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Final Report

Peak Time Rebate Pilot Process Evaluation

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EXECUTIVE SUMMARY

The Peak Time Rebate (PTR) pilot program¹ offered a bill credit for customers who reduced their energy use when requested by SDG&E during a specific time. A demand response pilot program for residential customers, the pilot offered a payment of 75¢ per kilowatt hours (kWh) reduction during event periods, but did not assess any penalties for households that did not achieve measurable reduction of electricity usage. To encourage customers to embrace automated enabling demand response technologies, the pilot paid a premium incentive of \$1.25 per kWh reduced for customers enrolled in the Summer Saver program. Bill credits for each unit of electricity reduced are calculated based on event day reduction in electric usage below an established customer-specific reference level (CRL) for that day.²

This report presents the results of a process evaluation conducted to inform the PTR program staff. In September 2011, San Diego Gas & Electric (SDG&E) contracted with Research Into Action to conduct research to: 1) document and assess the implementation process and identify opportunities to improve effectiveness for the 2012 program, and 2) assess customer awareness of the pilot program including perceptions of, and response to, curtailment requests.

SUMMARY

The Peak Time Rebate Pilot program provided SDG&E staff an opportunity to test and refine communication, notification, and rebate calculation processes with a cohort of randomly selected San Diego residential customers in preparation for a larger-scale demand response program expected in 2012. Program staff reported substantial learning within the utility about how to communicate with customers about the program and incorporate the curtailment estimates and bill credit into existing utility systems. The post-event survey and focus groups conducted as part of this evaluation effort revealed few concerns among enrolled participants about the requests and a willingness to take action on behalf of one's community.

The PTR program was adopted by the CPUC in decision 08-02-034.

The CRL for a weekday event is defined as the total consumption for the PTR event period averaged over the three (3) highest days from within the immediately preceding five (5) similar non-holiday weekdays prior to the event. The highest days are defined to be the days with the highest total consumption between 11:00 a.m. and 6:00 p.m. The similar days will exclude weekends, holidays, other PTR event days, and will exclude other demand response program event days for customers participating in multiple demand response programs. The CRL for a weekend or holiday event is defined as the total consumption during the PTR even period for the highest day from within the immediately preceding three (3) weekend days.

Our research also found opportunities to improve communication and notification and indicate that SDG&E will need to be creative in motivating residential customers to understand and engage in the concept of taking extraordinary action to reduce their energy use when asked.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion 1: Awareness of the program and requests was limited.

Among survey respondents, 63% were aware that they were enrolled in the pilot, 64% recalled receiving at least one request to reduce their use, and 57% recalled getting the welcome letters. Perhaps more importantly, only 50% recalled being notified of an event in October (ten days before the survey). While we would expect awareness of the program itself to be relatively low considering that participants did not take any action to opt-in, we expected that recall of specific phone message requests from SDG&E would be higher. Similarly, while PTR provided the option for text or email notification, fewer than 10% of participants had signed up to receive these notifications.

→ Recommendation 1: SDG&E will need to employ more compelling and memorable event request activities to engage residential customers.

Outbound dialing is not practical for a citywide program. Visible appeals through mass media, weathercasts, and text or tweet campaigns could raise overall awareness and generate word-of-mouth communication about the requests.

SDG&E should consider increasing the frequency of communication about the program and its features. Any delay between program information and curtailment request makes it harder for residents to connect the program details with a specific request. However, the somewhat episodic nature of demand response requests means that the utility will be unable to predict the best timing for a reminder mailing. Quarterly bill stuffers could remind residents throughout the year that they could be asked to curtail on critical peak days.

Conclusion 2: Website tools and electronic notification remain underused.

The website is the primary source of performance information; however, accessing this information involves several steps. Because of this, participants are not taking advantage of the information provided to them on the website. Email messages delivered to participants direct them to log into "My Account" at SDG&E.com, go to the Reduce Your Use section, and click on View Energy Charts and Rewards. Participants are informed that if they "use less than the amount of kilowatt hours (kWh) of electricity shown on the table," they will start earning rewards.

Participants want clearer program and event day notification, and responses indicate that participants may not understand how to register for text or email notification.

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→ Recommendation 2: Simplify the process of enrolling in text notification and provide engaging reasons to do so.

Consider ways to make website access to detailed energy use and performance information more straightforward. Identify ways to add a single-click hot link or a link embedded in simple questions like "when does my household use energy?"

Consider opportunities to increase the overall community engagement with the program and expand the text notification system. Create easy opportunities for customers to enroll in text notification with "one-click" or an opt-in text campaign whereby residents can receive notification by dialing into a text registration system.

Community events or neighborhood contests could spur residents in specific areas to sign up to receive text messages so that they can try to reduce their energy use by a larger percentage than a competing neighborhood. Intra-high school campaigns could tap into neighborhood pride and competition. Cycling this type of campaign through the entire city over a year could provide rolling focus and opportunity for neighborhood-by-neighborhood outreach with a message more compelling than one that might be appropriate for the entire city.

Consider opportunities to provide a visual display or visual cue of performance. This could occur citywide or as part of neighborhood contests, but should have an intuitive way of portraying community-level energy curtailment—messages akin to clocks, thermometers, reader boards, or graphics.

Conclusion 3: Participants are not consistently differentiating between ubiquitous messages to reduce their overall energy use and the short-term requests for extraordinary reduction.

In 2011, PTR operated with requests that participants "Reduce Your Use." This request is similar to overarching energy and water conservation messages Californians are used to hearing. While the details of the request provide the time period of the event, the language itself does not communicate the extraordinary nature of these demand response curtailment events.

In part because participants are not differentiating the message, they may not know exactly what types of activities they are being asked to do. Unlike exhortations to replace light bulbs or energy using equipment, demand response requests need to clarify that participants are being asked to take immediate action. One strategy for communicating the difference is to give examples of the type of behavior that seems to work for residential customers.

→ Recommendation 3: Revise the language of the request to communicate more urgency and provide examples of specific actions that are different from standard energy efficiency messages.

SDG&E should consider request language that communicates action or alert, or otherwise differentiates this request from the many efforts to encourage overall conservation and creates an imperative. News stories or other media coverage could help SDG&E

communicate why event days occur and how the utility approaches meeting energy demand at the highest peaks. Aligning messages about critical peaks with other experiences, such as rush hour traffic or smog alerts, could help communicate the time-bounded nature of the requests.

Media coverage could provide examples of activities that demonstrate the extraordinary nature of short-term curtailment. While this is likely to help differentiate these requests, the utility will want to emphasize that residents are not expected to suffer and that millions of small actions can add up to measurable load reduction. Communicating the aggregated load impact of specific activities (such as turning off three lights or raising air conditioner temperatures two degrees) could provide simple actions for people to take without risking the perception that SDG&E expects people to be uncomfortable.

Conclusion 4: Environmental and economic messages are not as compelling as community-oriented messages.

We found no difference in performance or survey response patterns based on welcome letters that stressed environmental benefits over those that stressed economic benefits. Focus group results indicate that messages that emphasize potential environmental and economic benefits are less compelling than those that emphasize overall community benefit and community action. The nonperformer focus group in particular tended to equate the program with longer-term actions that would lead to long-term reduction in energy use that are likely to lead to environmental benefits. While it is likely that some portion of nonperformers simply took no action, it may also be that the nonperformers on demand response days are engaged in every day actions to lower their energy use and thus perceive they do not have anything left to do. Environmental benefits from short-term energy use reduction may not be plausible, and the individual economic benefits are small.

Explaining how participants can earn rewards remains a communication challenge, since the customer baseline involves rolling calculations of energy use. On the other hand, focus group participants described overall interest in taking action on behalf of one's community, particularly preventing black outs and stabilizing the electrical grid.

In focus group discussions, nonperformers suggested that testimonials by real customers that had taken action and either earned a bill credit or seen a reduction on their energy bill could motivate others to take action. Some focus group participants stated that they wanted to know what SDG&E and other big energy users were doing during these events, to assure them that everyone was doing their part. Consistent performers described wanting to see that they were doing better than their neighbors.

→ Recommendation 4: Leverage the interest and willingness to engage in communityoriented action by framing the request as a community need.

This could also create peer-pressure to avoid conspicuous consumption of energy during alert days.

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Create profiles or case studies of real people that have been able to consistently lower their energy use when requested.

As PTR scales up to include citywide communication, SDG&E should report what the utility does during these events and what other large energy customers do. If residents are reminded of event days at stores, schools, or other businesses they frequent, it will both remind them of the event and normalize participation.

Explore opportunities to provide comparison or create competition. Residents that are paying attention and taking action want to know that their actions are acknowledged.

1 INTRODUCTION

THIS PROJECT

In September 2011, San Diego Gas & Electric (SDG&E) contracted with Research Into Action to conduct a process evaluation of the Peak Time Rebate pilot program. This research sought to: 1) document and assess the implementation process and identify opportunities to improve effectiveness for the 2012 program, and 2) assess customer awareness of the pilot program including perceptions of, and response to, curtailment requests.

PEAK TIME REBATE PILOT DESCRIPTION

The Peak Time Rebate (PTR) pilot program³ offered a bill credit for customers who reduced their energy use when requested by SDG&E during a specific time. A demand response pilot program for residential customers, the pilot offered a payment of 75¢ per kilowatt hours (kWh) reduction during event periods, but did not assess any penalties for households that did not achieve measurable reduction of electricity usage. To encourage customers to embrace automated enabling demand response technologies, the pilot paid a premium incentive of \$1.25 per kWh reduced for customers enrolled in the Summer Saver program. Bill credits for each unit of electricity reduced are calculated based on event day reduction in electric usage below an established customer-specific reference level (CRL) for that day.⁴

To test the concept and develop the processes required for full-scale launch, SDG&E randomly selected 3,000 residential customers and enrolled them in the pilot. Those selected to participate received a welcome kit describing the main features of the pilot program and inviting them to sign up to receive event notifications by text or email message. The initial cohort of 3,000 customers was chosen from a pool of 300,000 residential customers with Smart Meters exhibiting satisfactory remote reading performance. The 3,000 accounts selected for the pilot were stratified to represent different levels of summer energy use and each of SDG&E's climate zones so that the participants were representative of the city's overall population. Finally, SDG&E excluded a few categories of customers: medical baseline participants, net metering participants, SDG&E employees, homeowner associations, and any account associated with

The PTR program was adopted by the CPUC in decision 08-02-034.

The CRL for a weekday event is defined as the total consumption for the PTR event period averaged over the three (3) highest days from within the immediately preceding five (5) similar non-holiday weekdays prior to the event. The highest days are defined to be the days with the highest total consumption between 11:00 a.m. and 6:00 p.m. The similar days will exclude weekends, holidays, other PTR event days, and will exclude other demand response program event days for customers participating in multiple demand response programs. The CRL for a weekend or holiday event is defined as the total consumption during the PTR even period for the highest day from within the immediately preceding three (3) weekend days.

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multiple accounts. The pilot included fewer than 100 Summer Saver accounts. Summer Savers have agreed to remote air conditioning cycling and thus earn a slightly higher payment for each kWh reduction measured.

Invitation and Enrollment

The welcome kit sent to each participant included information about the pilot program, how to earn a rebate on PTR event days, and the benefits of signing up for email or text notification. For the pilot period, those that had not signed up for notification received a call through an outbound dialer to the phone number associated with that account.

Customers enrolled in the PTR pilot could receive information about their level of participation through web-based information, e-mail, and their energy bill. Bill credits show up as a line item on the billing statements of consumers with reduced energy use relative to their CRL on event days. SDG&E tested the content of several welcome letters with focus groups in San Diego prior to launching the pilot and, ultimately, minimized the explanation of the rebate calculation after focus group participants expressed confusion over their CRL. The welcome letter invited recipients to login to "My Account" on the SDG&E website to register for email or text notification of events. When few customers pursued this option, the pilot staff sent a direct-mailed postcard to participants to encourage online enrollment. Approximately 5% of participants had enrolled in text or email pre-notification options as of September 8, 2011. Participants who wanted to know right away how they did during an event could register to receive a "performance email" estimating their kWh reduction. Nearly 6% of participants had signed up for these post-event performance emails as of September 8, 2011.

