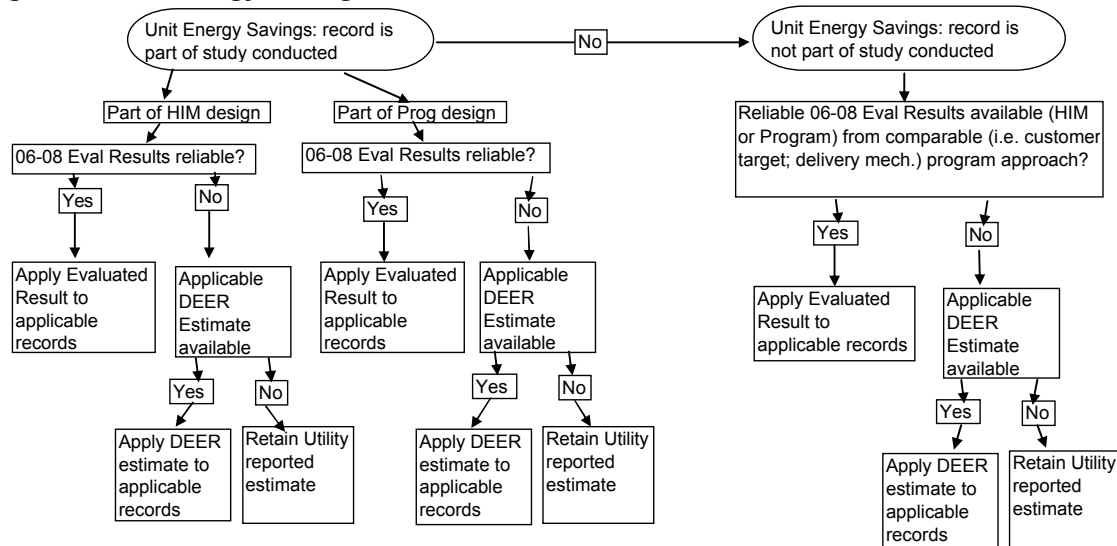
These rules for updating unit energy savings in the 06-08 utility claims will be applied based on the following chain of decisions.

² **Reliable:** An evaluated result or value that has met statistical expectations based on the study design and professional evaluators can confidently defend and have fully documented in their evaluation reports.

³ **Comparable** for the purpose of extrapolating unit energy savings or gross realization rates could be based on several criteria:

- Similar types of customers (e.g., NAIC, SIC, size)
- Similar quality control for measure installations
- Similar building type
- Similar operating hours
- Similar climate

Results from the 06-08 evaluation studies can be extrapolated to other programs or measures in other programs if these criteria are found to be consistent, the evaluation has produced a result that is deemed reliable (by the prior conditions); and evaluation contractors (based on their professional knowledge of the study results) can defend the extrapolation.

Figure 2. Unit Energy Savings Decision Tree

4. Program Level Estimates of Gross and Net Energy Savings

Joint Staff plans to conduct evaluations of the gross and net savings for each program in the utility portfolio. To the extent practicable, those findings will be broken out by program and/or program strategy. Interim results will be presented in the interim performance report in March 2008 and final results in March 2010. (1-11-06 ALJ Ruling, Attachment 2, p.4.)

Energy Division has planned evaluations that incorporate 82 programs and a majority of the total kWh, KW and therm savings. We have prioritized the evaluation activities to best capture the high impact measures (measure that make up >1% of the utility's portfolio savings). Estimates of the unit energy savings by measure or end-use will be combined with measure installations to develop program level savings estimates. Given this approach there will be about 90 programs that were not directly evaluated. Since the updates to utility claims are being made at the program tracking record level, records that are part of non-evaluated programs (and records that were not part of the evaluation plans) will still be eligible for a measure level update based on the 06-08 evaluation results, a DEER 2008 update or the utility claim will be passed through. This is illustrated in the "Unit Energy Savings" decision tree.

