



# Final Evaluation Report: Upstream Lighting Program

Volume 2

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# 11. Appendix E – Detailed Lighting Inventory Tables

This section presents detailed results from the Residential Lighting Metering Study. Specifically, detailed information on California’s residential lighting inventory characteristics are summarized by:

- Bulb type (e.g., CFL, incandescent, etc.)
- Base type (e.g., small screw-base, medium screw-base, pin-base)
- Control type (e.g., on/off, three-way, dimmer)
- Lamp shape (e.g., A-line, globe, reflector/flood, spiral)
- Fixture type (e.g., ceiling fan, recessed, floor/table lamp)
- Location (e.g., bedroom, living room, outdoor entry)
- Bulb wattage
- Bulbs stored

Overall, statewide results are presented first, followed by specific results for PG&E, SCE and SDG&E.

In the first six tables of each section, we present both the unweighted “count” of sockets observed with each of the relevant characteristics, as well as the weighted percentage that those sockets represents within the total population. In the tables following the first six in each section, cross tables present weighted percentages only.

## 11.1 Statewide Results

**Table 1: Type of Lamp**

LAMP TYPE	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
INCANDESCENT	34373	53%
CFL	13307	22%
FLUORESCENT	7639	12%
HALOGEN	5339	8%
SOCKET EMPTY	1960	4%
OTHER	76	0%
UNKNOWN	770	1%
OVERALL	63464	100%

**Table 2: Type of Base**

BASE TYPE	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
MEDIUM SCREW-BASED	43477	70%
PIN-BASED	11805	18%
SMALL SCREW-BASED	7041	11%
OTHER	67	0%
UNKNOWN	1074	2%
OVERALL	63464	100%

**Table 3: Control Type**

CONTROL TYPE	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
ON/OFF SWITCH	52276	83%
DIMMER	7088	10%
3-WAY SWITCH	2031	3%
MOTION SENSOR	627	1%
MOTION SENSOR & PHOTOCELL	457	1%
TIMER	611	1%
PHOTOCELL	277	0%
UNKNOWN	97	0%
OVERALL	63464	100%

**Table 4: Lamp Shape**

LAMP SHAPE	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
A-TYPE	17394	28%
SPIRAL	9531	16%
LINEAR TUBE	8265	13%
REFLECTOR	8791	13%
DECORATIVE	7175	11%
GLOBE	5217	8%
MR-16	1484	2%
U-BEND	1023	2%
BI-PIN	988	2%
CIRCLINE	557	1%
BULLET OR POST	112	0%
SOCKET EMPTY	1960	4%

OTHER	23	0%
UNKNOWN	944	1%
OVERALL	63464	100%

**Table 5: Fixture Type**

FIXTURE TYPE	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
WALL	14907	24%
CEILING	13394	22%
TABLE/DESK/FLOOR LAMP	8603	14%
RECESSED	9620	14%
SUSPENDED	6935	11%
CEILING FAN	5492	9%
UNDER-CABINET	1391	2%
TORCHIERE	1112	2%
TRACK	1085	2%
OTHER	799	1%
UNKNOWN	126	0%
OVERALL	63464	100%

**Table 6: Location**

LOCATION	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
BATHROOM	11131	18%
BEDROOM	10102	17%
KITCHEN (ALL)	8104	13%
EXTERIOR (ALL)	6832	11%
LIVING ROOM	5971	10%
HALL/ENTRANCE	5221	8%
DINING ROOM	4070	6%
GARAGE	3287	5%
OTHER LIVING ROOM	3188	5%
OFFICE	2236	3%
OTHER	3322	5%
OVERALL	63464	100%

**Table 7: Base Type by Lamp Type**

LAMP TYPE	BASE TYPE						n (unweighted)
	MEDIUM SCREW-BASED	PIN-BASED	SMALL SCREW-BASED	OTHER	UNKNOWN	Total	
INCANDESCENT	62%	0%	93%	13%	15%	53%	34373
CFL	29%	10%	3%	13%	9%	22%	13307
FLUORESCENT	0%	65%	0%	0%	2%	12%	7639
HALOGEN	5%	24%	1%	53%	4%	8%	5339
SOCKET EMPTY	4%	1%	3%	1%	19%	4%	1960
OTHER	0%	0%	0%	20%	1%	0%	76
UNKNOWN	0%	0%	0%	0%	50%	1%	770
Total	100%	100%	100%	100%	100%	100%	63464
n (unweighted)	43477	11805	7041	67	1074	63464	

**Table 8: Lamp Type by Base Type**

LAMP TYPE	BASE TYPE						n (unweighted)
	MEDIUM SCREW-BASED	PIN-BASED	SMALL SCREW-BASED	OTHER	UNKNOWN	Total	
INCANDESCENT	81%	0%	19%	0%	0%	100%	34373
CFL	90%	8%	2%	0%	1%	100%	13307
FLUORESCENT	1%	99%	0%	0%	0%	100%	7639
HALOGEN	41%	57%	1%	1%	1%	100%	5339
SOCKET EMPTY	79%	4%	9%	0%	8%	100%	1960
OTHER	11%	40%	20%	19%	10%	100%	76
UNKNOWN	27%	3%	0%	0%	70%	100%	770
Total	70%	18%	11%	0%	2%	100%	63464
n (unweighted)	43477	11805	7041	67	1074	63464	

**Table 9: Control Type by Lamp Type**

LAMP TYPE	CONTROL TYPE								Total	n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTO-CELL	UNKNOWN		
INCANDESCENT	52%	71%	63%	43%	37%	35%	29%	64%	53%	34373
CFL	24%	4%	32%	14%	10%	25%	43%	28%	22%	13307
FLUORESCENT	14%	1%	1%	5%	1%	2%	3%	0%	12%	7639
HALOGEN	5%	21%	3%	31%	45%	29%	23%	5%	8%	5339
SOCKET EMPTY	4%	2%	2%	4%	5%	1%	1%	2%	4%	1960
OTHER	0%	0%	0%	1%	1%	0%	1%	0%	0%	76
UNKNOWN	1%	1%	0%	2%	2%	8%	1%	1%	1%	770
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	63464
n (unweighted)	52276	7088	2031	627	457	611	277	97	63464	

**Table 10: Lamp Type by Control Type**

LAMP TYPE	CONTROL TYPE								Total	n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTO-CELL	UNKNOWN		
INCANDESCENT	80%	14%	4%	1%	1%	1%	0%	0%	100%	34373
CFL	90%	2%	5%	1%	0%	1%	1%	0%	100%	13307
FLUORESCENT	99%	1%	0%	0%	0%	0%	0%	0%	100%	7639
HALOGEN	57%	29%	1%	4%	5%	3%	1%	0%	100%	5339
SOCKET EMPTY	91%	4%	2%	1%	1%	0%	0%	0%	100%	1960
OTHER	76%	5%	0%	8%	6%	1%	3%	0%	100%	76
UNKNOWN	80%	9%	1%	2%	1%	6%	0%	0%	100%	770
Total	83%	10%	3%	1%	1%	1%	0%	0%	100%	63464
n (unweighted)	52276	7088	2031	627	457	611	277	97	63464	

**Table 11: Control Type by Location**

LOCATION	CONTROL TYPE								Total	n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTOCELL	UNKNOWN		
BATHROOM	20%	7%	0%	2%	0%	0%	3%	0%	18%	11131
BEDROOM	16%	16%	44%	4%	0%	5%	0%	51%	17%	10102
KITCHEN (ALL)	14%	14%	3%	3%	0%	0%	2%	1%	13%	8104
EXTERIOR (ALL)	9%	3%	0%	75%	99%	68%	89%	1%	11%	6832
LIVING ROOM	8%	17%	35%	2%	0%	12%	1%	31%	10%	5971
HALL/ENTRANCE	9%	6%	1%	2%	0%	1%	0%	0%	8%	5221
DINING ROOM	5%	23%	1%	3%	0%	3%	0%	2%	6%	4070
GARAGE	6%	0%	1%	2%	0%	2%	5%	1%	5%	3322
OTHER LIVING ROOM	4%	10%	11%	2%	0%	6%	0%	9%	5%	3287
OFFICE	3%	4%	4%	2%	0%	1%	0%	3%	3%	3188
OTHER	6%	0%	0%	3%	1%	1%	0%	1%	5%	2236
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	63464
n (unweighted)	52276	7088	2031	627	457	611	277	97	63464	

**Table 12: Location by Control Type**

LOCATION	CONTROL TYPE								Total	n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTOCELL	UNKNOWN		
BATHROOM	96%	4%	0%	0%	0%	0%	0%	0%	100%	11131
BEDROOM	81%	10%	8%	0%	0%	0%	0%	1%	100%	10102
KITCHEN (ALL)	88%	11%	1%	0%	0%	0%	0%	0%	100%	8104
EXTERIOR (ALL)	73%	3%	0%	7%	8%	5%	4%	0%	100%	6832
LIVING ROOM	69%	18%	11%	0%	0%	1%	0%	1%	100%	5971
HALL/ENTRANCE	91%	8%	0%	0%	0%	0%	0%	0%	100%	5221
DINING ROOM	61%	37%	1%	0%	0%	0%	0%	0%	100%	4070
GARAGE	98%	0%	0%	0%	0%	0%	0%	0%	100%	3322
OTHER LIVING ROOM	71%	21%	7%	0%	0%	1%	0%	0%	100%	3287
OFFICE	81%	13%	5%	1%	0%	0%	0%	0%	100%	3188
OTHER	98%	1%	0%	1%	0%	0%	0%	0%	100%	2236
Total	83%	10%	3%	1%	1%	1%	0%	0%	100%	63464
n (unweighted)	52276	7088	2031	627	457	611	277	97	63464	



**Table 13: Lamp Type by Fixture Type**

FIXTURE TYPE	LAMP TYPE							Total	n (unweighted)
	INCAN-DESCENT	CFL	FLUOR-ESCENT	HALOGEN	SOCKET EMPTY	OTHER	UNKNOWN		
WALL	27%	25%	5%	26%	28%	26%	20%	24%	14907
CEILING	17%	20%	58%	8%	22%	4%	26%	22%	13394
TABLE/DESK/FLOOR LAMP	14%	20%	2%	8%	15%	17%	5%	14%	8603
RECESSED	13%	13%	13%	28%	3%	0%	20%	14%	9620
SUSPENDED	14%	5%	11%	2%	8%	35%	8%	11%	6935
CEILING FAN	11%	13%	0%	1%	21%	2%	8%	9%	5492
UNDER-CABINET	1%	0%	9%	7%	1%	10%	3%	2%	1391
TORCHIERE	1%	2%	1%	4%	1%	2%	0%	2%	1112
TRACK	1%	1%	0%	10%	1%	0%	1%	2%	1085
OTHER	1%	1%	1%	4%	0%	4%	6%	1%	799
UNKNOWN	0%	0%	0%	1%	0%	0%	2%	0%	126
Total	100%	100%	100%	100%	100%	100%	100%	100%	63464
n (unweighted)	34373	13307	7639	5339	1960	76	770	63464	

**Table 14: Fixture Type by Lamp Type**

FIXTURE TYPE	LAMP TYPE							Total	n (unweighted)
	INCAN-DESCENT	CFL	FLUOR-ESCENT	HALOGEN	SOCKET EMPTY	OTHER	UNKNOWN		
WALL	60%	23%	2%	8%	4%	0%	1%	100%	14907
CEILING	41%	20%	31%	3%	4%	0%	1%	100%	13394
TABLE/DESK/FLOOR LAMP	57%	32%	2%	5%	4%	0%	0%	100%	8603
RECESSED	49%	21%	11%	16%	1%	0%	2%	100%	9620
SUSPENDED	72%	10%	12%	2%	3%	0%	1%	100%	6935
CEILING FAN	60%	29%	0%	1%	8%	0%	1%	100%	5492
UNDER-CABINET	17%	3%	50%	27%	1%	0%	1%	100%	1391
TORCHIERE	42%	30%	5%	20%	3%	0%	0%	100%	1112
TRACK	35%	14%	0%	49%	2%	0%	1%	100%	1085
OTHER	36%	16%	14%	27%	1%	0%	6%	100%	799
UNKNOWN	32%	6%	24%	18%	8%	0%	12%	100%	126
Total	53%	22%	12%	8%	4%	0%	1%	100%	63464
n (unweighted)	34373	13307	7639	5339	1960	76	770	63464	

**Table 15: Base Type by Fixture Type**

FIXTURE TYPE	BASETYPE						
	MEDIUM SCREW-BASED	PIN-BASED	SMALL SCREW-BASED	OTHER	UN-KNOWN	Total	n (unweighted)
WALL	28%	10%	19%	40%	21%	24%	14907
CEILING	18%	43%	11%	29%	21%	22%	13394
TABLE/DESK/FLOOR LAMP	16%	6%	14%	16%	10%	14%	8603
RECESSED	15%	15%	1%	0%	13%	14%	9620
SUSPENDED	6%	8%	44%	0%	10%	11%	6935
CEILING FAN	12%	1%	9%	0%	12%	9%	5492
UNDER-CABINET	1%	9%	1%	0%	3%	2%	1391
TORCHIERE	2%	2%	0%	8%	1%	2%	1112
TRACK	1%	3%	0%	0%	1%	2%	1085
OTHER	1%	2%	2%	8%	6%	1%	799
UNKNOWN	0%	0%	0%	0%	1%	0%	126
Total	100%	100%	100%	100%	100%	100%	63464
n (unweighted)	43477	11805	7041	67	1074	63464	

**Table 16: Fixture Type by Base Type**

FIXTURE TYPE	BASETYPE						
	MEDIUM SCREW-BASED	PIN-BASED	SMALL SCREW-BASED	OTHER	UN-KNOWN	Total	n (unweighted)
WALL	82%	8%	9%	0%	1%	100%	14907
CEILING	58%	35%	5%	0%	1%	100%	13394
TABLE/DESK/FLOOR LAMP	80%	7%	11%	0%	1%	100%	8603
RECESSED	78%	20%	0%	0%	1%	100%	9620
SUSPENDED	40%	14%	45%	0%	2%	100%	6935
CEILING FAN	87%	1%	10%	0%	2%	100%	5492
UNDER-CABINET	18%	76%	4%	0%	2%	100%	1391
TORCHIERE	74%	23%	2%	0%	1%	100%	1112
TRACK	60%	39%	0%	0%	1%	100%	1085
OTHER	35%	38%	17%	1%	9%	100%	799
UNKNOWN	55%	34%	0%	0%	11%	100%	126
Total	70%	18%	11%	0%	2%	100%	63464
n (unweighted)	43477	11805	7041	67	1074	63464	

**Table 17: Control Type by Fixture Type**

FIXTURE TYPE	CONTROL TYPE									n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTO-CELL	UNKNOWN	Total	
WALL	25%	9%	2%	70%	97%	20%	64%	0%	24%	14907
CEILING	26%	7%	0%	10%	3%	5%	5%	0%	22%	13394
TABLE/DESK/FLOOR LAMP	12%	5%	77%	0%	0%	27%	6%	77%	14%	8603
RECESSED	12%	32%	1%	9%	0%	3%	0%	0%	14%	9620
SUSPENDED	9%	26%	1%	4%	0%	3%	0%	0%	11%	6935
CEILING FAN	10%	10%	3%	4%	0%	0%	0%	0%	9%	5492
UNDER-CABINET	2%	2%	2%	1%	0%	0%	0%	0%	2%	1391
TORCHIERE	1%	3%	14%	0%	0%	4%	0%	23%	2%	1112
TRACK	1%	5%	0%	1%	0%	0%	4%	0%	2%	1085
OTHER	1%	1%	0%	0%	1%	36%	22%	0%	1%	799
UNKNOWN	0%	0%	0%	1%	0%	2%	0%	0%	0%	126
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	63464
n (unweighted)	52276	7088	2031	627	457	611	277	97	63464	

**Table 18: Fixture Type by Control Type**

FIXTURE TYPE	CONTROL TYPE								Total	n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTO-CELL	UNKNOWN		
WALL	88%	4%	0%	3%	3%	1%	1%	0%	100%	14907
CEILING	96%	3%	0%	0%	0%	0%	0%	0%	100%	13394
TABLE/DESK/FLOOR LAMP	76%	4%	18%	0%	0%	2%	0%	1%	100%	8603
RECESSED	75%	24%	0%	1%	0%	0%	0%	0%	100%	9620
SUSPENDED	73%	26%	0%	0%	0%	0%	0%	0%	100%	6935
CEILING FAN	88%	11%	1%	0%	0%	0%	0%	0%	100%	5492
UNDER-CABINET	88%	9%	3%	1%	0%	0%	0%	0%	100%	1391
TORCHIERE	48%	21%	26%	0%	0%	2%	0%	2%	100%	1112
TRACK	68%	30%	0%	1%	0%	0%	1%	0%	100%	1085
OTHER	57%	7%	0%	0%	0%	26%	9%	0%	100%	799
UNKNOWN	69%	19%	1%	5%	0%	6%	0%	0%	100%	126
Total	83%	10%	3%	1%	1%	1%	0%	0%	100%	63464
n (unweighted)	52276	7088	2031	627	457	611	277	97	63464	

**Table 19: Lamp Shape by Fixture Type**

FIXTURE TYPE	LAMP SHAPE														Total	n (un-weighted)
	A-TYPE	SPIRAL	LINEAR TUBE	REFLECTOR	DECORATIVE	GLOBE	MR-16	U-BEND	BI-PIN	CIRC-LINE	BULLET OR POST	SOCKET EMPTY	OTHER	UNKNOWN		
WALL	23%	24%	9%	17%	18%	75%	4%	25%	22%	2%	39%	28%	10%	16%	24%	14907
CEILING	26%	22%	49%	7%	7%	9%	12%	36%	3%	75%	19%	22%	33%	28%	22%	13394
TABLE/DESK/FLOOR LAMP	21%	23%	4%	1%	15%	4%	6%	16%	23%	11%	14%	15%	18%	7%	14%	8603
RECESSED	4%	7%	13%	66%	0%	1%	37%	18%	1%	0%	1%	3%	2%	18%	14%	9620
SUSPENDED	7%	5%	10%	1%	46%	7%	3%	2%	6%	1%	13%	8%	0%	8%	11%	6935
CEILING FAN	16%	15%	1%	1%	12%	3%	1%	2%	2%	3%	11%	21%	0%	9%	9%	5492
UNDER-CABINET	1%	0%	9%	1%	0%	0%	4%	0%	25%	0%	0%	1%	29%	3%	2%	1391
TORCHIERE	2%	3%	2%	0%	0%	0%	0%	1%	3%	8%	3%	1%	6%	0%	2%	1112
TRACK	1%	1%	0%	4%	0%	0%	27%	0%	4%	0%	0%	1%	0%	1%	2%	1085
OTHER	1%	0%	2%	1%	2%	0%	5%	0%	11%	0%	0%	0%	2%	6%	1%	799
UNKNOWN	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	2%	0%	126
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	63464
n (unweighted)	17394	9531	8265	8791	7175	5217	1484	1023	988	557	112	1960	23	944	63464	

**Table 20: Fixture Type by Lamp Shape**

FIXTURE TYPE	LAMP SHAPE															
	A-TYPE	SPIRAL	LINEAR TUBE	REFLECTOR	DECORATIVE	GLOBE	MR-16	U-BEND	BI-PIN	CIRC-LINE	BULLET OR POST	SOCKET EMPTY	OTHER	UNKNOWN	Total	n (unweighted)
WALL	27%	16%	5%	9%	8%	26%	0%	2%	1%	0%	0%	4%	0%	1%	100%	14907
CEILING	32%	16%	28%	4%	4%	3%	1%	3%	0%	3%	0%	4%	0%	2%	100%	13394
TABLE/DESK/FLOOR LAMP	42%	27%	4%	1%	12%	2%	1%	2%	3%	1%	0%	4%	0%	1%	100%	8603
RECESSED	8%	8%	12%	61%	0%	0%	6%	2%	0%	0%	0%	1%	0%	2%	100%	9620
SUSPENDED	19%	8%	12%	1%	48%	6%	1%	0%	1%	0%	0%	3%	0%	1%	100%	6935
CEILING FAN	46%	25%	1%	1%	14%	2%	0%	0%	0%	0%	0%	8%	0%	1%	100%	5492
UNDER-CABINET	7%	2%	55%	7%	1%	1%	3%	0%	19%	0%	0%	1%	0%	2%	100%	1391
TORCHIERE	39%	28%	17%	1%	3%	1%	0%	1%	3%	5%	0%	3%	0%	0%	100%	1112
TRACK	13%	10%	0%	34%	0%	0%	34%	0%	4%	0%	0%	2%	0%	1%	100%	1085
OTHER	16%	5%	17%	6%	22%	2%	9%	0%	15%	0%	0%	1%	0%	7%	100%	799
UNKNOWN	27%	5%	24%	10%	3%	1%	9%	0%	0%	0%	0%	8%	0%	12%	100%	126
Total	28%	16%	13%	13%	11%	8%	2%	2%	2%	1%	0%	4%	0%	1%	100%	63464
n (unweighted)	17394	9531	8265	8791	7175	5217	1484	1023	988	557	112	1960	23	944	63464	

**Table 21: Lamp Type by Location**

LOCATION	LAMP TYPE							Total	n (unweighted)
	INCAN-DESCENT	CFL	FLUOR-ESCENT	HALOGEN	SOCKET EMPTY	OTHER	UN-KNOWN		
BATHROOM	20%	19%	9%	9%	20%	5%	20%	18%	11131
BEDROOM	18%	20%	3%	12%	27%	14%	12%	17%	10102
KITCHEN (ALL)	8%	11%	36%	18%	10%	11%	11%	13%	8104
EXTERIOR (ALL)	10%	11%	2%	26%	8%	29%	26%	11%	6832
LIVING ROOM	11%	12%	2%	11%	10%	1%	7%	10%	5971
HALL/ENTRANCE	10%	8%	2%	5%	6%	28%	12%	8%	5221
DINING ROOM	9%	4%	0%	5%	5%	0%	2%	6%	4070
GARAGE	1%	2%	30%	1%	3%	9%	2%	5%	3322
OTHER LIVING ROOM	6%	5%	3%	6%	3%	0%	3%	5%	3287
OFFICE	3%	4%	2%	4%	3%	1%	1%	3%	3188
OTHER	5%	4%	11%	2%	4%	1%	5%	5%	2236
Total	100%	100%	100%	100%	100%	100%	100%	100%	63464
n (unweighted)	34373	13307	7639	5339	1960	76	770	63464	



**Table 22: Location by Lamp Type**

LOCATION	LAMP TYPE							Total	n (unweighted)
	INCAN-DESCENT	CFL	FLUOR-ESCENT	HALOGEN	SOCKET EMPTY	OTHER	UN-KNOWN		
BATHROOM	61%	24%	6%	4%	4%	0%	1%	100%	11131
BEDROOM	59%	27%	2%	6%	6%	0%	1%	100%	10102
KITCHEN (ALL)	33%	19%	33%	11%	3%	0%	1%	100%	8104
EXTERIOR (ALL)	51%	22%	2%	19%	3%	0%	3%	100%	6832
LIVING ROOM	58%	27%	2%	9%	4%	0%	1%	100%	5971
HALL/ENTRANCE	65%	23%	2%	5%	3%	0%	2%	100%	5221
DINING ROOM	75%	15%	1%	6%	3%	0%	0%	100%	4070
GARAGE	14%	9%	72%	1%	2%	0%	0%	100%	3322
OTHER LIVING ROOM	60%	21%	6%	10%	2%	0%	1%	100%	3287
OFFICE	49%	27%	9%	11%	4%	0%	0%	100%	3188
OTHER	48%	19%	25%	4%	3%	0%	1%	100%	2236
Total	53%	22%	12%	8%	4%	0%	1%	100%	63464
n (unweighted)	34373	13307	7639	5339	1960	76	770	63464	

**Table 23: Lamp Shape by Location**

LOCATION	LAMP SHAPE														Total	n (unweighted)
	A-TYPE	SPIRAL	LINEAR TUBE	REFLEC- TOR	DECOR- ATIVE	GLOBE	MR-16	U-BEND	BI-PIN	CIRCLINE	BULLET OR POST	SOCKET EMPTY	OTHER	UN- KNOWN		
BATHROOM	15%	16%	10%	10%	5%	74%	7%	31%	10%	20%	3%	20%	11%	19%	18%	11131
BEDROOM	26%	24%	4%	7%	16%	5%	14%	11%	13%	18%	26%	27%	14%	13%	17%	10102
KITCHEN (ALL)	6%	9%	33%	22%	6%	3%	22%	15%	22%	19%	9%	10%	29%	16%	13%	8104
EXTERIOR (ALL)	11%	9%	4%	20%	14%	2%	9%	14%	21%	1%	26%	8%	16%	21%	11%	6832
LIVING ROOM	11%	14%	3%	10%	14%	4%	17%	5%	10%	8%	10%	10%	0%	6%	10%	5971
HALL/ENTRANCE	7%	7%	1%	14%	12%	7%	6%	10%	3%	11%	9%	6%	0%	10%	8%	5221
DINING ROOM	5%	5%	1%	3%	25%	3%	8%	2%	7%	1%	7%	5%	0%	2%	6%	4070
GARAGE	2%	2%	28%	1%	0%	0%	1%	2%	0%	3%	3%	3%	21%	4%	5%	3322
OTHER LIVING ROOM	6%	5%	3%	7%	6%	1%	11%	3%	3%	4%	2%	3%	0%	2%	5%	3287
OFFICE	3%	4%	3%	4%	2%	1%	4%	3%	7%	3%	0%	3%	9%	1%	3%	3188
OTHER	7%	5%	10%	3%	1%	1%	2%	5%	4%	11%	5%	4%	0%	5%	5%	2236
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	63464
n (unweighted)	17394	9531	8265	8791	7175	5217	1484	1023	988	557	112	1960	23	944	63464	

**Table 24: Location by Lamp Shape**

LOCATION	LAMP SHAPE														Total	n (unweighted)
	A-TYPE	SPIRAL	LINEAR TUBE	REFLEC- TOR	DECOR- ATIVE	GLOBE	MR-16	U-BEND	BI-PIN	CIRCLINE	BULLET OR POST	SOCKET EMPTY	OTHER	UN- KNOWN		
BATHROOM	23%	14%	7%	7%	3%	34%	1%	3%	1%	1%	0%	4%	0%	1%	100%	11131
BEDROOM	43%	23%	3%	5%	11%	2%	2%	1%	1%	1%	0%	6%	0%	1%	100%	10102
KITCHEN (ALL)	14%	12%	32%	21%	5%	2%	3%	2%	3%	1%	0%	3%	0%	2%	100%	8104
EXTERIOR (ALL)	29%	14%	4%	23%	14%	1%	2%	2%	3%	0%	0%	3%	0%	3%	100%	6832
LIVING ROOM	31%	23%	4%	13%	15%	3%	3%	1%	2%	1%	0%	4%	0%	1%	100%	5971
HALL/ENTRANCE	26%	15%	2%	22%	17%	7%	1%	2%	1%	1%	0%	3%	0%	2%	100%	5221
DINING ROOM	24%	12%	2%	6%	44%	4%	2%	0%	2%	0%	0%	3%	0%	0%	100%	4070
GARAGE	12%	8%	72%	3%	0%	0%	0%	1%	0%	1%	0%	2%	0%	1%	100%	3322
OTHER LIVING ROOM	33%	17%	8%	17%	13%	2%	4%	1%	1%	1%	0%	2%	0%	1%	100%	3287
OFFICE	31%	20%	12%	16%	6%	2%	3%	1%	3%	1%	0%	4%	0%	1%	100%	3188
OTHER	41%	16%	24%	7%	1%	1%	1%	2%	1%	2%	0%	3%	0%	1%	100%	2236
Total	28%	16%	13%	13%	11%	8%	2%	2%	2%	1%	0%	4%	0%	1%	100%	63464
n (unweighted)	17394	9531	8265	8791	7175	5217	1484	1023	988	557	112	1960	23	944	63464	

**Table 25: Base Type by Location**

LOCATION	BASE TYPE						n (unweighted)
	MEDIUM SCREW- BASED	PIN- BASED	SMALL SCREW- BASED	OTHER	UNKNOWN	Total	
BATHROOM	20%	12%	9%	8%	20%	18%	11131
BEDROOM	20%	6%	15%	7%	17%	17%	10102
KITCHEN (ALL)	10%	30%	6%	4%	12%	13%	8104
EXTERIOR (ALL)	11%	7%	12%	39%	19%	11%	6832
LIVING ROOM	11%	5%	13%	32%	7%	10%	5971
HALL/ENTRANCE	8%	3%	16%	5%	9%	8%	5221
DINING ROOM	5%	2%	23%	0%	6%	6%	4070
GARAGE	2%	20%	0%	3%	3%	5%	3322
OTHER LIVING ROOM	5%	4%	5%	0%	2%	5%	3287
OFFICE	3%	3%	2%	2%	1%	3%	3188
OTHER	5%	8%	1%	0%	5%	5%	2236
Total	100%	100%	100%	100%	100%	100%	63464
n (unweighted)	43477	11805	7041	67	1074	63464	

**Table 26: Location by Base Type**

LOCATION	BASE TYPE						n (unweighted)
	MEDIUM SCREW- BASED	PIN- BASED	SMALL SCREW- BASED	OTHER	UNKNOWN	Total	
BATHROOM	80%	12%	5%	0%	2%	100%	11131
BEDROOM	82%	7%	9%	0%	2%	100%	10102
KITCHEN (ALL)	52%	42%	5%	0%	1%	100%	8104
EXTERIOR (ALL)	73%	11%	13%	0%	3%	100%	6832
LIVING ROOM	76%	9%	14%	0%	1%	100%	5971
HALL/ENTRANCE	70%	7%	21%	0%	2%	100%	5221
DINING ROOM	55%	5%	38%	0%	1%	100%	4070
GARAGE	25%	74%	0%	0%	1%	100%	3322
OTHER LIVING ROOM	75%	13%	11%	0%	1%	100%	3287
OFFICE	76%	18%	6%	0%	1%	100%	3188
OTHER	68%	29%	1%	0%	1%	100%	2236
Total	70%	18%	11%	0%	2%	100%	63464
n (unweighted)	43477	11805	7041	67	1074	63464	

**Table 27: Fixture Type by Location**

LOCATION	FIXTURE TYPE											Total	n (un-weighted)
	WALL	CEILING	TABLE/ DESK/ FLOOR LAMP	RE- CESSED	SUS- PENDED	CEILING FAN	UNDER- CABINET	TOR- CHIERE	TRACK	OTHER	UN- KNOWN		
BATHROOM	52%	12%	0%	15%	2%	1%	1%	0%	2%	0%	6%	18%	11131
BEDROOM	3%	13%	46%	6%	5%	46%	5%	35%	15%	10%	5%	17%	10102
KITCHEN (ALL)	1%	19%	1%	31%	11%	10%	69%	1%	17%	9%	6%	13%	8104
EXTERIOR (ALL)	33%	3%	2%	3%	3%	1%	0%	1%	0%	64%	42%	11%	6832
LIVING ROOM	2%	3%	29%	10%	8%	16%	7%	40%	18%	4%	2%	10%	5971
HALL/ENTRANCE	3%	15%	1%	17%	13%	0%	0%	1%	5%	1%	10%	8%	5221
DINING ROOM	0%	2%	2%	3%	37%	11%	6%	3%	6%	2%	0%	6%	4070
GARAGE	1%	14%	1%	1%	10%	1%	2%	1%	5%	6%	27%	5%	3322
OTHER LIVING ROOM	1%	2%	10%	7%	6%	8%	3%	12%	15%	2%	0%	5%	3287
OFFICE	0%	2%	7%	3%	1%	5%	3%	7%	13%	1%	1%	3%	3188
OTHER	3%	15%	1%	3%	3%	1%	4%	0%	5%	1%	1%	5%	2236
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	63464
n (unweighted)	14907	13394	8603	9620	6935	5492	1391	1112	1085	799	126	63464	

**Table 28: Location by Fixture Type**

LOCATION	FIXTURE TYPE											Total	n (un-weighted)
	WALL	CEILING	TABLE/ DESK/ FLOOR LAMP	RE- CESSED	SUS- PENDED	CEILING FAN	UNDER- CABINET	TOR- CHIERE	TRACK	OTHER	UN- KNOWN		
BATHROOM	70%	16%	0%	12%	1%	0%	0%	0%	0%	0%	0%	100%	11131
BEDROOM	5%	17%	38%	5%	3%	26%	1%	3%	1%	1%	0%	100%	10102
KITCHEN (ALL)	2%	33%	1%	33%	9%	7%	11%	0%	2%	1%	0%	100%	8104
EXTERIOR (ALL)	75%	6%	3%	3%	3%	1%	0%	0%	0%	7%	1%	100%	6832
LIVING ROOM	5%	6%	40%	14%	9%	15%	1%	7%	3%	0%	0%	100%	5971
HALL/ENTRANCE	8%	42%	1%	29%	17%	0%	0%	0%	1%	0%	0%	100%	5221
DINING ROOM	2%	6%	4%	6%	62%	16%	2%	1%	1%	0%	0%	100%	4070
GARAGE	7%	61%	2%	3%	21%	2%	1%	0%	1%	1%	1%	100%	3322
OTHER LIVING ROOM	5%	11%	28%	18%	12%	16%	1%	4%	5%	0%	0%	100%	3287
OFFICE	3%	17%	34%	14%	4%	16%	2%	4%	7%	0%	0%	100%	3188
OTHER	13%	64%	2%	9%	6%	1%	2%	0%	1%	0%	0%	100%	2236
Total	24%	22%	14%	14%	11%	9%	2%	2%	2%	1%	0%	100%	63464
n (unweighted)	14907	13394	8603	9620	6935	5492	1391	1112	1085	799	126	63464	

**Table 29: Lamp Type by Lamp Shape**

LAMP SHAPE	LAMP TYPE							Total	n (unweighted)
	INCANDESCENT	CFL	FLUORESCENT	HALOGEN	SOCKET EMPTY	OTHER	UNKNOWN		
A-TYPE	51%	3%	0%	2%	0%	16%	1%	28%	17394
SPIRAL	0%	73%	0%	0%	0%	0%	0%	16%	9531
LINEAR TUBE	1%	3%	90%	11%	0%	1%	1%	13%	8265
REFLECTOR	15%	7%	0%	39%	0%	16%	9%	13%	8791
DECORATIVE	20%	2%	0%	0%	0%	19%	0%	11%	7175
GLOBE	14%	4%	0%	0%	0%	0%	2%	8%	5217
MR-16	0%	0%	0%	26%	0%	1%	0%	2%	1484
BI-PIN	0%	0%	0%	20%	0%	23%	0%	2%	1023
U-BEND	0%	7%	1%	0%	0%	0%	0%	2%	988
CIRCLINE	0%	0%	8%	0%	0%	0%	0%	1%	557
BULLET OR POST	0%	1%	0%	0%	0%	0%	0%	0%	112
SOCKET EMPTY	0%	0%	0%	0%	100%	0%	0%	4%	1960
OTHER	0%	0%	0%	0%	0%	13%	1%	0%	23
UNKNOWN	0%	0%	1%	1%	0%	11%	87%	1%	944
Total	100%	100%	100%	100%	100%	100%	100%	100%	63464
n (unweighted)	34373	13307	7639	5339	1960	76	770	63464	

**Table 30: Lamp Shape by Lamp Type**

LAMP SHAPE	LAMP TYPE							Total	n (unweighted)
	INCANDESCENT	CFL	FLUORESCENT	HALOGEN	SOCKET EMPTY	OTHER	UNKNOWN		
A-TYPE	97%	2%	0%	1%	0%	0%	0%	100%	17394
SPIRAL	0%	100%	0%	0%	0%	0%	0%	100%	9531
LINEAR TUBE	3%	6%	84%	7%	0%	0%	0%	100%	8265
REFLECTOR	62%	13%	0%	24%	0%	0%	1%	100%	8791
DECORATIVE	96%	4%	0%	0%	0%	0%	0%	100%	7175
GLOBE	90%	10%	0%	0%	0%	0%	0%	100%	5217
MR-16	0%	0%	0%	100%	0%	0%	0%	100%	1484
BI-PIN	0%	0%	0%	98%	0%	2%	0%	100%	1023
U-BEND	0%	94%	5%	0%	0%	0%	0%	100%	988
CIRCLINE	0%	0%	100%	0%	0%	0%	0%	100%	557
BULLET OR POST	0%	99%	0%	0%	0%	0%	1%	100%	112
SOCKET EMPTY	0%	0%	0%	0%	100%	0%	0%	100%	1960
OTHER	2%	0%	26%	15%	0%	41%	16%	100%	23
UNKNOWN	9%	3%	8%	6%	0%	1%	73%	100%	944
Total	53%	22%	12%	8%	4%	0%	1%	100%	63464
n (unweighted)	34373	13307	7639	5339	1960	76	770	63464	



**Table 31: Wattage by Lamp Type<sup>1</sup>**

	Incandescent	CFL	Fluorescent	Halogen	Other	Total
Number of verified sockets with wattage	32,948	13,062	7,227	4,672	87	57,996
Total Wattage	1,886,381	222,802	256,964	340,055	4,319	2,710,521
Average Wattage per socket	57.25	17.06	35.56	72.79	49.64	46.74
Max Wattage	300	65	110	500	175	500
Min Wattage	3	3	5	3	0.46	0.46

**Table 32: Wattage by Site Information**

	All Utilities
Count of Sites with wattage available	1232
Average Weighted Wattage per Site	<b>1,960.60</b>
Count of Sites with square footage available	1079
Average Weighted Wattage per square foot	<b>1.24</b>

**Table 33: Average Number and Wattage of Bulbs in Storage by Bulb Type**

Bulb Type	Average Number of Bulbs in Storage Per Household	Average Number of Bulbs in Storage in Households with at Least One	Average Wattage of Bulbs in Storage in Households with at Least One
Incandescent	5.56	10.46	60.74
CFL	3.07	6.44	18.06
Fluorescent	0.23	4.16	39.71
Halogen	0.48	4.44	75.22
LED	0.01	4.26	1.89
Overall	9.35	14.08	46.90

<sup>1</sup> Wattage-based calculations were done on a subset of the sample that had complete information for the number of lamps in a fixture, the number of fixtures present, and the wattage of the lamp observed. This information was available for 91.4% of the full sample, therefore 8.6% of the cases were left out of the wattage calculations. The total number of sockets available for the wattage calculations was 57,996.

**Table 34: Number of CFLs per Household and Average Number of Bulbs in Storage by Bulb Type**

Number of CFLs Installed Per Household	Bulb Type	Average Number of Bulbs in Storage Per Household	Average Number of Bulbs in Storage in Households with at Least One
0 CFLs installed (n=150)	Incandescent	5.10	9.20
	CFL	0.42	2.97
	Fluorescent	0.18	5.15
	Halogen	0.80	12.79
	LED	0.00	0.00
	Overall	6.50	11.31
1-2 CFLs Installed (n=152)	Incandescent	6.38	10.46
	CFL	1.13	3.52
	Fluorescent	0.18	5.06
	Halogen	0.28	2.52
	LED	0.02	4.00
	Overall	7.99	11.88
3-5 CFLs Installed (n=226)	Incandescent	5.68	10.40
	CFL	1.90	4.14
	Fluorescent	0.36	6.26
	Halogen	0.48	5.01
	LED	0.00	0.00
	Overall	8.42	13.17
6-10 CFLs Installed (n=303)	Incandescent	4.44	9.34
	CFL	2.47	4.81
	Fluorescent	0.19	2.81
	Halogen	0.48	3.42
	LED	0.00	0.00
	Overall	8.42	11.34
11-20 CFLs Installed (n=249)	Incandescent	5.53	10.82
	CFL	4.28	7.10
	Fluorescent	0.12	2.74
	Halogen	0.67	4.48
	LED	0.00	0.00
	Overall	10.60	15.39
More than 20 CFLs Installed (n=152)	Incandescent	7.49	13.51
	CFL	9.37	12.75
	Fluorescent	0.43	4.50
	Halogen	0.42	2.77
	LED	0.08	4.35

	Overall	17.79	22.90
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## 11.2 Results by IOU

### 11.2.1 PG&E

**Table 35: Lamp Type, PG&E**

LAMP TYPE	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
INCANDESCENT	14044	52%
CFL	5782	23%
FLUORESCENT	3427	12%
HALOGEN	2515	9%
SOCKET EMPTY	764	3%
OTHER	36	0%
UNKNOWN	268	1%
OVERALL	26836	100%

**Table 36: Base Type, PG&E**

BASE TYPE	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
MEDIUM SCREW-BASED	18236	69%
PIN-BASED	5345	19%
SMALL SCREW-BASED	2904	11%
OTHER	29	0%
UNKNOWN	322	1%
OVERALL	26836	100%

**Table 37: Control Type, PG&E**

CONTROL	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
ON/OFF SWITCH	21765	82%
DIMMER	3340	11%
3-WAY SWITCH	918	3%
MOTION SENSOR	265	1%
MOTION SENSOR & PHOTOCELL	197	1%
TIMER	184	1%

PHOTOCELL	108	0%
UNKNOWN	59	0%
OVERALL	26836	100%

**Table 38: Lamp Shape, PG&E**

LAMP SHAPE	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
A-TYPE	7306	27%
SPIRAL	4088	17%
LINEAR TUBE	3754	13%
REFLECTOR	3555	12%
DECORATIVE	2970	11%
GLOBE	2228	8%
MR-16	648	2%
U-BEND	425	2%
BI-PIN	473	2%
CIRCLINE	264	1%
BULLET OR POST	37	0%
SOCKET EMPTY	764	3%
OTHER	12	0%
UNKNOWN	312	1%
OVERALL	26836	100%

**Table 39: Fixture Type, PG&E**

FIXTURE TYPE	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
WALL	6185	24%
CEILING	6235	24%
TABLE/DESK/FLOOR LAMP	3699	14%
RECESSED	3652	12%
SUSPENDED	3042	11%
CEILING FAN	2080	8%
UNDER-CABINET	706	2%
TRACK	487	2%
TORCHIERE	371	1%
OTHER	347	1%
UNKNOWN	32	0%
OVERALL	26836	100%

**Table 40: Location, PG&E**

LOCATION	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
BATHROOM	4409	17%
BEDROOM	4270	17%
KITCHEN (ALL)	3418	13%
EXTERIOR (ALL)	2978	11%
LIVING ROOM	2555	10%
HALL/ENTRANCE	2249	8%
DINING ROOM	1581	6%
GARAGE	1441	5%
OTHER LIVING ROOM	1266	4%
OFFICE	994	3%
OTHER	1675	6%
OVERALL	26836	100%

**Table 41: Base Type by Lamp Type, PG&E**

LAMP TYPE	BASE TYPE						n (unweighted)
	MEDIUM SCREW-BASED	PIN-BASED	SMALL SCREW-BASED	OTHER	UNKNOWN	Total	
INCANDESCENT	60%	0%	94%	19%	14%	52%	14044
CFL	30%	9%	3%	0%	6%	23%	5782
FLUORESCENT	0%	65%	0%	0%	0%	12%	3427
HALOGEN	5%	24%	1%	60%	8%	9%	2515
SOCKET EMPTY	4%	1%	2%	0%	20%	3%	764
OTHER	0%	0%	0%	21%	1%	0%	36
UNKNOWN	1%	0%	0%	0%	51%	1%	268
Total	100%	100%	100%	100%	100%	100%	26836
n (unweighted)	18236	5345	2904	29	322	26836	

**Table 42: Lamp Type by Base Type, PG&E**

LAMP TYPE	BASE TYPE						n (unweighted)
	MEDIUM SCREW-BASED	PIN-BASED	SMALL SCREW-BASED	OTHER	UNKNOWN	Total	
INCANDESCENT	80%	0%	19%	0%	0%	100%	14044
CFL	90%	8%	1%	0%	0%	100%	5782
FLUORESCENT	0%	100%	0%	0%	0%	100%	3427
HALOGEN	41%	55%	1%	1%	1%	100%	2515
SOCKET EMPTY	80%	5%	7%	0%	7%	100%	764
OTHER	16%	45%	16%	18%	7%	100%	36
UNKNOWN	34%	3%	0%	0%	63%	100%	268
Total	69%	19%	11%	0%	1%	100%	26836
n (unweighted)	18236	5345	2904	29	322	26836	

**Table 43: Control Type by Lamp Type, PG&E**

LAMP TYPE	CONTROL								Total	n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTO-CELL	UNKNOWN		
INCANDESCENT	49%	68%	60%	35%	32%	40%	40%	61%	52%	14044
CFL	25%	5%	34%	20%	13%	37%	25%	34%	23%	5782
FLUORESCENT	15%	1%	1%	5%	2%	3%	1%	0%	12%	3427
HALOGEN	6%	24%	4%	33%	50%	19%	33%	2%	9%	2515
SOCKET EMPTY	4%	2%	1%	4%	1%	1%	0%	2%	3%	764
OTHER	0%	0%	0%	2%	0%	0%	1%	0%	0%	36
UNKNOWN	1%	1%	0%	1%	3%	1%	0%	0%	1%	268
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	26836
n (unweighted)	21765	3340	918	265	197	184	108	59	26836	

**Table 44: Lamp Type by Control Type, PG&E**

LAMP TYPE	CONTROL								Total	n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTO-CELL	UNKNOWN		
INCANDESCENT	79%	15%	4%	1%	0%	0%	0%	0%	100%	14044
CFL	90%	2%	5%	1%	0%	1%	0%	0%	100%	5782
FLUORESCENT	98%	1%	0%	0%	0%	0%	0%	0%	100%	3427
HALOGEN	55%	32%	2%	4%	4%	1%	1%	0%	100%	2515
SOCKET EMPTY	92%	5%	1%	1%	0%	0%	0%	0%	100%	764
OTHER	80%	7%	0%	10%	0%	2%	2%	0%	100%	36
UNKNOWN	85%	12%	0%	1%	2%	0%	0%	0%	100%	268
Total	82%	11%	3%	1%	1%	1%	0%	0%	100%	26836
n (unweighted)	21765	3340	918	265	197	184	108	59	26836	



**Table 45: Control Type by Location, PG&E**

LOCATION	CONTROL								Total	n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTO-CELL	UNKNOWN		
BATHROOM	20%	6%	0%	4%	0%	0%	9%	0%	17%	4409
BEDROOM	16%	17%	44%	3%	0%	8%	0%	65%	17%	4270
KITCHEN (ALL)	14%	15%	4%	2%	0%	2%	0%	0%	13%	3418
EXTERIOR (ALL)	10%	2%	1%	69%	98%	56%	89%	1%	11%	2978
LIVING ROOM	8%	17%	35%	5%	1%	15%	0%	20%	10%	2555
HALL/ENTRANCE	9%	8%	1%	2%	0%	2%	0%	0%	8%	2249
DINING ROOM	4%	22%	2%	0%	0%	3%	0%	0%	6%	1581
GARAGE	6%	0%	0%	3%	0%	1%	1%	0%	5%	1441
OTHER LIVING ROOM	4%	9%	9%	4%	0%	7%	0%	10%	4%	1266
OFFICE	3%	4%	4%	4%	0%	2%	0%	5%	3%	994
OTHER	7%	1%	0%	5%	2%	5%	0%	0%	6%	1675
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	26836
n (unweighted)	21765	3340	918	265	197	184	108	59	26836	

**Table 46: Location by Control Type, PG&E**

LOCATION	CONTROL								Total	n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTO- CELL	UNKNOWN		
BATHROOM	96%	4%	0%	0%	0%	0%	0%	0%	100%	4409
BEDROOM	78%	12%	9%	0%	0%	0%	0%	1%	100%	4270
KITCHEN (ALL)	86%	13%	1%	0%	0%	0%	0%	0%	100%	3418
EXTERIOR (ALL)	79%	2%	0%	6%	7%	3%	3%	0%	100%	2978
LIVING ROOM	67%	19%	12%	0%	0%	1%	0%	0%	100%	2555
HALL/ENTRANCE	89%	11%	0%	0%	0%	0%	0%	0%	100%	2249
DINING ROOM	56%	43%	1%	0%	0%	0%	0%	0%	100%	1581
GARAGE	99%	0%	0%	1%	0%	0%	0%	0%	100%	1441
OTHER LIVING ROOM	67%	24%	7%	1%	0%	1%	0%	1%	100%	1266
OFFICE	79%	15%	4%	1%	0%	0%	0%	0%	100%	994
OTHER	97%	1%	0%	1%	0%	0%	0%	0%	100%	1675
Total	82%	11%	3%	1%	1%	1%	0%	0%	100%	26836
n (unweighted)	21765	3340	918	265	197	184	108	59	26836	

**Table 47: Lamp Type by Fixture Type, PG&E**

FIXTURE TYPE	LAMP TYPE								n (unweighted)
	INCANDESCENT	CFL	FLUORESCENT	HALOGEN	SOCKET EMPTY	OTHER	UNKNOWN	Total	
WALL	27%	26%	6%	25%	25%	21%	25%	24%	6185
CEILING	19%	23%	58%	9%	21%	0%	25%	24%	6235
TABLE/DESK/FLOOR LAMP	15%	19%	2%	9%	16%	8%	5%	14%	3699
RECESSED	11%	11%	8%	31%	2%	0%	26%	12%	3652
SUSPENDED	16%	4%	11%	2%	10%	53%	9%	11%	3042
CEILING FAN	9%	12%	0%	1%	22%	0%	7%	8%	2080
UNDER-CABINET	1%	0%	12%	6%	0%	10%	1%	2%	706
TORCHIERE	1%	2%	1%	4%	1%	3%	0%	1%	371
TRACK	1%	1%	0%	9%	2%	0%	0%	2%	487
OTHER	1%	1%	2%	3%	0%	4%	1%	1%	347
UNKNOWN	0%	0%	0%	0%	0%	0%	2%	0%	32
Total	100%	100%	100%	100%	100%	100%	100%	100%	26836
n (unweighted)	14044	5782	3427	2515	764	36	268	26836	

**Table 48: Fixture Type by Lamp Type, PG&E**

FIXTURE TYPE	LAMP TYPE								n (unweighted)
	INCANDESCENT	CFL	FLUORESCENT	HALOGEN	SOCKET EMPTY	OTHER	UNKNOWN	Total	
WALL	58%	25%	3%	9%	4%	0%	1%	100%	6185
CEILING	40%	22%	31%	3%	3%	0%	1%	100%	6235
TABLE/DESK/FLOOR LAMP	56%	32%	2%	6%	4%	0%	0%	100%	3699
RECESSED	47%	21%	8%	21%	1%	0%	2%	100%	3652
SUSPENDED	72%	9%	13%	1%	3%	1%	1%	100%	3042
CEILING FAN	55%	34%	0%	1%	9%	0%	1%	100%	2080
UNDER-CABINET	12%	3%	61%	23%	0%	1%	1%	100%	706
TORCHIERE	38%	30%	6%	23%	3%	0%	0%	100%	371
TRACK	38%	13%	0%	45%	4%	0%	0%	100%	487
OTHER	32%	21%	19%	26%	1%	1%	1%	100%	347
UNKNOWN	39%	0%	4%	31%	9%	0%	17%	100%	32
Total	52%	23%	12%	9%	3%	0%	1%	100%	26836
n (unweighted)	14044	5782	3427	2515	764	36	268	26836	

**Table 49: Base Type by Fixture Type, PG&E**

FIXTURE TYPE	BASE TYPE						n (unweighted)
	MEDIUM SCREW- BASED	PIN-BASED	SMALL SCREW- BASED	OTHER	UNKNOWN	Total	
WALL	28%	11%	18%	23%	19%	24%	6185
CEILING	20%	44%	13%	43%	22%	24%	6235
TABLE/DESK/FLOOR LAMP	16%	6%	14%	21%	10%	14%	3699
RECESSED	14%	13%	0%	0%	13%	12%	3652
SUSPENDED	7%	8%	46%	0%	16%	11%	3042
CEILING FAN	11%	1%	7%	0%	11%	8%	2080
UNDER-CABINET	1%	10%	1%	0%	1%	2%	706
TORCHIERE	1%	2%	0%	6%	1%	1%	371
TRACK	2%	3%	0%	0%	1%	2%	487
OTHER	1%	2%	1%	6%	4%	1%	347
UNKNOWN	0%	0%	0%	0%	2%	0%	32
Total	100%	100%	100%	100%	100%	100%	26836
n (unweighted)	18236	5345	2904	29	322	26836	

**Table 50: Fixture Type by Base Type, PG&E**

FIXTURE TYPE	BASE TYPE						n (unweighted)
	MEDIUM SCREW- BASED	PIN-BASED	SMALL SCREW- BASED	OTHER	UNKNOWN	Total	
WALL	82%	9%	8%	0%	1%	100%	6185
CEILING	58%	35%	6%	0%	1%	100%	6235
TABLE/DESK/FLOOR LAMP	80%	8%	11%	0%	1%	100%	3699
RECESSED	78%	20%	0%	0%	1%	100%	3652
SUSPENDED	41%	14%	43%	0%	2%	100%	3042
CEILING FAN	88%	1%	9%	0%	2%	100%	2080
UNDER-CABINET	15%	82%	2%	0%	1%	100%	706
TORCHIERE	69%	28%	2%	1%	1%	100%	371
TRACK	68%	31%	0%	0%	1%	100%	487
OTHER	44%	40%	10%	1%	5%	100%	347
UNKNOWN	48%	31%	2%	0%	19%	100%	32
Total	69%	19%	11%	0%	1%	100%	26836
n (unweighted)	18236	5345	2904	29	322	26836	

**Table 51: Control Type by Fixture Type, PG&E**

FIXTURE TYPE	CONTROL								Total	n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCCELL	TIMER	PHOTO-CELL	UNKNOWN		
WALL	26%	8%	2%	66%	92%	23%	61%	0%	24%	6185
CEILING	28%	8%	1%	14%	6%	9%	1%	0%	24%	6235
TABLE/DESK/FLOOR LAMP	12%	5%	79%	0%	0%	42%	10%	87%	14%	3699
RECESSED	10%	32%	1%	12%	0%	5%	0%	0%	12%	3652
SUSPENDED	10%	28%	2%	3%	0%	0%	0%	0%	11%	3042
CEILING FAN	9%	8%	2%	0%	0%	0%	0%	0%	8%	2080
UNDER-CABINET	3%	1%	2%	2%	0%	1%	0%	0%	2%	706
TORCHIERE	1%	3%	11%	0%	0%	4%	0%	13%	1%	371
TRACK	1%	5%	0%	2%	0%	0%	0%	0%	2%	487
OTHER	1%	1%	0%	0%	2%	11%	28%	0%	1%	347
UNKNOWN	0%	0%	0%	0%	0%	5%	0%	0%	0%	32
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	26836
n (unweighted)	21765	3340	918	265	197	184	108	59	26836	

**Table 52: Fixture Type by Control Type, PG&E**

FIXTURE TYPE	CONTROL								Total	n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTO-CELL	UNKNOWN		
WALL	89%	4%	0%	3%	3%	1%	1%	0%	100%	6185
CEILING	95%	4%	0%	1%	0%	0%	0%	0%	100%	6235
TABLE/DESK/FLOOR LAMP	73%	4%	20%	0%	0%	2%	0%	1%	100%	3699
RECESSED	69%	29%	0%	1%	0%	0%	0%	0%	100%	3652
SUSPENDED	70%	29%	1%	0%	0%	0%	0%	0%	100%	3042
CEILING FAN	87%	12%	1%	0%	0%	0%	0%	0%	100%	2080
UNDER-CABINET	90%	6%	3%	1%	0%	0%	0%	0%	100%	706
TORCHIERE	44%	27%	26%	0%	0%	1%	0%	2%	100%	371
TRACK	64%	35%	0%	1%	0%	0%	0%	0%	100%	487
OTHER	78%	6%	0%	0%	1%	6%	9%	0%	100%	347
UNKNOWN	73%	0%	0%	0%	0%	27%	0%	0%	100%	32
Total	82%	11%	3%	1%	1%	1%	0%	0%	100%	26836
n (unweighted)	21765	3340	918	265	197	184	108	59	26836	



**Table 53: Lamp Shape by Fixture Type, PG&E**

FIXTURE TYPE	LAMP SHAPE															
	A-TYPE	SPIRAL	LINEAR TUBE	REFLECTOR	DECORATIVE	GLOBE	MR-16	U-BEND	BI-PIN	CIRC-LINE	BULLET OR POST	SOCKET EMPTY	OTHER	UN-KNOWN	Total	n (unweighted)
WALL	24%	23%	10%	18%	17%	70%	3%	24%	27%	4%	64%	25%	16%	18%	24%	6185
CEILING	27%	25%	50%	9%	6%	13%	13%	37%	2%	79%	5%	21%	15%	30%	24%	6235
TABLE/DESK/FLOOR LAMP	21%	22%	4%	1%	15%	4%	7%	17%	27%	7%	19%	16%	10%	8%	14%	3699
RECESSED	4%	6%	9%	63%	0%	1%	44%	17%	2%	0%	2%	2%	0%	18%	12%	3652
SUSPENDED	8%	5%	11%	1%	50%	9%	1%	1%	9%	0%	5%	10%	0%	9%	11%	3042
CEILING FAN	13%	14%	1%	1%	9%	2%	1%	2%	2%	2%	5%	22%	0%	8%	8%	2080
UNDER-CABINET	1%	0%	12%	1%	0%	1%	5%	1%	15%	0%	0%	0%	48%	2%	2%	706
TORCHIERE	2%	2%	2%	0%	0%	0%	0%	1%	3%	7%	0%	1%	11%	0%	1%	371
TRACK	1%	1%	0%	6%	0%	0%	24%	0%	1%	0%	0%	2%	0%	1%	2%	487
OTHER	1%	0%	2%	1%	2%	0%	1%	0%	12%	0%	0%	0%	0%	4%	1%	347
UNKNOWN	0%	0%	0%	0%	0%	0%	1%	0%	0%	0%	0%	0%	0%	2%	0%	32
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	26836
n (unweighted)	7306	4088	3754	3555	2970	2228	648	425	473	264	37	764	12	312	26836	

**Table 54: Fixture Type by Lamp Shape, PG&E**

FIXTURE TYPE	LAMP SHAPE														Total	n (unweighted)
	A-TYPE	SPIRAL	LINEAR TUBE	REFLE- CTOR	DECO- RATIVE	GLOBE	MR- 16	U- BEND	BI- PIN	CIRC- LINE	BULLET OR POST	SOCKET EMPTY	OTHER	UN- KNOWN		
WALL	27%	16%	5%	9%	8%	25%	0%	2%	2%	0%	0%	4%	0%	1%	100%	6185
CEILING	31%	17%	28%	5%	3%	5%	1%	3%	0%	4%	0%	3%	0%	1%	100%	6235
TABLE/DESK/FLOOR LAMP	42%	27%	4%	1%	12%	2%	1%	2%	3%	1%	0%	4%	0%	1%	100%	3699
RECESSED	8%	8%	10%	61%	0%	1%	8%	2%	0%	0%	0%	1%	0%	2%	100%	3652
SUSPENDED	19%	7%	13%	1%	48%	6%	0%	0%	1%	0%	0%	3%	0%	1%	100%	3042
CEILING FAN	43%	29%	1%	1%	12%	2%	0%	0%	0%	0%	0%	9%	0%	1%	100%	2080
UNDER-CABINET	6%	2%	67%	5%	1%	2%	5%	0%	10%	0%	0%	0%	1%	1%	100%	706
TORCHIERE	34%	28%	20%	0%	2%	2%	0%	1%	3%	6%	0%	3%	0%	0%	100%	371
TRACK	15%	10%	0%	40%	0%	0%	29%	0%	1%	0%	0%	4%	0%	1%	100%	487
OTHER	20%	7%	22%	8%	17%	0%	3%	0%	18%	0%	0%	1%	0%	4%	100%	347
UNKNOWN	16%	0%	4%	7%	14%	3%	27%	0%	0%	0%	0%	9%	0%	19%	100%	32
Total	27%	17%	13%	12%	11%	8%	2%	2%	2%	1%	0%	3%	0%	1%	100%	26836
n (unweighted)	7306	4088	3754	3555	2970	2228	648	425	473	264	37	764	12	312	26836	

**Table 55: Lamp Type by Location, PG&E**

LOCATION	LAMP TYPE							Total	n (unweighted)
	INCANDE- SCENT	CFL	FLUORES- CENT	HALOGEN	SOCKET EMPTY	OTHER	UNKNOWN		
BATHROOM	19%	19%	8%	8%	17%	7%	22%	17%	4409
BEDROOM	18%	21%	3%	13%	28%	8%	10%	17%	4270
KITCHEN (ALL)	8%	11%	35%	19%	10%	10%	11%	13%	3418
EXTERIOR (ALL)	10%	10%	2%	25%	7%	30%	23%	11%	2978
LIVING ROOM	11%	12%	2%	11%	11%	0%	9%	10%	2555
HALL/ENTRANCE	11%	8%	1%	6%	7%	44%	12%	8%	2249
DINING ROOM	8%	4%	1%	4%	5%	0%	2%	6%	1581
GARAGE	1%	2%	30%	1%	1%	0%	3%	5%	1441
OTHER LIVING ROOM	5%	4%	2%	6%	4%	0%	3%	4%	1266
OFFICE	3%	4%	2%	4%	4%	0%	1%	3%	994
OTHER	5%	5%	14%	2%	5%	2%	4%	6%	1675
Total	100%	100%	100%	100%	100%	100%	100%	100%	26836
n (unweighted)	14044	5782	3427	2515	764	36	268	26836	

**Table 56: Location by Lamp Type, PG&E**

LOCATION	LAMP TYPE							Total	n (unweighted)
	INCANDE- SCENT	CFL	FLUORES- CENT	HALOGEN	SOCKET EMPTY	OTHER	UNKNOWN		
BATHROOM	59%	26%	6%	4%	4%	0%	1%	100%	4409
BEDROOM	56%	28%	2%	7%	6%	0%	1%	100%	4270
KITCHEN (ALL)	31%	20%	34%	12%	3%	0%	1%	100%	3418
EXTERIOR (ALL)	50%	22%	2%	20%	2%	0%	2%	100%	2978
LIVING ROOM	56%	28%	2%	9%	4%	0%	1%	100%	2555
HALL/ENTRANCE	66%	21%	2%	6%	3%	1%	1%	100%	2249
DINING ROOM	74%	15%	1%	6%	3%	0%	0%	100%	1581
GARAGE	15%	8%	74%	1%	1%	0%	1%	100%	1441
OTHER LIVING ROOM	59%	20%	4%	13%	3%	0%	1%	100%	1266
OFFICE	49%	28%	8%	10%	5%	0%	0%	100%	994
OTHER	45%	20%	29%	3%	3%	0%	1%	100%	1675
Total	52%	23%	12%	9%	3%	0%	1%	100%	26836
n (unweighted)	14044	5782	3427	2515	764	36	268	26836	

**Table 57: Lamp Shape by Location, PG&E**

LOCATION	LAMP SHAPE														Total	n (unweighted)
	A-TYPE	SPIRAL	LINEAR TUBE	REFLE- CTOR	DECO- RATIVE	GLOBE	MR- 16	U- BEND	BI- PIN	CIRC- LINE	BULLET OR POST	SOCKET EMPTY	OTHER	UN- KNOWN		
BATHROOM	15%	15%	9%	8%	6%	69%	6%	32%	11%	20%	4%	17%	15%	22%	17%	4409
BEDROOM	25%	25%	4%	8%	15%	5%	15%	11%	17%	18%	27%	28%	10%	9%	17%	4270
KITCHEN (ALL)	6%	10%	33%	21%	7%	3%	21%	13%	19%	20%	7%	10%	48%	17%	13%	3418
EXTERIOR (ALL)	11%	9%	4%	21%	13%	2%	8%	13%	22%	1%	45%	7%	27%	22%	11%	2978
LIVING ROOM	11%	14%	3%	9%	13%	5%	14%	6%	9%	6%	10%	11%	0%	6%	10%	2555
HALL/ENTRANCE	8%	7%	1%	15%	14%	9%	7%	8%	4%	9%	2%	7%	0%	11%	8%	2249
DINING ROOM	4%	4%	1%	2%	25%	4%	10%	2%	3%	1%	4%	5%	0%	2%	6%	1581
GARAGE	2%	2%	28%	1%	0%	0%	0%	3%	1%	4%	0%	1%	0%	3%	5%	1441
OTHER LIVING ROOM	5%	4%	2%	7%	5%	1%	13%	3%	5%	2%	0%	4%	0%	2%	4%	1266
OFFICE	3%	4%	3%	5%	2%	1%	4%	3%	7%	4%	0%	4%	0%	0%	3%	994
OTHER	8%	6%	12%	3%	1%	1%	2%	6%	3%	15%	2%	5%	0%	5%	6%	1675
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	26836
n (unweighted)	7306	4088	3754	3555	2970	2228	648	425	473	264	37	764	12	312	26836	

**Table 58: Location by Lamp Shape, PG&E**

LOCATION	LAMP SHAPE														Total	n (unweighted)
	A-TYPE	SPIRAL	LINEAR TUBE	REFLE- CTOR	DECO- RATIVE	GLOBE	MR- 16	U- BEND	BI- PIN	CIRC- LINE	BULLET OR POST	SOCKET EMPTY	OTHER	UN- KNOWN		
BATHROOM	24%	15%	7%	6%	4%	34%	1%	3%	1%	1%	0%	4%	0%	1%	100%	4409
BEDROOM	42%	24%	3%	6%	10%	2%	2%	1%	2%	1%	0%	6%	0%	1%	100%	4270
KITCHEN (ALL)	13%	13%	34%	19%	6%	2%	4%	2%	2%	2%	0%	3%	0%	2%	100%	3418
EXTERIOR (ALL)	29%	14%	5%	24%	14%	2%	2%	2%	3%	0%	1%	2%	0%	2%	100%	2978
LIVING ROOM	31%	24%	4%	11%	15%	4%	3%	1%	1%	1%	0%	4%	0%	1%	100%	2555
HALL/ENTRANCE	26%	14%	2%	21%	18%	9%	2%	2%	1%	1%	0%	3%	0%	1%	100%	2249
DINING ROOM	21%	12%	2%	5%	46%	5%	4%	0%	1%	0%	0%	3%	0%	0%	100%	1581
GARAGE	13%	7%	73%	3%	0%	0%	0%	1%	0%	1%	0%	1%	0%	1%	100%	1441
OTHER LIVING ROOM	33%	14%	6%	19%	11%	3%	7%	1%	2%	0%	0%	3%	0%	1%	100%	1266
OFFICE	28%	21%	12%	18%	7%	2%	3%	1%	3%	1%	0%	5%	0%	0%	100%	994
OTHER	37%	17%	27%	6%	2%	1%	1%	2%	1%	3%	0%	3%	0%	1%	100%	1675
Total	27%	17%	13%	12%	11%	8%	2%	2%	2%	1%	0%	3%	0%	1%	100%	26836
n (unweighted)	7306	4088	3754	3555	2970	2228	648	425	473	264	37	764	12	312	26836	

**Table 59: Base Type by Location, PG&E**

LOCATION	BASE TYPE						n (unweighted)
	MEDIUM SCREW- BASED	PIN-BASED	SMALL SCREW- BASED	OTHER	UNKNOWN	Total	
BATHROOM	20%	12%	8%	7%	20%	17%	4409
BEDROOM	20%	7%	14%	9%	14%	17%	4270
KITCHEN (ALL)	10%	29%	6%	0%	12%	13%	3418
EXTERIOR (ALL)	11%	6%	12%	28%	19%	11%	2978
LIVING ROOM	11%	4%	12%	54%	7%	10%	2555
HALL/ENTRANCE	8%	3%	19%	0%	7%	8%	2249
DINING ROOM	4%	2%	22%	0%	8%	6%	1581
GARAGE	2%	20%	0%	0%	3%	5%	1441
OTHER LIVING ROOM	5%	3%	4%	0%	3%	4%	1266
OFFICE	4%	3%	2%	1%	1%	3%	994
OTHER	6%	10%	1%	0%	5%	6%	1675
Total	100%	100%	100%	100%	100%	100%	26836
n (unweighted)	18236	5345	2904	29	322	26836	

**Table 60: Location by Base Type, PG&E**

LOCATION	BASE TYPE						n (unweighted)
	MEDIUM SCREW- BASED	PIN-BASED	SMALL SCREW- BASED	OTHER	UNKNOWN	Total	
BATHROOM	80%	13%	5%	0%	1%	100%	4409
BEDROOM	82%	7%	9%	0%	1%	100%	4270
KITCHEN (ALL)	50%	44%	5%	0%	1%	100%	3418
EXTERIOR (ALL)	73%	12%	12%	0%	2%	100%	2978
LIVING ROOM	77%	9%	13%	1%	1%	100%	2555
HALL/ENTRANCE	68%	7%	24%	0%	1%	100%	2249
DINING ROOM	53%	6%	40%	0%	2%	100%	1581
GARAGE	24%	75%	0%	0%	1%	100%	1441
OTHER LIVING ROOM	74%	15%	10%	0%	1%	100%	1266
OFFICE	77%	17%	6%	0%	0%	100%	994
OTHER	64%	33%	2%	0%	1%	100%	1675
Total	69%	19%	11%	0%	1%	100%	26836
n (unweighted)	18236	5345	2904	29	322	26836	