The PTR pilot launched with two types of welcome letters: one with reward-based content that explained how to earn a rebate; and another that focused on environmental benefits. In both cases, the welcome letter described activities that households could undertake to reduce their energy use and encouraged recipients to log on to a specific section of the SDG&E website to take an Energy Tour – a feature that guides homeowners through a typical home and provides conservation tips. Program staff reported receiving little feedback from enrollees, estimating that the call center received fewer than ten calls after the welcome letters were mailed, primarily from those wanting to enroll after receiving the letter. SDG&E call center staff are also able to enroll participants to receive emails or text notifications, so these participants would have been offered this opportunity.

PTR operated without official event "triggers" commonly associated with demand response. The pilot called events primarily based on temperature and load forecasts, but the program is not tied to specific thresholds. Pilot staff sought to test the notification, calculation, and rebate payment system, regardless of the overall load forecast, and the response on different types of days (weekends, holidays, and weekdays). For this reason, the pilot launched five events in 2011, three clustered around Labor Day weekend and on hot days in late August, as well as two midweek events in October, when the temperature was above average. Pilot staff describe the PTR

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pilot as a "stepping stone" in the effort to inform SDG&E customers about demand response and develop more awareness of the high costs associated with energy delivered during critical peaks.

In 2012, PTR will expand to include all eligible accounts, including most of SDG&E's nearly 2 million residential customers. The CRL calculation will not change, but some of the features of the pilot will likely drop off or evolve in order to reach the entire population. For example, in the pilot, those not signed up to receive text or email notification would receive a call from an SDG&E outbound dialer notifying them of the up-coming Reduce Your Use (RYU) day. This approach is not practical for the entire city, and will be replaced with a combination of mass media advertising, twitter, text or email notification, and communication through local news or other earned media.

Events and Population

In 2011, PTR had five events; all lasting from 11:00 a.m. to 6:00 p.m. Participants were notified the day ahead of planned Reduce Your Use events. Messages informed participants that they can "earn rewards when you reduce your electricity use from 11:00 a.m. to 6:00 p.m." Explaining how participants can earn rewards remains a communication challenge, since the customer baseline involves rolling calculations of energy use. Email messages delivered to participants direct them to log into "My Account" at SDG&E.com, go to the Reduce Your Use section, and click on View Energy Charts and Rewards. Participants are informed that if they "use less than the amount of kWh of electricity shown on the table" they will start earning rewards.

Table 1: 2011 PTR Events

2011 EVENT DATES

- August 28
- September 7
- September 8*
- October 12
- October 13

SDG&E initially enrolled 3,000 accounts, but the actual participants change daily with eligibility changes associated with moving or changes to the account holder. Staff estimate this churn in eligibility at about 127 of 3,000 or about 4%. Only those that are currently eligible receive notification.

THIS REPORT

This introductory section is followed by three sections. Section 2 describes the results of our post event survey with PTR participants. Section 3 provides a summary of the results of three focus

^{*}City-wide blackout prevented load impact measurement

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groups held with PTR participants. Finally, Section 4 provides a summary and recommendations to improve the PTR program as it scales up to include all of San Diego in 2012.



SURVEY METHODOLOGY

Population and Sample Selection

Program staff provided the research team with a program database that contained contact information for 2,915 participants enrolled in the RYU program as of August 2011. To ensure we reached program participants with a variety of program experiences and to understand any differences in level of effort, we stratified the sample based on the amount of savings achieved. Based on the August 28 event data, the most recent event available, we grouped program participants into three groups: nonperformers (0 kWh saved), low performers (1-4 kWh saved), and high performers (> 4 kWh saved). To achieve 90/10 confidence/precision, we planned to sample 70 contacts from each stratum (Table 2).

Table 2: Population and Sampling Strata

	POPULATION SAMPLE		POPULATION SAMPLE		Confidence/
STRATA (8/28 SAVINGS)	Percent Count Perc		Percent	Count	PRECISION
Nonperformers (0 kWh)	49%	1,484	33%	70	90/10
Low Performers (1 – 4 kWh)	31%	856	33%	70	90/10
High Performers (>4 kWh)	20%	574	33%	70	90/10
Total	100%	2,915	100%	210	95/7

To achieve this target sample size, we randomly selected a call list from the program database, performing the following steps (Table 3).

- 1. Participants from the program database were matched to an estimate of their reduction in energy use during event hours for August 28. Participants were grouped into strata and randomized.
- 2. Ineligible contacts were removed, including those marked "do not call" and those with no phone number.
- 3. A sufficient number of contacts were drawn from each strata to create call lists based on 10-14% response rate assumptions.

Nonperformers were those program participants who were not included in the database listing customers with event results on August 28.

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Table 3: Call List Creation

GROUP	ORIGINAL LIST (STEP 1)	QUALIFIED (STEP 2)	CALL LIST (STEP 3)
High Performer	574	486	486
Low Performer	856	758	758
Nonperformer	1,484	1,282	758
Total	2,914	2,526	2,002

Data Collection

The telephone interviews were conducted from CIC Research's call center using trained survey managers and interviewers who employ a Computer-Assisted Telephone Interview system (CATI). CIC Research fielded the survey within a small window of time, from October 20 (Thursday) to 23 (Sunday), to maximize meaningful responses regarding participant actions on the most recent RYU day on October 13.

Table 4 shows the final disposition. Out of 1,746 eligible contacts, we completed surveys with 210, for a response rate of 12%.

Table 4: Final Disposition

DISPOSITION	Count	PERCENT
Not Eligible	256	13%
Not in Service	173	9%
Wrong Number	47	2%
Business	17	1%
Fax	13	1%
Do Not Call/Duplicate	5	0%
Blocked Number	1	0%
Eligible but not Completed, or Eligibility Unknown	1,228	61%
Answering Machine	781	39%
Call Backs	247	12%
No Answer	154	8%
Spanish/Other Language	34	2%
Busy	12	1%
		CONTINUED

Response rate is the number of completed interviews divided by the number of eligible units in a sample.

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DISPOSITION	Count	PERCENT
Contacted, not Completed	308	15%
Refusals	283	14%
Never Available	13	1%
Terminates during interview	12	1%
Completed	210	10%
Total	2,002	100%

Performance Categorization

Our sampling strategy grouped participants based on the amount of curtailment achieved during the August 28 event, because it was the most recent event for which data existed at the time the survey was conducted (see above). The survey, conducted October 20-23, asked respondents about an event within the last ten days. There were two events during this period: events on October 12 and 13.

Table 5 shows the characteristics of each event day, and the percentage of the program population with measured curtailment for each of the three RYU days.

Table 5: Event Day Information and Performance Data (n=2915)

EVENT DATE	TEMPERATURE	DAY OF THE WEEK	TOTAL KWH SAVINGS REPORTED	PORTION WITH MEASURED CURTAILMENT
28-Aug	102	Sunday	8,761	51%
12-Oct	89	Wednesday	3,252	39%
13-Oct	86	Thursday	2,940	35%
All three events			26,283	14%

To verify that the curtailment grouping based on the 8/28 event was still logical, we assessed whether the savings achieved on the 28th were correlated with the savings achieved on the 12th and 13th. We found that, although the savings achieved during the two October events were significantly correlated, the savings achieved on August 28 were not correlated with the savings achieved on either October date (Table 6). An analysis of the complete program database for these three events revealed the same low level of correlation between the August event and the October events.

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Table 6: Correlation of kWh Savings on the 3 Event Days (n=210)

		PEARSON'S R					
DATE	August 28	October 12	October 13				
August 28	1.00	.025	.025				
October 12		1.00	.647*				
October 13			1.00				

* Pearson's r p<.05

Because the performance groupings based on the August 28 event data were not very representative of the savings on the event dates about which participants gave us information, we explored alternative groupings. Table 7 shows a list of alternative grouping strategies we explored.

Table 7: Performance Grouping Strategies

		DEFINITION	AND UNWEIGHT	ED SAMPLE
SAVINGS GROUPING	DESCRIPTION	High Performers	Low Performers	Non- performers
	Groups sample based on savings during 8/28	70	70	70
8/28	event	(>4 kWh)	(1-4 kWh)	(0 kWh)
	Groups sample based on savings during 10/12	36	57	117
10/12			(1-2 kWh)	(0 kWh)
	Groups sample based on savings during 10/13	30	47	133
10/13	event	(>2 kWh)	(1-2 kWh)	(0 kWh)
	Groups sample based on combined savings for	61	56	93
October	both October events	(>2 kWh)	(0-2 kWh)	(0 kWh)
October	Groups sample based on combined savings for	117	93	-
Dichotomous	both October events	(>0 kWh)	(0 kWh)	
	Groups sample based on combined savings for all	79	95	36
Sum	three events	(>6 kWh)	(1-6 kWh)	(0 kWh)
	Groups sample based on combined savings for all	83	91	36
Weighted Sum ⁷	three events, weighted by total program savings achieved per event	(>10 kWh)	(1-10 kWh)	(0 kWh)
	Groups sample by the number of days on which	38	136	36
Days of Savings	savings were achieved	(3 days)	(1-2 days)	(0 days)

Savings calculated based on the percent of total savings of all program participants, per event day, to control for the overall lower savings rates during the October events.

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We developed the following informal criteria for grouping selection:

- → Predictive of event date responses
- → Correlated with performance across multiple events
- → Secondarily: Large enough samples of performing groups to allow analyses

To select the best grouping strategy based on these criteria, we explored whether responses to several key survey variables varied significantly across any of these grouping strategies. Table 8 shows these results. For reference, the August 28 grouping strategy revealed significant differences across groups on five of the variables explored, but only two of these variables concerned actions on the most recent RYU days. Both the "October" and the "Days of Savings" grouping strategies showed significant savings on four of the variables.

Table 8: Significant Differences across Savings Groupings

SAVINGS GROUPING	AWARE OF SELECTION	SIGN UP FOR TEXT OR EMAIL NOTIFICATION	RECEIVED EVENT NOTIFICATION	EVENT NOTIFICATION WITHIN TEN DAYS	MADE AN EFFORT ON MOST RECENT DAY	NUMBER OF ACTIONS	SHIFT DOING LAUNDRY	TURN OFF A POOL PUMP	PRE-COOL HOME	AMOUNT OF EFFORT	SEEN A RATE CREDIT
28-Aug (Reference)	0.173	0.018	0.009	0.235	0.008	0.315	0.025	0.536	0.253	0.675	0.068
12-Oct	0.715	0.871	0.269	0.278	0.896	0.534	0.383	0.014	0.359	0.752	0.129
13-Oct	0.628	0.329	0.856	0.393	0.317	0.512	0.38	0.062	0.016	0.714	0.246
October	0.254	0.721	0.219	0.926	0.676	0.115	0.016	0.042	0.047	0.302	0.078
October Dichotomous	0.24	0.405	0.229	0.7	0.476	0.102	0.011	0.188	0.123	0.491	0.184
Sum	0.532	0.221	0.199	0.905	0.013	0.071	0.01	0.266	0.616	0.812	0.356
Weighted Sum	0.446	0.304	0.17	0.983	0.014	0.049	0.014	0.151	0.716	0.628	0.363
Days of Savings	0.664	0.492	0.185	0.637	0.012	0.072	0.01	0.018	0.672	0.369	0.254

^{*} Significant predictor at p<0.10.

^{**} Significant predictor at p<0.05.

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Because this analysis did not point conclusively towards one grouping strategy, we also performed a regression analysis to increase our power to detect significant relationships between participants' responses to our survey questions and their event day performance. This analysis, the weighted results of which are reported in the Predictors of Performance section, below, revealed that the number of performing days predicted not only the sum of savings, but also the individual event day savings, over and above the effects of other demographic, behavioral, and attitudinal variables.