At a minimum Energy Division is directed to apply appropriate ex-ante DEER updates to the DEER measures found in those programs that did not have a direct evaluation (or were not part of a HIM study design), or non-evaluated customized measures or customized projects that represent aggregated measures in the E3 calculator per D. 08-01-042 Ordering Paragraph 3 (see appendix B.).

No decision tree is provided for this "parameter" since the application of unit energy savings and net to gross values are described in their respective sections.

5. Load Factors or Daily Load Shapes to Transform Annual Energy Savings Estimates Into Peak Savings Estimates

Joint Staff plans to estimate the peak load impacts from a variety of programs using the Gross Demand Savings Protocols. These protocols allow the evaluators to use secondary load shape data or primary interval meter data to estimate peak savings depending on the level of rigor selected by the evaluation team. Joint Staff will make interim results from these studies on an informal basis and then finalize the estimates in the performance basis reports. These peak savings estimates will be available at the same time as the estimates of program energy savings are published. In addition, measure or end-use level savings. The frequency of reports on

measure installations (e.g., monthly/quarterly) and the data transfer process (what data is submitted by program administrators directly to Energy Division, what data is sent directly to the EM&V contractors, etc.) will be established by the Reporting Requirements. Estimates may also be produced and reported in the interim or final performance basis reports. (1-11-06 ALJ Ruling, Attachment 2, p.4.)

The evaluations conducted of the 06-08 program cycle have included evaluation of peak savings estimates for the largest programs and a majority of the key measures (HIM) generating the most energy savings in the portfolios. The peak savings estimates will have been evaluated in accordance with the Gross Demand Impact Protocols⁴ and consistent with the definition of peak demand adopted in D.06-06-063 (and compared to DEER 2008 Table 2. *Peak Demand Period Used for DEER 2008* for each climate zone.) The reports provided by contractors will include final results on peak energy savings on the evaluated program and HIM populations, and a discussion of the reliability of the results. In addition profiles of the full year savings (8760) will be provided for measures where data collection was required by either their HIM evaluation plan or site specific M&V plan. In these cases the data will be submitted in a format consistent with the E3 calculator load shape inputs, however these data will not be used to update load shapes in the E3 calculator for the 06-08 ex-post evaluation, but will be valuable for future updates to loadshapes.

Adjustments to utility claims for peak energy savings that are not being directly evaluated (are not part of a program or HIM evaluation design) will be considered for update based on the availability of reliable evaluation results from comparable programs or measures targeted at similar customers or delivery mechanisms. In the case of updating IOU peak savings claims ED staff will consider:

Option 1.) Extrapolate findings from comparable programs to determine net resource benefits for programs that do not receive full impact evaluation; and

Option 2.) Accept reported savings values for programs that do not receive impact evaluation.

Peak energy savings will be treated as a single parameter therefore extrapolation of these unit energy savings to measures found in other programs must ensure that the components of this estimate would also likely be comparable (i.e. delta watts or hours of use). ED staff does not interpret Option 3 (i.e., 3.) Extrapolate savings findings from impact evaluations for comparable programs for some net resource benefit parameters and accept reported values for others;) to mean that components of a parameter estimate can be extrapolated.

