SCE/PG&E Basic/Advanced/LMT Program Process Evaluation:

Commercial Lighting Retrofits – Targeted Research

Appendices

Prepared by Evergreen Economics and Research Into Action

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California Lighting Critical Synthetic Literature Review

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Executive Summary

A team led by Evergreen Economics (Evergreen) and supported by Research Into Action (RIA) and D&R International was contracted by Southern California Edison (SCE) and Pacific Gas and Electric Co. (PG&E) to conduct a process evaluation of the utilities' upstream lighting and market transformation programs and a lighting wants and needs assessment for residential and non-residential customers. As part of this project, D&R was tasked with conducting a critical synthetic literature review of the residential and non-residential lighting markets in California, in parallel with Evergreen and RIA's program manager interviews and research plan development.

The purpose of the research was to assist SCE and PG&E in developing detailed lighting program strategies and to help define priority areas for primary market research to be conducted by Evergreen and RIA .SCE and PG&E directed D&R to assess the state of and trends in residential and non-residential lighting markets, identify facets of the market with important program design implications, point out key documentary resources, and highlight critical data gaps.

The literature review focused primarily on the non-residential sector because other contractors were already engaged in substantial research on the residential market. To conduct the review, we collected more than 100 reports and program documents, screened them for data quality, reviewed reports with reliable data, and identified trends, key resources, facets, implications, and data gaps. We included only reports with sufficiently large sample size, no selection bias, and basis in empirical rather than self-reported data.

Overarching recommendations for PG&E and SCE

Consider adopting a choice architecture framework for program research and design.
A choice architecture is the collection of situational factors that influence a specific choice and typically, often unintentionally, drive most people to a particular decision. To succeed in delivering state-mandated reductions in lighting energy consumption by 2020, IOUs will have to induce millions of people to choose efficient lighting solutions. To succeed program strategies must be based on the scientific understanding of how people make choices and the factors that most strongly influence them. The critical observation from this body of scientific research is that most decisions are automatic and primarily influenced by immediate situational factors. Focusing research and design on choice architectures ensures that the program design addresses the factors that most directly influence choices.

Recruit as trade allies the groups of market actors that directly influence lighting selection, design, and installation decisions.
In the residential sector, these market actors are primarily retailers and manufacturers. In the non-residential sector, there are several market actors in the stream of influence. Some directly decide what lighting solution is picked and designed, others specify products, and yet others determine what is actually installed. Recruiting these market actors as trade allies will give the program the potential to influence the vast majority of lighting decisions.

Understand the choice architectures these market actors create for others.
The literature review provides insight into the business models and decision drivers for both non-residential and residential target market actors, but critical additional information is still needed, including the profitability of efficient vs. incumbent technologies; current stocking

behavior and views about incumbent and efficient technologies; the extent of technology, application, and segment specialization among each class of market actor; and operation and maintenance costs for segments, sub-segments, and common applications.

Design program interventions to reshape them so they favor the efficient product.
The behavioral literature offers a set of situational features that can be used as tools to shape a situation to influence behavior, such as defaults, prompts, contrast effects, limited choice, mappings, scarcity, social norms, word of mouth, expert opinion, and testimonials.
In some cases, more sophisticated approaches may be needed, like the training and certification on advanced lighting controls that California programs have already begun providing through the California Advanced Lighting Controls Training Program (CALCTP).

Program sponsors may need to use a combination of prescriptive approaches that provide payment for specific changes to the current practice or a non-prescriptive approach that aligns market actors and utilities' incentives (e.g., a market lift program model where the market actor is paid for kWh saved).

Apply product-, application-, and segment-specific tactics wherever possible.
Product-specific opportunities include targeting replacement of remaining halogen and incandescents with CFLs and LEDs; targeting replacement of remaining inefficient T12 and T8 lamps; and targeting mercury vapor, low-pressure and high-pressure sodium lamps for replacement with LEDs or induction lamps.

Application-specific opportunities include targeting parking structures for replacement with LED, induction. Segment-specific opportunities include targeting retail and office, which have the highest share of total lighting energy consumption and relatively high average hours of use, targeting restaurants, which have the highest average hours of use, and targeting owners/managers of large portfolios of buildings in these sectors.

Assess customer wants and needs through observation and measurement
People are terrible predictors of their likely future behavior, their past behavior, or even their primary motivators. The best way therefore to evaluate their preferences is to see how they react to a variety of actual situations.

Establish product quality and performance measures for advanced technologies.
Advanced technologies and solutions that can deliver better performance than many incumbent lighting technologies are available for virtually all applications. However, each has issues that must be further investigated and/or addressed.