Weighting and Performance Groups

Based on these results, we selected the "days of savings" metric as our grouping variable. Throughout the report, we refer to these groups as performance consistency. Because participants with measured savings were over-represented in the original stratified sample, we used proportional weights to make our sample more representative of the population. Table 9 shows the weights applied to each group.

Table 9: Weighting Calculations

	Рорц	POPULATION		SAMPLE		
GROUP	N	Percent	N	Percent	WEIGHT	
Consistent Performer	413	14%	38	18%	0.783	
Inconsistent Performer	1,737	60%	136	65%	0.920	
Nonperformer	764	26%	36	17%	1.529	
Total	2,914	100%	210	100%	-	

FOCUS GROUP METHODOLOGY

Each of the three focus groups consisted of nine to 12 participants and took approximately two hours.

We segmented participants based on their measured curtailment performance over three 2011 RYU events:⁸

- Consistent performers: these participants demonstrated measurable reduction of kWh used on all three RYU days.
- Inconsistent performers: demonstrated measureable reduction on one or two days, but not all three.
- Nonperformers: no measured reduction on any of the three event days.

We assigned performance status to the list of PTR participants, removed any contacts that had asked not to be contacted again for evaluation purposes, and attempted to target participants

⁸ We used kWh reduction for August 28, October 12, and October 13.

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within 15 miles of the focus group facility in downtown San Diego. Each of the focus groups had the same structure and questions and were facilitated by the same moderator. Focus group topics included initial awareness of RYU days and sources of awareness; participant experience with curtailment requests; actions taken to reduce household energy use; sources of household energy use; and opportunities to improve how the program provided information and notification. Participants had an opportunity to describe their experience with RYU days and their thoughts about the overall concept. We also asked the participants for their views on energy saving behaviors, utility intervention, and appropriate financial incentives for conservation behaviors.

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POST-EVENT SURVEY

This section presents the results of a post event survey with PTR participants approximately ten days after two curtailment event days in mid-October 2011. In this chapter, we will describe all sample sizes using a weighted sample. We grouped respondents by the consistency of their performance across three event days, referred to as "performance group" throughout the chapter. All statistically significant differences are noted.

FINDINGS

- → Although there is some confusion about the program among participants, less than a fifth of respondents indicated no awareness of the program. Some comments indicate that participants are likely confusing PTR with other programs (such as Summer Savers or efficiency messages) or outages.
- → The website tools are underused.
- → Many participants say they want clearer program and event day notifications; responses indicate that participants may not understand how to register for text or email notification.
- → The relationship between monthly use and RYU day savings is variable. Survey responses about curtailment activities and attitudes do not reliably predict performance.
- → We found no difference in performance or survey response patterns based on welcome letters that stressed environmental benefits over those that stressed economic benefits.

Demographics

Survey respondents answered several demographic questions. With the exceptions of homeownership and the number of children in the house (which differed marginally), none of the demographic variables differed across performance groups.⁹

SURVEY RESULTS

Awareness

About two thirds of surveyed participants (63%) knew that their household had been selected to participate in SDG&E's RYU program (Table 10). Similarly, 64% recalled receiving at least one

⁹ See Appendix A: Methodology for full demographic information.

RYU day notification, and 57% recalled receiving a letter in the mail from the program. Awareness did not differ significantly across performance groups.

Table 10: Program Awareness

	P	PERFORMANCE GROUP				
AWARENESS INDICATOR	Consistent Performers (n=30)	Inconsistent Performers (n=125)	Nonperformers (n=55)	ALL		
Knew their household had been selected to participate	69%	62%	58%	63%		
Recalled receiving at least one notification of an RYU day	71%	68%	53%	64%		
Recalled receiving a letter in the mail from the Program	53%	60%	53%	57%		

Approximately half of contacts (52%) received the "reward" message welcome letter, and half (48%) received the "environmental" message welcome letter. Of the 57% of contacts who recalled receiving a letter in the mail from the program, 80% rated it "easy" or "very easy" to understand, 4% rated it "difficult" or "very difficult" to understand, and 16% said they did not read it or did not know.

Level of Involvement

About a fifth of the contacts (19%) reported that they had signed up to receive email or text notifications of RYU days (Table 11). Of these, three-fourths (75%) rated this process as "very easy," and a fourth (23%) rated it as "somewhat easy."

Few contacts (14, or 6%) reported having looked at the Energy Charts and Rewards information on the SDG&E website. Of these, 12 reported looking at the information between once a week and a couple times a month. Among these 14 contacts, agreement with statements about the ease of navigation was high, and agreement with statements about usefulness was somewhat high.

Table 11: Use of Email or Text Event Notifications and of Website

	PE	JP		
INVOLVEMENT INDICATOR	Consistent Performers (n=30)	Inconsistent Performers (n=125)	Non- performers (n=55)	TOTAL
Signed up to receive email or text notifications	17%	20%	20%	19%
Looked at the Energy Charts and Rewards information on SDG&E website	7%	6%	5%	6%

No significant differences (Chi-Square)

This is a higher percentage than the 5% enrolled in email or text notification for the entire program and could indicate that survey respondents were more engaged overall than the entire PTR population.



EVENT RESPONSE

Of the 210 participants surveyed, 106 (50%) recalled being asked to reduce their energy use in mid-October 2011. We asked these 106 contacts a number of questions about their actions on that day.

Of the 106, most (78%) reported being notified via phone, but 16% were notified via email, and 6% were notified via text (2% were notified by more than one means). Respondents also reported where they were during the most recent RYU event (Table 12). Responses were roughly evenly divided between at home, not at home, or some combination of the two.

Table 12: Location during RYU Event

		PERFORMANCE GROUP					
LOCATION	Consistent Performers (n=17)	Inconsistent Performers (n=61)	Nonperformers (n=28)	ALL			
At home the entire time	35%	32%	32%	34%			
At home part of the time	24%	40%	18%	31%			
Not at home	29%	24%	39%	28%			
Don't know	12%	3%	11%	7%			

Actions

Over half of contacts (61%) reported that they were able to do something to conserve energy on the most recent RYU day, beyond what they normally do. The percentage of contacts able to do something extra to conserve energy differed significantly by performance group, though; while about three-fourths of consistent performers and inconsistent performers did something extra, only a third of nonperformers reported doing so.

Table 13: Able to Conserve Energy on last RYU Day, Beyond Usual Actions

		Performance Group*					
RESPONSE	Consistent Performers (n=17)	Inconsistent Performers (n=61)	Nonperformers (n=28)	ALL			
Yes	76%	70%	32%	61%			
No	24%	30%	61%	37%			
Don't know	0%	0%	7%	2%			

^{*}Chi-Square p<.05.

¹¹ The post-event survey occurred approximately ten days after the event days in mid-October.

Table 14 shows the most frequently reported actions. About two-thirds (64%) of contacts reported "just trying to use less energy," the most commonly reported action. Less than a fifth of respondents (16%) reported performing none of the actions.

Table 14: Commonly Reported Actions Taken on RYU Days (Multiple Responses Allowed; n=106)

	PERFORMANCE GROUP					
ACTION	Consistent Performers (n=17)	Inconsistent Performers (n=61)	Nonperformers (n=28)	TOTAL		
Just try to use less energy	59%	73%	50%	64%		
Shift doing laundry to before or after that time**	76%	67%	33%	60%		
Turn off lights	65%	65%	44%	59%		
Run the dishwasher earlier or later	41%	49%	29%	42%		
Cook at a different time	35%	28%	11%	25%		
Adjust the AC temp settings	18%	26%	29%	25%		
Turn your AC off	6%	11%	11%	10%		
Pre-cool your home	12%	10%	7%	9%		
Turn off a pool pump**	24%	6%	0%	7%		
Reduce plug load	11%	5%	11%	7%		
Maximize passive cooling	0%	3%	7%	4%		
Reduce standby load*	11%	2%	0%	3%		
Change cooling method	6%	2%	0%	2%		
None of the above**	11%	10%	33%	16%		

^{**}Chi-Square significant at p<.05

Three of the actions (shift laundry time, turn off pool pump, reduce standby load) showed significant or marginally significant differences across performance groups. Additionally, the mean number of actions performed also differed significantly across groups (Table 15).

Table 15: Mean Number of Actions

GROUP	MEAN NUMBER OF ACTIONS
Consistent performer (n=17)	3.59
Inconsistent performer (n=62)	3.46
Nonperformer (n=28)	2.28

p <.05, One-way ANOVA

^{*} Chi-Square marginally significant at p<.10

3. POST-EVENT SURVEY Page 17

Those contacts who reported performing one or more actions on the RYU day also rated the amount of effort they put into the RYU day (Table 16). About half of contacts (52%) reported making a "moderate" effort. Reported level of effort did not differ significantly across performance groups.

Table 16: Effort by Group

EFFORT	Consistent Performer (n=15)	Inconsistent Performer (n=56)	Nonperformer (n=20)	TOTAL
A great deal of effort	33%	14%	15%	18%
Moderate effort	40%	52%	60%	52%
A little effort	13%	25%	15%	21%
No effort	13%	9%	10%	10%

No significant differences, Kruskal-Wallis.

Negative Effects

Just under a third of respondents who performed at least one additional action (26 of 92, or 28%) reported that responding to the RYU request had affected at least one household routine (Table 17).

Table 17: Percent Reporting Affected Household Routines or Negative Effects

GROUP	AFFECTED ROUTINES*	NEGATIVE EFFECTS
Consistent performer (n=16)	44%	6%
Inconsistent performer (n=56)	30%	16%
Nonperformer (n=20)	10%	0%
Total	28%	11%

^{*}Chi-Square p<.10

Most of these affected routines (87%) mapped to actions mentioned in previous questions. Two-thirds (67%) of the responses included laundry, dishes, cooking, or cleaning. A fifth (20%) reported increased heat. Two contacts (8%), both consistent performers, reported their work schedules were affected.

- → "My whole cleaning routine... I waited to do dishes & laundry until after 6:00 p.m. I was more conscious of having lights on in the house."
- → "I didn't do laundry like I normally would in the afternoon, I just did it later at night; I turned computer back on after 7:00 p.m., stayed at work longer."
- → "I didn't watch TV."

→ "The laundry was put off."

Eleven percent of those who performed at least one additional action (10 of 92) reported negative effects of responding; most negative effects (8 of 10) concerned excessive heat (two of these eight also mentioned the heat in response to the question about routines). Two other contacts reported cooking-related negative effects.

- → "The heat really drained us."
- → "I did not cook."
- → "Dishwasher times interfered with my morning coffee."

Contacts appeared to discriminate between affected routines and negative effects: just a fourth of those who mentioned affected routines (7 of 26, or 27%) also mentioned negative effects of participating in an RYU day.

PREDICTORS OF PERFORMANCE

Because many contacts' responses were seemingly unconnected to their performance group (consistent performers were no more aware of the program than nonperformers, for example), we dug further into response patterns in order to understand which program enrollees were reducing their electricity use the most on event days. Using the performance data for the three events in August and October, we attempted to identify demographic, attitudinal, and behavioral factors affecting participants' kWh reductions during RYU days. We looked for factors that predicted overall kWh reduction, as well as kWh reduction on each of the three event days (represented as "savings metrics" in Table 19).

We used regression analyses to search for performance patterns. We performed two sets of regression analyses, one using only demographic predictors to predict savings performance, and one using reported behaviors and attitudes to predict performance.

Demographic Models

We hypothesized that, regardless of program awareness and reported activities, contacts with large homes, high monthly electricity usage, and more occupants might have the highest savings levels during RYU days. We found that, controlling for the effect of the other demographic predictors, only monthly use consistently predicted savings; higher monthly use predicted higher savings on all metrics except the 10/13 savings metric (Table 18).