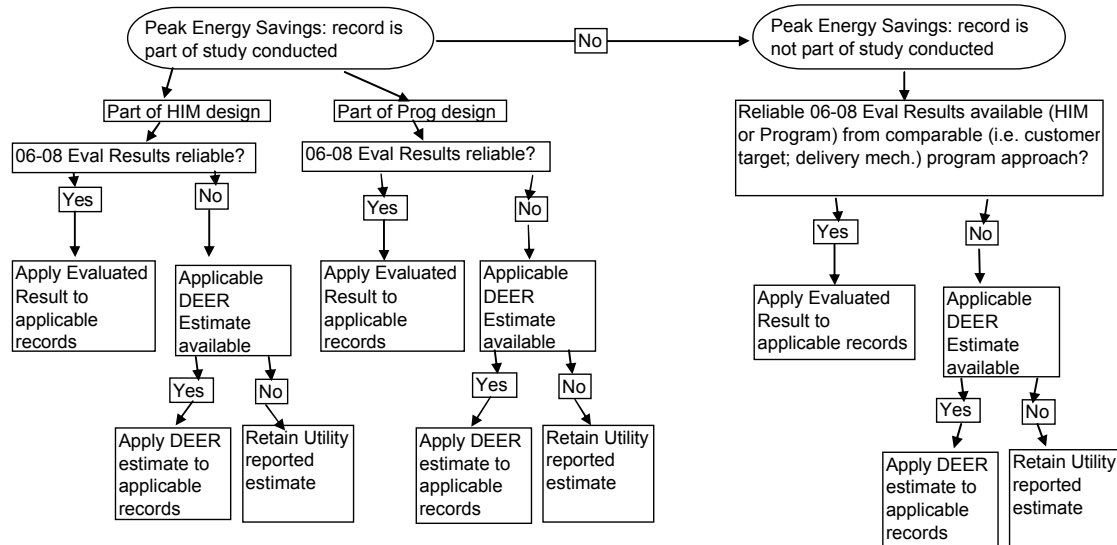
Given time constraints to extract results from prior studies and concerns about comparability with prior studies ED will not consider option 4 for peak energy savings (i.e.4.) Apply a discount factor to savings or costs from programs that do not receive impact evaluation based upon historic impact evaluation results for comparable programs.)

If a comparable evaluation result is not available for the peak energy savings for a measure in a given program, a DEER ex-ante update will be considered for DEER measures or customized measures or customized projects that represent aggregated measures in the E3 calculator as outlined in D. 08-01-042 Ordering Paragraph 3 (see appendix B.).

In lieu of any of these options available to Energy Division staff, the utility reported peak energy savings will be passed through.

These rules for updating peak energy savings in the 06-08 utility claims will be applied based on the following chain of decisions.

⁴ California Evaluation Protocols, June 2006 p. 32-35

Figure 3. Peak Savings Decision Tree

6. Incremental Measure Costs

Joint Staff plans to verify the utility reported estimates of incremental measure cost on a spot check or sample basis to ensure consistency with the DEER estimates. In addition, Joint Staff plans to review and verify estimates of incremental cost for large industrial and commercial energy efficiency projects where ex ante estimates of incremental costs were not available. (1-11-06 ALJ Ruling, Attachment 2, p.5.)

The evaluations conducted of the 06-08 program cycle have NOT included a review or analysis of incremental measure costs. A comprehensive incremental cost study is necessary but was not part of the evaluation activities in this program cycle. Incremental cost data is not consistently provided at the program tracking level and the estimates provided in the E3 calculator are likely out of date, not always incremental, and pose considerable problems with accurately estimating the cost effectiveness of the portfolios. While a comprehensive review and update of incremental costs is preferable, only the results of a “spot check” review and comparison will be provided in the final ED staff report. Utility filed values for incremental measure costs (from the E3 calculator) will be used in the calculations of the cost effectiveness of the portfolios.

Energy Division staff and contractors have developed a method to back cast incremental measure cost data reported by the utilities in the E3 calculator to program tracking records in the standardized tracking database.

7. Avoided Costs

Joint Staff will have its contractors verify that utility performance basis calculations utilize the adopted avoided cost time series (per the 2006 Update) whenever administrators are asked to provide an estimate of the performance basis of their portfolio. (1-11-06 ALJ Ruling, Attachment 2, p.5.)

Avoided costs in the E3 filed calculators have been reviewed for consistency with the avoided cost proceeding and will not be modified in the final evaluation work.

8. Expected Useful Lives of Measures

Joint Staff plans to hire contractors to estimate survival functions for a selected set of measures

using guidance from the expected useful life protocol. The goal is to estimate survival functions and ultimately useful lives for those measures that are forecast to be responsible for a significant proportion of the portfolio savings but were not covered by the most recent evaluation of useful lives completed in the last three years. These estimates will be used to update the ex ante estimates of useful life for the next program planning cycle but not to update the useful life estimates used in the 2006-2008 program estimates. (1-11-06 ALJ Ruling, Attachment 2, p.5.)