**Table 61: Fixture Type by Location, PG&E**

LOCATION	FIXTURE TYPE											Total	n (unweighted)
	WALL	CEILING	TABLE/DESK/ FLOOR LAMP	RECESSED	SUSPENDED	CEILING FAN	UNDER- CABINET	TORCHIERE	TRACK	OTHER	UNKNOWN		
BATHROOM	51%	11%	0%	13%	3%	1%	2%	1%	2%	1%	16%	17%	4409
BEDROOM	3%	12%	46%	9%	7%	47%	2%	37%	20%	12%	8%	17%	4270
KITCHEN (ALL)	1%	19%	1%	28%	13%	10%	73%	2%	20%	19%	14%	13%	3418
EXTERIOR (ALL)	34%	3%	3%	4%	3%	1%	0%	0%	0%	54%	34%	11%	2978
LIVING ROOM	2%	3%	29%	10%	7%	19%	5%	43%	10%	4%	8%	10%	2555
HALL/ENTRANCE	4%	15%	1%	17%	14%	1%	1%	2%	7%	0%	14%	8%	2249
DINING ROOM	1%	1%	2%	3%	34%	9%	3%	2%	6%	1%	0%	6%	1581
GARAGE	1%	14%	1%	1%	9%	1%	2%	0%	1%	3%	3%	5%	1441
OTHER LIVING ROOM	1%	2%	9%	7%	5%	6%	4%	7%	14%	2%	0%	4%	1266
OFFICE	0%	3%	8%	4%	1%	5%	3%	6%	15%	2%	0%	3%	994
OTHER	3%	17%	1%	4%	4%	1%	4%	0%	6%	2%	3%	6%	1675
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	26836
n (unweighted)	6185	6235	3699	3652	3042	2080	706	371	487	347	32	26836	

**Table 62: Location by Fixture Type, PG&E**

LOCATION	FIXTURE TYPE											Total	n (unweighted)
	WALL	CEILING	TABLE/DESK/ FLOOR LAMP	RECESSED	SUSPENDED	CEILING FAN	UNDER- CABINET	TORCHIERE	TRACK	OTHER	UNKNOWN		
BATHROOM	71%	16%	0%	10%	2%	0%	0%	0%	0%	0%	0%	100%	4409
BEDROOM	4%	18%	38%	6%	5%	23%	0%	3%	2%	1%	0%	100%	4270
KITCHEN (ALL)	2%	34%	1%	27%	11%	6%	13%	0%	3%	2%	0%	100%	3418
EXTERIOR (ALL)	75%	7%	4%	4%	3%	1%	0%	0%	0%	6%	0%	100%	2978
LIVING ROOM	5%	8%	41%	13%	8%	16%	1%	6%	2%	0%	0%	100%	2555
HALL/ENTRANCE	10%	43%	1%	25%	18%	0%	0%	0%	1%	0%	0%	100%	2249
DINING ROOM	2%	5%	4%	6%	65%	13%	1%	1%	2%	0%	0%	100%	1581
GARAGE	4%	67%	2%	3%	20%	1%	1%	0%	0%	1%	0%	100%	1441
OTHER LIVING ROOM	4%	12%	27%	21%	13%	12%	2%	2%	6%	0%	0%	100%	1266
OFFICE	2%	19%	32%	16%	5%	12%	2%	3%	8%	1%	0%	100%	994
OTHER	12%	66%	2%	7%	8%	1%	2%	0%	2%	0%	0%	100%	1675
Total	24%	24%	14%	12%	11%	8%	2%	1%	2%	1%	0%	100%	26836
n (unweighted)	6185	6235	3699	3652	3042	2080	706	371	487	347	32	26836	

**Table 63: Lamp Type by Lamp Shape, PG&E**

LAMP SHAPE	LAMP TYPE							Total	n (unweighted)
	INCANDE- SCENT	CFL	FLUORES- CENT	HALOGEN	SOCKET EMPTY	OTHER	UNKNOWN		
A-TYPE	52%	2%	0%	1%	0%	21%	0%	27%	7306
SPIRAL	0%	73%	0%	0%	0%	0%	0%	17%	4088
LINEAR TUBE	1%	3%	90%	12%	0%	2%	1%	13%	3754
REFLECTOR	13%	6%	0%	42%	0%	11%	15%	12%	3555
DECORATIVE	20%	3%	0%	0%	0%	16%	0%	11%	2970
GLOBE	14%	5%	0%	0%	0%	0%	3%	8%	2228
MR-16	0%	0%	0%	25%	0%	0%	0%	2%	648
BI-PIN	0%	0%	0%	18%	0%	35%	0%	2%	473
U-BEND	0%	7%	1%	0%	0%	0%	0%	2%	425
CIRCLINE	0%	0%	9%	0%	0%	0%	0%	1%	264
BULLET OR POST	0%	1%	0%	0%	0%	0%	0%	0%	37
SOCKET EMPTY	0%	0%	0%	0%	100%	0%	0%	3%	764
OTHER	0%	0%	0%	0%	0%	13%	1%	0%	12
UNKNOWN	0%	0%	0%	1%	0%	2%	80%	1%	312
Total	100%	100%	100%	100%	100%	100%	100%	100%	26836
n (unweighted)	14044	5782	3427	2515	764	36	268	26836	

**Table 64: Lamp Shape by Lamp Type, PG&E**

LAMP SHAPE	LAMP TYPE							Total	n (unweighted)
	INCANDE- SCENT	CFL	FLUORES- CENT	HALOGEN	SOCKET EMPTY	OTHER	UNKNOWN		
A-TYPE	97%	2%	0%	0%	0%	0%	0%	100%	7306
SPIRAL	0%	100%	0%	0%	0%	0%	0%	100%	4088
LINEAR TUBE	3%	6%	84%	8%	0%	0%	0%	100%	3754
REFLECTOR	58%	11%	0%	30%	0%	0%	1%	100%	3555
DECORATIVE	95%	5%	0%	0%	0%	0%	0%	100%	2970
GLOBE	87%	12%	0%	0%	0%	0%	0%	100%	2228
MR-16	0%	0%	0%	100%	0%	0%	0%	100%	648
BI-PIN	0%	0%	0%	97%	0%	3%	0%	100%	473
U-BEND	0%	95%	5%	0%	0%	0%	0%	100%	425
CIRCLINE	0%	0%	100%	0%	0%	0%	0%	100%	264
BULLET OR POST	0%	100%	0%	0%	0%	0%	0%	100%	37
SOCKET EMPTY	0%	0%	0%	0%	100%	0%	0%	100%	764
OTHER	0%	0%	15%	26%	0%	42%	17%	100%	12
UNKNOWN	9%	5%	5%	9%	0%	0%	72%	100%	312
Total	52%	23%	12%	9%	3%	0%	1%	100%	26836
n (unweighted)	14044	5782	3427	2515	764	36	268	26836	

**Table 65: Wattage by Site Information, PG&E**

	PG&E
Count of Sites with wattage available	497
Average Weighted Wattage per Site	<b>1,995.0</b>
Count of Sites with square footage available	440
Average Weighted Wattage per square foot	<b>1.22</b>

**Table 66: Average Number and Wattage of Bulbs in Storage by Bulb Type, PG&E**

Bulb Type	Average Number of Bulbs in Storage Per Household	Average Number of Bulbs in Storage in Households with at Least One	Average Wattage of Bulbs in Storage in Households with at Least One
Incandescent	4.65	10.08	61.80
CFL	0.22	7.02	17.16
Fluorescent	0.29	4.01	43.64
Halogen	1.87	5.65	68.80
LED	0.00	4.37	1.71
Overall	7.02	14.53	45.24

**Table 67: Number of CFLs per Household and Average Number of Bulbs in Storage by Bulb Type, PG&E**

Number of CFLs Installed Per Household	Bulb Type	Average Number of Bulbs in Storage Per Household	Average Number of Bulbs in Storage in Households with at Least One
0 CFLs installed (n=150)	Incandescent	4.65	8.14
	CFL	0.22	1.80
	Fluorescent	0.29	4.37
	Halogen	1.87	24.58
	LED	0.00	0.00
	Overall	7.02	11.33
1-2 CFLs Installed (n=152)	Incandescent	6.49	9.11
	CFL	1.70	3.88
	Fluorescent	0.15	2.66
	Halogen	0.17	2.26
	LED	0.06	4.00
	Overall	8.57	10.89
3-5 CFLs Installed (n=226)	Incandescent	6.40	10.54
	CFL	2.62	5.05
	Fluorescent	0.57	6.16
	Halogen	0.62	7.20
	LED	0.00	0.00
	Overall	10.20	14.97
6-10 CFLs Installed (n=303)	Incandescent	5.31	10.42
	CFL	2.52	4.56
	Fluorescent	0.21	2.76
	Halogen	0.24	2.69
	LED	0.00	0.00
	Overall	8.26	12.13
11-20 CFLs Installed (n=249)	Incandescent	4.24	8.21
	CFL	5.38	8.34
	Fluorescent	0.16	3.30
	Halogen	0.47	4.53
	LED	0.00	0.00
	Overall	10.25	14.25
More than 20 CFLs Installed (n=152)	Incandescent	7.99	14.63
	CFL	10.07	13.28
	Fluorescent	0.47	4.00
	Halogen	0.37	2.62
	LED	0.15	4.52

	Overall	19.05	24.26
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## 11.2.2 SCE

**Table 68: Lamp Type, SCE**

LAMP TYPE	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
INCANDESCENT	12991	55%
CFL	5149	23%
FLUORESCENT	2661	11%
HALOGEN	1530	6%
SOCKET EMPTY	851	4%
OTHER	15	0%
UNKNOWN	301	1%
OVERALL	23498	100%

**Table 69: Base Type, SCE**

BASE TYPE	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
MEDIUM SCREW-BASED	16315	71%
PIN-BASED	3942	17%
SMALL SCREW-BASED	2708	11%
OTHER	19	0%
UNKNOWN	514	2%
OVERALL	23498	100%

**Table 70: Control Type, SCE**

CONTROL	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
ON/OFF SWITCH	19683	84%
DIMMER	2368	9%
3-WAY SWITCH	710	3%
MOTION SENSOR	256	1%
MOTION SENSOR & PHOTOCELL	128	1%
TIMER	198	1%
PHOTOCELL	131	1%
UNKNOWN	24	0%



OVERALL	23498	100%
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**Table 71: Lamp Shape, SCE**

LAMP SHAPE	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
A-TYPE	6561	29%
SPIRAL	3798	17%
LINEAR TUBE	2843	12%
REFLECTOR	3143	12%
DECORATIVE	2767	11%
GLOBE	1779	8%
MR-16	500	2%
U-BEND	387	2%
BI-PIN	227	1%
CIRCLINE	174	1%
BULLET OR POST	69	0%
SOCKET EMPTY	851	4%
OTHER	8	0%
UNKNOWN	391	1%
OVERALL	23498	100%

**Table 72: Fixture Type, SCE**

FIXTURE TYPE	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
WALL	5404	24%
CEILING	4919	22%
TABLE/DESK/FLOOR LAMP	3295	14%
RECESSED	3488	14%
SUSPENDED	2500	10%
CEILING FAN	2359	11%
UNDER-CABINET	392	2%
TRACK	404	2%
TORCHIERE	440	2%
OTHER	220	1%
UNKNOWN	77	0%
OVERALL	23498	100%

**Table 73: Location, SCE**

LOCATION	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
BATHROOM	4137	18%
BEDROOM	3865	17%
KITCHEN (ALL)	2933	13%
EXTERIOR (ALL)	2411	11%
LIVING ROOM	2350	11%
HALL/ENTRANCE	1836	7%
DINING ROOM	1684	7%
GARAGE	1131	5%
OTHER LIVING ROOM	1286	5%
OFFICE	794	3%
OTHER	1071	4%
OVERALL	23498	100%

**Table 74: Base Type by Lamp Type, SCE**

LAMP TYPE	BASE TYPE						n (unweighted)
	MEDIUM SCREW-BASED	PIN-BASED	SMALL SCREW-BASED	OTHER	UNKNOWN	Total	
INCANDESCENT	63%	0%	92%	2%	17%	55%	12991
CFL	29%	10%	4%	30%	13%	23%	5149
FLUORESCENT	0%	65%	0%	0%	4%	11%	2661
HALOGEN	3%	24%	0%	40%	3%	6%	1530
SOCKET EMPTY	5%	1%	4%	5%	20%	4%	851
OTHER	0%	0%	0%	22%	0%	0%	15
UNKNOWN	0%	0%	0%	0%	44%	1%	301
Total	100%	100%	100%	100%	100%	100%	23498
n (unweighted)	16315	3942	2708	19	514	23498	

**Table 75: Lamp Type by Base Type, SCE**

LAMP TYPE	BASE TYPE						n (unweighted)
	MEDIUM SCREW-BASED	PIN-BASED	SMALL SCREW-BASED	OTHER	UNKNOWN	Total	
INCANDESCENT	81%	0%	18%	0%	1%	100%	12991
CFL	90%	7%	2%	0%	1%	100%	5149
FLUORESCENT	1%	99%	0%	0%	1%	100%	2661
HALOGEN	38%	61%	0%	0%	1%	100%	1530
SOCKET EMPTY	77%	4%	10%	0%	9%	100%	851
OTHER	0%	29%	37%	24%	9%	100%	15
UNKNOWN	21%	4%	1%	0%	74%	100%	301
Total	71%	17%	11%	0%	2%	100%	23498
n (unweighted)	16315	3942	2708	19	514	23498	

**Table 76: Control Type by Lamp Type, SCE**

LAMP TYPE	CONTROL								Total	n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTO-CELL	UNKNOWN		
INCANDESCENT	53%	75%	64%	53%	39%	38%	23%	66%	55%	12991
CFL	24%	5%	31%	8%	9%	22%	51%	17%	23%	5149
FLUORESCENT	13%	1%	1%	3%	0%	2%	4%	0%	11%	2661
HALOGEN	4%	17%	1%	28%	43%	35%	19%	12%	6%	1530
SOCKET EMPTY	4%	2%	3%	5%	6%	2%	1%	2%	4%	851
OTHER	0%	0%	0%	1%	2%	0%	1%	0%	0%	15
UNKNOWN	1%	1%	1%	3%	1%	0%	1%	4%	1%	301
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	23498
n (unweighted)	19683	2368	710	256	128	198	131	24	23498	

**Table 77: Lamp Type by Control Type, SCE**

LAMP TYPE	CONTROL								Total	n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTO-CELL	UNKNOWN		
INCANDESCENT	81%	13%	3%	1%	1%	1%	0%	0%	100%	12991
CFL	91%	2%	4%	0%	0%	1%	2%	0%	100%	5149
FLUORESCENT	99%	0%	0%	0%	0%	0%	0%	0%	100%	2661
HALOGEN	57%	24%	0%	5%	6%	5%	2%	0%	100%	1530
SOCKET EMPTY	91%	3%	2%	1%	1%	0%	0%	0%	100%	851
OTHER	54%	0%	0%	9%	27%	0%	9%	0%	100%	15
UNKNOWN	87%	7%	2%	3%	1%	0%	1%	0%	100%	301
Total	84%	9%	3%	1%	1%	1%	1%	0%	100%	23498
n (unweighted)	19683	2368	710	256	128	198	131	24	23498	

**Table 78: Control Type by Location, SCE**

LOCATION	CONTROL								Total	n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTO-CELL	UNKNOWN		
BATHROOM	20%	7%	0%	1%	0%	1%	0%	0%	18%	4137
BEDROOM	17%	14%	43%	7%	0%	5%	1%	21%	17%	3865
KITCHEN (ALL)	14%	11%	1%	2%	0%	0%	3%	3%	13%	2933
EXTERIOR (ALL)	8%	4%	0%	80%	100%	71%	88%	0%	11%	2411
LIVING ROOM	9%	19%	37%	0%	0%	9%	1%	53%	11%	2350
HALL/ENTRANCE	8%	5%	0%	3%	0%	1%	0%	0%	7%	1836
DINING ROOM	5%	25%	1%	5%	0%	3%	0%	7%	7%	1684
GARAGE	5%	0%	1%	1%	0%	3%	7%	2%	5%	1131
OTHER LIVING ROOM	5%	11%	13%	0%	0%	7%	0%	9%	5%	1286
OFFICE	3%	4%	4%	0%	0%	1%	0%	0%	3%	794
OTHER	5%	0%	0%	1%	0%	0%	0%	5%	4%	1071
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	23498
n (unweighted)	19683	2368	710	256	128	198	131	24	23498	

**Table 79: Location by Control Type, SCE**

LOCATION	CONTROL								Total	n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTO-CELL	UNKNOWN		
BATHROOM	96%	4%	0%	0%	0%	0%	0%	0%	100%	4137
BEDROOM	84%	8%	7%	0%	0%	0%	0%	0%	100%	3865
KITCHEN (ALL)	91%	8%	0%	0%	0%	0%	0%	0%	100%	2933
EXTERIOR (ALL)	68%	4%	0%	8%	9%	6%	6%	0%	100%	2411
LIVING ROOM	72%	16%	10%	0%	0%	1%	0%	1%	100%	2350
HALL/ENTRANCE	94%	6%	0%	0%	0%	0%	0%	0%	100%	1836
DINING ROOM	66%	33%	0%	1%	0%	0%	0%	0%	100%	1684
GARAGE	97%	1%	1%	0%	0%	1%	1%	0%	100%	1131
OTHER LIVING ROOM	72%	20%	7%	0%	0%	1%	0%	0%	100%	1286
OFFICE	83%	12%	4%	0%	0%	0%	0%	0%	100%	794
OTHER	99%	0%	0%	0%	0%	0%	0%	0%	100%	1071
Total	84%	9%	3%	1%	1%	1%	1%	0%	100%	23498
n (unweighted)	19683	2368	710	256	128	198	131	24	23498	

**Table 80: Lamp Type by Fixture Type, SCE**

FIXTURE TYPE	LAMP TYPE							Total	n (unweighted)
	INCANDE- SCENT	CFL	FLUORES- CENT	HALOGEN	SOCKET EMPTY	OTHER	UNKNOWN		
WALL	26%	25%	4%	29%	28%	56%	16%	24%	5404
CEILING	17%	18%	59%	7%	23%	10%	32%	22%	4919
TABLE/DESK/FLOOR LAMP	14%	21%	2%	8%	14%	25%	7%	14%	3295
RECESSED	13%	13%	16%	20%	3%	0%	18%	14%	3488
SUSPENDED	13%	5%	11%	2%	6%	0%	7%	10%	2500
CEILING FAN	13%	13%	0%	1%	22%	5%	9%	11%	2359
UNDER-CABINET	1%	0%	5%	10%	1%	0%	5%	2%	392
TORCHIERE	1%	2%	1%	5%	2%	0%	0%	2%	440
TRACK	1%	1%	0%	13%	0%	0%	2%	2%	404
OTHER	1%	1%	1%	4%	0%	4%	0%	1%	220
UNKNOWN	0%	0%	1%	1%	1%	0%	3%	0%	77
Total	100%	100%	100%	100%	100%	100%	100%	100%	23498
n (unweighted)	12991	5149	2661	1530	851	15	301	23498	

**Table 81: Fixture Type by Lamp Type, SCE**

FIXTURE TYPE	LAMP TYPE							Total	n (unweighted)
	INCANDE- SCENT	CFL	FLUORES- CENT	HALOGEN	SOCKET EMPTY	OTHER	UNKNOWN		
WALL	60%	24%	2%	8%	5%	0%	1%	100%	5404
CEILING	43%	19%	30%	2%	4%	0%	2%	100%	4919
TABLE/DESK/FLOOR LAMP	56%	34%	2%	4%	4%	0%	1%	100%	3295
RECESSED	53%	22%	13%	10%	1%	0%	1%	100%	3488
SUSPENDED	71%	12%	12%	2%	3%	0%	1%	100%	2500
CEILING FAN	64%	26%	0%	1%	8%	0%	1%	100%	2359
UNDER-CABINET	25%	3%	32%	35%	2%	0%	3%	100%	392
TORCHIERE	45%	31%	3%	17%	3%	0%	0%	100%	440
TRACK	28%	15%	0%	55%	1%	0%	1%	100%	404
OTHER	48%	13%	12%	25%	1%	0%	0%	100%	220
UNKNOWN	34%	9%	24%	17%	8%	0%	9%	100%	77
Total	55%	23%	11%	6%	4%	0%	1%	100%	23498
n (unweighted)	12991	5149	2661	1530	851	15	301	23498	



**Table 82: Base Type by Fixture Type, SCE**

FIXTURE TYPE	BASE TYPE						n (unweighted)
	MEDIUM SCREW- BASED	PIN-BASED	SMALL SCREW- BASED	OTHER	UNKNOWN	Total	
WALL	28%	9%	18%	77%	22%	24%	5404
CEILING	18%	45%	10%	16%	22%	22%	4919
TABLE/DESK/FLOOR LAMP	16%	6%	15%	0%	11%	14%	3295
RECESSED	15%	15%	1%	0%	16%	14%	3488
SUSPENDED	5%	8%	41%	0%	7%	10%	2500
CEILING FAN	14%	1%	11%	0%	14%	11%	2359
UNDER-CABINET	1%	7%	1%	0%	4%	2%	392
TORCHIERE	2%	2%	0%	0%	1%	2%	440
TRACK	1%	4%	0%	0%	1%	2%	404
OTHER	1%	2%	3%	8%	1%	1%	220
UNKNOWN	0%	1%	0%	0%	1%	0%	77
Total	100%	100%	100%	100%	100%	100%	23498
n (unweighted)	16315	3942	2708	19	514	23498	

**Table 83: Fixture Type by Base Type, SCE**

FIXTURE TYPE	BASE TYPE						n (unweighted)
	MEDIUM SCREW- BASED	PIN-BASED	SMALL SCREW- BASED	OTHER	UNKNOWN	Total	
WALL	83%	6%	8%	0%	2%	100%	5404
CEILING	59%	34%	5%	0%	2%	100%	4919
TABLE/DESK/FLOOR LAMP	80%	7%	12%	0%	1%	100%	3295
RECESSED	79%	18%	1%	0%	2%	100%	3488
SUSPENDED	39%	14%	46%	0%	1%	100%	2500
CEILING FAN	86%	1%	11%	0%	2%	100%	2359
UNDER-CABINET	23%	66%	7%	0%	4%	100%	392
TORCHIERE	77%	19%	3%	0%	1%	100%	440
TRACK	50%	48%	0%	0%	1%	100%	404
OTHER	33%	37%	27%	0%	2%	100%	220
UNKNOWN	65%	28%	0%	0%	7%	100%	77
Total	71%	17%	11%	0%	2%	100%	23498
n (unweighted)	16315	3942	2708	19	514	23498	

**Table 84: Control Type by Fixture Type, SCE**

FIXTURE TYPE	CONTROL								Total	n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTO-CELL	UNKNOWN		
WALL	24%	9%	1%	73%	100%	22%	63%	0%	24%	5404
CEILING	25%	7%	1%	6%	0%	3%	8%	0%	22%	4919
TABLE/DESK/FLOOR LAMP	13%	5%	75%	0%	0%	25%	4%	56%	14%	3295
RECESSED	13%	32%	1%	6%	0%	1%	0%	0%	14%	3488
SUSPENDED	9%	23%	1%	4%	0%	4%	0%	0%	10%	2500
CEILING FAN	12%	12%	4%	9%	0%	0%	0%	0%	11%	2359
UNDER-CABINET	2%	2%	2%	0%	0%	0%	0%	0%	2%	392
TORCHIERE	1%	4%	16%	0%	0%	4%	0%	44%	2%	440
TRACK	1%	4%	0%	0%	0%	0%	6%	0%	2%	404
OTHER	1%	1%	0%	0%	0%	40%	19%	0%	1%	220
UNKNOWN	0%	1%	0%	2%	0%	0%	0%	0%	0%	77
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	23498
n (unweighted)	19683	2368	710	256	128	198	131	24	23498	

**Table 85: Fixture Type by Control Type, SCE**

FIXTURE TYPE	CONTROL									n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTO-CELL	UNKNOWN	Total	
WALL	86%	3%	0%	3%	4%	1%	2%	0%	100%	5404
CEILING	96%	3%	0%	0%	0%	0%	0%	0%	100%	4919
TABLE/DESK/FLOOR LAMP	79%	3%	16%	0%	0%	2%	0%	0%	100%	3295
RECESSED	77%	22%	0%	1%	0%	0%	0%	0%	100%	3488
SUSPENDED	77%	22%	0%	0%	0%	0%	0%	0%	100%	2500
CEILING FAN	88%	10%	1%	1%	0%	0%	0%	0%	100%	2359
UNDER-CABINET	86%	11%	3%	0%	0%	0%	0%	0%	100%	392
TORCHIERE	51%	19%	26%	0%	0%	2%	0%	3%	100%	440
TRACK	72%	25%	0%	0%	0%	0%	3%	0%	100%	404
OTHER	44%	10%	0%	0%	0%	34%	12%	0%	100%	220
UNKNOWN	63%	28%	1%	7%	0%	0%	0%	0%	100%	77
Total	84%	9%	3%	1%	1%	1%	1%	0%	100%	23498
n (unweighted)	19683	2368	710	256	128	198	131	24	23498	

**Table 86: Lamp Shape by Fixture Type, SCE**

FIXTURE TYPE	LAMP SHAPE															
	A-TYPE	SPIRAL	LINEAR TUBE	REFLECTOR	DECORATIVE	GLOBE	MR-16	U-BEND	BI-PIN	CIRC-LINE	BULLET OR POST	SOCKET EMPTY	OTHER	UN-KNOWN	Total	n (unweighted)
WALL	22%	23%	8%	19%	17%	77%	5%	27%	12%	1%	28%	28%	0%	16%	24%	5404
CEILING	25%	19%	51%	6%	9%	8%	12%	36%	3%	73%	23%	23%	73%	28%	22%	4919
TABLE/DESK/FLOOR LAMP	19%	24%	5%	1%	15%	4%	7%	15%	19%	14%	13%	14%	21%	7%	14%	3295
RECESSED	4%	7%	15%	67%	0%	0%	27%	17%	0%	1%	0%	3%	6%	20%	14%	3488
SUSPENDED	6%	6%	10%	1%	41%	6%	6%	4%	2%	2%	17%	6%	0%	7%	10%	2500
CEILING FAN	19%	15%	1%	1%	14%	3%	1%	1%	1%	3%	15%	22%	0%	12%	11%	2359
UNDER-CABINET	1%	0%	5%	1%	0%	0%	3%	0%	40%	0%	0%	1%	0%	5%	2%	392
TORCHIERE	3%	3%	2%	0%	1%	0%	0%	0%	3%	6%	4%	2%	0%	1%	2%	440
TRACK	1%	1%	0%	3%	0%	0%	32%	0%	9%	0%	0%	0%	0%	2%	2%	404
OTHER	1%	0%	1%	0%	3%	0%	6%	0%	11%	0%	0%	0%	0%	0%	1%	220
UNKNOWN	0%	0%	1%	0%	0%	0%	1%	0%	0%	0%	0%	1%	0%	2%	0%	77
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	23498
n (unweighted)	6561	3798	2843	3143	2767	1779	500	387	227	174	69	851	8	391	23498	

**Table 87: Fixture Type by Lamp Shape, SCE**

FIXTURE TYPE	LAMP SHAPE															
	A-TYPE	SPIRAL	LINEAR TUBE	REFLECTOR	DECORATIVE	GLOBE	MR-16	U-BEND	BI-PIN	CIRC-LINE	BULLET OR POST	SOCKET EMPTY	OTHER	UN-KNOWN	Total	n (unweighted)
WALL	27%	17%	4%	10%	8%	25%	0%	2%	1%	0%	0%	5%	0%	1%	100%	5404
CEILING	34%	15%	27%	3%	5%	3%	1%	3%	0%	3%	0%	4%	0%	2%	100%	4919
TABLE/DESK/FLOOR LAMP	40%	29%	4%	1%	12%	2%	1%	2%	2%	1%	0%	4%	0%	1%	100%	3295
RECESSED	8%	9%	13%	62%	0%	0%	4%	2%	0%	0%	0%	1%	0%	2%	100%	3488
SUSPENDED	18%	10%	12%	1%	48%	5%	1%	1%	0%	0%	1%	3%	0%	1%	100%	2500
CEILING FAN	48%	23%	1%	1%	14%	2%	0%	0%	0%	0%	0%	8%	0%	1%	100%	2359
UNDER-CABINET	11%	3%	35%	10%	2%	1%	3%	0%	30%	0%	0%	2%	0%	4%	100%	392
TORCHIERE	40%	29%	16%	1%	3%	1%	0%	0%	2%	3%	1%	3%	0%	1%	100%	440
TRACK	12%	12%	1%	24%	0%	1%	39%	0%	8%	0%	0%	1%	0%	2%	100%	404
OTHER	16%	3%	14%	5%	32%	3%	11%	0%	13%	0%	0%	1%	0%	0%	100%	220
UNKNOWN	34%	8%	24%	13%	0%	0%	5%	0%	0%	0%	0%	8%	0%	9%	100%	77
Total	29%	17%	12%	12%	11%	8%	2%	2%	1%	1%	0%	4%	0%	1%	100%	23498
n (unweighted)	6561	3798	2843	3143	2767	1779	500	387	227	174	69	851	8	391	23498	

**Table 88: Lamp Type by Location, SCE**

LOCATION	LAMP TYPE							Total	n (unweighted)
	INCANDE- SCENT	CFL	FLUORES- CENT	HALOGEN	SOCKET EMPTY	OTHER	UNKNOWN		
BATHROOM	20%	19%	9%	7%	20%	3%	24%	18%	4137
BEDROOM	19%	19%	4%	10%	27%	25%	17%	17%	3865
KITCHEN (ALL)	8%	11%	37%	16%	11%	0%	14%	13%	2933
EXTERIOR (ALL)	10%	11%	2%	30%	9%	46%	18%	11%	2411
LIVING ROOM	12%	12%	2%	13%	10%	5%	4%	11%	2350
HALL/ENTRANCE	9%	9%	2%	2%	6%	0%	10%	7%	1836
DINING ROOM	9%	5%	0%	6%	5%	0%	2%	7%	1684
GARAGE	1%	2%	30%	1%	3%	22%	1%	5%	1131
OTHER LIVING ROOM	6%	5%	3%	7%	2%	0%	2%	5%	1286
OFFICE	3%	3%	3%	4%	2%	0%	2%	3%	794
OTHER	4%	4%	9%	3%	4%	0%	6%	4%	1071
Total	100%	100%	100%	100%	100%	100%	100%	100%	23498
n (unweighted)	12991	5149	2661	1530	851	15	301	23498	

**Table 89: Location by Lamp Type, SCE**

LOCATION	LAMP TYPE							Total	n (unweighted)
	INCANDE- SCENT	CFL	FLUORES- CENT	HALOGEN	SOCKET EMPTY	OTHER	UNKNOWN		
BATHROOM	62%	24%	6%	3%	5%	0%	1%	100%	4137
BEDROOM	60%	26%	2%	4%	7%	0%	1%	100%	3865
KITCHEN (ALL)	35%	20%	32%	8%	4%	0%	1%	100%	2933
EXTERIOR (ALL)	52%	23%	2%	18%	4%	0%	2%	100%	2411
LIVING ROOM	60%	26%	2%	8%	4%	0%	0%	100%	2350
HALL/ENTRANCE	63%	27%	3%	2%	4%	0%	1%	100%	1836
DINING ROOM	74%	17%	1%	6%	3%	0%	0%	100%	1684
GARAGE	14%	11%	70%	1%	3%	0%	0%	100%	1131
OTHER LIVING ROOM	61%	22%	7%	8%	2%	0%	0%	100%	1286
OFFICE	51%	27%	10%	9%	2%	0%	1%	100%	794
OTHER	50%	19%	22%	4%	4%	0%	2%	100%	1071
Total	55%	23%	11%	6%	4%	0%	1%	100%	23498
n (unweighted)	12991	5149	2661	1530	851	15	301	23498	



**Table 90: Lamp Shape by Location, SCE**

LOCATION	LAMP SHAPE														Total	n (unweighted)
	A-TYPE	SPIRAL	LINEAR TUBE	REFLE- CTOR	DECO- RATIVE	GLOBE	MR- 16	U- BEND	BI- PIN	CIRC- LINE	BULLET OR POST	SOCKET EMPTY	OTHER	UN- KNOWN		
BATHROOM	15%	16%	9%	11%	5%	77%	8%	30%	5%	22%	3%	20%	6%	20%	18%	4137
BEDROOM	25%	22%	5%	6%	17%	5%	13%	13%	8%	16%	27%	27%	0%	18%	17%	3865
KITCHEN (ALL)	6%	9%	33%	23%	5%	3%	22%	16%	24%	17%	11%	11%	0%	18%	13%	2933
EXTERIOR (ALL)	11%	9%	4%	20%	12%	1%	8%	14%	19%	2%	16%	9%	0%	15%	11%	2411
LIVING ROOM	11%	14%	3%	12%	16%	3%	22%	3%	13%	10%	10%	10%	0%	6%	11%	2350
HALL/ENTRANCE	7%	8%	1%	13%	10%	5%	4%	13%	3%	12%	12%	6%	0%	7%	7%	1836
DINING ROOM	6%	6%	1%	3%	26%	4%	6%	2%	15%	3%	8%	5%	0%	2%	7%	1684
GARAGE	2%	2%	28%	1%	0%	0%	1%	1%	0%	3%	3%	3%	73%	5%	5%	1131
OTHER LIVING ROOM	6%	6%	4%	7%	6%	1%	9%	2%	2%	6%	3%	2%	0%	2%	5%	1286
OFFICE	3%	3%	3%	3%	1%	1%	4%	2%	7%	2%	0%	2%	21%	2%	3%	794
OTHER	7%	4%	8%	2%	1%	1%	4%	4%	5%	7%	7%	4%	0%	6%	4%	1071
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	23498
n (unweighted)	6561	3798	2843	3143	2767	1779	500	387	227	174	69	851	8	391	23498	

**Table 91: Location by Lamp Shape, SCE**

LOCATION	LAMP SHAPE														Total	n (unweighted)
	A-TYPE	SPIRAL	LINEAR TUBE	REFLE- CTOR	DECO- RATIVE	GLOBE	MR- 16	U- BEND	BI- PIN	CIRC- LINE	BULLET OR POST	SOCKET EMPTY	OTHER	UN- KNOWN		
BATHROOM	24%	15%	6%	8%	3%	33%	1%	3%	0%	1%	0%	5%	0%	2%	100%	4137
BEDROOM	43%	22%	4%	5%	12%	2%	1%	1%	1%	1%	1%	7%	0%	1%	100%	3865
KITCHEN (ALL)	14%	12%	30%	23%	5%	2%	3%	2%	3%	1%	0%	4%	0%	2%	100%	2933
EXTERIOR (ALL)	31%	15%	5%	23%	13%	1%	1%	2%	2%	0%	1%	4%	0%	2%	100%	2411
LIVING ROOM	30%	22%	3%	14%	17%	2%	4%	0%	2%	1%	0%	4%	0%	1%	100%	2350
HALL/ENTRANCE	27%	17%	2%	22%	15%	5%	1%	3%	1%	1%	1%	4%	0%	1%	100%	1836
DINING ROOM	24%	13%	1%	6%	42%	4%	2%	1%	3%	0%	0%	3%	0%	0%	100%	1684
GARAGE	11%	8%	69%	4%	0%	0%	1%	0%	0%	0%	0%	3%	0%	1%	100%	1131
OTHER LIVING ROOM	33%	19%	9%	15%	14%	2%	3%	1%	1%	1%	0%	2%	0%	0%	100%	1286
OFFICE	35%	21%	13%	12%	5%	2%	2%	1%	3%	1%	0%	2%	0%	1%	100%	794
OTHER	43%	16%	21%	6%	1%	1%	2%	1%	2%	1%	1%	4%	0%	2%	100%	1071
Total	29%	17%	12%	12%	11%	8%	2%	2%	1%	1%	0%	4%	0%	1%	100%	23498
n (unweighted)	6561	3798	2843	3143	2767	1779	500	387	227	174	69	851	8	391	23498	

**Table 92: Base Type by Location, SCE**

LOCATION	BASE TYPE						n (unweighted)
	MEDIUM SCREW- BASED	PIN-BASED	SMALL SCREW- BASED	OTHER	UNKNOWN	Total	
BATHROOM	21%	11%	9%	5%	21%	18%	4137
BEDROOM	20%	6%	15%	0%	21%	17%	3865
KITCHEN (ALL)	10%	30%	6%	16%	13%	13%	2933
EXTERIOR (ALL)	11%	7%	11%	68%	13%	11%	2411
LIVING ROOM	11%	5%	15%	0%	6%	11%	2350
HALL/ENTRANCE	8%	3%	12%	0%	10%	7%	1836
DINING ROOM	6%	2%	24%	0%	4%	7%	1684
GARAGE	2%	20%	0%	11%	3%	5%	1131
OTHER LIVING ROOM	6%	4%	6%	0%	2%	5%	1286
OFFICE	3%	3%	1%	0%	2%	3%	794
OTHER	4%	7%	1%	0%	5%	4%	1071
Total	100%	100%	100%	100%	100%	100%	23498
n (unweighted)	16315	3942	2708	19	514	23498	

**Table 93: Location by Base Type, SCE**

LOCATION	BASE TYPE						n (unweighted)
	MEDIUM SCREW- BASED	PIN-BASED	SMALL SCREW- BASED	OTHER	UNKNOWN	Total	
BATHROOM	82%	11%	5%	0%	2%	100%	4137
BEDROOM	82%	6%	9%	0%	2%	100%	3865
KITCHEN (ALL)	53%	40%	5%	0%	2%	100%	2933
EXTERIOR (ALL)	75%	10%	12%	0%	2%	100%	2411
LIVING ROOM	76%	8%	15%	0%	1%	100%	2350
HALL/ENTRANCE	73%	7%	18%	0%	2%	100%	1836
DINING ROOM	56%	6%	37%	0%	1%	100%	1684
GARAGE	26%	72%	1%	0%	1%	100%	1131
OTHER LIVING ROOM	75%	12%	12%	0%	1%	100%	1286
OFFICE	74%	20%	6%	0%	1%	100%	794
OTHER	70%	27%	1%	0%	2%	100%	1071
Total	71%	17%	11%	0%	2%	100%	23498
n (unweighted)	16315	3942	2708	19	514	23498	

**Table 94: Fixture Type by Location, SCE**

LOCATION	FIXTURE TYPE											Total	n (unweighted)
	WALL	CEILING	TABLE/DESK/ FLOOR LAMP	RECESSED	SUSPENDED	CEILING FAN	UNDER- CABINET	TORCHIERE	TRACK	OTHER	UNKNOWN		
BATHROOM	51%	14%	1%	16%	2%	0%	0%	0%	3%	0%	3%	18%	4137
BEDROOM	3%	14%	45%	5%	4%	44%	7%	30%	10%	9%	4%	17%	3865
KITCHEN (ALL)	1%	21%	0%	35%	8%	10%	64%	0%	13%	0%	4%	13%	2933
EXTERIOR (ALL)	34%	3%	2%	2%	3%	1%	0%	2%	1%	70%	48%	11%	2411
LIVING ROOM	2%	3%	30%	11%	10%	15%	7%	38%	28%	5%	0%	11%	2350
HALL/ENTRANCE	2%	16%	1%	17%	11%	0%	0%	0%	2%	0%	10%	7%	1836
DINING ROOM	0%	2%	2%	3%	42%	13%	11%	4%	3%	3%	0%	7%	1684
GARAGE	2%	11%	1%	1%	11%	1%	1%	2%	8%	10%	28%	5%	1131
OTHER LIVING ROOM	1%	3%	11%	6%	6%	9%	2%	17%	18%	2%	0%	5%	1286
OFFICE	0%	2%	7%	2%	1%	6%	2%	7%	10%	0%	2%	3%	794
OTHER	3%	12%	1%	3%	2%	1%	4%	0%	4%	0%	0%	4%	1071
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	23498
n (unweighted)	5404	4919	3295	3488	2500	2359	392	440	404	220	77	23498	

**Table 95: Location by Fixture Type, SCE**

LOCATION	FIXTURE TYPE											Total	n (unweighted)
	WALL	CEILING	TABLE/DESK/ FLOOR LAMP	RECESSED	SUSPENDED	CEILING FAN	UNDER- CABINET	TORCHIERE	TRACK	OTHER	UNKNOWN		
BATHROOM	68%	17%	0%	13%	1%	0%	0%	0%	0%	0%	0%	100%	4137
BEDROOM	5%	18%	37%	4%	2%	29%	1%	3%	1%	1%	0%	100%	3865
KITCHEN (ALL)	1%	35%	0%	37%	6%	9%	9%	0%	2%	0%	0%	100%	2933
EXTERIOR (ALL)	76%	6%	2%	3%	2%	1%	0%	0%	0%	7%	2%	100%	2411
LIVING ROOM	4%	5%	40%	14%	9%	15%	1%	6%	4%	1%	0%	100%	2350
HALL/ENTRANCE	6%	45%	1%	31%	15%	0%	0%	0%	0%	0%	0%	100%	1836
DINING ROOM	1%	6%	3%	6%	58%	20%	3%	1%	1%	0%	0%	100%	1684
GARAGE	10%	52%	3%	2%	23%	3%	0%	1%	3%	2%	2%	100%	1131
OTHER LIVING ROOM	5%	11%	29%	15%	11%	19%	1%	6%	5%	0%	0%	100%	1286
OFFICE	3%	17%	35%	8%	3%	23%	1%	4%	5%	0%	0%	100%	794
OTHER	15%	62%	3%	9%	5%	2%	2%	0%	2%	0%	0%	100%	1071
Total	24%	22%	14%	14%	10%	11%	2%	2%	2%	1%	0%	100%	23498
n (unweighted)	5404	4919	3295	3488	2500	2359	392	440	404	220	77	23498	

**Table 96: Lamp Type by Lamp Shape, SCE**

LAMP SHAPE	LAMP TYPE							Total	n (unweighted)
	INCANDE- SCENT	CFL	FLUORES- CENT	HALOGEN	SOCKET EMPTY	OTHER	UNKNOWN		
A-TYPE	51%	3%	0%	2%	0%	12%	2%	29%	6561
SPIRAL	0%	74%	0%	0%	0%	0%	0%	17%	3798
LINEAR TUBE	1%	3%	90%	10%	0%	0%	1%	12%	2843
REFLECTOR	15%	8%	0%	36%	0%	36%	4%	12%	3143
DECORATIVE	20%	1%	0%	0%	0%	27%	0%	11%	2767
GLOBE	13%	3%	0%	0%	0%	0%	1%	8%	1779
MR-16	0%	0%	0%	29%	0%	0%	0%	2%	500
BI-PIN	0%	0%	0%	21%	0%	5%	0%	1%	227
U-BEND	0%	7%	1%	0%	0%	0%	0%	2%	387
CIRCLINE	0%	0%	7%	0%	0%	0%	0%	1%	174
BULLET OR POST	0%	1%	0%	0%	0%	0%	1%	0%	69
SOCKET EMPTY	0%	0%	0%	0%	100%	0%	0%	4%	851
OTHER	0%	0%	0%	0%	0%	10%	0%	0%	8
UNKNOWN	0%	0%	1%	1%	0%	9%	91%	1%	391
Total	100%	100%	100%	100%	100%	100%	100%	100%	23498
n (unweighted)	12991	5149	2661	1530	851	15	301	23498	

**Table 97: Lamp Shape by Lamp Type, SCE**

LAMP SHAPE	LAMP TYPE							Total	n (unweighted)
	INCANDE- SCENT	CFL	FLUORES- CENT	HALOGEN	SOCKET EMPTY	OTHER	UNKNOWN		
A-TYPE	97%	2%	0%	1%	0%	0%	0%	100%	6561
SPIRAL	0%	100%	0%	0%	0%	0%	0%	100%	3798
LINEAR TUBE	4%	5%	85%	6%	0%	0%	0%	100%	2843
REFLECTOR	67%	15%	0%	18%	0%	0%	0%	100%	3143
DECORATIVE	97%	3%	0%	0%	0%	0%	0%	100%	2767
GLOBE	90%	9%	0%	0%	0%	0%	0%	100%	1779
MR-16	0%	0%	0%	100%	0%	0%	0%	100%	500
BI-PIN	0%	0%	0%	100%	0%	0%	0%	100%	227
U-BEND	0%	95%	5%	0%	0%	0%	0%	100%	387
CIRCLINE	0%	0%	100%	0%	0%	0%	0%	100%	174
BULLET OR POST	0%	98%	0%	0%	0%	0%	2%	100%	69
SOCKET EMPTY	0%	0%	0%	0%	100%	0%	0%	100%	851
OTHER	6%	0%	48%	0%	0%	25%	21%	100%	8
UNKNOWN	12%	2%	11%	4%	0%	0%	70%	100%	391
Total	55%	23%	11%	6%	4%	0%	1%	100%	23498
n (unweighted)	12991	5149	2661	1530	851	15	301	23498	



**Table 98: Wattage by Site Information, SCE**

	SCE
Count of Sites with wattage available	487
Average Weighted Wattage per Site	<b>1,858.2</b>
Count of Sites with square footage available	406
Average Weighted Wattage per square foot	<b>1.20</b>

**Table 99: Average Number and Wattage of Bulbs in Storage by Bulb Type, SCE**

Bulb Type	Average Number of Bulbs in Storage Per Household	Average Number of Bulbs in Storage in Households with at Least One	Average Wattage of Bulbs in Storage in Households with at Least One
Incandescent	5.27	10.77	59.47
CFL	2.42	6.01	19.05
Fluorescent	0.16	3.93	34.75
Halogen	0.44	3.86	82.22
LED	0.00	0.00	N/A
Overall	8.29	13.91	48.38

**Table 100: Number of CFLs per Household and Average Number of Bulbs in Storage by Bulb Type, SCE**

Number of CFLs Installed Per Household	Bulb Type	Average Number of Bulbs in Storage Per Household	Average Number of Bulbs in Storage in Households with at Least One
0 CFLs installed (n=150)	Incandescent	5.11	9.90
	CFL	0.46	3.01
	Fluorescent	0.13	9.57
	Halogen	0.18	3.03
	LED	0.00	0.00
	Overall	5.89	11.28
1-2 CFLs Installed (n=152)	Incandescent	5.02	10.19
	CFL	0.54	2.83
	Fluorescent	0.27	9.29
	Halogen	0.30	2.58
	LED	0.00	0.00
	Overall	6.12	11.45
3-5 CFLs Installed (n=226)	Incandescent	5.30	11.13
	CFL	1.33	3.28
	Fluorescent	0.20	7.58
	Halogen	0.25	2.87
	LED	0.00	0.00
	Overall	7.08	12.38
6-10 CFLs Installed (n=303)	Incandescent	3.15	7.84
	CFL	2.03	4.67
	Fluorescent	0.17	2.48
	Halogen	0.36	4.28
	LED	0.00	0.00
	Overall	5.71	9.69
11-20 CFLs Installed (n=249)	Incandescent	7.02	12.84
	CFL	3.25	6.10
	Fluorescent	0.10	2.09
	Halogen	0.95	5.02
	LED	0.00	0.00
	Overall	11.31	17.55
More than 20 CFLs Installed (n=152)	Incandescent	7.30	12.99
	CFL	8.77	12.76
	Fluorescent	0.12	2.50
	Halogen	0.47	3.10
	LED	0.00	0.00

	Overall	16.65	22.45
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### 11.2.3 SDG&E

**Table 101: Lamp Type, SDG&E**

LAMP TYPE	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
INCANDESCENT	7338	56%
CFL	2376	19%
FLUORESCENT	1551	12%
HALOGEN	1294	9%
SOCKET EMPTY	345	3%
OTHER	25	0%
UNKNOWN	201	1%
OVERALL	13130	100%

**Table 102: Base Type, SDG&E**

BASE TYPE	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
MEDIUM SCREW-BASED	8926	69%
PIN-BASED	2518	19%
SMALL SCREW-BASED	1429	11%
OTHER	19	0%
UNKNOWN	238	2%
OVERALL	13130	100%

**Table 103: Control Type, SDG&E**

CONTROL	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
ON/OFF SWITCH	10828	85%
DIMMER	1380	10%
3-WAY SWITCH	403	3%
MOTION SENSOR	106	1%
MOTION SENSOR & PHOTOCELL	132	1%
TIMER	229	1%
PHOTOCELL	38	0%
UNKNOWN	14	0%

OVERALL	13130	101%
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**Table 104: Lamp Shape, SDG&E**

LAMP SHAPE	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
A-TYPE	3527	27%
SPIRAL	1645	13%
LINEAR TUBE	1668	13%
REFLECTOR	2093	14%
DECORATIVE	1438	11%
GLOBE	1210	9%
MR-16	336	2%
U-BEND	211	2%
BI-PIN	288	2%
CIRCLINE	119	1%
BULLET OR POST	6	0%
SOCKET EMPTY	345	3%
OTHER	3	0%
UNKNOWN	241	2%
OVERALL	13130	100%

**Table 105: Fixture Type, SDG&E**

FIXTURE TYPE	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
WALL	3318	26%
CEILING	2240	18%
TABLE/DESK/FLOOR LAMP	1609	13%
RECESSED	2480	18%
SUSPENDED	1393	11%
CEILING FAN	1053	8%
UNDER-CABINET	293	2%
TRACK	194	1%
TORCHIERE	301	2%
OTHER	232	1%
UNKNOWN	17	0%
OVERALL	13130	100%

**Table 106: Location, SDG&E**

LOCATION	SOCKET COUNT (NOT WEIGHTED)	WEIGHTED PERCENT
BATHROOM	2585	20%
BEDROOM	1967	15%
KITCHEN (ALL)	1753	13%
EXTERIOR (ALL)	1443	11%
LIVING ROOM	1066	8%
HALL/ENTRANCE	1136	9%
DINING ROOM	805	6%
GARAGE	715	6%
OTHER LIVING ROOM	636	6%
OFFICE	448	3%
OTHER	576	4%
OVERALL	13130	100%

**Table 107: Base Type by Lamp Type, SDG&E**

LAMP TYPE	BASE TYPE						n (unweighted)
	MEDIUM SCREW-BASED	PIN-BASED	SMALL SCREW-BASED	OTHER	UNKNOWN	Total	
INCANDESCENT	66%	0%	95%	5%	10%	56%	7338
CFL	24%	10%	3%	32%	4%	19%	2376
FLUORESCENT	0%	65%	0%	0%	1%	12%	1551
HALOGEN	6%	24%	0%	50%	1%	9%	1294
SOCKET EMPTY	4%	1%	2%	0%	17%	3%	345
OTHER	0%	0%	0%	13%	2%	0%	25
UNKNOWN	0%	0%	0%	0%	65%	1%	201
Total	100%	100%	100%	100%	100%	100%	13130
n (unweighted)	8926	2518	1429	19	238	13130	

**Table 108: Lamp Type by Base Type, SDG&E**

LAMP TYPE	BASE TYPE						n (unweighted)
	MEDIUM SCREW-BASED	PIN-BASED	SMALL SCREW-BASED	OTHER	UNKNOWN	Total	
INCANDESCENT	81%	0%	19%	0%	0%	100%	7338
CFL	88%	10%	2%	0%	0%	100%	2376
FLUORESCENT	1%	99%	0%	0%	0%	100%	1551
HALOGEN	46%	53%	1%	1%	0%	100%	1294
SOCKET EMPTY	81%	4%	6%	0%	9%	100%	345
OTHER	12%	38%	9%	13%	28%	100%	25
UNKNOWN	22%	0%	0%	0%	78%	100%	201
Total	69%	19%	11%	0%	2%	100%	13130
n (unweighted)	8926	2518	1429	19	238	13130	

**Table 109: Control Type by Lamp Type, SDG&E**

LAMP TYPE	CONTROL								Total	n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTO-CELL	UNKNOWN		
INCANDESCENT	55%	72%	67%	35%	42%	20%	21%	80%	56%	7338
CFL	21%	2%	27%	17%	5%	12%	70%	20%	19%	2376
FLUORESCENT	14%	0%	2%	8%	0%	0%	0%	0%	12%	1551
HALOGEN	6%	23%	4%	34%	40%	31%	6%	0%	9%	1294
SOCKET EMPTY	3%	2%	1%	2%	11%	2%	3%	0%	3%	345
OTHER	0%	0%	0%	0%	0%	0%	0%	0%	0%	25
UNKNOWN	1%	1%	0%	5%	2%	35%	0%	0%	1%	201
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	13130
n (unweighted)	10828	1380	403	106	132	229	38	14	13130	

**Table 110: Lamp Type by Control Type, SDG&E**

LAMP TYPE	CONTROL								Total	n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTO-CELL	UNKNOWN		
INCANDESCENT	82%	13%	3%	1%	1%	0%	0%	0%	100%	7338
CFL	92%	1%	4%	1%	0%	1%	1%	0%	100%	2376
FLUORESCENT	99%	0%	0%	1%	0%	0%	0%	0%	100%	1551
HALOGEN	59%	26%	1%	3%	5%	5%	0%	0%	100%	1294
SOCKET EMPTY	89%	5%	1%	1%	4%	1%	0%	0%	100%	345
OTHER	97%	3%	0%	0%	0%	0%	0%	0%	100%	25
UNKNOWN	55%	8%	0%	3%	1%	34%	0%	0%	100%	201
Total	84%	10%	3%	1%	1%	1%	0%	0%	100%	13130
n (unweighted)	10828	1380	403	106	132	229	38	14	13130	



**Table 111: Control Type by Location, SDG&E**

LOCATION	CONTROL								Total	n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTO-CELL	UNKNOWN		
BATHROOM	22%	13%	0%	1%	0%	0%	0%	0%	20%	2585
BEDROOM	15%	16%	45%	2%	0%	0%	0%	58%	15%	1967
KITCHEN (ALL)	13%	17%	2%	10%	0%	0%	0%	0%	13%	1753
EXTERIOR (ALL)	9%	1%	0%	79%	100%	80%	100%	0%	11%	1443
LIVING ROOM	6%	16%	33%	1%	0%	13%	0%	42%	8%	1066
HALL/ENTRANCE	10%	5%	0%	0%	0%	0%	0%	0%	9%	1136
DINING ROOM	5%	22%	0%	4%	0%	2%	0%	0%	6%	805
GARAGE	7%	0%	0%	0%	0%	0%	0%	0%	6%	715
OTHER LIVING ROOM	5%	7%	13%	0%	0%	5%	0%	0%	6%	636
OFFICE	3%	3%	7%	1%	0%	0%	0%	0%	3%	448
OTHER	5%	0%	1%	2%	0%	0%	0%	0%	4%	576
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	13130
n (unweighted)	10828	1380	403	106	132	229	38	14	13130	

**Table 112: Location by Control Type, SDG&E**

LOCATION	CONTROL								Total	n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTO-CELL	UNKNOWN		
BATHROOM	94%	6%	0%	0%	0%	0%	0%	0%	100%	2585
BEDROOM	81%	10%	8%	0%	0%	0%	0%	0%	100%	1967
KITCHEN (ALL)	86%	13%	0%	1%	0%	0%	0%	0%	100%	1753
EXTERIOR (ALL)	69%	1%	0%	6%	10%	10%	3%	0%	100%	1443
LIVING ROOM	66%	20%	12%	0%	0%	2%	0%	0%	100%	1066
HALL/ENTRANCE	94%	6%	0%	0%	0%	0%	0%	0%	100%	1136
DINING ROOM	65%	34%	0%	1%	0%	1%	0%	0%	100%	805
GARAGE	100%	0%	0%	0%	0%	0%	0%	0%	100%	715
OTHER LIVING ROOM	79%	13%	6%	0%	0%	1%	0%	0%	100%	636
OFFICE	82%	11%	7%	0%	0%	0%	0%	0%	100%	448
OTHER	99%	0%	1%	0%	0%	0%	0%	0%	100%	576
Total	84%	10%	3%	1%	1%	1%	0%	0%	100%	13130
n (unweighted)	10828	1380	403	106	132	229	38	14	13130	

**Table 113: Lamp Type by Fixture Type, SDG&E**

FIXTURE TYPE	LAMP TYPE							Total	n (unweighted)
	INCANDE- SCENT	CFL	FLUORES- CENT	HALOGEN	SOCKET EMPTY	OTHER	UNKNOWN		
WALL	31%	25%	3%	24%	36%	0%	19%	26%	3318
CEILING	13%	17%	52%	5%	18%	9%	17%	18%	2240
TABLE/DESK/FLOOR LAMP	14%	19%	2%	7%	13%	41%	1%	13%	1609
RECESSED	14%	17%	23%	38%	7%	3%	12%	18%	2480
SUSPENDED	15%	6%	8%	4%	5%	9%	6%	11%	1393
CEILING FAN	10%	12%	0%	1%	16%	9%	9%	8%	1053
UNDER-CABINET	1%	0%	9%	5%	3%	24%	0%	2%	293
TORCHIERE	2%	3%	1%	4%	2%	0%	1%	2%	301
TRACK	1%	1%	0%	6%	1%	0%	1%	1%	194
OTHER	1%	1%	1%	5%	0%	5%	33%	1%	232
UNKNOWN	0%	0%	1%	0%	0%	0%	2%	0%	17
Total	100%	100%	100%	100%	100%	100%	100%	100%	13130
n (unweighted)	7338	2376	1551	1294	345	25	201	13130	

**Table 114: Fixture Type by Lamp Type, SDG&E**

FIXTURE TYPE	LAMP TYPE							Total	n (unweighted)
	INCANDE- SCENT	CFL	FLUORES- CENT	HALOGEN	SOCKET EMPTY	OTHER	UNKNOWN		
WALL	66%	18%	2%	8%	4%	0%	1%	100%	3318
CEILING	40%	17%	36%	3%	3%	0%	1%	100%	2240
TABLE/DESK/FLOOR LAMP	62%	28%	2%	5%	3%	0%	0%	100%	1609
RECESSED	46%	18%	16%	19%	1%	0%	1%	100%	2480
SUSPENDED	76%	10%	9%	3%	1%	0%	1%	100%	1393
CEILING FAN	63%	28%	1%	1%	6%	0%	1%	100%	1053
UNDER-CABINET	16%	2%	53%	24%	4%	1%	0%	100%	293
TORCHIERE	44%	27%	7%	18%	3%	0%	1%	100%	301
TRACK	46%	9%	0%	42%	2%	0%	1%	100%	194
OTHER	20%	10%	5%	31%	1%	0%	33%	100%	232
UNKNOWN	0%	0%	82%	0%	0%	0%	18%	100%	17
Total	56%	19%	12%	9%	3%	0%	1%	100%	13130
n (unweighted)	7338	2376	1551	1294	345	25	201	13130	

**Table 115: Base Type by Fixture Type, SDG&E**

FIXTURE TYPE	BASE TYPE						n (unweighted)
	MEDIUM SCREW- BASED	PIN-BASED	SMALL SCREW- BASED	OTHER	UNKNOWN	Total	
WALL	30%	10%	25%	38%	20%	26%	3318
CEILING	14%	38%	5%	0%	16%	18%	2240
TABLE/DESK/FLOOR LAMP	15%	4%	10%	22%	8%	13%	1609
RECESSED	19%	23%	0%	0%	7%	18%	2480
SUSPENDED	6%	7%	48%	0%	7%	11%	1393
CEILING FAN	10%	1%	9%	0%	8%	8%	1053
UNDER-CABINET	0%	8%	1%	0%	3%	2%	293
TORCHIERE	2%	2%	0%	28%	0%	2%	301
TRACK	1%	3%	0%	0%	0%	1%	194
OTHER	0%	3%	2%	11%	29%	1%	232
UNKNOWN	0%	1%	0%	0%	1%	0%	17
Total	100%	100%	100%	100%	100%	100%	13130
n (unweighted)	8926	2518	1429	19	238	13130	

**Table 116: Fixture Type by Base Type, SDG&E**

FIXTURE TYPE	BASE TYPE						n (unweighted)
	MEDIUM SCREW- BASED	PIN-BASED	SMALL SCREW- BASED	OTHER	UNKNOWN	Total	
WALL	80%	7%	11%	0%	1%	100%	3318
CEILING	56%	40%	3%	0%	2%	100%	2240
TABLE/DESK/FLOOR LAMP	83%	7%	9%	0%	1%	100%	1609
RECESSED	75%	24%	0%	0%	1%	100%	2480
SUSPENDED	40%	12%	48%	0%	1%	100%	1393
CEILING FAN	85%	2%	12%	0%	2%	100%	1053
UNDER-CABINET	14%	78%	4%	0%	3%	100%	293
TORCHIERE	78%	20%	0%	2%	0%	100%	301
TRACK	58%	42%	0%	0%	0%	100%	194
OTHER	16%	37%	12%	1%	34%	100%	232
UNKNOWN	0%	82%	0%	0%	18%	100%	17
Total	69%	19%	11%	0%	2%	100%	13130
n (unweighted)	8926	2518	1429	19	238	13130	

**Table 117: Control Type by Fixture Type, SDG&E**

FIXTURE TYPE	CONTROL									n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTO-CELL	UNKNOWN	Total	
WALL	26%	14%	2%	76%	99%	12%	82%	0%	26%	3318
CEILING	21%	4%	0%	9%	1%	2%	6%	0%	18%	2240
TABLE/DESK/FLOOR LAMP	12%	5%	77%	0%	0%	11%	0%	72%	13%	1609
RECESSED	17%	29%	0%	7%	0%	1%	0%	0%	18%	2480
SUSPENDED	10%	27%	0%	4%	0%	2%	4%	0%	11%	1393
CEILING FAN	9%	12%	0%	2%	0%	0%	0%	0%	8%	1053
UNDER-CABINET	2%	2%	0%	1%	0%	0%	0%	0%	2%	293
TORCHIERE	1%	3%	20%	0%	0%	7%	0%	28%	2%	301
TRACK	1%	3%	0%	0%	0%	0%	0%	0%	1%	194
OTHER	1%	1%	1%	0%	0%	65%	8%	0%	1%	232
UNKNOWN	0%	0%	0%	0%	0%	0%	0%	0%	0%	17
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	13130
n (unweighted)	10828	1380	403	106	132	229	38	14	13130	

**Table 118: Fixture Type by Control Type, SDG&E**

FIXTURE TYPE	CONTROL								Total	n (unweighted)
	ON/OFF SWITCH	DIMMER	3-WAY SWITCH	MOTION SENSOR	MOTION SENSOR & PHOTOCELL	TIMER	PHOTO-CELL	UNKNOWN		
WALL	86%	6%	0%	2%	4%	1%	1%	0%	100%	3318
CEILING	97%	2%	0%	0%	0%	0%	0%	0%	100%	2240
TABLE/DESK/FLOOR LAMP	77%	4%	17%	0%	0%	1%	0%	1%	100%	1609
RECESSED	83%	16%	0%	0%	0%	0%	0%	0%	100%	2480
SUSPENDED	75%	24%	0%	0%	0%	0%	0%	0%	100%	1393
CEILING FAN	86%	14%	0%	0%	0%	0%	0%	0%	100%	1053
UNDER-CABINET	87%	11%	1%	0%	0%	0%	0%	0%	100%	293
TORCHIERE	51%	15%	28%	0%	0%	5%	0%	1%	100%	301
TRACK	74%	26%	0%	0%	0%	0%	0%	0%	100%	194
OTHER	31%	4%	1%	0%	0%	62%	2%	0%	100%	232
UNKNOWN	100%	0%	0%	0%	0%	0%	0%	0%	100%	17
Total	84%	10%	3%	1%	1%	1%	0%	0%	100%	13130
n (unweighted)	10828	1380	403	106	132	229	38	14	13130	



**Table 119: Lamp Shape by Fixture Type, SDG&E**

FIXTURE TYPE	LAMP SHAPE															
	A-TYPE	SPIRAL	LINEAR TUBE	REFLECTOR	DECORATIVE	GLOBE	MR-16	U-BEND	BI-PIN	CIRC-LINE	BULLET OR POST	SOCKET EMPTY	OTHER	UN-KNOWN	Total	n (unweighted)
WALL	22%	26%	11%	13%	21%	84%	8%	22%	29%	1%	43%	36%	0%	13%	26%	3318
CEILING	22%	17%	43%	3%	6%	2%	11%	33%	6%	64%	57%	18%	29%	24%	18%	2240
TABLE/DESK/FLOOR LAMP	24%	22%	3%	1%	11%	3%	3%	16%	19%	17%	0%	13%	52%	4%	13%	1609
RECESSED	3%	9%	22%	75%	0%	1%	40%	24%	1%	0%	0%	7%	0%	11%	18%	2480
SUSPENDED	9%	6%	8%	1%	48%	6%	3%	4%	7%	0%	0%	5%	0%	6%	11%	1393
CEILING FAN	15%	16%	1%	1%	11%	3%	0%	0%	2%	2%	0%	16%	0%	8%	8%	1053
UNDER-CABINET	0%	0%	9%	1%	0%	0%	0%	0%	22%	0%	0%	3%	0%	2%	2%	293
TORCHIERE	3%	4%	2%	0%	1%	0%	0%	0%	4%	16%	0%	2%	0%	1%	2%	301
TRACK	0%	1%	0%	4%	0%	0%	24%	0%	1%	0%	0%	1%	0%	0%	1%	194
OTHER	0%	0%	1%	0%	1%	0%	12%	1%	10%	0%	0%	0%	20%	29%	1%	232
UNKNOWN	0%	0%	1%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	2%	0%	17
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	13130
n (unweighted)	3527	1645	1668	2093	1438	1210	336	211	288	119	6	345	3	241	13130	

**Table 120: Fixture Type by Lamp Shape, SDG&E**

FIXTURE TYPE	LAMP SHAPE														Total	n (unweighted)
	A-TYPE	SPIRAL	LINEAR TUBE	REFLECTOR	DECORATIVE	GLOBE	MR-16	U-BEND	BI-PIN	CIRC-LINE	BULLET OR POST	SOCKET EMPTY	OTHER	UN-KNOWN		
WALL	23%	14%	6%	7%	9%	31%	1%	1%	2%	0%	0%	4%	0%	1%	100%	3318
CEILING	34%	13%	32%	3%	4%	1%	1%	3%	1%	3%	0%	3%	0%	2%	100%	2240
TABLE/DESK/FLOOR LAMP	50%	23%	3%	1%	10%	2%	0%	2%	3%	1%	0%	3%	0%	0%	100%	1609
RECESSED	5%	7%	17%	61%	0%	0%	5%	2%	0%	0%	0%	1%	0%	1%	100%	2480
SUSPENDED	22%	7%	9%	2%	49%	5%	1%	1%	1%	0%	0%	1%	0%	1%	100%	1393
CEILING FAN	46%	25%	1%	2%	15%	3%	0%	0%	1%	0%	0%	6%	0%	1%	100%	1053
UNDER-CABINET	3%	0%	58%	9%	2%	2%	0%	0%	21%	0%	0%	4%	0%	2%	100%	293
TORCHIERE	45%	24%	11%	0%	4%	1%	0%	0%	4%	7%	0%	3%	0%	1%	100%	301
TRACK	5%	8%	0%	42%	0%	0%	39%	0%	2%	0%	0%	2%	0%	1%	100%	194
OTHER	6%	2%	11%	2%	12%	1%	17%	1%	13%	0%	0%	1%	0%	33%	100%	232
UNKNOWN	0%	0%	82%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	18%	100%	17
Total	27%	13%	13%	14%	11%	9%	2%	2%	2%	1%	0%	3%	0%	2%	100%	13130
n (unweighted)	3527	1645	1668	2093	1438	1210	336	211	288	119	6	345	3	241	13130	

**Table 121: Lamp Type by Location, SDG&E**

LOCATION	LAMP TYPE							Total	n (unweighted)
	INCANDE- SCENT	CFL	FLUORES- CENT	HALOGEN	SOCKET EMPTY	OTHER	UNKNOWN		
BATHROOM	23%	18%	13%	12%	27%	0%	9%	20%	2585
BEDROOM	17%	20%	2%	12%	28%	21%	6%	15%	1967
KITCHEN (ALL)	8%	11%	37%	19%	10%	33%	3%	13%	1753
EXTERIOR (ALL)	10%	11%	0%	22%	10%	0%	50%	11%	1443
LIVING ROOM	9%	11%	2%	9%	5%	0%	6%	8%	1066
HALL/ENTRANCE	10%	9%	1%	9%	3%	9%	16%	9%	1136
DINING ROOM	9%	3%	0%	3%	5%	0%	2%	6%	805
GARAGE	1%	3%	34%	1%	4%	28%	0%	6%	715
OTHER LIVING ROOM	6%	7%	4%	4%	3%	0%	4%	6%	636
OFFICE	2%	3%	2%	6%	2%	9%	1%	3%	448
OTHER	4%	4%	5%	3%	3%	0%	4%	4%	576
Total	100%	100%	100%	100%	100%	100%	100%	100%	13130
n (unweighted)	7338	2376	1551	1294	345	25	201	13130	

**Table 122: Location by Lamp Type, SDG&E**

LOCATION	LAMP TYPE							Total	n (unweighted)
	INCANDE- SCENT	CFL	FLUORES- CENT	HALOGEN	SOCKET EMPTY	OTHER	UNKNOWN		
BATHROOM	65%	17%	8%	5%	4%	0%	1%	100%	2585
BEDROOM	62%	24%	1%	7%	6%	0%	1%	100%	1967
KITCHEN (ALL)	34%	16%	35%	12%	2%	0%	0%	100%	1753
EXTERIOR (ALL)	53%	19%	1%	18%	3%	0%	7%	100%	1443
LIVING ROOM	59%	25%	3%	9%	2%	0%	1%	100%	1066
HALL/ENTRANCE	65%	20%	2%	9%	1%	0%	3%	100%	1136
DINING ROOM	84%	9%	0%	4%	2%	0%	0%	100%	805
GARAGE	13%	9%	73%	1%	2%	1%	0%	100%	715
OTHER LIVING ROOM	58%	24%	8%	7%	2%	0%	1%	100%	636
OFFICE	48%	23%	7%	18%	2%	0%	1%	100%	448
OTHER	56%	18%	16%	6%	3%	0%	2%	100%	576
Total	56%	19%	12%	9%	3%	0%	1%	100%	13130
n (unweighted)	7338	2376	1551	1294	345	25	201	13130	