Table 18: Demographic Predictors of Savings

J .	DEMOGRAPHIC PREDICTOR										
SAVINGS METRIC	CHILDREN UNDER 18	ADULTS OVER 70	#Occupants	Home size	HOME AGE	MONTHLY KWH USE	EDUCATION	ETHNICITY	GENDER	INCOME	HOME OWNERSHIP
8/28 Savings	ns	ns	ns	ns	ns	**	ns	ns	ns	ns	ns
10/12 Savings	ns	ns	*	ns	ns	**	ns	ns	ns	ns	ns
10/13 Savings	ns	ns	ns	ns	ns	ns	ns	ns	ns	ns	**
Sum of savings	ns	ns	ns	ns	ns	**	ns	ns	ns	ns	ns
Weighted sum of savings	ns	ns	ns	ns	ns	**	ns	ns	ns	ns	ns

^{*} Significant predictor at p<0.10.

Behavioral and Attitudinal Models

Based on the results of the demographic models, we analyzed the effects of several behavioral and attitudinal responses on RYU day savings metrics, controlling for several demographic predictors. We hypothesized that participants who reported performing the most actions to save energy on those days, participants with positive attitudes towards participating, and participants with the highest monthly energy use would have the highest level of measured reduction during actual events.

Overall, we found few behavioral or attitudinal predictors that consistently predicted performance across savings metrics (Table 19). When controlling for other demographic and behavioral factors, average monthly use only significantly predicted savings during the August 28 event. Whether or not participants reported making additional effort was never predictive of savings levels. Interestingly, the actual number of performing days not only predicted the total curtailment measured across all three events (which would be expected), but also predicted the level of savings on each individual event day.

^{**} Significant predictor at p<0.05.

Table 19: Significant Predictors of kWh Savings during RYU Events

		PREDICTOR									
SAVINGS METRIC	#Occupants	HOME SIZE	HOME OWNERSHIP	MONTHLY KWH USE	# PERFORMING DAYS	AT HOME OR AWAY	MADE ADDITIONAL EFFORT	# ACTIONS	PARTICIPATING SAVES \$	PARTICIPATING HELPS ENVIRONMENT	IMPORTANT TO DO OUR PART TO SAVE
8/28 Savings	ns	ns	ns	**	**	ns	ns	**	ns	ns	ns
10/12 Savings	ns	*	ns	ns	**	ns	ns	ns	ns	ns	ns
10/13 Savings	ns	ns	ns	ns	**	ns	ns	**	ns	ns	**
Sum of savings	ns	ns	ns	*	**	ns	ns	ns	*	ns	ns
Weighted sum of savings	ns	ns	ns	ns	**	ns	ns	ns	*	ns	ns

^{*} Significant predictor at p<0.10.

General Participation Experience

Regardless of whether they recalled receiving a recent notification of an RYU day, we also asked all contacts about their general experiences with RYU days. A fifth of participants (20%) reported seeing a credit on their bill after participating (Table 20).

Table 20: Noticed a Credit after Participating

	PERFORMANCE GROUP				
	Consistent Performer (n=30)	Inconsistent Performer (n=125)	Nonperformer (n=55)	TOTAL	
Have seen a credit	30%	21%	14%	20%	
Have not seen a credit or don't know	70%	79%	86%	80%	

No significant differences.

Expectations for the amount of the bill credit varied. Of the 20% who reported seeing a credit after participating, just over a fourth (12 of 41, or 29%) reported that the bill credit was about what they expected, about a fourth (11 of 41, or 27%) reported that the bill credit was not what they expected, and just less than half (18 of 41, or 44%) were not sure. Receiving a welcome letter focused on economic benefits did not affect whether they noticed a bill credit or their expectations about the amount of the credit.

^{**} Significant predictor at p<0.05.

3. POST-EVENT SURVEY Page 21

A third of all surveyed participants (78 of 210, or 37%) reported performing new day-to-day activities to save energy because of their experience with RYU notifications (Table 21). Among these participants, reported activities were mostly conservation actions, such as turning off lights and reducing appliance use. A third of these respondents (25 of 78, or 32%) noted that they had started regularly shifting activities to off-peak hours, and a few (6 of 78, or 7%) reported efficiency investments, such as purchasing new appliances or CFLs.

Table 21: Types of New Activities (n=78)

TYPE OF BEHAVIOR	PERCENT
Turned off energy-using products	72%
Shifted consumption to off-peak hours	32%
Purchased efficient products	7%

Of the contacts reporting new actions, over a third (41%) reported noticing a reduction on their utility bill as a result (Table 22).

Table 22: Noticed a Reduction on Utility Bill as a Result of New Activities (n=78)

RESPONSE	PERCENT
Noticed a reduction	41%
Have not noticed a reduction	41%
Don't know	18%

Satisfaction

Overall satisfaction with the program was high (Table 23). In particular, 91% of contacts said they would reduce energy use during future events, and 84% said they would like to continue to be part of the program. Nearly all contacts (93%) said that it was important to do their part to save electricity during periods of high demand. Program satisfaction and attitudes did not differ significantly by performance group or the type of welcome message received.

Table 23: Ratings of Program Elements and Attitudes about Participation (n=210)

French	Ac	AGREE		DISAGREE		Don't		
ELEMENT	Strongly	Somewhat	Neutral	Somewhat	Strongly	Know		
PROGRAM EXPERIENCE								
I will reduce my energy use when future RYU day event is called	74%	17%	3%	1%	3%	2%		
I'd like to continue to be part of this program	67%	16%	3%	2%	5%	6%		
Notification of RYU day event was clear	61%	13%	5%	2%	5%	13%		
I had enough time to prepare for the RYU day notification	52%	16%	5%	6%	7%	14%		
The number of RYU day notifications was what I expected	27%	33%	14%	5%	7%	14%		
ATTITUDES								
It is important to do our part to save energy in times of high electricity demand	81%	12%	2%	0%	1%	3%		
Participating in this Program helps the environment	65%	18%	7%	1%	2%	7%		
Participating in this Program helps me save money	46%	17%	10%	5%	8%	14%		

Suggested Improvements

A third of participants (32%) offered suggestions to improve the program (Table 24).

Table 24: Suggestions for Program Improvements (Multiple Responses Allowed; n=67)

Suggestion	MENTIONS (N=67)
Improved event notification	21
Earlier	8
Asked for currently available means of notification (email, text)	6
Clearer program information	21
Improved means of enrollment	13
More information about program offer	10
Build awareness among public	7
Provide more money	6
Encourage wider participation in program	4
Other	8

The most commonly mentioned topic in these suggestions was program and event notification, mentioned by over half of respondents (38 of 67, or 56%). A majority of these comments concerned the means of notification, rather than the content. Ten contacts wanted more program information in the program notification letter, however.

- → "Set up some public meetings about the program, to make people aware and to understand."
- → "Initially call customer to advise them that they are, or that they have been, selected for this program, and provide general information about how future correspondence will occur, whether phone, e-mail, or mail."
- → "The message could indicate the most effective way to reduce use and increase the potential rewards."
- → "Delivery of messages to customers has to be more effective, like emails. Add something to the envelope (a different color or something) that lets you know it's not related to an SDG&E bill. Something to alert you, like mention something about the benefits of the program. What's it about, what's expected, how can I benefit. The title of the program means nothing. Do bullet points of three things I need to understand. That it's clear that my participation is required; make it clear, what am I suppose to do, what's expected of me."
- → "Be kind to little old ladies; give them a little more time. They called at 7:00 p.m. for the next day, maybe a couple hours even."

Generally, quite a few of these comments indicated confusion about the program. For example, several contacts (6 of 67) explicitly asked for currently available means of event notification, such as email or text.

- → "Email notices, at least a week in advance to let us know."
- → "Instead of soliciting on-site audits, which no one wants to do, set up a comprehensive checklist that makes sense to people, bills sent out in kilowatt hours and megahertz doesn't make sense to people."
- → "To sign up a number to text to would be helpful."
- → "Make it more clear. I did not understand what was going on with the letter; thought it was for AC only."

One of these comments indicated confusion between naturally occurring outages and RYU events.

→ "This residence is a part-time vacation residence. Reduce Your Use program is absolutely no use to me. (I am) not generally there to participate. . . . Food in my refrigerator has been ruined at my replacement [own] expense, the destroyed food costs more than any

other savings on utility bills. Reduce Your Use program should be limited to 2-3 hr time segments maximum in order to salvage food.... Eliminate it; it doesn't work out for part-time residents."

The "other" comments included three comments about the kinds of people selected to participate and three comments about the program design.

- → "Select someone who uses a lot of electricity, not someone who has a \$20 electricity bill."
- → "If you don't try to save, and then on the day you do save, it will look like you do more than someone who saves all the time."
- → "Quit picking on the people in the desert about this. We are old and have no place like a restaurant with air conditioning to go sit in."
- → "Reduce your use hours should apply more to peak demand."



FOCUS GROUP RESULTS

To provide additional insight and more nuanced understanding of the survey results presented in Section 2, in November 2011, Research Into Action conducted focus groups with three segments of PTR participants.

PROGRAM UNDERSTANDING

Understanding of Program Requests

While participants in all three groups recognized that the program staff contacted them with requests to reduce their energy use when electricity demand was anticipated to be high, the nonperformer group demonstrated less overall understanding that the program is focused on, and rewards, reduction in energy use *on specific days*. Instead, nonperformers largely appeared to associate program messages with other messages focused on reducing their use of natural resources.

- → In discussing actions they had taken or could take in response to program requests, nonperformers primarily described seeking to reduce energy use over the long term. For example, contacts discussed general efforts to use fans or other alternatives to air conditioning rather than efforts focused on specific days. Nonperformers also discussed larger, long-term retrofits, such as switching to gas for cooking and water heating and installing programmable thermostats. In contrast, consistent and inconsistent performers more often discussed short-term actions taken specifically in response to a specific request to reduce their energy use.
- → Nonperformers, more than other groups, cited environmental concerns or a desire to conserve natural resources as a motivation for taking action. One nonperformer's comments illustrate the connection this participant sees between the program and resource conservation efforts, "...there is so much waste everywhere you turn, and it's accepted. I'm just hoping that through campaigns like this, we can get it to not be acceptable and help everybody." As discussed further below, consistent and inconsistent performers more often cited a sense of civic responsibility and cost savings as motivations.
- → The need to reduce energy use at peak time periods appears clearer than the need to reduce on specific days. One participant recalled the program's initial messaging as encouraging her to "Just do it [reduce energy use], and not on any certain days, just to do it." Another participant recalled a greater focus on peak times, but did not mention specific days, "To me it matters if they are asking you to cut back between 11 and 6 because of the peak power usage; then I think, to me that's important to try to cut back during those hours."

→ While participants in all three groups were aware of the potential to receive a bill credit for reducing their energy use when requested, participants within the consistent and inconsistent performer groups were divided in their awareness of bill credits they had received.¹² Participants in the inconsistent and consistent performer groups who were not aware of receiving bill credits reported that they had not looked closely at their bill, instead focusing on the total amount due. Some of these contacts also reported paying their bills online. Participants who were aware of the bill credit described it as an acknowledgement of their efforts to reduce their energy use. According to one consistent performer, "to me it was recognition that somebody knew that I tried."

Perspectives on Energy Costs

Focus group findings suggest that some nonperformers may view their energy bills as more arbitrary and outside their control than do members of other groups. More than other groups, nonperformers expressed frustration about energy rates and perceived these rates to be higher than those of neighboring utility territories, reported that they had not seen cost savings from past energy efficiency improvements, and stated that their bills were increasing while their usage remained constant. Some nonperformers also sought a greater understanding of their energy costs. According to one, "We would like to see where the money that we are paying the electric company is going? If it's going to provide us with electricity, that's one thing, but if it's going to pay the people at the top or the shareholders [that's another thing]."