Energy Division hired the DEER team and assigned them to update the EUL's which were then published for both the 2006-2008 ex-ante update as well as the 2010-2012 planning. This work is in line with D. 08-01-042 OP3, (see appendix B) which required an update of the ex-ante EULs. While the Retro-Commissioning contract group will have evaluation results regarding the effective useful life of those activities; no other evaluation contract group is charged with evaluating effective useful lives of measures.

Most of the existing prescriptive measure and rebate activity in the portfolio continues to be replaced on burnout, which means the incremental savings (over code or standard efficiency) for the measure is acceptable to propagate over the effective useful life of that measure. This does not account for changes in the market overtime, or changes in code that will occur at some future point in the measure life (e.g. Huffman bill and compact fluorescent bulbs), though we know that they affect the actual savings on the ground in any given time period.

Evaluation contractors have identified projects in the portfolios that are early replacement but to varying degrees. An early replacement means that the program was able to get a customer to change out equipment before it would have expired on its own, or accelerated adoption. Early replacement cases typically means larger savings in the early years due to the larger marginal savings over the existing equipment that was replaced, and lower marginal savings for the period after the existing equipment would have expired (assuming more efficient products would be available in the market if replaced upon burnout.) Given the lack of information about the early replacement cases for prescriptive measures, ED will only model early replacement savings for custom projects. The component of the net to gross algorithm that considers the effect of the program on early replacement will be included to account for program influence on early replacement in the net savings calculation.

Custom projects: will be modeled with a dual baseline. Contractors will use the data collected from the field to model dual baselines and develop appropriate RULs and baselines as a result of their field research. Contractors have been collecting data for this purpose and have sufficient evidence to assign both an appropriate baseline and an RUL period to account for the variable stream of savings over time. In the final aggregation of energy savings and cost effectiveness calculations, ED will attempt to account for a variable stream of savings over time. Details regarding the method used, and modifications to the E3 calculator, or other necessary assumptions due to data limitations, will be documented in the ED staff report.

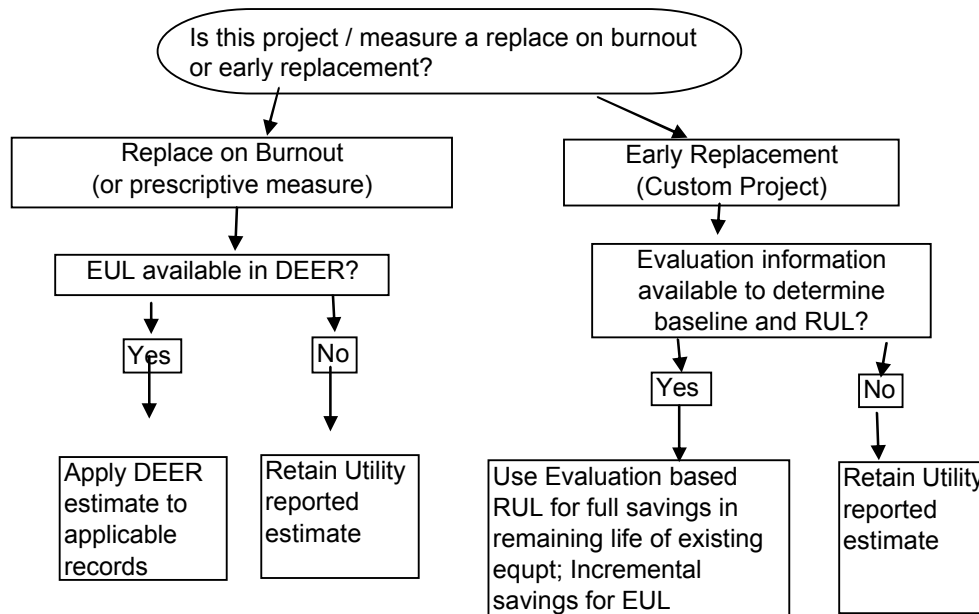
In both cases we believe the Commission needs to provide clearer direction on the intent to allow utilities to claim early replacement (for all measures) and subsequently reporting of ex-ante savings has to be consistent with early replacement program rules and Commission policy.