**Table 123: Lamp Shape by Location, SDG&E**

LOCATION	LAMP SHAPE														Total	n (unweighted)
	A-TYPE	SPIRAL	LINEAR TUBE	REFLE- CTOR	DECO- RATIVE	GLOBE	MR- 16	U- BEND	BI- PIN	CIRC- LINE	BULLET OR POST	SOCKET EMPTY	OTHER	UN- KNOWN		
BATHROOM	14%	17%	13%	12%	4%	83%	8%	27%	20%	11%	0%	27%	0%	12%	20%	2585
BEDROOM	26%	24%	4%	6%	15%	3%	14%	6%	11%	19%	19%	28%	71%	8%	15%	1967
KITCHEN (ALL)	7%	9%	33%	21%	5%	3%	22%	21%	25%	25%	0%	10%	0%	7%	13%	1753
EXTERIOR (ALL)	10%	10%	2%	14%	19%	1%	16%	18%	19%	2%	33%	10%	0%	38%	11%	1443
LIVING ROOM	9%	13%	4%	9%	10%	3%	11%	6%	10%	9%	0%	5%	0%	6%	8%	1066
HALL/ENTRANCE	7%	7%	1%	17%	17%	4%	9%	7%	2%	15%	0%	3%	0%	14%	9%	1136
DINING ROOM	7%	2%	1%	4%	23%	2%	7%	1%	2%	0%	0%	5%	0%	2%	6%	805
GARAGE	2%	3%	31%	2%	0%	0%	1%	0%	0%	3%	38%	4%	0%	6%	6%	715
OTHER LIVING ROOM	7%	7%	4%	7%	7%	0%	6%	6%	1%	11%	0%	3%	0%	3%	6%	636
OFFICE	3%	3%	2%	4%	2%	0%	6%	2%	6%	3%	0%	2%	29%	1%	3%	448
OTHER	7%	3%	5%	3%	0%	1%	0%	6%	4%	2%	10%	3%	0%	4%	4%	576
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	13130
n (unweighted)	3527	1645	1668	2093	1438	1210	336	211	288	119	6	345	3	241	13130	

**Table 124: Location by Lamp Shape, SDG&E**

LOCATION	LAMP SHAPE														Total	n (unweighted)
	A-TYPE	SPIRAL	LINEAR TUBE	REFLE- CTOR	DECO- RATIVE	GLOBE	MR- 16	U- BEND	BI- PIN	CIRC- LINE	BULLET OR POST	SOCKET EMPTY	OTHER	UN- KNOWN		
BATHROOM	19%	11%	9%	9%	2%	39%	1%	2%	2%	0%	0%	4%	0%	1%	100%	2585
BEDROOM	46%	21%	3%	6%	11%	2%	2%	1%	1%	1%	0%	6%	0%	1%	100%	1967
KITCHEN (ALL)	13%	9%	33%	23%	4%	2%	3%	3%	4%	2%	0%	2%	0%	1%	100%	1753
EXTERIOR (ALL)	26%	13%	3%	19%	20%	1%	3%	3%	3%	0%	0%	3%	0%	6%	100%	1443
LIVING ROOM	30%	21%	7%	15%	13%	3%	3%	1%	2%	1%	0%	2%	0%	1%	100%	1066
HALL/ENTRANCE	22%	11%	1%	29%	23%	4%	2%	1%	1%	1%	0%	1%	0%	3%	100%	1136
DINING ROOM	31%	5%	2%	10%	42%	3%	2%	0%	1%	0%	0%	2%	0%	0%	100%	805
GARAGE	9%	7%	74%	4%	0%	1%	0%	0%	0%	0%	0%	2%	0%	2%	100%	715
OTHER LIVING ROOM	32%	18%	9%	19%	13%	1%	2%	2%	0%	2%	0%	2%	0%	1%	100%	636
OFFICE	31%	17%	10%	22%	7%	0%	4%	1%	4%	1%	0%	2%	0%	1%	100%	448
OTHER	49%	11%	17%	12%	0%	2%	0%	2%	2%	1%	0%	3%	0%	2%	100%	576
Total	27%	13%	13%	14%	11%	9%	2%	2%	2%	1%	0%	3%	0%	2%	100%	13130
n (unweighted)	3527	1645	1668	2093	1438	1210	336	211	288	119	6	345	3	241	13130	

**Table 125: Base Type by Location, SDG&E**

LOCATION	BASE TYPE						n (unweighted)
	MEDIUM SCREW- BASED	PIN-BASED	SMALL SCREW- BASED	OTHER	UNKNOWN	Total	
BATHROOM	23%	15%	10%	18%	14%	20%	2585
BEDROOM	18%	5%	16%	13%	9%	15%	1967
KITCHEN (ALL)	10%	32%	4%	0%	4%	13%	1753
EXTERIOR (ALL)	10%	6%	15%	32%	38%	11%	1443
LIVING ROOM	9%	4%	9%	5%	8%	8%	1066
HALL/ENTRANCE	8%	3%	18%	28%	13%	9%	1136
DINING ROOM	5%	1%	22%	0%	5%	6%	805
GARAGE	2%	23%	0%	0%	4%	6%	715
OTHER LIVING ROOM	6%	3%	5%	0%	2%	6%	636
OFFICE	3%	3%	1%	5%	1%	3%	448
OTHER	5%	5%	0%	0%	2%	4%	576
Total	100%	100%	100%	100%	100%	100%	13130
n (unweighted)	8926	2518	1429	19	238	13130	

**Table 126: Location by Base Type, SDG&E**

LOCATION	BASE TYPE						n (unweighted)
	MEDIUM SCREW- BASED	PIN-BASED	SMALL SCREW- BASED	OTHER	UNKNOWN	Total	
BATHROOM	79%	14%	6%	0%	1%	100%	2585
BEDROOM	81%	6%	11%	0%	1%	100%	1967
KITCHEN (ALL)	50%	45%	4%	0%	1%	100%	1753
EXTERIOR (ALL)	67%	11%	15%	0%	6%	100%	1443
LIVING ROOM	75%	10%	13%	0%	2%	100%	1066
HALL/ENTRANCE	68%	7%	23%	0%	3%	100%	1136
DINING ROOM	57%	4%	38%	0%	1%	100%	805
GARAGE	24%	74%	0%	0%	1%	100%	715
OTHER LIVING ROOM	80%	10%	10%	0%	1%	100%	636
OFFICE	77%	17%	5%	0%	1%	100%	448
OTHER	79%	21%	0%	0%	1%	100%	576
Total	69%	19%	11%	0%	2%	100%	13130
n (unweighted)	8926	2518	1429	19	238	13130	



**Table 127: Fixture Type by Location, SDG&E**

LOCATION	FIXTURE TYPE											Total	n (unweighted)
	WALL	CEILING	TABLE/DESK/ FLOOR LAMP	RECESSED	SUSPENDED	CEILING FAN	UNDER- CABINET	TORCHIERE	TRACK	OTHER	UNKNOWN		
BATHROOM	55%	13%	0%	18%	2%	1%	1%	0%	3%	0%	0%	20%	2585
BEDROOM	3%	10%	48%	6%	3%	51%	7%	41%	10%	4%	0%	15%	1967
KITCHEN (ALL)	1%	17%	2%	31%	11%	12%	68%	0%	21%	5%	0%	13%	1753
EXTERIOR (ALL)	31%	3%	2%	2%	2%	3%	0%	1%	1%	75%	11%	11%	1443
LIVING ROOM	2%	3%	23%	7%	9%	9%	10%	36%	15%	3%	0%	8%	1066
HALL/ENTRANCE	3%	14%	1%	19%	17%	1%	0%	2%	9%	2%	0%	9%	1136
DINING ROOM	1%	1%	2%	3%	39%	7%	2%	2%	15%	1%	0%	6%	805
GARAGE	1%	20%	1%	2%	8%	0%	2%	1%	9%	6%	82%	6%	715
OTHER LIVING ROOM	1%	3%	12%	6%	8%	12%	5%	9%	6%	2%	0%	6%	636
OFFICE	0%	1%	9%	4%	1%	3%	3%	9%	12%	2%	0%	3%	448
OTHER	2%	15%	0%	3%	1%	1%	1%	0%	0%	1%	7%	4%	576
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	13130
n (unweighted)	3318	2240	1609	2480	1393	1053	293	301	194	232	17	13130	

**Table 128: Location by Fixture Type, SDG&E**

LOCATION	FIXTURE TYPE											Total	n (unweighted)
	WALL	CEILING	TABLE/DESK/ FLOOR LAMP	RECESSED	SUSPENDED	CEILING FAN	UNDER- CABINET	TORCHIERE	TRACK	OTHER	UNKNOWN		
BATHROOM	71%	12%	0%	15%	1%	0%	0%	0%	0%	0%	0%	100%	2585
BEDROOM	5%	11%	40%	7%	2%	28%	1%	5%	1%	0%	0%	100%	1967
KITCHEN (ALL)	2%	24%	2%	42%	9%	8%	10%	0%	2%	1%	0%	100%	1753
EXTERIOR (ALL)	74%	5%	3%	3%	2%	2%	0%	0%	0%	10%	0%	100%	1443
LIVING ROOM	7%	6%	35%	15%	13%	10%	2%	9%	2%	0%	0%	100%	1066
HALL/ENTRANCE	8%	28%	1%	38%	22%	1%	0%	0%	1%	0%	0%	100%	1136
DINING ROOM	3%	4%	4%	7%	68%	9%	1%	0%	3%	0%	0%	100%	805
GARAGE	6%	64%	3%	5%	16%	0%	1%	0%	2%	1%	2%	100%	715
OTHER LIVING ROOM	4%	10%	27%	20%	15%	18%	2%	3%	1%	0%	0%	100%	636
OFFICE	2%	8%	40%	23%	3%	9%	2%	6%	5%	1%	0%	100%	448
OTHER	13%	65%	1%	15%	2%	3%	1%	0%	0%	0%	0%	100%	576
Total	26%	18%	13%	18%	11%	8%	2%	2%	1%	1%	0%	100%	13130
n (unweighted)	3318	2240	1609	2480	1393	1053	293	301	194	232	17	13130	

**Table 129: Lamp Type by Lamp Shape, SDG&E**

LAMP SHAPE	LAMP TYPE							Total	n (unweighted)
	INCANDE- SCENT	CFL	FLUORES- CENT	HALOGEN	SOCKET EMPTY	OTHER	UNKNOWN		
A-TYPE	46%	2%	0%	6%	0%	0%	0%	27%	3527
SPIRAL	0%	71%	0%	0%	0%	0%	0%	13%	1645
LINEAR TUBE	1%	5%	91%	8%	0%	0%	0%	13%	1668
REFLECTOR	17%	8%	0%	39%	0%	3%	7%	14%	2093
DECORATIVE	20%	2%	0%	0%	0%	18%	0%	11%	1438
GLOBE	16%	3%	0%	0%	0%	0%	1%	9%	1210
MR-16	0%	0%	0%	24%	0%	9%	0%	2%	336
BI-PIN	0%	0%	0%	22%	0%	0%	0%	2%	288
U-BEND	0%	8%	1%	0%	0%	0%	0%	2%	211
CIRCLINE	0%	0%	7%	0%	0%	0%	0%	1%	119
BULLET OR POST	0%	0%	0%	0%	0%	0%	0%	0%	6
SOCKET EMPTY	0%	0%	0%	0%	100%	0%	0%	3%	345
OTHER	0%	0%	0%	0%	0%	18%	0%	0%	3
UNKNOWN	0%	0%	1%	1%	0%	51%	93%	2%	241
Total	100%	100%	100%	100%	100%	100%	100%	100%	13130
n (unweighted)	7338	2376	1551	1294	345	25	201	13130	

**Table 130: Lamp Shape by Lamp Type, SDG&E**

LAMP SHAPE	LAMP TYPE							Total	n (unweighted)
	INCANDE- SCENT	CFL	FLUORES- CENT	HALOGEN	SOCKET EMPTY	OTHER	UNKNOWN		
A-TYPE	97%	1%	0%	2%	0%	0%	0%	100%	3527
SPIRAL	0%	100%	0%	0%	0%	0%	0%	100%	1645
LINEAR TUBE	5%	7%	83%	5%	0%	0%	0%	100%	1668
REFLECTOR	65%	11%	0%	24%	0%	0%	1%	100%	2093
DECORATIVE	96%	4%	0%	0%	0%	0%	0%	100%	1438
GLOBE	94%	6%	0%	0%	0%	0%	0%	100%	1210
MR-16	0%	0%	0%	99%	0%	1%	0%	100%	336
BI-PIN	0%	0%	0%	100%	0%	0%	0%	100%	288
U-BEND	0%	93%	7%	0%	0%	0%	0%	100%	211
CIRCLINE	0%	0%	100%	0%	0%	0%	0%	100%	119
BULLET OR POST	0%	100%	0%	0%	0%	0%	0%	100%	6
SOCKET EMPTY	0%	0%	0%	0%	100%	0%	0%	100%	345
OTHER	0%	0%	29%	0%	0%	71%	0%	100%	3
UNKNOWN	4%	1%	7%	3%	0%	4%	81%	100%	241
Total	56%	19%	12%	9%	3%	0%	1%	100%	13130
n (unweighted)	7338	2376	1551	1294	345	25	201	13130	

**Table 131: Wattage by Site Information, SDG&E**

	SDG&E
Count of Sites with wattage available	248
Average Weighted Wattage per Site	<b>2195.4</b>
Count of Sites with square footage available	233
Average Weighted Wattage per square foot	<b>1.43</b>

**Table 132: Average Number and Wattage of Bulbs in Storage by Bulb Type, SDG&E**

Bulb Type	Average Number of Bulbs in Storage Per Household	Average Number of Bulbs in Storage in Households with at Least One	Average Wattage of Bulbs in Storage in Households with at Least One
Incandescent	6.08	10.86	60.99
CFL	2.89	5.49	19.42
Fluorescent	0.22	6.34	33.35
Halogen	0.45	3.16	78.94
LED	0.01	3.00	5.00
Overall	9.65	12.97	48.85

**Table 133: Number of CFLs per Household and Average Number of Bulbs in Storage by Bulb Type, SDG&E**

Number of CFLs Installed Per Household	Bulb Type	Average Number of Bulbs in Storage Per Household	Average Number of Bulbs in Storage in Households with at Least One
0 CFLs installed (n=150)	Incandescent	6.32	9.69
	CFL	0.86	5.19
	Fluorescent	0.05	2.00
	Halogen	0.16	4.67
	LED	0.00	0.00
	Overall	7.39	11.34
1-2 CFLs Installed (n=152)	Incandescent	10.50	15.17
	CFL	1.36	3.44
	Fluorescent	0.00	0.00
	Halogen	0.54	2.70
	LED	0.00	0.00
	Overall	12.40	15.72
3-5 CFLs Installed (n=226)	Incandescent	4.44	8.04
	CFL	1.22	2.87
	Fluorescent	0.17	4.44
	Halogen	0.69	4.57
	LED	0.00	0.00
	Overall	6.52	9.26
6-10 CFLs Installed (n=303)	Incandescent	5.67	9.40
	CFL	3.90	5.98
	Fluorescent	0.17	6.44
	Halogen	0.34	3.29
	LED	0.00	0.00
	Overall	10.09	13.14
11-20 CFLs Installed (n=249)	Incandescent	5.19	14.26
	CFL	3.77	5.41
	Fluorescent	0.00	0.00
	Halogen	0.46	2.46
	LED	0.00	0.00
	Overall	9.42	12.94
More than 20 CFLs Installed (n=152)	Incandescent	5.51	9.84
	CFL	8.17	9.97
	Fluorescent	1.67	8.16
	Halogen	0.46	2.29
	LED	0.07	3.00

	Overall	15.88	17.93
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## 12. Appendix F – Conjoint Study

### 12.1 Introduction

In July 2009, as part of the Residential Retrofit High Impact Measure (HIM) Evaluation Plan, Cadmus teamed with KEMA and Nexus Market Research (the Team) to conduct a CFL conjoint study. Specifically, the survey was designed with the following objectives in mind:

1. Understanding why consumers choose to buy (or not buy) CFLs (e.g., environmental concerns, saving money, appearance, light quality, product quality, previous satisfaction with CFLs, value of specialty features in both incandescent and CFLs, lifetime, etc.), and determining the role of price in the mix of these qualitative and quantitative considerations.
2. Measuring the price sensitivity (elasticity) of demand for CFL bulbs in selected California markets to determine price points that trigger and optimize consumers' conversions from incandescents to CFLs. Findings from the price elasticity study, combined with the supply-side pricing research (i.e., program impacts on reducing CFL prices), were also used to derive an estimate of net program impacts. **This estimate of NTG, however, ultimately was not used in the final determination of program NTG, for reasons presented below in the NTG discussion of the ULP report.**

The conjoint survey was conducted in concert with a series of eighteen, 90-minute focus groups, consisting of six in each of the following service territories: San Diego Gas & Electric (SDG&E); Southern California Edison (SCE); and Pacific Gas & Electric (PG&E). Information learned from the focus groups was intended to qualitatively explain the quantitative results from the conjoint survey discussed in this report.

A conjoint survey was chosen for this evaluation because it provides an objective methodology to trade-off price and non-price attributes without directly asking the question, “What are you willing to pay?” Conjoint analysis surveys provide respondents with descriptions of different goods, characterized by a consistent set of seven or less distinct attributes (the levels of which vary across questions). Respondents are asked to choose between the different options presented. A fundamental benefit of a conjoint analysis approach is its questions provide an experience similar to real-world decision making. Traditionally, conjoint analysis is used to determine an “optimal price” for a product and its varying options (e.g., new cars with sun roofs, stereos, etc.).



While the conjoint approach attempts to mimic real-life purchase decision making, the Team believes several key differences between this study and actual purchasing decisions for light bulbs may affect the results:

1. The study took place in a controlled environment without distractions. Real-life shopping experiences are often affected by: a product's location in the store and on the shelf; the amount of time a consumer has to evaluate options; and whether or not other factors are competing for the shopper's attention.
2. While the Team tried to mimic information found on actual light bulb packages when designing attribute descriptions, the information provided in the survey contained greater detail to ensure participants understood the questionnaire. For instance, most light bulb packages attempt to inform participants that CFLs provide cost savings; however, this information may not be as explicit as that described by the Lifetime and Cost Savings attribute, where the participant was given three options: 12-year life savings of \$90; 10-year life savings of \$75; or 8-year life savings of \$60.
3. For this study, the purchase question was limited to a 75W standard bulb or the equivalent CFL without dimming, three-way, or other variations for the first "choice" experiment, and for a 60 W reflector or equivalent CFL flood without dimming, three-way, or other variations for the second "choice" experiment.

## 12.2 Methodology

### 12.3 Recruiting

A total of 327 participants were recruited, exceeding the goal of 100 for each utility service territory. Groups were scheduled in eight different markets across California:

- For SCE: Irvine, Riverside, and Palm Springs (two groups per market).
- For PG&E: San Francisco, Stockton, and Fresno (two groups per market).
- For SDG&E: San Diego and El Cajon (three groups per market).

Participants were recruited according to approved, sample-stratification criteria, including:

- Participants were customers of SCE, PG&E, or SDG&E in their respective markets.
- Participants were involved in the decision to purchase and install light bulbs in their homes.
- Half were aged 20–44, and half were aged 45–70 (with a spectrum within each age bracket).
- Half were male; half were female.
- One-third were home renters; two-thirds were home owners.
- Half had Household Income (HHI) of less than \$75,000; and half had HHI of more than \$75,000 (with a spectrum within each bracket).
- Education: minimum high school graduate/GED (with actual education levels captured).
- CFL Usage: one-third low, one third mid, and one-third high:
  - Low usage = 0 to 2 CFLs currently installed
  - Mid usage = 3 to 8 CFLs currently installed
  - High usage = 9+ CFLs currently installed

Participants in the “low usage” category were not required to own CFLs, but had to be familiar enough with them to converse about their perceptions.

### 12.4 Weighting

Resulting data were weighted based on utility and income levels, consistent with the Residential Appliance Saturation Survey (RASS) results. Segmentation analysis was also performed by age, household income, education level, CFL usage, ownership of household, and gender.

## 12.5 Questionnaire

Sawtooth Software, proprietary Web-based survey software, was utilized to generate the “random choice” survey questions (computer-generated questions with random levels of CFL attributes varying by participant), compile data, and analyze results. Participants electronically completed survey questionnaires, using laptop computers in supervised settings with five to seven other participants, either before or concurrent with the focus groups at the same locations (but in a different room). The questionnaire was split into two sections, each consisting of 17 random choice questions and a “fixed choice” question (specified by the Team and asked twice of all participants to check response consistency). The first section focused on standard CFLs, comparing two types of standard CFLs (mini twister, standard twister, or covered A-bulb) to a standard incandescent bulb; the second section compared two CFL flood lights to an incandescent flood light. All participants were also asked several “direct response questions” (gathering awareness and self-reported attribute ranking information) at the end of the survey.

The attributes and their associated “levels” for both the standard and flood CFL segments are identified in Table . To ensure reliable results, certain constraints were set that prohibited the program from creating a choice comparing the highest-priced CFLs against the lowest-priced CFLs. For instance, a \$0.60 CFL bulb could not be matched against a \$7.50 CFL bulb.

**Table 1: Conjoint Survey Attributes and Levels**

Attribute	Standard Bulbs	Flood Bulbs	Incandescent
Bulb Shape	Mini twister Standard twister Covered twister	N/A	N/A
Light Color	Warm/soft (with yellow tones) Cool/bright/natural (with white tones)		Warm/soft with yellow tones
Turn On	IMMEDIATELY on, DIM at first DELAYED on, FULL BRIGHTNESS		IMMEDIATELY on, FULL BRIGHTNESS
Environment	BETTER for environment MUCH BETTER for environment		NO IMPROVEMENT for environment
Labels	No ENERGY STAR label ENERGY STAR label ENERGY STAR label plus utility sticker		No ENERGY STAR label
Lifetime Cost Savings	8 year life, \$60 saved 10 year life, \$75 saved 12 year life, \$90 saved		1 year life, \$0 saved
Price	\$0.60 to \$7.50	\$2.40 to \$15.00	\$0.65 (standard) \$4.00 (flood)

Survey sections were designed to evaluate two scenarios:

1. An 18–23 W CFL (A-lamp, twister, or mini-twister style) in comparison to a 75 W incandescent—the most heavily promoted bulbs of the program.
2. A 14–16 W CFL flood light in comparison to a 60 W incandescent flood light, representing the next highest opportunity in terms of available and applicable sockets.

Dimmable, three-way lamps, and LEDs were also considered, but were not chosen for the study for the following reasons:

1. The CFL technology has a limited ability to light at different levels or to continuously dim. The lighting color changes as output level changes, and the minimum output level is much higher than an incandescent light's minimum.
2. LED technology, while promising, remains in its infancy. Very few inside-home products exist, and these vary greatly in terms of quality and price. In addition, promised lifetimes of these lights have not been verified.
3. The conjoint survey analysis is only applicable to scenarios where attributes vary within a technology and not for attributes that vary *by technology*. In this case, both the CFL and incandescent technology, while different from each other, are fairly consistent among all brands of dimmable and three-way lights of that particular technology.
4. Opportunities for dimmable, three-way, and LED lights are much lower than the CFL standards and CFL floods. The in-home lighting inventories, conducted as part of the CFL metering study, found that dimmable sockets make up about 12% of the sockets, three-ways make up 3%, and flood light sockets make up 15% of the market share.

Pricing levels for each scenario were developed by analyzing data from the shelf audit survey<sup>2</sup> for 70–75 W incandescents, 18–23 W CFLs, 14–16 W CFL floods, and 60–65 W incandescent flood lights. Data were sorted for each light type, and obvious outliers were eliminated. Statistics were computed to understand the distribution, range, and averages for each type of lamp, covering both IOU-discounted and non-discounted prices. Based on these data, an appropriate range of prices was selected for testing. The price levels reflected the wide price variation seen in the market, while providing sensitivity at the low end of the scale to assess the impact of the ULP discounts.

Each survey section began with the following scenario descriptions:

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<sup>2</sup> Conducted as part of the California CFL Market Effects Report, expected in February 2010.

### 12.5.1 Standard CFLs

“Assume that a light in your house that is used frequently has burned out and you need to replace the bulb. The light is not dimmable or three-way and takes a standard screw-in bulb of 75 W or equivalent. You don’t have a replacement bulb at home so you need to purchase one.”


### 12.5.2 Flood CFLs




“Assume that a flood or reflector light in your house that is used frequently has burned out and you need to replace the bulb. The light is not dimmable or three-way and takes a flood or reflector screw-in bulb of 60 W or equivalent. You don’t have a replacement bulb at home, so you need to purchase one.”


Detailed explanations of each of the attributes were also provided during the on-line introduction to the survey and in a hard copy, to be used by participants, if necessary, as a reference guide while taking the survey. Exhibit D-1 contains the detailed descriptions provided to survey participants.

Figure 1 is an illustration of an actual question to the conjoint survey participants.

**Figure 1: Sample Conjoint Survey Question**


 Now that you are familiar with all of the attributes of the bulbs, lets begin the survey. Please consider the different features and price of each bulb. Now, assuming these 3 bulbs are your only options to choose from, which ONE of these would you purchase? Please click the button under your purchase choice and click "next" to advance to the next survey question. This is the first of 20 questions in part one of this survey.

Standard CFL	Covered CFL	Regular Incandescent
		
<p>WARM/soft white (with yellow tones)                      IMMEDIATELY on, DIM at first                      MUCH BETTER for the Environment                      NO ENERGY STAR label</p>	<p>COOL/bright/natural white (with white tones)                      DELAYED on, FULL BRIGHTNESS                      MUCH BETTER for the Environment                      ENERGY STAR label</p>	<p>WARM/soft white (with yellow tones)                      IMMEDIATELY on, FULL brightness                      NO IMPROVEMENT for the Environment                      NO ENERGY STAR label</p>
<p>12 year life, \$90 saved                      Price: \$5.25</p> <input type="radio"/>	<p>10 year life, \$75 saved                      Price: \$2.40</p> <input type="radio"/>	<p>1 year life, \$0 saved                      Price: \$0.65</p> <input type="radio"/>

0%  100%

## 12.6 Relative Importance Analysis Methodology

To compute the relative importance of each attribute, a starting point of Sawtooth outputs called “part-worth utilities” is used. Part-worth utilities are a measure of the number of times a product with a particular attribute level is chosen relative to other levels, and is scaled to an arbitrary additive constant within each attribute. The data are interval data<sup>3</sup> with the arbitrary origin of the scaling within each attribute resulting from dummy coding in the design matrix. When using this dummy coding, part-worth’s of all attribute levels are scaled to sum to zero within. For example, the set of part-worth utilities for Lifetime Cost Savings are defined in Table 2:

**Table 2: Part-worth’s for Lifetime Cost Savings**

Lifetime Cost Savings	Utility
Lifetime 8 years saving \$60	-33.04
Lifetime 10 years saving \$75	-0.97
Lifetime 12 years saving \$90	34.01

A lifetime of eight years received a negative utility value, but this does not mean that an eight-year lifetime was unattractive. In fact, an eight-year lifetime may have been acceptable to all respondents. But, all else being equal, 10 years and 12 years were more attractive. The utilities were scaled to sum to zero within each attribute; so an eight-year lifetime would receive a negative utility value.

To characterize the relative importance of each attribute, we considered how much difference each attribute could make in the total utility of a product. That difference was the range in the attribute’s utility values. Attributes’ importance were calculated for respondents at the individual level, then averaged across a group, rather than taking the average utility values. If half the respondents preferred incandescent, and the other half preferred standard CFL’s, the average utilities would appear to be zero.

To preserve the relative scale of utility within each attribute while maintaining the absolute importance across attributes, the Team rescaled the part-worth utilities according to attribute importances. The attribute importances were calculated by Sawtooth using the output part-worths

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<sup>3</sup> Interval data are those permitting the simple operations of addition and subtraction. The rating scales so common to market research provide interval data. For example, the Celsius scale is an interval scale. Each degree of temperature represents an equal heat increment. It takes the same amount of heat to raise the temperature of a cup of water from 10 to 20 degrees as from 20 to 30 degrees. The zero point is arbitrarily tied to the freezing point of distilled water. Sixty degrees is not twice as hot as 30 degrees, and the ratio 60/30 has no meaning.

on an individual level. The rescaled part-worth utilities can be seen in Table 3, below, along with the set of attribute importance values adding to 100%.

**Table 3: Calculations for Rescaled Relative Attribute Importance**

Attribute	Level	Rescaled Part-Worth Utility	Rescaled Utility Range = Attribute Importance
Price	\$0.60	21.77%	21.77% - (-26.11%) = 47.88%
	\$1.20	14.26%	
	\$2.40	7.66%	
	\$3.00	3.34%	
	\$4.50	-7.32%	
	\$5.25	-13.61%	
	\$7.50	-26.11%	
Lifetime Cost Savings	8-year life, \$60 saved	-5.21%	5.36% - (-5.21%) = 10.57%
	10-year life, \$75 saved	-0.15%	
	12-year life, \$90 saved	5.36%	
Label	ENERGY STAR label	0.49%	4.55% - (-5.05%) = 9.60%
	ENERGY STAR label + Utility sticker	4.55%	
	NO ENERGY STAR label	-5.05%	
Environment	BETTER for the Environment	-2.92%	2.92% - (-2.92%) = 5.84%
	MUCH BETTER for the Environment	2.92%	
Turn On	IMMEDIATELY on, DIM at first	2.49%	2.49% - (-2.49%) = 4.98%
	DELAYED on, FULL BRIGHTNESS	-2.49%	
Color	WARM	-5.32%	5.32% - (-5.32%) = 10.64%
	COOL	5.32%	
Bulb Size and Shape	Standard CFL	6.50%	6.50% - (-3.98%) = 10.48%
	Covered CFL	-2.52%	
	Mini-CFL	-3.98%	
		<b>Total</b>	<b>100%</b>

It should be noted that importance depended on the particular attribute levels chosen for the study. For example, with a narrower range of prices, price would have been less important. Importance measures were ratio-scaled, but they were also relative, within-study measures. An attribute with an importance of 20% was twice as important as an attribute with an importance of 10%, given the set of attributes and levels used in the study.

## 12.7 Market Share Elasticity

To compute market share elasticity, the Sawtooth software simulates “market shares” of one configuration versus another at different price points. In other words, the market share of a particular configuration of one CFL (choosing a particular level for each attribute) is compared to the market share of the incandescent bulb at each of the price levels for the CFL. Elasticity is computed by a regression analysis of:

$$y = ax + b$$

where  $y$  = natural log of market shares, and  $x$  = natural log of the CFL price. The analysis solves for  $a$ , or elasticity, which equals  $\text{Ln}(\text{market shares})/\text{Ln}(\text{price})$ .

The Team looked at several types of results available by analyzing the conjoint survey data:

1. The importance of different attributes—both based on the Sawtooth software analysis of participants choices, and in summarizing participants’ responses to the direct question asking them to rank the attributes.
2. Segmentation analysis—importance of each attribute according to segmentation by income levels, CFL usage, education levels, age, and gender.
3. Price elasticity—the change in market share of different CFLs in response to changes in price.



## 12.8 Results

### 12.8.1 Importance Attributes

Figure 2, below, shows the relative importance of all attributes for both the standard and flood survey, as calculated based on participants' choices. Price was overwhelmingly the most important feature, representing almost half the purchase decision for standard bulbs and slightly more than half for flood or reflector bulbs. Of low importance (close to 10%) were: color, lifetime and cost savings; while of very low importance (close to 5%) were: turn on (immediate vs. delay), environmental impact, and labeling (although labeling had a slightly higher importance for flood CFLs).

**Figure 2: Attribute Importance for Flood and Standard Bulbs**

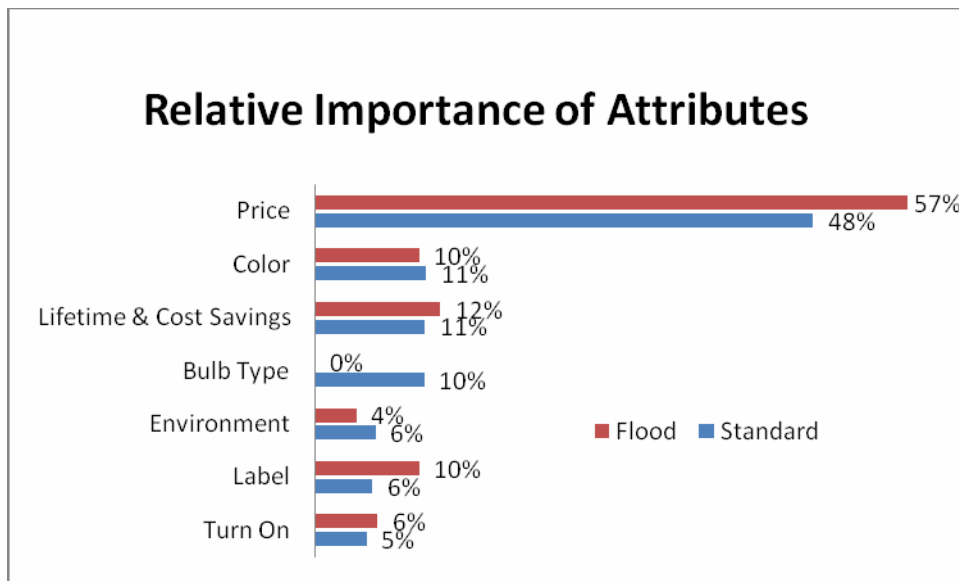


Table 4, below, portrays the importance data as rankings, for the standard and flood surveys as determined by participant choices, and for direct response (the self-reported ranking of the attributes by participants). A few inconsistencies occurred between the computed results and self-reported values. While participants ranked labeling as the lowest priority, their choices in the flood survey put it much higher (#7 vs. #3) and slightly higher for the standard survey (#7 vs. #5). Also participants self-reportedly ranked the environment as number 4, but in their choice responses, environment was #6 in the ranking. Note that rankings in Table 4 were color-coded to show those with high, low and very low importance. While the inconsistencies are notable, they are not different by a large percentage of relative importance.

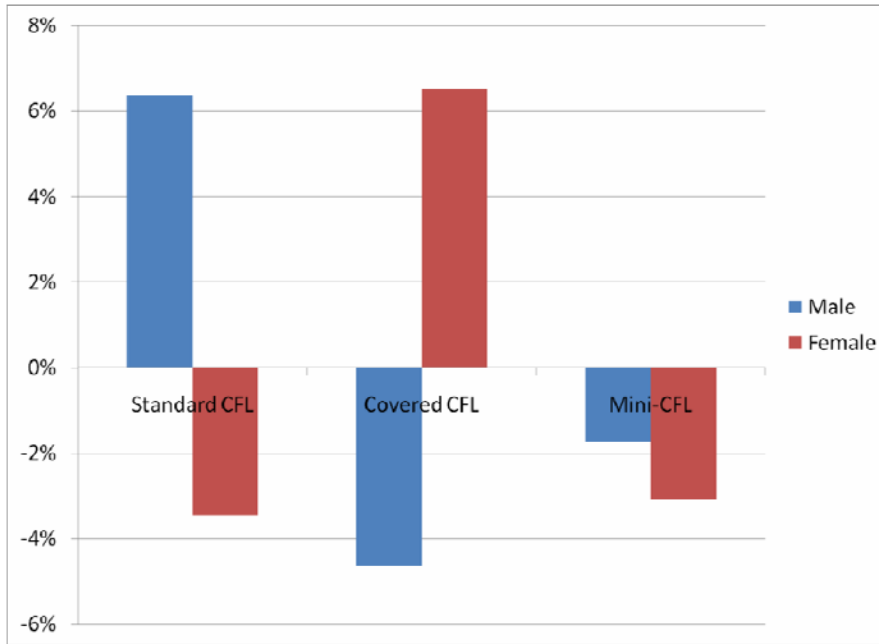
**Table 4: Attribute Ranking by Survey and Direct Response**

Attribute	Standard Survey	Flood Survey	Direct Response
Price	1	1	1
Color	2	4	3
Lifetime & Cost Savings	3	2	2
Bulb Size & Shape	4	N/A	5
Label	5	3	7
Environment	6	6	4
Delay	7	5	6

High Importance
Low Importance
Very Low Importance

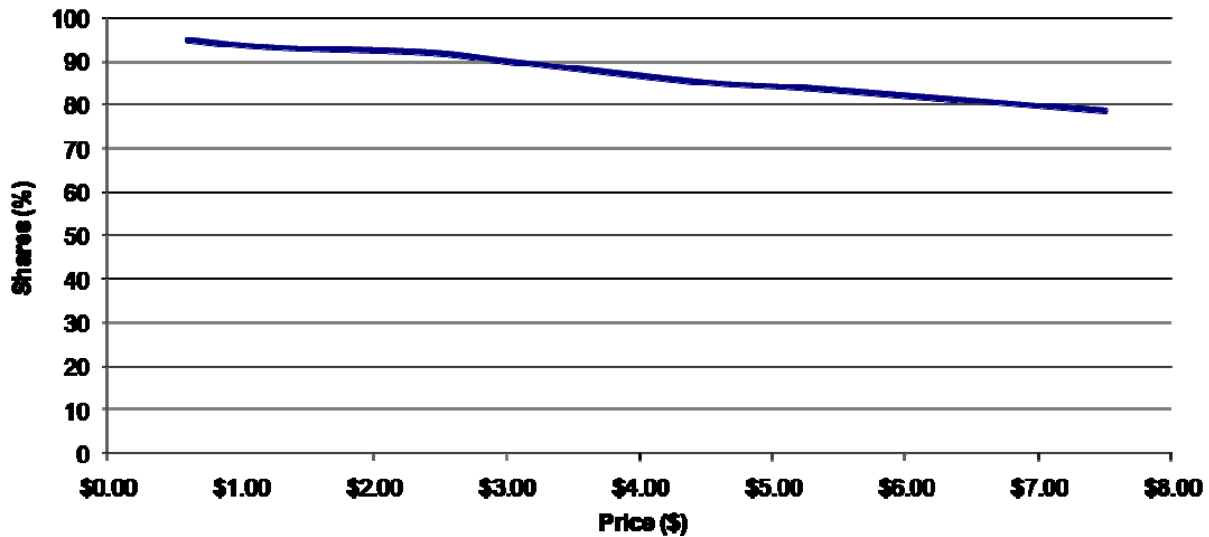
### 12.8.2 Segmentation

Importance results were segmented by household income, age, CFL usage, education level, utility, home ownership status, and gender. With the exception of the bulb-shape preferences varying by gender, no significant trends were found among the importance of different attributes. Figure 3 illustrates males tended to prefer the standard, twister-shaped CFLs and females preferred covered CFLs. A complete set of segmentation results can be found in Exhibit D-2 of this report.

**Figure 3: Importance of Bulb Size and Shape by Gender**

## 12.9 Market Share Price Elasticity

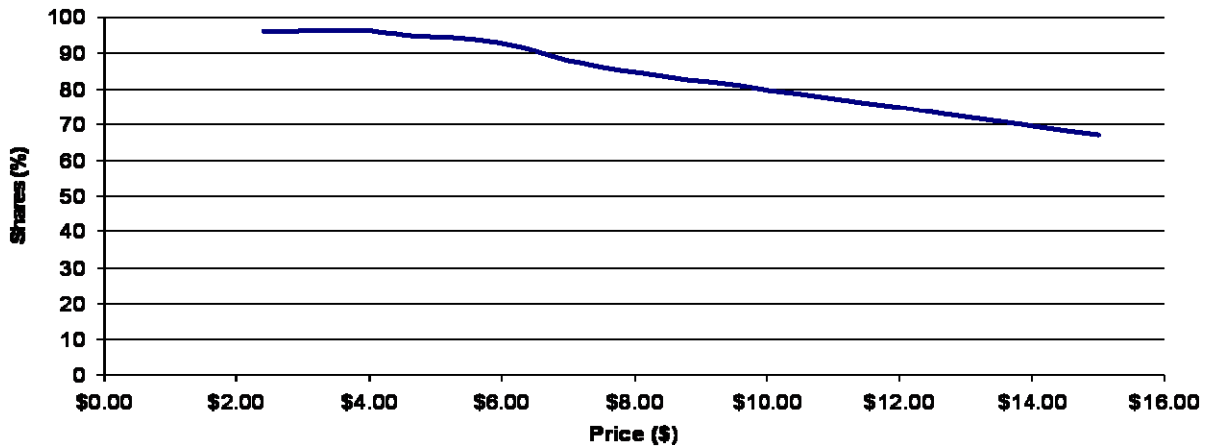
Price elasticity of a common standard CFL (with attributes of: lifetime and cost savings = eight-year life; \$60 saved; color = cool/white; bulb size and shape = standard; labeling = ENERGY STAR<sup>®</sup> w/ utility sticker; turn on = immediate on; and environment = better for the environment) was -0.07 compared to the incandescent bulb, indicating that for every 10% decrease in bulb price, market share of CFLs will increase by 0.7%. Figure 4 graphically represents price elasticity for a common, standard CFL compared to an incandescent bulb, showing its relatively inelastic results.

**Figure 4: Price Elasticity of Standard CFLs vs. Incandescent Bulbs**

The relatively low price elasticity implies utility incentives paid to lower the price of CFLs had very little effect on purchase rates. Indeed, the associated focus group results indicated, for many consumers, as long as there were long-term savings from CFLs, differences in upfront prices were not as important. However, the Team cautions against placing too much importance on this elasticity result as the controlled study environment and complete disclosure of CFL costs and benefits vs. incandescent bulbs may have biased the results. For study purposes, participants also assumed easy availability of the CFL they wanted and in the package size they desired, which is not always true in the actual marketplace. Further illustrating this point, throughout the conjoint study, 90% of the bulb choices were CFLs, while estimates of the actual proportion of CFL choice to incandescent bulbs is one in three.<sup>4</sup>

Price elasticity was also computed for flood CFLs compared to incandescent floods. Figure 5, below, illustrates elasticity computed at -20% overall.

<sup>4</sup> CA CFL Market Effects Study, Interim Report, 2009.

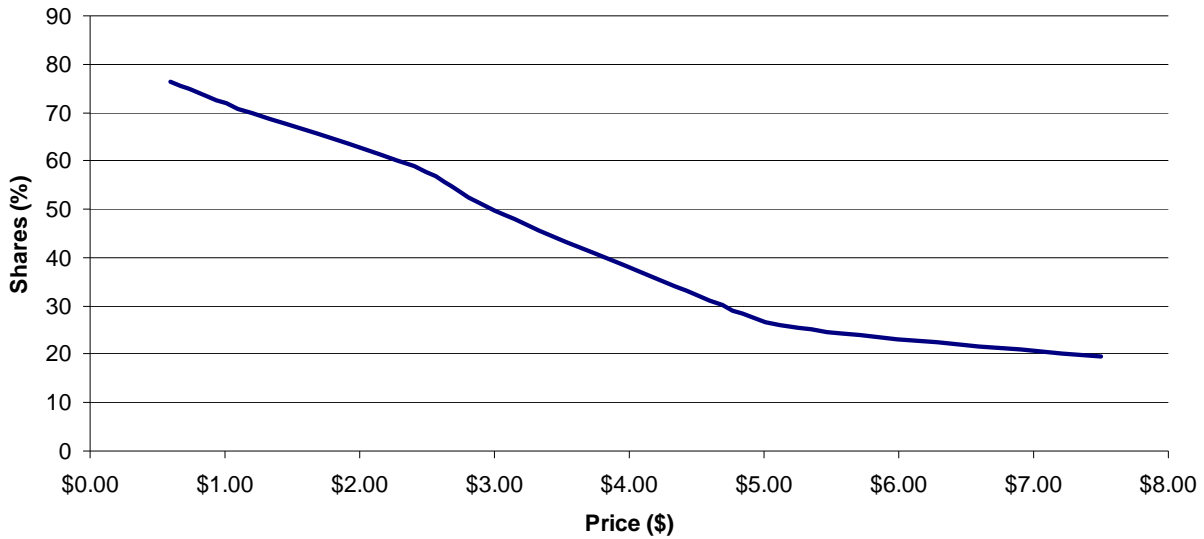
**Figure 5: Price Elasticity of Flood CFLs vs. Incandescent Floods**

In the above figure, it is notable that the elasticity (slope of the curve) actually shifts at around the \$6.00 mark. This shift could be indicative of a “sweet spot” or “optimal” price point, whereby, below \$6.00, shares do not increase significantly, but above this price, shares drop at a higher rate. Interestingly, below \$4.00, shares actually decrease slightly. Given the price of incandescent floods averages approximately \$4.00,<sup>5</sup> a possible explanation may be a perceived lack of quality of CFLs priced below the comparable incandescent flood.

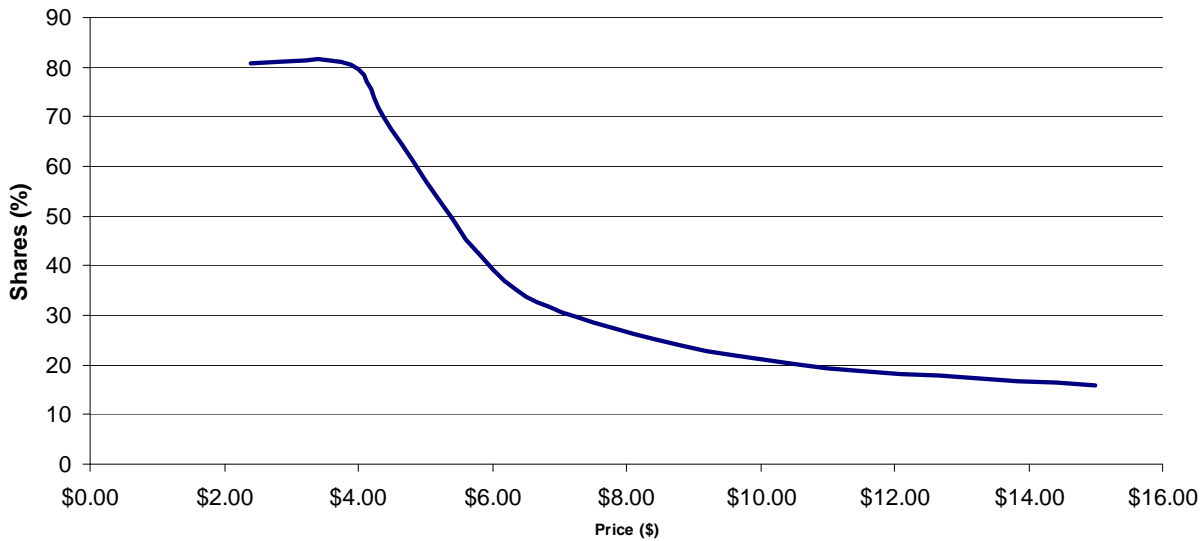
It was also interesting to compute price elasticity among two different configurations of CFLs. Figure 6 and Figure 7, below, illustrate that for consumers choosing between two types of CFLs, price has a much greater impact on purchasing decision. For standard CFLs, price elasticity between two types of CFLs was -69%; for flood CFLs, price elasticity between two types was -92%.

<sup>5</sup> Shelf survey results from the forthcoming CA CFL Market Effects Study, February 2010.

**Figure 6: Price Elasticity of Best<sup>6</sup> Standard CFL vs. Common<sup>7</sup> Standard CFL**



**Figure 7: Price Elasticity of Best Flood CFL<sup>8</sup> vs. Common Flood CFL<sup>9</sup>**



<sup>6</sup> Lifetime and cost savings = 12-year life, \$90 saved; color = warm/yellow; bulb size and shape = standard; labeling = ENERGY STAR<sup>®</sup> w/ utility sticker; turn on = immediate on; and environment = much better for the environment.

<sup>7</sup> Lifetime and cost savings = 8-year life; \$60 saved; color = cool/white; bulb size and shape = standard; labeling = ENERGY STAR<sup>®</sup> w/ utility sticker; turn on = immediate on; and environment = better for the environment.

<sup>8</sup> Lifetime and cost savings = 12-year life; \$90 saved; color = warm/yellow; bulb size and shape = standard; labeling = ENERGY STAR<sup>®</sup> w/ utility sticker; turn on = immediate on; and environment = much better for the environment.

<sup>9</sup> Lifetime and cost savings = 8-year life; \$60 saved; color = cool/white; bulb size and shape = standard; labeling = ENERGY STAR<sup>®</sup> w/ utility sticker; turn on = immediate on; and environment = better for the environment.

## 12.10 Conclusions

The conjoint study showed price is important to consumers, particularly as they choose between *different types* of CFLs. However, it is not clear price is as important to consumers when choosing *between* a CFL and an incandescent bulb, as long as consumers fully understand the overall costs and benefits of choosing a CFL over an incandescent bulb and have the desired CFL readily available. The concurrent focus groups concluded certain consumers reject CFLs or all fixtures due to non-price considerations, such as light color, fit, and mercury concerns. For these consumers, decreasing prices are not likely to cause increased purchases of CFLs.

As noted above, the limitations of the study led The Team to not use the findings **in the final NTG estimation for Upstream CFLs**. These results may be helpful for future program design and evaluation, as they do indicate that with proper information regarding cost vs. payback consumers are likely to choose a CFL, even at higher price points.

## Exhibit F-1: Attribute Descriptions



**Standard CFL**



**Mini CFL**



**Covered CFL**



**Regular Incandescent**

- 1. Size and Shape.** Bulb size and shape are among the factors you might consider when choosing a replacement for your burned-out bulb. The options are Standard CFL, Mini CFL, Covered CFL, and Regular Incandescent.
- 2. Light Color.** Some lights are labeled WARM or SOFT WHITE and have yellow tones while others are labeled COOL or BRIGHT WHITE and have white tones.
- 3. Turn On.** Some CFLs turn on IMMEDIATELY but don't reach FULL BRIGHTNESS immediately while others experience a DELAY for 1 or 2 seconds in turning on but are at FULL BRIGHTNESS right away. Regular incandescent bulbs turn on IMMEDIATELY at FULL BRIGHTNESS.
- 4. Environment.** The replacement bulb options are characterized in one of three ways: a) No Improvement for the environment b) BETTER for the environment - Some CFLs are BETTER for the environment because they use less energy and therefore result in lower power plant emissions than regular incandescent bulbs. They also have a longer life than regular bulbs, which means you throw fewer of them away. c) MUCH BETTER for the environment - The CFLs that are MUCH BETTER for the environment similarly use less energy than regular bulbs but may have an even longer life and are made of more environmentally conscious materials than other CFLs.
- 4. Labeling.** There are three different variations on the special labels you might find on each bulb package:
  - a) ENERGY STAR Label
  - b) ENERGY STAR Label plus promotional sticker from your utility
  - c) NO ENERGY STAR Label
- 6. Lifetime Cost Savings.** CFLs save you about \$7.50 per year in energy costs compared to regular incandescent bulb. If a CFL has a life of 10 years, you could save \$75 over the life of the bulb (10 years x \$7.50 per year). The three variations are:
  - a) An 8-year CFL that could save you \$60 over its lifetime
  - b) A 10-year CFL that could save you \$75 over its lifetime
  - c) A 12-year CFL that could save you \$90 over its lifetime
 The regular incandescent bulb will always have a 1-year lifetime and \$0 saved.
- 7. Price.** Each scenario will always include the same price for the regular incandescent bulb (\$0.65 per bulb) and several variations on prices for the CFLs.



## Exhibit F-2: Segmentation Results

**Table 5: Segmentation Results by IOU**

	Average	PGE	SCE	SDGE
Standard CFL	3.74%	-4.33%	5.34%	3.12%
Covered CFL	3.00%	6.63%	-5.92%	3.02%
Mini-CFL	-6.74%	-2.30%	0.58%	-6.14%
WARM	-5.38%	-4.87%	-6.11%	-5.10%
COOL	5.38%	4.87%	6.11%	5.10%
IMMEDIATELY on, DIM at first	2.42%	2.58%	2.15%	2.45%
DELAYED on, FULL BRIGHTNESS	-2.42%	-2.58%	-2.15%	-2.45%
BETTER for the Environment	-2.76%	-2.91%	-2.74%	-2.63%
MUCH BETTER for the Environment	2.76%	2.91%	2.74%	2.63%
ENERGY STAR label	0.49%	0.86%	0.09%	0.48%
ENERGY STAR label + SDGE sticker	4.56%	4.40%	4.72%	4.57%
NO ENERGY STAR label	-5.05%	-5.26%	-4.81%	-5.05%
8 year life, \$60 saved	-5.09%	-5.28%	-5.16%	-4.71%
10 year life, \$75 saved	-0.31%	-0.46%	-0.17%	-0.41%
12 year life, \$90 saved	5.40%	5.74%	5.32%	5.12%
Price: \$0.60	21.82%	21.84%	20.75%	23.04%
Price: \$1.20	14.54%	14.57%	14.36%	14.83%
Price: \$2.40	7.79%	7.72%	7.94%	7.74%

Price: \$3.00	3.35%	3.32%	3.60%	3.15%
Price: \$4.50	-7.37%	-7.68%	-6.97%	-7.42%
Price: \$5.25	-13.66%	-13.97%	-13.71%	-13.44%
Price: \$7.50	-26.47%	-25.79%	-25.97%	-27.90%

## Exhibit F-3: Direct Response Questions

**Table 6: Frequency of last CFL Purchase**

Last purchase of CFL?	Percent
This year (2009)	60.73%
Last year (2008)	21.98%
Two or three years ago	5.75%
More than three years ago	3.14%
Never purchased CFLs	6.28%
Don't remember	2.09%

**Table 7: Awareness of Program Discounts**

Aware of IOU Promotion	Percent
Yes	26.81%
No	73.18%

**Table 8: Influence of Promotion on Purchase**

Promotion Influence	Percent
Strong influence	27.08%
Moderate influence	41.66%
Small influence	18.75%
No influence	12.5%

## 13. Appendix G – Supplemental Documents

### **CFL User Survey**

Survey codebook for Wave 1 of data collection

Survey codebook for Waves 2-5 of data collection

### **CFL User Survey On Site Verification**

Data collection form for Verification On Sites

### **In Store Intercepts and Shelf Survey**

Revealed preference data collection survey

Stated preference data collection survey

Shelf survey for store- and package-level data

### **In Store Intercepts Follow-up Survey**

Telephone survey script for follow-up data collection

### **Supply Side Market Actor Research**

Interview guide for lighting manufacturers

Follow-up interview guide for lighting manufacturers

Interview guide for lighting retail buyers

Follow-up interview guide for lighting retail buyers

Codebook for retail store manager survey

### **Lighting Metering**

Letter verifying the purpose of the on site

Data collection for HVAC and demographic info

Demographic flyer to be filled out by participant

Data entry form for inventory and logger location(s)

Instructions for installation of DENT meters

Example of metering protocols (determining which fixture(s) to meter)

Telephone recruitment script used to recruit participants

**Upstream Lighting Program – CFL User Codebook – Wave 1**

NOTE:

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

**respnum\$** respondent number

**caseid** case ID number

**time\$** length of interview

**Screener Section**

**S1** Before we get started, I'd like to ask you a few questions about your awareness of different types of light bulbs. Before this call today, had you ever heard of compact fluorescent bulbs, or CFLs?

- 1 Yes (SKIP TO S3)
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

**S2** Compact fluorescent light bulbs – also known as CFLs – usually do not look like regular incandescent bulbs. The most common type of CFL is made with a glass tube bent into a spiral, resembling a soft-serve ice cream, and it fits in a regular light bulb socket. Before today, were you familiar with CFLs?

- 1 Yes
- 2 No (SKIP TO [Appliance Recycling Section])
- 8 DON'T KNOW (SKIP TO [Appliance Recycling Section])
- 9 REFUSED (SKIP TO [Appliance Recycling Section])

**S3** How familiar are you with energy saving CFLs? Would you say that you are...

- 1 Very familiar
- 2 Somewhat familiar
- 3 Slightly familiar
- 4 Not at all familiar
- 8 DON'T KNOW (SKIP TO [Appliance Recycling Section])
- 9 REFUSED (SKIP TO [Appliance Recycling Section])

**Q\_1** Have you or anyone else in your household ever purchased or been given any compact fluorescent light bulbs or CFLs to use in a home?

- 1 Yes, R has
- 2 Yes, someone else has (ASK TO SPEAK TO THAT PERSON AND REPEAT INTRO)
- 3 No (SKIP TO [Appliance Recycling Section])
- 8 DON'T KNOW (SKIP TO [Appliance Recycling Section])
- 9 REFUSED (SKIP TO [Appliance Recycling Section])

**CFL User Section**

**Q\_2** Do you currently have any CFLs installed on the inside or outside of your home?

- 1 Yes
- 2 No (SKIP TO Q\_2c)
- 8 DON'T KNOW (SKIP TO Q\_2c)
- 9 REFUSED (SKIP TO Q\_2c)

**Q\_2a** About how many CFLs are currently installed on the inside or outside of your home?

- \_\_\_ (Enter # of CFLs)
- 8 DON'T KNOW (SKIP TO Q\_3)
- 9 REFUSED (SKIP TO Q\_3)

**Q\_2b** Did you have these same [Q\_2a quantity] CFLs installed three months ago?

- 1 Yes (SKIP TO Q\_3)
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

**Q\_2c** About how many CFLs were installed on the inside or outside of your home three months ago?

- \_\_\_ (Enter # of CFLs)
- 8 DON'T KNOW
- 9 REFUSED

**Q\_3** Are you currently storing any CFLs at your home? This could be in your closet, your pantry, your garage, or anywhere at your home.

- 1 Yes
- 2 No (SKIP TO Q\_3c)
- 8 DON'T KNOW (SKIP TO Q\_3c)
- 9 REFUSED (SKIP TO Q\_3c)

**Q\_3a** About how many CFLs are you storing at your home?

- \_\_\_ (Enter # of CFLs)
- 8 DON'T KNOW (SKIP TO Q\_3c)
- 9 REFUSED (SKIP TO Q\_3c)

**Q\_3b** Were you storing these same [Q\_3a quantity] CFLs three months ago?

- 1 Yes (SKIP TO Q\_4)
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

**Q\_3c** About how many CFLs were you storing at your home 3 months ago?

\_\_ (Enter # of CFLs)

-8 DON'T KNOW

-9 REFUSED

**Q\_4** [ASK IF Q\_3 = 1] Why are you currently storing CFLs?

For Q\_4\_1 –10:

0 Not mentioned

1 Mentioned

**Q\_4\_1** So that I have them on hand if a bulb burns out

**Q\_4\_2** Purchased more CFLs than I needed / in bulk / on sale

**Q\_4\_3** Bought them in bulk

**Q\_4\_4** Bought them on sale

**Q\_4\_5** Can't use them in certain rooms

**Q\_4\_6** Can't use them in certain applications (e.g. dimmer switch)

**Q\_4\_7** Didn't like having them installed

**Q\_4\_8** Other (SPECIFY)

**Q\_4\_9** Don't Know

**Q\_4\_10** Refused



**Recent CFL Purchaser Section**

**Q\_5** Have you purchased or been given any CFLs in the last three months to use in a home?

- 1 Yes, purchased
- 2 Yes, given (SKIP TO Q\_7)
- 3 Yes, both
- 4 No (SKIP TO A1)
- 8 DON'T KNOW (SKIP TO A1)
- 9 REFUSED (SKIP TO A1)

**Q\_6** Approximately, how many CFLs – in total – did you buy in the past three months to use in a home? If a package contained multiple CFLs, please count each CFL bulb separately. [PURPOSE OF THIS QUESTION IS TO GET RESPONDENT THINKING ABOUT THE NUMBER OF CFLS. WE WILL CONFIRM THAT THIS NUMBER MATCHES WITH THE RESPONSES TO THE SUBSEQUENT QUESTIONS ON QUANTITIES PURCHASED.]

- \_\_ Enter #
- 0 None (SKIP to Q\_7)
- 8 Don't know
- 9 Refused

**Q\_6a1 to Q\_6a5** At what stores did you purchase CFLs in the past three months to use in a home?

- 1 \$1 Super Store
- 2 98 Cent World
- 3 99 Cent Depot
- 4 99 Cent Mart
- 5 99 Cents Only
- 6 99 Cents Outlet Plus
- 7 99 Cents Plus
- 8 99 Ranch
- 9 Ace Hardware
- 10 Ace Maintenance Mart
- 11 Albertson's
- 12 All American Home Center
- 13 Arcadia Market
- 14 B & B Hardware
- 15 Best Way Supermarket
- 16 Big A Drugs
- 17 Big Lots
- 18 Big Save 98 Cents
- 19 Big Saver Food
- 20 Cal Do It Center
- 21 Cardenas Market
- 22 Cole Hardware
- 23 Contractor's Warehouse
- 24 Costco
- 25 CVS/Sav-On Drugs
- 26 D & M Gift Store
- 27 Del Mar Supermarket
- 28 Discount Club 3
- 29 Dixieline Lumber

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30	Dollar Club
31	Dollar K
32	Dollar Mart
33	Dollar Tree
34	Drug Emporium
35	El Toro Market
36	El Valle Discount
37	Food 4 Less
38	Foothill Builders Mart
39	Friedman Brothers Hardware
40	Fry's Electronics
41	Ganahl Lumber
42	Giant Bargain
43	Grant's Hardware
44	Grocery Outlet
45	Hannam Market
46	Hawaii Supermarket
47	Henry's Farmers Market
48	Home Depot
49	Hong Kong Market
50	JC 98 Cents Plus
51	Jumbo 99
52	Lamps Plus
53	Light Bulbs Etc.
54	Light Bulbs Unlimited
55	Light Concern
56	Lion Foods
57	Long's Drugs
58	Lowe's
59	Marukai Market
60	Northgate Markets
61	Orchard Supply
62	Payless Foods
63	Q Bargain
64	Qualy Electric Supply Inc.
65	Ralph's
66	Rite Aid
67	San Gabriel Superstore
68	Shun Fat Supermarket
69	Smart & Final
70	Stater Bros
71	Super 99
72	Super Bargain Inc.
73	Superco Home Theater & Appliances
74	Superfood Warehouse
75	Superior Super
76	T.S. Emporium
77	Tashman's Hardware
78	Tawa Supermarket
79	Todo \$1 Only Store
80	Top Fancy Lighting
81	True Value Hardware
82	Under \$1 Store
83	Valley Thrift Store
84	Victor's Lighting
85	Walgreen's

- 86 Wal-Mart
- 87 Winco Foods
- 88 Target
- 89 Sam's Club
- 999 Other
- 777 Don't Know

**Q\_6a1a to Q\_6a5a** (If Q\_6a1 to Q\_6a13=999) What is the store type?

- 1 Discount
- 2 Grocery
- 3 Sm Hardware
- 4 Ltg & Electr
- 5 Drug
- 6 Lg Home Imprv

**Q\_6b1 to Q\_6b13** In what city is the store in?

**Q\_6c1 to Q\_6c5** How many packages, in total, did you buy from the [store] in [city] to use in a home?

\_\_\_\_ Enter number of packages of CFLs

**Q\_6d1\_1 to Q\_6d13\_5** Now, thinking about the [package] package - of the ones you bought from [store] in [city] to use in a home, how many CFLs were in the package?

\_\_\_\_ Enter number of CFLs in package

**Q\_6e1\_1 to Q\_6e13\_5** And approximately what was the price of that package?

- \_\_\_ Dollars
- 8 Don't know
- 9 Refused

**Q\_6f1\_1 to Q\_6f13\_5** Do you know if this particular package of CFLs was part of a utility promotion or utility sponsored sale? There might have been a sticker on the package or a utility sign or display in the store.

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

**Q\_6f1a\_1 to Q\_6f13a\_5** Did you buy more than one of this type of package at [store]

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

**Q\_6f1b\_1 to Q\_6f13b\_13** How many did you buy?

- \_\_\_ Number of this type of CFL package
- 8 Don't know
- 9 Refused

**Q\_6g** Earlier, you said that you had bought around [INSERT Q\_6] in the past three months to use in a home, but when I add up each of your purchases, I get [INSERT TOTAL CFLS FROM CHART]. Should I assume that adding up your purchases is a better estimate of the number of CFLs you have purchased in the past three months?

- 1 Yes (Skip to Q\_7)
- 2 No
- 8 Don't know
- 9 Refused

**Q\_6h** Is there a purchase that we did not discuss?

- 1 Yes [GO BACK TO Q\_6A AND ADD "THAT WE DIDN'T ALREADY DISCUSS" TO THE END OF THE QUESTION. REPEAT Q\_6B – Q6\_F]
- 2 No
- 8 Don't know
- 9 Refused

**Q\_6i** Which number most accurately represents the total number of CFLs you have purchased in the past three months to use in a home? Is it ...

- 1 [Q\_6]
- 2 [TOTAL FROM CHART]
- 8 Don't know
- 9 Refused

**Q7** You mentioned that you [READ IF TOTAL CFLS>1 for Q\_6 or Q\_6i: also] have been given CFLs in the past three months, either by somebody else or at a CFL giveaway event. How many CFLs have you been given in the past three months?

- 0 None (SKIP TO Q\_8)
- \_\_\_ (Enter # of CFLs)
- 8 DON'T KNOW
- 9 REFUSED

Q\_7a Where or from whom did you receive these CFLs?

- Q\_7a\_1 PG&E
- Q\_7a\_2 SDGE
- Q\_7a\_3 SCE
- Q\_7a\_4 Other utility
- Q\_7a\_5 Sierra Club
- Q\_7a\_6 Girl/Boy Scout
- Q\_7a\_7 Sporting Event
- Q\_7a\_8 Employer/Business Meeting (Specify)
- Q\_7a\_9 Retail Store (Specify)
- Q\_7a\_10 School (Specify)
- Q\_7a\_11 Friend/family
- Q\_7a\_12 Other (Specify)
- Q\_7a\_13 Don't know
- Q\_7a\_14 Refused

Q\_7bm\_1 to Q\_7bm\_12 What month did you receive these CFLs from (event/person)?

- \_\_\_ Month
- 8 Don't know
- 9 Refused

Q\_7bD\_1 to Q\_7bD\_12 What date did you receive these CFLs from (event/person)?

- \_\_\_ Date
- 8 Don't know
- 9 Refused

Q\_8 You mentioned that you bought or had been given CFLs in the past three months. How many of these are currently installed inside or outside of your home?

- \_\_\_ Enter # of CFLs installed
- 8 Don't know
- 9 Refused

Q\_9 (If Q\_3 = 1) How many of the [total CFLs] CFLs you bought or had been given in the last three months are currently being stored?

- \_\_\_ Enter # of CFLs stored
- 8 Don't know
- 9 Refused

[If all CFLs are installed or stored, skip to Q\_11]

Q\_10 What did you do with the other CFLs you purchased or were given in the past three months that were neither installed nor stored?

- Q\_10\_1 They burned out
- Q\_10\_2 Using them in another home
- Q\_10\_3 Storing them in another home
- Q\_10\_4 Using them at office/work/other
- Q\_10\_5 Storing them at office/work/other nonresidential location
- Q\_10\_6 Gave them away
- Q\_10\_7 Misplaced them
- Q\_10\_8 Other
- Q\_10\_9 Don't know
- Q\_10\_10 Refused

Q\_11 [ASK ONLY IF Q\_3 = 1] Have you installed any *other* CFLs in the past three months on the inside or outside of your home – that is, other than the [quantity of CFLs] CFLs we just discussed?

- 1 Yes
- 2 No (SKIP to A1)
- 8 Don't know (SKIP to A1)
- 9 Refused (SKIP to A1)

Q\_11a How many *other* CFLs did you install in the past three months?

- \_\_ Enter #
- 8 Don't know
- 9 Refused

2006-2008 CFL Purchaser Section

Alntro Now I'd like to ask about any CFLs you've purchased or received more than three months ago.

**A1** [Show if purchased CFLs in last three months: Not counting the CFLs we just talked about,]  
Have you purchased any CFLs at retail stores for use in a home since January 1, 2006?

- 1 Yes
- 2 No (SKIP TO Q\_12)
- 8 DON'T KNOW (SKIP TO Q\_12)
- 9 REFUSED (SKIP TO Q\_12)

**A2** Approximately, how many CFLs – in total – did you buy since January 1, 2006 for use in a home? Please try to estimate the total number of CFL bulbs, as opposed to packages.

- \_\_\_ (Enter # of CFLs)
- 8 DON'T KNOW (SKIP to Q\_12)
- 9 REFUSED (SKIP to Q\_12)

**A3a** How many of these [A2 quantity] CFLs did you purchase in 2006 for use in a home? Your best estimate is fine.

- \_\_\_ # CFLs purchased in 2006
- 0 None
- 8 DON'T KNOW
- 9 REFUSED

**A3b** How many of these [A2 quantity] CFLs did you purchase in 2007 for use in a home? Your best estimate is fine.

- \_\_\_ # CFLs purchased in 2007
- 0 None
- 8 DON'T KNOW
- 9 REFUSED

**A3c** How many of these [A2 quantity] CFLs did you purchase in 2008 for use in a home? Your best estimate is fine.

- \_\_\_ # CFLs purchased in 2008
- 0 None
- 8 DON'T KNOW
- 9 REFUSED

**A4** Of the [insert total number CFLs purchased from A2] CFLs you purchased since January 1, 2006, how many are currently installed on the inside or outside your home?

- \_\_\_ (Enter # of CFLs)
- 8 DON'T KNOW (SKIP TO Q\_12)
- 9 REFUSED (SKIP TO Q\_12)

**A4aa** [[f A3a>0] I know this might be hard to recall, but can you tell me if all, some, or none of the [read qty of 2006 CFL purchases from Aa3] CFLs you purchased in 2006 were installed in 2006?

- 1 All
- 2 Some
- 3 None
- 8 DON'T KNOW
- 9 REFUSED

**A4ab** [[f A3a>0] I know this might be hard to recall, but can you tell me if all, some, or none of the [read qty of 2006 CFL purchases from Aa3] CFLs you purchased in 2006 were installed in 2007?

- 1 All
- 2 Some
- 3 None
- 8 DON'T KNOW
- 9 REFUSED

**A4ac** [[f A3a A3>0] I know this might be hard to recall, but can you tell me if all, some, or none of the [read qty of 2006 CFL purchases from A3a] CFLs you purchased in 2006 were installed in 2008?