While inconsistent performers appeared to see greater potential to reduce their energy bills through their own actions than nonperformers, they also expressed a desire for clearer information on energy costs. According to one inconsistent performer, "the rates are in such flux that people don't know how much anything costs in terms of usage...it would be nice to know if 1 watt or whatever equals 0.001 penny." Inconsistent performers suggested that clarifying energy bills to emphasize usage and rates might improve their understanding of the bill and help them identify opportunities to take action that would reduce energy costs.

ACTIONS TAKEN

Motivation for Taking Action

While participants reported that the cost savings associated with reduced energy use motivate them to take action in response to curtailment requests, in focus group discussions appeals to civic responsibility emerged as a more powerful motivator. This finding is consistent with the findings from pre-PTR implementation.

→ Focus group findings suggest that a sense of civic responsibility motivates participants across all three groups to take action in response to requests that they reduce their

None of the participants in the nonperformer group recalled receiving a credit on their bill, which is consistent with their program performance.

energy use. Focus group participants described their actions as helping to reduce the demand on the electrical grid, ultimately benefiting the community as a whole by preventing blackouts or brownouts.¹³ Illustrative comments from each group include:

- Consistent Performers: "If we can at least feel like we are helping with that—playing some small part in keeping the grid running, then that is cool, helping the power not shut off entirely."
- *Inconsistent Performers:* "This has an impact on San Diego County for everyone. In a sense, it's not just us as individuals...the electricity distribution network, it's there, it's not free, we don't think about it, but that's what SDG&E is raising flags about. And it's a complicated problem; every little bit makes a difference."
- *Nonperformers:* "They were asking us to cooperate with them because of the problem they were having with the grid and stuff. And you know, I agree with that. I think it's good to comply and cooperate with the company that is supplying the power."
- → Contacts from all three groups cited cost savings as a motivation and described the program incentive as a secondary motivator. Contacts from all three groups reported participating in the program to save money and noted that reduced energy usage would result in a bill reduction in addition to any incentive they received. Nonetheless, consistent and inconsistent performers in particular, emphasized that program incentives were a secondary motivation to a sense of civic responsibility or concerns over environmental degradation and resource use. According to one consistent performer, "The real message needs to be that we aren't talking about four bucks, we are talking about the fact that you had power that day and every day that month because people like you made an effort."
- → In addition to individual bill savings resulting from their actions, inconsistent performers and nonperformers recognized that a reduction in demand at peak times could result in an overall reduction in energy costs. Participants in both groups noted that their electric rates would reflect the cost of building any new power plants that are necessary to meet peak demand. According to one inconsistent performer, "If they build another half-billion dollar power plant, we are going to pay for it some way or another. If we can keep from having to do that, that's a darn good idea." However, participants in all three groups feared that the electric utilities could enact a system similar to the water utilities, which raised their rates when usage declined due to conversation efforts.

Although these responses may have been influenced by the recent blackouts, participants clearly indicated that preventing blackouts *in general* was a strong motivator for shifting behavior.

Types of Action Taken

Participants in all three groups reported taking a variety of actions in response to program requests to reduce their energy use. In some cases, participants reported taking short-term actions specifically in response to an event and only on the event day, while in other cases, participants discussed longer-term actions or ongoing changes to their habits. Table 25 lists the actions focus group participants most often reported taking, the groups in which the action was discussed, and whether participants primarily discussed the action as a longer-term behavior change or as a short-term response to a program request.

Table 25: Actions Taken In Response to a "Reduce Your Use" Request

	GROUPS MENTIONING			
ACTION	Consistent Performers	Inconsistent Performers	Non- performers	LONGEVITY
Reduce air conditioning use	Х	Х	Х	Varied
Postpone laundry and/or dish washing	X	Х	X	Short-term
Reduce plug load power draw	Х	Х	Х	Long-term
Leave home during peak times		Х	Х	Short-term
Alter cooking behaviors	Х	Х		Short-term
Change timers on pool/spa circulation pumps	Х	Х		Varied

^{*} Air conditioning was described as a long-term and short-term activity, with some participants describing short-term reductions and others describing trying to use less air conditioning as an on-going effort.

Nonperformers discussed behavior changes related to cooking in a notably different way from consistent and inconsistent performers. All three groups recognized cooking as a potentially significant energy user. However, while consistent and inconsistent performers described efforts such as barbecuing and not baking in electric ovens on event days, nonperformers described cooking energy use as a factor they could not change without significantly disrupting their daily routine or making costly upgrades to change their cooking fuel.

Barriers to Taking Action

Focus group findings suggest that a lack of awareness of effective curtailment action is a primary barrier to participants' ability to take action, particularly when participants already take steps to limit their energy use or are typically away from home during peak times. Although the emphasis placed on different barriers varied somewhat between groups, focus groups revealed three general barriers that limit participants' ability to take action in response to requests to reduce their energy use.

^{**} Pool and spa circulation pumps were also described as both a strategy for short term reduction and as an opportunity for long-term pump programming change.

- → While it arose in all three groups, **consistent performers particularly emphasized the difficulty of further reducing energy use beyond their existing efforts to conserve.** Findings suggest these participants see little additional opportunity to reduce energy use during peak times. In a typical comment, one consistent performer stated, "The problem that I see is that, if you already…are conserving as far as you can, you don't think you can do more."
- → Nonperformers and inconsistent performers **emphasized the difficulty of taking action when they are not typically home during peak times.** These participants noted that they seek to minimize energy use when they are away from home in general, and, like the participants who reported already doing all they can to conserve, saw little opportunity to reduce their energy use in response to a request. According to one nonperformer, "I think for those of us who are outside the home during that time anyhow, it's a natural thing to try and leave as much stuff off as possible."
- → Although it received less emphasis than other barriers, participants in all three groups stated that the need to maintain their lifestyle limits the action they are willing to take. According to one inconsistent performer, "If it's really hot, we will pay....We will pay, and if it costs more, we will pay more. We are going to live our lives." In particular, participants noted that they may be unwilling to go without air conditioning on very hot days or ask their children to stop using computers for school work.

PROGRAM MESSAGING AND COMMUNICATIONS

Event Notifications

Consistent with survey findings, differences in energy use reduction do not appear to result from differences in awareness of event notification between the groups. There was a great deal of variation in the number of notifications participants recalled receiving within all three groups. The greatest variation was among consistent performers, one of whom did not recall receiving any notifications, while another recalled receiving notifications for five event days. Nonperformers and inconsistent performers recalled between two and six notifications, with most participants recalling between two and four. Participants in all three groups largely agreed that the number of notifications they had received was reasonable, and appeared to view the notifications positively.

In each group, only two or three participants seemed aware that they could choose the type of notification they preferred to receive. Nonetheless, even participants who had not chosen their preferred communication method appeared largely satisfied with the phone calls they received. According to one nonperformer, "I think the messages on your phone are good, because then you can tell people in your household 'we just got this call to reduce electricity." Suggesting ways for the program to improve phone outreach, one inconsistent performer noted that she is wary of

The program notified participants of five event days in the summer and fall of 2011.

answering calls that show up as toll-free numbers on her caller ID, and another stated that the prior notification she received that the program would be contacting her made her more likely to take the calls.

Focus group findings confirmed prior research indicating that some participants confuse the request to select email, text, or cell phone notification with the process of signing up to participate in the program itself. At least one participant in each group mentioned distinct memories of signing up for the program, and these participants typically demonstrated knowledge that they could choose how the program would contact them. At least one participant in each group also expressed some confusion about receiving messages from the program even though they had not signed up. According to one consistent performer, "when the call came, I didn't know if we had signed up for anything; I don't know if we signed up at all. I don't know what we had to do."

Focus group findings also suggest that program messages have the potential to spread through word-of-mouth communication. Nonperformer and inconsistent performer participants stated that they had discussed, or were likely to discuss, event notifications with friends or colleagues. In addition, both consistent performers and nonperformers noted that the potential to discuss energy and cost savings achievements and the incentives they had received with others could motivate those people to participate in the program. One nonperformer stated, "If they can see an incentive, or hear that one or two people got the incentive, well, next thing you know, they want this incentive. It spreads by word of mouth until maybe everybody joins."

While we attempted to quantify how many events participants thought they could comfortably tolerate, participants' willingness to accommodate events was linked to their understanding that the events were based on need. Participants were prepared to accommodate the events, even if they were inconvenient, but might not shift some behaviors if the events are called frequently. Participants thought that the current number of events was acceptable.

Online Tools

While a minority of participants in all three groups reported using the online tools provided by SDG&E to track and identify ways to reduce their energy use, consistent and inconsistent performers reported taking advantage of the tools more than nonperformers. Nonperformers were largely unaware that the program offers tools to track energy use, while one consistent performer and two inconsistent performers reported using the tracking tools.

An inconsistent performer reported that the tools had helped her identify her stove as a significant energy user, while another reported that the tools had raised his general awareness of his home's energy use. This participant described the benefit he saw in the tracking tool saying, "If you are reasonably familiar with the website, then using the hourly usage is a way of sensitizing yourself to what's going on...I mean, when you see on the hourly chart those big bars, you think 'what was that?" In contrast to these generally positive assessments of the online tools, a third inconsistent performer stated that he found the tools difficult to use and felt they provided more information than he could easily interpret.

Suggested Messaging to Improve Performance

Focus group findings suggest that the three groups varied in the type of information that might encourage or facilitate their efforts to take additional action in response to requests to reduce their energy use. While consistent performers sought recognition for the actions they have taken, nonperformers would like additional information and a greater understanding of where their efforts fit in a broader context.

- → Consistent and inconsistent performers expressed a desire for additional information on their performance on event days and advice on how to improve, while a desire for additional feedback did not arise among nonperformers. Consistent and inconsistent performers suggested that this feedback could serve as an acknowledgement of their efforts to conserve. An inconsistent performer expressed this desire for feedback, saying, "You know you did something, but you don't really know how it came back to you." A consistent performer suggested more direct feedback, noting: "I would like to get a follow-up call from a person to ask me if there is anything else they could do to help me participate and maybe tell me how I am doing."
- → Consistent performers and nonperformers are interested in how their actions contribute to larger conservation efforts, but the context in which they place their efforts differs.
 - *Nonperformers*, and, to a lesser extent, inconsistent performers, compared their energy use and conservation efforts to efforts by businesses. In a typical comment, one nonperformer said, "I'm sure the companies, these corporations and all that, big business and manufacturers, they are going to make an attempt to do what they can, but...they can't shut down."
 - Consistent performers compared their conservation efforts to those of other homeowners. These participants sought recognition for the sacrifices they had made to conserve energy, while they perceived that others had not made similar sacrifices. One contact expressed a desire for performance information "So when you see that house next door, you can think that they used ten times as much as you and that you saved thousands of dollars."
- → Inconsistent performers and nonperformers want additional information on the energy used by various devices within their homes and opportunities to conserve. These participants particularly expressed interest in information that allows them to identify the cost of operating a device and the potential cost savings from limiting its use. One inconsistent performer offered an example of the type of information he would like to see, saying "Turn a 100 watt light bulb off, an incandescent light bulb; your bill would drop by \$3." A nonperformer requested similar information, "So when they do call and tell you to reduce, you will know what to actually reduce." These suggestions are consistent with the interest participants in research to test PTR welcome materials expressed in the operating cost table with which they were presented.

Messages to Expand Participation

The types of messages focus group participants suggested to expand program participation largely parallel the motivations they cited for taking action. Consistent performers in particular suggested that messages focused on civic responsibility, including the benefits of protecting the electrical grid and avoiding power outages would be effective. Inconsistent performers and nonperformers also stated that messages focused on energy savings, environmental preservation, and the potential to earn a rebate might attract others to participate. Nonperformers also suggested that testimonials by customers who had taken action and seen a reduction in their energy bills might motivate others to participate and could generate word-of-mouth publicity for the program.