IOUs should consider requiring off-the-shelf verification testing of incentivized LED, specialty CFL, and induction lamps. The former two show extreme performance variability across models. Program managers report similar problems with induction lamps. There is extensive off-the-shelf verification testing for CFLs, but not for LED lamps and luminaires. Such manufacturer-funded testing could occur through ENERGY STAR, the DesignLights Consortium, and/or LED Lighting Facts.

Use bright spots analyses to locate complete solutions and opportunities for potential rapid growth.
Bright spots are areas with unexpectedly high levels of adoption of the efficient technology. Outdoor lighting has bright spots of LED and induction lighting in parking lot and area lighting,

and many segments have high levels of adoption of advanced lighting controls. These should be studied to understand and steer the choice architectures that are naturally driving growth.

Sustain upstream incentives for CFLs to the extent possible.

Upstream incentives have worked extremely well in California. As of 2009, California had the highest levels of CFL saturation and the most even distribution of CFLs across households in the nation. Limited data available indicates that upstream incentives in California are responsible for increasing sales by nearly 200 percent, as sales drop by 65 percent when incentives are removed. California has succeeded in raising specialty CFL sales to 35 percent of all incented products and might be able raise that to 65 percent or higher by replicating the strategies currently being used by Efficiency Vermont.

Use the planned primary research to be conducted by Evergreen and RIA to fill as many of the following priority data gaps as possible:

1. Factors defining current choice architectures for major manufacturers and retailers in the major distribution channels in the residential sector, i.e., conditions that determine product selection, promotion, and pricing of incumbent and efficient technologies.

2. Factors defining current choice architectures for distributors, electrical engineers, electrical contractors, architects, and manufacturers serving the non-residential sector.

3. Output of current choice architectures, i.e., full category lighting sales data from retailers and distributors.

4. Insight into customer wants and needs, e.g., current (2012) LED and specialty CFL saturation in California, by lamp type, wattage and location, and/or customer response to in-store choice-engineered pricing and promotion strategies for advanced lighting products at retail compared to a control.

5. Changes to the choice architecture likely to make the efficient solution the preferred or recommended option for each class of trade ally.

6. Incentive structures that will induce each class of trade ally to make the efficient solution the preferred or recommended option.

7. Data on performance of off-the-shelf LED and induction lamps and luminaires, and lighting controls.

8. Large and robust dataset on energy savings from energy efficient lighting by application, segment, and solution (lamp type, control, integrated).

Introduction

Background

Southern California Edison (SCE) and Pacific Gas & Electric Co. (PG&E) engaged with the Evergreen team (Evergreen Economics, Research Into Action, and D&R International) in November 2011 to conduct a process evaluation and market research on their 2010-12 lighting programs.

In December 2011, SCE and PG&E directed the Evergreen team to conduct a literature review as part of the larger study to inform program staff and stakeholders of the wealth of available literature on lighting programs and markets and also to facilitate the identification of research gaps that might be addressed by the market characterization component of this study.

D&R, the lead team member on this task, conducted a critical synthetic literature review and analysis to offer commentary and synthesis of the wide array of literature. The objectives specified by SCE and PG&E were to:

- Identify the major factors influencing residential and non-residential lighting purchases including: market trends, distribution channels, product mix and availability, marketing and merchandizing strategies, and customer preferences, with a strong emphasis on the non-residential market where much less is known.
- Review and consider the supporting quantitative data and its sources along with any full reports or papers that are required reading for the SCE and PG&E program team and staff.
- Identify areas where primary research is needed because there is no published literature based on reliable empirical data available.
- Quickly educate current and new staff on the state of the market, key lighting market factors, and successful strategies to consider in program design and implementation.
- Organize key findings by major customer segments within residential and non-residential sectors to support program design and implementation efforts.

D&R presented a summary of its findings to SCE on March 8, 2012 and PG&E on March 16, 2012. The slides used in those presentations accompany this report.

Approach

To conduct the analysis, the team reviewed more than one hundred published reports, extracted relevant findings that were based on robust methodologies and datasets, and critically analyzed the findings with important market and/or program implications. To be comprehensive, residential consumer wants/needs and market transformation studies to date were given some attention, but were not the dominant focus, as KEMA was concurrently conducting a comprehensive literature review focused on these topics. A list of the reports the team reviewed is provided in the accompanying Excel workbook.

Data Screening

Data was screened across a number of dimensions to ensure that all data presented in the report was reliable, accurate, and applicable to California. The data screen focused primarily on the following characteristics:

- Sample size – to avoid potential sample biases, preference was given to data based on large samples.
- Sample methods – to ensure that the data accurately represented the population of individuals, organizations, or buildings, rather than a possibly non-representative subset of the population. For example, state-wide data was typically preferable over program participant-only data.
- Data-gathering methods – empirical data was preferable, due to the inherent risk of bias in self-reported data.
- Relevance to the California market.