- 1 All
- 2 Some
- 3 None
- 8 DON'T KNOW
- 9 REFUSED

**A4ba** [[f A3b>0] [Again,] I know this might be hard to recall, but can you tell me if all, some, or none of the [read qty of 2007 CFL purchases from A3b] CFLs you purchased in 2007 were installed in 2007?

- 1 All
- 2 Some
- 3 None
- 8 DON'T KNOW
- 9 REFUSED

**A4bb** [[f A3b>0] [Again,] I know this might be hard to recall, but can you tell me if all, some, or none of the [read qty of 2007 CFL purchases from A3b] CFLs you purchased in 2007 were installed in 2008?

- 1 All
- 2 Some
- 3 None
- 8 DON'T KNOW
- 9 REFUSED



**A4c** [If A3c>0] [Again.] I know this might be hard to recall, but can you tell me if all, some, or none of the [read qty of 2008 CFL purchases from A3c] CFLs you purchased in 2008 were installed in 2008?

- 1 All
- 2 Some
- 3 None
- 8 DON'T KNOW
- 9 REFUSED

**A5** [If A4<A2, ask] You said that you purchased [read A2] CFLs to use in a home but have only installed [read A4], what happened to the other [read A2-A4] CFLs?

- For A5\_1 – 11:
- 0 Not mentioned
  - 1 Mentioned

- A5\_1** They burned out
- A5\_2** Using them in another home (ASK CITY, STATE WHERE HOME IS LOCATED)
- A5\_3** Storing them in another home (ASK CITY, STATE WHERE HOME IS LOCATED)
- A5\_4** Using them at office/work/other nonresidential location (ASK CITY, STATE WHERE OFFICE IS LOCATED)
- A5\_5** Storing them in office/work/other nonresidential location (ASK CITY, STATE WHERE OFFICE IS LOCATED)
- A5\_6** Gave them away (ASK IF THEY KNOW CITY, STATE WHERE THEY WENT)
- A5\_7** Misplaced them
- A5\_8** Other (SPECIFY)
- A5\_9** DON'T KNOW
- A5\_10** REFUSED
- A5\_11** Storing in own home

**A6** [Ask if A5=3 or A5=5 or A5=11] Approximately when do you think you will install the CFLs you currently have in storage? Will it be:

- 1 Within the next month
- 2 Within the next three months
- 3 Within the next six months
- 4 Within the next year
- 5 More than one year from now
- 6 Other (SPECIFY)
- 8 DON'T KNOW
- 9 REFUSED

**CFL User Characterization Section**

**Q\_12Int** Do you currently have any incandescent light bulbs installed in your home?

- 1 Yes
- 2 No (SKIP TO Q\_13)
- 8 DON'T KNOW (SKIP TO Q\_13)
- 9 REFUSED (SKIP TO Q\_13)

**Q\_12** When your next incandescent light bulb burns out, what will you do?

- 1 Replace it with another incandescent from storage/cabinet
- 2 Buy another incandescent from the store to replace it (SKIP TO Q\_13)
- 3 [ONLY READ IF Q\_3 = 1] Replace it with a CFL from storage/cabinet (SKIP TO Q\_12b)
- 4 Buy a CFL from the store and replace it (SKIP TO Q\_13)
- 5 Other (SPECIFY) (SKIP TO Q\_13)
- 8 DON'T KNOW (SKIP TO Q\_13)
- 9 REFUSED (SKIP TO Q\_13)

**Q\_12a** If you didn't have incandescent in storage/cabinet, what would you do?

- 1 Buy an incandescent from the store to replace it (SKIP TO Q\_13)
- 2 [ONLY READ IF Q\_3 = 1] Replace it with a CFL from storage/cabinet (SKIP TO Q\_13)
- 3 Buy a CFL from the store and replace it (SKIP TO Q\_13)
- 4 Other (SPECIFY) (SKIP TO Q\_13)
- 8 DON'T KNOW (SKIP TO Q\_13)
- 9 REFUSED (SKIP TO Q\_13)

**Q\_12b** [ONLY READ IF Q\_3 = 1] If you didn't have any CFLs in storage/cabinet, what would you do?

- 1 Replace it with incandescent from storage/cabinet
- 2 Buy an incandescent from the store and replace it
- 3 Buy a CFL from the store and replace it
- 4 Other (SPECIFY)
- 8 DON'T KNOW
- 9 REFUSED

**Q\_13** [ASK IF Q\_2=1] When your next CFL burns out, what will you do?

- 1 [ONLY READ IF Q\_3 = 1] Replace it with another CFL from storage/cabinet
- 2 Buy another CFL from the store to replace it (SKIP TO Q\_14)
- 3 Replace it with an incandescent from storage/cabinet (SKIP TO Q\_13b)
- 4 Buy an incandescent from the store and replace it (SKIP TO Q\_14)
- 5 Other (SPECIFY) (SKIP TO Q\_14)
- 8 DON'T KNOW (SKIP TO Q\_14)
- 9 REFUSED (SKIP TO Q\_14)

**Q\_13a** [ONLY READ IF Q\_3 = 1] If you didn't have any CFLs in storage/cabinet, what would you do?

- 1 Buy another CFL from the store to replace it (SKIP TO Q\_14)
- 2 Replace it with an incandescent from storage/cabinet (SKIP TO Q\_14)
- 3 Buy an incandescent from the store and replace it (SKIP TO Q\_14)
- 4 Other (SPECIFY) (SKIP TO Q\_14)
- 8 DON'T KNOW (SKIP TO Q\_14)
- 9 REFUSED (SKIP TO Q\_14)

**Q\_13b** If you didn't have any incandescents in storage/cabinet, what would you do? [READ ALL, ACCEPT ONLY ONE, ROTATE ANSWERS]

- 1 Replace it with another CFL from storage/cabinet
- 2 Buy another CFL from the store and replace it
- 3 Buy an incandescent from the store and replace it
- 4 Other (SPECIFY)
- 8 DON'T KNOW
- 9 REFUSED

**Q\_14** [ASK IF Q\_1 = 1] I am going to describe six ways in which people use their CFL bulbs. Please tell me which of the following best applies to your household. More than one may apply. Please select the most appropriate or best answer for your household.

- 1 I have purchased CFLs in the past but I do not like them and will not buy them again
- 2 I replace burnt out bulbs with whatever is most convenient at the time, whether it be a CFL or an incandescent or something else that works
- 3 Whenever an incandescent burns out, I replace it with a CFL if it can work in that fixture
- 4 I have CFLs in every location that I am willing to put them
- 5 I have CFLs in every fixture that they work in, to the best of my knowledge
- 6 Every single lamp in my household uses CFLs, including lamps with small light bulbs and fixtures with specialty controls such as dimmers
- 7 Other (SPECIFY)
- 8 DON'T KNOW
- 9 REFUSED

**Q\_15** In the past two years, have you had any CFLs that you installed but then removed before they burned out?

- 1 Yes
- 2 No (SKIP TO NEXT SECTION)
- 8 DON'T KNOW (SKIP TO NEXT SECTION)
- 9 REFUSED (SKIP TO NEXT SECTION)

Upstream Lighting Program – CFL User Codebook

Q\_15a What were the main reasons for removing the CFLs? [ACCEPT MULTIPLE, DO NOT READ]

For Q\_15a\_1 – 11:

0 Not mentioned

1 Mentioned

Q\_15a\_1 Didn't like the color

Q\_15a\_2 It took too long to start up

Q\_15a\_3 It wasn't bright enough

Q\_15a\_4 Didn't like the way it looked

Q\_15a\_5 It didn't fit

Q\_15a\_6 It made noise / buzzed

Q\_15a\_7 Other (SPECIFY)

Q\_15a\_8 Don't Know

Q\_15a\_9 Refused

Q\_15a\_10 It didn't work in a dimmer switch

Q\_15a\_11 It wasn't available in 3-way

Q\_15b What type of bulb did you use to replace the CFL(s) you removed?

1 Incandescent

2 CFL

3 Both

4 Other (SPECIFY)

-8 DON'T KNOW

-9 REFUSED

**Nonresidential CFL Purchaser Section**

[If using or storing CFLs in nonresidential location from either Q\_10=4 or 5 or A5=4 or 5, skip Q\_16 and use the following as a lead-in for Q\_17: "You mentioned previously that you purchased or were given CFLs that you are using or storing at your office, at work, or at some other nonresidential location."]

**Q\_16** Have you or someone else in your household ever purchased any CFLs at retail stores and installed them at your office, at work or at some other nonresidential location?

- 1 Yes
- 2 No (SKIP TO NEXT SECTION)
- 8 DON'T KNOW (SKIP TO NEXT SECTION)
- 9 REFUSED (SKIP TO NEXT SECTION)

**Q\_17** Since January 1, 2006, approximately how many total CFLs bulbs, not packages, did you or someone else in your household purchase at retail stores and install at your office, at work or at some other nonresidential location?

- \_\_\_ (Enter # of CFLs)
- 8 DON'T KNOW
- 9 REFUSED

**Demographics Section**

We're almost finished. I just have a few questions about your household to make sure we're getting a representative sample of [utility] residents.

**D1** Do you own or rent your home?

- 1 Own
- 2 Rent
- 3 Other (SPECIFY)
- 8 DON'T KNOW
- 9 REFUSED

**D2** In what type of building do you live? [READ LIST IF NEEDED]

- 1 A one-family home detached from any other house
- 2 A one-family home attached to one or more houses
- 3 A building with 2 apartments
- 4 A building with 3 or 4 apartments
- 5 A building with 5 or more apartments
- 6 A mobile home
- 7 Other (SPECIFY)
- 8 DON'T KNOW
- 9 REFUSED

**Comment [AP1]:** Changed order of responses (moved mobile home to end) to remain consistent with other CPUC studies

**D3** About when was this building first built? [READ LIST IF NEEDED]

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 8 DON'T KNOW
- 9 REFUSED

**D4** How many square feet of living space are there in your residence, including bathrooms, foyers and hallways? (Exclude garages, basements and unheated porches.)

- 1 Less than 500
- 2 501 – 1000
- 3 1001 – 1500
- 4 1501 – 2000
- 5 2001 – 2500
- 6 2501 – 3000
- 7 Greater than 3000
- 8 DON'T KNOW
- 9 REFUSED

**D5** How many full or half bathrooms do you have in your home?

- \_\_\_ (Enter # of bathrooms)
- 8 DON'T KNOW
- 9 REFUSED

**D6** How many bedrooms do you have in your home (If a one-room efficiency, or studio apartment, bedrooms=0)

- \_\_\_ (Enter # of bedrooms)
- 8 DON'T KNOW
- 9 REFUSED

**D7** Other than bedrooms and bathrooms, how many other rooms are there in your home? Do not count laundry rooms, foyers, unfinished storage spaces, porches, or garages.

- \_\_\_ (Enter # of other rooms)
- 8 DON'T KNOW
- 9 REFUSED

**D8** Including yourself, how many people currently live in your home year-round?

- \_\_\_ (Enter # of people)
- 8 DON'T KNOW
- 9 REFUSED

**D9** [IF D8=1] Which of the following best describes your age?

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

**D10** [IF D8>1] Including yourself, how many people currently living in your home year-round are in the following age groups?

- D10a** \_\_\_ Less than 18 years old
- D10b** \_\_\_ 18-24 years old
- D10c** \_\_\_ 25-34 years old
- D10d** \_\_\_ 35-44 years old
- D10e** \_\_\_ 45-54 years old
- D10f** \_\_\_ 55-64 years old
- D10g** \_\_\_ 65 or older
- 8 DON'T KNOW
- 9 REFUSED

- D11** What is the highest level of education you have completed?
- 1 no schooling
  - 2 less than high school
  - 3 some high school
  - 4 high school graduate or equivalent (e.g., GED)
  - 5 trade or technical school
  - 6 some college
  - 7 college graduate degree
  - 8 some graduate school
  - 9 graduate degree
  - 77 Other (SPECIFY)
  - 8 DON'T KNOW
  - 9 REFUSED
- D12** Which of the following best represents your annual household income from all sources in 2007, before taxes? Was it . . . ? (READ)
- 1 Less than \$20,000 per year
  - 2 \$20,000-49,999
  - 3 \$50,000-74,999
  - 4 \$75,000-99,999
  - 5 \$100,000-149,999
  - 6 \$150,000-199,999
  - 7 \$200,000 or more
  - 8 DON'T KNOW
  - 9 REFUSED
- D13** Are you Spanish/Hispanic/Latino?
- 1 Yes
  - 2 No
  - 8 DON'T KNOW
  - 9 REFUSED
- D14** What is your race? [INDICATE ALL THAT APPLY]
- For D14\_1 – 16:
- 0 Not mentioned
  - 1 Mentioned
- D14\_1** White
- D14\_2** Black or African American
- D14\_3** American Indian or Alaska Native
- D14\_4** Asian
- D14\_5** Chinese
- D14\_6** Japanese
- D14\_7** Korean
- D14\_8** Vietnamese
- D14\_9** Filipino
- D14\_10** Native Hawaiian
- D14\_11** Pacific Islander
- D14\_12** Guamanian or Chamorro



- D14\_13 Samoan
- D14\_14 Other (SPECIFY)
- D14\_15 DON'T KNOW
- D14\_16 REFUSED

D15 What is the primary language spoken in your home? (DO NOT READ)

- 1 English
- 2 Spanish
- 3 Mandarin
- 4 Cantonese
- 5 Tagalog
- 6 Korean
- 7 Vietnamese
- 8 Russian
- 9 Japanese
- 10 Other (SPECIFY)
- 8 DON'T KNOW
- 9 REFUSED

D16 RECORD GENDER

- 1 Male
- 2 Female
- 8 DON'T KNOW

D17 Have you made any of the following improvements to your home since October 2005?  
[READ ALL]

- For D17\_1 – 7:
- 0 Not mentioned
  - 1 Mentioned

- D17\_1 Replaced major components in your heating or air conditioning systems?
- D17\_2 Added or replaced windows?
- D17\_3 Added ceiling insulation
- D17\_4 Created a room addition
- D17\_5 No [SKIP TO A1\_1]
- D17\_6 (DON'T KNOW) [SKIP TO L1]
- D17\_7 (REFUSED) [SKIP TO A1\_1]

[Ask D18-D20 for each improvement: a = heating/AC; b = windows; c = ceiling insulation; d = room addition (d series skipped due to programming error)]

D18a – D18c Did you hire a contractor to [home improvement]?

- 1 Yes, I hired a general contractor
- 2 Yes, I hired a specialty contractor (for example, an HVAC contractor or insulation contractor)
- 3 No, I did the work myself
- 4 No, family/friend/neighbor did the work
- 8 DON'T KNOW
- 9 REFUSED

**D19a – D19c** Did you or your contractor get a building permit for [home improvement]?

- 1 Yes, contractor obtained one
- 2 Yes, I obtained one
- 3 No, it wasn't needed
- 4 Don't recall
- 8 DON'T KNOW
- 9 REFUSED

**D20a – D20c** Did you get any type of inspection for [home improvement]?

- 1 Yes
- 2 No, it wasn't needed
- 3 Don't recall
- 8 DON'T KNOW
- 9 REFUSED

**Lighting Follow-up Survey / Metering Study Recruitment Section**

[ASK ALL RESPONDENTS]

**L1** In order to better understand how households like yours use different types of light bulbs, we are going to conduct another research study – sponsored by the California Public Utilities Commission and [utility name] in the near future. These studies will likely involve an on-site visit, and you will be paid between \$25 and \$100, depending on the type and duration of the visit. Can we have one of our researchers contact you to make an appointment for this upcoming phase of the research project?

- 1 Yes
- 2 No (ATTEMPT TO CONVERT)
- 8 DON'T KNOW (ATTEMPT TO CONVERT)
- 9 REFUSED (ATTEMPT TO CONVERT)

**Sample Variables**

**Respnum\$** Respondent number

**Fname** First name

**Lname** Last name

**Address** Address

**City** City

**State** State

**zipco** Zip code

**area** Area code

**phone** Phone number

**rep** Replicate

**utility** Utility

**choice** Recycled appliance

**kemaid** KEMA ID

## Upstream Lighting Program – CFL User Survey

User Breakdown		
Respondent Type	Description	Relevant Questions/ Responses
Unaware	Respondents who are unaware of CFLs, even after prompting	S1<>1 &S2<>1
Non-Purchasers (CFLs)	Respondents who have never purchased any CFLs	Q_1=3
Non-Users (CFLs)	Respondents who are currently not using or storing CFLs at their home	Q_2<>1 & Q_3<>1
3mo CFL purchaser	Respondents who purchased CFLs within the last three months	Q_5=1 or Q_5=3
06-08 CFL purchaser	Respondents who purchased CFLs since January 1, 2006	A2>0
3mo incandescent purchaser	Respondents who purchased incandescents within the last three months	OTH1=1

**RESPNUM\$** Respondent Number

### Introduction

**DIALSCR** Hello, my name is *[interviewer name]*, and I'm calling on behalf of the California Public Utilities Commission. We are contacting households to discuss how you use different types of light bulbs in your home. May I speak with someone who is the most knowledgeable about household purchases?  
*(EXPLAIN IF THERE IS MORE THAN ONE DECISION-MAKER WE ONLY NEED TO TALK TO ONE PERSON. ARRANGE CALL BACK IF RESPONDENT NOT AVAILABLE)*

This call may be recorded or monitored for quality assurance purposes.

**Screener Section**

**S1** Before we get started, I'd like to ask you a few questions about your awareness of different types of light bulbs. Before this call today, had you ever heard of compact fluorescent bulbs, or CFLs?

- 1 Yes (*SKIP TO S3*)
- 2 No
- 8 Don't know
- 9 Refused

**S2** Compact fluorescent light bulbs – also known as CFLs – usually do not look like regular incandescent bulbs. The most common type of CFL is made with a glass tube bent into a spiral, resembling a soft-serve ice cream, and it fits in a regular light bulb socket. Before today, were you familiar with CFLs?

- 1 Yes
- 2 No (*SKIP TO OTH1*)
- 8 Don't know (*SKIP TO OTH1*)
- 9 Refused (*SKIP TO OTH1*)

**S3** How familiar are you with energy saving CFLs? Would you say that you are...

- 1 Very familiar
- 2 Somewhat familiar
- 3 Slightly familiar
- 4 Not at all familiar
- 8 Don't know (*SKIP TO OTH1*)
- 9 Refused (*SKIP TO OTH1*)

**Q1** Have you or anyone else in your household ever purchased or been given any compact fluorescent light bulbs or CFLs to use in a home?

- 1 Yes, R has
- 2 Yes, someone else has  
(*ASK TO SPEAK TO THAT PERSON AND REPEAT INTRO*)
- 3 No (*SKIP TO Q\_2*)
- 8 Don't know (*SKIP TO Q\_2*)
- 9 Refused (*SKIP TO Q\_2*)

**Q1A** In what year did you or someone else in your household purchase or receive your first CFL for use in your home?

- 1 2009

- 2 2008
- 3 2007
- 4 2006
- 5 2005
- 6 2004
- 7 2003
- 8 2002
- 9 2001
- 10 2000
- 11 1998-1999
- 12 1993-1997
- 13 1990-1992
- 14 Other (*SPECIFY*)
- 4 Skip Error
- 8 Don't know
- 9 Refused (*SKIP TO Q\_2*)

**Q1A\_14** Other time period purchased specified

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

*[ASK Q\_1B IF Q\_1A=-8 or 14, ELSE SKIP TO Q\_1C]*

**Q\_1B** Was it... (*READ LIST. RECORD ONLY ONE RESPONSE*)

- 1 In 2009
- 2 In 2008
- 3 n 2007 or 2006
- 4 Before 2006
- 8 Don't know
- 9 Refused

*[ASK Q\_1C IF Q\_1A=1 OR 2 OR Q\_1B=1 or 2 ELSE SKIP TO Q\_2]*

**Q\_1C** In what month?

- \_\_\_\_\_ Record month
- 8 Don't know
- 9 Refused

<b>CFL User Section</b>
-------------------------

**Q\_2** Do you currently have any CFLs installed on the inside or outside of your home?

- 1 Yes
- 2 No (*SKIP TO Q\_2c*)

- 8 Don't know (*SKIP TO Q\_2c*)
- 9 Refused (*SKIP TO Q\_2c*)

**Q\_2A** About how many CFLs are currently installed on the inside or outside of your home? (*ENTER NUMBER*)

- \_\_\_\_\_ Number of CFLs
- 8 Don't know (*SKIP TO Q\_3*)
  - 9 Refused (*SKIP TO Q\_3*)

**Q\_2B** Did you have these same [*Q\_2a quantity*] CFLs installed three months ago, before [*FILL MONTH*], 2009?

- 1 Yes (*SKIP TO Q\_3*)
- 2 No
- 8 Don't know
- 9 Refused

**Q\_2C** About how many CFLs were installed on the inside or outside of your home three months ago? (*ENTER # OF CFLs*)

- \_\_\_\_\_ Number of CFLs
- 8 Don't know (*SKIP TO Q\_3*)
  - 9 Refused (*SKIP TO Q\_3*)

**Q\_3** Are you currently storing any CFLs at your home? This could be in your closet, your pantry, your garage, or anywhere at your home.

- 1 Yes
- 2 No (*SKIP TO Q\_3c*)
- 8 Don't know (*SKIP TO Q\_3c*)
- 9 Refused (*SKIP TO Q\_3c*)

**Q\_3A** About how many CFLs are you storing at your home? (*ENTER # OF CFLs*)

- \_\_\_\_\_ Number of CFLs
- 8 Don't know (*SKIP TO Q\_3C*)
  - 9 Refused (*SKIP TO Q\_3C*)

**Q\_3B** Were you storing these same [*Q\_3a quantity*] CFLs three months ago, before [*FILL MONTH*], 2009?

- 1 Yes (*SKIP TO Q\_4*)
- 2 No
- 8 Don't know



-9 Refused

**Q\_3C** About how many CFLs were you storing at your home 3 months ago?  
(ENTER # OF CFLs)

- \_\_\_\_\_ Number of CFLs
- 8 Don't know
- 9 Refused

[ASK IF Q\_3 = 1]

**Q4** Why are you storing extra CFLs at your home?

For Q4\_1 through Q4\_10

- 0 Not mentioned
- 1 Mentioned

- Q4\_1** So that I have them on hand if a bulb burns out
- Q4\_2** Purchased more CFLs than I needed / in bulk / on sale
- Q4\_3** Bought them in bulk
- Q4\_4** Bought them on sale
- Q4\_5** Can't use them in certain rooms
- Q4\_6** Can't use them in certain applications (e.g. dimmer switch)
- Q4\_7** Didn't like having them installed
- Q4\_8** Other (SPECIFY)
- Q4\_9** Don't know
- Q4\_10** Refused

**Q4\_8** Other reason for storage specified

[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]

[IF Q\_1=3 SKIP TO OTH1, OTHERWISE ASK Q\_5]

**Recent CFL Purchaser Section**

(IF NECESSARY: You mentioned that in the last three months, you have purchased or been given CFLs for use in your home.)

**Q5** Have you purchased or been given any CFLs in the last three months to use in a home, that is since [FILL MONTH], 2009?

- 1 Yes, purchased
- 2 Yes, given (SKIP TO Q\_7)

- 3 Yes, both
- 4 No (SKIP TO A1)
- 8 Don't know (SKIP TO A1)
- 9 Refused (SKIP TO A1)

**Q6** Approximately, how many CFLs – in total – did you buy in the past three months to use in a home? If a package contained multiple CFLs, please count each CFL bulb separately. (ENTER # OF CFLs)

*[PURPOSE OF THIS QUESTION IS TO GET RESPONDENT THINKING ABOUT THE NUMBER OF CFLS. WE WILL CONFIRM THAT THIS NUMBER MATCHES WITH THE RESPONSES TO THE SUBSEQUENT QUESTIONS ON QUANTITIES PURCHASED.]*

- \_\_\_\_\_ Number of CFLs
- 0 None (SKIP to Q\_7 IF GIVEN CFLS. IF NONE GIVEN, SKIP TO A1 )
- 8 Don't know (SKIP to Q\_7 IF GIVEN CFLS. IF NONE GIVEN, SKIP TO A1)
- 9 Refused (SKIP to Q\_7 IF GIVEN CFLS. IF NONE GIVEN, SKIP TO A1)

**Q\_6a1 to Q\_6a13** What was the name of this/these stores?

- 1 \$1 Super Store
- 2 98 Cent World
- 3 99 Cent Depot
- 4 99 Cent Mart
- 5 99 Cents Only
- 6 99 Cents Outlet Plus
- 7 99 Cents Plus
- 8 99 Ranch
- 9 Ace Hardware
- 10 Ace Maintenance Mart
- 11 Albertson's
- 12 All American Home Center
- 13 Arcadia Market
- 14 B & B Hardware
- 15 Best Way Supermarket
- 16 Big A Drugs
- 17 Big Lots
- 18 Big Save 98 Cents
- 19 Big Saver Food
- 20 Cal Do It Center
- 21 Cardenas Market
- 22 Cole Hardware
- 23 Contractor's Warehouse
- 24 Costco
- 25 CVS/Sav-On Drugs
- 26 D & M Gift Store

27	Del Mar Supermarket
28	Discount Club 3
29	Dixieline Lumber
30	Dollar Club
31	Dollar K
32	Dollar Mart
33	Dollar Tree
34	Drug Emporium
35	El Toro Market
36	El Valle Discount
37	Food 4 Less
38	Foothill Builders Mart
39	Friedman Brothers Hardware
40	Fry's Electronics
41	Ganahl Lumber
42	Giant Bargain
43	Grant's Hardware
44	Grocery Outlet
45	Hannam Market
46	Hawaii Supermarket
47	Henry's Farmers Market
48	Home Depot
49	Hong Kong Market
50	JC 98 Cents Plus
51	Jumbo 99
52	Lamps Plus
53	Light Bulbs Etc.
54	Light Bulbs Unlimited
55	Light Concern
56	Lion Foods
57	Long's Drugs
58	Lowes
59	Marukai Market
60	Northgate Markets
61	Orchard Supply
62	Payless Foods
63	Q Bargain
64	Qualy Electric Supply Inc.
65	Ralph's
66	Rite Aid
67	San Gabriel Superstore
68	Shun Fat Supermarket
69	Smart & Final
70	Stater Bros
71	Super 99
72	Super Bargain Inc.
73	Superco Home Theater & Appliances
74	Superfood Warehouse
75	Superior Super
76	T.S. Emporium
77	Tashman's Hardware

78	Tawa Supermarket
79	Todo \$1 Only Store
80	Top Fancy Lighting
81	True Value Hardware
82	Under \$1 Store
83	Valley Thrift Store
84	Victor's Lighting
85	Walgreen's
86	Wal-Mart
87	Winco Foods
88	Target
89	Sam's Club
90	Acme
91	Aldi
92	Genuardi's
93	Hen House Market
94	Hy-Vee
95	Pathmark
96	Price Chopper
97	Safeway
98	Save-A-Lot
99	Superfresh
999	Other
666	End Store Loop
-8	Don't know/refused
-3	Interviewer Code Error

*[If Q\_6a1 to Q\_6a13=999]*

**Q\_6a1aO to Q\_6a13aO** What is the name of the store?

[If Q\_6a1 to Q\_6a13=999 or 777]

**Q\_6a1a to Q\_6a13a** What is the store type?

- 1 Discount store, such as 99 Cent or Dollar Store
- 2 Grocery store
- 3 Small hardware store
- 4 Lighting or electronics store
- 5 Drug store
- 6 Large home improvement store, such as Home Depot, Lowe's or Orchard Supply
- 7 Mass merchandise store, such as Wal-Mart or Target
- 8 Membership club store, such as Costco or Sam's Club

**Q\_6b1 to Q\_6b13** In what city is the [INSERT STORE] store in?

**Q\_6c1 to Q\_6c13** How many packages, in total, did you buy from the [store] in [city] to use in a home? (ENTER NUMBER OF PACKAGES OF CFLs)

- \_\_\_\_\_ Number of packages of CFLs
- 3 Interviewer Code Error

**Q\_6d1\_1 to Q\_6d13\_13** Now, thinking about the [package] package - of the ones you bought from [store] in [city] to use in a home, how many CFLs were in the package?  
(ENTER NUMBER OF CFLS IN PACKAGE)

- \_\_\_\_\_ Number of CFLs
- 3 Interviewer Code Error

[Q\_6d\_total =  $\sum$ Q\_6d1\_1 -- Q\_6d13\_5]

**Q\_6e1\_1 to Q\_6e13\_13** And approximately what was the price of that package?

- \_\_\_\_\_ Dollars
- 8 Don't Know
- 3 Interviewer Code Error

**Q\_6f1\_1 to Q\_6f13\_13** Do you know if this particular package of CFLs was part of a utility promotion or utility sponsored sale? There might have been a sticker on the package or a utility sign or display in the store.

- 1 Yes
- 2 No
- 3 Interviewer Code Error

**Q\_6f1a\_1 to Q\_6f13a\_13** Did you buy more than one of this type of package at [store]?

- 1 Yes
- 2 No
- 3 Interviewer Code Error

**Q\_6f1b\_1 to Q\_6f13b\_13** How many did you buy?

- \_\_\_\_\_ Number of this type of CFL package
- 8 Don't know
- 9 Refused

*[SKIP Q\_6\_CHECK IF Q\_6D\_TOTAL=Q\_6]*

**Q\_6\_CHECK** We just discussed a total of [Q\_6d\_total] CFLs that you purchased at various stores in the last three months. Earlier you said that you purchased a total of [Q\_6] CFLs in the last three months. Should I now use [Q\_6d\_total] as your estimate of the total number of CFLs you purchased in the last three months?

- 1 Yes
- 2 No (GO BACK TO Q\_6c1 AND CORRECT RESPONSES)
- 8 Don't know
- 9 Refused

**Q7** You mentioned that you [READ IF TOTAL CFLS>1 for Q\_6 or Q\_6i: also] have been given CFLs in the past three months, either by somebody else or at a CFL giveaway event. How many CFLs have you been given in the past three months? (ENTER # OF CFLS)

- \_\_\_\_\_ Number of CFLs
- 0 None (SKIP TO Q\_8)
- 8 Don't know
- 9 Refused

**Q\_7A** Where or from whom did you receive these CFLs?  
*(RECORD QUANTITY OF CFLS RECEIVED FROM EACH SOURCE)*

For Q\_7a\_1 –Q\_7a\_11

- 0 Not mentioned
- 1 Mentioned

- Q\_7A\_1** Utility (*SPECIFY*)
- Q\_7A\_2** Sierra Club
- Q\_7A\_3** Girl/Boy Scout
- Q\_7A\_4** Sporting Event
- Q\_7A\_5** Employer/Business Meeting (*SPECIFY*)
- Q\_7A\_6** Retail Store (*SPECIFY*)
- Q\_7A\_7** School (*SPECIFY*)
- Q\_7A\_8** Friend/family
- Q7A\_9** Other (*SPECIFY*)
- Q7A\_10** Don't know
- Q7A\_11** Refused

**Q\_7A\_1** Other utility specified  
*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**Q\_7A\_5** Other employer/business meeting specified  
*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**Q\_7A\_6** Other retail store specified  
*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**Q\_7A\_7** Other school specified  
*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**Q\_7A\_9** Other place or person received specified  
*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**Q\_7AA** How many bulbs did you receive from the ...

For Q\_7AA1 through Q\_7AA9

- \_\_\_\_\_ Number of bulbs
- 8 Don't know
- 9 Refused

- Q\_7AA\_1** Utility?
- Q\_7AA\_2** Sierra Club?
- Q\_7AA\_3** Girl/Boy Scouts?
- Q\_7AA\_4** Sporting Event?
- Q\_7AA\_5** Employer/business meeting?
- Q\_7AA\_6** Retail store?
- Q\_7AA\_7** School?
- Q\_7AA\_8** Friend/family?
- Q\_7AA\_9** Other?

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**Q\_7bm\_1 to Q\_7bm\_9** What month did you receive these CFLs from (event/person)?

- \_\_\_\_\_ Month
- 8 Don't know
- 9 Refused

**Q\_7bm\_1 to Q\_7bm\_9** What date did you receive these CFLs from (event/person)?

- \_\_\_\_\_ Date
- 8 Don't know
- 9 Refused

**Q\_8** You mentioned that you bought or had been given [Q\_6+Q\_7] CFLs in the past three months. How many of these are currently installed inside or outside of your home? (ENTER # OF CFLs INSTALLED)

- \_\_\_\_\_ Number of CFLs
- 8 Don't know
- 9 Refused
- 3 Interviewer Code Error

*[If Q\_3 = 1]*



**Q\_9** How many of the [Q\_6+Q\_7] CFLs you bought or had been given in the last three months are currently being stored at your home?

- \_\_\_\_\_ Number of CFLs  
 -8 Don't know  
 -9 Refused

*[If Q\_6+Q\_7 = Q\_8+Q\_9 SKIP TO Q\_11]*

**Q\_10** You mentioned that [Q\_8] of the CFLs you purchased in the last three months are currently installed, and [Q\_9] are currently being stored. What did you do with the other CFLs  $[(Q_6+Q_7)-(Q_8+Q_9)]$  you purchased or were given in the past three months that were neither installed nor stored? *(RECORD QUANTITY OF CFLS FOR EACH RESPONSE)*

For Q\_10\_1 to Q\_10\_13

- 0 Not mentioned  
 1 Mentioned  
 -2 Respondent Inconsistency

- Q\_10\_1** They burned out  
**Q\_10\_2** Using them in another home  
**Q\_10\_3** Storing them in another home  
**Q\_10\_4** Using them at office/work/other nonresidential location  
**Q\_10\_5** Storing them in office/work/other nonresidential location  
**Q\_10\_6** Gave them away  
**Q\_10\_7** Misplaced them  
**Q\_10\_8** They broke  
**Q\_10\_9** Returned them to the store  
**Q\_10\_10** Installed them but later removed  
**Q\_10\_11** Other (*SPECIFY*)  
**Q\_10\_12** Don't know  
**Q\_10\_13** Refused

**Q\_10\_2** ASK CITY, STATE WHERE HOME IS LOCATED

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**Q\_10\_3** ASK CITY, STATE WHERE HOME IS LOCATED

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**Q\_10\_4** ASK CITY, STATE WHERE OFFICE IS LOCATED

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**Q\_10\_5** ASK CITY, STATE WHERE OFFICE IS LOCATED

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**Q\_10\_6** ASK IF THEY KNOW CITY, STATE WHERE THEY WENT

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**Q\_10\_11** Other storage specified

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**Q\_10A** How many bulbs...

For Q\_10A1 through Q\_10A11

*(Ask if Q\_10\_1=1)*

\_\_\_\_\_ Number of bulbs

-8 Don't know

-9 Refused

**Q\_10A1** Burned out?

**Q\_10A2** Are being used in another home?

**Q\_10A3** Are being stored in another home?

**Q\_10A4** Are being used at office/work?

**Q\_10A5** Are being stored at office/work?

**Q\_10A6** Were given away?

**Q\_10A7** Were misplaced?

**Q\_10A8** Broke?

**Q\_10A9** Were returned to the store?

**Q\_10A10** Were installed but later removed?

**Q\_10A11** Did something else happen to?

*[TOTAL QUANTITY RECORDED IN Q\_10\_1 – Q\_10\_13 MUST EQUAL [(Q\_6+Q\_7)-(Q\_8+Q\_9)] FROM ABOVE]*

*[ASK ONLY IF Q\_10\_10=1]*

Q\_10C      You said [Q\_10\_10 quantity] CFLs were installed but have since been removed. Why were the bulbs removed?

For Q\_10C\_1 through Q\_10C\_11

- 0      Not mentioned
- 1      Mentioned

- Q\_10C\_1      Didn't like the color
- Q\_10C\_2      It took too long to start up
- Q\_10C\_3      It wasn't bright enough
- Q\_10C\_4      Didn't like the way it looked
- Q\_10C\_5      It didn't fit
- Q\_10C\_6      It made noise/buzzed
- Q\_10C\_7      It didn't work in a dimmer switch
- Q\_10C\_8      It wasn't available in 3-way
- Q\_10C\_9      Other (*SPECIFY*)
- Q\_10C\_10      Don't know
- Q\_10C\_11      Refused

Q\_10C\_9      Other reason for removal specified

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

*[ASK ONLY IF Q\_10\_10=1]*

Q\_10B      What type of bulb did you use to replace the CFL(s) you removed?

- 1      Incandescent
- 2      CFL
- 3      Both
- 4      Other (*SPECIFY*)
- 8      Don't know
- 9      Refused

Q\_10B\_4      Other type of bulb specified

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

*[ASK ONLY IF Q\_10\_10=1]*

Q\_10D           What happened to the bulbs that you installed but later removed?  
*[RECORD DISPOSITION FOR EACH BULB INSTALLED BUT LATER  
 REMOVED FROM Q\_10\_10]*

For Q\_10D\_1 through Q\_10D\_15

- 0       Not mentioned
- 1       Mentioned

- Q\_10D\_1   Storing them in this home
- Q\_10D\_2   They burned out
- Q\_10D\_3   Using them in another home
- Q\_10D\_4   Storing them in another home
- Q\_10D\_5   Using them at office/work/other nonresidential location
- Q\_10D\_6   Storing them in office/work/other nonresidential location
- Q\_10D\_7   Gave them away
- Q\_10D\_8   Misplaced them
- Q\_10D\_9   They broke
- Q\_10D\_10  Returned them to the store
- Q\_10D\_11  Threw them away in the trash
- Q\_10D\_12  Recycled them
- Q\_10D\_13  Other (*SPECIFY*)
- Q\_10D\_14  Don't know
- Q\_10D\_15  Refused

Q\_10D\_3       ASK CITY, STATE WHERE HOME IS LOCATED  
*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

Q\_10D\_4       ASK CITY, STATE WHERE HOME IS LOCATED  
*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

Q\_10D\_5       ASK CITY, STATE WHERE OFFICE IS LOCATED  
*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

Q\_10D\_6       ASK CITY, STATE WHERE OFFICE IS LOCATED  
*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

Q\_10D\_7       ASK IF THEY KNOW CITY, STATE WHERE THEY WENT  
*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**Q\_10D\_13** Other reason for removal specified

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**Q\_10E** How many bulbs...

- \_\_\_\_\_ Number of bulbs
- 8 Don't know
- 9 Refused

- Q\_10E1** *(Ask if Q\_10d\_1=1)* Are being stored in your home?
- Q\_10E2** *(Ask if Q\_10d\_2=1)* Burned out?
- Q\_10E3** *(Ask if Q\_10d\_3=1)* Are being used in another home?
- Q\_10E4** *(Ask if Q\_10d\_4=1)* Are being stored in another home?
- Q\_10E5** *(Ask if Q\_10d\_5=1)* Are being used at office/work?
- Q\_10E6** *(Ask if Q\_10d\_6=1)* Are being stored at office/work?
- Q\_10E7** *(Ask if Q\_10d\_7=1)* Were given away?
- Q\_10E8** *(Ask if Q\_10d\_8=1)* Were misplaced?
- Q\_10E9** *(Ask if Q\_10d\_9=1)* Broke?
- Q\_10E10** *(Ask if Q\_10d\_10=1)* Were returned to the store?
- Q\_10E11** *(Ask if Q\_10d\_11=1)* Were thrown in the trash?
- Q\_10E12** *(Ask if Q\_10d\_12=1)* Did you recycle?
- Q\_10E13** *(Ask if Q\_10d\_13=1)* Did something else happen to?

*[TOTAL QUANTITY RECORDED IN Q\_10\_10b\_0 – Q\_10\_10b\_14 MUST EQUAL QUANTITY FROM Q\_10\_10 ABOVE]*

*[ASK ONLY IF Q\_3 = 1]*

**Q\_11** Have you installed any other CFLs in the past three months on the inside or outside of your home – that is, other than the *[Q\_8]* CFLs we just discussed?

- 1 Yes
- 2 No *(SKIP to A1)*
- 3 Interviewer Code Error
- 8 Don't know *(SKIP to A1)*
- 9 Refused *(SKIP to A1)*

**Q\_11A** How many other CFLs did you install in the past three months?  
*(ENTER NUMBER OF CFLS)*

- \_\_\_\_\_ Number of CFLs
- 8 Don't know
- 9 Refused

**2006-2008 CFL Purchaser Section**

**AINTRO** Now I'd like to ask about any CFLs you've purchased more than three months ago.

*[Show if purchased CFLs in last three months: Not counting the [Q\_6] CFLs you purchased within the last three months that we just talked about,]*

**A1** Have you purchased any CFLs at retail stores for use in a home in 2006, 2007 or 2008?  
*(INTERVIEWER NOTE: THESE QUESTIONS DO NOT APPLY TO ANY CFL PURCHASES BEFORE 2006 OR IN 2009.)*

- 1 Yes
- 2 No *(SKIP TO OTH1)*
- 8 Don't know *(SKIP TO OTH1)*
- 9 Refused *(SKIP TO OTH1)*

*[Show if purchased CFLs in last three months: Including the [Q\_6] CFLs you purchased within the last three months that we just talked about,]*

**A2** How many CFLs – in total – did you buy in 2006, 2007, 2008 for use in a home? Please try to estimate the total number of CFL bulbs, as opposed to packages. *(ENTER # OF CFLs)*

- \_\_\_\_\_ Number of CFLs
- 8 Don't know *(SKIP TO OTH1)*
- 9 Refused *(SKIP TO OTH1)*

**A3A** How many of these *[A2]* CFLs did you purchase in 2006 for use in a home? Your best estimate is fine. *(ENTER # OF CFLs)*

- \_\_\_\_\_ Number of CFLs purchased in 2006
- 0 None
- 8 Don't know *(SKIP TO OTH1)*
- 9 Refused *(SKIP TO OTH1)*

**A3B** How many of these *[A2]* CFLs did you purchase in 2007 for use in a home? Your best estimate is fine. *(ENTER # OF CFLs)*

- \_\_\_\_\_ Number of CFLs purchased in 2007
- 0 None
- 8 Don't know
- 9 Refused

**A3C** How many of these [A2] CFLs did you purchase in 2008 for use in a home? Your best estimate is fine.

- \_\_\_\_\_ Number of CFLs purchased in 2008
- 0 None
- 8 Don't know
- 9 Refused

**A4** Of the [A2] CFLs you purchased in 2006, 2007 and 2008, how many are currently installed on the inside or outside your home? (*ENTER # OF CFLs*)

- \_\_\_\_\_ Number of CFLs
- 8 Don't know (*SKIP TO OTH1*)
- 9 Refused (*SKIP TO OTH1*)

**A4A** Of the [A2] CFLs you purchased in 2006, 2007, 2008, how many are currently being stored at your home? (*ENTER # OF CFLs*)

- \_\_\_\_\_ Number of CFLs
- 8 Don't know (*SKIP TO OTH1*)
- 9 Refused (*SKIP TO OTH1*)

**A5** You mentioned that [A4] of the CFLs you purchased in 2006, 2007, 2008 are currently installed, and [A4a] are currently being stored. What did you do with the other [A2-(A4+A4a)] CFLs you purchased in 2006, 2007, 2008 that were neither installed nor stored?

For A5\_1 through A5\_13

- 0 Not mentioned
- 1 Mentioned

- A5\_1** They burned out
- A5\_2** Using them in another home
- A5\_3** Storing them in another home
- A5\_4** Using them at office/work/other nonresidential location
- A5\_5** Storing them in office/work/other nonresidential location
- A5\_6** Gave them away
- A5\_7** Misplaced them
- A5\_8** They broke
- A5\_9** Returned them to the store
- A5\_10** Installed them but later removed
- A5\_11** Other (*SPECIFY*)
- A5\_12** Don't know
- A5\_13** Refused

- A5\_2** ASK CITY, STATE WHERE HOME IS LOCATED  
*[SEE RESPONSES LOCATED IN “CFL\_W5 Open Ends.xls”]*
- A5\_3** ASK CITY, STATE WHERE HOME IS LOCATED  
*[SEE RESPONSES LOCATED IN “CFL\_W5 Open Ends.xls”]*
- A5\_4** ASK CITY, STATE WHERE OFFICE IS LOCATED  
*[SEE RESPONSES LOCATED IN “CFL\_W5 Open Ends.xls”]*
- A5\_5** ASK CITY, STATE WHERE OFFICE IS LOCATED  
*[SEE RESPONSES LOCATED IN “CFL\_W5 Open Ends.xls”]*
- A5\_6** ASK IF THEY KNOW CITY, STATE WHERE THEY WENT  
*[SEE RESPONSES LOCATED IN “CFL\_W5 Open Ends.xls”]*
- A5\_11** Other reason for removal specified  
*[SEE RESPONSES LOCATED IN “CFL\_W5 Open Ends.xls”]*
- A5A** How many bulbs...  
 For A5A1 through A5A11  
 \_\_\_\_\_ Number of bulbs  
 -8 Don't know  
 -9 Refused
- A5A1** *(Ask if A5\_1=1) Burned out?*  
**A5A2** *(Ask if A5\_2=1) Are being used in another home?*  
**A5A3** *(Ask if A5\_3=1) Are being stored in another home?*  
**A5A4** *(Ask if A5\_4=1) Are being used at office/work?*  
**A5A5** *(Ask if A5\_5=1) Are being stored at office/work?*  
**A5A6** *(Ask if A5\_6=1) Were given away?*  
**A5A7** *(Ask if A5\_7=1) Were misplaced?*  
**A5A8** *(Ask if A5\_8=1) Broke?*  
**A5A9** *(Ask if A5\_9=1) Were returned to the store?*  
**A5A10** *(Ask if A5\_10=1) Were installed but later removed?*  
**A5A11** *(Ask if A5\_11=1) Did something else happen to?*



*[TOTAL QUANTITY RECORDED IN A5\_1 – A5\_13 MUST EQUAL A2-(A4+A4a) FROM ABOVE]*

*[ASK ONLY IF A5\_10=1]*

**A5C** You said *[A5a10 quantity]* CFLs were installed but have since been removed. Why were the bulbs removed?  
(DO NOT READ LIST, RECORD ALL THAT APPLY)

For A5C\_1 through A5C\_11

0 Not mentioned  
1 Mentioned

**A5C\_1** Didn't like the color  
**A5C\_2** It took too long to start up  
**A5C\_3** It wasn't bright enough  
**A5C\_4** Didn't like the way it looked  
**A5C\_5** It didn't fit  
**A5C\_6** It made noise / buzzed  
**A5C\_7** It didn't work in a dimmer switch  
**A5C\_8** It wasn't available in 3-way  
**A5C\_9** Other (*SPECIFY*)  
**A5C\_10** Don't know  
**A5C\_11** Refused

*[ASK ONLY IF A5\_10=1]*

**A5D** What type of bulb did you use to replace the CFL(s) you removed?

1 Incandescent  
2 CFL  
3 Both  
4 Other (*SPECIFY*)  
-8 Don't know  
-9 Refused

**A5D\_4** Other type of bulbs specified

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

*[ASK ONLY IF A5\_10=1]*

A5\_10D      What happened to the bulbs that you installed but later removed?

For A5\_10D\_1 through A5\_10D\_15

- 0      Not mentioned
- 1      Mentioned

- A5\_10D\_1      Storing them in this home
- A5\_10D\_2      They burned out
- A5\_10D\_3      Using them in another home
- A5\_10D\_4      Storing them in another home
- A5\_10D\_5      Using them at office/work/other nonresidential location
- A5\_10D\_6      Storing them in office/work/other nonresidential location
- A5\_10D\_7      Gave them away
- A5\_10D\_8      Misplaced them
- A5\_10D\_9      They broke
- A5\_10D\_10      Returned them to the store
- A5\_10D\_11      Threw them away in the trash
- A5\_10D\_12      Recycled them
- A5\_10D\_13      Other (*SPECIFY*)
- A5\_10D\_14      Don't know
- A5\_10D\_15      Refused

**A5\_10D\_3**      ASK CITY, STATE WHERE HOME IS LOCATED

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**A5\_10D\_4**      ASK CITY, STATE WHERE HOME IS LOCATED

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**A5\_10D\_5**      ASK CITY, STATE WHERE OFFICE IS LOCATED

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**A5\_10D\_6**      ASK CITY, STATE WHERE OFFICE IS LOCATED

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**A5\_10D\_7**      ASK IF THEY KNOW CITY, STATE WHERE THEY WENT

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**A5\_10D\_13** Other reason for removal specified

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**A5E** How many bulbs...

For A5E1 through A5E11

- \_\_\_\_\_ Number of bulbs
- 8 Don't know
- 9 Refused

- A5E1** (Ask if A5\_10d\_1) Are being stored in your home?
- A5E2** (Ask if A5\_10d\_2) Burned out?
- A5E3** (Ask if A5\_10d\_3) Are being used in another home?
- A5E4** (Ask if A5\_10d\_4) Are being stored in another home?
- A5E5** (Ask if A5\_10d\_5) Are being used at office/work?
- A5E6** (Ask if A5\_10d\_6) Are being stored at office/work?
- A5E7** (Ask if A5\_10d\_7) Were given away?
- A5E8** (Ask if A5\_10d\_8) Were misplaced?
- A5E9** (Ask if A5\_10d\_9) Broke?
- A5E10** (Ask if A5\_10d\_10) Were returned to the store?
- A5E11** (Ask if A5\_10d\_11) Did you throw away in the trash?
- A5E12** (Ask if A5\_10d\_12) Did you recycle?
- A5E13** (Ask if A5\_10d\_13) Did something else happen to?

*[Ask if A5\_3>=1 or A5\_5>=1 or A5\_10b\_0>=1 or A5\_10b\_3>=1 or A5\_10b\_5>1]*

**A6** Approximately when do you think you will install the CFLs you currently have in storage? Will it be:

- 1 Within the next month
- 2 Within the next three months
- 3 Within the next six months
- 4 Within the next year
- 5 More than one year from now
- 6 Other (SPECIFY)
- 8 Don't know
- 9 Refused

**A6\_6** Other time period specified

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**Other Light Bulb Purchases Section**

**OTH1**      Now I have a few questions about some other types of light bulbs you may have purchased recently.

Have you purchased any incandescent light bulbs at retail stores for use in a home in the last three months, that is since *[FILL MONTH]*, 2009?

- 1      Yes
- 2      No (*SKIP TO OTH3*)
- 8     Don't know (*SKIP TO OTH3*)
- 9     Refused (*SKIP TO OTH3*)

**OTH2**      How many incandescent light bulbs – in total – did you buy in the last three months for use in a home? Please try to estimate the total number of incandescent light bulbs, as opposed to packages.

- \_\_\_\_\_ Number of Incandescent Bulbs
- 8     Don't know
  - 9     Refused

**OTH3**      During the past three months, how many other types of bulbs – BESIDES regular incandescent light bulbs and CFLs – did you purchase? This might include halogen bulbs, long fluorescent tubes, and other types of specialty light bulbs.  
*(RECORD NUMBER OF BULBS. IF "DON'T KNOW," PROBE "IS IT LESS THAN OR MORE THAN 5 BULBS?" AND WORK FROM THERE TO GET ESTIMATE)*

- \_\_\_\_\_ Number of Other Light Bulbs
- 8     Don't know
  - 9     Refused

**CFL User Characterization Section**

**Q\_12INT**    Do you currently have any incandescent light bulbs installed in your home?

- 1      Yes
- 2      No (*SKIP TO Q\_13*)
- 8     Don't know (*SKIP TO Q\_13*)
- 9     Refused (*SKIP TO Q\_13*)

**Q\_12** When your next incandescent light bulb burns out, what will you do?

- 1 Replace it with another incandescent from storage/cabinet
- 2 Buy another incandescent from the store to replace it  
(SKIP TO Q\_13)
- 3 [ONLY READ IF Q\_3 = 1] Replace it with a CFL from storage/cabinet (SKIP TO Q\_12b)
- 4 Buy a CFL from the store and replace it (SKIP TO Q\_13)
- 5 Other (SPECIFY) (SKIP TO Q\_13)
- 8 Don't know (SKIP TO Q\_13)
- 9 Refused (SKIP TO Q\_13)

**Q\_12\_5** Other actions specified

[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]

**Q\_12A** If you didn't have incandescents in storage/cabinet, what would you do?

- 1 Buy an incandescent from the store to replace it (SKIP TO Q\_13)
- 2 [ONLY READ IF Q\_3 = 1] Replace it with a CFL from storage/cabinet (SKIP TO Q\_13)
- 3 Buy a CFL from the store and replace it (SKIP TO Q\_13)
- 4 Other (SPECIFY) (SKIP TO Q\_13)
- 8 Don't know (SKIP TO Q\_13)
- 9 Refused (SKIP TO Q\_13)

**Q\_12A\_4** Other actions specified

[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]

[ONLY READ IF Q\_3 = 1]

**Q\_12B** If you didn't have any CFLs in storage/cabinet, what would you do?

- 1 Replace it with incandescent from storage/cabinet
- 2 Buy an incandescent from the store and replace it
- 3 Buy a CFL from the store and replace it
- 4 Other (SPECIFY)
- 8 Don't know
- 9 Refused

**Q\_12B\_4** Other actions specified

[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]

[ASK IF Q\_2=1]

**Q\_13** When your next CFL burns out, what will you do?

- 1 [ONLY READ IF Q\_3 = 1] Replace it with another CFL from storage/cabinet
- 2 Buy another CFL from the store to replace it (SKIP TO Q\_15)
- 3 Replace it with an incandescent from storage/cabinet (SKIP TO Q\_13b)
- 4 Buy an incandescent from the store and replace it (SKIP TO Q\_15)
- 5 Other (SPECIFY) (SKIP TO Q\_15)
- 3 Interviewer Code Error
- 8 Don't know (SKIP TO Q\_15)
- 9 Refused (SKIP TO Q\_15)

**Q\_13\_5** Other action specified

[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]

[ONLY READ IF Q\_3 = 1]

**Q\_13A** If you didn't have any CFLs in storage/cabinet, what would you do?

- 1 Buy another CFL from the store to replace it (SKIP TO Q\_15)
- 2 Replace it with an incandescent from storage/cabinet (SKIP TO Q\_15)
- 3 Buy an incandescent from the store and replace it (SKIP TO Q\_15)
- 4 Other (SPECIFY) (SKIP TO Q\_15)
- 3 Interviewer Code Error
- 8 Don't know (SKIP TO Q\_15)
- 9 Refused (SKIP TO Q\_15)

**Q\_13B** If you didn't have any incandescents in storage/cabinet, what would you do? (READ ALL, ACCEPT ONLY ONE, ROTATE ANSWERS)

- 1 Replace it with another CFL from storage/cabinet
- 2 Buy another CFL from the store and replace it
- 3 Buy an incandescent from the store and replace it
- 4 Other (SPECIFY)
- 3 Interviewer Code Error
- 8 Don't know
- 9 Refused

[Ask if S1=1 or S2=1]

**Q\_15** In 2006, 2007, or 2008 have you had any CFLs that you installed but then removed before they burned out?

- 1 Yes
- 2 No (*SKIP TO Q15b*)
- 8 Don't know (*SKIP TO Q15b*)
- 9 Refused (*SKIP TO Q15b*)

**Q\_15A** What were the main reasons for removing the CFLs?  
(*ACCEPT MULTIPLE, DO NOT READ*)

For Q\_15A\_1 through Q\_15A\_11:

- 0 Not mentioned
- 1 Mentioned

- Q\_15A\_1** Didn't like the color
- Q\_15A\_2** It took too long to start up
- Q\_15A\_3** It wasn't bright enough
- Q\_15A\_4** Didn't like the way it looked
- Q\_15A\_5** It didn't fit
- Q\_15A\_6** It made noise / buzzed
- Q\_15A\_7** Other (*SPECIFY*)
- Q\_15A\_8** Don't know
- Q\_15A\_9** Refused
- Q\_15A\_10** It didn't work in a dimmer switch
- Q\_15A\_11** It wasn't available in 3-way

**Q\_15A\_7** Other reason for removal specified

[*SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"*]

**Q\_15B** Where will you most likely purchase future CFLs, if you buy them at a later date?

- 1 Discount store, such as 99 Cent or Dollar Store
- 2 Grocery store
- 3 Small hardware store
- 4 Lighting or electronics store
- 5 Drug store
- 6 Large home improvement store, such as Home Depot, Lowe's or Orchard Supply
- 7 Mass merchandise store, such as Wal-Mart or Target
- 8 Membership club store, such as Costco or Sam's Club
- 8 Don't know

-9 Refused

*[IF S1 <>1 or S2 <> 1, SKIP TO D1]*

**Q\_15C** At this time, would you recommend CFLs to friends or family members?

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

**Nonresidential CFL Purchaser Section**

*[Q\_16\_total=Σ(Q\_10\_4+Q\_10\_5+A5\_4+A5\_5)]*

*[If using or storing CFLs in nonresidential location from either Q\_10=4 or 5 or A5=4 or 5, skip Q\_16 and use the following as a lead-in for Q\_17: "You mentioned previously that you purchased or were given [Q\_16\_total] CFLs that you are now using or storing at your office, at work, or at some other nonresidential location. Including these [Q\_16\_total] CFLs,"]*

**Q\_16** Have you or someone else in your household ever purchased any CFLs at retail stores and installed them at your office, at work or at some other nonresidential location?

- 1 Yes
- 2 No (*SKIP TO D1*)
- 8 Don't know (*SKIP TO D1*)
- 9 Refused (*SKIP TO D1*)

**Q\_17** Since January 1, 2006, approximately how many total CFLs bulbs, not packages, did you or someone else in your household purchase at retail stores and install at your office, at work or at some other nonresidential location? (*ENTER # OF CFLs*)

- \_\_\_\_\_ Number of CFLs
- 8 Don't know
- 9 Refused



**Q\_18** What type of nonresidential location did you install these [Q\_17] CFLs at?

- 1 Office (non-medical)
- 2 Restaurant/Food Service
- 3 Food Stores (including liquor stores and convenience stores)
- 4 Agricultural (greenhouses...)
- 5 Retail Stores
- 6 Warehouse
- 7 Health Care
- 8 Education
- 9 Lodging
- 10 Public Assembly (church, fitness center, theatre, library, museum, convention center, community center, other rec)
- 11 Services (gas, repair, etc)
- 12 Industrial
- 13 Laundry
- 14 Other (*SPECIFY*)
- 8 Don't know
- 9 Refused

**Q18\_14** Other nonresidential location specified

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**Q\_19** Which of the following statements best describes why you bought the CFLs for use at your office, work or some other nonresidential location?

- 1 I just bought them for use in a lamp on or near my desk or workspace
- 2 I buy all of the lighting for my office, work or other nonresidential location
- 3 I wanted my office, work or nonresidential location to use CFLs and this was the only way to get them to use CFLs
- 4 Other (*SPECIFY*)
- 8 Don't know
- 9 Refused

**Q19\_4** Other reasons specified

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**Demographics Section**

**DIntro** We're almost finished. I just have a few questions about your household to make sure we're getting a representative sample of [utility] residents.

**D1** Do you own or rent your home?

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

**D1\_3** Other type specified

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**D2** In what type of building do you live? (*READ LIST IF NEEDED*)

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

**D2\_7** Other type of building specified

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**D3** About when was this building first built? (*READ LIST IF NEEDED*)

- 1 Before 1970's
- 2 1970's
- 3 1980's
- 4 1990-94
- 5 1995-99
- 6 2000's
- 8 Don't know
- 9 Refused

**D4** How many square feet of living space are there in your residence, including bathrooms, foyers and hallways? (Exclude garages, basements and unheated porches.)

- 1 Less than 500
- 2 501–1000
- 3 1001–1500
- 4 1501–2000
- 5 2001–2500
- 6 2501–3000
- 7 Greater than 3000
- 8 Don't know
- 9 Refused

**D5** How many full or half bathrooms do you have in your home?  
(ENTER # OF BATHROOMS)

- \_\_\_\_\_ Number of bathrooms
- 8 Don't know
- 9 Refused

**D6** How many bedrooms do you have in your home (If a one-room efficiency, or studio apartment, bedrooms=0) (ENTER # OF BEDROOMS)

- \_\_\_\_\_ Number of bedrooms
- 8 Don't know
- 9 Refused

**D7** Other than bedrooms and bathrooms, how many other rooms are there in your home? Do not count laundry rooms, foyers, unfinished storage spaces, porches, or garages. (ENTER # OF OTHER ROOMS)

- \_\_\_\_\_ Number of rooms
- 8 Don't know
- 9 Refused

**D8** Including yourself, how many people currently live in your home year-round? (ENTER # OF PEOPLE)

- \_\_\_\_\_ Number of people
- 8 Don't know
- 9 Refused

[IF D8=1]

**D9** Which of the following best describes your age?

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

*[IF D8>1]*

**D10** Including yourself, how many people currently living in your home year-round are in the following age groups?

For 10A through 10 G

- \_\_\_\_\_ Number of people
- 8 Don't know
- 9 Refused

- D10A** Less than 18 years old
- D10B** 18-24 years old
- D10C** 25-34 years old
- D10D** 35-44 years old
- D10E** 45-54 years old
- D10F** 55-64 years old
- D10G** 65 or older

**D11** What is the highest level of education you have completed?

- 1 no schooling
- 2 less than high school
- 3 some high school
- 4 high school graduate or equivalent (e.g., GED)
- 5 trade or technical school
- 6 some college
- 7 college graduate degree
- 8 some graduate school
- 9 graduate degree
- 77 Other (*SPECIFY*)
- 8 Don't know
- 9 Refused

**D12** Which of the following best represents your annual household income from all sources in 2008, before taxes? Was it . . . ? (*READ*)

- 1 Less than \$20,000 per year
- 2 \$20,000–49,999
- 3 \$50,000–74,999
- 4 \$75,000–99,999
- 5 \$100,000–149,999
- 6 \$150,000–199,999
- 7 \$200,000 or more
- 8 Don't know
- 9 Refused

**D13** Are you Spanish/Hispanic/Latino?

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

**D14** What is your race? (*INDICATE ALL THAT APPLY*)

For D14\_1 through D14\_16

- 0 Not mentioned
- 1 Mentioned

- D14\_1** White
- D14\_2** Black or African American
- D14\_3** American Indian or Alaska Native
- D14\_4** Asian
- D14\_5** Chinese
- D14\_6** Japanese
- D14\_7** Korean
- D14\_8** Vietnamese
- D14\_9** Filipino
- D14\_10** Native Hawaiian
- D14\_11** Pacific Islander
- D14\_12** Guamanian or Chamorro
- D14\_13** Samoan
- D14\_14** Other (*SPECIFY*)
- D14\_15** Don't know
- D14\_16** Refused

**D14\_14** Other race specified

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**D15** What is the primary language spoken in your home? (DO NOT READ)

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

**D15\_10** Other language specified

*[SEE RESPONSES LOCATED IN "CFL\_W5 Open Ends.xls"]*

**D16** Record gender (DO NOT ASK)

- 1 Male
- 2 Female
- 8 Don't know

**Lighting Follow-up Survey Recruitment Section**

**L2** In order to better understand how households like yours use different types of light bulbs, we are going to conduct another research study. This study will involve an on-site visit, and you will be paid \$50 in appreciation of your time and cooperation. Can we have one of our researchers contact you to make an appointment for this upcoming phase of the research project?

- 1 Yes
- 2 No (ATTEMPT TO CONVERT)
- 8 Don't know (ATTEMPT TO CONVERT)
- 9 Refused (ATTEMPT TO CONVERT)

**L2A** Great! Someone from the Cadmus/KEMA team will give you a call back to determine when they can schedule an appointment with one of the auditors in your area. I want to make sure when they call to schedule this visit, they ask for you specifically. They will tell you that I passed on your name. My name is\_\_\_\_\_

**L2B**            What is your name?

\_\_\_\_\_

**L2BB**            What is your address - street address, city, state, and zip?  
(Address will be used during the visit from the auditor)

\_\_\_\_\_

**L2C**            We currently have your phone number listed as...Is this the best number  
to reach you? (If yes, enter shown phone number)  
(If no, record new number)

\_\_\_\_\_

<b>System Variables</b>
-------------------------

<b>CITY</b>	Respondent's city
<b>STATE</b>	Respondent's state
<b>ZIPCO</b>	Respondent's zip code
<b>KEMAID</b>	Unique respondent identifier
<b>UTILCODE</b>	Respondent's utility company
<b>CASEID</b>	Unique respondent identifier

# KEMA, Inc. CFL User Survey VERIFICATION

July-August 2008

SITE ID			
Contact Name		Phone Number	
Service Address		Mailing Address	
Service City		Mailing City	
Service Zip		Mailing Zip	

### INFORMATION TO BE VERIFIED FROM TELEPHONE SURVEY

CFLs in Storage	
CFLs Installed	

### INFORMATION COLLECTED DURING FEILD VISIT

		Tally	Count
Storage	CFLs in Storage		
	Non-CFL Srew bases (Med or Small) in Storage		
Walk-through	CFLs Installed		
	Screw Based sockets with other types of bulbs (incandescents, halogens)		

### NOTES

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[START]

Were you planning to purchase light bulbs when you entered the store today?

Yes

No / DK

What type (or types) of bulbs were you planning to buy?

1. CFLs only

2. CFLs + other

3. Incandescent  
4. Halogen  
5. Other non-CFL  
6. Don't know

May I take a look at the types of light bulbs you're purchasing?  
[LOOK IN SHOPPING CART / BASKET]

[PURCHASING  
CFLs +  
INCANDESCENTS]

[PURCHASING  
CFLs ONLY]

[PURCHASING  
INCANDESCENTS  
ONLY]

Why are you buying both CFLs and non-CFLs? [DO NOT READ LIST.] [ACCEPT MULTIPLE RESPONSES.]

1. Use in different rooms
2. Use in different fixture types
3. Dislike CFL fit in fixtures
4. Dislike CFL look in fixtures
5. Need/can't get dimmable CFL
6. Need/can't get 3-way CFL
7. Other (Explain: \_\_\_\_\_)

[PURCHASING  
<IOU> CFLs]

[PURCHASING  
NO <IOU> CFLs]

Did you know that the CFLs you're purchasing today are discounted by <IOU>?

Yes

No, didn't know they were discounted by <IOU>

No, didn't know they were discounted at all

Did you come into the store today specifically to buy CFLs discounted by <IOU>?

Yes

No / DK

Why did you choose these CFLs instead of the ones discounted by <IOU>? [DO NOT READ LIST.] [ACCEPT MULTIPLE RESPONSES.]

1. Prefer this brand/manufacture
2. Prior experience with this model
3. No discounted CFLs in this wattage
4. Didn't want to buy a multi-pack
5. Full-price CFLs are higher quality
6. Didn't know about <IOU>-discounted CFLs
7. Didn't know about any discounted CFLs
8. Other (Explain: \_\_\_\_\_)

Before entering the store today, did you know <IOU> was offering discounts on CFLs?

Yes

No / DK

Did you know you could find CFLs here that were discounted by <IOU>?

0. No
1. Yes
2. Don't know

IF PURCHASING ANY CFLs → GO TO BLUE PAGE (CFL Purchasers) – Page 2

IF NOT PURCHASING CFLs → GO TO YELLOW PAGE (Incandescent Purchasers) – Page 3

## REVEALED PREFERENCE GUIDE

Store Name	
Store City	
Date	
Time	
Researcher	

# Pkgs	CFL or Incand.	Style	Dimmable?	3-way?	Watts	# per Pkg	Pkg Price	PG&E discount?
			Y N	Y N				Y N
								Y N
								Y N
								Y N

May I take a look at the types of light bulbs you're purchasing?  
[LOOK IN SHOPPING CART / BASKET]

[PURCHASING  
CFLs +  
INCANDESCENTS]

[PURCHASING  
CFLs ONLY]

[PURCHASING  
INCANDESCENTS  
ONLY]

Why are you buying both CFLs and non-CFLs? [DO NOT READ LIST.] [ACCEPT MULTIPLE RESPONSES.]

1. Use in different rooms
2. Use in different fixture types
3. Dislike CFL fit in fixtures
4. Dislike CFL look in fixtures
5. Need/can't get dimmable CFL
6. Need/can't get 3-way CFL
7. Other (Explain: \_\_\_\_\_)

	A Check if Mentioned	B Rank
<b>[COLUMN A]</b> What influenced your decision to purchase these particular CFLs today? <b>[DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES.]</b>		
Anything else? <b>[RECORD OTHER INFLUENCES.]</b>		
<b>[COLUMN B – FOR ALL IDENTIFIED IN COLUMN A]</b> Which of these factors was most influential on your decision? Second most? Third most? <b>[ETC.]</b>		
<b>[ENTER RANKINGS. USE EACH RANK ONLY ONCE AND ENTER "N/A" IF NOT APPLICABLE.]</b>		
<b>Reason [DO NOT READ LIST.]</b>		
1. CFL price is low / affordable		
2. To save money		
3. To save energy		
4. Saw signs or displays in store		
5. Environmental reasons		
6. Recommended by friends/family		
7. Saw advertisement outside store		
8. CFLs work better/higher quality than incandescent		
9. Prior experience with CFLs		
10. CFL location in store (caught my attention)		
11. Other (Specify: _____)		

How many CFLs would you have purchased today if they cost twice as much? Would you say...

- none,
- fewer,
- the same number, or
- more CFLs?
- [Don't know]

What if they cost half as much? Would you have purchased...

- none,
- fewer,
- the same number, or
- more CFLs?
- [Don't know]

**[IF APPLICABLE]**  
Would you still have purchased CFLs today if...  
**[ENTER "N/A" IF NOT APPLICABLE. DK = "Don't Know"]**

Question	Circle one	
1. ...you hadn't seen advertising outside the store?	Yes	No
	DK	N/A
2. ...you had no prior experiences with CFLs?	Yes	No
	DK	N/A
3. ...there were no CFL signs/displays in the store?	Yes	No
	DK	N/A
4. ...the CFLs were located with the rest of the lighting products?	Yes	No
	DK	N/A

Are you planning to install the CFLs you're purchasing today in your home, a business, or both? [Business could be your own or your employer's.]