Participants in all three focus groups primarily recommended delivering messages to expand participation through mass media and direct mail:

- → Mass media: Participants in all three groups stated that announcements distributed through mass media would be an effective way to notify large numbers of people about event days. Participants suggested that the program could notify people of events and suggest actions to take through local TV and radio news broadcasts and articles in local newspapers or through advertisements.
- → Mail: Focus group participants were divided on the most effective form for announcements delivered through the mail to take. One inconsistent performer stated that a separate mailing effectively caught her attention since she does not typically read bill inserts. However, a nonperformer stated that receiving stand-alone mailings causes her to question whether the cost of the mailing is a prudent expenditure for the utility to make. Other inconsistent performers suggested that bill inserts, particularly ones printed on brightly colored paper that deliver simple messages would be effective.

5 CONCLUSIONS AND RECOMMENDATIONS

The Peak Time Rebate Pilot program provided SDG&E staff an opportunity to test and refine communication, notification, and rebate calculation processes with a cohort of randomly selected San Diego residential customers in preparation for a larger-scale demand response program expected in 2012. Program staff reported substantial learning within the utility about how to communicate with customers about the program and incorporate the curtailment estimates and bill credit into existing utility systems. The post-event survey and focus groups conducted as part of this evaluation effort revealed few concerns among enrolled participants about the requests and a willingness to take action on behalf of one's community.

Our research also found opportunities to improve communication and notification and indicate that SDG&E will need to be creative in motivating residential customers to understand and engage in the concept of taking extraordinary action to reduce their energy use when asked.

CONCLUSIONS AND RECOMMENDATIONS

Conclusion 1: Awareness of the program and requests was limited.

Among survey respondents, 63% were aware that they were enrolled in the pilot, 64% recalled receiving at least one request to reduce their use, and 57% recalled getting the welcome letters. Perhaps more importantly, only 50% recalled being notified of an event in October (ten days before the survey). While we would expect awareness of the program itself to be relatively low considering that participants did not take any action to opt-in, we expected that recall of specific phone message requests from SDG&E would be higher. Similarly, while PTR provided the option for text or email notification, fewer than 10% of participants had signed up to receive these notifications.

→ Recommendation 1: SDG&E will need to employ more compelling and memorable event request activities to engage residential customers.

Outbound dialing is not practical for a citywide program. Visible appeals through mass media, weathercasts, and text or tweet campaigns could raise overall awareness and generate word-of-mouth communication about the requests.

SDG&E should consider increasing the frequency of communication about the program and its features. Any delay between program information and curtailment request makes it harder for residents to connect the program details with a specific request. However, the somewhat episodic nature of demand response requests means that the utility will be unable to predict the best timing for a reminder mailing. Quarterly bill stuffers could remind residents throughout the year that they could be asked to curtail on critical peak days.

Conclusion 2: Website tools and electronic notification remain underused.

The website is the primary source of performance information; however, accessing this information involves several steps. Because of this, participants are not taking advantage of the information provided to them on the website. Email messages delivered to participants direct them to log into "My Account" at SDG&E.com, go to the Reduce Your Use section, and click on View Energy Charts and Rewards. Participants are informed that if they "use less than the amount of kilowatt hours (kWh) of electricity shown on the table," they will start earning rewards.

Participants want clearer program and event day notification, and responses indicate that participants may not understand how to register for text or email notification.

→ Recommendation 2: Simplify the process of enrolling in text notification and provide engaging reasons to do so.

Consider ways to make website access to detailed energy use and performance information more straightforward. Identify ways to add a single-click hot link or a link embedded in simple questions like "when does my household use energy?"

Consider opportunities to increase the overall community engagement with the program and expand the text notification system. Create easy opportunities for customers to enroll in text notification with "one-click" or an opt-in text campaign whereby residents can receive notification by dialing into a text registration system.

Community events or neighborhood contests could spur residents in specific areas to sign up to receive text messages so that they can try to reduce their energy use by a larger percentage than a competing neighborhood. Intra-high school campaigns could tap into neighborhood pride and competition. Cycling this type of campaign through the entire city over a year could provide rolling focus and opportunity for neighborhood-by-neighborhood outreach with a message more compelling than one that might be appropriate for the entire city.

Consider opportunities to provide a visual display or visual cue of performance. This could occur citywide or part of neighborhood contests, but should have an intuitive way of portraying community level energy curtailment—messages akin to clocks, thermometers, reader boards or graphics.

Conclusion 3: Participants are not consistently differentiating between ubiquitous messages to reduce their overall energy use and the short-term requests for extraordinary reduction.

In 2011, PTR operated with requests that participants "Reduce Your Use." This request is similar to overarching energy and water conservation messages Californians are used to hearing. While the details of the request provide the time period of the event, the language itself does not communicate the extraordinary nature of these demand response curtailment events.

In part because participants are not differentiating the message, they may not know exactly what types of activities they are being asked to do. Unlike exhortations to replace light bulbs or energy using equipment, demand response requests need to clarify that participants are being asked to take immediate action. One strategy for communicating the difference is to give examples of the type of behavior that seems to work for residential customers.

→ Recommendation 3: Revise the language of the request to communicate more urgency and provide examples of specific actions that are different from standard energy efficiency messages.

SDG&E should consider request language that communicates action or alert, or otherwise differentiates this request from the many efforts to encourage overall conservation and creates an imperative. News stories or other media coverage could help SDG&E communicate why event days occur and how the utility approaches meeting energy demand at the highest peaks. Aligning messages about critical peaks with other experiences, such as rush hour traffic or smog alerts, could help communicate the time-bounded nature of the requests.

Media coverage could provide examples of activities that demonstrate the extraordinary nature of short-term curtailment. While this is likely to help differentiate these requests, the utility will want to emphasize that residents are not expected to suffer and that millions of small actions can add up to measurable load reduction. Communicating the aggregated load impact of specific activities (such as turning off three lights or raising air conditioner temperatures two degrees) could provide simple actions for people to take without risking the perception that SDG&E expects people to be uncomfortable.

Conclusion 4: Environmental and economic messages are not as compelling as community-oriented messages.

We found no difference in performance or survey response patterns based on welcome letters that stressed environmental benefits over those that stressed economic benefits. Focus group results indicate that messages that emphasize potential environmental and economic benefits are less compelling than those that emphasize overall community benefit and community action. The nonperformer focus group in particular tended to equate the program with longer-term actions that would lead to long-term reduction in energy use that are likely to lead to environmental benefits. While it is likely that some portion of nonperformers simply took no action, it may also be that the nonperformers on demand response days are engaged in every day actions to lower their energy use and thus perceive they do not have anything left to do. Environmental benefits from short-term energy use reduction may not be plausible, and the individual economic benefits are small.

Explaining how participants can earn rewards remains a communication challenge, since the customer baseline involves rolling calculations of energy use. On the other hand, focus group participants described overall interest in taking action on behalf of one's community, particularly preventing black outs and stabilizing the electrical grid.

In focus group discussions, nonperformers suggested that testimonials by real customers that had taken action and either earned a bill credit or seen a reduction on their energy bill could motivate others to take action. Some focus group participants stated that they wanted to know what SDG&E and other big energy users were doing during these events, to assure them that everyone was doing their part. Consistent performers described wanting to see that they were doing better than their neighbors.

→ Recommendation 4: Leverage the interest and willingness to engage in communityoriented action by framing the request as a community need.

This could also create peer-pressure to avoid conspicuous consumption of energy during alert days.

Create profiles or case studies of real people that have been able to consistently lower their energy use when requested.

As PTR scales up to include citywide communication, SDG&E should report what the utility does during these events and what other large energy customers do. If residents are reminded of event days at stores, schools, or other businesses they frequent, it will both remind them of the event and normalize participation.

Explore opportunities to provide comparison or create competition. Residents that are paying attention and taking action want to know that their actions are acknowledged.



APPENDIX A: SURVEY DEMOGRAPHICS

APPENDIX B: PTR PHONE SURVEY

APPENDIX C: PTR FOCUS GROUP GUIDE

APPENDIX D: PTR PHONE SURVEY RAW RESPONSES





SURVEY DEMOGRAPHICS

Just over a third of contacts were renters (35% unweighted, 38% weighted). Homeownership differed significantly across performance groups: 30% of consistent and inconsistent performers were renters, compared with 62% of nonperformers.

Contacts reported an average of 2.62 household members (Table 26). Just under a third of contacts (28%) had children under 18 (33% of consistent performers, 31% of inconsistent performers, and 16% of nonperformers, Chi-Square p<.10.) Similarly, just under a third (28%) also reported adults over 70 as inhabitants. Contacts reported a mean home size of 1991 square feet.

Table 26: Home and Household Characteristics

	Мінімим	MAXIMUM	MEAN (UNWEIGHTED)	MEAN (WEIGHTED)
Number of household members (n=207)	1	9	3	2.62
Size of home, square feet (n=178)	600	6500	1995	1991
Age of home, years (n=166)	2	121	33	33

Just under half of respondents reported a bachelors or master's degree (Table 27).

Table 27: Level of Education (n=210)

	PERCENT	
EDUCATION LEVEL	Unweighted	Weighted
High school or less	17%	18%
Some college or Associate's Degree	36%	34%
Bachelor's degree	25%	26%
Graduate or professional degree	20%	20%
Refused	2%	3%

Table 28: Income (n=210)

	PERC	PERCENT	
INCOME	Unweighted	Weighted	
Less than \$20,000	12%	13%	
\$20,000-\$40,000	17%	17%	
\$40,000- \$75,000	23%	22%	

	Perc	PERCENT	
INCOME	Unweighted	Weighted	
More than \$75,000	31%	31%	
Don't know or refused	17%	18%	

Table 29: Ethnicity (n=210; Multiple Responses Allowed)

	PERCENT	
ETHNICITY	Unweighted	Weighted
White	80%	79%
Black or African American	5%	4%
American Indian or Alaska Native	3%	3%
Asian or Pacific Islander	4%	4%
Not sure or refused	9%	9%

Twelve percent of respondents were of Hispanic heritage, and just over half of respondents were female.



PEAK TIME REBATE / REDUCE YOUR USE SURVEY-#485

_	document is the SDG&E survey guide for participants of the Peak Time Rebate rwise known as the Reduce Your Use program.
of San EE's Recent their end of participm and y	he residence? My name is calling from on Diego Gas and Electric. We are talking to people about their experience with duce Your Use Day .This is a program that provides bill credits to households that nergy use when asked to do so by SDG&E. We are speaking to households that are pate in this program. Your input will help us improve the effectiveness of this your responses will be anonymous. Are you the person who knows the most about d's participation in the program?
	ONTACT NAME TO VERIFY STUDY, IF NEEDED: Brenda Gettig, Senior yst at SDG&E. 858-654-8755]
ill take	about 10 minutes. Is this a good time?
Use pr	ou know your household had been selected to participate in SDG&E's Reduce Your ogram? [Probe: This program requests that households reduce their energy use on c days and provides bill credits to those that do.]
1.	Yes
2.	No
98.	DK
99.	RF
cation	& Awareness
Did yo	ou sign up to receive an email or text notification about Reduce Your Use days?
1.	Yes [ASK Q3]
2.	No [SKIP TO Q4]
98.	DK [SKIP TO Q4]
99.	RF [SKIP TO Q4]
	is this to of San is their end participm and yousehold ITY CC ass Analytill take Did you Use prospecified 1. 2. 98. 99. cation Did you 1. 2. 98.

- 3. How difficult was it to sign up for Reduce Your Use notifications?
 - 1. Very easy
 - 2. somewhat easy
 - 3. somewhat difficult
 - 4. Very difficult
 - 98. DK
 - 99. RF
- 4. Did you receive a letter in the mail from the Reduce Your Use program?
 - 1. Yes [ASK Q5]
 - 2. No [SKIP TO Q6]
 - 98. DK [SKIP TO Q6]
 - 99. RF [SKIP TO Q6]
- 5. How would you rate the information in the letter? Would you say it was . . .
 - 1. Very easy to understand
 - 2. Easy to understand
 - 3. Difficult to understand
 - 4. Very difficult
 - 5. I didn't read it
 - 98. Don't know/not sure
 - 99. RF

Event

- 6. How many Reduce Your Use day notifications did you receive this summer?
- 7. Do you remember receiving a message from SDG&E asking you to conserve energy within the last ten days?
 - 1. Yes [ASK Q7A]
 - 2. No [SKIP TO Q14]

Q7A. If yes: how were you notified? [Multiple responses allowed]

1. by email,

8.