To align benefits (savings) with costs in the TRC test (see citation from the policy manual below), incremental savings and costs in each time period must be accounted for. Reporting from the utilities and studies specifically designed to capture the necessary information are required to be able to model dual baseline scenario, this has not been the case in this program implementation cycle.

"The TRC test uses the "incremental" measure cost (not the full cost) and incremental energy savings benefit (not the full energy savings benefit) when an energy-efficient appliance or measure promoted through the program is installed in lieu of the standard (less efficient) appliance/measure that would have been installed, without the utility EE

activity. The TRC test uses the full measure cost (at the time of installation) and the full energy savings benefit (of the new measure) for the remaining useful life of the pre-existing equipment (e.g., 3 or more years), where the utility EE activity causes measure/equipment to be replaced much earlier. The TRC test then uses the incremental savings for the balance of the effective useful life of the newly installed measure/equipment and deducts the full cost of that equipment discounted back to the date of the measure/equipment installation. [Policy Manual V4.0 ; page 8 footnote 9]

Figure 4. EUL Decision Tree



9. Net-to-Gross Ratio

Joint Staff plans to estimate net-to-gross ratios for each of the program delivery strategies as part of its load impact evaluations for each of the major program strategy groupings. In some cases, the net-to-gross ratios will also be reported for specific measures and or end-uses associated with a given delivery strategy, as appropriate. For example, the net-to-gross ratio for a downstream rebate program focused on increasing the sales of compact fluorescent lamps, might be available for a given program year, say 2006, but would need to be updated at the end of the program cycle to account for any changes in program delivery strategies in 2007 or 2008. The availability of these net-to-gross estimates is closely linked to the schedule for releasing estimates of gross and net program energy savings in the interim and final performance basis reports. These net-to-gross ratios will be combined with estimates of gross energy savings to yield net program savings estimates in the interim and final performance basis reports. (1-11-06 ALJ Ruling, Attachment 2, p.5.)

The evaluations conducted of the 06-08 program cycle have included evaluation of the largest programs and a majority of the key measures (HIM) generating the most energy savings in the portfolios. Evaluation results for net to gross (NTG) ratios for high impact measures and directly evaluated programs will be included in the final contractor reports along with a discussion of the reliability of the results. Contractors will report NTG ratios for each fuel type (kWh, kW, and Therms) in the study population.

Adjustments to utility deemed NTG ratios that are not being directly evaluated (are not part of a program or HIM evaluation design) will be considered for update based on the availability of

reliable⁵ evaluation results from **comparable**⁶ programs or measures targeted at similar customers or delivery mechanisms. In the case of updating IOU net to gross claims ED staff will consider:

Option 1.) Extrapolate findings from comparable programs to determine net resource benefits for programs that do not receive full impact evaluation; and

Option 2.) Accept reported savings values for programs that do not receive impact evaluation.

Given time constraints to extract results from prior studies and concerns about comparability with prior studies ED will not consider option 4 for net to gross ratios (i.e., 4.) Apply a discount factor to savings or costs from programs that do not receive impact evaluation based upon historic impact evaluation results for comparable programs.)

If a comparable evaluation result is not available for the net to gross ratio for a measure in a given program or a program, a DEER ex-ante update will be considered for DEER measures or customized measures or customized projects that represent aggregated measures in the E3 calculator as outlined in D. 08-01-042 Ordering Paragraph 3 (see appendix B.).

In lieu of any of these options available to Energy Division staff, the utility reported NTG ratio will be passed through.

These rules for updating net to gross ratios in the 06-08 utility claims will be applied based on the following chain of decisions.