- Home
- Business (Type: \_\_\_\_\_)
- Both (Bus.Type: \_\_\_\_\_)
- Other (Explain: \_\_\_\_\_)
- Don't know

**[IF BOTH/OTHER]**

# in home	
# in business	
(# other)	

Have you ever purchased or been given any CFLs (before today)?

Yes      No / DK

Do you have any CFLs installed right now in your [home/business]?

Home	[if relevant]	Business
0. No		0. No
1. Yes		1. Yes
2. Don't know		2. Don't know

Of the CFLs you are purchasing today, how many are you planning to install in the next month?

# in home	
# in business	
(# other)	

Do you have any CFLs in storage (to install later) in your [home/business]?

Home	[if relevant]	Business
0. No		0. No
1. Yes		1. Yes
2. Don't know		2. Don't know

The next few questions will help us get a sense of your home lighting usage. How many bedrooms do you have in your home?  
**RECORD NUMBER:** \_\_\_\_\_

And how many bathrooms?  
[RECORD HALF BATHS AS 0.5]  
**RECORD NUMBER:** \_\_\_\_\_

And how many people live in your home?  
**RECORD NUMBER:** \_\_\_\_\_

**[IF PURCHASING MULTI-PACK(S)]**

**RECORD # IN LARGEST MULTI-PACK:** \_\_\_\_\_

If the CFLs were sold individually but at the same price you're paying per bulb, do you think you'd have purchased the same number, more, or fewer bulbs?

- Same number
- Would have purchased more
- Would have purchased fewer
- Other (Explain: \_\_\_\_\_)
- Don't know

**[IF MORE/FEWER]**  
How many would you have purchased if they were in single packs?  
**RECORD NUMBER:** \_\_\_\_\_

Does <IOU> provide electricity to your [home/business]?

Yes  
\_\_\_\_ home  
\_\_\_\_ business

**[CLOSE.]** Thank you for your time today! May I have your name and zip code for our records?  
**[GIVE GIFT CARD.]**

Name		Zip	
Respondent gender (circle one):    MALE    FEMALE			

**[PHONE RECRUIT]**  
Those are all of the questions I have for you today; thank you for your time.

Could we give you a call in about 3 months to talk with you a little more about these CFLs? In appreciation for your participation in that phase of the study, we'll send you a \$20 gift certificate for Amazon.com.

No / DK      Yes

**[CLOSE.]** Excellent; thank you. May I please have your contact information?  
**[GIVE GIFT CARD.]**

Name			
Phone		Zip	
Respondent gender (circle one):    MALE    FEMALE			

[ASSUME RESPONSE OF “YES” IF RESPONDENT INTENDED TO BUY CFLs TODAY (SEE PAGE 1)]

Did you consider purchasing CFLs today?

Yes

DK

No

Why did you choose incandescent bulbs over CFLs?  
[ACCEPT MULTIPLE RESPONSES.]

1. Not aware of CFLs before today
2. CFL price / too expensive
3. Don't know enough about CFLs / need more information
4. Don't like the way they fit in fixtures
5. Don't like the way they look in fixtures
6. CFLs burn out too quickly
7. Dislike the light quality/color from CFLs
8. Need dimmable bulbs
9. Need 3-way bulbs
10. Need other specialty bulbs (Specify: \_\_\_\_\_)
11. CFLs take too long to reach full brightness
12. CFLs flicker
13. Accustomed to incandescent bulbs/habit
14. Prefer this incandescent bulb brand to available CFL brand(s)
15. Prior experience with this incandescent bulb model
16. CFLs only in multi-pack/didn't want a multi-pack of CFLs
17. Other (Specify: : \_\_\_\_\_)

Why not?  
[ACCEPT MULTIPLE RESPONSES.]

1. Not aware of CFLs before today
2. CFL price / too expensive
3. Don't know enough about CFLs / need more information
4. Don't like the way they fit in fixtures
5. Don't like the way they look in fixtures
6. CFLs burn out too quickly
7. Dislike the light quality/color from CFLs
8. Need dimmable bulbs
9. Need 3-way bulbs
10. Need other specialty bulbs (Specify: \_\_\_\_\_)
11. CFLs take too long to reach full brightness
12. CFLs flicker
13. Accustomed to incandescent bulbs/habit
14. Prefer this incandescent bulb brand to available CFL brand(s)
15. Prior experience with this incandescent bulb model
16. CFLs only in multi-pack/didn't want a multi-pack of CFLs
17. Other (Specify: : \_\_\_\_\_)

Would you have purchased CFLs today if they cost half as much?

0. No
1. Yes
2. Don't know

Have you ever purchased or been given any CFLs?

No / DK

Yes

Do you have any CFLs installed right now in your [home/business]?

- |               |                               |
|---------------|-------------------------------|
| <u>Home</u>   | [IF RELEVANT] <u>Business</u> |
| 0. No         | 0. No                         |
| 1. Yes        | 1. Yes                        |
| 2. Don't know | 2. Don't know                 |

Do you have any CFLs in storage right now at your [home/business] to install later?

- |               |                               |
|---------------|-------------------------------|
| <u>Home</u>   | [IF RELEVANT] <u>Business</u> |
| 0. No         | 0. No                         |
| 1. Yes        | 1. Yes                        |
| 2. Don't know | 2. Don't know                 |

The next few questions will help us get a sense of your home lighting usage. How many bedrooms do you have in your home?

RECORD NUMBER: \_\_\_\_\_

And how many bathrooms?  
[RECORD HALF BATHS AS 0.5]

RECORD NUMBER: \_\_\_\_\_

And how many people live in your home?

RECORD NUMBER: \_\_\_\_\_

Are you planning to install the light bulbs you're purchasing today in your home, a business, or both?

1. Home
2. Business (Type: \_\_\_\_\_)
3. Both (Bus.Type: \_\_\_\_\_)
4. Other (Explain: \_\_\_\_\_)
5. Don't know

[IF BOTH/OTHER]

# in home	
# in business	
(# other)	

[CLOSE]

Thank you for your time today! May I have your name and zip code for our records?

Name		Zip	
Respondent gender (circle one):    MALE    FEMALE			

[GIVE GIFT CARD]

Does <IOU> provide electricity to your [home/business]?

- |               |                                |
|---------------|--------------------------------|
| <u>Home?</u>  | [IF RELEVANT] <u>Business?</u> |
| 0. No         | 0. No                          |
| 1. Yes        | 1. Yes                         |
| 2. Don't know | 2. Don't know                  |

# STATED PREFERENCE GUIDE

**[START]**  
Are you planning to purchase any light bulbs today?

Yes  
No / DK

**[SWITCH TO REVEALED PREFERENCE GUIDE.]**

Store	
Date	
Time	
Researcher	

Are you shopping here today for your home, a business, or both?

- Home
- A business (my own or my employer)
- Both
- Other (Specify: \_\_\_\_\_)

Is this where you normally shop for light bulbs for your **[CHOOSE RELEVANT]** home / business?

- No
- Yes
- Don't know

Let's say you were buying light bulbs today for a typical fixture in **[CHOOSE RELEVANT]** your home / your business that uses these types of bulbs. Which of these packages would you choose?  
**[POINT OUT INCANDESCENT BULBS AND CFLs]**

CFL		
Manufacturer		
Wattage		
Style		
Dim mable	Yes	No
3-way	Yes	No
# per Pkg		
Pkg Price		
PG&E discount	Yes	No

INCANDESCENT		
Manufacturer		
Wattage		
Style		
Dim mable	Yes	No
3-way	Yes	No
# per Pkg		
Pkg Price		

Before entering the store today, did you know <IOU> was offering discounts on CFLs?

No / DK Yes

Did you know you could find CFLs here that were discounted by <IOU>?

- No
- Yes
- Don't know

Before entering the store today, did you know <IOU> was offering discounts on CFLs?

No / DK Yes

Did you know you could find CFLs here that were discounted by <IOU>?

- No
- Yes
- Don't know

**[COLUMN A]**  
What influenced your decision to choose these particular CFLs today?  
**[DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES.]**

Anything else? **[RECORD OTHER INFLUENCES.]**

**[COLUMN B – FOR ALL IDENTIFIED IN COLUMN A]**  
Which of these factors was most influential on your decision? Second most? Third most? **[ETC.]**

**[ENTER RANKINGS. USE EACH RANK ONLY ONCE AND ENTER "N/A" IF NOT APPLICABLE.]**

Reason [DO NOT READ LIST.]	A Check if Mentioned	B Rank
1. CFL price is low / affordable		
2. To save money		
3. To save energy		
4. Saw signs or displays in store		
5. Environmental reasons		
6. Recommended by friends/family		
7. Saw advertisement outside store		
8. CFLs work better/higher quality than incandescent		
9. Prior experience with CFLs		
10. CFL location in store (caught my attention)		
11. Other (Specify: _____)		

Would you still have chosen CFLs if they cost twice as much?

- No
- Yes
- Don't know

**[IF APPLICABLE]** Would you still have chosen CFLs today if...  
**[ENTER "N/A" IF NOT APPLICABLE. DK = "Don't Know"]**

Question	Circle one	
1. ...you hadn't seen advertising outside the store?	Yes	No DK N/A
2. ...you had no prior experiences with CFLs?	Yes	No DK N/A
3. ...there were no CFL signs/displays in the store?	Yes	No DK N/A
4. ...the CFLs were located with the rest of the lighting products?	Yes	No DK N/A

**IF CHOSE ANY CFLs**  
**GO TO BLUE PAGE**

**IF CHOSE NON-CFL**  
**GO TO YELLOW PAGE**

**STATED PREFERENCE GUIDE -- BLUE PAGE -- CFL CHOOSERS**

Have you ever purchased or been given any CFLs (before today)?

Yes

No / DK

Do you have any installed right now in your [home/business]?

Home [if relevant] Business

- |               |               |
|---------------|---------------|
| 0. No         | 0. No         |
| 1. Yes        | 1. Yes        |
| 2. Don't know | 2. Don't know |

Do you have any CFLs in storage right now at your [home/business]?

Home [if relevant] Business

- |               |               |
|---------------|---------------|
| 0. No         | 0. No         |
| 1. Yes        | 1. Yes        |
| 2. Don't know | 2. Don't know |

Where do you think you'll install those CFLs? Would you say in your home, a business, or both?

1. Home
2. Business (Type: \_\_\_\_\_)
3. Both (Bus.Type: \_\_\_\_\_)
4. Other (Explain: \_\_\_\_\_)
5. Don't know

**[IF BOTH/OTHER]**

# in home	
# in business	
(# other)	

The next few questions will help us get a sense of your home lighting usage. How many bedrooms do you have in your home?

**RECORD NUMBER:** \_\_\_\_\_

And how many bathrooms?  
[RECORD HALF BATHS AS 0.5]

**RECORD NUMBER:** \_\_\_\_\_

And how many people live in your home?

**RECORD NUMBER:** \_\_\_\_\_

Does <IOU> provide electricity to your [home/business]?

Home [if relevant] Business

- |               |               |
|---------------|---------------|
| 0. No         | 0. No         |
| 1. Yes        | 1. Yes        |
| 2. Don't know | 2. Don't know |

**[IF SELECTED A MULTI-PACK]**

**RECORD # MULTI-PACK:** \_\_\_\_\_

If the CFLs were sold individually but at the same price you'd be paying per bulb, do you think you'd have selected the same number, more, or fewer bulbs?

1. Same number
2. Would have selected more
3. Would have selected fewer
4. Other (Explain: \_\_\_\_\_)
5. Don't know

**[IF MORE/FEWER]**

How many would you have selected if they were in single packs?

**RECORD NUMBER:** \_\_\_\_\_

About how many CFLs do you think you'll purchase within the next 6 months?

**NUMBER:** \_\_\_\_\_

Are you planning to purchase any CFLs within the next 6 months?

Yes

No / DK

Why not?

**[ACCEPT MULTIPLE RESPONSES.]**

1. Not aware of CFLs before today
2. CFL price / too expensive
3. Don't know enough about CFLs / need more information
4. Don't like the way they fit in fixtures
5. Don't like the way they look in fixtures
6. CFLs burn out too quickly
7. Dislike the light quality/color from CFLs
8. Need dimmable bulbs
9. Need 3-way bulbs
10. Need other specialty bulbs (Specify: \_\_\_\_\_)
11. CFLs take too long to reach full brightness
12. CFLs flicker
13. Accustomed to incandescent bulbs/habit
14. Prefer this incandescent bulb brand to available CFL brand(s)
15. Prior experience with this incandescent bulb model
16. CFLs only in multi-pack/didn't want a multi-pack of CFLs
17. Other (Specify: \_\_\_\_\_)

**[CLOSE]**

Thank you for your time today! May I have your name and zip code for our records?

Name		Zip	
Respondent gender (circle one):			
	MALE	FEMALE	

**[GIVE GIFT CARD.]**

Did you consider choosing CFLs today?

Yes

DK

No

Why did you choose incandescent bulbs over CFLs?  
[ACCEPT MULTIPLE RESPONSES.]

1. Not aware of CFLs before today
2. CFL price / too expensive
3. Don't know enough about CFLs / need more information
4. Don't like the way they fit in fixtures
5. Don't like the way they look in fixtures
6. CFLs burn out too quickly
7. Dislike the light quality/color from CFLs
8. Need dimmable bulbs
9. Need 3-way bulbs
10. Need other specialty bulbs (Specify: \_\_\_\_\_)
11. CFLs take too long to reach full brightness
12. CFLs flicker
13. Accustomed to incandescent bulbs/habit
14. Prefer this incandescent bulb brand to available CFL brand(s)
15. Prior experience with this incandescent bulb model
16. CFLs only in multi-pack/didn't want a multi-pack of CFLs
17. Other (Specify: \_\_\_\_\_)

Why not?  
[ACCEPT MULTIPLE RESPONSES.]

1. Not aware of CFLs before today
2. CFL price / too expensive
3. Don't know enough about CFLs / need more information
4. Don't like the way they fit in fixtures
5. Don't like the way they look in fixtures
6. CFLs burn out too quickly
7. Dislike the light quality/color from CFLs
8. Need dimmable bulbs
9. Need 3-way bulbs
10. Need other specialty bulbs (Specify: \_\_\_\_\_)
11. CFLs take too long to reach full brightness
12. CFLs flicker
13. Accustomed to incandescent bulbs/habit
14. Prefer this incandescent bulb brand to available CFL brand(s)
15. Prior experience with this incandescent bulb model
16. CFLs only in multi-pack/didn't want a multi-pack of CFLs
17. Other (Specify: \_\_\_\_\_)

Would you have chosen CFLs today if they cost half as much?

0. No
1. Yes
2. Don't know

Have you ever purchased or been given any CFLs?

Yes

No / DK

Do you have any CFLs installed right now in your [home/business]?

- |               |                      |                 |
|---------------|----------------------|-----------------|
| <u>Home</u>   | <b>[if relevant]</b> | <u>Business</u> |
| 0. No         |                      | 0. No           |
| 1. Yes        |                      | 1. Yes          |
| 2. Don't know |                      | 2. Don't know   |

Do you have any CFLs in storage right now at your [home/business] to install later?

- |               |                      |                 |
|---------------|----------------------|-----------------|
| <u>Home</u>   | <b>[if relevant]</b> | <u>Business</u> |
| 0. No         |                      | 0. No           |
| 1. Yes        |                      | 1. Yes          |
| 2. Don't know |                      | 2. Don't know   |

The next few questions will help us get a sense of your home lighting usage. How many bedrooms do you have in your home?  
RECORD NUMBER: \_\_\_\_\_

And how many bathrooms?  
[RECORD HALF BATHS AS 0.5]  
RECORD NUMBER: \_\_\_\_\_

And how many people live in your home?  
RECORD NUMBER: \_\_\_\_\_

Does <IOU> provide electricity to your [home/business]?

- |               |                      |                 |
|---------------|----------------------|-----------------|
| <u>Home</u>   | <b>[if relevant]</b> | <u>Business</u> |
| 0. No         |                      | 0. No           |
| 1. Yes        |                      | 1. Yes          |
| 2. Don't know |                      | 2. Don't know   |

[CLOSE]

Thank you for your time today! May I have your name and zip code for our records?

Name		Zip	
Respondent gender (circle one):			
MALE		FEMALE	

[GIVE GIFT CARD]

# **“ABBREVIATED” SHELF SURVEY**

**(Fielded in Stores Visited for CA Res Retrofit Customer Intercept Surveys)**

Field Staff Name:	
Store name:	Date:
Store address:	Store city:
Store type:	Store zip code:

**A1. Types of Products Sold [CIRCLE ALL THAT APPLY.]**

- 1 IOU-discounted CFLs – spiral/twister style
- 2 Other IOU-discounted CFLs
- 3 Non-IOU ENERGY STAR CFLs – spiral/twister style
- 4 Other Non-IOU ENERGY STAR CFLs
- 5 Non- ENERGY STAR CFLs – spiral/twister style
- 6 Other Non- ENERGY STAR CFLs
- 7 Incandescent bulbs – standard (a-lamp)
- 8 Incandescent bulbs – specialty (any style other than a-lamp)
- 9 Other types of light bulbs (e.g., Halogen, LED, Non-CFL Fluorescents)

- A2. **Are there any end-cap lighting displays?** (If no, skip to A3.) **Yes**  **No**
- A2a. **Are CFL bulbs featured in the end-cap displays?** **Yes**  **No**
- A2b. **Are ENERGY STAR® CFL bulbs featured in the end-cap displays?** **Yes**  **No**
- A2c. **Are IOU-discounted CFL bulbs featured on end-cap displays?** **Yes**  **No**

**A3. What types of materials are present that promote CFLs? [CIRCLE ALL THAT APPLY.]**

- 1 Retailer signage – Describe: \_\_\_\_\_
- 2 Promotional signage (mentions IOU discount) – Describe: \_\_\_\_\_
- 3 Brochures
- 4 Floor sticker/cling
- 5 Sign on shelf/wall (**CIRCLE ONE:** Parallel to aisle Perpendicular to aisle )
- 6 Sign hung from ceiling
- 7 Other (such as display with working CFLs) – Describe: \_\_\_\_\_
- 8 No materials present

**A3a. If the retailer currently running any other CFL promotions (discounted CFLs in addition to IOU discount), describe:**

---

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**A4. What pricing information does the signage provide? [CIRCLE ALL THAT APPLY.]**

- 1 Discounted price or Sale price (only if discounted/on sale)
- 2 Original price (only if discounted/on sale)
- 3 Discount amount (only if discounted/on sale)
- 4 One price only
- 5 Other (Describe) \_\_\_\_\_
- 6 No pricing information

[IF STORE SELLS CFLs + OTHER TYPES OF LIGHT BULBS]

A5. **Are the CFLs located in the same aisle/location in the store as the rest of the light bulbs?**

- 1 Yes, all of the CFLs are located with the rest of the light bulbs.
- 2 Yes, some of the CFLs are located with the rest of the light bulbs.
- 3 No, none of the CFLs are located with the rest of the light bulbs.
- 4 Store sells no other types of light bulbs (store sells only CFLs).

A6. **Where are the IOU-discounted CFLs located? [CIRCLE ALL THAT APPLY.]**

- 1 With other CFLs
- 2 With other light bulbs
- 3 Separate from all other bulbs (e.g., display near cash register)

Describe: \_\_\_\_\_

- 4 Other location

Describe: \_\_\_\_\_

A8. **Does one particular CFL model (or a couple of CFL models) dominate inventory?**

- 1 Yes
- 2 No

If yes, describe manufacturer, style and wattage \_\_\_\_\_

Also describe degree of dominance (e.g., 100+ packages of this model, 4 or 5 packages of each other model):

A9. **What styles of medium screw-base CFLs are available? [CHECK ALL THAT APPLY.]**

Style	Any non 3-way or non-dimmable?	Any 3-way?	Any dimmable?	STYLE CODES (for bulb inventory)
1. Spiral/twister				TW
2. Globe (e.g., for bathroom vanity fixtures)				GL
3. A-lamp (shaped like standard incandescent)				AL
4. Torpedo/Bullet				TO
5. Bug light (yellow color)				BU
6. Spotlight/reflector/floodlight				SP
7. Circline				CI
8. Tube Style				TU
9. Pin-based				
10. Other (describe in box to right of table)				

List "other" types w/medium screw base

A10. **Does the store have any candelabra-base (small-base) CFLs in stock? Yes  No**

If yes, describe styles: \_\_\_\_\_

A11. **Does the store have any GU-24 base CFLs in stock? .....Yes  No**

If yes, describe styles: \_\_\_\_\_

A12. **Does the store have any LED bulbs in stock? .....Yes  No**

If yes, describe styles: \_\_\_\_\_

A13. **Does the store have any cold cathode bulbs in stock? .....Yes  No**

If yes, describe styles: \_\_\_\_\_



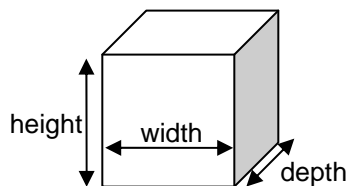
A14. **Measure light bulb displays.**

**ALL MEASUREMENTS IN INCHES**

HEIGHT = top to bottom

WIDTH = left to right

DEPTH = front to back



If all displays of a certain type (e.g., all aisle displays) have the same measurements, record all as "SIZE 1" and indicate the number of similar displays in the "# displays of this size." Otherwise, if displays of a certain type have different measurements, record them separately (as size 1, size 2, size 3, etc.). Use additional sheets if necessary.

Display Type	# DISPLAYS (of this type and size)	TOTAL DISPLAY DIMENSIONS (IN INCHES)			% OF DISPLAY SPACE BY BULB TYPE		
		Height (INCHES)	Width (INCHES)	Depth (INCHES)	CFL	Incandescent	Other Types
<b>Aisle, Shelf, or Shelves – SIZE 1</b> (Bulbs displayed on wall/shelves in aisle)							
<b>Aisle, Shelf, or Shelves – SIZE 2</b>							
<b>Aisle, Shelf, or Shelves – SIZE 3</b>							
<b>Endcap – SIZE 1</b> (Display at end of aisle, perpendicular to aisle)							
<b>Endcap – SIZE 2</b>							
<b>Endcap – SIZE 3</b>							
<b>Free-standing display / pallet – SIZE 1</b> (Not mounted/hung on a wall)							
<b>Free-standing display / pallet – SIZE 2</b>							
<b>Free-standing display / pallet – SIZE 3</b>							
<b>Fenceline – SIZE 1</b> (A row of bulb boxes or pallets)							
<b>Fenceline – SIZE 2</b>							
<b>Fenceline – SIZE 3</b>							
<b>Other 1</b> Describe:							
<b>Other 2</b> Describe:							
<b>Other 3</b> Describe:							



CFL Inventory (continued)

Manufacturer	Style Refer to A9 for style code	Model Number	Location A=Aisle E=End-cap F=Fenceline P=Pallet O=Other	Qty in Pack	Full/Original Price <u>If discounted:</u> record price <i>before</i> discount. <u>If not discounted:</u> record product price	Discount Amount  (if on sale/ discounted)	Discount Provider (if discounted)  R=Retailer; I= IOU; O=Other; DK= don't know	Program Year 2009; 2008; 2007	Discounted Price  (if on sale/ discounted)	Lumens	Wattage	3-way?	Dimmable?	Energy Star?
Notes:											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Notes:											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Notes:											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Notes:											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Notes:											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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Notes:											<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
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### Incandescent Bulb Inventory

Inventory all incandescent bulbs for which equivalent CFL styles available in store. Use as many pages as necessary.

Manufacturer	Style Refer to A9 for style code	Model Number	Location A=Aisle E=End-cap F=Fenceline P=Pallet O=Other	Qty in Pack	Price per Package	Wattage	3-way?
Notes:							<input type="checkbox"/>
Notes:							<input type="checkbox"/>
Notes:							<input type="checkbox"/>
Notes:							<input type="checkbox"/>
Notes:							<input type="checkbox"/>
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Incandescent Bulb Inventory (continued)

Manufacturer	Style Refer to A9 for style code	Model Number	Location A=Aisle E=End-cap F=Fenceline P=Pallet O=Other	Qty in Pack	Price per Package	Wattage	3-way?
Notes:							<input type="checkbox"/>
Notes:							<input type="checkbox"/>
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Incandescent Bulb Inventory (continued)

Manufacturer	Style Refer to A9 for style code	Model Number	Location A=Aisle E=End-cap F=Fenceline P=Pallet O=Other	Qty in Pack	Price per Package	Wattage	3-way?
Notes:							<input type="checkbox"/>
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**Follow-Up Telephone Survey  
(of Consumers Who Participated in In-Store Customer Intercept Surveys)**

*PG&E and SCE Process Evaluations of 2006-2008 Upstream Lighting Programs  
CPUC EM&V of 2006-2008 Statewide Residential Programs*

**v080811**

**Definitions**

[PH_SURVEYOR_NAME]	= name of telephone interviewer
[CONTACT]	= name of survey respondent
[STORE]	= store in which respondent purchased CFLs
[SURVEY_MONTH]	= month during which in-store survey took place
[NUM_CFLs]	= number of CFLs purchased at time of in-store survey
[IOU]	= PG&E or SCE (as appropriate)
[CFL_WATT_1]	= wattage of first CFL purchased on day of in-store survey
[CFL_WATT_2]	= wattage of second CFL purchased on day of in-store survey
[CFL_WATT_3]	= wattage of third CFL purchased on day of in-store survey
[CONTACT NUMBER]	= callback number for customers w/questions about survey incentive delivery status



**Lead-In**

Hello, may I speak with [CONTACT]?

[IF CONTACT NOT AVAILABLE, DETERMINE CALL-BACK DATE/TIME.]

My name is [PH\_SURVEYOR\_NAME] and I'm calling from KEMA, Inc., on behalf of [IOU]. I'm calling with regard to some light bulbs you purchased at [STORE] during the month of [SURVEY\_MONTH]. At that time, one of our researchers completed a brief survey with you regarding your purchase.

L1. Do you remember this?

0	No	L2
1	Yes	L3
-99	Refused	L2
-88	Don't know	L2

L2. Our records indicate that you completed a survey with one of our researchers and that you purchased compact fluorescent light bulbs – or “CFLs” – in [STORE] that day. The researcher gave you a gift card to [STORE] **or a local coffee shop** when you completed the survey. Do you remember this?

0	No	END
1	Yes	L3
-99	Refused	END
-88	Don't know	END

L3. Great! At that time, our researcher offered you a **\$20 gift certificate to Amazon.com** for completing this follow-up telephone survey. At the end, I'll collect your contact information so we know where to send the gift certificate.

1	[AGREES TO PARTICIPATE]	B1
2	[SCHEDULE CALL-BACK TIME]	END
0	[DOES NOT AGREE TO PARTICIPATE]	END

**[If asked who is sponsoring this study:** We are conducting this study on behalf of [IOU] to help them improve their energy-efficiency programs.]

**[If asked why you are conducting this study:** Studies like this help the State of California and utility companies like [IOU] better understand customers' need for and interest in energy programs and services.]

**[If asked about survey length:** This call should take about 10 minutes of your time. Is this a good time for us to speak with you? IF NOT, SET UP CALL BACK APPOINTMENT.]

**[If respondent expresses sales concern:** I am not selling anything, and your responses will be kept confidential. If you would like to talk with someone from [IOU] about this study, feel free to call  
 PG&E: Beatrice Mayo, 415-973-5269  
 SCE: Shahana Samiullah, 626-812-7661  
 for more information.]

Great, let's get started. I'd like you to think back to when you purchased the CFLs and completed the in-store survey.

**Recall**

B1. According to our records, you purchased [NUM\_CFLs] that day. Does that sound right to you?

0	No	B2
1	Yes	B3
-88	Refused	B2
-99	Don't know	B2

B2. How many CFLs did you buy that day?

	[RECORD NUMBER OF CFLs] [RECORD AS NEW VALUE FOR NUM_CFLs]	B3
-88	Refused	B3
-99	Don't know	B3

B3. Did you pay full price for the CFLs, or was the price reduced by a special sale or promotion?

0	Paid full price for CFLs	B5
1	CFL price reduced by sale or promotion	B4
-88	Refused	B5
-99	Don't know	B5

B4. Who provided the discount? Was it ... [READ LIST]

1	The store ([STORE]);	B5
2	The manufacturer;	B5
3	[IOU]; or	B5
-77	Someone else? (Specify: _____)	B5
-99	Refused	B5
-88	Don't know	B5

We'd like to talk with you in more detail about the [NUM\_CFLS] CFLs you purchased on the day you completed the in-store survey.

B5. How many of those [NUM\_CFLS] did you install in a home?  
 [IF INSTALLED AND THEN REMOVED, DO NOT INCLUDE IN B5.]  
 [IF NECESSARY: This can be at your home or in another residence.]

	RECORD NUMBER OF CFLs]	B6
-88	Refused	B10
-99	Don't know	B10

B6. Does [IOU] provide electric service to the home where you installed this/these CFL(s)?

0	No (none of CFLs in homes in [IOU] territory)	B7
1	Yes, all of the CFLs	B7
2	Yes, some of CFLs [RECORD NUMBER OF CFLS IN [IOU] TERRITORY]	B7
-88	Refused	B7
-99	Don't know	B7

B7. [IF B5 = NUM\_CFLS SKIP TO I1] How many of the CFLs you bought on the day of the in-store survey did you install in a business?  
 [IF NECESSARY: This can be a business you own or at another business location.]

	RECORD NUMBER OF CFLs]	B8
-88	Refused	B8
-99	Don't know	B8

B8. What type of business? [ACCEPT MULTIPLE RESPONSES]

1	Office [CONFIRM NOT A HOME OFFICE; IF SO, RECODE AS HOME] [RECORD NUMBER CFLS]	B9
2	Grocery or convenience store [RECORD NUMBER CFLS]	B9
3	Other type of retail store [RECORD NUMBER CFLS]	B9
4	Restaurant or bar [RECORD NUMBER CFLS]	B9
5	Health care facility [RECORD NUMBER CFLS]	B9
6	Hotel or motel [RECORD NUMBER CFLS]	B9
7	Warehouse or [RECORD NUMBER CFLS]	B9
-77	Other type (specify) [RECORD NUMBER CFLS]	B9
-88	Refused	B9
-99	Don't know	B9

B9. Does [IOU] provide electric service to the business where you installed this/these CFL(s)?

0	No (none of CFLs in business in [IOU] territory)	B10
1	Yes, all of the CFLs	B10
2	Yes, some of CFLs [RECORD NUMBER OF CFLS IN [IOU] TERRITORY]	B10
-88	Refused	B10
-99	Don't know	B10

B10. [IF B5 + B7 = NUM\_CFLS SKIP TO I1] Of the CFLs you purchased on the day of the in-store survey, how many have you placed into storage to install later?

	[RECORD NUMBER OF CFLs]	B11
-88	Refused	B11
-99	Don't know	B11

B11. [IF B5 + B7 + B10 = NUM\_CFLS SKIP TO I1] What did you do with the other CFLs you bought that day?

1	Gave it away [RECORD NUMBER OF CFLS]	L1
2	Forgot about it/misplaced it [RECORD NUMBER OF CFLS]	G1
3	Discarded it/Threw it away [RECORD NUMBER OF CFLS]	T1
4	Installed and then removed it [RECORD NUMBER OF CFLS]	R1
-88	Other (Specify: _____) [RECORD NUMBER OF CFLS]	G1
-99	Refused	G1
-98	Don't know	G1

### **Installation**

Let's talk in a little more detail about the [NUM\_CFLs / OR IF NUM\_CFLS > 3 READ: three of the] CFLs you purchased on the day of the in-store survey.

[REPEAT 0 THROUGH E1 FOR UP TO 3 CFLS PURCHASED ON DAY OF SURVEY]

[IF B5 ≤ 0 SKIP TO R1] You mentioned that you installed at least one of them.

I1. In which room(s) did you install this/these CFLs?

[FIRST MENTION = ROOM\_TYPE1; SECOND = ROOM\_TYPE2; THIRD = ROOM\_TYPE3]

	[ROOM_TYPE]	
1	Kitchen	I2
2	Eat-in kitchen	I2
3	Living room	I2
4	Dining room	I2
5	Bedroom	I2
6	Bathroom	I2
7	Hall/Entry	I2
8	Office	I2
9	Basement	I2
10	Laundry/utility room	I2
11	Living room (family room, rec room, den)	I2
12	Garage	I2
13	Closet	I2
-77	Other room inside home (specify)	I2
14	Outdoor – porch or patio	I2
15	Outdoor – entryway	I2
16	Outdoor – other	I2
-88	Refused	I2
-99	Don't know	I2

12. About how many weeks after this purchase did you install the CFL in your [ROOM\_TYPE1; ROOM\_TYPE2; ROOM\_TYPE3]?

	[RECORD TIME PERIOD IN WEEKS]	
-88	Refused	I3
-99	Don't know	I3

13. Is this CFL still installed?

0	No	R1
1	Yes	I4
-88	Refused	G1
-99	Don't know	G1

14. In what type of light fixture did you install the CFL in your [ROOM\_TYPE1; ROOM\_TYPE2; ROOM\_TYPE3]?

1	Table lamp	I5
2	Ceiling lamp	I5
3	Standing Lamp	I5
4	Ceiling Fan	I5
5	Wall sconce	I5
6	Chandelier	I5
-77	Other (specify)	I5
-88	Refused	I5
-99	Don't know	I5

15. According to our records, you purchased [a] [CFL\_WATT\_1, CFL\_WATT\_2, CFL\_WATT\_3] CFL(s) on the day of the in-store survey. What was the wattage of the CFL you installed?

	[RECORD WATTAGE]	
-88	Refused	I6
-99	Don't know	I6

16. Did this CFL have any special features such as being dimmable?

0	No	I7
1	Yes (Specify Feature)	I7
-88	Refused	I7
-99	Don't know	I7

17. What type of bulb did the CFL replace in your [ROOM\_TYPE1; ROOM\_TYPE2; ROOM\_TYPE3]?

1	Incandescent	I8
2	CFL	I8
3	Halogen	I8
-77	Other (specify)	I8
-88	Refused	I8
-99	Don't know	I8

18. What was the wattage of the bulb you replaced in your [ROOM\_TYPE1; ROOM\_TYPE2; ROOM\_TYPE3] with this CFL?

	[RECORD WATTAGE]	G1
-88	Refused	G1
-99	Don't know	G1

### **CFL Removal**

R1. [IF B11 ≠ 4 SKIP TO L1] What was your main reason for taking the CFL out?  
[DO NOT READ LIST. ACCEPT ONLY ONE RESPONSE.]

1	Burned out	R2
2	Didn't like the color	R2
3	Took too long to start up	R2
4	Wasn't bright enough	R2
5	Was too bright	R2
6	Didn't like the way it looked	R2
7	Didn't fit in fixture	R2
-77	Other reason (specify)	R2
-88	Refused	R3
-99	Don't know	R3

R2. Were there any other reasons?  
[DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES.]

1	Burned out	R3
2	Didn't like the color	R3
3	Took too long to start up	R3
4	Wasn't bright enough	R3
5	Was too bright	R3
6	Didn't like the way it looked	R3
7	Didn't fit in fixture	R3
-77	Other reason (specify)	R3
-88	Refused	R3
-99	Don't know	R3

R3. What type of bulb did you use to replace the CFLs you removed?  
[DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES.]

1	Incandescent	R4
2	CFL	R4
3	Halogen	R4
-77	Other (specify)	R4
-88	Refused	R4
-99	Don't know	R4

R4. What did you do with the bulb once you removed it?

1	Installed in a different location	G1
2	Gave it away	G1
3	Threw it away	G1
4	Storing it/saving it	G1
5	Returned it to the store	G1
6	Took it to a recycling center	G1
7	Brought to solid waste disposal center	G1
-77	Other reason (specify)	G1
-88	Refused	G1
-99	Don't know	G1

### **Gave CFL Away**

L1. [IF B11 ≠ 1 SKIP TO T1] Does the person to whom you gave the CFL live in California?

0	No	L2
1	Yes	G1
-88	Refused	G1
-99	Don't know	G1

L2. What state do they live in?

	[RECORD STATE OR (IF OUTSIDE U.S.) COUNTRY]	G1
-88	Refused	G1
-99	Don't know	G1

### **Discarded CFL**

T1. [IF B11 ≠ 3 SKIP TO E1] Why did you throw the CFL away? [ACCEPT MULTIPLE RESPONSES.]

1	Burned out	R3
2	Didn't like the color	R3
3	Took too long to start up	R3
4	Wasn't bright enough	R3
5	Was too bright	R3
6	Didn't like the way it looked	R3
7	Didn't fit in fixture	R3
-77	Other reason (specify)	R3
-88	Refused	R3
-99	Don't know	R3

T2. How did you dispose of the CFL? [ACCEPT ONLY ONE RESPONSE.]

1	<b>Wrapped in paper/plastic</b> and threw in trash	G1
2	Threw in trash	G1
2	Returned it to the store	G1
3	Took it to a recycling center	G1
4	Brought to solid waste disposal center	G1
-77	Other (specify)	G1
-88	Refused	G1
-99	Don't know	G1

### **Put CFL in Storage**

E1. [IF B10 > 0; ELSE SKIP TO G1] Earlier you mentioned that you're storing [B10] CFLs from your most recent purchase. When do you think you'll install these CFLs? Would you say ...within the next 3 months, 3 to 6 months from now, 6 months to a year from now, more than a year from now, or never?

1	Within the next 3 months	G1
2	3 to 6 months from now	G1
3	6 to 12 months from now	G1
4	More than a year from now	G1
5	Never	G1
6	Depends on when installed bulbs burn out	G1
-88	Refused	G1
-99	Don't know	G1

### **General CFL Use**

G1. Have you purchased any more CFLs since the day you did the in-store survey?

0	No	G3
1	Yes	G2
-88	Refused	G3
-99	Don't know	G3

G2. [IF G1 = 1] How many more CFLs have you purchased since then?

	[RECORD NUMBER]	G3
-88	Refused	G3
-99	Don't know	G3

G3. On how many total occasions have you purchased CFLs? Would you say...

1	Once,	G4
2	Two or three times, or	G4
3	More than three times?	G4
-88	Refused	G4
-99	Don't know	G4

G4. About how many total CFLs do you have installed on the inside or outside of your home?

	[RECORD NUMBER]	G5
-88	Refused	G5
-99	Don't know	G5

G5. About how many total CFLs are you storing at your home? \_\_\_\_\_  
[NOTE: INCLUDE CFLS PURCHASE ON DATE OF IN-STORE SURVEY.]

	[RECORD NUMBER]	G6
-88	Refused	G6
-99	Don't know	G6

G6. [IF G5 > 0 OR B10 > 0 OR R4 = 4] Why are you storing CFLs?  
[ALLOW MULTIPLE RESPONSES.]

1	To have them on hand if a bulb burns out	S1
2	Have more than I need	S1
3	Bought them on sale	S1
4	Can't/won't use them in certain rooms	S1
5	Can't/won't use them in certain fixture types	S1
6	Can't won't use them with certain controls (e.g., dimmer switches)	S1
-88	Refused	S1
-99	Don't know	S1

### **CFL Satisfaction**

S1. [IF B5 ≠ 1 OR R4 ≠ 1 OR G4 ≤ 0 SKIP TO S12] Using a scale of 1 to 10, where 1 means you are "not at all satisfied" and 10 means you are "extremely satisfied," how satisfied are you in general with the CFL(s) you have installed?

	[RECORD RATING]	S2
-88	Refused	S2
-99	Don't know	S2

Using the same scale, how would you rate CFLs in terms of ... [ROTATE S2 – S7].

- S2. The color of the light they provide?
- S3. The brightness of the light they provide?
- S4. The amount of time they take to light up?
- S5. The way they fit into light fixtures?
- S6. The way they look in light fixtures?
- S7. How long they last before burning out?

	[RECORD RATING]	S8
-88	Refused	S8
-99	Don't know	S8

S8. [IF S3 < 4] Are they too bright, or not bright enough?

1	Too bright	S9
2	Not bright enough	S9
-88	Refused	S9
-99	Don't know	S9

S9. In general, what are the best features of CFLs?  
[DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES.]



1	Last longer before burning out	S10
2	Save money/reduce electric bill	S10
3	Save/conserves energy/electricity	S10
4	Resource conservation benefits/better for environment/"green"/global warming	S10
5	CFLs work better/higher quality than incandescent bulbs	S10
-77	Other (specify)	S10
-88	Refused	S10
-99	Don't know	S10

S10. [IF B5 > 0] When one of the CFLs you now have installed burns out, how likely are you to replace it with another CFL? Use a scale of 1 to 5, where 1 means you are "not at all likely" and 5 means you are "very likely."

	[RECORD RATING]	S11
-88	Refused	S11
-99	Don't know	S11

S11. [IF S10 < 6] Why do you say that?

	[RECORD VERBATIM RESPONSE]	S12
-88	Refused	S12
-99	Don't know	S12

S12. On a scale from 1 to 5 where 1 means "not at all likely" and 5 means "very likely," how likely are you to purchase CFLs within the next year?

	[RECORD RATING]	S13
-88	Refused	S13
-99	Don't know	S13

On a scale of 1 to 5 where 1 means "strongly disagree" and 5 means "strongly agree," how much do you agree or disagree with the following statement(s)?

[RANDOMIZE AND ROTATE S13 – S16.]

S13. The performance of CFLs is just as good as regular light bulbs.

S14. The performance of CFLs is better than regular light bulbs.

S15. [IF B4 ≠ 3 SKIP TO S16] The [IOU] logo on a CFL package helps me identify high-quality CFLs.

S16. I trust [IOU] to recommend high-quality products.

	[RECORD RATING]	S17
-88	Refused	S17
-99	Don't know	S17

S17. When one of the incandescent bulbs you now have installed burns out, would you say you will definitely replace it with a CFL, will possibly replace it with a CFL, or will definitely not replace it with a CFL?

0	Don't have any incandescent bulbs installed in my home	S18
1	Definitely replace it with a CFL	S18
2	Possibly replace it with a CFL	S18
3	Will definitely not replace it with a CFL	S18
-88	Refused	S18
-99	Don't know	S18

S18. What is preventing you from installing [IF B5 ≠ 1 OR R4 ≠ 1 OR G4 ≤ 0 READ "more"] CFLs in your home?

[DO NOT READ LIST. ACCEPT MULTIPLE RESPONSES.]

1	Waiting for bulbs installed to burn out	V1
2	Storing incandescent bulbs	V1
3	Operating hours -- don't use the other bulbs/lamps enough	V1
4	CFLs are too expensive/cost too much	V1
5	Need dimmable bulbs / can't get dimmable CFLs / can't use CFLs with dimmers	V1
6	Need 3-way bulbs / can't get 3-way CFLs / can't use CFLs in my 3-way fixtures	V1
7	Don't like the way CFLs look in fixtures	V1
8	Don't like the way CFLs fit in fixtures	V1
9	CFLs aren't bright enough	V1
10	CFL light color isn't what I want/isn't right	V1
11	CFLs take too long to light up	V1
-77	Other (specify)	V1
-88	Refused	V1
-99	Don't know	V1

### **Verification of IOU service**

V1. I have just a few more questions before we wrap up. Just to verify, does [IOU] provide electricity to your home?

0	No	D1
1	Yes	D1
-88	Refused	D1
-99	Don't know	D1

### **DEMOGRAPHICS**

D1. Do you own or rent your home?

0	No	D2
1	Yes	D2
-77	Other (specify)	D2
-88	Refused	D2
-99	Don't know	D2

D2. In what type of building do you live? [READ LIST IF NEEDED.]

1	Mobile home	D3
2	One-family home detached from any other house	D3
3	One-family home attached to one or more houses	D3
4	A building with 2 apartments	D3
5	A building with 3 or 4 apartments	D3
6	A building with 5 or more apartments	D3
-77	Other (specify)	D3
-88	Refused	D3
-99	Don't know	D3

D3. About when was this building first built? [READ LIST IF NEEDED.]

1	Before the 1970s	D4
2	1970s	D4
3	1980s	D4
4	1990-1994	D4
5	1995-1999	D4
6	2000s	D4
-88	Refused	D4
-99	Don't know	D4

D4. How many square feet of living space are there in your residence, including bathrooms, foyers and hallways? (Exclude garages, basements and unheated porches.)

1	Less than 500	D5
2	500 – 1,000	D5
3	1,001 – 1,500	D5
4	1,501 – 2,000	D5
5	2,001 – 2,500	D5
6	2,501 – 3,000	D5
7	Greater than 3,000	D5
-88	Refused	D5
-99	Don't know	D5

D5. How many full or half bathrooms do you have in your home? (PROBE: A full bathroom is one that has a sink with running water, and a toilet, and either a bathtub or shower. A half bathroom has either a toilet or a bathtub or a shower.)

	[RECORD NUMBER]	D6
-88	Refused	D6
-99	Don't know	D6

D6. How many bedrooms do you have in your home (If a one-room efficiency, or studio apartment, bedrooms=0)

	[RECORD NUMBER]	D7
-88	Refused	D7
-99	Don't know	D7

D7. Other than bedrooms and bathrooms, how many other rooms are there in your home? Do not count laundry rooms, foyers, unfinished storage spaces, porches, or garages.

	[RECORD NUMBER]	D8
-88	Refused	D8
-99	Don't know	D8

D8. Including yourself, how many people currently live in your home year-round?

	[RECORD NUMBER]	D9
-88	Refused	D9
-99	Don't know	D9

D9. Which of the following best describes your age?

1	Less than 18 years old,	D10
2	18 to 24,	D10
3	25 to 34,	D10
4	35 to 44,	D10
5	45 to 54,	D10
6	55 to 64, or	D10
7	65 or older?	D10
-88	Refused	D10
-99	Don't know	D10

D10. [IF D8 > 1] Including yourself, how many people currently living in your home year-round are in the following age groups? [TOTAL SHOULD EQUAL D8.]

1	Less than 18 years old	[RECORD NUMBER]	D11
2	18 to 24	[RECORD NUMBER]	D11
3	25 to 34	[RECORD NUMBER]	D11
4	35 to 44	[RECORD NUMBER]	D11
5	45 to 54	[RECORD NUMBER]	D11
6	55 to 64	[RECORD NUMBER]	D11
7	65 or older	[RECORD NUMBER]	D11
-88	Refused		D11
-99	Don't know		D11

D11. What is the highest level of education you have completed?

1	No schooling	D12
2	Less than high school	D12
3	Some high school	D12
4	High school graduate or equivalent (e.g., GED)	D12
5	Trade or technical school	D12
6	Some college	D12
7	College degree	D12
8	Some graduate school	D12
9	Graduate degree	D12
-88	Refused	D12
-99	Don't know	D12

D12. Which of the following best represents your annual household income from all sources in 2007, before taxes? Was it . . . ?

1	Less than \$20,000 per year,	D13
2	\$20,000-49,999,	D13
3	\$50,000-74,999,	D13
4	\$75,000-99,999,	D13
5	\$100,000-149,999,	D13
6	\$150,000-199,999, or	D13
7	\$200,000 or more?	D13
-88	Refused	D13
-99	Don't know	D13

D13. Are you Spanish/Hispanic/Latino?

0	No	D14
1	Yes	D14
-88	Refused	D14
-99	Don't know	D14

D14. What is your race? [ACCEPT MULTIPLE RESPONSES.]

1	White	D15
2	Black or African American	D15
3	American Indian or Alaska Native	D15
4	Asian	D15
5	Chinese	D15
6	Japanese	D15
7	Korean	D15
8	Vietnamese	D15
10	Filipino	D15
11	Native Hawaiian	D15
12	Guamanian or Chamorro	D15
13	Samoan	D15
-77	Other (specify)	D15
-88	Refused	D15
-99	Don't know	D15

D15. What is the primary language spoken in your home? [DO NOT READ LIST.]

1	English	D16
2	Spanish	D16
3	Mandarin	D16
4	Cantonese	D16
5	Tagalog	D16
6	Korean	D16
7	Vietnamese	D16
8	Russian	D16
9	Japanese	D16
-77	Other (specify)	D16
-88	Refused	D16
-99	Don't know	D16

D16. RECORD GENDER [DO NOT ASK.]

1	Male	C1
2	Female	C1
-99	Don't know	C1

### **Confirm Mailing Address for Gift Certificate**

Those are all of the questions I have for you today.

C1. Could I please have your full name and mailing address so I can send you the gift card?

	[RECORD FIRST AND LAST NAME]	C3
	[RECORD STREET]	C3
	[RECORD CITY / STATE / ZIP]	C3
-99	Refused	C2
-88	Don't know	C2

C2. Without an address we will be unable to send you the \$20 gift card to Amazon.com as a way of saying thank you for participating in the study.

0	Will not provide address	C7
1	Will provide address	C1

C3. I'd like to make sure we have the best phone number for you in case we have a problem mailing the gift card. Is the number I called today the best number to use?

0	No	C4
1	Yes	C5
-99	Refused	C5
-88	Don't know	C5

C4. What's the best number for you?

	[RECORD NUMBER]	L2
0	Unwilling to provide phone number	C5

C5. Okay, if we run into any trouble we'll give you a call back at the phone number we're using today.  
[GO TO C6.]

**Thank & Terminate**

C6. Those are all of the questions I have for you today. You should receive your gift card within 2 to 4 weeks. If you do not receive your giftcard within 6 weeks you can contact us at [CONTACT NUMBER]. Thank you for your time. (END.)

C7. Those are all of the questions I have. Thank you for your time. (END.)

**Program Attribution, Market Effects, and Market Characterization  
Interview Guide  
for Lighting Manufacturers Participating  
in the 2006-2008 California Upstream Lighting Programs**

**I. Introduction**

A. Contact Protocol

1. Call potential interviewees to ascertain most appropriate interviewee. Obtain email address(es) of appropriate interviewees. If company refuses interview, determine reasons for refusal and if it's logistical in nature, try to find workaround.
2. Send email interview invitation to appropriate interviewee. This invitation will include:
  - a) Explanation of purpose and scope of interview.
  - b) Explanation of time frame within which the interview will need to be completed.
  - c) Explanation of expected duration of interview and flexibility to complete interview over multiple sessions.
  - d) Instructions to propose a convenient interview time.
  - e) Contact information for interviewers.
  - f) Assurances of confidentiality.
  - g) A letter attachment from the CPUC explaining the importance of the interview.
3. If target interviewee does not respond to the email invitation within a week, a follow-up call will be made to try to schedule an interview time, find an alternate interview target, or determine reasons for refusal.
4. Once an interview time has been arranged, the interviewee will be emailed, a couple days in advance of the interview, a copy of the interview guide as well as a customized data table similar to Table 1 below. The email will contain additional assurances of confidentiality.

B. At the beginning of the interview, collect information on interviewee's position, overall responsibilities, and experience with the program..

**II. Program Participation Confirmation and Reasons for Participation**

- A. Pacific Gas and Electric, Southern California Edison, and San Diego Gas and Electric jointly participate in an Upstream Lighting Program which provides per bulb or per fixture financial incentives to buy down the cost of energy efficient lighting products. According to our information your company has been receiving these manufacturer buydown incentives from this California Upstream Lighting Program during the 2006-2008 time period. Are you aware of your company's participation in this program? [IF UNAWARE, FIND SOMEONE WITH THE COMPANY WHO IS AWARE. IF THEY RECOGNIZE THIS PROGRAM BY A DIFFERENT NAME, EXPLAIN THAT FOR THE SAKE OF SIMPLICITY YOU'LL HENCEFORTH REFER TO THE PROGRAM AS "THE CALIFORNIA UPSTREAM LIGHTING PROGRAM."]

- B. Besides getting these financial incentives, are there any other aspects of this California Upstream Lighting Program that your company has actively taken part in?
  - 1. [IF YES] What other aspects of this program has your company been involved in?
- C. About what year did your company first get involved with the California Upstream Lighting Program?
- D. Before becoming involved with the California Upstream Lighting Program, was your company involved in any other California programs that provide rebates or buydown discounts for energy-efficient lighting products?
  - 1. [IF YES] What programs were these? [IF REBATES MENTIONED, TRY TO DETERMINE IF THESE WERE UPSTREAM OR DOWNSTREAM (MAIL-IN REBATES, POINT-OF-SALE REBATES)]
  - 2. [IF YES] About when did this involvement begin and what was the nature of this participation?
- E. Was your company selling compact fluorescent bulbs or fixtures in California before getting involved with any of these California lighting rebate or discount programs?
- F. What was your primary reason for getting involved with the California Upstream Lighting program?
- G. Did you have any other reasons for getting involved with the California Upstream Lighting program?
  - 1. [IF YES] What were these?

**III. 2006-2008 CFL Product Sales and California Upstream Lighting Program Trends**

- A. My next questions concern which compact fluorescent bulbs or fixtures you sell in California and what retail channels you sell them through. Is this a topic that you are familiar with? [IF INTERVIEWEE IS FAMILIAR, PROCEED. IF NOT FAMILIAR, GET ALTERNATIVE CONTACT NAME AND SKIP TO NEXT SECTION]
- B. **Non-Specialty CFL Bulbs** [IF THEY SOLD NON-SPECIALTY CFL BULBS ELSE SKIP TO III. C.] First I'm going to ask you some questions



about your sales of non-specialty CFL bulbs in California. By “non-specialty” CFL bulbs I mean bulbs that do not have special functions or features such as reflectors, dimmability, three-way light levels, or flood lighting. Now earlier I emailed you a table that shows you a record of the types of non-specialty CFL bulbs that we have records of you selling through the ULP program along with some spaces for non-program sales that we were hoping you could fill in. [REPEAT ASSURANCES OF CONFIDENTIALITY]

**Table 1  
Sample Data Table**

Retail Channel/Product Type	# Non-Specialty CFL Bulbs Through Upstream Lighting Program				# Non-Specialty CFL Bulbs Sold in California Not Through Upstream Lighting Program			
	2006	2007	Q1 2008	Total 2006-2008	2006	2007	Q1 2008	Total 2006-2008
<b>Non-Specialty CFL Bulbs of Type Sold Through Upstream Lighting Program</b>								
<b>Large Home Improvement</b>								
CFL INT INTEGRAL - 13 WATT >= 800 LUMENS - SCREW-IN	50,000	78,000	32,000	160,000	A	B	C	D
INTERIOR CF BULB - 23 WATT 1,100 TO 1,399 LUMENS	100,000	213,000	81,000	394,000	E	F	G	H
<b>Grocery</b>								
CFL INT INTEGRAL - 13 WATT >= 800 LUMENS - SCREW-IN	60,000	93,600	38,400	192,000	I	J	K	L
INTERIOR CF BULB - 23 WATT 1,100 TO 1,399 LUMENS	120,000	255,600	97,200	472,800	M	N	O	P
INTERIOR CF BULB - 23 WATT >=1,600 LUMENS	85,000	34,000	56,000	175,000	Q	R	S	T
<b>Other Non-Specialty Energy Star CFLs Sold in California But Not Through Upstream Lighting Program</b>								
<b>Channel?</b>								
???								
???								
???								
<b>Channel?</b>								
???								
???								
???								
<b>Non-Specialty Non-Energy Star CFLs Sold in California</b>								
<b>Channel?</b>								
???								
???								
???								
<b>Channel?</b>								
???								
???								
???								

- Does the table I sent to you seem correct in terms of the types and volume of non-specialty CFLs you sold through the California Upstream Lighting Program?

- a) [IF NO] [Record any corrections to the table]
2. Why did you choose to sell these particular products and packages through the California Upstream Lighting Program?
3. [IF THEY DID FILL IN NON-ULP DATA INTO TABLE THAT INDICATED NON-SPECIALTY ENERGY STAR CFLs SOLD IN CALIFORNIA IN 2006-2008 BUT NOT THROUGH ULP PROGRAM] I noticed that when you filled out the table you indicated that in the 2006-2008 period you sold non-specialty Energy Star CFLs in California that were not rebated by the California Upstream Lighting Program. Why didn't you sell these CFL bulbs through the program?
- a) [IF THEY INDICATE MULTIPLE REASONS] Which of these reasons was the most important?
- b) [IF NOT ALREADY EXPLAINED] What advantages, if any, did you see in not selling CFL bulbs through the program?
- c) [IF NOT ALREADY EXPLAINED] What disadvantages, if any, did you see in not selling CFL bulbs through the program?
4. [IF THEY DID FILL IN NON-ULP DATA INTO TABLE THAT INDICATED NON-SPECIALTY NON-ENERGY STAR CFLs SOLD IN CALIFORNIA IN 2006-2008] I noticed that when you filled out the table you indicated that in the 2006-2008 period you sold non-specialty non-Energy Star CFLs in California. Why do you sell these rather than just Energy Star CFLs?
- a) [IF THEY INDICATE MULTIPLE REASONS] Which of these reasons was the most important?
- b) What would have to change for you to only offer Energy Star CFLs for the CFLs you sell?
- c) What are the advantages and disadvantages of getting bulbs certified by Energy Star?
5. [IF THEY DIDN'T FILL IN NON-ULP DATA INTO TABLE] During the 2006-2008 period did you sell non-specialty Energy Star CFL bulbs in California that **did not** receive discounts from the Upstream Lighting Program?

- a) [IF YES] Are the bulb types and packages different from those you sell through the California Upstream Lighting Program?
    - a. [IF YES] How so?
  - b) [IF YES] What sorts of distribution channels did you sell these non-specialty Energy Star CFLs through?
  - c) [IF YES] Why didn't you sell these bulbs through the California Upstream Lighting Program?
6. [IF THEY DIDN'T FILL IN NON-ULP DATA INTO TABLE] During the 2006-2008 period did you sell non-specialty non-Energy Star CFL bulbs in California that **did not** receive discounts from the Upstream Lighting Program?
- a) [IF YES] What sorts of bulb types and packages were these non-specialty, non-Energy Star bulbs?
  - b) [IF YES] What sorts of retail channels do you sell these non-specialty, non-Energy Star bulbs through? [MAKE SURE TO CLARIFY WHICH BULB TYPES/PACKAGES WERE SOLD THROUGH WHICH RETAIL CHANNELS]
7. When discounts from the Upstream Lighting Program **were not** available, due to delays in program startup or product allocations for discounted CFLs running out, did you sell non-specialty Energy Star CFL bulbs in California?
- a) [IF YES] Were the bulb types and packages different from those you sell through the California Upstream Lighting Program?
    - a. [IF YES] How so?
  - b) [IF YES] What sorts of distribution channels did you sell these non-specialty CFLs through?
8. [IF THEY DIDN'T COMPLETE THE TABLE] Please provide your best estimate of what % of non-specialty CFL bulbs that you sold in California during the 2006-2008 period fit into the following categories:

First consider the non-specialty CFL bulbs that were discounted by the California Upstream Lighting Program (ULP). About what % non-specialty CFL bulbs that you sold in California during the 2006-2008	_____ %
--	---------

period did these account for?	
Next consider the non-specialty CFL bulbs that met Energy Star specifications but were not discounted by the program. About what % non-specialty CFL bulbs that you sold in California during the 2006-2008 period did these account for?	_____ %
Finally consider the non-specialty bulbs that did not meet Energy Star specifications. About what % non-specialty CFL bulbs that you sold in California during the 2006-2008 period did these account for?	_____ %
<b>Total non-specialty CFL bulbs sold in California during the 2006-2008 period</b>	<b>100%</b>

9. Did you sell non-specialty CFLs in the 2006-2008 period that you believe exceed Energy Star specifications? [REMINDEE OF ENERGY STAR SPECIFICATIONS]
- a) [IF YES] In what ways do these bulbs exceed Energy Star specification?
  - b) [IF YES] What types (wattages, brands) of non-specialty CFL bulbs were these?
  - c) [IF YES] Why do you offer such non-specialty bulbs that exceeded Energy Star specifications?
  - d) [IF YES] What sorts of distribution channels did you sell these better-than-Energy Star CFL bulbs through?
  - e) [IF YES] About what percentage of the non-specialty CFL bulbs that you sold in California during the 2006-2008 period did these account for?
10. [IF THEY SOLD NON-SPECIALTY CFLS IN CALIFORNIA IN 2006-2008 THAT DID NOT RECEIVE CALIFORNIA UPSTREAM LIGHTING PROGRAM DISCOUNTS]. The California Public Utilities Commission and the California investor-owned utilities have sales data for the CFL products that your company sold through the California Upstream Lighting Program. However, they are also very interested in learning about prices and sales volumes for CFL products that were not sold through the Upstream Lighting Program. If we provided assurances to protect the confidentiality of these sales data, would you be willing to share these data?

- a) [IF YES] What would be the next step for getting these data?
- C. Specialty CFL Bulbs** [IF THEY SOLD SPECIALTY CFL BULBS ELSE SKIP TO III. D]. Next I'm going to ask you some similar questions but this time about your sales of specialty CFL bulbs. By "specialty" CFL bulbs I mean bulbs that have special functions or features such as reflectors, dimmability, three-way light levels, or flood lighting. [REPEAT QUESTIONS B1. – B10 EXCEPT SUBSTITUTE WORD "Specialty" for "Non-Specialty"]
- D. CFL Fixtures** [IF THEY SOLD CFL FIXTURES ELSE SKIP TO III. E.] Next I'm going to ask you some similar questions but this time about your sales of Energy Star-qualified CFL fixtures. [REPEAT QUESTIONS B1. – B10 EXCEPT SUBSTITUTE WORDS "CFL fixtures" for "Non-Specialty CFL bulbs"]
- E. Recent trends, policies for the California Upstream Lighting Program**
- 1. Are there certain types of CFL or LED bulbs or fixtures that the California Upstream Lighting Program has been encouraging your company to sell more than others?
    - a) [IF YES] Which products are these?
    - b) Have there been differences between the California investor-owned utilities involved in this program in terms of which lighting products they have been encouraging?
      - a. [IF YES] What are these differences?
    - c) [IF YES] Do you agree with an emphasis on these products?
      - a. Why do you say this?
    - d) Are there certain types of the energy-efficient lighting products that you think the California Upstream Lighting Program should be promoting that they are not currently promoting?
  - 2. Are there certain types of retailers that the California Upstream Lighting Program has been encouraging lighting manufacturers to partner with more than other retailer types?
    - a) [IF YES] Which types of retailers?
    - b) [IF YES] Do you agree with an emphasis on these retailer types?

- a. Why do you say this?
  - c) Are there certain types of retailers that you think the California Upstream Lighting Program should be focusing on more to encourage their sales of energy-efficient lighting products?
    - a. Why do you say this?
- 3. Before now were you aware that the California Upstream Lighting Program currently has a bulk purchase limit on how many CFLs, CFL fixtures, LED night lights or holiday lights can be included in a single customer purchase?
  - a) What is your opinion on these bulk purchase limits?
  - b) [IF WERE AWARE OF BULK LIMITS] What, if anything, is your company doing to try to enforce these bulk limits?
    - a. [IF INVOLVED IN POLICING OF BULK LIMITS] The main purpose of the bulk purchase limits is to reduce the chance of CFL products discounted by the Upstream Lighting Program being sold outside of California. Have you discovered any of your CFL products being sold outside of California?
      - i. [IF YES] How do you think this happened?

**IV. Free Ridership and In-State Spillover for 2006-2008 Upstream Lighting Program**

- A. My next questions are about the impact that the 2006-2008 California Upstream Lighting Program may have had on your California CFL products sales. Are there any retailers or retailer categories that you worked with through the 2006-2008 Upstream Lighting Program that you think would not have been selling any CFL products during this 2006-2008 time period if the discounts of \$0.50-\$2.75 per bulb from this program had not been available?
  - 1. [IF YES] Which retailers or retailer categories?
  - 2. Are there any retailers or retailer categories that you worked with through the 2006-2008 Upstream Lighting Program that you think would have been selling a different assortment of CFL bulbs or fixtures than they are now if the discounts of \$0.50-\$2.75 per bulb from this program had not been available?

- a. [IF YES] Which retailers/retailer categories and which products?
- B. [SURVEYORS: PLEASE FOLLOW THE FOLLOWING INSTRUCTIONS CAREFULLY FOR THE FREE RIDERSHIP PORTION OF THIS SURVEY].
1. FIRST ASK THE MANUFACTURER THE FREE RIDERSHIP AND SPILLOVER QUESTION SEQUENCE FOR THE RETAILER CATEGORY THROUGH WHICH THEY SOLD THE **MOST CFLS** THROUGH THE PROGRAM (SEE MATRIX). **HOWEVER, EXCLUDE ANY RETAILER CATEGORIES THAT THEY IDENTIFIED AS NOT SELLING ANY CFL PRODUCTS AT ALL WITHOUT THE BUYDOWNS]**
  2. SECOND ASK THE MANUFACTURER **THE FREE RIDERSHIP QUESTION SEQUENCES ONLY** FOR THE RETAILER CATEGORY THROUGH WHICH THEY SOLD THE **SECOND MOST CFLS** THROUGH THE PROGRAM (SEE MATRIX). **HOWEVER, AS BEFORE, EXCLUDE ANY RETAILER CATEGORIES THAT THEY IDENTIFIED IN V. A AS NOT SELLING ANY CFL PRODUCTS AT ALL WITHOUT THE BUYDOWNS]**
  3. [IF THEY SOLD DISCOUNTED CFLS THROUGH MORE THAN TWO RETAILER CATEGORIES] THEN SAY: “You also sold CFL products through [LIST OTHER RETAILER CATEGORIES, IF ANY, BESIDES THE TWO ALREADY IDENTIFIED].”
    - a) “Would your responses regarding the effect of the manufacturer buydowns on CFL product sales in these types of retailers be different, in a non-trivial way than for the retailer categories we already discussed?
      - a. [IF YES, OR THEY RESPOND IN A WAY THAT WOULD INDICATE SOME NON-TRIVIAL DIFFERENCE (THIS IS A JUDGEMENT CALL)]  
For which types of retailers would your responses be different?
        - i. ASK A NEW FREE RIDERSHIP QUESTION SEQUENCE FOR EACH ADDITIONAL RETAILER CATEGORY THAT THEY IDENTIFY ABOVE.

**C. Free Ridership**

1. **Non-Specialty CFL bulbs** [ASK ONLY IF SOLD NON-SPECIALTY CFL BULBS – OTHERWISE SKIP TO IV.C.2.]  
According to our records in the 2006-2008 period you received California Upstream Lighting Program manufacturer buydown discounts of \$0.50-\$2.75 per bulb for the sale of the following types

of non-specialty CFL bulbs [NAME TYPES] through [RETAILER CATEGORY] such as [NAME RETAILER EXAMPLE]. The program also provided promotional materials such as signage. If these manufacturer buydown discounts and program promotional materials had not been available during this 2006-2008 period, do you think your sales of these types of non-specialty Energy Star CFL bulbs through [RETAILER CATEGORY] stores would have been about the same, lower, or higher?

- a) [IF HIGHER] Why do you say this? [RECORD RESPONSE AND THEN SKIP TO NEXT RETAILER CATEGORY]
  
- b) [IF LOWER] By what percentage do you estimate your sales of non-specialty Energy Star CFL bulbs through [RETAILER CATEGORY] stores would be lower during this 2006-2008 period if these manufacturer buydowns and program promotional materials for non-specialty CFLs had not been available? [RECORD % DECREASE]
  - a. I want to make sure I understand you correctly. You estimate that your sales would have been [PERCENTAGE FROM QUESTION IV.C.1. b.] % lower without the manufacturer buydowns. So if you actually sold 100 non-specialty CFLs in a given week, you think you'd have sold only about [100 – (PERCENTAGE FROM QUESTION IV.C.1. b. \* 100)] in that period if the manufacturer buydowns hadn't been available? [IF RESPONSE IS ≠ YES THEN CLARIFY ESTIMATED SALES DECREASE]
  
- c) **Manufacturer add-on discounts:** When the California Upstream Lighting Program was providing manufacturer buydown discounts for non-specialty bulbs sold through the [RETAIL CATEGORY] retail channel, did your company ever provide any of its own price discounts in addition to those provided by the Upstream Lighting Program?
  - a. [IF NO] Why not?
  
  - b. [IF YES] What were your reasons for providing these additional price discounts?
  
  - c. [IF YES] What was the typical range of these additional discounts on a \$ per bulb basis?



- d. [IF YES] Were there particular types of bulbs that you offered these additional discounts on?
  - i. [IF YES] What types of bulbs were these?
- e. Using a scale of 0 to 10 where 10 equals “very likely” and 0 equals “not likely at all,” how likely were you to offer these additional price discounts if the manufacturer buydowns had not also been available?

[REPEAT QUESTIONS IV. C. 1. a) – d). FOR THE NEXT RETAILER CATEGORY]

- 2. **Specialty CFL bulbs** [ASK ONLY IF SOLD SPECIALTY CFL BULBS THROUGH THIS RETAILER CATEGORY OTHERWISE SKIP TO IV.C.3.] [REPEAT QUESTIONS IV. C. 1. a) – d) BUT SUBSTITUTE APPROPRIATE PRODUCT NAME AND DISCOUNT LEVELS. REPEAT SEQUENCE FOR EACH RETAILER CATEGORY]
- 3. **CFL fixtures** [ASK ONLY IF SOLD SPECIALTY CFL BULBS THROUGH THIS RETAILER CATEGORY OTHERWISE SKIP TO NEXT QUESTION] [REPEAT QUESTIONS IV. C. 1. a) – d) BUT SUBSTITUTE APPROPRIATE PRODUCT NAME AND DISCOUNT LEVELS. REPEAT SEQUENCE FOR EACH RETAILER CATEGORY]
- 4. **Effects of other California IOU programs/efforts**
  - a) Besides the discounts and the promotional materials, do you think the California Upstream Lighting Program does anything else to help you sell non-specialty Energy Star CFL bulbs?
    - a. [IF YES] What else does the program do?
  - b) California also has a program called Flex Your Power that does mass advertising for CFL products and other energy efficient measures. Please indicate how significant you think this program is as a driver of increased CFL product sales in California in the 2006-2008 period. Please use a 0 to 10 scale, where 0 is not at all significant and 10 is extremely significant. [RECORD RATING]
    - a. Why do you give this rating?
  - c) In addition to the Upstream Lighting Program and the Flex Your Power Program some California utilities have also been involved in other campaigns to promote sales of CFL products such as the

Energy Star Change-a-Light promotion. Please indicate how significant you think these promotions have been as a driver of increased CFL product sales in the 2006-2008 period. Please use a 0 to 10 scale, where 0 is not at all significant and 10 is extremely significant. [RECORD RATING]

a. Why do you give this rating?