9.

10.

7.

8.

9.

10.

Just try to use less energy

Anything else: _

Your Use time so that you could turn it off later

None of the above/Nothing [SKIP TO Q14]

2. by text, 3. by phone or voice mail, 9. Don't remember, Thinking about the most recent Reduce Your Use day notification, were you . . . [READ LIST], during the day and the time you were asked to reduce your energy use? 1. At home the entire time 2. At home part of the time OR 3. Not at home 98. DK 99. RF Were you able to do anything to conserve energy that day in addition to what you normally do? 1. Yes 2. No 98. DK 99. RF During the day and the time you were asked to conserve energy use, which of the following did you do? [READ LIST. SELECT ALL THAT APPLY] 1. Adjust the temperature setting on your air conditioner 2. Shift doing laundry to before or after that time 3. Turn off lights 4. Turn off a pool pump 5. Cook at a different time 6. Run the dishwasher earlier or later

Did you pre-cool your home - that is, run your air conditioner before the Reduce

- 11. Were any household routines affected by the request to reduce your energy use?

 O11A. [IF YES:] What routines were affected?
- 12. Did you experience any negative effects as a result of responding to the Reduce Your Use notification?
 - 1. Yes
 - 2. No [SKIP TO Q13]
 - 98. DK [SKIP TO Q13]
 - 99. RF [SKIP TO Q13]

Q12A. [IF YES:] What happened?

- 13. In response to the request, how much effort would you say that you and your household have made to change how you use electricity?
 - 1. a great deal of effort
 - 2. moderate effort
 - 3. a little effort
 - 4. no effort
 - 98. DK
 - 99. RF

General/Other Program Experience

I'd like to ask you a few questions about this opportunity to earn SDG&E bill credits.

- 14. Have you seen a credit on your SDG&E bill after participating in a Reduce Your Use day?
 - 1. Yes [ASK Q15]
 - 2. No [SKIP TO Q16]
 - 98. DK [SKIP TO Q16]
 - 99. RF [SKIP TO Q16]
- 15. Was the credit about what you expected?
 - 1. Yes
 - 2. No

- 98. Not Sure/Don't know
- 99. Refused
- 16. As a result of your experience with the Reduce Your Use program, are you doing anything new on a day-to-day basis to save energy?
 - 1. Yes [ASK Q16A]
 - 2. No [SKIP TO Q17]
 - 98. DK [SKIP TO Q17]
 - 99. RF [SKIP TO Q17]

16A. [If yes]: What are you doing now on a day-to-day basis to save energy?

- 17. Have you noticed any reduction in your SDG&E bill as a result of these changes
 - 1. Yes [ASK Q17A]
 - 2. No [SKIP TO Q18]
 - 98. DK [SKIP TO Q18]
 - 99. RF [SKIP TO Q18]

17A. [IF YES]: Was the reduction about what you expected?

- 18. Have you logged in to the SDG&E Website and looked at a feature called "My Account" to view the Energy Charts and Rewards information?
 - 1. Yes [ASK Q18A]
 - 2. No [SKIP TO Q24]
 - 98. Don't know/not sure [SKIP TO Q19]
 - 99. RF [SKIP TP Q24]
 - 18A. [IF YES]: Which of the following best describes how often you look at this information?
 - 1. A few times a day
 - 2. Once a day
 - 3. A few times a week
 - 4. Once a week
 - 5. Every couple of weeks
 - 6. A couple of times a month or less
 - 7. Only in the beginning

- 19. I'm going to list several features in My Account, for each one, please tell me if you've used it, and if you found it useful.
 - 1. Have you accessed the daily energy use chart?
 - 2. Have you looked at the hourly energy use chart?
 - 3. Have you accessed information that shows how your household performed during a Reduce Your Use event? If yes: did you find this very helpful, somewhat helpful, or not at all helpful?

How much do you agree with the following two statements about this section of "My Account" on the SDG&E Website?

- 20. Energy Charts and Rewards is easy to navigate through.
 - 1. Strongly agree
 - 2. Somewhat agree
 - 3. Neutral
 - 4. Somewhat disagree
 - 5. Strongly disagree
 - 98. DK
 - 99. RF
- 21. Energy Charts and Rewards helps me better understand how much energy my household uses throughout the day and the week.
 - 1. Strongly agree
 - 2. Somewhat agree
 - 3. Neutral
 - 4. Somewhat disagree
 - 5. Strongly disagree
 - 98. DK
 - 99. RF
- 22. How useful is the Energy Charts and Rewards information?
 - 1. Very useful
 - 2. Somewhat useful
 - 3. Neither useful nor not useful
 - 4. Not very useful



- 5. Not at all useful
- 98. DK
- 99. RF
- 23. [If Q22 equals 3, 4, or 5.] What would you change about the Energy Charts and Rewards information to make it more useful?

Satisfaction

How much do you agree with the following statements regarding various elements of this Reduce Your Use program?

For each one, please indicate if you strongly agree, somewhat agree, neither agree nor disagree, somewhat disagree, or strongly disagree.

- 24. The number of Reduce Your Use day notification was what I expected.
- 25. Notification of Reduce Your Use day event was clear.
- 26. I had enough time to prepare for the Reduce Your Use day notification.
- 27. I'd like to continue to be part of this program.
- 28. I will reduce my energy use when future Reduce Your Use day event is called.
- 29. Participating in Reduce Your Use program helps me save money.
- 30. Participating in Reduce Your Use program helps the environment.
- 31. It is important to do our part to save energy in times of high electricity demand.
- 32. Do you have any suggestions for how to improve the Reduce Your Use program?

Demographics

We're almost done. I just have a few final questions to help us group your answers with those of other households.

33. Including yourself, how many children and adults normally live in your household on a full-time basis? Please do not include anyone who is just visiting or children who may be away at college or in the military. Include all members of your household whether or not they are related to you.

Total number of people in the household:

- 33a. How many of those are children under 5 years of age? _____
- 33b. How many of those are children between 5 and 18?
- 33c. How many of those are adults 70 or older? _____
- 34. How large is your home, in square feet? Just give us your best estimate.

No. of Square Feet:

- 88. Not sure / Don't Know
- 99. Refused
- 35. When was your home built? Just give us your best estimate.

Year home was built: [ENTER 4-digit YEAR] (NOW SKIP TO Q36)

- 99. Don't Know (ASK Q35A)
- 88. Refused (SKIP TO Q36)
- 35A. If necessary: Do you think it was built in . . . (READ CHOICES)
 - 1. In the 1930's or earlier
 - 2. In the 40's
 - 3. The 50's
 - 4. The 60's
 - 5. The 70s
 - 6. The 80's
 - 7. The 90's
 - 8. Or after 2000?
 - 88. Not sure/ Don't Know
 - 99. Refused
- 36. What is the highest level of education you have completed so far? [READ CHOICES]
 - 1. Less than 9th grade
 - 2. 9th to 12th grade, with no diploma
 - 3. High school graduate or GED
 - 4. Some college, with no degree
 - 5. Associates degree



- 6. Bachelor's degree
- 7. Graduate or professional degree
- 88. Not sure / Don't Know (DO NOT READ)
- 99. Refused (DO NOT READ)
- 37. What is your ethnicity? [Read if needed; UP TO 5 RESPONSES ALLOWED]
 - 1. White
 - 2. Black or African American
 - 3. American Indian or Alaska Native
 - 4. Asian
 - 5. Pacific Islander
 - 6. Other, Specify _____
 - 98. Not sure / Don't Know
 - 99. Refused
- 38. Are you of Hispanic or Latino descent?
 - 1. Yes
 - 2. No
 - 98. Not sure / Don't Know
 - 99. Refused
- 39. Which of the following categories includes the total combined income of all members of your household from all sources. Is it . . . (READ CHOICES)
 - 1. Less than \$10,000
 - 2. \$10,000 to \$15,000
 - 3. \$15,000 to \$20,000
 - 4. \$20,000 to \$30,000
 - 5. \$30,000 to \$40,000
 - 6. \$40,000 to \$50,000
 - 7. \$50,000 to \$75,000
 - 8. \$75,000 to \$100,000
 - 9. More than \$100,000

- 98. Not sure / Don't know
- 99. Refused

Thank you very much for your time and cooperation. We really appreciate your help. Have a good day/evening.

INTERVIEWER, RECORD GENDER:

- 1. Male
- 2. Female



FOCUS GROUP GUIDE

November 2011

I want to thank you for coming here today. My name is April Armstrong and I work for Research Into Action. I am not an employee of any utility. We are an independent research firm that conducts market research and evaluations in support of energy efficiency programs all over the country. We've been hired to help SDG&E understand how the features of the Reduce Your Use program affect households like yours.

I know how busy all of you are, so I really appreciate your willingness to come here and participate in this discussion. Since you are the first people to try this out your feedback is very important.

What you say here today will NOT be reported in any way that could identify you, so please feel free to speak freely.

1 MODERATOR/PARTICIPANT ROLES (5 MINUTES)

How many of you have participated in a focus group before?

The way this works is that you should feel like this is your group – that you will be the talkers and I will be the listener. Even if you are little tentative or shy, it is really important that you speak up as we need to hear about ALL of your experiences and opinions relating to the questions I'll ask you about your experience with SDG&E's requests to Reduce Your Use.

While I need for you to speak one at a time, so I can hear each of you, I want to encourage you to interact and respond to comments made by others in the group. My job is to make sure that we explore some key topics and that everyone gets a chance to speak, and it will be valuable if you are also directing the discussion as well.

Ground Rules

We do have a few basic ground rules, but these really are things about being in groups that we all "learned in kindergarten."

- → The first thing is to **participate**. We need everybody's help to have a good group.
- → The second thing is to take turns so we can all hear each other.
- → The third thing is to **share**. Please share the floor so everyone in our group has a chance to talk.

Taping Procedures

We're tape recording the discussion today to have an accurate record of what we discuss and I won't have to take so many notes.

Confidentiality

Finally, we ask that you respect each other's privacy. Whatever we say and hear today is just for this group. I know none of us want other people to repeat anything that would violate our privacy, so we all need to trust each other not to do that.

2 INTRODUCTIONS (10 MINUTES)

Let's get starting by going around the table and introducing ourselves. Please tell us...

- 1. Your name
- 2. Favorite thing to do in San Diego

3 AWARENESS (10 MINUTES)

I'd like you to think back to how you first heard about the Peak Time Rebate program. This is the program that provides those notifications to Reduce Your Use.

- 1. How did you react when you first learned about Reduce Your Use Days? Did you know, when you first heard about the program that you would be asked to reduce your energy use on certain days?
 - a. Did you discuss the message with anyone? [family members?]
 - b. Did anyone see any advertising?
 - c. What did you think of the request?
 - d. Did you know you were "part of the program"?
 - e. Did you hear about earning a bill credit?
 - f. Did you know you could get more information about your energy usage?
 - g. Did you take any actions immediately?
 - h. Did anyone have a different reaction?

- 2. When you first heard about the idea of Reduce Your Use Days, what did you think you might do? [Probe if needed: to reduce your energy use?]
 - a. Why?
 - b. Do you always do this?
 - c. When would you do this?