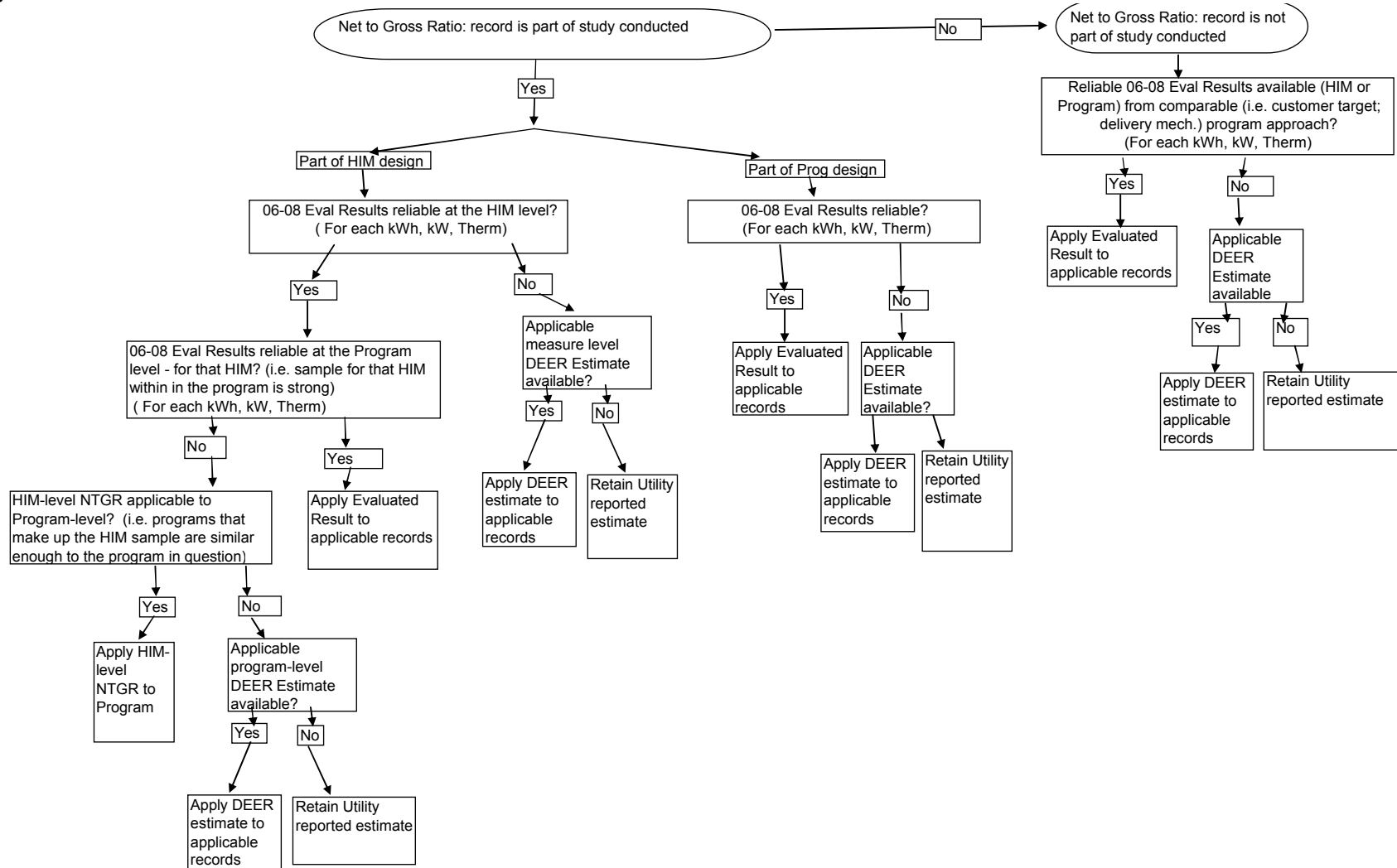
⁵ **Reliable:** An evaluated result or value that has met statistical expectations based on the study design and professional evaluators can confidently defend and have fully documented in their evaluation reports.