**D. Program Effects on Non-discounted CFLs Sold in California in 2006-2008 [IF THEY SOLD NON-SPECIALTY CFLS IN CALIFORNIA IN 2006-2008 THAT DID NOT RECEIVE CALIFORNIA UPSTREAM LIGHTING PROGRAM DISCOUNTS ELSE SKIP TO SECTION V.]**

1. You said earlier that you also sold CFL bulbs or fixtures in California in the 2006-2008 that did not receive discounts from the California Upstream Lighting Program. What effects, if any, do the program-discounted CFL bulbs or fixtures have on your sales levels of these non-program-discounted CFL bulbs or fixtures? [IF MECHANISM FOR THESE EFFECTS IS NOT EXPLAINED, PROBE FOR MECHANISM]

a) Would these effects vary depending on the type of CFL product?

a. [IF YES] How so?

b) Have these effects changed at all over this 2006-2008 period?

a. [IF YES] How so and about what time period did these effects change?

2. Do the retailers that you supply ever sell program-discounted CFL bulbs or fixtures and non-program-discounted CFL bulbs or fixtures at the same time?

a) [IF YES] Would you say this happens always, very often, sometimes, or not very often?

b) [IF YES] Do you promote these non-program-discounted CFL bulbs or fixtures differently than you do the program-discounted CFL bulbs or fixtures?

a. [IF YES] How are your promotional efforts different?

c) [IF YES] Do you think increased shopper foot traffic due to program-discounted CFL bulbs and fixtures has any impact on

- a. [IF YES] Why do you say this?
3. What effects do you think program-discounted CFL bulbs or fixtures have on consumer expectations regarding prices of non-discounted CFL bulbs or fixtures?
4. You indicated that you sold the following types of non-specialty CFL bulbs in California during the 2006-2008 period that you did not sell through the ULP Program:[READ PRODUCT TYPES AND RETAIL CHANNELS (IF AVAILABLE). IF THEY FILLED OUT THE TABLE, DIRECT THEM TO SPECIFIC ROW]. Do you think your sales of these types of non-specialty non-program-discounted CFL bulbs would be about the same, lower, or higher if the California Upstream Lighting program – with its manufacturing buydowns and promotional materials – did not exist during this time period?
- a) [IF HIGHER] Why do you say this?
- b) [IF HIGHER] By what percentage do you estimate your sales of these non-specialty non-program-discounted CFL bulbs through [RETAILER CATEGORY] stores would be higher during this period if the California Upstream Lighting Program did not exist during this 2006-2008 time period? [RECORD % DECREASE]
- a. I want to make sure I understand you correctly. You estimate that your sales of non-program-discounted bulbs would have been [PERCENTAGE FROM QUESTION IV. D. 4. b.] % higher without the manufacturer buydowns. So if you actually sold 100 of these non-specialty CFLs in a given week, you think you'd have sold about  $[100 + (\text{PERCENTAGE FROM QUESTION IV. D. 4. b.} * 100)]$  in that period if the California Upstream manufacturer buydowns hadn't been available? [IF RESPONSE IS  $\neq$  YES THEN CLARIFY ESTIMATED SALES INCREASE]
- c) [IF LOWER] Why do you say this?
- d) [IF LOWER] By what percentage do you estimate your sales of these non-specialty CFL bulbs through [RETAILER CATEGORY] stores would be lower during this period if the

California Upstream Lighting Program did not exist during this time period? [RECORD % DECREASE]

a. I want to make sure I understand you correctly. You estimate that your sales of non-program-discounted bulbs would have been [PERCENTAGE FROM QUESTION IV. D. 4. d.] % lower without the manufacturer buydowns. So if you actually sold 100 of these non-specialty CFLs in a given week, you think you'd have sold about [100 - (PERCENTAGE FROM QUESTION IV. D. 4. d. \* 100)] in that period if the California Upstream Lighting Program did not exist during this time period? [IF RESPONSE IS ≠ YES THEN CLARIFY ESTIMATED SALES DECREASE]

e) [IF SAME] Why do you say this?

f) [IF THEY INDICATED IN IV B. 1. THAT EFFECTS OF PROGRAM ON NON-PROGRAM NON\_SPECIALTY CFLS HAS CHANGED OVER 2006-2008 PERIOD, PROBE FOR HOW THESE SALES EFFECTS WOULD VARY OVER THE 2006-2008 PERIOD]

5. [REPEAT SEQUENCE IV. D. 4 FOR SPECIALTY CFLS OR CFL FIXTURES IF RELEVANT, MAKING SURE TO CHANGE PRODUCT DESCRIPTION IN QUESTIONS.]

6. [IF THEY SOLD BOTH SPECIALTY AND NON-SPECIALTY CFLS] You said earlier that during the 2006-2008 period, you sold both non-specialty and specialty CFL bulbs through the California Upstream Lighting Program. What effects, if any, do the program-discounted non-specialty CFL bulbs have on your sales levels of program-discounted specialty CFL bulbs, such as dimmable bulbs, bulbs with reflectors, 3-way bulbs, and flood lights? [IF MECHANISM FOR THESE EFFECTS IS NOT EXPLAINED, PROBE FOR MECHANISM]

**V. Early, Cumulative Effects of California Lighting Rebate Programs** – Up until now we have been talking about the effect of the California Upstream Lighting Program on CFL bulbs and products that you sold in California during the 2006-2008 period. Now I want you to think about the earlier and cumulative effects that the years of California lighting rebate and discount programs might have had on your company's sales of CFL products.

- A. Have the years of California lighting rebate and discount programs had any effects on the types of CFL products you sell or the way that you sell them?
1. [IF YES] How so?
- B. [IF THEY SAID THAT THEY HADN'T BEEN SELLING CFL PRODUCTS IN CALIFORNIA BEFORE BECOMING INVOLVED IN CA LIGHTING REBATE PROGRAMS – E.G. II. E = “NO”] Earlier you said that your company was not selling CFL products in California before getting involved with any California lighting rebate or discount programs. How significant was the existence of the California lighting rebate or discount programs in your company’s decision to enter the California lighting market? Please use a 0 to 10 scale, where 0 is not at all significant and 10 is extremely significant.
- C. [IF THEY SAID THAT THEY HAD BEEN SELLING CFL PRODUCTS IN CALIFORNIA BEFORE BECOMING INVOLVED IN CA LIGHTING REBATE PROGRAMS – E.G. II. E = “YES”] Earlier you said that your company sold CFL products in California before getting involved with any of these California lighting rebate or discount programs. Are you familiar with your company’s CFL product sales activities during this period?
1. [IF YES] Currently you sell CFL products in the following retail channels in California [IDENTIFY RETAIL CHANNELS]. Were you selling in these same retail channels before you became involved with the California lighting rebate or discount programs?
    - a) [IF NO] Which retail channels did you enter only after becoming involved with the California lighting rebate or discount programs?
      - a. How significant was your involvement in the California lighting rebate or discount programs in your decision to enter the [X] retail channel. Please use a 0 to 10 scale, where 0 is not at all significant and 10 is extremely significant. [REPEAT QUESTIONS FOR ALL NEW RETAIL CHANNELS]?
      - b. Why do you say this?
  2. [IF NO, OR NO LONGER RECALL] Is there anyone else in your company that might recall your CFL sales trends during this period? [IF SO, RECORD NAME AND CONTACT INFORMATION AND CONTINUE TO NEXT QUESTION]

3. Do you have California CFL product sales data for this period before you became involved with the California lighting rebate or discount programs?

a) [IF YES] If we provided assurances to protect the confidentiality of these sales data, would you be willing to share these data?

a. [IF YES] What would be the next step for getting these data?

D. Does your company sell CFL bulbs or fixtures in any states that **do not** have utilities or state energy efficiency programs that offer manufacturer buydowns or point of sale rebates for these kind of lighting products?

1. [IF YES] Are you familiar with your company's CFL bulb or fixture sales activities in these states?

a) [IF YES] Currently you sell CFL bulbs or fixtures in [IDENTIFY RETAIL CHANNELS] channels in California. Do you sell CFL products in the same retail channels in these states that **do not have** utilities or state energy efficiency programs offering CFL product rebates or discounts?

a. [IF NO] Which retail channels do you use to sell CFL products in these other states?

b. [IF RETAIL CHANNELS ARE USED IN CALIFORNIA THAT ARE NOT USED IN THESE OTHER STATES] You sell CFL products through the [INCREMENTAL CA CHANNELS] retail channels in California but not in other states. How significant is the 2006-2008 California Upstream Lighting program in explaining why you sell CFL products through these retail channels in California and not these other states? Please use a 0 to 10 scale, where 0 is not at all significant and 10 is extremely significant.

b) [IF NO] Who would be another person at your company who is familiar with the sales of these CFL products in states that do not have utilities or state energy efficiency programs offering CFL product rebates or discounts? [RECORD NAME AND CONTINUE TO NEXT QUESTION]

- E. [IF YES] If we provided assurances to protect the confidentiality of your data, would you be willing to share recent CFL product sales data for states other than California?
1. [IF YES] What would be the next step for getting these data?
- F. California energy efficiency programs have been offering rebates and discounts on CFL bulbs for many years. Do you think these California programs have influenced the level of sales of CFLs in other states?
1. Why do you say this?
    - a) [IF NOT EXPLAINED IN THEIR ANSWER TO E1] How do the California lighting rebate programs influence the level of sales of CFLs in other states?
  2. [IF YES] How significant has been the influence of these years of California rebate programs on the price of CFLs in these states? Please use a 0 to 10 scale, where 0 is not at all significant and 10 is extremely significant.
- G. Has your firm experienced any reductions in manufacturing production costs for non-specialty CFLs over the last ten years?
1. [IF YES] By how much do you think these reductions in production costs have reduced the average per-bulb prices during this ten-year period?
  2. [IF YES] What factors have led to these reductions in manufacturing production costs?
    - a) [IF STATE/UTILITY REBATE PROGRAMS ARE MENTIONED] How did these rebate programs influence these reductions in your manufacturing costs?
    - b) [IF STATE/UTILITY REBATE PROGRAMS ARE MENTIONED] In what time period did these rebate programs influence these reductions in your manufacturing costs?
    - c) [IF STATE/UTILITY REBATE PROGRAMS ARE MENTIONED] Do you think that the California lighting rebate and discount programs in particular have been an important factor in influencing these reductions in your manufacturing costs?

a. [IF YES] How important a factor were the California lighting rebate programs, in particular, in influencing these reductions in your manufacturing costs? Please use a scale of 0 to 10 where 10 equals “very important” and 0 equals “not important at all.”

i. Why do you give this rating?

1. [IF INCREASED MANUFACTURING CAPACITY CAUSED BY CALIFORNIA REBATE PROGRAMS MENTIONED] By approximately what % did you increase your manufacturing capacity in response to the California rebate programs?

2. [IF INCREASED MANUFACTURING CAPACITY CAUSED BY CALIFORNIA REBATE PROGRAMS MENTIONED] About when did these increases in manufacturing capacity caused by the California rebate programs occur?

3. [IF INCREASED MANUFACTURING CAPACITY CAUSED BY CALIFORNIA REBATE PROGRAMS MENTIONED] By approximately what % did this increase in CFL manufacturing capacity reduce your average CFL production cost?

d) [IF GENERAL INCREASES IN WORLD CFL DEMAND MENTIONED] How important a factor were the California lighting rebate programs, in particular, in increasing demand for these CFL products? Please use a scale of 0 to 10 where 10 equals “very important” and 0 equals “not important at all.”

a. Why do you give that rating?

e) [IF TECHNOLOGICAL IMPROVEMENTS AT THE FACTORY MENTIONED] How important a factor were the



California lighting rebate programs, in particular, in driving these technological improvements in the factory? Please use a scale of 0 to 10 where 10 equals “very important” and 0 equals “not important at all.”

a. Why do you give that rating?

f) If the California rebate and discount programs went away after 2008 do you think your average production costs for non-specialty CFLs would go up, would go down, or stay about the same?

a. Why do you say that?

H. For years California lighting rebate and discount programs have been working to improve the performance of CFLs as well as their acceptability as substitutes for incandescent bulbs. For example, these programs have long required Energy Star compliance and offered larger rebates for higher lumen levels at a given wattage level. What influences, if any, have these program requirements had on the performance of the CFLs that you manufacture?

I. If the California lighting rebate and discount programs had not existed, do you think the performance improvements you have made to your CFLs would have happened sooner, later, or about the same time as they actually did?

1. [IF LATER] How much later would you have made these performance improvements?

J. Have the California lighting rebate and discount programs influenced the way that you market your CFLs in other states?

1. [IF YES] How so?

K. State or utility rebate and discount programs are only some of the factors that may be encouraging sales of CFL bulbs and fixtures. I’m going to name a number of possible drivers of increased CFL bulbs and fixtures. For each one I identify, please indicate how significant you think it is as a driver of increased CFL product sales during the 2006-2008 period. Please use a 0 to 10 scale, where 0 is not at all significant and 10 is extremely significant.

1. State or utility rebate and discount programs? [RECORD RATING]

a) Why do you give this rating?

2. The Energy Star program including its Change-a-Light campaign?  
[RECORD RATING]
  - a) Why do you give this rating?
3. CFL promotion campaigns by some large retailers such as Wal-Mart, Home Depot, and Lowe's that are being done independently of any state or utility energy efficiency programs? [RECORD RATING]
  - a) Why do you give this rating?
4. Media stories promoting the use of CFLs? [RECORD RATING]
  - a) Why do you give this rating?
5. Reductions in CFL production costs and price points due to lower-cost overseas manufacturing and increases in CFL production capacity? [RECORD RATING]
  - a) Why do you give this rating?
6. Growing consumer awareness about global warming? [RECORD RATING]
  - a) Why do you give this rating?
7. Higher energy costs? [RECORD RATING]
  - a) Why do you give this rating?
- L. Have you seen any evidence that that some lighting products receiving discounts from the California Upstream Lighting Program are being sold out-of-state or through out-of-state buyers through the Internet?
  1. [IF YES]. What evidence have you seen?
- M. What do you think should be done to minimize the occurrence of out-of-state sales of lighting products receiving discounts from the California Upstream Lighting Program?

**VI. Supply Chain Characterization**

- A. Now I would like to ask you some questions about your supply chain. Of the CFL products that you sell in California, where are most of them manufactured?

1. Are your CFL products that are discounted through the ULP-program manufactured in different places than those that are not discounted through the program? [IF YES, IDENTIFY DIFFERENT SOURCES]
- B. How long does it typically take from the time that you notify your production facilities that you have received a new order for CFL products and the time that order is delivered to the California retailer or distributor who ordered it?
1. Approximately how much of this time is for manufacture?
  2. Approximately how much of this time is for shipment?
  3. Approximately how much of this is for temporary warehousing and storage that occurs before the retailer or distributor receives the product?
- C. Are there any types of CFL products for which it takes significantly longer than this to receive after your order them?
1. [IF YES] Which products?
- D. What other factors could cause variations in these delivery times?
- E. Are your delivery times for CFL products that you sell through the Upstream Lighting Program different than those for other CFL products that you manufacture?
1. [IF YES] How so?
- F. At what point in the supply chain are the stickers and packages for the California Upstream Lighting Program applied?
1. What safeguards do you have in place to insure that CFLs which receive the program stickers and packaging are not sent to retailers that are not participating in the program?
- G. If a retailer has program-discounted CFLs that remain unsold after a long period of time do you ever regain possession of these unsold bulbs through retailer returns, buybacks, or other means?
1. [IF YES] Do you track these returned or repossessed CFLs?
  2. [IF YES] About what percentage of the program-discounted CFLs that you sell do these account for?

3. [IF YES] In such case, what do you typically do with these unsold bulbs?
- H. As noted earlier, there is evidence that some lighting products receiving discounts from the California Upstream Lighting Program are being sold out-of-state or through out-of-state buyers through the Internet. At what point in the supply and distribution chain do you think this might be happening?
  - I. Do you track CFL products that you sell through the California Upstream Lighting Program that are lost due to breakage and other damage?
    1. [IF YES] Do you just track damage/breakage to CFL products before they reach the retailer or also after?
    2. [IF YES] If we gave your company assurances of confidentiality, would you be willing to share information about your loss and breakage rates?

**VII. Pricing**

- A. The California Upstream Lighting Program requires manufacturers to estimate the price for which their CFL products would have been selling for if the program's buydown discounts had not been available. How are these estimates derived?
  1. [IF SOLD PROGRAM-DISCOUNTED CFLs THROUGH MULTIPLE RETAIL CHANNELS] Did they way that you estimate these retail prices vary by retailer type?
    - a) [IF YES] How so?
- B. You sold the most program-discounted CFL products through the [RETAILER CATEGORY] retail channel. How much influence do the retailers in this channel have over the price of the CFL products that you supply them? Would you say that they are very influential, somewhat influential, or not very influential?
- C. [IF SOLD PROGRAM-DISCOUNTED CFLs THROUGH MULTIPLE RETAIL CHANNELS] You sold the second-most program-discounted CFL products through the [RETAILER CATEGORY] retail channel. How much influence do the retailers in this channel have over the price of the CFL products that you supply them? Would you say that they are very influential, somewhat influential, or not very influential?

- D. Some claim that retailers often use something called “keystone pricing” where they double the wholesale price to determine the retail price. In your experience, how frequently is this keystone pricing used for setting retail prices for CFL products. Would you say it is done always, most of the time, some of the time, or never?
1. [IF KEYSTONE PRICING NOT USED ALWAYS] What other rules or strategies do retailers use to mark up wholesale prices?
  2. [ASK OF ALL] Are the retail pricing strategies for the products with California Upstream Lighting Program buydowns handled differently than non-program products?
    - a) [IF YES] How are these different?
    - b) [IF YES] Why do you think the retail pricing of these program discounted products is set in this way?
- E. For CFL types that have very low costs of production, sometimes the buydown discounts from the California Upstream Lighting Program can reduce the wholesale prices to almost nothing. Do you provide any advice to retailers on how to price these free or nearly free CFL products?
1. [IF YES] What advice do you give them?
- F. California CFL product prices have been declining in the last 10 years. Do you think this trend will continue, or will prices level off or even increase?
1. What factors are causing you to make this prediction?
- G. [IF THEY SELL NON-PROGRAM-DISCOUNTED CFLS ALSO] You said earlier that you also sell CFL products in California that do not receive buydown discounts from the California Upstream Lighting Program. Are the program-discounted CFL products typically sold at a lower retail price, a higher retail price, or at the same retail prices as the non-program-discounted bulbs?
1. On a per-bulb basis, on average, how much [LOWER/HIGHER] are the prices of the program-discounted CFL bulbs than the other CFL bulbs that you sell?
  2. On a per-fixture basis, on average, how much [LOWER/HIGHER] is the price on the program-discounted CFL fixtures than the other CFL fixtures that you sell?

3. Are your pricing strategies for the products with California Upstream Lighting Program buydowns handled differently than non-program products?

a) [IF YES] How are these different?

### **VIII. Market Characterization**

A. How would you characterize the current market for CFL products in California in terms of manufacturer market share? For example, are there a few major manufacturers responsible for the major share of product sales? Or are there a large number of major players?

B. Where would you characterize your firm in terms of market share for the California CFL market?

C. Are there factors inherent in the manufacturing, importing or distributing processes that have restricted the production and supply of CFL products in the past year or so? Please describe: [IF RESPONDENT CAN'T THINK OF ANYTHING, PROMPT WITH EXAMPLES SUCH AS SHORTAGES OF INPUTS USED IN MANUFACTURING PROCESSES (LABOR, CAPITAL, RAW MATERIALS), INADEQUATE INFRASTRUCTURE TO PRODUCE OR IMPORT PRODUCTS, OR BRING THEM TO MARKET, ETC.]

1. To what degree have these production and supply restrictions varied with the type of CFL product?

2. How do these supply-side barriers compare to those for non-CFL products?

3. [IF SUPPLY BARRIERS IDENTIFIED] Has there been any progress recently to reduce these barriers?

a) [IF YES] What factors led to the reduced barriers?

b) [IF NOT ALREADY MENTIONED] Did the 2006-2008 California Upstream Lighting Program play a role in reducing these barriers?

a. [IF YES] What role did it play?

c) Are there any supply-side barriers that have been increased due to the structure or timing of the California lighting rebate programs?

a. [IF YES] What are these?



- F. What are your expectations for U.S. CFL product sales in 2008 and beyond?
  - 1. Why do you say that?
- G. If California eliminated its CFL rebate and discount programs starting in 2009 what effects would this have on the sales levels of CFL products in California?
- H. Will manufacturers continue to develop and market CFLs without support from rebate and discount programs?
- I. What effects do you think the California Upstream Lighting Program has on the capability and willingness of lighting manufacturers to produce innovative CFL products?
- J. What has a greater impact on the level of sales of CFL products: 1) having a lower level of price or 2) having a higher awareness of CFL benefits and options?
- K. Do you sell CFL products in other countries besides the United States?
  - 1. [IF YES] Are you familiar with your company's international sales trends?
    - a) [IF NO] Who would be another person at your company who is familiar with your company's international sales of CFL products? [RECORD NAME AND CONTACT INFORMATION AND SKIP TO SECTION IX]
    - b) [IF YES] How do your international sales trends for CFL products compare to those in the United States?
    - c) [IF YES] What do you think are driving these international sales trends?

**IX. Product Quality, Recycling**

- A. Do you think the quality of CFL products in recent years has been increasing, decreasing, or staying about the same?
  - 1. [IF THEY THINK QUALITY IS DECREASING] What factors do you think might be leading to the production of lower quality CFL products?



- B. What do you think should be done to improve the quality of CFL products?
- C. Do you think that CFL product discount programs like the California Upstream Lighting Program, have affected consumer attitudes towards the quality of CFL products in any way?
  - 1. [IF YES] In what way?
- D. Energy Star's "CFL Criteria Version 4.0" was released in February 2008 and will become effective in November 2008. What do you think will be the impact of new Energy Star standards on CFL products and prices?
- E. CFL disposal has become a major issue in recent years. What policies do you advocate for dealing with CFL disposal?
- F. What actions has your own company taken to encourage environmentally-safe recycling and disposal of CFL products?

**X. Program Satisfaction**

Finally I would like to find out your level of satisfaction with the California Upstream Lighting Program

**A. Rebate Reservation, Program Verification Process**

- 1. Using a scale of 0 to 10 where 10 = very satisfied and 0 = very dissatisfied, how satisfied have you been with the incentive fund reservation process – that is, the process used by the utility to allocate a set amount of incentive dollars to participating stores?
  - a) [IF SATISFACTION RATING IS 0-5] Why do you say that?
- 2. Again using a scale of 0 to 10 where 10 = very satisfied and 0 = very dissatisfied, how satisfied have you been with the program tracking and verification process – that is, the process used by the utility to insure that the CFL products that they are providing discounts for are being sold by retailers and are properly labeled and promoted?
  - a) [IF SATISFACTION RATING IS 0-5] Why do you say that?

**B. Incentive Levels and Coverage**

- 1. CFL bulbs [ASK ONLY IF THEY SELL CFL BULBS THROUGH THE PROGRAM]
  - a) Using this same satisfaction scale, how satisfied have you been with the level of manufacturer buydown incentives for CFL *bulbs*?

- a. [IF SATISFACTION RATING IS 0-5] Why do you say that? For which bulb types are you unsatisfied with the incentive levels?
    - b) If the program, due to fund constraints, had to eliminate a manufacturer buydown incentive for one type of CFL bulb, which one should they choose? Why do say that?
  - 2. CFL fixtures [ASK ONLY IF THEY SELL CFL FIXTURES THROUGH THE PROGRAM]
    - a) Using this same satisfaction scale, how satisfied have you been with the levels of manufacturer buydown incentives for CFL *fixtures*?
      - a. [IF SATISFACTION RATING IS 0-5] Why do you say that? For which fixture types are you unsatisfied with the incentive levels?
  - 3. Are there CFL products that you think that the program should be offering manufacturer buydown incentives for, that it's not currently offering?
    - a) [IF YES] For what CFL products?

**C. Marketing and Coordination with Retailers**

- 1. Using the same scale of 0 to 10, how satisfied have you been with the California Upstream Lighting Program's efforts to mass-market CFL products?
  - a) [ASK ONLY IF SATISFACTION RATING IS 0-5] Why do you say that?
- 2. Using the same satisfaction scale, how satisfied have you been with the program's efforts to coordinate with retailers on in-store product placement and promotions?
  - a) [ASK ONLY IF SATISFACTION RATING IS 0-5] Why do you say that?
- 3. What effects, if any, does the inclusion of the utility logos have on the sales of your CFL products?

**D. Satisfaction with Program Staff and Program As a Whole**

1. Using the same satisfaction scale, how satisfied have you been with the program managers and other staff involved in the California Upstream Lighting Program?
  - a) [ASK ONLY IF SATISFACTION RATING IS 0-5] Why do you say that?
2. Using the same scale, how would you rate your level of satisfaction with the program in general?
  - a) [ASK ONLY IF SATISFACTION RATING IS 0-5] Why do you say that?
3. In what way could the program be improved?
4. Are you planning to participate in the program going forward?
  - a) [IF YES] Why do you say that?
5. Can you estimate what percentage of the CFL products you sold through the California Upstream Lighting Program during the 2006-2008 time period were installed in residential vs. nonresidential fixtures?
  - a) [IF YES] What is your estimate of this breakdown?
6. “Many discount, grocery stores, and drug stores are participating in the California Upstream Lighting Program that did not sell Energy Star CFLs before joining this program. To what degree do you think these grocery, drug, and discount stores are creating new Energy Star CFL product sales as opposed to taking away Energy Star CFL sales that otherwise would have gone to national chain retailers such as Wal-Mart, Home Depot, or Lowe's?
  - a) [IF RESPONDENT INDICATES THESE GROCERY, DRUG, OR DISCOUNT STORES MAY BE TAKING SALES FROM OTHER RETAILERS] Which retailers do you think these grocery, drug, or discount stores are taking Energy Star CFL product sales away from?

**Program Attribution, Market Effects, and Market Characterization  
Guide for Reinterviewing  
Lighting Manufacturers Participating  
in the 2006-2008 California Upstream Lighting Programs**

**I. Introduction**

A. Contact Protocol

1. Send email invitations to previous interviewees for follow-up interview. This invitation will include:
  - a) Explanation of purpose and scope of interview.
  - b) Explanation of time frame within which the interview will need to be completed.
  - c) Explanation of expected duration of interview and flexibility to complete interview over multiple sessions.
  - d) Instructions to propose a convenient interview time.
  - e) Contact information for interviewers.
  - f) Assurances of confidentiality.
  - g) A letter attachment from the CPUC explaining the importance of the interview
  - h) A table representing the company's CFL product shipments sales through the Upstream Lighting Program for this time period.
2. If target interviewee does not respond to the email invitation within a week, a follow-up call will be made to try to schedule an interview time, find an alternate interview target, or determine reasons for refusal.

**II. Program Participation Confirmation and Reasons for Participation**

A. Since we last interviewed you in [month] 2008, have there been any changes in the nature of your participation in the Upstream Lighting Program?

1. [IF YES] What changes were these?

**III. 2006-2008 CFL Product Sales and California Upstream Lighting Program Trends**

A. We recently received data from the utilities of CFL product shipments through the Upstream Lighting Program for the full 2006-2008 time period. I emailed you a table that represents your company's CFL product shipments sales through the Upstream Lighting Program for this time period. Does this information appear accurate?

1. [IF RESPONDENT QUESTIONS ACCURACY OF DATA, RECORD WHAT ASPECTS OF THE DATA THEY REGARD AS QUESTIONABLE. IF NECESSARY, EXPLAIN WHAT SHIPMENT DATES WERE USED FOR CUTOFF DATES TO DEFINE THE 2006-2008 TIME PERIOD]

B. Have all the Upstream Lighting-Program discounted CFL products that are listed in this table as having been shipped to retailers been sold through?

1. [IF YES] How do you know this?
2. [IF YES] About when [TRY TO GET MONTH/YEAR] were all these program-discounted CFLs products sold through?
3. [IF YES] About when [TRY TO GET MONTH/YEAR] were about 90% of these program-discounted CFL products sold through?
4. [IF NO] Which of the program-discounted CFL products listed in this table have not sold through?
5. [IF NO] What happened to these unsold program-discounted CFL products?

**Table 1  
Sample Data Table**

Retail Channel/Product Type	# Non-Specialty CFL Bulbs Through Upstream Lighting Program				# Non-Specialty CFL Bulbs Sold in California Not Through Upstream Lighting Program			
	2006	2007	Q1 2008	Total 2006-2008	2006	2007	Q1 2008	Total 2006-2008
<b>Non-Specialty CFL Bulbs of Type Sold Through Upstream Lighting Program</b>								
<b>Large Home Improvement</b>								
CFL INT INTEGRAL - 13 WATT >= 800 LUMENS - SCREW-IN	50,000	78,000	32,000	160,000	A	B	C	D
INTERIOR CF BULB - 23 WATT 1,100 TO 1,399 LUMENS	100,000	213,000	81,000	394,000	E	F	G	H
<b>Grocery</b>								
CFL INT INTEGRAL - 13 WATT >= 800 LUMENS - SCREW-IN	60,000	93,600	38,400	192,000	I	J	K	L
INTERIOR CF BULB - 23 WATT 1,100 TO 1,399 LUMENS	120,000	255,600	97,200	472,800	M	N	O	P
INTERIOR CF BULB - 23 WATT >=1,600 LUMENS	85,000	34,000	56,000	175,000	Q	R	S	T
<b>Other Non-Specialty Energy Star CFLs Sold in California But Not Through Upstream Lighting Program</b>								
<b>Channel?</b>								
???								
???								
???								
<b>Channel?</b>								
???								
???								
???								
<b>Non-Specialty Non-Energy Star CFLs Sold in California</b>								
<b>Channel?</b>								
???								
???								
???								
<b>Channel?</b>								
???								
???								
???								

**Updating/Verifying Information Regarding Sales of Non-ULP Discounted CFLs**

6. When we last interviewed you in [month] 2008, you said that your company [had/ had not] sold non-specialty Energy Star CFL bulbs in California during the 2006-2008 period that **did not** receive discounts from the Upstream Lighting Program? Has anything changed since our last interview in terms of your sales of non-ULP-discounted Energy Star CFL bulbs?
  - a) [IF YES] What has changed?

- b) [IF YES AND SINCE THE LAST INTERVIEW THEY'RE NOW SELLING OR THEY SOLD NON-ULP CFL BULBS WHERE THEY WEREN'T BEFORE] What types of non-specialty Energy Star CFL bulbs are you selling [did you sell] that are not receiving the ULP discounts?
- c) [IF YES AND SINCE THE LAST INTERVIEW THEY'RE NOW SELLING OR THEY SOLD NON-ULP CFL BULBS WHERE THEY WEREN'T BEFORE] What sorts of retail channels are you selling [did you sell] these CFLs through?
- d) [IF YES AND SINCE THE LAST INTERVIEW THEY'RE NOW SELLING OR THEY SOLD NON-ULP CFL BULBS WHERE THEY WEREN'T BEFORE] Why aren't you selling [didn't you sell] these bulbs through the California Upstream Lighting Program?

**Updating/Verifying Information Regarding Sales of Non-Energy-Star CFLs**

- 7. When we last interviewed you in [month] 2008, you said that your company [had/ had not] sold non-Energy Star CFL bulbs in California during the 2006-2008 period? Has anything changed since our last interview in terms of your sales of non- Energy Star CFL bulbs?
  - a) [IF YES] What has changed?
  - b) [IF YES AND SINCE THE LAST INTERVIEW THEY'RE NOW SELLING OR THEY SOLD NON-ENERGY STAR CFL BULBS WHERE THEY WEREN'T BEFORE] What types of non-Energy Star CFL bulbs are you selling?
  - c) [IF YES AND SINCE THE LAST INTERVIEW THEY'RE NOW SELLING OR THEY SOLD NON-ENERGY STAR CFL BULBS WHERE THEY WEREN'T BEFORE] What sorts of retail channels do you sell these non-Energy-Star CFLs through?
  - d) [IF YES AND SINCE THE LAST INTERVIEW THEY'RE NOW SELLING OR THEY SOLD NON-ENERGY STAR CFL BULBS WHERE THEY WEREN'T BEFORE] Why do you sell these non- Energy-Star CFLs?

**Updating/Verifying Information Regarding % of ULP, Non-ULP Energy Star, and Non-Energy Star Sales**

8. [IF THEY PROVIDED THIS ESTIMATE] When we last interviewed you in [month] 2008, you provided the following estimate of the % of non-specialty CFL bulbs that you sold in California during the 2006-2008 period that fit into the following categories [READ %s FROM TABLE] Would you want to adjust these estimates in anyway? [IF YES, RECORD CHANGES IN PROPORTIONS AND REASONS WHY RESPONDENT CHANGED PROPORTIONS]
9. [IF THEY DID NOT PROVIDE THIS ESTIMATE IN THE PREVIOUS INTERVIEW, ASK THEM TO ESTIMATE THESE PROPORTIONS THIS TIME AROUND.]

ULP-Discounted % of non-specialty CFL bulbs sold in California during the 2006-2008 period that were ULP-discounted.	__%
Non-ULP Energy Star % of non-specialty CFL bulbs sold in California during the 2006-2008 period that met Energy Star specifications but were not discounted by the program.	__%
Non-Energy Star % of non-specialty CFL bulbs sold in California during the 2006-2008 period that did not meet Energy Star specifications.	__%
<b>Total non-specialty CFL bulbs sold in California during the 2006-2008 period</b>	<b>100%</b>

**Effects of Suspension of ULP Incentives/ Effects of Bridge Funding**

10. In October 2008 some of the California utility program managers said that they ended financial incentive payments from the Upstream Lighting Program for 2008. What effects did this suspension of incentives have on your sales of CFLs – whether through the Upstream Lighting Program or outside this program?
11. Although the 2009-2011 Upstream Lighting Program has yet to be approved by the California Public Utilities Commission, the Commission has provided the California utilities with “bridge funding” to allow them to pay financial incentives to lighting suppliers in the first half of 2009. What’s the current status of your participation in this Upstream Lighting Program? [PROBE FOR STATUS OF ALLOCATION APPLICATIONS, SHIPMENTS TO STORES (VOLUMES, DESTINATIONS)]

**Seeking Sales Data for Non-ULP CFLs**



12. [IF THEY SOLD NON-SPECIALTY CFLS IN CALIFORNIA IN 2006-2008 THAT DID NOT RECEIVE ULP DISCOUNTS, SAID THAT THEY WOULD PROVIDE THESE DATA IN THE FIRST INTERVIEW, BUT NEVER CAME THROUGH]. When we last interviewed you in [month] 2008, you said that you would provide us with sales data for the CFL products that were not sold through the Upstream Lighting Program, but we never received these data. How can we obtain these non-program CFL sales data?

### **Specialty CFLs**

- C. [IF THEY SOLD SPECIALTY CFL BULBS ELSE SKIP TO III. D]. Next I'm going to ask you some similar questions but this time about your sales of specialty CFL bulbs. By "specialty" CFL bulbs I mean bulbs that have special functions or features such as reflectors, dimmability, three-way light levels, or flood lighting. [REPEAT QUESTIONS B1. – B4 EXCEPT SUBSTITUTE WORD "Specialty" for "Non-Specialty"]

### **CFL Fixtures**

- D. [IF THEY SOLD CFL FIXTURES ELSE SKIP TO III. E.] Next I'm going to ask you some similar questions but this time about your sales of Energy Star-qualified CFL fixtures. [REPEAT QUESTIONS B1. – B4 EXCEPT SUBSTITUTE WORDS "CFL fixtures" for "Non-Specialty CFL bulbs"]

### **ULP Trends, Policies**

- E. Recent trends, policies for the California Upstream Lighting Program**
1. Since we last interviewed you in [month] 2008, have there been any changes in the types of CFL bulbs or LED products or compact fluorescent fixtures that the California Upstream Lighting Program has been encouraging your company to sell? [IF NECESSARY, REMIND THEM OF THEIR RESPONSE FROM THE PREVIOUS INTERVIEW]
    - a) [IF YES] What have been these changes?
    - b) [IF YES] What do you think about these changes?
  2. Have you worked with other state, utility, or regional lighting rebate programs besides California's Upstream Lighting Program?

- a) [IF YES] Are there any differences between the California Upstream Lighting Program and these other rebate programs in terms of the types of energy-efficient lighting products they promote?
    - a. What are these differences?
    - b. The California Upstream Lighting program offers higher rebates for higher lumen levels at a given wattage level. Do any of the other lighting rebate/discount programs you participate in also do this?
      - i. [IF YES] Which ones?
  - b) [IF YES] Are there any differences between the California Upstream Lighting Program and these other rebate programs in terms of the types of retailers they encourage lighting manufacturers and suppliers to work with?
    - a. What are these differences?
3. Does your company sell CFL products in the states of Georgia, Kansas, or Pennsylvania?
- a) [IF YES] Are you familiar with your company's sales of CFL products in these states?
    - a. [IF YES] In late 2008 we conducted some telephone surveys of residential customers to ask them about their CFL purchasing behavior. These surveys found that residential respondents in Georgia, Kansas, and Pennsylvania were actually reporting a higher level of recent CFL purchases than those in California. They were reporting this even though California has a statewide CFL discount program and these states had no CFL discount programs or very small ones. Do you have any information or theories on why this might be happening?
4. Since we last interviewed you in [month] 2008, have there been any changes in the types of retailers that the California Upstream Lighting Program has been encouraging lighting manufacturers to partner with? [IF NECESSARY, REMIND THEM OF THEIR RESPONSE FROM THE PREVIOUS INTERVIEW]

- a. [IF YES] What have been these changes?
  - b. [IF YES] What do you think about these changes?
5. [IF THEY WERE PREVIOUSLY AWARE OF THE BULK PURCHASE LIMITS] Since we last interviewed you in [month] 2008, have there been any changes in what your company is doing to try to enforce these bulk limits?
- a. [IF YES] What have been these changes?

**IV. Free Ridership and In-State Spillover for 2006-2008 Upstream Lighting Program**

- A. [IF THEY SOLD LEDs THROUGH THE ULP PROGRAM, ASK THEM THE SAME FREE RIDERSHIP QUESTIONS THAT WERE ASKED LAST TIME FOR CFL PRODUCTS, ONLY SUBSTITUTING “LED” FOR “CFL” WHERE APPROPRIATE]
- B. [ONLY ASK THE CFL PRODUCT FREE RIDERSHIP QUESTIONS IF CFL PRODUCT FREE RIDERSHIP ESTIMATES ARE MISSING FROM THE PREVIOUS INTERVIEW. IN SUCH CASES, USE THE SAME FREE RIDERSHIP QUESTION SEQUENCE FROM THE FULL INTERVIEW GUIDE].
- C. Program Effects on Non-discounted CFLs Sold in California in 2006-2008 [ONLY ASK THESE QUESTIONS IF THEY BEGAN SELLING NON-ULP CFL PRODUCTS SINCE THE LAST INTERVIEW. IN SUCH CASES, USE THE SAME QUESTION SEQUENCE FROM THE FULL INTERVIEW GUIDE]
- D. [IF THEY SOLD BOTH SPECIALTY AND NON-SPECIALTY CFLS AND THIS QUESTION WAS NOT ASKED IN THE PREVIOUS INTERVIEW] You said earlier that during the 2006-2008 period, you sold both non-specialty and specialty CFL bulbs through the California Upstream Lighting Program. What effects, if any, do the program-discounted non-specialty CFL bulbs have on your sales levels of program-discounted specialty CFL bulbs, such as dimmable bulbs, bulbs with reflectors, 3-way bulbs, and flood lights? [IF MECHANISM FOR THESE EFFECTS IS NOT EXPLAINED, PROBE FOR MECHANISM]

**V. Early, Cumulative Effects of California Lighting Rebate Programs**

- A. [ONLY ASK QUESTIONS FROM THE PREVIOUS INTERVIEW IF THE PREVIOUS RESPONSES WERE MISSING OR AMBIGUOUS] Have the years of California lighting rebate and discount programs had any effects on the variety of energy-efficient lighting products that you sell?
1. [IF YES] What have been these effects?
- B. [IF THEY SOLD CFLS IN CALIFORNIA BEFORE BECOMING INVOLVED IN THE CALIFORNIA LIGHT REBATE PROGRAMS AND SAID IN THE FIRST INTERVIEW THAT THEY PROVIDE SALES DATA FROM THIS PERIOD, BUT NEVER CAME THROUGH]. When we last interviewed you in [month] 2008, you said that you would provide us with sales data for the CFL products that you sold in California before becoming involved in the California lighting rebate programs. But we never received these data. How can we obtain these pre-program CFL sales data?
- C. [IF THEY SOLD CFLS IN STATES WITHOUT LIGHTING REBATE PROGRAMS AND SAID IN THE FIRST INTERVIEW THAT THEY WOULD PROVIDE SALES DATA FROM THIS PERIOD, BUT NEVER CAME THROUGH]. When we last interviewed you in [month] 2008, you said that you would provide us with CFL sales data for the products that you sold in states without lighting rebate programs. But we never received these data. How can we obtain these CFL sales data from states without lighting rebate programs?
- D. When we last interviewed you in [month] 2008, we asked you whether the years of California lighting rebate and discount programs have influenced the level of CFL sales in other states. You said [RECAP PREVIOUS RESPONSE]. Has anything happened in recent months that would cause you to change your previous answer?
1. [IF YES] How would your answer change and why?

### **Manufacturing Cost/Capacity for Specialty CFLs, LEDs**

- E. Has your firm experienced any reductions in manufacturing production costs for specialty CFLs over the last five years? By “specialty CFLs” I mean bulbs that have special functions or features such as reflectors, dimmability, three-way light levels, or flood lighting.
1. [IF YES] By how much do you think these reductions in production costs have reduced the average per-bulb prices for specialty CFLs during this ten-year period?

2. [IF YES] What factors have led to these reductions in manufacturing production costs for specialty CFLs?
  - a) [IF STATE/UTILITY REBATE PROGRAMS ARE MENTIONED] How did these rebate programs influence these reductions in your manufacturing costs?
  - b) [IF STATE/UTILITY REBATE PROGRAMS ARE MENTIONED] In what time period did these rebate programs influence these reductions in your manufacturing costs?
  - c) [IF STATE/UTILITY REBATE PROGRAMS ARE MENTIONED] Do you think that the California lighting rebate and discount programs in particular have been an important factor in influencing these reductions in your manufacturing costs for specialty CFLs?
    - a. [IF YES] How important a factor were the California lighting rebate programs, in particular, in influencing these reductions in your manufacturing costs? Please use a scale of 0 to 10 where 10 equals “very important” and 0 equals “not important at all.”
      - i. Why do you give this rating?
        1. [IF INCREASED MANUFACTURING CAPACITY CAUSED BY CALIFORNIA REBATE PROGRAMS MENTIONED] By approximately what % did you increase your manufacturing capacity for specialty CFLs in response to the California rebate programs?
        2. [IF INCREASED MANUFACTURING CAPACITY CAUSED BY CALIFORNIA REBATE PROGRAMS MENTIONED] About when did these increases in manufacturing capacity caused by the California rebate programs occur?

3. [IF INCREASED MANUFACTURING CAPACITY CAUSED BY CALIFORNIA REBATE PROGRAMS MENTIONED] By approximately what % did this increase in specialty CFL manufacturing capacity reduce your average CFL production cost?

d) [IF GENERAL INCREASES IN WORLD CFL DEMAND MENTIONED] How important a factor were the California lighting rebate programs, in particular, in increasing demand for these specialty CFL products? Please use a scale of 0 to 10 where 10 equals “very important” and 0 equals “not important at all.”

a. Why do you give that rating?

e) [IF TECHNOLOGICAL IMPROVEMENTS AT THE FACTORY MENTIONED] How important a factor were the California lighting rebate programs, in particular, in driving these technological improvements in the factory for specialty CFLs? Please use a scale of 0 to 10 where 10 equals “very important” and 0 equals “not important at all.”

a. Why do you give that rating?

f) If the California rebate and discount programs went away after 2008 do you think your average production costs for specialty CFLs would go up, would go down, or stay about the same?

a. Why do you say that?

3. What do think will be the trend for specialty CFL production costs over the next few years. Do you think they’ll go up, go down or stay the same?

a) Why do you say that?

F. [REPEAT QUESTION E. 1-3 FOR LED PRODUCTION IF THEY MANUFACTURE LED PRODUCTS]

G. Has the California Upstream Lighting Program done anything since we last interviewed you in [MONTH] 2008 that has affected the quality or performance of the CFL or LED products that you produce?

1. [IF YES] What has the program done?
- H. Last time we named a number of possible drivers of increased CFL bulbs and fixtures and asked you to rate how significant each of these were as a driver of increased CFL product sales during the 2006-2008 period. You were asked to use a 0 to 10 scale, where 0 was not at all significant and 10 was extremely significant. Now I want you to rate these same drivers, but this time focusing on their likely influence on CFL products sales over the next 2-3 years. Please use the same 10-point significance scale.
1. How important will state or utility rebate and discount programs be for CFL product sales over the next 2-3 years? [RECORD RATING]
    - a) Why do you give this rating?
  2. How about the Energy Star program including its Change-a-Light campaign? [RECORD RATING]
    - a) Why do you give this rating?
  3. How about CFL promotion campaigns by some large retailers such as Wal-Mart, Home Depot, and Lowe's that will be done independently of any state or utility energy efficiency programs? [RECORD RATING]
    - a) Why do you give this rating?
  4. How about media stories promoting the use of CFLs? [RECORD RATING]
    - a) Why do you give this rating?
  5. How about possible reductions in CFL production costs and price points due to lower-cost overseas manufacturing and increases in CFL production capacity? [RECORD RATING]
    - a) Why do you give this rating?
  6. How about consumer awareness about global warming? [RECORD RATING]
    - a) Why do you give this rating?

7. How about possible future increases in energy costs? [RECORD RATING]
  - a) Why do you give this rating?
8. Are there any significant drivers of future CFL product sales that I haven't already mentioned?
  - a) [IF YES] What are these?
  - b) [IF YES] How would you rate these using the 10-point significance scale? [COLLECT A SEPARATE RATING FOR EACH DRIVER MENTIONED]
9. [IF THEY SELL LED PRODUCTS] Your company sells LED lighting products. Would the answers you gave just now for drivers of CFL product sales be any different for LED lighting products?
  - a) [IF YES] How so?
- I. When we last interviewed you in [month] 2008 you talked about whether you had seen evidence of lighting products receiving discounts from the California Upstream Lighting Program that were being sold out-of-state or through out-of-state buyers through the Internet? Have you seen any additional evidence of this so-called CFL leakage since our last interview?
  1. [IF YES] What new evidence have you seen?

## **VI. Supply Chain Characterization**

- A. When we last interviewed you in [month] 2008 we asked you a number of questions about the CFL supply chain such as the amount of time it takes for CFL products to be delivered, how long it takes to sell them through, and what happens to any unsold products. Has anything happened since our last interview that would cause you to change your answers for any of these questions? [READ BACK SOME OF THE RESPONSES IF NECESSARY]
  1. [IF YES] How would your answers change?

## **VII. Pricing and Incentive Levels**

- A. When we last interviewed you in [month] 2008 we asked you a number of questions about CFL pricing such as how you estimate your non-discounted CFL prices, how influential retailers are over the pricing of



your CFL products, how retailers mark up CFL products, and the differences in retail prices between program-discounted and non-program-discounted CFL products. Has anything happened since our last interview that would cause you to change your answers for any of these questions? [READ BACK SOME OF THE PREVIOUS RESPONSES IF NECESSARY]

1. [IF YES] How would your answers change?
- B. What do you think will be the trend for retail prices for non-specialty CFLs over the next few years? Do you think retail prices for specialty CFLs will go up, go down, or stay about the same?
1. Why do you say that?
- C. What do you think will be the trend for retail prices for specialty CFLs over the next few years? Do you think retail prices for specialty CFLs will go up, go down, or stay about the same?
1. Why do you say that?
- D. If the California utilities wanted to help reduce prices for specialty CFLs over the next few years, what would be the best way for them to leverage their resources to accomplish this?
- E. The California Upstream Lighting Program currently offers buydown discounts for specialty CFLs of [CITE MOST RECENT INCENTIVE LEVELS]. Do you think these incentive levels are adequate to move consumer demand for these products?
1. [IF NO] What buydown discount levels are needed to move consumer demand?
- F. What do you think will be the trend for retail prices for CFL fixtures over the next few years? Do you think retail prices for CFL fixtures will go up, go down, or stay about the same?
1. Why do you say that?
- G. What do you think will be the trend for retail prices for LED lighting products over the next few years? Do you think retail prices for LED lighting products will go up, go down, or stay about the same?
1. Why do you say that?

- H. If the California utilities wanted to help reduce prices for LED lighting products over the next few years, what would be the best way for them to leverage their resources to accomplish this?
- I. The California Upstream Lighting Program currently offers buydown discounts for LED lighting products of [CITE MOST RECENT INCENTIVE LEVELS]. Do you think these incentive levels are adequate to move consumer demand for these products?
  - 1. [IF NO] What buydown discount levels are needed to move consumer demand?

## **VIII. Market Characterization Present and Future**

### **Supply-Side and Demand-Side Barriers**

- A. When we last interviewed you in [month] 2008 we asked you a number of questions about possible supply-side barriers. These were manufacturing, importing, or distribution factors that might have restricted the production or supply of CFL products. Has anything happened since our last interview that would cause you to change your answers for any of these questions? [READ BACK SOME OF THE PREVIOUS RESPONSES IF NECESSARY]
  - 1. [IF YES] How would your answers change?
- B. When we last interviewed you we asked you a number of questions about possible demand-side barriers. These were factors that might limit customer demand for CFL products? Has anything happened since our last interview that would cause you to change your answers for any of these questions? [READ BACK SOME OF THE PREVIOUS RESPONSES IF NECESSARY]
  - 1. [IF YES] How would your answers change?

### **Retailer Cannibalization, Energy Star 4.0, and Expectations for Future CFL Sales**

- C. [ASK ONLY IF NOT ASKED IN PREVIOUS INTERVIEW] Many discount, grocery stores, and drug stores are participating in the California Upstream Lighting Program that did not sell Energy Star CFLs before joining this program. To what degree do you think these grocery, drug, and discount stores are creating new Energy Star CFL product sales as opposed to taking away Energy Star CFL sales that otherwise would have gone to national chain retailers such as Wal-Mart, Home Depot, or Lowe's?

1. [IF RESPONDENT INDICATES THESE GROCERY, DRUG, OR DISCOUNT STORES MAY BE TAKING SALES FROM OTHER RETAILERS] Which retailers do you think these grocery, drug, or discount stores are taking Energy Star CFL product sales away from?
- D. Energy Star's "CFL Criteria Version 4.0" became effective in December 2008. What do you think has been the impact of these new Energy Star standards on CFL products and prices?
- E. What are your expectations for U.S. CFL product sales in 2009 and beyond?
  1. Why do you say that?
- F. What are your expectations for international CFL product sales in 2009 and beyond?
  1. Why do you say that?
- G. If California eliminated its CFL rebate and discount programs starting in 2009, what effects would this have on the sales levels of CFL products in California?
- H. Will manufacturers continue to develop and market CFLs without support from rebate and discount programs?
- I. What effects do you think the California Upstream Lighting Program has on the capability and willingness of lighting manufacturers to produce innovative CFL products?

**Handicapping the Medium, Screw-Based Lighting Technologies of the Future**

- J. There is currently discussion as to which types of lighting technology – e.g. CFLs, LEDs, halogens, enhanced incandescents, cathode ray technologies – will be used in medium screw-based lighting technologies of the future. What is your opinion on this?
- K. What do you think are the advantages and disadvantages of CFL technology in terms of being the medium screw-based lighting technology of the future?

- L. What do you think are the advantages and disadvantages of LED technology in terms of being the medium screw-based lighting technology of the future?
- M. What do you think are the advantages and disadvantages of other possible lighting technologies such as advanced incandescent, halogen, or cathode ray technologies in terms of being the medium screw-based lighting technology of the future?

**Assessing the Potential for Super CFLs**

- N. Before now were you aware that the California utilities along with the California Lighting Technology Center and other partners have developed specifications for a CFL with enhanced features called the Super CFL?
  - 1. [IF YES] What do you know about this effort?
  - 2. [IF NO, OR IF RESPONDENT’S KNOWLEDGE OF SUPER CFL EFFORT IS SLIGHT, PROVIDE INTERVIEWEE WITH SHORT SUMMARY OF SUPER CFL EFFORT AND THE TYPES OF CFL SPECIFICATIONS CURRENTLY BEING CONSIDERED]
  - 3. Based on the description of the Super CFL that I just provided you, what do you think about:
    - a) Any potential production barriers – whether technology-related or cost-related – that a product like this might face?
    - b) The potential marketability of a product like this?
    - c) What kind of price premium that a product like this could command compared to currently-available specialty CFLs?
    - d) If those working on the Super CFL were going to limit the CFL features they were trying to enhance to just a few, which CFL features do you think they should focus on?
      - a. Why do you say that?
    - e) Of the CFL features that they are considering for enhancement, which of these do you think has the greatest potential for commanding a price premium in the lighting marketplace?
      - a. Why do you say that?

- f) I'm going to name a number of CFL specifications or attributes. For each one I name, please let me know if your company is planning any performance improvements over current Energy Star standards for any of your CFL products over the next couple of years [IN EACH CASE WHERE RESPONDENT SAYS A PRODUCT IMPROVEMENT IS PLANNED, PROBE FOR NATURE OF IMPROVEMENT]
- a. Mercury content?
  - b. Start-up or run-up times?
  - c. Coloring rendering Index (CRI)?
  - d. Chromaticity/color temperature?
  - e. Acoustic noise or flickering?
  - f. Power factor?
  - g. Efficacy while dimmed?
  - h. Bulb size or shape?
  - i. Reflecting capabilities?
- g) Are you planning any other enhancements in the quality or performance of your CFL products that we haven't already discussed?
- a. What are these?
- h) What factors are driving these planned improvements in the quality or performance of your CFL products? [ATTEMPT TO MATCH FACTORS WITH SPECIFIC PLANNED PRODUCT IMPROVEMENTS]
- i) [IF NOT ALREADY MENTIONED] Has the California Upstream Lighting Program played any role in your decision to pursue these product enhancements?
- a. [IF YES] What role has it played?

- j) How could the California utilities best utilize their resources to facilitate the CFL product improvements that you are planning?
- k) How could the California utilities best utilize their resources to facilitate CFL product improvements in general?

## **IX. CFL Quality, Disposal**

- A. When we last interviewed you in [month] 2008 you said that you thought the quality of CFL products in recent years has been [INCREASING/DECREASING/STAYING ABOUT THE SAME] Have you seen or heard anything since our last interview that would cause you to change this assessment?
  - 1. [IF YES] What has changed?
- B. When we last interviewed you, your preferred policies for the issue of CFL disposal was [RECAP PREVIOUS RESPONSE] Since this last interview have your perspectives on this issue changed?
  - 1. [IF YES] How so?
- C. When we last interviewed you, you said that your company was taking the following actions [RECAP PREVIOUS RESPONSE] to encourage environmentally-safe recycling and disposal of CFL products. Since this last interview, has your company taken any new actions in this areas or developed plan to do so?
  - 1. [IF YES] What are these new actions or plans?

## **X. Program Satisfaction**

- A. When we last interviewed you in [month] 2008, you provided satisfaction ratings for the California Upstream Lighting Program as a whole as well as a number of program processes. Has anything happened since our last interview that might cause you to change your satisfaction ratings either positively or negatively? [RECAP PREVIOUS SATISFACTION RATINGS IF NECESSARY]
  - 1. [IF YES] What has happened and how would this affect your previous satisfaction rating(s) for the California Upstream Lighting Program?
- B. When we last interviewed you in [month] 2008, you provided the following recommendations for improvements for the California Upstream Lighting Program [RECAP RECOMMENDATIONS]. Based

on your experience with the program since the last program, are there are recommendations for program improvements that you would like to add?

1. [IF YES] What are these recommendations?

C. Are you planning to participate in the program going forward?

1. [IF NO] Why do you say that?

**Program Attribution, Market Effects, and Market Characterization  
Interview Guide  
for Executives of Large Lighting Retailers  
Participating in the 2006-2008 California Upstream Lighting Programs**

**I. Introduction**

**A. Contact Protocol**

1. Call potential interviewees to ascertain most appropriate interviewee. Obtain email address(es) of appropriate interviewees. If company refuses interview, determine reasons for refusal and if it's logistical in nature, try to find workaround.
  2. Send email interview invitation to appropriate interviewee. This invitation will include:
    - a) Explanation of purpose and scope of interview.
    - b) Explanation of time frame within which the interview will need to be completed.
    - c) Explanation of expected duration of interview and flexibility to complete interview over multiple sessions.
    - d) Instructions to propose a convenient interview time.
    - e) Contact information for interviewers.
    - f) Assurances of confidentiality.
    - g) A letter attachment from the CPUC explaining the importance of the interview.
  3. If target interviewee does not respond to the email invitation within a week, a follow-up call will be made to try to schedule an interview time, find an alternate interview target, or determine reasons for refusal.
  4. Once an interview time has been arranged, the interviewee will be emailed, a couple days in advance of the interview, a copy of the interview guide as well as a customized data table similar to Table 1 below. The email will contain additional assurances of confidentiality.
- B.** At the beginning of the interview, collect information on interviewee's position and overall responsibilities, and experience with the program.

**II. Program Participation Confirmation and Reasons for Participation**

- A.** Pacific Gas and Electric, Southern California Edison, and San Diego Gas and Electric jointly participate in an Upstream Lighting Program which provides per bulb or per fixture financial incentives to buy down the cost of energy efficient lighting products. According to our information your company has been selling lighting products that receive these manufacturer buydown incentives from this California Upstream Lighting Program during the 2006-2008 time period. Are you aware of your company's participation in this program? [IF UNAWARE, FIND SOMEONE WITH THE COMPANY WHO IS AWARE. IF THEY RECOGNIZE THIS PROGRAM BY A DIFFERENT NAME, EXPLAIN THAT FOR THE SAKE OF SIMPLICITY YOU'LL HENCEFORTH



REFER TO THE PROGRAM AS “THE CALIFORNIA UPSTREAM LIGHTING PROGRAM.”]

- B. Besides getting these financial incentives, are there any other aspects of this California Upstream Lighting Program that your company has actively taken part in?
  - 1. [IF YES] What other aspects of this program has your company been involved in?
- C. About what year did your company first get involved with the California Upstream Lighting Program?
- D. Before becoming involved with the California Upstream Lighting Program, was your company involved in any other California energy efficiency programs that provide rebates or buydown discounts for energy-efficient lighting products?
  - 1. [IF YES] What programs were these? [IF REBATES MENTIONED, TRY TO DETERMINE IF THESE WERE UPSTREAM OR DOWNSTREAM (MAIL-IN REBATES, POINT-OF-SALE REBATES)]
  - 2. [IF YES] About when did this involvement begin and what was the nature of this participation?
- E. Was your company selling compact fluorescent bulbs or fixtures in California before getting involved with any of these California lighting rebate or discount programs?
- F. Was your company selling **Energy Star** compact fluorescent bulbs or fixtures in California before getting involved with any of these California lighting rebate or discount programs?
- G. What was your primary reason for getting involved with the California Upstream Lighting program?
- H. Did you have any other reasons for getting involved with the California Upstream Lighting program?
  - 1. [IF YES] What were these?

**III. 2006-2008 CFL Product Sales and California Upstream Lighting Program Trends**

- A. My next questions concern which CFL products you sell in California. Is this a topic that you are familiar with? [IF INTERVIEWEE IS

B. **Non-Specialty CFL Bulbs** [IF THEY SOLD NON-SPECIALTY CFL BULBS ELSE SKIP TO III. C.] First I'm going to ask you some questions about your sales of non-specialty CFL bulbs in California, both Energy Star and non-Energy Star. By "non-specialty" CFL bulbs I mean bulbs that do not have special functions or features such as reflectors, dimmability, three-way light levels, or flood lighting. Now earlier I emailed you a table that shows you a record of the types of non-specialty CFL bulbs that we have records of you selling through the ULP program along with some spaces for non-program sales that we were hoping you could fill in. [REPEAT ASSURANCES OF CONFIDENTIALITY]

**Table 1  
Sample Data Table**

Product Type	# Non-Specialty CFL Bulbs Through Upstream Lighting Program				# Non-Specialty CFL Bulbs Sold in California Not Through Upstream Lighting Program			
	2006	2007	Q1 2008	Total 2006-2008	2006	2007	Q1 2008	Total 2006-2008
<b>Non-Specialty CFL Bulbs of Type Sold Through Upstream Lighting Program</b>								
CFL INT INTEGRAL - 13 WATT >= 800 LUMENS - SCREW-IN	50,000	78,000	32,000	160,000	A	B	C	D
INTERIOR CF BULB - 23 WATT 1,100 TO 1,399 LUMENS	100,000	213,000	81,000	394,000	E	F	G	H
<b>Other Non-Specialty Energy Star CFLs Sold in California But Not Through Upstream Lighting Program</b>								
???								
???								
???								
<b>Non-Specialty Non-Energy Star CFLs Sold in California</b>								
???								
???								
???								

[IF NO, MAKE APPROPRIATE CORRECTIONS/CLARIFICATIONS]

1. Does the table I sent to you seem correct in terms of the types and volume of non-specialty CFLs you sold through the California Upstream Lighting Program?
  - a) [IF NO] [Record any corrections to the table]
2. Why did you choose to sell these particular products and packages through the California Upstream Lighting Program?
3. [IF THEY DID FILL IN NON-ULP DATA INTO TABLE THAT INDICATED NON-SPECIALTY ENERGY STAR CFLs SOLD IN CALIFORNIA IN 2006-2008 BUT NOT THROUGH ULP]

PROGRAM] I noticed that when you filled out the table you indicated that in the 2006-2008 period you sold non-specialty Energy Star CFLs in California that were not rebated by the California Upstream Lighting Program. Why didn't you sell these CFL bulbs through the program?

- a) [IF THEY INDICATE MULTIPLE REASONS] Which of these reasons was the most important?
  - b) [IF NOT ALREADY EXPLAINED] What advantages, if any, did you see in not selling CFL bulbs through the program?
  - c) [IF NOT ALREADY EXPLAINED] What disadvantages, if any, did you see in not selling CFL bulbs through the program?
4. [IF THEY DID FILL IN NON-ULP DATA INTO TABLE THAT INDICATED NON-SPECIALTY NON-ENERGY STAR CFLs SOLD IN CALIFORNIA IN 2006-2008] I noticed that when you filled out the table you indicated that in the 2006-2008 period you sold non-specialty non-Energy Star CFLs in California. Why do you sell these rather than just Energy Star CFLs?
- a) [IF THEY INDICATE MULTIPLE REASONS] Which of these reasons was the most important?
  - b) What would have to change for you to only offer Energy Star CFLs for the CFLs you sell?
5. [IF THEY DIDN'T FILL IN NON-ULP DATA INTO TABLE] During the 2006-2008 period did you sell non-specialty Energy Star CFL bulbs in California that **did not** receive discounts from the Upstream Lighting Program?
- a) [IF YES] Are the bulb types and packages different from those you sell through the California Upstream Lighting Program?
    - a. [IF YES] How so?
  - b) [IF YES] Why didn't you sell these bulbs through the California Upstream Lighting Program?
6. [IF THEY DIDN'T FILL IN NON-ULP DATA INTO TABLE] During the 2006-2008 period did you sell non-specialty non-Energy Star CFL bulbs in California that **did not** receive discounts from the Upstream Lighting Program?

- a) [IF YES] What sorts of bulb types and packages were these non-specialty, non-Energy Star bulbs?
7. When discounts from the Upstream Lighting Program **were not** available, due to delays in program startup or product allocations for discounted CFLs running out, did you sell non-specialty Energy Star CFL bulbs in California?
- a) [IF YES] Were the bulb types and packages different from those you sell through the California Upstream Lighting Program?
- a. [IF YES] How so?
8. [IF THEY DIDN'T COMPLETE THE TABLE] Please provide your best estimate of what % of non-specialty CFL bulbs that you sold in California during the 2006-2008 period fit into the following categories:

First consider the non-specialty CFL bulbs that were discounted by the California Upstream Lighting Program (ULP). About what % non-specialty CFL bulbs that you sold in California during the 2006-2008 period did these account for?	_____ %
Next consider the non-specialty CFL bulbs that met Energy Star specifications but were not discounted by the program. About what % non-specialty CFL bulbs that you sold in California during the 2006-2008 period did these account for?	_____ %
Finally consider the non-specialty bulbs that did not meet Energy Star specifications. About what % non-specialty CFL bulbs that you sold in California during the 2006-2008 period did these account for?	_____ %
<b>Total non-specialty CFL bulbs sold in California during the 2006-2008 period</b>	<b>100%</b>

9. Do you sell non-specialty CFLs that you believe exceed Energy Star specifications? [IF NECESSARY, REMIND INTERVIEWEE OF ENERGY STAR SPECIFICATIONS]
- a) [IF YES] In what ways do these bulbs exceed Energy Star specification?

- b) [IF YES] What types (wattages, brands) of non-specialty CFL bulbs are these?
  - c) [IF YES] Why do you offer such non-specialty bulbs that exceeded Energy Star specifications?
  - d) [IF YES] About what percentage of the non-specialty CFL bulbs that you sold in California during the 2006-2008 period did these account for?
10. [IF THEY SOLD NON-SPECIALTY CFLS IN CALIFORNIA IN 2006-2008 THAT DID NOT RECEIVE CALIFORNIA UPSTREAM LIGHTING PROGRAM DISCOUNTS]. The California Public Utilities Commission and the California investor-owned utilities have sales data for the CFL products that your company sold through the California Upstream Lighting Program. However, they are also very interested in learning about prices and sales volumes for CFL products that were not sold through Upstream Lighting. If we provided assurances to protect the confidentiality of these sales data, would you be willing to share these data?
- a) [IF YES] What would be the next step for getting these data?

**C. Specialty CFL Bulbs** [IF THEY SOLD SPECIALTY CFL BULBS ELSE SKIP TO III. D]. Next I'm going to ask you some similar questions but this time about your sales of specialty CFL bulbs, both Energy Star and non-Energy Star. By "specialty" CFL bulbs I mean bulbs that have special functions or features such as reflectors, dimmability, three-way light levels, or flood lighting. [REPEAT QUESTIONS B1. – B10 EXCEPT SUBSTITUTE WORD "Specialty" for "Non-Specialty"]

**D. CFL Fixtures** [IF THEY SOLD CFL FIXTURES ELSE SKIP TO III. E.] Next I'm going to ask you some similar questions but this time about your sales of Energy Star-qualified CFL fixtures. [REPEAT QUESTIONS B1. – B10 EXCEPT SUBSTITUTE WORDS "CFL fixtures" for "Non-Specialty CFL bulbs"]

**E. Recent trends, policies for the California Upstream Lighting Program**

- 1. Are there certain types of CFL or LED bulbs or fixtures that the California Upstream Lighting Program has been encouraging your company to sell more than others?
  - a) [IF YES] Which products are these?

- b) Have there been differences between the California investor-owned utilities involved in this program in terms of which lighting products they have been encouraging?
    - a. [IF YES] What are these differences?
  - c) [IF YES] Do you agree with an emphasis on these products?
    - a. Why do you say this?
  - d) Are there certain types of the energy-efficient lighting products that you think the California Upstream Lighting Program should be promoting that they are not currently promoting?
2. Are there certain types of retailers that the California Upstream Lighting Program has been encouraging lighting manufacturers to partner with more than other retailer types?
- a) [IF YES] Which types of retailers?
  - b) [IF YES] Do you agree with an emphasis on these retailer types?
    - a. Why do you say this?
  - c) Are there certain types of retailers that you think the California Upstream Lighting Program should be focusing on more to encourage their sales of energy-efficient lighting products?
    - a. Why do you say this?
3. Before now were you aware that the California Upstream Lighting Program currently has a bulk purchase limit on how many CFLs, CFL fixtures, LED night lights or holiday lights can be included in a single customer purchase?
- a) What is your opinion on these bulk purchase limits?
  - b) [IF WERE AWARE OF BULK LIMITS] What, if anything, is your company doing to try to enforce these bulk limits?
    - a. [IF INVOLVED IN POLICING OF BULK LIMITS] The main purpose of the bulk purchase limits is to reduce the chance of CFL products discounted by the Upstream Lighting Program being sold outside of California. Have you

discovered any of your CFL products being sold outside of California?

i. [IF YES] How do you think this happened?

c) Before now were you aware that lighting manufacturers who participate in the California Upstream Lighting Program are helping to enforce this rule by monitoring retailers for evidence of bulk sales?

#### **IV. Free Ridership and In-State Spillover**

A. My next questions are about the impact that the 2006-2008 California Upstream Lighting Program may have had on your California CFL products sales.

1. Do you think your company would have been selling CFL products during this 2006-2008 time period if the discounts of \$0.50-\$2.75 per bulb from this program had not been available?
2. Has the availability of these rebates had any influence on your stocking or packaging decisions, such as the amount of shelf space devoted to CFL's or number of CFL bulbs sold per package?