4 PARTICIPATION (30 MINUTES)

Now, I'd like to talk about your experience with actual Reduce Your Use requests. [Make a list on the board of listed actions]

- 1. How did you hear that it was a Reduce Your Use day?
 - a. Did you know you could sign up for email or text alerts? How did you know? Did you sign up? How did that work out?
- 2. Did you know what to do when the event happened?
- 3. What did you do?
 - a. Why did you decide to do that?
 - b. What did others in your home do?
 - c. Did you have to convince anyone to do anything?
 - d. Is this unusual behavior for you?
- 4. What couldn't you do?
 - a. Did you try anything that didn't work?
 - b. What was difficult?
 - c. What consequences, if any, did your actions have for you or your family?
- 5. What, if any, bill credit did you EXPECT to receive?
- 6. After these Reduce Days, did anyone see a bill credit?
 - a. Was this what you expected?
 - b. How did this change your expectations for future events?
 - c. How did this change what you will do in the future?
 - d. Even if you didn't get a bill credit, was it worth it to reduce use for other reasons?

5 GROUP DISCUSSION OF EVENT EXPERIENCE AND REACTION (15 MINUTES)

Considering your experiences, I'd like to ask what you think about the idea of the program overall.

- 1. What do you think caused the request to reduce your use?
 - a. Why does the utility need to do this?
 - b. Was this request reasonable?
 - c. How often would an event like this be reasonable?
- 2. Thinking of the equipment that's typically running in your house, what do you think is using the most electricity?
 - a. Now, what about the things you'd be willing to shut down... which of those items use the most electricity?
- 3. SDG&E wants these requests to work well for all customers enrolled. As the first ones through, you are all the experts. Can you tell me what would make it easier for you to reduce your energy use when asked?
 - a. What could SDG&E do to make it easier for you to Reduce Your Use on special days?
 - b. What is the best way to reach you—or, how would you most like to be informed: text, cell phone call, voice mail, media?

[SDG&E wants to know if people know they can sign up for text/email notifications, and/or if they are interested in doing so.]

- c. What kind of message is most likely to get your attention?
- d. What would make it more compelling?
- e. What would motivate you to do more to reduce your use?
- f. What about the opportunity to earn a bill credit, how appealing is that?
- g. What do you think the utility should do if the need to have these sorts of Reduce Days becomes routine something that happens every month every summer?

6 CONCLUDING REMARKS (10 MINUTES)

As we finish up I wanted to give you the opportunity to respond to a more general question. What would you tell someone that asked you what they should do on a Reduce Your Use day?

Thanks for participating in this group.
, would you please start for us?
the room one person at a time to make sure that we really do hear from each of you.
I know we have let this discussion run somewhat loosely so far, but this time I want to go around



This appendix presents the unweighted responses to closed-ended questions asked of the 210 respondents to the phone survey. Unless otherwise noted, the n for each table is 210.

Q1. Did you know your household had been selected to participate in SDG&E's Reduce Your Use program?

	Count	PERCENT
Yes	132	63%
No	75	36%
DK	3	1%

Q2. Did you sign up to receive an email or text notification about Reduce Your Use days?

	Count	PERCENT
Yes	40	19%
No	139	66%
DK	31	15%

Q3. How difficult was it to sign up for Reduce Your Use notifications? (n=40)

	Count	PERCENT
Very easy	30	75%
Somewhat easy	9	23%
DK	1	3%

Q4. Did you receive a letter in the mail from the Reduce Your Use program?

	Count	PERCENT
Yes	120	57%
No	31	15%
DK	58	28%
Refused	1	0%

Q5. How would you rate the information in the letter? (n=120)

	Count	PERCENT
Very easy to understand	53	44%
Easy to understand	46	38%
Difficult to understand	4	3%
Very difficult to understand	1	1%
I didn't read it	12	10%
DK/not sure	4	3%

Q6. How many "Reduce Your Use" day notifications did you receive this summer?

	Count	PERCENT
None	31	15%
1	24	11%
2	41	20%
3	42	20%
4	18	9%
5	5	2%
6	7	3%
8	1	0%
DK/Refused	41	20%

Q7. Do you remember receiving a message from SDG&E asking you to conserve energy within the last ten days?

	Count	PERCENT
Yes	107	51%
No	103	49%

Q7a-c. How were you notified? (n=107)

	ı	No		YES	
	Count	Percent	Count	Percent	
Email (n=107)	85	(79%)	16	(15%)	
Text (n=107)	94	(88%)	7	(7%)	
Phone (n=107)	18	(17%)	83	(78%)	

Q8. Thinking about the most recent Reduce Your Use day notification, were you at home the entire time, at home part of the time, or not at home during the day at the time you were asked to reduce your energy use? (n=107)

	Count	PERCENT
At home the entire time	36	34%
At home part of the time	35	33%
Not at home	29	27%
DK	7	7%

Q9. Were you able to do anything to conserve energy that day in addition to what you normally do? (n=107)

	Count	PERCENT
Yes	70	65%
No	36	34%
DK	1	1%

Q10. During the day and the time you were asked to conserve energy use, which of the following did you do? (n=107)

	No		YES	
	Count	Percent	Count	Percent
Adjust the AC temp settings (n=107)	81	76%	26	24%
Shift doing laundry to before or after that time (n=107)	42	36%	65	61%
Turn off lights (n=107)	42	39%	65	61%
Turn off a pool pump (n=107)	98	92%	9	8%
Cook at a different time (n=107)	78	73%	28	26%
Run the dishwasher earlier or later (n=107)	60	56%	45	42%
Just try to use less energy (n=107)	36	34%	71	66%
Pre-cool your home (n=107)	97	91%	10	9%
None of the above (n=107)	93	87%	13	12%
Other (n=107)	76	99%	31	1%

Q11. Were any household routines affected by the request to reduce your energy use? (n=94)

	Count	PERCENT
Yes	29	31%
No	65	69%

Q12. Did you experience any negative effects as a result of responding to the Reduce Your Use notification? (n=94)

	Count	PERCENT
Yes	11	12%
No	83	88%

Q13. In response to the request, how much effort would you say that you and your household have made to change how you use electricity? (n=94)

	Count	PERCENT
A great deal of effort	18	19%
Moderate effort	48	51%
A little effort	20	21%
No effort	8	9%

Q14. Have you seen a credit on your SDG&E bill after participating in a Reduce Your Use day?

	Count	PERCENT
Yes	44	21%
No	125	60%
DK	41	20%

Q15. Was the credit about what you expected? (n=44)

	Count	PERCENT
Yes	13	30%
No	12	27%
Not Sure/DK	19	43%

Q16. As a result of your experience with the Reduce Your Use program, are you doing anything new on a day-to-day basis to save energy?

	Count	PERCENT
Yes	80	38%
No	129	61%
DK	1	0%

Q17. Have you noticed any reduction in your SDG&E bill as a result of these changes? (n=80)

	Count	PERCENT
Yes	32	40%
No	34	43%
DK/Not sure	14	18%

Q18. Have you logged in to the SDG&E Website and looked at a feature called "My Account" to view the Energy Charts and Rewards information?

	Count	PERCENT
Yes	14	7%
No	196	93%

Q18a. Which of the following best describes how often you look at this information? (n=14)

	Count	PERCENT
Once a week	3	21%
Every couple of weeks	3	21%
A couple of times a month or less	6	43%
Only in the beginning	1	7%
DK/Refused	1	7%

Q19_1. Have you accessed the daily energy use chart? (n=12)

	COUNT	PERCENT
Yes	8	67%
No	4	33%

Q19_1a. Did you find daily energy use chart - very helpful, somewhat helpful, or not at all helpful? (n=8)

	Count	PERCENT
Very helpful	1	13%
Somewhat helpful	4	50%
Not at all helpful	3	38%

Q19_2. Have you looked at the hourly energy use chart? (n=12)

	Count	PERCENT
Yes	5	42%
No	7	58%

Q19_2a. Did you find hourly energy use chart - very helpful, somewhat helpful, or not at all helpful? (n=5)

	Count	PERCENT
Very helpful	1	20%
Somewhat helpful	2	40%
Not at all helpful	2	40%

Q19_1. Have you used the historical bill information? (ORIGINAL) (n=2)

	Count	PERCENT
Yes	2	100%

Q19_1a. Did you find historical bill information - very helpful, somewhat helpful, or not at all helpful? (ORIGINAL) (n=2)

	Count	PERCENT
Very helpful	1	50%
Somewhat helpful	1	50%

Q19_2. Have you used the energy consumption history? (ORIGINAL) (n=2)

	Count	PERCENT
Yes	2	100%

Q19_2a. Did you find energy consumption history - very helpful, somewhat helpful, or not at all helpful? (ORIGINAL) (n=2)

	Count	PERCENT
Very helpful	1	50%
Somewhat helpful	1	50%

Q19_3. Have you used the feature that predicts your monthly bill? (ORIGINAL) (n=2)

	Count	PERCENT
Yes	1	50%
No	1	50%

Q19_3a. Did you find predicts your monthly bill - very helpful, somewhat helpful, or not at all helpful? (ORIGINAL) (n=1)

	COUNT	PERCENT
Somewhat helpful	1	100%

Q19_4. Have you accessed information that shows how your household performed during a Reduce Your Use event? (n=14)

	Count	PERCENT
Yes	8	57%
No	6	43%

Q19_4a. Did you find how your household performed during a Reduce Your Use event - very helpful, somewhat helpful, or not at all helpful? (n=8)

	COUNT	PERCENT
Very helpful	2	25%
Somewhat helpful	3	38%
Not at all helpful	3	38%

Q19_5. Have you accessed the information about when your household might start to use energy at the highest, most expensive price? (ORIGINAL) (n=2)

	Count	PERCENT
Yes	1	50%
No	1	50%

Q19_5a. Did you find information about when your household might start to use energy at the highest... -very helpful, somewhat helpful, or not at all helpful? (ORIGINAL) (n=1)

	Count	PERCENT
Somewhat helpful	1	100%

Q20 &Q21. How much do you agree with the following two statements about this section of My Account on the SDG&E website (n=14)

	Stron Agr		Some: Agr		SOME DISAC		STROM DISAG		Do Kno	
	Count	Per- cent	Count	Per- cent	Count	Per- cent	Count	Per- cent	Count	Per- cent
Energy Charts and Rewards is easy to navigate through	8	57%	4	29%	1	7%	1	7%		
Energy Charts and Rewards helps me identify how I can save energy	6	43%	4	29%	2	14%	1	7%	1	7%

Q22. How useful is the Energy Charts and Rewards information? (n=14)

	COUNT	PERCENT
Very useful	7	50%
Somewhat useful	2	14%
Not very useful	1	7%
Not at all useful	3	21%
DK	1	7%

Q24 - Q31. Agreement with...

	STRONGLY AGREE	SOMEWHAT AGREE	NEITHER AGREE NOR DISAGREE	SOMEWHAT DISAGREE	STRONGLY DISAGREE	Don't Know	REFUSED
	Count	Count	Count	Count	Count	Count	Count
The number of Reduce Your Use day notification was what I expected.	55	70	30	12	13	29	1
Notification of Reduce Your Use day event was clear.	130	28	9	4	11	27	1
I had enough time to prepare for the Reduce Your Use day notification.	112	34	10	11	14	28	1
I'd like to continue to be part of this program.	142	36	5	3	11	12	1

	STRONGLY AGREE	Somewhat Agree	NEITHER AGREE NOR DISAGREE	SOMEWHAT DISAGREE	STRONGLY DISAGREE	Don't Know	REFUSED
	Count	Count	Count	Count	Count	Count	Count
I will reduce my energy use when future Reduce Your Use day event is called.	156	35	7	1	6	4	1
Participating in Reduce Your Use program helps me save money.	96	38	19	11	17	28	1
Participating in Reduce Your Use program helps the environment.	135	38	15	1	5	15	1
It is important to do our part to save energy in times of high electricity demand.	169	27	4	1	3	5	1

Q32. Do you have any suggestions for how to improve the Reduce Your Use program?

	Count	PERCENT
No Suggestions/Nothing	143	68%
Open end	67	32%