⁶ **Comparable:** for the purpose of extrapolating net to gross ratios will be based on several criteria:

<p>Situation #1 NTGR (other measures or projects within a given program)</p> <ul style="list-style-type: none"> ▪ Similar rebate as a percent of incremental cost ▪ Similar types of customers (e.g., NAIC, SIC) ▪ Similar size of customer (annual kWh consumption) 	<p>Situation #2 NTGR (within the same IOU)</p> <ul style="list-style-type: none"> ▪ Similar implementation strategy ▪ Similar rebate as a percent of incremental cost ▪ Similar types of customers (e.g., NAIC, SIC) ▪ Similar size of customer (annual kWh consumption) 	<p>Situation #3 NTGR (across IOU)</p> <ul style="list-style-type: none"> ▪ Similar implementation strategy ▪ Similar rebate as a percent of incremental cost ▪ Similar types of customers (e.g., NAIC, SIC) ▪ Size of customer (annual kWh consumption) ▪ Similar economic environment ▪ Similar cost of living
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Results from the 06-08 evaluation studies can be extrapolated to other programs or measures in other programs if these criteria are found to be consistent, the evaluation has produced a result that is deemed reliable (by the prior conditions); and evaluation contractors (based on their professional knowledge of the study results) can defend the extrapolation.

Figure 5. Net to Gross Decision Tree



Appendix A. Policy Direction on ED options for Extrapolating Results

D-07-09-043 , Section 8.4.2, p137

Finally, establishing where performance falls along the adopted penalty/earnings curve involves estimating load impacts, load shapes and (for calculating PEB) measure and program costs for an extensive number of programs and measures. In recognition that we may not have the resources to verify each parameter on an *ex post* basis for every program, our adopted EM&V protocols provide staff the flexibility to establish priorities for the EM&V efforts throughout the program cycle. In performing its EM&V duties, we clarify that staff or its evaluation contractors may utilize any or all of the following approaches in order to report an estimated PEB for those programs that do not receive an impact evaluation, as staff deems appropriate:

- Extrapolate findings from comparable programs to determine net resource benefits for programs that do not receive full impact evaluation; or

- Accept reported savings values for programs that do not receive impact evaluation; or

- Extrapolate savings findings from impact evaluations for comparable programs for some net resource benefit parameters and accept reported values for others; or

- Apply a discount factor to savings or costs from programs that do not receive impact evaluation based upon historic impact evaluation results for comparable programs.

Staff should describe the method(s) it uses to estimate PEB for those programs that do not receive an impact evaluation in the Final Performance Basis Report, which will be issued to obtain stakeholder input pursuant to the Attachment 7 procedures. In addition, Energy Division may need to prioritize resources for verifying measure installations and program costs over the program cycle, and may, as circumstances warrant, report the results of completed verification tasks in the Final Verification and Performance Basis Report. If such circumstances arise, Energy Division should describe in each Verification Report the additional verification activities that will be performed and reported later in the program cycle.

Appendix B. Requirement for the application of the DEER 2008 updates

D. 08-01-042 (Ordering Paragraph 3)

3. For the 2006-2008 program cycle, the following ex ante assumptions of energy savings and demand reductions ~~shall be used~~ in conjunction with verified installations and verified costs, shall be used as the basis for to calculate the 1st and 2nd Claims: [line out strike out per D.08-12-059; OP 11.]

(a) Except as otherwise provided for below, the ex ante measure savings parameters that are contained in the utilities' E3 calculators, as of the 4th quarter 2007 report for the 1st Claim and as of the 4th quarter 2008 report for the 2nd Claim.

(b) For measures contained in the Database for Energy Efficient Resources (DEER), the 2008 and 2009 DEER updates of ex ante measure savings parameters, including net-to-gross ratios and expected useful lives. The 2008 DEER update shall apply to the 1st Claim and the 2009 DEER update shall apply to the 2nd Claim.

(c) For customized measures or customized projects that represent aggregated measures in the E3 calculator, Energy Division shall identify the appropriate installed measure(s) based on its measure verification results and develop the associated ex ante load impact values. For this purpose, Energy Division may use the utilities' tracking system information, engineering workpapers, DEER values and methods, or other current measurement and verification results that are available.