#### **B. Free Ridership**

1. **Non-Specialty CFL bulbs** [ASK IF THEY SAID YES TO IV. A. AND THEY SELL NON-SPECIALTY CFL BULBS ELSE SKIP TO IV.B.2.] According to our records in the 2006-2008 period you received California Upstream Lighting Program manufacturer buydown discounts of \$0.50-\$2.75 per bulb for the sale of the following types of non-specialty CFL bulbs [NAME TYPES]. If these manufacturer buydown discounts and program promotional materials had not been available during this 2006-2008 period, do you think your sales of these types of non-specialty Energy Star CFL bulbs would have been about the same, lower, or higher?

a) [IF HIGHER] Why do you say this? [RECORD RESPONSE AND THEN SKIP TO NEXT RETAILER CATEGORY]

b) [IF LOWER] By what percentage do you estimate your sales of non-specialty Energy Star CFL bulbs would be lower during this 2006-2008 period if these manufacturer buydowns and program promotional materials for non-specialty CFLs had not been available? [RECORD % DECREASE]

a. I want to make sure I understand you correctly. You estimate that your sales would have been [PERCENTAGE FROM QUESTION IV.B.1. b.] %

lower without the manufacturer buydowns. So if you actually sold 100 non-specialty CFLs in a given week, you think you'd have sold only about [100 – (PERCENTAGE FROM QUESTION IV.B.1. b. \* 100)] in that period if the manufacturer buydowns hadn't been available? [IF RESPONSE IS ≠ YES THEN CLARIFY ESTIMATED SALES DECREASE]

c) **Retailer add-on rebates:** When the California Upstream Lighting Program was providing manufacturer buydown discounts for non-specialty bulbs during the 2006-2008 period, did your company ever provide any of its own price discounts in addition to those provided by the Upstream Lighting Program?

- a. [IF NO] Why not?
- b. [IF YES] What were your reasons for providing these additional price discounts?
- c. [IF YES] What was the typical range of these additional discounts on a \$ per bulb basis?
- d. [IF YES] Were there particular types of bulbs that you were more likely to offer these additional discounts on?
  - i. [IF YES] What types of bulbs were these?
- e. Using a scale of 0 to 10 where 10 equals “very likely” and 0 equals “not likely at all,” how likely were you to offer these additional price discounts if the manufacturer buydown rebates had not also been available?

2. **Specialty CFL bulbs** [ASK IF THEY SAID YES TO IV. A. AND SOLD SPECIALTY CFL BULBS OTHERWISE SKIP TO IV.B.3.] [REPEAT QUESTIONS IV. B. 1. a) – c) BUT SUBSTITUTE APPROPRIATE PRODUCT NAME AND REBATE LEVELS.]

3. **CFL fixtures** [ASK IF THEY SAID YES TO IV. A. AND SOLD CFL FIXTURES OTHERWISE SKIP TO V.B.4.] [REPEAT QUESTIONS IV. B. 1. a) – c) BUT SUBSTITUTE APPROPRIATE PRODUCT NAME AND REBATE LEVELS.]

4. **Effects of other California IOU programs/efforts**



a) Besides the discounts and the promotional materials, do you think the California Upstream Lighting Program does anything else that helps you sell non-specialty Energy Star CFL bulbs?

a. [IF YES] What else does the program do?

b) California also has a program called Flex Your Power that does mass advertising for CFL products and other energy efficient measures. Please indicate how significant you think this program is as a driver of increased CFL product sales in California in the 2006-2008 period. Please use a 0 to 10 scale, where 0 is not at all significant and 10 is extremely significant. [RECORD RATING]

a. Why do you give this rating?

c) In addition to the Upstream Lighting Program and the Flex Your Power Program some California utilities have also been involved in other campaigns to promote sales of CFL products such as the Energy Star Change-a-Light promotion. Please indicate how significant you think these promotions have been as a driver of increased CFL product sales in the 2006-2008 period. Please use a 0 to 10 scale, where 0 is not at all significant and 10 is extremely significant. [RECORD RATING]

a. Why do you give this rating?

**C. Program Effects on Non-discounted CFLs Sold in California in 2006-2008** [IF THEY SOLD NON-SPECIALTY CFLS IN CALIFORNIA IN 2006-2008 THAT DID NOT RECEIVE CALIFORNIA UPSTREAM LIGHTING PROGRAM DISCOUNTS ELSE SKIP TO SECTION V.]

1. You said earlier that you also sold CFL bulbs or fixtures in California in the 2006-2008 that did not receive discounts from the California Upstream Lighting Program. What effects, if any, do the program-discounted CFL bulbs or fixtures have on your sales levels of these non-program-discounted CFL bulbs or fixtures? [IF MECHANISM FOR THESE EFFECTS IS NOT EXPLAINED, PROBE FOR MECHANISM]

a) Would these effects vary depending on the type of CFL product?

a. [IF YES] How so?

b) Have these effects changed at all over this 2006-2008 period?

a. [IF YES] How so and about what time period did these effects change?

2. Does your company ever sell program-discounted CFL bulbs or fixtures and non-program-discounted CFL bulbs or fixtures at the same time?
  - a) [IF YES] Would you say this happens always, very often, sometimes, or not very often?
  - b) [IF YES] Do you promote these non-program-discounted CFL bulbs or fixtures differently than you do the program-discounted CFL bulbs or fixtures?
    - a. [IF YES] How are your promotional efforts different?
  - c) [IF YES] Do you think increased shopper foot traffic due to program-discounted CFL bulbs and fixtures has any impact on the sales of non-program discounted CFL bulbs or fixtures that are being sold at the same time?
    - a. [IF YES] Why do you say this?
  
3. What effects do you think program-discounted CFL bulbs or fixtures have on consumer expectations regarding prices of non-discounted CFL bulbs or fixtures?
  
4. You indicated that you sold the following types of non-specialty CFL bulbs in California during the 2006-2008 period that you did not sell through the ULP Program: [READ PRODUCT TYPES. IF THEY FILLED OUT THE TABLE, DIRECT THEM TO SPECIFIC ROW]. Do you think your sales of these types of non-specialty non-program-discounted CFL bulbs would be about the same, lower, or higher if the California Upstream Lighting program – with its manufacturing buydowns and promotional materials – did not exist during this time period?
  - a) [IF HIGHER] Why do you say this?
  - b) [IF HIGHER] By what percentage do you estimate your sales of these non-specialty non-program-discounted CFL bulbs would be higher during this period if the California Upstream Lighting Program did not exist during this 2006-2008 time period? [RECORD % INCREASE]
    - a. I want to make sure I understand you correctly. You estimate that your sales would have been

[PERCENTAGE FROM QUESTION IV. D. 4. b.]  
% higher without the manufacturer buydowns. So if  
you actually sold 100 of these non-specialty CFLs  
in a given week, you think you'd have sold about  
[ $100 + (\text{PERCENTAGE FROM QUESTION IV. D. 4. b.} * 100)$ ] in that period if the California  
Upstream manufacturer buydowns hadn't been  
available? [IF RESPONSE IS  $\neq$  YES THEN  
CLARIFY ESTIMATED SALES INCREASE]

c) [IF LOWER] Why do you say this?

d) [IF LOWER] By what percentage do you estimate your sales of  
these non-specialty CFL bulbs through [RETAILER  
CATEGORY] stores would be lower during this period if the  
California Upstream Lighting Program did not exist during this  
time period? [RECORD % DECREASE]

a. I want to make sure I understand you correctly. You  
estimate that your sales of non-program-discounted  
bulbs would have been [PERCENTAGE FROM  
QUESTION IV. D. 4. d.] % lower without the  
manufacturer buydowns. So if you actually sold 100  
of these non-specialty CFLs in a given week, you  
think you'd have sold about [ $100 - (\text{PERCENTAGE  
FROM QUESTION IV. D. 4. d.} * 100)$ ] in that  
period if the California Upstream Lighting Program  
did not exist during this time period? [IF  
RESPONSE IS  $\neq$  YES THEN CLARIFY  
ESTIMATED SALES DECREASE]

e) [IF SAME] Why do you say this?

f) [IF THEY INDICATED IN IV B. 1. THAT EFFECTS OF  
PROGRAM ON NON-PROGRAM NON\_SPECIALTY CFLS  
HAS CHANGED OVER 2006-2008 PERIOD, PROBE FOR  
HOW THESE SALES EFFECTS WOULD VARY OVER THE  
2006-2008 PERIOD]

5. [REPEAT SEQUENCE IV. D. 4 FOR SPECIALTY CFLS OR CFL  
FIXTURES IF RELEVANT, MAKING SURE TO CHANGE  
PRODUCT DESCRIPTION IN QUESTIONS.]

D. [IF THEY SOLD BOTH SPECIALTY AND NON-SPECIALTY CFLS]  
You said earlier that during the 2006-2008 period, you sold both non-  
specialty and specialty CFL bulbs through the California Upstream

Lighting Program. What effects, if any, do the program-discounted non-specialty CFL bulbs have on your sales levels of program-discounted specialty CFL bulbs, such as dimmable bulbs, bulbs with reflectors, 3-way bulbs, and flood lights? [IF MECHANISM FOR THESE EFFECTS IS NOT EXPLAINED, PROBE FOR MECHANISM]

- V. **Early, Cumulative Effects of California Lighting Rebate Programs** – Up until now we have been talking about the effect of the California Upstream Lighting Program on CFL bulbs and products that you sold in California during the 2006-2008 period. Now I want you to think about the earlier and cumulative effects that the years of California lighting rebate and discount programs might have had on your company’s sales of CFL products.
- A. Have the years of California lighting rebate and discount programs had any effects on the types of CFL products you sell or the way that you sell them?
1. [IF YES] How so?
- B. [IF THEY SAID THAT THEY HADN’T BEEN SELLING CFL PRODUCTS IN CALIFORNIA BEFORE BECOMING INVOLVED IN CA LIGHTING REBATE PROGRAMS – E.G. II. E = “NO”] Earlier you said that your company was not selling CFL products in California before getting involved with any California lighting rebate or discount programs. How significant was the existence of the California lighting rebate or discount programs in your company’s decision to enter the California lighting market? Please use a 0 to 10 scale, where 0 is not at all significant and 10 is extremely significant.
- C. [IF THEY SAID THAT THEY HAD BEEN SELLING CFL PRODUCTS IN CALIFORNIA BEFORE BECOMING INVOLVED IN CA LIGHTING REBATE PROGRAMS – E.G. II. E = “YES”] Earlier you said that your company sold CFL products in California before getting involved with any of these California lighting rebate or discount programs. Do you have California CFL product sales data for this period before you became involved with the California lighting rebate or discount programs?
- a) [IF YES] If we provided assurances to protect the confidentiality of these sales data, would you be willing to share these data?
- a. [IF YES] What would be the next step for getting these data?
- D. Does your company sell CFL bulbs or fixtures in states other than California?

1. [IF YES] Does your company sell CFL bulbs or fixtures in any states that **do not** have utilities or state energy efficiency programs that offer manufacturer buydowns or point of sale rebates for these kind of lighting products?

a) [IF YES] Are you familiar with your company's CFL bulb or fixture sales activities in these states?

a. [IF YES] In these states without utility or state energy efficiency program rebates, do you promote your CFL products differently than you do in California?

i. [IF YES] How is this promotion different?

b. [IF YES] On a per-bulb basis, on average, how much lower are the prices of the California program-discounted CFL than the CFL bulbs that you sell in states that do not offer rebates or discounts from utilities or state energy efficiency programs?

b) [IF YES] If we provided assurances to protect the confidentiality of your data, would you be willing to share recent CFL product sales data for states other than California?

a. [IF YES] What would be the next step for getting these data?

c) [IF NO] Who would be another person at your company who is familiar with the sales of these CFL products in states that do not have utilities or state energy efficiency programs offering CFL product rebates or discounts? [RECORD NAME AND CONTINUE TO NEXT QUESTION]

E. California energy efficiency programs have been offering rebates and discounts on CFL bulbs for many years. Do you think these California programs have influenced the level of sales of CFLs in other states?

1. Why do you say this?

a) [IF NOT EXPLAINED IN THEIR ANSWER TO E1] How do the California lighting rebate programs influence the level of sales of CFLs in other states?

2. [IF YES] How significant has been the influence of these years of California rebate programs on the price of CFLs in these states? Please use a 0 to 10 scale, where 0 is not at all significant and 10 is extremely significant.
- F. For years California lighting rebate and discount programs have been working to improve the performance of CFLs as well as their acceptability as substitutes for incandescent bulbs. For example, these programs have long required Energy Star compliance and offered larger rebates for higher lumen levels at a given wattage level. What influences, if any, have these program requirements had on the performance of the CFLs that you sell?
- G. If the California lighting rebate and discount programs had not existed, do you think the performance improvements that have been made to the CFLs you sell would have happened sooner, later, or about the same time as they actually did?
1. [IF LATER] How much later would you have made these performance improvements?
- H. Have the California lighting rebate and discount programs influenced the way that you market your CFLs in other states?
1. [IF YES] How so?
- I. State or utility rebate and discount programs are only some of the factors that may be encouraging sales of CFL bulbs and fixtures. I'm going to name a number of possible drivers of increased CFL bulbs and fixtures. For each one I identify, please indicate how significant you think it is as a driver of increased CFL product sales during the 2006-2008 period. Please use a 0 to 10 scale, where 0 is not at all significant and 10 is extremely significant.
1. State or utility rebate and discount programs? [RECORD RATING]
    - a) Why do you give this rating?
  2. The Energy Star program including its Change-a-Light campaign? [RECORD RATING]
    - a) Why do you give this rating?
  3. CFL promotion campaigns by some large retailers such as Wal-Mart, Home Depot, and Lowe's that are being done independently of any state or utility energy efficiency programs? [RECORD RATING]
    - a) Why do you give this rating?

4. Media stories promoting the use of CFLs? [RECORD RATING]
  - a) Why do you give this rating?
5. Reductions in CFL production costs and price points due to lower-cost overseas manufacturing and increases in CFL production capacity? [RECORD RATING]
  - a) Why do you give this rating?
6. Growing consumer awareness about global warming? [RECORD RATING]
  - a) Why do you give this rating?
7. Higher energy costs? [RECORD RATING]
  - a) Why do you give this rating?
- J. Have you seen any evidence that that some lighting products receiving discounts from the California Upstream Lighting Program are being sold out-of-state or through out-of-state buyers through the Internet?
  1. [IF YES]. What evidence have you seen?
- K. What do you think should be done to minimize the occurrence of out-of-state sales of lighting products receiving discounts from the California Upstream Lighting Program?

**VI. Supply Chain Characterization and Stocking Practices**

- A. Now I would like to ask you some questions about your supply chain. Of the CFL products that you sell in California, where are most of them manufactured?
  1. Are your CFL products that are discounted through the ULP-program manufactured in different places than those that are not discounted through the program? [IF YES, IDENTIFY DIFFERENT SOURCES]
- B. How long does it typically take from the time that you place an order with the manufacturer or distributor and the time that you receive delivery of this order in your stores?
  1. Approximately how much of this time is for manufacture?

2. Approximately how much of this time is for shipment?
  3. Approximately how much of this is for temporary warehousing and storage by the manufacturer or distributor?
  4. Approximately how much of this is for your own company's warehousing and storage?
- C. Are there any types of CFL products for which it takes significantly longer than this to receive after your order them?
1. [IF YES] Which products?
- D. What other factors could cause variations in these delivery times?
- E. Are your delivery times for CFL products that you sell through the Upstream Lighting Program different than those for other CFL products that you sell?
1. [IF YES] How so?
- F. At what point in the supply chain are the stickers and packages for the California Upstream Lighting Program applied?
- G. How are the sizes of shipments of program-discounted CFLs to your stores determined?
- H. Have your stores ever received shipments of program-discounted CFLs from manufacturers that were larger than you expected or ordered?
1. [IF YES] Has this happened frequently, occasionally, or rarely?
- I. Have your stores ever received shipments of program-discounted CFLs from manufacturers that came at an unexpected time?
1. [IF YES] Has this happened frequently, occasionally, or rarely?
- J. Is your process for ordering shipments of program-discounted CFLs different from your process for ordering shipments of other lighting products?
1. [IF YES] How is it different?
- K. Do your stores stock CFLs that are discounted by the California Upstream Lighting Program year round?



1. [IF YES] Do your stores stock approximately the same number of program-discounted CFLs year round?
  - a) [IF NO] Why not?
  
- L. [IF THEY SELL SPECIALTY CFLS] Are your stocking practices for specialty CFLs such as dimmable, 3-way, or reflector CFLs any different than those for non-specialty CFLs?
  - a) [IF YES] How so?
  
- M. [IF THEY SELL CFL FIXTURES] Are your stocking practices for CFL fixtures any different than those for non-specialty CFLs?
  - a) [IF YES] How so?
  
- N. How long will typical shipments of program-discounted non-specialty CFLs last in one of you stores before being sold out?
  
- O. [IF THEY SELL SPECIALTY CFLS] How long will typical shipments of program-discounted specialty CFLs last in one of you stores before being sold out?
  
- P. [IF THEY SELL CFL FIXTURES] How long will typical shipments of program-discounted specialty CFLs last in one of you stores before being sold out?
  
- Q. [IF THEY SELL NON-PROGRAM-DISCOUNTED CFL PRODUCTS] Do the CFLs bulbs that are discounted by the Upstream Lighting Program sell quicker, slower, or at about the same pace as other light bulbs that your store sells?
  
- R. If the supply of program-discounted non-specialty CFLs in your store sells out, what do you typically do?
  
- S. Is this process any different for specialty CFLs or CFL fixtures?
  1. [IF YES] How so?
  
- T. If one of your stores has program-discounted CFLs that remain unsold after a long period of time, what typically happens to these products?
  1. [IF MANUFACTURER/SUPPLIER RETAKES BULBS] Is this done as a condition of your contract with the manufacturer?
  
- U. Would this unsold inventory ever be sold out of California?

1. [IF YES] How might this happen?
  2. [IF YES] How would you know this?
- V. As noted earlier, there is evidence that some lighting products receiving discounts from the California Upstream Lighting Program are being sold out-of-state or through out-of-state buyers through the Internet. At what point in the supply and distribution chain do you think this might be happening?
- W. Do you track CFL products that you sell through the California Upstream Lighting Program that are lost due to breakage and other damage?
1. [IF YES] Do you just track damage/breakage to CFL products before they reach the retailer or also after?
  2. [IF YES] If we gave your company assurances of confidentiality, would you be willing to share information about your loss and breakage rates?

## **VII. Pricing**

- A. How much influence does your company have over the prices of the CFL products that you receive from manufacturers? Would you say that your company is very influential, somewhat influential, or not very influential?
- B. Some retailers use something called “keystone pricing” where the retail price is set at twice what the wholesale price is. Is this how you determine the retail price for the California Upstream Lighting Program CFLs products that you sell?
1. [IF NO] How do you determine the retail price for the program-discounted CFLs you sell?
- C. Some manufacturers participating in the California Upstream Lighting Program have been more aggressive than others and have offered their products to certain retailers for free. Have you ever received program-discounted CFLs for free?
1. [IF YES] How do you determine the retail price for these “free” CFLs?
- D. California CFL product prices have been declining in the last 10 years. Do you think this trend will continue, or will prices level off or even increase?
1. What factors are causing you to make this prediction?

- E. [IF THEY SELL NON-PROGRAM-DISCOUNTED CFLS ALSO] You said earlier that you also sell CFL products in California that do not receive buydown discounts from the California Upstream Lighting Program. Are the program-discounted CFL products typically sold at a lower retail price, a higher retail price, or at the same retail prices as the non-program-discounted bulbs?
1. On a per-bulb basis, on average, how much [LOWER/HIGHER] are the prices of the program-discounted CFL bulbs than the other CFL bulbs that you sell?
  2. On a per-fixture basis, on average, how much [LOWER/HIGHER] is the price on the program-discounted CFL fixtures than the other CFL fixtures that you sell?
  3. Are your pricing strategies for the products with California Upstream Lighting Program buydowns handled differently than non-program products?
    - a) [IF YES] How are these different?

### **VIII. Market Characterization**

- A. How would you characterize the current market for CFL products in California in terms of retailer market share? For example, are there a few major retailers responsible for the major share of product sales? Or are there a large number of major players?
- B. Where would you characterize your firm in terms of market share for the California CFL market?
- C. Are there factors inherent in the manufacturing, importing or distributing processes that have restricted the production and supply of CFL products in the past year or so? Please describe: [IF RESPONDENT CAN'T THINK OF ANYTHING, PROMPT WITH EXAMPLES SUCH AS SHORTAGES OF INPUTS USED IN MANUFACTURING PROCESSES (LABOR, CAPITAL, RAW MATERIALS), INADEQUATE INFRASTRUCTURE TO PRODUCE OR IMPORT PRODUCTS, OR BRING THEM TO MARKET, ETC.]
1. To what degree have these production and supply restrictions varied with the type of CFL product?
  2. How do these supply-side barriers compare to those for non-CFL products?

3. [IF SUPPLY BARRIERS IDENTIFIED] Has there been any progress recently to reduce these barriers?
    - a) [IF YES] What factors lead to the reduced barriers?
    - b) [IF NOT ALREADY MENTIONED] Did the 2006-2008 California Upstream Lighting Program play a role in reducing these barriers?
      - a. [IF YES] What role did it play?
    - c) Are there any supply-side barriers that have been increased due to the structure or timing of the California lighting rebate programs?
      - a. [IF YES] What are these?
      - b. [IF YES] How did/does the California programs create or increase these barriers?
  4. [IF SUPPLY BARRIERS IDENTIFIED] What, if anything, needs to happen to overcome the remaining supply-side restrictions?
- D. What are the most important factors that are limiting customer demand for CFL products? Please explain. [IF RESPONDENT CAN'T THINK OF ANYTHING, PROMPT WITH EXAMPLES SUCH AS LACK OF AWARENESS, PRODUCT PRICING, AND PERCEPTIONS REGARDING PRODUCT PERFORMANCE, BULB FIT, APPEARANCE, EARLY BURN-OUT, ETC. RECORD WHETHER ONE HAD TO PROMPT AND RANDOMLY ROTATE THE EXAMPLES USED IN THE PROMPT.]
1. To what degree have these demand barriers varied with the type of CFL product?
  2. [IF DEMAND BARRIERS IDENTIFIED] Has there been any progress recently to reduce these barriers?
    - a) [IF YES] What factors lead to the reduced barriers?
    - b) [IF NOT ALREADY MENTIONED] Did the 2006-2008 California Upstream Lighting Program play a role in reducing these barriers?
      - a. [IF YES] What role did it play?

- c) Are there any demand-side barriers that have been increased due to the structure or timing of the California lighting rebate programs?
        - a. [IF YES] What are these?
        - b. [IF YES] How did/does the California programs create or increase these barriers?
  - 3. [IF DEMAND BARRIERS IDENTIFIED] What needs to happen to overcome these demand-side barriers?
- E. Are you aware that in 2007 a federal Energy Bill was passed that requires new efficiency standards for light bulbs?
- 1. [IF YES] What do you think will be the impact of this 2007 Energy Bill on CFL sales and prices?
- F. What are your expectations for U.S. CFL product sales in 2008 and beyond?
- 1. Why do you say that?
- G. If California eliminated its CFL rebate and discount programs starting in 2009 what effects would this have on the sales levels of CFL products in California?
- H. What effects do you think the California Upstream Lighting Program has on the capability and willingness of lighting manufacturers to produce innovative CFL products?
- I. Do you sell CFL products in other countries besides the United States?
- 1. [IF YES] Are you familiar with your company's international sales trends?
    - a) [IF NO] Who would be another person at your company who is familiar with your company's international sales of CFL products? [RECORD NAME AND CONTACT INFORMATION AND SKIP TO SECTION IX]
    - b) [IF YES] How do your international sales trends for CFL products compare to those in the United States?
    - c) [IF YES] What do you think are driving these international sales trends?

**IX. Product Quality, Recycling**

- A. Do you think the quality of CFL products in recent years has been increasing, decreasing, or staying about the same?
  - 1. [IF THEY THINK QUALITY IS DECREASING] What factors do you think might be leading to the production of lower quality CFL products?
- B. What do you think should be done to improve the quality of CFL products?
- C. Do you think that CFL product discount programs like the California Upstream Lighting Program, have affected consumer attitudes towards the quality of CFL products in any way?
  - 1. [IF YES] In what way?
- D. How important is product quality in deciding what types or brands of CFLs you're selling in your store? Would you say that quality is very important, somewhat important, or not important at all?
  - 1. [IF NOT IMPORTANT AT ALL] Why do you say that?
- E. How can you tell whether the CFLs your stores are selling are quality products?
- F. Is your company doing anything to assure the quality of the CFL products it sells?
  - 1. [IF YES] What is your company doing to assure quality?
- G. Are there any CFLs you have stopped offering due to customer complaints related to quality?
  - 1. [IF YES] What types or brands of CFLs did you stop offering due to quality concerns?
- H. Energy Star's "CFL Criteria Version 4.0" was released in February 2008 and will become effective in November 2008. What do you think will be the impact of new Energy Star standards on CFL products and prices?
- I. The disposal of CFL products has become a major issue in recent years. Do you have standard recommendations you give to customers about how to recycle their CFLs?

1. [IF YES] What are these recommendations?
- J. Do you offer CFL recycling on-site in any of your stores?
1. [IF NO] Have you ever considered doing this?
  2. [IF NO] What factors or barriers might keep you from offering CFL recycling on-site?

**X. Program Satisfaction**

Finally I would like to find out your level of satisfaction with the California Upstream Lighting Program

**A. Rebate Reservation, Program Verification Process**

1. Using a scale of 0 to 10 where 10 = very satisfied and 0 = very dissatisfied, how satisfied have you been with the rebate fund reservation process – that is, the process used by the utility to allocate a set amount of rebate dollars to participating stores?
  - a) [IF SATISFACTION RATING IS 0-5] Why do you say that?
2. Again using a scale of 0 to 10 where 10 = very satisfied and 0 = very dissatisfied, how satisfied have you been with the program tracking and verification process – that is, the process used by the utility to ensure that the CFL products that they are providing discounts for are being sold by retailers and are properly labeled and promoted?
  - a) [IF SATISFACTION RATING IS 0-5] Why do you say that?

**B. Rebate Levels and Coverage**

1. CFL bulbs [ASK ONLY IF THEY SELL CFL BULBS THROUGH THE PROGRAM]
  - a) Using this same satisfaction scale, how satisfied have you been with the level of manufacturer buydown rebates for CFL *bulbs*?
    - a. [IF SATISFACTION RATING IS 0-5] Why do you say that? For which bulb types are you unsatisfied with the rebate levels?
  - b) If the program, due to fund constraints, had to eliminate a manufacturer buydown rebate for one type of CFL bulb, which one should they choose? Why do say that?
2. CFL fixtures [ASK ONLY IF THEY SELL CFL FIXTURES THROUGH THE PROGRAM]
  - a) Using this same satisfaction scale, how satisfied have you been with the levels of manufacturer buydown rebates for CFL *fixtures*?

- a. [IF SATISFACTION RATING IS 0-5] Why do you say that? For which fixture types are you unsatisfied with the rebate levels?

**C. Marketing and Coordination with Retailers**

1. Using the same satisfaction scale, how satisfied have you been with the California Upstream Lighting Program's efforts to mass market CFL products?
  - a) [ASK ONLY IF SATISFACTION RATING IS 0-5] Why do you say that?
2. Using the same satisfaction scale, how satisfied have you been with the program's efforts to coordinate with retailers on in-store product placement and promotions?
  - a) [ASK ONLY IF SATISFACTION RATING IS 0-5] Why do you say that?
3. What effects, if any, does the inclusion of the utility logos have on the sales of your CFL products?

**D. Satisfaction with Program Staff and Program As a Whole**

1. Using the same satisfaction scale, how satisfied have you been with the program managers and other staff involved in the California Upstream Lighting Program?
  - a) [ASK ONLY IF SATISFACTION RATING IS 0-5] Why do you say that?
2. Using the same scale, how would you rate your level of satisfaction with the program in general?
  - a) [ASK ONLY IF SATISFACTION RATING IS 0-5] Why do you say that?
3. In what way could the program processes be improved?
4. Are you planning to participate in the program going forward?
  - a) [IF YES] Why do you say that?
5. Can you estimate what percentage of the CFL products you sold through the California Upstream Lighting Program during the 2006-2008 time period were installed in residential vs. nonresidential fixtures?



- a) [IF YES] What is your estimate of this breakdown?
6. “Many discount, grocery stores, and drug stores are participating in the California Upstream Lighting Program that did not sell Energy Star CFLs before joining this program. To what degree do you think these grocery, drug, and discount stores are creating new Energy Star CFL product sales as opposed to taking away Energy Star CFL sales that otherwise would have gone to national chain retailers such as Wal-Mart, Home Depot, or Lowe's?
- a) [IF RESPONDENT INDICATES THESE GROCERY, DRUG, OR DISCOUNT STORES MAY BE TAKING SALES FROM OTHER RETAILERS] Which retailers do you think these grocery, drug, or discount stores are taking Energy Star CFL product sales away from?
7. If your customers could not purchase CFL bulbs in your stores, for whatever reason, do you think they would buy incandescent bulbs instead or would they wait to buy their CFL bulbs from other retailers?
- a) [IF THEY INDICATE THEIR CUSTOMERS WOULD WAIT TO BUY CFL BULBS FROM OTHER RETAILERS] What other retailers do you think your customers would be buying their CFLs from?

**Program Attribution, Market Effects, and Market Characterization  
Guide for Reinterviewing  
Lighting High-Level Retail Buyers Participating  
in the 2006-2008 California Upstream Lighting Programs**

**I. Introduction**

A. Contact Protocol

1. Send email invitations to previous interviewees for follow-up interview. This invitation will include:
  - a) Explanation of purpose and scope of interview.
  - b) Explanation of time frame within which the interview will need to be completed.
  - c) Explanation of expected duration of interview and flexibility to complete interview over multiple sessions.
  - d) Instructions to propose a convenient interview time.
  - e) Contact information for interviewers.
  - f) Assurances of confidentiality.
  - g) A letter attachment from the CPUC explaining the importance of the interview
  - h) A table representing the company's CFL product shipments sales through the Upstream Lighting Program for this time period.
2. If target interviewee does not respond to the email invitation within a week, a follow-up call will be made to try to schedule an interview time, find an alternate interview target, or determine reasons for refusal.

**II. Program Participation Confirmation and Reasons for Participation**

A. Since we last interviewed you in [month] 2008, have there been any changes in the nature of your participation in the Upstream Lighting Program?

1. [IF YES] What changes were these?

**III. 2006-2008 CFL Product Sales and California Upstream Lighting Program Trends**

A. We recently received data from the utilities of CFL product shipments through the Upstream Lighting Program for the full 2006-2008 time period. I emailed you a table that represents your company's CFL product shipments sales through the Upstream Lighting Program for this time period. Does this information appear accurate?

1. [IF RESPONDENT QUESTIONS ACCURACY OF DATA, RECORD WHAT ASPECTS OF THE DATA THEY REGARD AS QUESTIONABLE. IF NECESSARY, EXPLAIN WHAT SHIPMENT DATES WERE USED FOR CUTOFF DATES TO DEFINE THE 2006-2008 TIME PERIOD]

- B. Have all the Upstream Lighting-Program discounted CFL products that are listed in this table as having been shipped to your stores been sold through?
1. [IF YES] How do you know this?
  2. [IF YES] About when [TRY TO GET MONTH/YEAR] were all these program-discounted CFLs products sold through?
  3. [IF YES] About when [TRY TO GET MONTH/YEAR] were about 90% of these program-discounted CFL products sold through?
  4. [IF NO] Which of the program-discounted CFL products listed in this table have not sold through?
  5. [IF NO] What happened to these unsold program-discounted CFL products?

**Table 1**  
**Sample Data Table**

Retail Channel/Product Type	# Non-Specialty CFL Bulbs Through Upstream Lighting Program				# Non-Specialty CFL Bulbs Sold in California Not Through Upstream Lighting Program			
	2006	2007	Q1 2008	Total 2006-2008	2006	2007	Q1 2008	Total 2006-2008
<b>Non-Specialty CFL Bulbs of Type Sold Through Upstream Lighting Program</b>								
<b>Large Home Improvement</b>								
CFL INT INTEGRAL - 13 WATT >= 800 LUMENS - SCREW-IN	50,000	78,000	32,000	160,000	A	B	C	D
INTERIOR CF BULB - 23 WATT 1,100 TO 1,399 LUMENS	100,000	213,000	81,000	394,000	E	F	G	H
<b>Grocery</b>								
CFL INT INTEGRAL - 13 WATT >= 800 LUMENS - SCREW-IN	60,000	93,600	38,400	192,000	I	J	K	L
INTERIOR CF BULB - 23 WATT 1,100 TO 1,399 LUMENS	120,000	255,600	97,200	472,800	M	N	O	P
INTERIOR CF BULB - 23 WATT >=1,600 LUMENS	85,000	34,000	56,000	175,000	Q	R	S	T
<b>Other Non-Specialty Energy Star CFLs Sold in California But Not Through Upstream Lighting Program</b>								
<b>Channel?</b>								
???								
???								
???								
<b>Channel?</b>								
???								
???								
???								
<b>Non-Specialty Non-Energy Star CFLs Sold in California</b>								
<b>Channel?</b>								
???								
???								
???								
<b>Channel?</b>								
???								
???								
???								

**Updating/Verifying Information Regarding Sales of Non-ULP Discounted CFLs**

6. When we last interviewed you in [month] 2008, you said that your company [had/ had not] sold non-specialty Energy Star CFL bulbs in California during the 2006-2008 period that **did not** receive discounts from the Upstream Lighting Program? Has anything changed since our last interview in terms of your sales of non-ULP-discounted Energy Star CFL bulbs?
  - a) [IF YES] What has changed?

b) [IF YES AND SINCE THE LAST INTERVIEW THEY'RE NOW SELLING OR THEY SOLD NON-ULP CFL BULBS WHERE THEY WEREN'T BEFORE] What types of non-specialty Energy Star CFL bulbs are you selling [did you sell] that are not receiving the ULP discounts?

c) [IF YES AND SINCE THE LAST INTERVIEW THEY'RE NOW SELLING OR THEY SOLD NON-ULP CFL BULBS WHERE THEY WEREN'T BEFORE] Why aren't you selling [didn't you sell] these bulbs through the California Upstream Lighting Program?

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### **Updating/Verifying Information Regarding Sales of Non-Energy-Star CFLs**

7. When we last interviewed you in [month] 2008, you said that your company [had/ had not] sold non-Energy Star CFL bulbs in California during the 2006-2008 period? Has anything changed since our last interview in terms of your sales of non- Energy Star CFL bulbs?

a) [IF YES] What has changed?

b) [IF YES AND SINCE THE LAST INTERVIEW THEY'RE NOW SELLING OR THEY SOLD NON-ENERGY STAR CFL BULBS WHERE THEY WEREN'T BEFORE] What types of non-Energy Star CFL bulbs are you selling?

c) [IF YES AND SINCE THE LAST INTERVIEW THEY'RE NOW SELLING OR THEY SOLD NON-ENERGY STAR CFL BULBS WHERE THEY WEREN'T BEFORE] Why do you sell these non- Energy-Star CFLs?

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### **Updating/Verifying Information Regarding % of ULP, Non-ULP Energy Star, and Non-Energy Star Sales**

8. [IF THEY PROVIDED THIS ESTIMATE] When we last interviewed you in [month] 2008, you provided the following estimate of the % of non-specialty CFL bulbs that you sold in California during the 2006-2008 period that fit into the following categories [READ %s FROM TABLE] Would you want to adjust these estimates in anyway? [IF YES, RECORD CHANGES IN PROPORTIONS AND REASONS WHY RESPONDENT CHANGED PROPORTIONS]
9. [IF THEY DID NOT PROVIDE THIS ESTIMATE IN THE PREVIOUS INTERVIEW, ASK THEM TO ESTIMATE THESE PROPORTIONS THIS TIME AROUND.]

ULP-Discounted % of non-specialty CFL bulbs sold in California during the 2006-2008 period that were ULP-discounted.	__%
Non-ULP Energy Star % of non-specialty CFL bulbs sold in California during the 2006-2008 period that met Energy Star specifications but were not discounted by the program.	__%
Non-Energy Star % of non-specialty CFL bulbs sold in California during the 2006-2008 period that did not meet Energy Star specifications.	__%
<b>Total non-specialty CFL bulbs sold in California during the 2006-2008 period</b>	<b>100%</b>

**Effects of Suspension of ULP Incentives/ Effects of Bridge Funding**

10. In October 2008 some of the California utility program managers said that they ended financial incentive payments from the Upstream Lighting Program for 2008. What effects did this suspension of incentives have on your sales of CFLs – whether through the Upstream Lighting Program or outside this program?
  
11. Although the 2009-2011 Upstream Lighting Program has yet to be approved by the California Public Utilities Commission, the Commission has provided the California utilities with “bridge funding” to allow them to pay financial incentives to lighting suppliers in the first half of 2009. What’s the current status of your participation in this Upstream Lighting Program? [PROBE FOR STATUS OF ALLOCATION APPLICATIONS, SHIPMENTS TO STORES (VOLUMES, DESTINATIONS)]

**Seeking Sales Data for Non-ULP CFLs**

12. [IF THEY SOLD NON-SPECIALTY CFLS IN CALIFORNIA IN 2006-2008 THAT DID NOT RECEIVE ULP DISCOUNTS, SAID THAT THEY WOULD PROVIDE THESE DATA IN THE FIRST INTERVIEW, BUT NEVER CAME THROUGH]. When we last interviewed you in [month] 2008, you said that you would provide us with sales data for the CFL products that were not sold through the Upstream Lighting Program, but we never received these data. How can we obtain these non-program CFL sales data?

**Specialty CFLs**

- C. [IF THEY SOLD SPECIALTY CFL BULBS ELSE SKIP TO III. D].  
Next I'm going to ask you some similar questions but this time about your sales of specialty CFL bulbs. By "specialty" CFL bulbs I mean bulbs that have special functions or features such as reflectors, dimmability, three-way light levels, or flood lighting. [REPEAT QUESTIONS B1. – B4 EXCEPT SUBSTITUTE WORD "Specialty" for "Non-Specialty"]

#### **CFL Fixtures**

- D. [IF THEY SOLD CFL FIXTURES ELSE SKIP TO III. E.] Next I'm going to ask you some similar questions but this time about your sales of Energy Star-qualified CFL fixtures. [REPEAT QUESTIONS B1. – B4 EXCEPT SUBSTITUTE WORDS "CFL fixtures" for "Non-Specialty CFL bulbs"]

#### **ULP Trends, Policies**

##### **E. Recent trends, policies for the California Upstream Lighting Program**

1. Since we last interviewed you in [month] 2008, have there been any changes in the types of CFL bulbs or LED products or compact fluorescent fixtures that the California Upstream Lighting Program has been encouraging your company to sell? [IF NECESSARY, REMIND THEM OF THEIR RESPONSE FROM THE PREVIOUS INTERVIEW]
  - a) [IF YES] What have been these changes?
  - b) [IF YES] What do you think about these changes?
2. Have you worked with other state, utility, or regional lighting rebate programs besides California's Upstream Lighting Program?
  - a) [IF YES] Are there any differences between the California Upstream Lighting Program and these other rebate programs in terms of the types of energy-efficient lighting products they promote?
    - a. What are these differences?
    - b. The California Upstream Lighting program offers higher rebates for higher lumen levels at a given wattage level. Do any of the other lighting rebate/discount programs you participate in also do this?

- i. [IF YES] Which ones?
  - b) [IF YES] Are there any differences between the California Upstream Lighting Program and these other rebate programs in terms of the types of retailers they encourage lighting manufacturers and suppliers to work with?
    - a. What are these differences?
- 3. Does your company sell CFL products in the states of Georgia, Kansas, or Pennsylvania?
  - a) [IF YES] Are you familiar with your company's sales of CFL products in these states?
    - a. [IF YES] In late 2008 we conducted some telephone surveys of residential customers to ask them about their CFL purchasing behavior. These surveys found that residential respondents in Georgia, Kansas, and Pennsylvania were actually reporting a higher level of recent CFL purchases than those in California. They were reporting this even though California has a statewide CFL discount program and these states had no CFL discount programs or very small ones. Do you have any information or theories on why this might be happening?

4. [IF THEY WERE PREVIOUSLY AWARE OF THE BULK PURCHASE LIMITS] Since we last interviewed you in [month] 2008, have there been any changes in what your company is doing to try to enforce these bulk limits?

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- a. [IF YES] What have been these changes?

**IV. Free Ridership and In-State Spillover for 2006-2008 Upstream Lighting Program**

- A. [IF THEY SOLD LEDs THROUGH THE ULP PROGRAM, ASK THEM THE SAME FREE RIDERSHIP QUESTIONS THAT WERE ASKED LAST TIME FOR CFL PRODUCTS, ONLY SUBSTITUTING "LED" FOR "CFL" WHERE APPROPRIATE]
- B. [ONLY ASK THE CFL PRODUCT FREE RIDERSHIP QUESTIONS IF CFL PRODUCT FREE RIDERSHIP ESTIMATES ARE MISSING FROM THE PREVIOUS INTERVIEW. IN SUCH CASES, USE THE



SAME FREE RIDERSHIP QUESTION SEQUENCE FROM THE FULL INTERVIEW GUIDE].

- C. Program Effects on Non-discounted CFLs Sold in California in 2006-2008 [ONLY ASK THESE QUESTIONS IF THEY BEGAN SELLING NON-ULP CFL PRODUCTS SINCE THE LAST INTERVIEW. IN SUCH CASES, USE THE SAME QUESTION SEQUENCE FROM THE FULL INTERVIEW GUIDE]
- D. .[IF THEY SOLD BOTH SPECIALTY AND NON-SPECIALTY CFLS AND THIS QUESTION WAS NOT ASKED IN THE PREVIOUS INTERVIEW] You said earlier that during the 2006-2008 period, you sold both non-specialty and specialty CFL bulbs through the California Upstream Lighting Program. What effects, if any, do the program-discounted non-specialty CFL bulbs have on your sales levels of program-discounted specialty CFL bulbs, such as dimmable bulbs, bulbs with reflectors, 3-way bulbs, and flood lights? [IF MECHANISM FOR THESE EFFECTS IS NOT EXPLAINED, PROBE FOR MECHANISM]

**V. Early, Cumulative Effects of California Lighting Rebate Programs**

- A. [ONLY ASK QUESTIONS FROM THE PREVIOUS INTERVIEW IF THE PREVIOUS RESPONSES WERE MISSING OR AMBIGUOUS] Have the years of California lighting rebate and discount programs had any effects on the variety of energy-efficient lighting products that you sell?
  - 1. [IF YES] What have been these effects?
- B. [IF THEY SOLD CFLS IN CALIFORNIA BEFORE BECOMING INVOLVED IN THE CALIFORNIA LIGHT REBATE PROGRAMS AND SAID IN THE FIRST INTERVIEW THAT THEY PROVIDE SALES DATA FROM THIS PERIOD, BUT NEVER CAME THROUGH]. When we last interviewed you in [month] 2008, you said that you would provide us with sales data for the CFL products that you sold in California before becoming involved in the California lighting rebate programs. But we never received these data. How can we obtain these pre-program CFL sales data?
- C. [IF THEY SOLD CFLS IN STATES WITHOUT LIGHTING REBATE PROGRAMS AND SAID IN THE FIRST INTERVIEW THAT THEY WOULD PROVIDE SALES DATA FROM THIS PERIOD, BUT NEVER CAME THROUGH]. When we last interviewed you in [month] 2008, you said that you would provide us with CFL sales data for the products that you sold in states without lighting rebate programs. But we never received these data. How can we obtain these CFL sales data from states without lighting rebate programs?

D. When we last interviewed you in [month] 2008, we asked you whether the years of California lighting rebate and discount programs have influenced the level of CFL sales in other states. You said [RECAP PREVIOUS RESPONSE]. Has anything happened in recent months that would cause you to change your previous answer?

1. [IF YES] How would your answer change and why?

**Manufacturing Cost/Capacity for Specialty CFLs, LEDs [FOR RETAILERS, ASK IF THEY KNOW ANYTHING ABOUT MANUFACTURING COSTS FOR CFL, IF NO, SKIP THIS SECTION]**

E. Has your firm experienced any reductions in manufacturing production costs for specialty CFLs over the last five years? By “specialty CFLs” I mean bulbs that have special functions or features such as reflectors, dimmability, three-way light levels, or flood lighting.

1. [IF YES] By how much do you think these reductions in production costs have reduced the average per-bulb prices for specialty CFLs during this ten-year period?

2. [IF YES] What factors have led to these reductions in manufacturing production costs for specialty CFLs?

a) [IF STATE/UTILITY REBATE PROGRAMS ARE MENTIONED] How did these rebate programs influence these reductions in your manufacturing costs?

b) [IF STATE/UTILITY REBATE PROGRAMS ARE MENTIONED] In what time period did these rebate programs influence these reductions in your manufacturing costs?

c) [IF STATE/UTILITY REBATE PROGRAMS ARE MENTIONED] Do you think that the California lighting rebate and discount programs in particular have been an important factor in influencing these reductions in your manufacturing costs for specialty CFLs?

a. [IF YES] How important a factor were the California lighting rebate programs, in particular, in influencing these reductions in your manufacturing costs? Please use a scale of 0 to 10 where 10 equals “very important” and 0 equals “not important at all.”

i. Why do you give this rating?

1. [IF INCREASED MANUFACTURING CAPACITY CAUSED BY CALIFORNIA REBATE PROGRAMS MENTIONED] By approximately what % did you increase your manufacturing capacity for specialty CFLs in response to the California rebate programs?
  2. [IF INCREASED MANUFACTURING CAPACITY CAUSED BY CALIFORNIA REBATE PROGRAMS MENTIONED] About when did these increases in manufacturing capacity caused by the California rebate programs occur?
  3. [IF INCREASED MANUFACTURING CAPACITY CAUSED BY CALIFORNIA REBATE PROGRAMS MENTIONED] By approximately what % did this increase in specialty CFL manufacturing capacity reduce your average CFL production cost?
- d) [IF GENERAL INCREASES IN WORLD CFL DEMAND MENTIONED] How important a factor were the California lighting rebate programs, in particular, in increasing demand for these specialty CFL products? Please use a scale of 0 to 10 where 10 equals “very important” and 0 equals “not important at all.”
- a. Why do you give that rating?
- e) [IF TECHNOLOGICAL IMPROVEMENTS AT THE FACTORY MENTIONED] How important a factor were the California lighting rebate programs, in particular, in driving these technological improvements in the factory for specialty CFLs? Please use a scale of 0 to 10 where 10 equals “very important” and 0 equals “not important at all.”

- a. Why do you give that rating?
  - f) If the California rebate and discount programs went away after 2008 do you think your average production costs for specialty CFLs would go up, would go down, or stay about the same?
    - a. Why do you say that?
  3. What do think will be the trend for specialty CFL production costs over the next few years. Do you think they'll go up, go down or stay the same?
    - a) Why do you say that?
- F. [REPEAT QUESTION E. 1-3 FOR LED PRODUCTION IF THEY MANUFACTURE LED PRODUCTS]
- G. Has the California Upstream Lighting Program done anything since we last interviewed you in [MONTH] 2008 that has affected the quality or performance of the CFL or LED products that you sell?
1. [IF YES] What has the program done?
- H. Last time we named a number of possible drivers of increased CFL bulbs and fixtures and asked you to rate how significant each of these were as a driver of increased CFL product sales during the 2006-2008 period. You were asked to use a 0 to 10 scale, where 0 was not at all significant and 10 was extremely significant. Now I want you to rate these same drivers, but this time focusing on their likely influence on CFL products sales over the next 2-3 years. Please use the same 10-point significance scale.
1. How important will state or utility rebate and discount programs be for CFL product sales over the next 2-3 years? [RECORD RATING]
    - a) Why do you give this rating?
  2. How about the Energy Star program including its Change-a-Light campaign? [RECORD RATING]
    - a) Why do you give this rating?
  3. How about CFL promotion campaigns by some large retailers such as Wal-Mart, Home Depot, and Lowe's that will be done independently of any state or utility energy efficiency programs? [RECORD RATING]

- a) Why do you give this rating?
- 4. How about media stories promoting the use of CFLs? [RECORD RATING]
  - a) Why do you give this rating?
- 5. How about possible reductions in CFL production costs and price points due to lower-cost overseas manufacturing and increases in CFL production capacity? [RECORD RATING]
  - a) Why do you give this rating?
- 6. How about consumer awareness about global warming? [RECORD RATING]
  - a) Why do you give this rating?
- 7. How about possible future increases in energy costs? [RECORD RATING]
  - a) Why do you give this rating?
- 8. Are there any significant drivers of future CFL product sales that I haven't already mentioned?
  - a) [IF YES] What are these?
  - b) [IF YES] How would you rate these using the 10-point significance scale? [COLLECT A SEPARATE RATING FOR EACH DRIVER MENTIONED]
- 9. [IF THEY SELL LED PRODUCTS] Your company sells LED lighting products. Would the answers you gave just now for drivers of CFL product sales be any different for LED lighting products?
  - a) [IF YES] How so?
- I. When we last interviewed you in [month] 2008 you talked about whether you had seen evidence of lighting products receiving discounts from the California Upstream Lighting Program that were being sold out-of-state or through out-of-state buyers through the Internet? Have you seen any additional evidence of this so-called CFL leakage since our last interview?

1. [IF YES] What new evidence have you seen?

## **VI. Supply Chain Characterization**

- A. When we last interviewed you in [month] 2008 we asked you a number of questions about the CFL supply chain such as the amount of time it takes for CFL products to be delivered, how long it takes to sell them through, and what happens to any unsold products. Has anything happened since our last interview that would cause you to change your answers for any of these questions? [READ BACK SOME OF THE RESPONSES IF NECESSARY]
  1. [IF YES] How would your answers change?

## **VII. Pricing and Incentive Levels**

- A. When we last interviewed you in [month] 2008 we asked you a number of questions about CFL pricing such as how you mark up CFL products, and the differences in retail prices between program-discounted and non-program-discounted CFL products. Has anything happened since our last interview that would cause you to change your answers for any of these questions? [READ BACK SOME OF THE PREVIOUS RESPONSES IF NECESSARY]
  1. [IF YES] How would your answers change?
- B. What do you think will be the trend for retail prices for non-specialty CFLs over the next few years? Do you think retail prices for specialty CFLs will go up, go down, or stay about the same?
  1. Why do you say that?
- C. What do you think will be the trend for retail prices for specialty CFLs over the next few years? Do you think retail prices for specialty CFLs will go up, go down, or stay about the same?
  1. Why do you say that?
- D. If the California utilities wanted to help reduce prices for specialty CFLs over the next few years, what would be the best way for them to leverage their resources to accomplish this?

- E. The California Upstream Lighting Program currently offers buydown discounts for specialty CFLs of [CITE MOST RECENT INCENTIVE LEVELS]. Do you think these incentive levels are adequate to move consumer demand for these products?
  - 1. [IF NO] What buydown discount levels are needed to move consumer demand?
- F. What do you think will be the trend for retail prices for CFL fixtures over the next few years? Do you think retail prices for CFL fixtures will go up, go down, or stay about the same?
  - 1. Why do you say that?
- G. What do you think will be the trend for retail prices for LED lighting products over the next few years? Do you think retail prices for LED lighting products will go up, go down, or stay about the same?
  - 1. Why do you say that?
- H. If the California utilities wanted to help reduce prices for LED lighting products over the next few years, what would be the best way for them to leverage their resources to accomplish this?
- I. The California Upstream Lighting Program currently offers buydown discounts for LED lighting products of [CITE MOST RECENT INCENTIVE LEVELS]. Do you think these incentive levels are adequate to move consumer demand for these products?
  - 1. [IF NO] What buydown discount levels are needed to move consumer demand?

## **VIII. Market Characterization Present and Future**

### **Supply-Side and Demand-Side Barriers**

- A. When we last interviewed you in [month] 2008 we asked you a number of questions about possible supply-side barriers. These were manufacturing, importing, or distribution factors that might have restricted the production or supply of CFL products. Has anything happened since our last interview that would cause you to change your answers for any of these questions? [READ BACK SOME OF THE PREVIOUS RESPONSES IF NECESSARY]
  - 1. [IF YES] How would your answers change?

- B. When we last interviewed you we asked you a number of questions about possible demand-side barriers. These were factors that might limit customer demand for CFL products? Has anything happened since our last interview that would cause you to change your answers for any of these questions? [READ BACK SOME OF THE PREVIOUS RESPONSES IF NECESSARY]

1. [IF YES] How would your answers change?

**Retailer Cannibalization, Energy Star 4.0, and Expectations for Future CFL Sales**

- C. [ASK ONLY IF NOT ASKED IN PREVIOUS INTERVIEW] Many discount, grocery stores, and drug stores are participating in the California Upstream Lighting Program that did not sell Energy Star CFLs before joining this program. To what degree do you think these grocery, drug, and discount stores are creating new Energy Star CFL product sales as opposed to taking away Energy Star CFL sales that otherwise would have gone to national chain retailers such as Wal-Mart, Home Depot, or Lowe's?
1. [IF RESPONDENT INDICATES THESE GROCERY, DRUG, OR DISCOUNT STORES MAY BE TAKING SALES FROM OTHER RETAILERS] Which retailers do you think these grocery, drug, or discount stores are taking Energy Star CFL product sales away from?
- D. Energy Star's "CFL Criteria Version 4.0" became effective in December 2008. What do you think has been the impact of these new Energy Star standards on CFL products and prices?
- E. What are your expectations for U.S. CFL product sales in 2009 and beyond?
1. Why do you say that?
- F. What are your expectations for international CFL product sales in 2009 and beyond?
1. Why do you say that?
- G. If California eliminated its CFL rebate and discount programs starting in 2009, what effects would this have on the sales levels of CFL products in California?



- H. Will manufacturers continue to develop and market CFLs without support from rebate and discount programs?
- I. What effects do you think the California Upstream Lighting Program has on the capability and willingness of lighting manufacturers to produce innovative CFL products?

**Handicapping the Medium, Screw-Based Lighting Technologies of the Future**

- J. There is currently discussion as to which types of lighting technology – e.g. CFLs, LEDs, halogens, enhanced incandescents, cathode ray technologies – will be used in medium screw-based lighting technologies of the future. What is your opinion on this?
- K. What do you think are the advantages and disadvantages of CFL technology in terms of being the medium screw-based lighting technology of the future?
- L. What do you think are the advantages and disadvantages of LED technology in terms of being the medium screw-based lighting technology of the future?
- M. What do you think are the advantages and disadvantages of other possible lighting technologies such as advanced incandescent, halogen, or cathode ray technologies in terms of being the medium screw-based lighting technology of the future?

**Assessing the Potential for Super CFLs**

- N. Before now were you aware that the California utilities along with the California Lighting Technology Center and other partners have developed specifications for a CFL with enhanced features called the Super CFL?
  - 1. [IF YES] What do you know about this effort?
  - 2. [IF NO, OR IF RESPONDENT'S KNOWLEDGE OF SUPER CFL EFFORT IS SLIGHT, PROVIDE INTERVIEWEE WITH SHORT SUMMARY OF SUPER CFL EFFORT AND THE TYPES OF CFL SPECIFICATIONS CURRENTLY BEING CONSIDERED]
  - 3. Based on the description of the Super CFL that I just provided you, what do you think about:
    - a) Any potential production barriers – whether technology-related or cost-related – that a product like this might face?

- b) The potential marketability of a product like this?
- c) What kind of price premium that a product like this could command compared to currently-available specialty CFLs?
- d) If those working on the Super CFL were going to limit the CFL features they were trying to enhance to just a few, which CFL features do you think they should focus on?
  - a. Why do you say that?
- e) Of the CFL features that they are considering for enhancement, which of these do you think has the greatest potential for commanding a price premium in the lighting marketplace?
  - a. Why do you say that?
- f) I'm going to name a number of CFL specifications or attributes. For each one I name, please let me know if your company is planning any performance improvements over current Energy Star standards for any of your CFL products over the next couple of years [IN EACH CASE WHERE RESPONDENT SAYS A PRODUCT IMPROVEMENT IS PLANNED, PROBE FOR NATURE OF IMPROVEMENT]
  - a. Mercury content?
  - b. Start-up or run-up times?
  - c. Coloring rendering Index (CRI)?
  - d. Chromaticity/color temperature?
  - e. Acoustic noise or flickering?
  - f. Power factor?
  - g. Efficacy while dimmed?
  - h. Bulb size or shape?
  - i. Reflecting capabilities?

- g) Are you planning any other enhancements in the quality or performance of your CFL products that we haven't already discussed?
  - a. What are these?
- h) What factors are driving these planned improvements in the quality or performance of your CFL products? [ATTEMPT TO MATCH FACTORS WITH SPECIFIC PLANNED PRODUCT IMPROVEMENTS]
- i) [IF NOT ALREADY MENTIONED] Has the California Upstream Lighting Program played any role in your decision to pursue these product enhancements?
  - a. [IF YES] What role has it played?
- j) How could the California utilities best utilize their resources to facilitate the CFL product improvements that you are planning?
- k) How could the California utilities best utilize their resources to facilitate CFL product improvements in general?

**IX. CFL Quality, Disposal**

- A. When we last interviewed you in [month] 2008 you said that you thought the quality of CFL products in recent years has been [INCREASING/DECREASING/STAYING ABOUT THE SAME] Have you seen or heard anything since our last interview that would causes you to change this assessment?
  - 1. [IF YES] What has changed?
- B. When we last interviewed you, your preferred policies for the issue of CFL disposal was [RECAP PREVIOUS RESPONSE] Since this last interview have your perspectives on this issue changed?
  - 1. [IF YES] How so?
- C. When we last interviewed you, you said that your company was taking the following actions [RECAP PREVIOUS RESPONSE] to encourage environmentally-safe recycling and disposal of CFL products. Since this last interview, has your company taken any new actions in this areas or developed plan to do so?

1. [IF YES] What are these new actions or plans?

**X. Program Satisfaction**

- A. When we last interviewed you in [month] 2008, you provided satisfaction ratings for the California Upstream Lighting Program as a whole as well as a number of program processes. Has anything happened since our last interview that might cause you to change your satisfaction ratings either positively or negatively? [RECAP PREVIOUS SATISFACTION RATINGS IF NECESSARY]

1. [IF YES] What has happened and how would this affect your previous satisfaction rating(s) for the California Upstream Lighting Program?

- B. When we last interviewed you in [month] 2008, you provided the following recommendations for improvements for the California Upstream Lighting Program [RECAP RECOMMENDATIONS]. Based on your experience with the program since the last program, are there are recommendations for program improvements that you would like to add?

1. [IF YES] What are these recommendations?

- C. Are you planning to participate in the program going forward?

1. [IF NO] Why do you say that?

**2006-2008 Upstream Lighting Program  
Store/Lighting Manager Survey**

**NOTES:**

1. Variable names are in bold type.
2. A code of -8 means the respondent answered don't know.
3. A code of -9 means the respondent refused to answer the question.
4. NP indicates questions only asked to non participant respondents.
5. All responses to open-end or "other – specify" options can be found in the files: "Retail Participant open ends.xls" and Retail Nonparticipant open ends.xls".

**Section 1. Respondent Information**

**RI1** We are evaluating California's Upstream Lighting Program and our records show that you may have received some discounted compact fluorescent lights from [UTILITY] as part of the program. Are you familiar with the stocking patterns or sales trends for the lighting products that you sell?

(IF THEY ASK WHY, SAY: "This study will help us understand the impact this program has had on energy efficiency lighting. We would like to learn more about your experience with stocking and selling energy efficient bulbs and fixtures.")

- 1 Yes [SKIP TO INTRO2]
- 2 No
- 9 REFUSED [THANK AND TERMINATE]

**RI2** May I please speak with a person more familiar with the stocking patterns and sales trends for the lighting products sold at your store? (IF REFERRED TO CORPORATE: "Right now we are looking for input at the store level; corporate-level surveys are being conducted as another part of this study. Is there someone at your store I can speak with?")

- 1 Yes
- 2 No [ATTEMPT TO RESCHEDULE]
- 8 DON'T KNOW [TERMINATE]
- 9 REFUSED [TERMINATE]

**RI3** (WHEN NEW PERSON IS ON LINE) Are you the person at your store who is most familiar with the stocking patterns or sales trends for the lighting products that you sell?

- 1 Yes [IF NP, then SKIP TO LEAD IN]
- 2 No [SKIP BACK TO RI2]
- 8 DON'T KNOW [SKIP BACK TO RI2]

-9 REFUSED [TERMINATE]

**RI4** PARTICIPANTS ONLY According to our records, your store has participated in the [UTILITY] Residential Lighting Incentive Program also referred to as the Upstream Lighting Program. This program pays lighting manufacturers \$0.50-\$3.50 per compact fluorescent bulb and \$10 per compact fluorescent lighting fixture so that they can provide these products to retailers at discounted prices. The packaging on these discounted bulbs have labels with [UTILITY]'s name on it.

Do you recall ever receiving a shipment of CFL bulbs that were discounted through the program?

- 1 Yes [SKIP TO ST1]
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

**RI5** Would anyone else at the store be familiar with this program?

- 1 Yes [SKIP BACK TO RI2]
- 2 No [SKIP TO ST2 (NP Questions)]
- 8 DON'T KNOW [TERMINATE]
- 9 REFUSED [TERMINATE]

**LEAD\_IN** I have a few questions about your lighting stock. Is now a good time?

- 1 Yes [NP Skip to ST2, else continue]
- 2 No [ATTEMPT TO RESCHEDULE]

**Section 2. Stocking**

**STIi** For these first questions, we're going to review your stocking patterns for light products.

**STIa** Which of the following lighting types has your store stocked that are discounted by [UTILITY]:

Standard ENERGY STAR compact fluorescent bulbs, or CFLs, that are 30 watts or less?

By "standard ENERGY STAR compact fluorescents" I mean bulbs with the ENERGY STAR label that are not dimmable or reflectors, and that have just one light level.

- 1 Yes
- 2 No

- 8 DON'T KNOW
- 9 REFUSED

**ST1b** Which of the following lighting types has your store stocked that are discounted by [UTILITY]:

Specialty CFLs, such as dimmable, 3-way, spotlights, or reflector CFLs?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

**ST1c** Which of the following lighting types has your store stocked that are discounted by [UTILITY]:

Energy Star qualified CFL fixtures?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

**ST1d** Which of the following lighting types has your store stocked that are discounted by [UTILITY]:

Any other types of lighting?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

**ST2a** Which of the following CFL lighting types does your store stock that are NOT discounted through any [UTILITY] energy efficiency program:

Standard ENERGY STAR compact fluorescent bulbs that are 30 watts or less?

By "standard ENERGY STAR compact fluorescents" I mean CFLs with the ENERGY STAR label that are not dimmable or reflectors, and that have just one light level.

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

NP

**ST2b** Which of the following CFL lighting types does your store stock that are NOT discounted through any [UTILITY] energy efficiency program:

NP

Specialty CFLs, such as dimmable, 3-way, spotlights or reflector CFLs?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

**ST2c** Which of the following CFL lighting types does your store stock that are NOT discounted through any [UTILITY] energy efficiency program:

NP

ENERGY STAR qualified CFL fixtures?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

**ST2d** Which of the following CFL lighting types does your store stock that are NOT discounted through any [UTILITY] energy efficiency program:

NP

Any other types of lighting?

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED

**ST3** Did you carry ENERGY STAR CFL bulbs prior to participating in the [UTILITY] Upstream Lighting Program? (IF DOESN'T UNDERSTAND UPSTREAM LIGHTING PROGRAM SAY: "Prior to receiving [UTILITY] discounted bulbs")

- 1 Yes
- 2 No
- 8 DON'T KNOW
- 9 REFUSED



ST4 Which of the following types of non-CFL lighting to you stock on a regular basis:

For ST4\_1 through ST4\_7:

- 0 Not Mentioned
- 1 Mentioned

NP

- ST4\_1 Incandescent bulbs
- ST4\_2 Halogens
- ST4\_3 LED lights
- ST4\_4 Other (SPECIFY)
- ST4\_5 DON'T KNOW
- ST4\_6 REFUSED
- ST4\_7 None

ST5a (According to your best estimate, what percentage of the lighting products currently on your sales floor can be attributed to the following lighting types)

NP

- \_\_\_\_\_ %CFLs
- 8 DON'T KNOW
- 9 REFUSED

ST5b (According to your best estimate, what percentage of the lighting products currently on your sales floor can be attributed to the following lighting types)

NP

- \_\_\_\_\_ %LEDs
- 8 DON'T KNOW
- 9 REFUSED

ST5c (According to your best estimate, what percentage of the lighting products currently on your sales floor can be attributed to the following lighting types)

NP

- \_\_\_\_\_ %Incandescent bulbs
- 8 DON'T KNOW
- 9 REFUSED

ST5d (According to your best estimate, what percentage of the lighting products currently on your sales floor can be attributed to the following lighting types)

NP

- \_\_\_\_\_ %Other
- 8 DON'T KNOW
- 9 REFUSED

**ST6** Does the light bulb stocking pattern you just described reflect your typical stocking pattern?

NP

- 1 Yes [SKIP TO ST8]
- 2 No
- 8 DON'T KNOW [SKIP TO ST8]
- 9 REFUSED [SKIP TO ST8]

**ST7** How does it differ? (PROBE: QUANTITIES AND/OR TYPES OF BULBS OFFERED; ALSO PROBE FOR PERCENT INCREASE OR DECREASE TODAY AS COMPARED TO THE SAME TIME LAST YEAR)

NP

\_\_\_\_\_ (OPEN-END)

**ST8** Is the current stocking pattern you described similar to the stocking pattern this time last year (May/June 2008)?

NP

- 1 Yes [SKIP TO ST10]
- 2 No
- 8 DON'T KNOW [SKIP TO ST10]
- 9 REFUSED [SKIP TO ST10]

**ST9** How does it differ? (PROBE: QUANTITIES AND/OR TYPES OF BULBS OFFERED; ALSO PROBE FOR PERCENT INCREASE OR DECREASE TODAY AS COMPARED TO THE SAME TIME LAST YEAR)

NP

\_\_\_\_\_ (OPEN-END)

*[ASK IF ST5a >0]*

**ST10** Given the CFL stock you currently have on your sales floor, how many weeks do you estimate it would take to sell out all of your CFL bulbs if you did not restock them?

NP

- \_\_\_\_\_ Weeks (IF UNSURE, SAY: "Your best guess is fine.")
- 8 DON'T KNOW
- 9 REFUSED

[ASK IF ST5c>0]

**ST11** How many weeks would it take to sell out of the incandescent bulbs currently on your sales floor if you did not restock them ?

NP

- \_\_\_\_\_ Weeks (IF UNSURE, SAY: "Your best guess is fine.")
- 8 DON'T KNOW
- 9 REFUSED

[ASK IF ST1=1]

**ST12** On Average, how many weeks do you estimate it would take to sell out all of the [UTILITY] Upstream Lighting Program CFL bulbs from a single shipment of program bulbs?

- \_\_\_\_\_ Weeks (IF UNSURE, SAY: "Your best guess is fine.")
- 8 DON'T KNOW
- 9 REFUSED

[ASK IF ST2=1]

**ST13** Do you stock standard ENERGY STAR CFLs year round? (IF ASKED, SAY: By "standard ENERGY STAR compact fluorescents" I mean CFLs with the ENERGY STAR label that are not dimmable or reflectors, and that have just one light level.)

NP

- 1 Yes [SKIP TO ST15]
- 2 No
- 8 DON'T KNOW [SKIP TO ST15]
- 9 REFUSED [SKIP TO ST17]

**ST14** Why not?

NP

- \_\_\_\_\_ (RECORD RESPONSE)
- 8 DON'T KNOW
- 9 REFUSED

**ST15** Does your stocking pattern for standard ENERGY STAR CFLs have seasonal cycles or otherwise fluctuate during the year?

NP

- 1 Yes
- 2 No [SKIP TO ST17]
- 8 DON'T KNOW [SKIP TO ST17]
- 9 REFUSED [SKIP TO ST17]

**ST16a1** Please describe when during the year your stocking pattern for standard ENERGY STAR CFLs fluctuates and, for each of these time periods, the percentage increase or decrease in stock compared to today.

NP

\_\_\_\_\_ (TIME OF YEAR)

**ST16a2** Percent Change

NP

\_\_\_\_\_% Percentage  
-8 DON'T KNOW  
-9 REFUSED

**ST16a3** Was this an increase or a decrease?

NP

1 Increased  
2 Decreased  
-8 DON'T KNOW  
-9 REFUSED

**ST16b1** Please describe when during the year your stocking pattern for standard ENERGY STAR CFLs fluctuates and, for each of these time periods, the percentage increase or decrease in stock compared to today.

NP

\_\_\_\_\_ (TIME OF YEAR)

**ST16b2** Percent Change

NP

\_\_\_\_\_% Percentage  
-8 DON'T KNOW  
-9 REFUSED

**ST16b3** Was this an increase or a decrease?

NP

1 Increased  
2 Decreased  
-8 DON'T KNOW  
-9 REFUSED

**ST16c1** Please describe when during the year your stocking pattern for standard ENERGY STAR CFLs fluctuates and, for each of these time periods, the percentage increase or decrease in stock compared to today.

NP

\_\_\_\_\_ (TIME OF YEAR)

**ST16c2**      Percent Change

NP

\_\_\_\_%    Percentage  
 -8        DON'T KNOW  
 -9        REFUSED

**ST16c3**      Was this an increase or a decrease?

NP

1        Increased  
 2        Decreased  
 -8        DON'T KNOW  
 -9        REFUSED

**ST16d1**      Please describe when during the year your stocking pattern for standard ENERGY STAR CFLs fluctuates and, for each of these time periods, the percentage increase or decrease in stock compared to today.

NP

\_\_\_\_\_ (TIME OF YEAR)

**ST16d2**      Percent Change

NP

\_\_\_\_%    Percentage  
 -8        DON'T KNOW  
 -9        REFUSED

**ST16d3**      Was this an increase or a decrease?

NP

1        Increased  
 2        Decreased  
 -8        DON'T KNOW  
 -9        REFUSED

*[ASK IF ST1=1]***ST17**      Do you stock [UTILITY]-discounted CFLs year round?

1        Yes  
 2        No  
 -8        DON'T KNOW [SKIP TO ST20]  
 -9        REFUSED [SKIP TO ST20]

**ST18** Does your stocking pattern for [UTILITY]-discounted CFLs have seasonal cycles or otherwise fluctuate during the year?

- 1 Yes
- 2 No [SKIP TO ST20]
- 8 DON'T KNOW [SKIP TO ST20]
- 9 REFUSED [SKIP TO ST20]

**ST19a1** Please describe when during the year your stocking pattern for [UTILITY]-discounted CFLs fluctuates and, for each of these time periods, the percentage increase or decrease in stock compared to today.

\_\_\_\_\_ (TIME OF YEAR)

**ST19a2** Percent Change

- \_\_\_\_\_% Percentage
- 8 DON'T KNOW
- 9 REFUSED

**ST19a3** Was this an increase or a decrease?

- 1 Increased
- 2 Decreased
- 8 DON'T KNOW
- 9 REFUSED

**ST19b1** Please describe when during the year your stocking pattern for [UTILITY]-discounted CFLs fluctuates and, for each of these time periods, the percentage increase or decrease in stock compared to today.

\_\_\_\_\_ (TIME OF YEAR)

**ST19b2** Percent Change

- \_\_\_\_\_% Percentage
- 8 DON'T KNOW
- 9 REFUSED

**ST19b3** Was this an increase or a decrease?

- 1 Increased
- 2 Decreased
- 8 DON'T KNOW
- 9 REFUSED

**ST19c1** Please describe when during the year your stocking pattern for [UTILITY]-discounted CFLs fluctuates and, for each of these time periods, the percentage increase or decrease in stock compared to today.

\_\_\_\_\_ (TIME OF YEAR)

**ST19c2** Percent Change

\_\_\_\_\_% Percentage  
-8 DON'T KNOW  
-9 REFUSED

**ST19c3** Was this an increase or a decrease?

1 Increased  
2 Decreased  
-8 DON'T KNOW  
-9 REFUSED

**ST19d1** Please describe when during the year your stocking pattern for [UTILITY]-discounted CFLs fluctuates and, for each of these time periods, the percentage increase or decrease in stock compared to today.

\_\_\_\_\_ (TIME OF YEAR)

**ST19d2** Percent Change

\_\_\_\_\_% Percentage  
-8 DON'T KNOW  
-9 REFUSED

**ST19d3** Was this an increase or a decrease?

1 Increased  
2 Decreased  
-8 DON'T KNOW  
-9 REFUSED

[ASK IF ST1 = 2 or ST2 =2 ELSE SKIP TO ST23]

**ST20** You said earlier that you sell specialty CFLs such as dimmable, 3-way, or reflector CFLs. Do you stock specialty CFLs year round?

NP

- 1 Yes
- 2 No
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**ST21** Does your stocking pattern for specialty CFLs have seasonal cycles or otherwise fluctuate during the year?

NP

- 1 Yes
- 2 No [SKIP TO ST23]
- 3 Skip Error
- 8 DON'T KNOW [SKIP TO ST23]
- 9 REFUSED [SKIP TO ST23]

**ST22a1** Please describe when during the year your stocking pattern for specialty CFLs fluctuates and, for each of these time periods, the percentage increase or decrease in stock compared to today.

NP

\_\_\_\_\_ (TIME OF YEAR)

**ST22a2** Percent Change

NP

- \_\_\_\_% Percentage
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**ST22a3** Was this an increase or a decrease?

NP

- 1 Increased
- 2 Decreased
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**ST22b1** Please describe when during the year your stocking pattern for specialty CFLs fluctuates and, for each of these time periods, the percentage increase or decrease in stock compared to today.

NP



\_\_\_\_\_ (TIME OF YEAR)

**ST22b2** Percent Change

NP

- \_\_\_\_% Percentage
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**ST22b3** Was this an increase or a decrease?

NP

- 1 Increased
- 2 Decreased
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**ST22c1** Please describe when during the year your stocking pattern for specialty CFLs fluctuates and, for each of these time periods, the percentage increase or decrease in stock compared to today.

NP

\_\_\_\_\_ (TIME OF YEAR)

**ST22c2** Percent Change

NP

- \_\_\_\_% Percentage
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**ST22c3** Was this an increase or a decrease?

NP

- 1 Increased
- 2 Decreased
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**ST22d1** Please describe when during the year your stocking pattern for specialty CFLs fluctuates and, for each of these time periods, the percentage increase or decrease in stock compared to today.

NP

\_\_\_\_\_ (TIME OF YEAR)

**ST22d2** Percent Change

NP

- \_\_\_\_% Percentage
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**ST22d3** Was this an increase or a decrease?

NP

- 1 Increased
- 2 Decreased
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

*[ASK IF ST1 = 3 or ST2 = 3 ELSE SKIP TO ST24]*

**ST23** Do you stock ENERGY STAR CFL fixtures year round?

NP

- 1 Yes
- 2 No
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**ST24** Does your stocking pattern for ENERGY STAR CFL fixtures stocked have seasonal cycles or otherwise fluctuate during the year?

NP

- 1 Yes
- 2 No [SKIP TO ST27]
- 3 Skip Error
- 8 DON'T KNOW [SKIP TO ST27]
- 9 REFUSED [SKIP TO ST27]

**ST26a1** Please describe when during the year your stocking pattern for ENERGY STAR CFL fixtures fluctuates and, for each of these time periods, the percentage increase or decrease in stock compared to today.

NP

\_\_\_\_\_ (TIME OF YEAR)

**ST26a2** Percent Change

NP

- \_\_\_\_% Percentage
- 3 Skip Error
- 8 DON'T KNOW

-9 REFUSED

**ST26a3** Was this an increase or a decrease?

NP

- 1 Increased
- 2 Decreased
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**ST26b1** Please describe when during the year your stocking pattern for ENERGY STAR CFL fixtures fluctuates and, for each of these time periods, the percentage increase or decrease in stock compared to today.

NP

\_\_\_\_\_ (TIME OF YEAR)

**ST26b2** Percent Change

NP

- \_\_\_\_% Percentage
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**ST26b3** Was this an increase or a decrease?

NP

- 1 Increased
- 2 Decreased
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**ST26c1** Please describe when during the year your stocking pattern for ENERGY STAR CFL fixtures fluctuates and, for each of these time periods, the percentage increase or decrease in stock compared to today.

NP

\_\_\_\_\_ (TIME OF YEAR)

**ST26c2** Percent Change

NP

- \_\_\_\_% Percentage
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**ST26c3** Was this an increase or a decrease?

NP

- 1 Increased
- 2 Decreased
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**ST26d1** Please describe when during the year your stocking pattern for ENERGY STAR CFL fixtures fluctuates and, for each of these time periods, the percentage increase or decrease in stock compared to today.

NP

\_\_\_\_\_ (TIME OF YEAR)

**ST26d2** Percent Change

NP

- \_\_\_\_\_% Percentage
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**ST26d3** Was this an increase or a decrease?

NP

- 1 Increased
- 2 Decreased
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**ST27** In the last year, has the number of models of ENERGY STAR light bulbs that your store carries gone up, down, or remained the same.

NP

- 1 Up/Carrying more
- 2 Down/Carrying less
- 3 Same/Carrying the same (e.g. it hasn't affected the stock)
- 8 DON'T KNOW
- 9 REFUSED

**ST28** How about over the past three years? Has the number of models of energy efficient light bulbs that your store carries over the past three years gone up, down, or remained the same.

NP

- 1 Up/Carrying more
- 2 Down/Carrying less
- 3 Same/Carrying the same (e.g. it hasn't affected the stock)

- 8 DON'T KNOW
- 9 REFUSED

**NON PARTICIPANTS SKIP TO TR16**

*[ASK IF ST1 =1,2,3]*

**ST29** How has participating in the program affected the number of models of ENERGY STAR light bulbs that your store carried in the last year?

- 1 Carrying more
- 2 Carrying less
- 3 Carrying the same (e.g. it hasn't affected the stock)
- 8 DON'T KNOW
- 9 REFUSED

**ST30** How about over the past three years? How has participating in the program affected the number of models of ENERGY STAR light bulbs that your store carried over the past three years (2006-2008)?

- 1 Carrying more
- 2 Carrying less
- 3 Carrying the same (e.g. it hasn't affected the stock)
- 8 DON'T KNOW
- 9 REFUSED

*[ASK IF ST1=1,2, or 3]*

**ST31** Now, let's focus on the [UTILITY]-discounted bulbs you received.

Our records indicate that approximately [Bulbs] [UTILITY]-discounted bulbs were shipped to your store during 2006-2008. What percent of those bulbs were sold as of December 31, 2008?

- \_\_\_% Percentage
- 8 DON'T KNOW
- 9 REFUSED

*[ASK IF ST31<%100]*

**ST32** Do you still have 2006-2008 [UTILITY]-discounted bulbs available at your store?

- 1 Yes
- 2 No [SKIP TO ST36]
- 8 DON'T KNOW [SKIP TO ST36]
- 9 REFUSED [SKIP TO ST36]

**ST33** What type of 2006-2008 [UTILITY]-discounted bulbs are available?

For ST33\_1 through ST33\_4:

- 0 Not Mentioned
- 1 Mentioned

- ST33\_1** Standard, twister style CFL bulbs
- ST33\_2** Specialty CFLs, such as dimmable, 3-way, spotlights, or reflector CFLs
- ST33\_3** DON'T KNOW
- ST33\_4** REFUSED

**ST34** What percentage of the [Bulbs] 2006-2008 [UTILITY]-discounted bulbs are still available at your store?

- \_\_\_% Percentage [SKIP TO ST36]
- 8 DON'T KNOW [SKIP TO ST36]
- 9 REFUSED [SKIP TO ST36]

*[ASK IF ST31 = 100%]*

**ST35** Approximately when were the rest of the 2006-2008 program bulbs sold out?

- 1 (RECORD MONTH/YEAR)
- 2 We still have 2006-2008 bulbs available [SKIP TO ST36m]
- 3 Skip Error
- 8 DON'T KNOW [SKIP TO ST36m]
- 9 REFUSED [SKIP TO ST36m]

**ST35M** Approximately when were the rest of the 2006-2008 program bulbs sold out?

- \_\_\_ Months
- 8 DON'T KNOW
- 9 REFUSED

**ST35Y** Approximately when were the rest of the 2006-2008 program bulbs sold out?

\_\_\_\_\_ Year  
 -8 DON'T KNOW  
 -9 REFUSED

**ST36m** How long did a typical shipment of discounted CFLs last before being sold out?

\_\_\_\_\_ Months  
 -8 DON'T KNOW  
 -9 REFUSED

**ST36w** How long did a typical shipment of discounted CFLs last before being sold out?

\_\_\_\_\_ Weeks  
 -8 DON'T KNOW  
 -9 REFUSED

**ST36d** How long did a typical shipment of discounted CFLs last before being sold out?

\_\_\_\_\_ Days  
 -8 DON'T KNOW  
 -9 REFUSED

**ST37** If the supply of [UTILITY]-discounted CFLs in your store sells out, what do you (or did you) typically do?

For ST37\_1 through ST37\_7:

0 Not Mentioned  
 1 Mentioned

- ST37\_1** Re-order more [UTILITY]-discounted products
- ST37\_2** Continue selling this same product at a non-discounted price.
- ST37\_3** Continue selling this same product at a discount provided by the retailer.
- ST37\_4** Discontinue sales of this product
- ST37\_5** Other (SPECIFY)
- ST37\_6** DON'T KNOW
- ST37\_7** REFUSED

**ST38** What happens to [UTILITY]-discounted CFLs that remain unsold after a long period of time?

For ST38\_1 through ST38\_9:

0 Not Mentioned

1 Mentioned

- ST38\_1 Does not happen, we sell all our discounted CFLs [SKIP TO ST41a]
- ST38\_2 We keep it on the shelves until we sell them [SKIP TO ST41a]
- ST38\_3 We distribute it to another one of our stores
- ST38\_4 We return it to the manufacturer
- ST38\_5 We sell it to another lighting distributor/contractor/liquidator.
- ST38\_6 We give it away
- ST38\_7 Other (SPECIFY)
- ST38\_8 DON'T KNOW
- ST38\_9 REFUSED

ST39 Would this unsold inventory ever be sold out of the [UTILITY] service territory or out-of-state?

- 1 Yes
- 2 No [SKIP TO ST41a]
- 8 DON'T KNOW [SKIP TO ST41a]
- 9 REFUSED [SKIP TO ST41a]

ST40Y How often do you estimate this happens?

- \_\_\_\_\_ Times per year
- 8 DON'T KNOW
- 9 REFUSED

ST40M How often do you estimate this happens?

- \_\_\_\_\_ Times per year
- 8 DON'T KNOW
- 9 REFUSED

Participants – [SKIP TO TR1]

ST41a Have you ever received lighting products discounted from the California Upstream Lighting Program (PG&E, SCE, or SDG&E)?

NP

- 1 Yes
- 2 No [SKIP TO TR1]
- 4 Question added after fielding
- 8 DON'T KNOW [SKIP TO TR1]
- 9 REFUSED [SKIP TO TR1]

ST41bM When did you receive this/these shipment(s)?

NP

- \_\_\_\_\_ Months
- 4 Question added after fielding



- 8 DON'T KNOW
- 9 REFUSED

**ST41bY** When did you receive this/these shipment(s)?

NP

- \_\_\_\_\_ Year
- 4 Question added after fielding
- 8 DON'T KNOW
- 9 REFUSED

**ST41c** Approximately how many bulbs were in the/these shipment(s)?

NP

- \_\_\_\_\_ Enter number in shipment
- 4 Question added after fielding
- 8 DON'T KNOW
- 9 REFUSED

**ST41d** What did you do with the bulbs?

NP

\_\_\_\_\_

**Section 3 Sales Trends**

*[ASK SECTION IF ST1= 1 ]*

**TR1** Next, I'd like to shift focus to lighting sales trends at your store.

For the next few questions, think about standard ENERGY STAR CFL bulbs that are 30 watts or less.

Would your store stock standard ENERGY STAR CFLs without the support of [UTILITY] Upstream Lighting Program?

- 1 Yes
- 2 No [SKIP TO TR3]
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**TR2** If the discounted standard ENERGY STAR CFL bulbs were not available, do you think your sales of these CFL bulbs would be about the same, lower, or higher?

- 1 Same
- 2 Lower
- 3 Higher
- 3 Skip Error
- 8 DON'T KNOW {SKIP TO TR6}
- 9 REFUSED [SKIP TO TR6]

**TR3** Why do you think this is?

- 1 {RECORD RESPONSE} [If TR1 = 2 then Skip to TR6]
- 3 Skip Error
- 8 DON'T KNOW [SKIP TO TR6]
- 9 REFUSED [SKIP TO TR6]

**TR4** By what percentage do you estimate your store's sales of standard ENERGY STAR CFLs would be [TR2 higher/lower] during the 2006-2008 time period if the discounted CFLs were not available?

- \_\_\_% Percentage (higher/lower)
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**TR5** I want to make sure I understand you correctly. When you say your store's sales would be [PERCENTAGE FROM QUESTION TR4] [TR2 higher/lower] without the discounted bulbs, you're saying that if you sold 100 CFLs in a given week with the discount bulbs, you would have only sold [If TR2 = "lower" then 100 - (PERCENTAGE FROM QUESTION TR4\* 100); else if TR2 = "higher" then 100 + (PERCENTAGE FROM QUESTION TR4\*100)] that week without the discount bulbs. (IF RESPONSE IS ≠ YES THEN CLARIFY RESPONSE TO TR4).

- 1 Yes
- 2 No (Clarify)
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

*[ASK NEXT SECTION (TR6 – TR10) IF ST1 = 2]*

**TR6** Now I'm going to ask you about the effect of the program discounts on your sales of specialty CFLs such as dimmable, 3-way, or reflector CFLs.

Would your store stock specialty CFLs without the support of the [UTILITY] Upstream Lighting Program?

- 1 Yes
- 2 No [SKIP TO TR8]
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**TR7** If the discounted specialty CFLs were not available, do you think your sales of these CFL bulbs would be about the same, lower, or higher?

- 1 Same
- 2 Lower
- 3 Higher
- 3 Skip Error
- 8 DON'T KNOW {SKIP TO TR11}
- 9 REFUSED [SKIP TO TR11]

**TR8** Why do you think this is?

- \_\_\_\_\_ {RECORD RESPONSE} [IF TR6 = 2 then Skip to TR11]
- 3 Skip Error
- 8 DON'T KNOW {SKIP TO TR11}
- 9 REFUSED [SKIP TO TR11]

**TR9** By what percentage do you estimate your store's sales of these specialty CFLs would be [TR7 higher/lower] during the 2006-2008 time period if program discounted CFL bulb were not available?

- \_\_\_\_\_% Percentage (higher/lower)
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**TR10** I want to make sure I understand you correctly. When you say your store's sales would be [PERCENTAGE FROM QUESTION TR9] lower without the [UTILITY] discounts. So you're saying that if you sold 100 CFLs in a given week with the discounts, you would have only sold [If TR7 = "lower" then 100 - (PERCENTAGE FROM QUESTION TR9\* 100); else if TR7 = "higher" then 100 + (PERCENTAGE FROM QUESTION TR9 \*100)] that week without the [UTILITY] discounts. (IF RESPONSE IS ≠ YES THEN CLARIFY RESPONSE TO TR9).

- 1 Yes
- 2 No (Clarify)
- 3 Skip Error
- 8 DON'T KNOW

-9 REFUSED

*[ASK NEXT SET OF QUESTIONS (TR11 – TR15) IF ST1 = 3]*

**TR11** Now I'm going to ask you about the effect of the [UTILITY] discounts on your sales of Energy Star qualified CFL fixtures. Would your store stock Energy Star qualified CFL fixtures without the support of the [UTILITY] Upstream Lighting Program?

- 1 Yes
- 2 No [SKIP TO TR13]
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**TR12** If the discounted Energy Star CFL fixtures were not available, do you think your sales of these fixtures would be about the same, lower, or higher?

- 1 Same
- 2 Lower
- 3 Higher
- 3 Skip Error
- 8 DON'T KNOW {SKIP TO TR16}
- 9 REFUSED [SKIP TO TR16]

**TR13** Why do you think this is?

- \_\_\_\_\_ {RECORD RESPONSE} [IF TR11 = 2 then Skip to TR16]
- 3 Skip Error
- 8 DON'T KNOW {SKIP TO TR16}
- 9 REFUSED [SKIP TO TR16]

**TR14** By what percentage do you estimate your store's sales of these Energy Star qualified CFL fixtures would be [TR12 higher/lower] during the 2006-2008 time period if [UTILITY] discounts were not available?

- \_\_\_\_\_% Percentage (higher/lower)
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**TR15** I want to make sure I understand you correctly. When you say your store's sales would be [PERCENTAGE FROM QUESTION TR14] [TR12 higher/lower] without the [UTILITY] discounts. So you're saying that if you

sold 100 CFL fixture in a given week with the discounts, you would have only sold [If TR12 = "lower" then 100 - (PERCENTAGE FROM QUESTION TR14\* 100); else if TR12 = "higher" then 100 + (PERCENTAGE FROM QUESTION TR14\*100] that week without the discounts. (IF RESPONSE IS ≠ YES THEN CLARIFY RESPONSE TO TR14)

- 1 Yes
- 2 No (Clarify)
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**TR16** Do your light bulb sales have seasonal cycles or fluctuate during the year? If so, when? (PROBE: Seasonal—Spring, Summer, Fall, Winter; Events/promotions--Earth Day (Spring), Change a Light... (Fall), utility promotions, other) Please specify the sales changes for standard ENERGY STAR CFLs, specialty CFLs, and incandescent bulbs. For each type of bulb, please say the time of year when the changes occur, and whether the changes are increases or decreases.

NP

- 1 Yes
- 2 No [SKIP TO TR17a]
- 8 DON'T KNOW [SKIP TO TR17a]
- 9 REFUSED [SKIP TO TR17a]

**TR16a1** What type of light bulbs have seasonal cycles or fluctuating sales during the year?

For TR16a1\_1 through TR16a1\_4:

- 0 Not Mentioned
- 1 Mentioned

NP

**TR16a1\_1** Standard ENERGY STAR CFLs  
**TR16a1\_2** Specialty CFLs  
**TR16a1\_3** ENERGY STAR qualified light fixtures  
**TR16a1\_4** Incandescent bulbs

**TR16b1** When do sales change?

NP

- \_\_\_\_\_ {RECORD RESPONSE}
- 8 DON'T KNOW
- 9 REFUSED

**TR16c1** Approximately what was the percent change in your sales for this light bulb/these light bulbs?

NP

\_\_\_\_% Percentage  
 -8 DON'T KNOW  
 -9 REFUSED

**TR16d1** (READ IF NECESSARY) Were the changes positive or negative?

NP

1 Positive  
 2 Negative  
 -8 DON'T KNOW  
 -9 REFUSED

TR16a2 What type of light bulbs have seasonal cycles or fluctuating sales during the year?

For TR16a1\_1 through TR16a1\_4:

0 Not Mentioned  
 1 Mentioned

NP

**TR16a2\_1** Standard ENERGY STAR CFLs  
**TR16a2\_2** Specialty CFLs  
**TR16a2\_3** ENERGY STAR qualified light fixtures  
**TR16a2\_4** Incandescent bulbs

**TR16b2** When do sales change?

NP

\_\_\_\_\_ {RECORD RESPONSE}  
 -8 DON'T KNOW  
 -9 REFUSED

**TR16c2** Approximately what was the percent change in your sales for this light bulb/these light bulbs?

NP

\_\_\_\_% Percentage  
 -8 DON'T KNOW  
 -9 REFUSED

**TR16d2** (READ IF NECESSARY) Were the changes positive or negative?

NP

1 Positive  
 2 Negative  
 -8 DON'T KNOW  
 -9 REFUSED

TR16a3 What type of light bulbs have seasonal cycles or fluctuating sales during the year?

For TR16a1\_1 through TR16a1\_4:

- 0 Not Mentioned
- 1 Mentioned

NP

- TR16a3\_1 Standard ENERGY STAR CFLs
- TR16a3\_2 Specialty CFLs
- TR16a3\_3 ENERGY STAR qualified light fixtures
- TR16a3\_4 Incandescent bulbs

TR16b3 When do sales change?

NP

- \_\_\_\_\_ {RECORD RESPONSE}
- 8 DON'T KNOW
- 9 REFUSED

TR16c3 Approximately what was the percent change in your sales for this light bulb/these light bulbs?

NP

- \_\_\_\_% Percentage
- 8 DON'T KNOW
- 9 REFUSED

TR16d3 (READ IF NECESSARY) Were the changes positive or negative?

NP

- 1 Positive
- 2 Negative
- 8 DON'T KNOW
- 9 REFUSED

TR16a4 What type of light bulbs have seasonal cycles or fluctuating sales during the year?

For TR16a1\_1 through TR16a1\_4:

- 0 Not Mentioned
- 1 Mentioned

NP

- TR16a4\_1 Standard ENERGY STAR CFLs
- TR16a4\_2 Specialty CFLs
- TR16a4\_3 ENERGY STAR qualified light fixtures
- TR16a4\_4 Incandescent bulbs

TR16b4 When do sales change?

NP

- \_\_\_\_\_ {RECORD RESPONSE}  
 -8 DON'T KNOW  
 -9 REFUSED

**TR16c4** Approximately what was the percent change in your sales for this light bulb/these light bulbs?

NP

- \_\_\_\_\_ % Percentage  
 -8 DON'T KNOW  
 -9 REFUSED

**TR16d4** (READ IF NECESSARY) Were the changes positive or negative?

NP

- 1 Positive  
 2 Negative  
 -8 DON'T KNOW  
 -9 REFUSED

**TR17a** In the last year, what effect have each of the following had on your sales of ENERGY STAR light bulbs? If the effect was positive or negative, approximately what was the % change in your sales?

NP

The economy

- 1 Positive  
 2 Negative  
 3 No effect [SKIP TO TR17b]  
 -8 DON'T KNOW [SKIP TO TR17b]  
 -9 REFUSED [SKIP TO TR17b]

**TR17a\_1** Approximately what was the percent change in your sales?

NP

- \_\_\_\_\_ % Percentage  
 -8 DON'T KNOW  
 -9 REFUSED

**TR17b** In the last year, what effect have each of the following had on your sales of ENERGY STAR light bulbs? If the effect was positive or negative, approximately what was the % change in your sales?

NP

Higher energy prices

- 1 Positive  
 2 Negative  
 3 No effect [SKIP TO TR17c]



- 8 DON'T KNOW [SKIP TO TR17c]
- 9 REFUSED [SKIP TO TR17c]

**TR17b\_1** Approximately what was the percent change in your sales?

NP

- \_\_\_\_% Percentage
- 8 DON'T KNOW
- 9 REFUSED

**TR17c** In the last year, what effect have each of the following had on your sales of ENERGY STAR light bulbs? If the effect was positive or negative, approximately what was the % change in your sales?

NP

New federal standards to improve the energy efficiency of light bulbs

- 1 Positive
- 2 Negative
- 3 No effect [SKIP TO TR17d]
- 8 DON'T KNOW [SKIP TO TR17d]
- 9 REFUSED [SKIP TO TR17d]

**TR17c\_1** Approximately what was the percent change in your sales?

NP

- \_\_\_\_% Percentage
- 8 DON'T KNOW
- 9 REFUSED

**TR17d** In the last year, what effect have each of the following had on your sales of ENERGY STAR light bulbs? If the effect was positive or negative, approximately what was the % change in your sales?

NP

State standards for lighting

- 1 Positive
- 2 Negative
- 3 No effect [SKIP TO TR17e]
- 8 DON'T KNOW [SKIP TO TR17e]
- 9 REFUSED [SKIP TO TR17e]

**TR17d\_1** Approximately what was the percent change in your sales?

NP

- \_\_\_\_% Percentage
- 8 DON'T KNOW
- 9 REFUSED

**TR17e** In the last year, what effect have each of the following had on your sales of ENERGY STAR light bulbs? If the effect was positive or negative, approximately what was the % change in your sales?

State level promotional activities

NP

- 1 Positive
- 2 Negative
- 3 No effect [SKIP TO TR17f]
- 8 DON'T KNOW [SKIP TO TR17f]
- 9 REFUSED [SKIP TO TR17f]

**TR17e\_1** Approximately what was the percent change in your sales?

NP

- \_\_\_\_% Percentage
- 8 DON'T KNOW
- 9 REFUSED

**TR17f** In the last year, what effect have each of the following had on your sales of ENERGY STAR light bulbs? If the effect was positive or negative, approximately what was the % change in your sales?

NP

Environmental concerns

- 1 Positive
- 2 Negative
- 3 No effect [SKIP TO TR17g]
- 8 DON'T KNOW [SKIP TO TR17g]
- 9 REFUSED [SKIP TO TR17g]

**TR17f\_1** Approximately what was the percent change in your sales?

NP

- \_\_\_\_% Percentage
- 8 DON'T KNOW
- 9 REFUSED

**TR17g** In the last year, what effect have each of the following had on your sales of ENERGY STAR light bulbs? If the effect was positive or negative, approximately what was the % change in your sales?

New or improved energy efficient lighting technologies

NP

- 1 Positive
- 2 Negative
- 3 No effect [SKIP TO TR17h]
- 8 DON'T KNOW [SKIP TO TR17h]

-9 REFUSED [SKIP TO TR17h]

**TR17g\_1** Approximately what was the percent change in your sales?

NP

\_\_\_\_% Percentage  
-8 DON'T KNOW  
-9 REFUSED

**TR17h** In the last year, what effect have each of the following had on your sales of ENERGY STAR light bulbs? If the effect was positive or negative, approximately what was the % change in your sales?

NP

The sales of competing retailers

1 Positive  
2 Negative  
3 No effect [SKIP TO TR17i]  
-8 DON'T KNOW [SKIP TO TR17i]  
-9 REFUSED [SKIP TO TR17i]

**TR17h\_1** Approximately what was the percent change in your sales?

NP

\_\_\_\_% Percentage  
-8 DON'T KNOW  
-9 REFUSED

**TR17i** In the last year, what effect have each of the following had on your sales of ENERGY STAR light bulbs? If the effect was positive or negative, approximately what was the % change in your sales?

NP

The [UTILITY] Upstream Lighting Program

1 Positive  
2 Negative  
3 No effect [SKIP TO TR18]  
-8 DON'T KNOW [SKIP TO TR18]  
-9 REFUSED [SKIP TO TR18]

**TR17i\_1** Approximately what was the percent change in your sales?

NP

\_\_\_\_% Percentage  
-8 DON'T KNOW  
-9 REFUSED

{NON PARTICIPANTS SKIP TO TR21}

[ASK IF ST1 = 1,2,3]

**TR18** Did you have an expectation that CFL sales would increase through your participation in the [UTILITY] program?

- 1 Yes
- 2 No [SKIP TO TR21]
- 3 Skip error
- 8 DON'T KNOW [SKIP TO TR21]
- 9 REFUSED [SKIP TO TR21]

**TR19** Has your expectation of increased sales through the program been met?

- 1 Yes
- 2 No
- 3 Skip Error
- 8 DON'T KNOW [SKIP TO TR21]
- 9 REFUSED [SKIP TO TR21]

**TR20** Why do you say that?

\_\_\_\_\_ (OPEN-END)

**TR21** Can you estimate the percentage of customers who are buying CFLs for their own homes, the percentage who are buying CFLs for their own businesses, and the percentage who are builders or contractors buying them for construction or retrofit projects?

NP

- 1 Yes
- 2 No [SKIP TO TR22]
- 8 DON'T KNOW [SKIP TO TR22]
- 9 REFUSED [SKIP TO TR22]

**TR21a1** What's your percent estimate of this breakdown? (IF NEED PROMPT: IS IT ABOUT 50% CONTRACTORS, 50% HOMEOWNERS, ETC.)

NP

- \_\_\_\_% of customers buying CFLs for their own homes
- 8 DON'T KNOW
- 9 REFUSED

**TR21a2** What's your percent estimate of this breakdown? (IF NEED PROMPT: IS IT ABOUT 50% CONTRACTORS, 50% HOMEOWNERS, ETC.)



- \_\_\_% of customers buying CFLs for their own businesses
- 8 DON'T KNOW
- 9 REFUSED

**TR21a3** What's your percent estimate of this breakdown? (IF NEED PROMPT: IS IT ABOUT 50% CONTRACTORS, 50% HOMEOWNERS, ETC.)

NP

\_\_\_\_% of customers buying CFLs for construction/retrofit projects  
-8 DON'T KNOW  
-9 REFUSED

**TR21b** What information is this based on? (IF NEED PROMPTION: SIZE OF PURCHASE, INTERACTION WITH CUSTOMERS, ETC.)

NP

\_\_\_\_\_ (RECORD RESPONSE)

**TR22a1** Considering data you might have available or your personal knowledge, what would you estimate the total sales of all CFLs to be for your store over the course of a month or a year?

NP

\_\_\_\_ Dollars/Month  
-8 DON'T KNOW  
-9 REFUSED

**TR22a2** Considering data you might have available or your personal knowledge, what would you estimate the total sales of all CFLs to be for your store over the course of a month or a year?

NP

\_\_\_\_ Units/Month  
-8 DON'T KNOW  
-9 REFUSED

**TR22b1** Considering data you might have available or your personal knowledge, what would you estimate the total sales of all CFLs to be for your store over the course of a month or a year?

NP

\_\_\_\_ Dollars/Year  
-8 DON'T KNOW  
-9 REFUSED

**TR22b2** Considering data you might have available or your personal knowledge, what would you estimate the total sales of all CFLs to be for your store over the course of a month or a year?

NP

\_\_\_\_ Units/Year  
-8 DON'T KNOW  
-9 REFUSED

**TR23a1** How would that total be broken down between screw-based CFLs and pin-based CFLs?

Pin-based CFLs?

NP

\_\_\_\_\_ Dollars  
 -8 DON'T KNOW  
 -9 REFUSED

**TR23a2** How would that total be broken down between screw-based CFLs and pin-based CFLs?

Pin-based CFLs?

NP

\_\_\_\_\_ % Percent  
 -8 DON'T KNOW  
 -9 REFUSED

**TR23b1** How would that total be broken down between screw-based CFLs and pin-based CFLs?

Screw-based CFLs?

NP

\_\_\_\_\_ Dollars  
 -8 DON'T KNOW  
 -9 REFUSED

**TR23b2** How would that total be broken down between screw-based CFLs and pin-based CFLs?

Screw-based CFLs?

NP

\_\_\_\_\_ % Percent  
 -8 DON'T KNOW  
 -9 REFUSED

**TR24** What is the source of your estimate?

NP

\_\_\_\_\_ (RECORD RESPONSE) (PROBE: INTERACTION WITH CUSTOMERS, SALES DATA, ETC)

[ASK IF ST1 = 1,2,3]

**TR25** What percent of your total CFL sales would you estimate are CFLs purchased through the [UTILITY] Upstream Lighting Program?

- \_\_\_\_ % Percent
- 3 Skip Error
- 8 DON'T KNOW
- 9 REFUSED

**TR26m1** What would you estimate is the total sales of incandescent bulbs for your store over the course of a month?

NP

- \_\_\_\_ Dollars/Month
- 8 DON'T KNOW
- 9 REFUSED

**TR26m2** What would you estimate is the total sales of incandescent bulbs for your store over the course of a month?

NP

- \_\_\_\_ Units/Month
- 8 DON'T KNOW
- 9 REFUSED

**TR26y1** What would you estimate is the total sales of incandescent bulbs for your store over the course of a year?

NP

- \_\_\_\_ Dollars/Year
- 8 DON'T KNOW
- 9 REFUSED

**TR26y2** What would you estimate is the total sales of incandescent bulbs for your store over the course of a month?

NP

- \_\_\_\_ Units/Year
- 8 DON'T KNOW
- 9 REFUSED

**TR27** What is the source of your estimate?

NP

\_\_\_\_\_ (OPEN-END) (PROBE: INTERACTION WITH CUSTOMERS, SALES DATA, ETC)



**Section 5: CFL Pricing**

**PR1** Now I would like to ask you a few questions about your CFL pricing. Some retailers use something called “keystone pricing” where the retail price is set at twice the wholesale price. Is this how you determine the retail price for the [IF ST1 = 1,2,3 then insert “discounted”] CFLs you sell?

NP

- 1 Yes [SKIP TO PR3]
- 2 No
- 8 DON'T KNOW [SKIP TO PR3]
- 9 REFUSED [SKIP TO PR3]

**PR2** How do you determine the retail price for the [IF ST1 = 1,2,3 then insert “[UTILITY]-discounted”] CFLs you sell?

NP

- 1 {ENTER RESPONSE} \_\_\_\_\_
- 8 DON'T KNOW
- 9 REFUSED

*{NON PARTICIPANTS SKIP TO P01}*

**PR3** Some manufacturers participating in the Upstream Lighting Program have offered their products to certain retailers for free. Have you ever received [UTILITY]- discounted CFLs for free?

- 1 Yes
- 2 No [SKIP TO PR5]
- 8 DON'T KNOW [SKIP TO PR5]
- 9 REFUSED [SKIP TO PR5]

**PR4** How do you determine the retail price for these “free” CFLs?

- 1 {ENTER RESPONSE} \_\_\_\_\_
- 8 DON'T KNOW
- 9 REFUSED

*[ASK IF ST2 = 1]*

**PR5** You said earlier that you sell standard ENERGY STAR CFLs that do not receive discounts from the [UTILITY] Program. Are the discounted CFLs typically lower-priced than other, non-[UTILITY] discounted CFLs?

- 1 Yes
- 2 No [SKIP TO PO1]
- 8 DON'T KNOW [SKIP TO PO1]
- 9 REFUSED [SKIP TO PO1]

**PR6** On a per-bulb basis, on average how much lower are the [UTILITY]-discounted CFLs than the other CFLs that you sell?

- \_\_\_\_\_ Dollars/Bulb
- 7 Other
- 8 DON'T KNOW
- 9 REFUSED

**PR7** Have the reduced prices of discounted bulbs impacted the sale of other compact fluorescent bulbs in your store?

- 1 Yes
- 2 No [SKIP TO PO1]
- 8 DON'T KNOW [SKIP TO PO1]
- 9 REFUSED [SKIP TO PO1]

**PR8** How has it impacted the sale of other CFLs?

- 1 \_\_\_\_\_ (OPEN-END, PROBE: SALES INCREASED/DECREASED, STOCK MORE/FEWER MODELS, OTHER CFL PRICES INCREASED/DECREASED, OTHER){ENTER RESPONSE}
- 8 DON'T KNOW
- 9 REFUSED

**Section 6: Point-Of-Purchase (POP) Promotions**

**PO1** Now I would like to ask you a few questions about how you promote the CFLs in your store. Does your store partake in any independent marketing or promoting of ENERGY STAR light bulbs [IF ST1 =1,2,3 then insert "without [UTILITY] Upstream Lighting Program involvement"]?

NP

- 1 Yes
- 2 No [SKIP TO PO4]
- 8 DON'T KNOW [SKIP TO PO4]
- 9 REFUSED [SKIP TO PO4]

**PO2** What independent marketing or promoting do you do?

NP

- 1 {ENTER RESPONSE} \_\_\_\_\_
- 8 DON'T KNOW
- 9 REFUSED

**PO3** How often do you do this? Would you say it was always, very often, sometimes, or not very often?

NP

- 1 Always
- 2 Very Often
- 3 Sometimes
- 4 Not Very Often
- 8 DON'T KNOW
- 9 REFUSED

**PO4** When your store and/or the sponsors are promoting ENERGY STAR lighting, do your sales of these products...?

NP

- 1 Increase
- 2 Stay the Same [SKIP TO F1]
- 3 Decrease
- 8 DON'T KNOW [SKIP TO F1]
- 9 REFUSED [SKIP TO F1]

**PO5** (If increase or decrease) By how much – as a percentage of sales?

NP

- \_\_\_\_% Percent
- 8 DON'T KNOW
- 9 REFUSED

**Section 7: Firmographics**

**F1** Finally, I have a few questions about your store characteristics.

NP

Would you consider this store independently-owned, a franchise, or part of a corporation?

- 1 Independently -owned
- 2 Franchise
- 3 Corporate Owned
- 4 Other (SPECIFY)
- 8 DON'T KNOW
- 9 REFUSED

**F2** What is the square footage (of the store's sales area)? Your best estimate is fine.

NP

\_\_\_\_\_ SQUARE FEET  
 -8 \_\_\_\_\_ DON'T KNOW  
 -9 \_\_\_\_\_ REFUSED

**F3** How many employees work at this particular store location?

NP

\_\_\_\_\_ EMPLOYEES  
 -8 \_\_\_\_\_ DON'T KNOW  
 -9 \_\_\_\_\_ REFUSED

**F4** Which category would you place your store? Is it a (READ RESPONSES)

NP

1 Mass Merchandiser (such as Target or Walmart)  
 2 Discount Store (such as Big Lots or a 99¢ store)  
 3 Large Home Improvement (such as Home Depot or Lowe's)  
 4 Hardware (such as ACE Hardware)  
 5 Grocery (such as Vons or Ralphs)  
 6 Drug Store (such as Rite Aid or Longs)  
 7 Other (SPECIFY)  
 -8 \_\_\_\_\_ DON'T KNOW  
 -9 \_\_\_\_\_ REFUSED

**F5** What is your name and job title?

NP

\_\_\_\_\_ {RECORD RESPONSE}

*[IF ST1 =1,2,3]*

**F6** How many years has your store been selling CFLs?

1 One  
 2 Two  
 3 Three  
 4 Four  
 5 Five  
 6 More than five  
 -3 Skip Error  
 -8 \_\_\_\_\_ DON'T KNOW  
 -9 \_\_\_\_\_ REFUSED

**[THANK AND TERMINATE]**

Please note if respondent would like a copy of the study results.

**System Variables**

<b>respnum\$</b>	Respondent Number
<b>address</b>	Respondent Address
<b>city</b>	Respondent City
<b>state</b>	Respondent State
<b>zip4</b>	Respondent Zip Code
<b>area</b>	Respondent Area Code
<b>phone</b>	Respondent Phone
<b>caseid</b>	PA assigned ID
<b>rep</b>	Replicate
<b>priority</b>	Priority sample from the shelf-stocking survey
	1 Priority sample
	0 RDD sample

**stratum**      Stratum codes for channel, state and utility

**Participant**

- 1 PGE Independent Discount Store
- 2 PGE Independent
- 3 PGE Independent Grocery Store
- 4 PGE Independent
- 5 PGE Large Chain Discount Store
- 6 PGE Large Chain
- 7 PGE Large Chain Grocery Store
- 8 PGE Large Chain Large Home Improvement Store
- 9 PGE Large Chain Mass Merchandise Store
- 10 PGE Large Chain Membership Club Store
- 11 PGE Small Chain Grocery Store
- 12 PGE Small Chain
- 13 SCE Independent Discount Store
- 14 SCE Independent
- 15 SCE Independent Grocery Store
- 16 SCE Independent
- 17 SCE Large Chain Discount Store
- 18 SCE Large Chain
- 19 SCE Large Chain Grocery Store
- 20 SCE Large Chain
- 21 SCE Large Chain Large Home Improvement Store
- 22 SCE Large Chain Mass Merchandise Store
- 23 SCE Large Chain Membership Club Store
- 24 SCE Small Chain Discount Store
- 25 SCE Small Chain Grocery Store
- 26 SCE Small Chain
- 27 SDGE Independent Discount Store
- 28 SDGE Independent
- 29 SDGE Independent Large Home Improvement Store
- 30 SDGE Large Chain Discount Store
- 31 SDGE Large Chain
- 32 SDGE Large Chain Grocery Store
- 33 SDGE Large Chain
- 34 SDGE Large Chain Large Home Improvement Store
- 35 SDGE Large Chain Mass Merchandise Store
- 36 SDGE Large Chain Membership Club Store
- 37 SDGE Small Chain Grocery Store
- 38 SDGE Small Chain

**Non-participant**

- 1 GA Discount
- 2 GA Grocery
- 3 GA Large Home Improvement
- 4 GA Mass Merchandise
- 5 GA Membership Clubs
- 6 KS Discount
- 7 KS Grocery
- 8 KS Large Home Improvement
- 9 KS Mass Merchandise
- 10 KS Membership Clubs
- 11 KS Small Hardware
- 12 PA Discount
- 13 PA Grocery
- 14 PA Large Home Improvement
- 15 PA Mass Merchandise
- 16 PA Membership Clubs
- 17 PGE Discount"
- 18 PGE Drug
- 19 PGE Grocery
- 20 PGE Large Home Improvement
- 21 PGE Mass Merchandise
- 22 PGE Membership Clubs
- 23 PGE Small Hardware
- 24 SCE Discount
- 25 SCE Drug
- 26 SCE Grocery
- 27 SCE Large Home Improvement
- 28 SCE Mass Merchandise
- 29 SCE Membership Clubs
- 30 SCE Small Hardware
- 31 SDGE Discount
- 32 SDGE Grocery
- 33 SDGE Large Home Improvement
- 34 SDGE Mass Merchandise
- 35 SDGE Membership Clubs
- 36 SDGE Small Hardware

PUBLIC UTILITIES COMMISSION  
505 VAN NESS AVENUE  
SAN FRANCISCO, CA 94102-3298



DATE: July 16, 2008

SUBJECT: California Residential Lighting Research Project

FROM: Mikhail Haramati / California Public Utilities Commission

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Dear California Utility Customer:

The California Public Utilities Commission's Energy Division is currently employing independent program evaluators to measure achievements of electric and gas utility sponsored energy efficiency programs. As part of these evaluations you are participating in a state-wide residential lighting study. The study includes a full inventory of all the lighting in your home and the installation of small metering devices that collect information about how lighting is used. This research is critical for the verification and evaluation efforts of the 2006-2008 energy-efficiency programs sponsored by the state's investor-owned utilities (PG&E, SCE, and SDG&E).

The Cadmus Group (formerly Quantec, LLC) is the primary contractor retained for this evaluation work. The Cadmus Group has subcontracted with KEMA, Inc., and KEMA staff will be performing the in-home lighting inventory and installation of lighting metering devices. This letter serves to authenticate their request for information. For additional confirmation and a list of the subcontractors used by all of the primary evaluation contractors please visit the CPUC website at the link below:

<http://www.cpuc.ca.gov/evalidation>

Should you have further questions regarding the evaluation process, please contact me using the information provided below.

Thank you for your participation.

Sincerely,

/S/MIKHAIL HARAMATI

Mikhail Haramati  
Residential Retrofit Contract Manager  
415-703-1458  
[mkh@cpuc.ca.gov](mailto:mkh@cpuc.ca.gov)

# Verification Badges

## Energy Efficiency Verification Inspector



**Forrest Wong**



Evaluating residential energy efficiency programs conducted by PG&E, SCE, and SDG&E on behalf of the California Public Utility Commission

The individual pictured on the reverse is under contract to the California Public Utility Commission to verify impacts achieved by energy efficiency programs in California.

Please direct any questions or concerns regarding your experience with this contractor to:

Mikhail Haramati  
Residential Retrofit Contract Manager  
California Public Utility Commission  
(415) 703-1458

*Please reference contractor name:*

**Forrest Wong**

IF FOUND, PLEASE RETURN TO:

KEMA Inc.  
492 Ninth St.  
Suite 220  
Oakland, CA 94607



<b>SITE ID:</b>	
<b>Heating and Cooling</b>	
<b>Primary Space Heating</b> <input type="radio"/> NONE	
<input type="radio"/> <b>Natural Gas</b> (gas from utility)	<input type="radio"/> Central forced-air furnace <input type="radio"/> Floor or wall <input type="radio"/> Hot water radiator <input type="radio"/> Fireplace (Gas) <input type="radio"/> Other
<input type="radio"/> <b>Electric</b>	<input type="radio"/> Resistance (baseboard/ceiling/floor/wall) <input type="radio"/> Central forced air furnace (fan circulates hot air through ducts) <input type="radio"/> Central heat pump (heats and cools) <input type="radio"/> Through-the-wall heat pump (looks like a window a/c but also provides heat) <input type="radio"/> Portable heaters <input type="radio"/> Other system type
<input type="radio"/> <b>Bottled Gas</b> (propane, LP)	<input type="radio"/> Central forced-air furnace <input type="radio"/> Floor or wall <input type="radio"/> Hot water radiator <input type="radio"/> Other
<input type="radio"/> <b>Wood</b>	<input type="radio"/> Woodstove/pellet stove/fireplace insert <input type="radio"/> Fireplace (Wood-burning)
<input type="radio"/> <b>Solar</b>	<input type="radio"/> Solar-no back up <input type="radio"/> Solar-natural gas backup <input type="radio"/> Solar-propane backup <input type="radio"/> Solar electric backup
<input type="radio"/> <b>Rooms with NO HEAT</b>	<input type="radio"/> B1 <input type="radio"/> B2 <input type="radio"/> B3 <input type="radio"/> B4 <input type="radio"/> B5 <input type="radio"/> BA1 <input type="radio"/> BA2 <input type="radio"/> BA3 <input type="radio"/> BA4 <input type="radio"/> OL1 <input type="radio"/> OL2 <input type="radio"/> BS <input type="radio"/> KE <input type="radio"/> K <input type="radio"/> Living Room <input type="radio"/> LN <input type="radio"/> OF1 <input type="radio"/> OF2 <input type="radio"/> NONE <input type="radio"/> OTHER _____
<b>Primary Space Cooling</b> <input type="radio"/> NONE	
<input type="radio"/> <b>Central Air Conditioning</b>	<input type="radio"/> Central air conditioning <input type="radio"/> Central Evaporative Cooler (swamp) <input type="radio"/> Heat pump (heats and cools) <input type="radio"/> Could not determine
<input type="radio"/> <b>Room Air Conditioning</b>	<input type="radio"/> Window/wall a/c <input type="radio"/> Window/wall heat pump <input type="radio"/> Window/wall evaporative cooler <input type="radio"/> Could not determine
<input type="radio"/> <b>Rooms with NO AC</b>	<input type="radio"/> B1 <input type="radio"/> B2 <input type="radio"/> B3 <input type="radio"/> B4 <input type="radio"/> B5 <input type="radio"/> BA1 <input type="radio"/> BA2 <input type="radio"/> BA3 <input type="radio"/> BA4 <input type="radio"/> OL1 <input type="radio"/> OL2 <input type="radio"/> BS <input type="radio"/> KE <input type="radio"/> K <input type="radio"/> Living Room <input type="radio"/> LN <input type="radio"/> OF1 <input type="radio"/> OF2 <input type="radio"/> NONE <input type="radio"/> OTHER _____
<b>Home type</b>	
<input type="radio"/> <b>Single Family</b>	<input type="radio"/> Detached <input type="radio"/> Townhouse/Duplex/Row house
<input type="radio"/> <b>Apartment or Condominium</b>	<input type="radio"/> 2-4 Units <input type="radio"/> 5 or more Units <input type="radio"/> Other (Describe _____)
<input type="radio"/> <b>Mobile Home</b>	
<b>Number of Bedrooms and Bathrooms</b>	BEDROOMS: <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10 BATHROOMS: <input type="radio"/> 1 <input type="radio"/> 2 <input type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 5 <input type="radio"/> 6 <input type="radio"/> 7 <input type="radio"/> 8 <input type="radio"/> 9 <input type="radio"/> 10
<b>Number of DIMMABLE CFLs</b> _____	Locations and Fixture Group numbers:
<b>RASS Status</b> <input type="radio"/> Not Started <input type="radio"/> Started <input type="radio"/> Completed <input type="radio"/> Refused	
<b>Notes:</b>	

*We Appreciate Your Participation in our Study!*

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***Thank You!***



**Finished?**

Please place in envelope and return to the KEMA staff member conducting lighting visit. Once again, all information collected will be kept entirely confidential.

**KEMA Demographics Information:**

Please circle one option for each of the questions in this brief survey. Your answers will be kept confidential. Thank your for your participation!



Demographics Survey

1. What is your gender?
  - a. Female
  - b. Male
2. Do you own your home or rent?
  - a. Own [SKIP TO 4]
  - b. Rent
3. Do you pay a utility company directly for your electricity, or is it included in your rent?
  - a. Pay electric bill directly
  - b. Included in rent
  - c. Other [SPECIFY] \_\_\_\_\_
98. Don't Know
4. About when was this building first built?
  - a. Before 1978
  - b. Between 1978 and 1992
  - c. Between 1993 and 2000
  - d. Between 2001 and 2004
  - e. 2005 or later
5. How large in square feet is your home?
  - a. Less than 500 square feet
  - b. 501 – 1,000
  - c. 1,001 – 1,500
  - d. 1,501 – 2,000
  - e. 2,001 – 2,500
  - f. 2,501 – 3,000
  - g. Greater than 3,000
6. Write in the **AGE** of each person currently living in your home.

Person 1: _____	Person 7: _____
Person 2: _____	Person 8: _____
Person 3: _____	Person 9: _____
Person 4: _____	Person 10: _____
Person 5: _____	Person 11: _____
Person 6: _____	Person 12: _____
7. What is the highest level of education you have completed?
  - a. No schooling
  - b. Less than high school
  - c. Some high school
  - d. High school graduate or equivalent (i.e. GED)
  - e. Trade or technical school
  - f. Some college
  - g. College graduate
  - h. Some graduate school
  - i. Graduate degree
  - j. Other [SPECIFY] \_\_\_\_\_
98. Don't Know
8. Which of the following best represents your annual household income from all sources in 2008, before taxes?
  - a. Less than \$20,000 per year
  - b. \$20,000 to \$49,999
  - c. \$50,000 to \$74,999
  - d. \$75,000 to \$99,999
  - e. \$100,000 to \$149,999
  - f. \$150,000 to \$199,999
  - g. \$200,000 or more
9. Are you Spanish/Hispanic/Latino?
  - a. Yes
  - b. No
10. What is your race / ethnic group?
  - a. Spanish/Hispanic/Latino
  - b. White, Caucasian
  - c. Black, African American
  - d. American Indian or Alaska Native
  - e. Asian
  - f. Chinese
  - g. Japanese
  - h. Korean
  - i. Vietnamese
  - j. Filipino
  - k. Native Hawaiian
  - l. Pacific Islander
  - m. Guamanian or Chamorro
  - n. Samoan
  - o. Other [SPECIFY] \_\_\_\_\_
98. Don't Know
11. What is the primary language spoken in your home?
  - a. English
  - b. Spanish
  - c. Mandarin
  - d. Cantonese
  - e. Tagalog
  - f. Korean
  - g. Vietnamese
  - h. Russian
  - i. Japanese
  - j. Other [SPECIFY] \_\_\_\_\_

# Lighting Inventory Data Entry Form

Unique Site ID:

<b>STORAGE</b>	S1	S2	S3	S4	S5	S6	S7	S8	S9
<b>Lamp Information</b>									
Number of lamps									
Watts per lamp									
Lamp Type	ICF HLO	ICF HLO	ICF HLO	ICF HLO	ICF HLO	ICF HLO	ICF HLO	ICF HLO	ICF HLO
Lamp Shape									
Base type	SM SS PO	SM SS PO	SM SS PO	SM SS PO	SM SS PO	SM SS PO	SM SS PO	SM SS PO	SM SS PO
Other features									

<b>Total number of fixtures</b>									
Fixture Group Number	___	___	___	___	___	___	___	___	___
<b>Fixture Group Information</b>									
Location									
Control Type	SDL3 MPT	SDL3 MPT	SDL3 MPT	SDL3 MPT	SDL3 MPT	SDL3 MPT	SDL3 MPT	SDL3 MPT	SDL3 MPT
Fixture Type									
Fixtures									
<b>Lamp Information</b>									
Number of lamps per fixture									
Watts per lamp									
Lamp Type	ICF HLO	ICF HLO	ICF HLO	ICF HLO	ICF HLO	ICF HLO	ICF HLO	ICF HLO	ICF HLO
Lamp Shape									
Base type	SS SM PO	SS SM PO	SS SM PO	SS SM PO	SS SM PO	SS SM PO	SS SM PO	SS SM PO	SS SM PO

<b>Room(s) that could not be entered:</b>	<b>Reason?</b>

Comments:

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# Lighting Inventory Data Entry Form

Unique Site ID: \_\_\_\_\_

<b>Total number of fixtures</b>									
<b>Fixture Group Number</b>	___	___	___	___	___	___	___	___	___
<b>Fixture Group Information</b>									
Location									
Control Type	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T
Fixture Type									
Fixtures									
<b>Lamp Information</b>									
Number of lamps per fixture									
Watts per lamp									
Lamp Type	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O
Lamp Shape									
Base type	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O

<b>Total number of fixtures</b>									
<b>Fixture Group Number</b>	___	___	___	___	___	___	___	___	___
<b>Fixture Group Information</b>									
Location									
Control Type	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T
Fixture Type									
Fixtures									
<b>Lamp Information</b>									
Number of lamps per fixture									
Watts per lamp									
Lamp Type	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O
Lamp Shape									
Base type	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O

Comments:

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# Lighting Inventory Data Entry Form

Unique Site ID: \_\_\_\_\_

<b>Total number of fixtures</b>									
<b>Fixture Group Number</b>	___	___	___	___	___	___	___	___	___
<b>Fixture Group Information</b>									
Location									
Control Type	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T
Fixture Type									
Fixtures									
<b>Lamp Information</b>									
Number of lamps per fixture									
Watts per lamp									
Lamp Type	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O
Lamp Shape									
Base type	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O

<b>Total number of fixtures</b>									
<b>Fixture Group Number</b>	___	___	___	___	___	___	___	___	___
<b>Fixture Group Information</b>									
Location									
Control Type	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T
Fixture Type									
Fixtures									
<b>Lamp Information</b>									
Number of lamps per fixture									
Watts per lamp									
Lamp Type	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O
Lamp Shape									
Base type	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O

Comments:

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# Lighting Inventory Data Entry Form

Unique Site ID: \_\_\_\_\_

<b>Total number of fixtures</b>									
<b>Fixture Group Number</b>	___	___	___	___	___	___	___	___	___
<b>Fixture Group Information</b>									
Location									
Control Type	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T
Fixture Type									
Fixtures									
<b>Lamp Information</b>									
Number of lamps per fixture									
Watts per lamp									
Lamp Type	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O
Lamp Shape									
Base type	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O

<b>Total number of fixtures</b>									
<b>Fixture Group Number</b>	___	___	___	___	___	___	___	___	___
<b>Fixture Group Information</b>									
Location									
Control Type	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T	S D L3 M P T
Fixture Type									
Fixtures									
<b>Lamp Information</b>									
Number of lamps per fixture									
Watts per lamp									
Lamp Type	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O	I C F H L O
Lamp Shape									
Base type	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O	SS SM P O

Comments:

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# LOGGER TRACKING INFORMATION

Unique Site ID# \_\_\_\_\_

<b>Fixture #</b>	_____	_____	_____	_____	_____	_____	_____
<b>Logger Serial Number/Type</b>							
<b>Room/fixture/ lamp type/lamp shape</b>							
<b>Fixture and logger location</b>							
<b>If CFL, Manufacturer and Model #</b>							
<b>If Dimmable, how is the light used?</b>							
<b>Fiber Optic Eye?</b>	Y N	Y N	Y N	Y N	Y N	Y N	Y N
<b>Time installed</b>	____:____AM/PM	____:____AM/PM	____:____AM/PM	____:____AM/PM	____:____AM/PM	____:____AM/PM	____:____AM/PM
<b>Approximate total hours of use per day</b>							
<b>If CFL, date of 1st CFL installation</b>	____/____/____ Month/year	____/____/____ Month/year	____/____/____ Month/year	____/____/____ Month/year	____/____/____ Month/year	____/____/____ Month/year	____/____/____ Month/year
<b>Used during July peak* hours?</b>	Y N	Y N	Y N	Y N	Y N	Y N	Y N
<b>Used during Sept peak* hours?</b>	Y N	Y N	Y N	Y N	Y N	Y N	Y N
<b>Household Level:</b>	AC System: Heat system:			Inspected: Y N		Rooms w/o conditioned Air:	

\* Peak hours: weekday from 2-5 pm. Ask for all metered lights!

**Comments:**

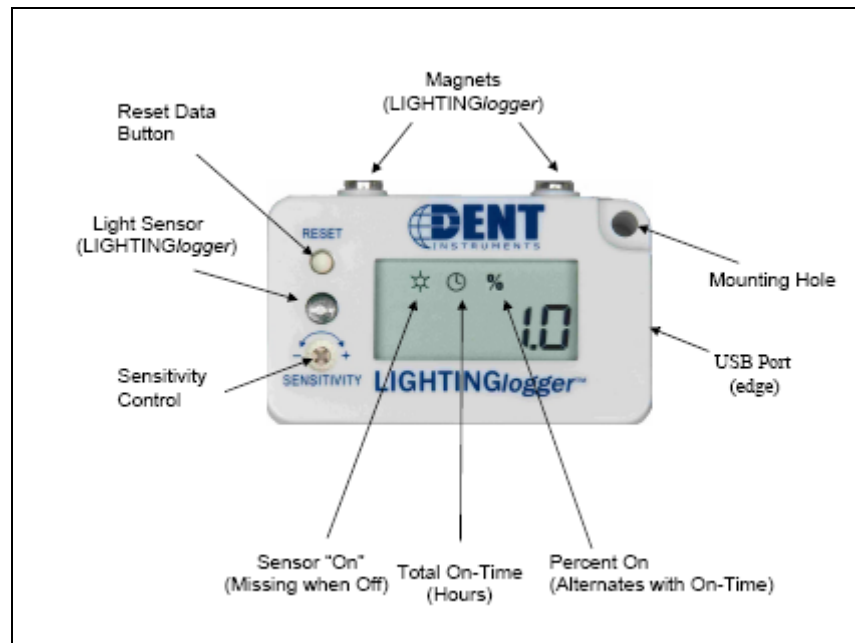
On a typical July weekday afternoon, 2-5 pm, are the CFLs in your home  
**CIRCLE: mostly on / mostly off / some on and some off ?**  
 And in Sept?: **CIRCLE: mostly on / mostly off / some on and some off ?**



## DENT Meter Installation Guidelines

The ULP Residential Lighting Study primarily used the DENT Instruments TOU LIGHTINGlogger. The layout of this logger is shown in Figure .

**Figure 1 – Dent Time of Use LIGHTINGlogger**



The meter came equipped with a photo sensor (labeled Light Sensor in Figure 1) and displayed a sun icon when sensing light and nothing when not. For every change in status of the icon, the meter recorded a time and date stamp. The meter also tracked the total number of hours since last reset that the meter sensed light as well as what percent of cumulative time since last reset this was.

It was important to install the logger so that the light sensor was aimed toward the light source to be monitored and away from any ambient or stray light sources such as lamps or windows, which could cause false monitoring.

For monitoring fluorescent lighting it was possible to place the logger inside the fixture and attach the logger to the fixture using the magnets on top. It was necessary to reinforce the magnets with tape on top, as glue alone was not sufficient to hold the magnets to the meter for the installation duration.

The maximum temperature rating of the loggers is 140 degrees Fahrenheit. Thus, for incandescent (including halogen) lighting, the meters were placed at least eight inches from a 100 watt bulb in free-moving air and considerably more in still air. It was not possible to install the meters in recessed cans or wall fixtures with incandescent lighting. In these cases a fiber optic eye was attached to the meter over the photo sensor. The fiber optic eye extended the range in which the meter could sense a specific light source accurately.

If it was not possible to mount the logger at an appropriate distance using the integrated magnets, zip ties, insulated garden wire, gravity, or some combination was used. Tape was avoided as preliminary tests found that tape may remove paint and was not capable of holding the meter in place for six months. Plastic sandwich bags were used to protect the meter from moisture when installed on exposed, exterior lights or in small bathrooms. For high temperature or hard-to-reach locations including the case already discussed, a flexible fiber optic eye was used to place the meter conveniently away from the light fixture. Figure 2 is a sample meter installations.

**Figure 2- Sample meter installations**





e



Fixture Number	19	20	21	22	23	24	25	26	27
<b>Fixture Information</b>									
Location	<i>D</i>	<i>D</i>							
Control Type	<del>2</del> SD 3 MPT	<del>S</del> D 3 MPT	S D 3 MPT	S D 3 MPT	S D 3 MPT	S D 3 MPT	S D 3 MPT	S D 3 MPT	S D 3 MPT
Fixture Type	<i>C</i>	<i>S</i>							
Total number of fixtures	<i>1</i>	<i>1</i>							
<b>Lamp Information</b>									
Number of lamps per fixture	<i>2</i>	<i>2</i>							
Watts per lamp	<i>60</i>	<i>13</i>							
Primary Lamp Type	<del>1</del> IC F HLG	<del>1</del> IC F HLG	IC F HLG	IC F HLG	IC F HLG	IC F HLG	IC F HLG	IC F HLG	IC F HLG
Secondary Lamp Type	<i>A</i>	<i>S</i>							
Base type	<del>SM</del> SS PO	<del>SM</del> SS PO	SM SS PO	SM SS PO	SM SS PO	SM SS PO	SM SS PO	SM SS PO	SM SS PO
Lighting Logger Installed?	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N

The first step is to categorize each fixture as a CFL fixture or a non-CFL fixture. A fixture with at least one CFL was considered a CFL fixture. The total number of CFL fixtures and the total number of non-CFL fixtures is counted separately.

The second step is to consult Table 1, The Metering Protocol Lookup Table. This table was included on every metering site cover page. The Randomized Starting Numbers Table was uniquely determined for each site. The Randomized Starting Numbers Table for the example is Table 2.

**Table 1 – Metering Protocol Lookup Table**

Number of Fixtures	Random Start Number (CFL)	Meter Every (CFL)	Random Start Number (non-CFL)	Meter Every (non-CFL)
3-10	1-3	3 <sup>rd</sup>	1-4	4 <sup>th</sup>
11-20	1-5	5 <sup>th</sup>	1-7	7 <sup>th</sup>
21-30	1-8	8 <sup>th</sup>	1-10	10 <sup>th</sup>
31-40	1-10	10 <sup>th</sup>	1-13	13 <sup>th</sup>
41-50	1-13	13 <sup>th</sup>	1-16	16 <sup>th</sup>
More than 50	1-17	17 <sup>th</sup>	1-17	17 <sup>th</sup>

**Table 2 – Randomized Starting Variables Table (unique to each site)**

<b>Fixture Groups</b>	<b>Randomized Start number non-CFL</b>	<b>Randomized Start number CFL</b>
3-10	3	2
11-20	4	1
21-30	8	2
31-40	4	6
41-50	12	2
More than 50	3	9

The total number of each type of fixtures at the site dictates the number of fixtures to count between metered lamps. In this example inventory there are 11 CFL fixtures, so according to Table 1, every 5<sup>th</sup> CFL fixture would be metered. Likewise, this example has 9 non-CFL fixtures, and every 4<sup>th</sup> non-CFL would be metered. Incandescent, halogen, fluorescent, and LEDs are all considered non-CFLs.

Now, Table 2 gives the unique fixtures to start counting on for this site. According to Table 2, row one, column one (for non-CFLs), the randomized start number for this site for non-CFLs is 3. Thus, the place to start counting on the Sample inventory form is Fixture Number 6. It has already been determined that every 4<sup>th</sup> non-CFL fixture is to be metered. The first metered non-CFL is accordingly Fixture 13. Continuing the protocol, the two remaining non-CFL meters would be placed on Fixtures 4 and 12. Note that fixtures already selected for metering are excluded from counting after being selected.

Following the same protocol for CFLs, the randomized starting number for this site is 1. Accordingly, the place to start counting is the first CFL fixture, Fixture 1. Since every fifth CFL fixture is metered, the first metered CFL fixture in the Sample inventory is Fixture 8. Continuing the protocol the remaining meters would be placed on Fixtures 18, 7, and 1.

## Phone Recruitment Script

Hello, my name is \_\_\_\_\_ and I'm calling from a research firm called KEMA on behalf of the California Public Utilities Commission. We have selected your household at random to participate in an important research study about household lighting. We are offering \$100 per household if you are selected for this study. Are you interested?

- 1 Yes
- 2 No [Attempt to convert, otherwise T&T]
- 3 Don't know [Attempt to convert, otherwise T&T]
- 4 Refused [Attempt to convert, otherwise T&T]

### Study Description & Recruitment Text

Great! As I mentioned, the purpose of the study is to understand what types of lighting are used by residents of California. Let me reassure you that we are not selling anything, and you will not be contacted by anyone else interested in selling you anything.

The study consists of three visits. The first visit will be an inventory of the lighting in your home and we will install light meters on 7 lights in your home. There will then be up to two additional follow-up visits to your home within the next six months. We will pay you \$50 after the first visit and then another \$50 after the last visit, for a total of \$100.

Can we count on your participation in this important research?

- 1 Yes
- 2 No [Attempt to convert, otherwise T&T]
- 3 Don't know [Attempt to convert, otherwise T&T]
- 4 Refused [Attempt to convert, otherwise T&T]

Great! Then let me give you a few more details. During the first visit, we will conduct a survey of all the lighting in your home. Also during this visit, we will be installing a few devices on some of your lights that record when they are on and when they are off. These devices are small and you will probably not even notice most of them. None of these devices will interfere with how your lights work; they will simply record information each time the light is turned on or off. This initial visit could take from one to three hours depending on the size of your house. We will send you a check for \$50 after this first visit is completed. In some cases, we will come back a month or two later to check to make

sure the devices are working properly and then return again after a total of six months to remove them<sup>1</sup>. We'll give you the final \$50 payment after that third and final visit.

Do you have any questions before I continue?

Can I verify your contact information?

Name: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

City: \_\_\_\_\_

Zip: \_\_\_\_\_

1 OK. Let me just ask you a few more questions. First, are you familiar with energy-saving compact fluorescent bulbs, or CFLs?

1 Yes [Skip to 3]

2 No

3 Don't know

2 Compact fluorescent light bulbs are small screw-in fluorescent bulbs that fit in regular light bulb sockets. Some have unusual shapes, such as a spiral. They are usually made out of thin tubes of glass bent into loops. Now do you think you've heard of compact fluorescent light bulbs or CFLs?

1 Yes

2 No [Skip to 5]

3 Don't know [Skip to 5]

3 Are you currently using any compact fluorescent light bulbs in any lighting fixtures inside or outside of your home?

1 Yes

2 No [Skip to 5]

3 Don't know [Skip to 5]

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<sup>1</sup> During subsequent waves the second site visit will not take place.



4. Approximately how many compact fluorescent light bulbs are you using in your home?

- 1 \_\_\_\_\_ Number of fixtures using CFLs
- 2 Don't know

5. What type of home do you live in? Is it.. .

- 1 A one-family home detached from any other house?
- 2 A one-family home attached to one or more houses?
- 3 A building with 2 apartments?
- 4 A building with 3 or 4 apartments?
- 5 A building with 5 or more apartments?
- 6 [DO NOT READ] Other [SPECIFY \_\_\_\_\_]
- 7 [DO NOT READ] Don't know

16. Including yourself, how many people currently living in your home year-round are in the following age groups?

- 1 \_\_\_\_\_ Less than 5 years old
- 2 \_\_\_\_\_ 5-17 years old
- 3 \_\_\_\_\_ 18-24years old
- 4 \_\_\_\_\_ 25-34 years old
- 5 \_\_\_\_\_ 35-44 years old
- 6 \_\_\_\_\_ 45-54 years old
- 7 \_\_\_\_\_ 55-64 years old
- 8 \_\_\_\_\_ 65 or older

Thank you very much for your time today. You will receive \$50 upon the completion of the on-site survey and then \$50 upon completion of your participation. Someone should be contacting you within the next few weeks to schedule a mutually agreeable time for our surveyor to come to your home. Do you have any other questions for me?

Thanks again for your time and we looking forward to meeting you shortly. Have a good day/night.