Why Screen Data?

Not all data and research are of equal quality. Sometimes, researchers cannot obtain representative samples or lack resources to use the most reliable data-gathering methods. Other times, they do not intend for their findings to be taken as quantitative rather than qualitative evidence. For whatever reason, when examining a study's research methodologies, one may discover that the conclusions are not based on representative or reliable data. In these cases, we believe the responsible course of action is to exclude the findings from subsequent analysis.

Most of our screening criteria are not controversial, however, we occasionally encounter colleagues who challenge our exclusion of studies based on self-reported data. While we are willing to consider self-reported data in some cases, our general experience and that of researchers across numerous fields is that such data is typically highly unreliable for two reasons:

1. People are extremely poor predictors of future or likely behavior and typically do not know how they will react in certain situations.
2. People are poor reporters of both concrete, factual information and past events and actions.

These are best illustrated with two examples from the energy efficiency and renewable energy fields.

The Green Power Switch
In the late 1990s, the Tennessee Valley Authority (TVA) surveyed customers to determine whether they wanted the option to purchase green power at a premium. Approximately 84 percent responded that they would like this option. However, in 2009, several years after TVA launched its Green Power Switch® program, only 0.40 percent of customers had enrolled.

Were customers lying when they said they would like the option? No. After all, TVA asked only if they wanted the option, not if they would choose it. However, even if TVA had asked the question explicitly, it is quite likely a large proportion of customers would still have answered yes, not because they were lying, wanting to please the surveyor, or trying to impress him with their green credentials, but because people are very poor predictors of how they will react in a particular situation, especially when that situation is not described in detail.
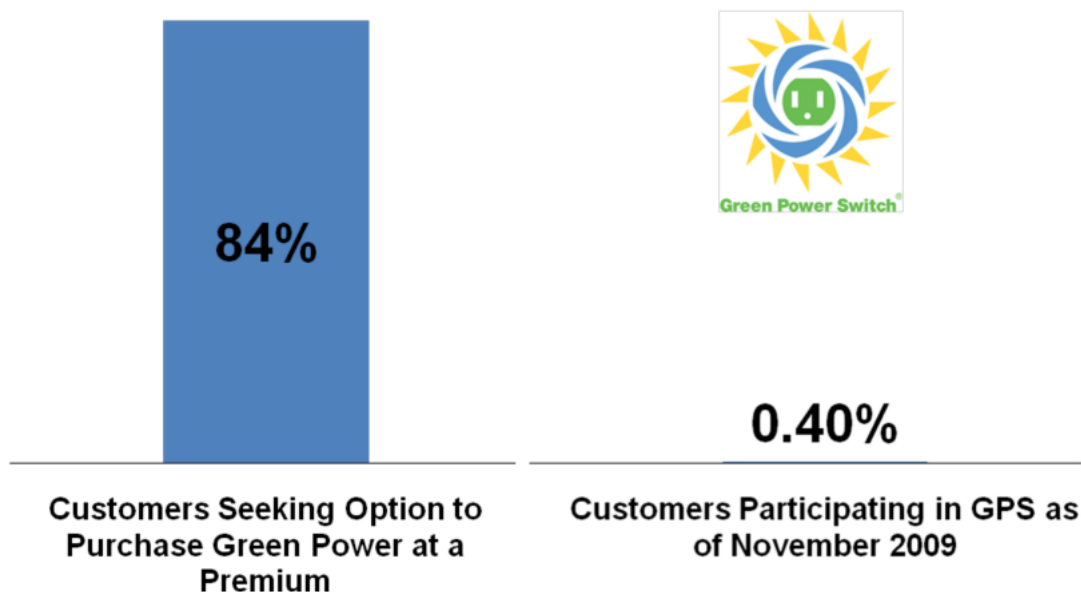
Source: TVA. Request for Proposal (RFP) - Green Power Switch Product Development. Dec. 11, 2009; TVA. Q&A on same; and TVA website.

How Many CFLs Are Installed in Your Home?

Even when they are asked to report concrete, factual information, subjects tend to be highly unreliable sources of information. For the Multistate CFL Modeling Effort undertaken in 2008 and 2009, in which California was a participant, data was gathered using two methods: a comprehensive phone survey (random digit dial, or RDD) and follow-up on-site audits at customer homes. Both surveys gathered data on the number of compact fluorescent lightbulbs (CFLs) installed. As Figure 2 shows, the correlation between self-reported RDD data and on-site data gathered by trained assessors was extremely poor.
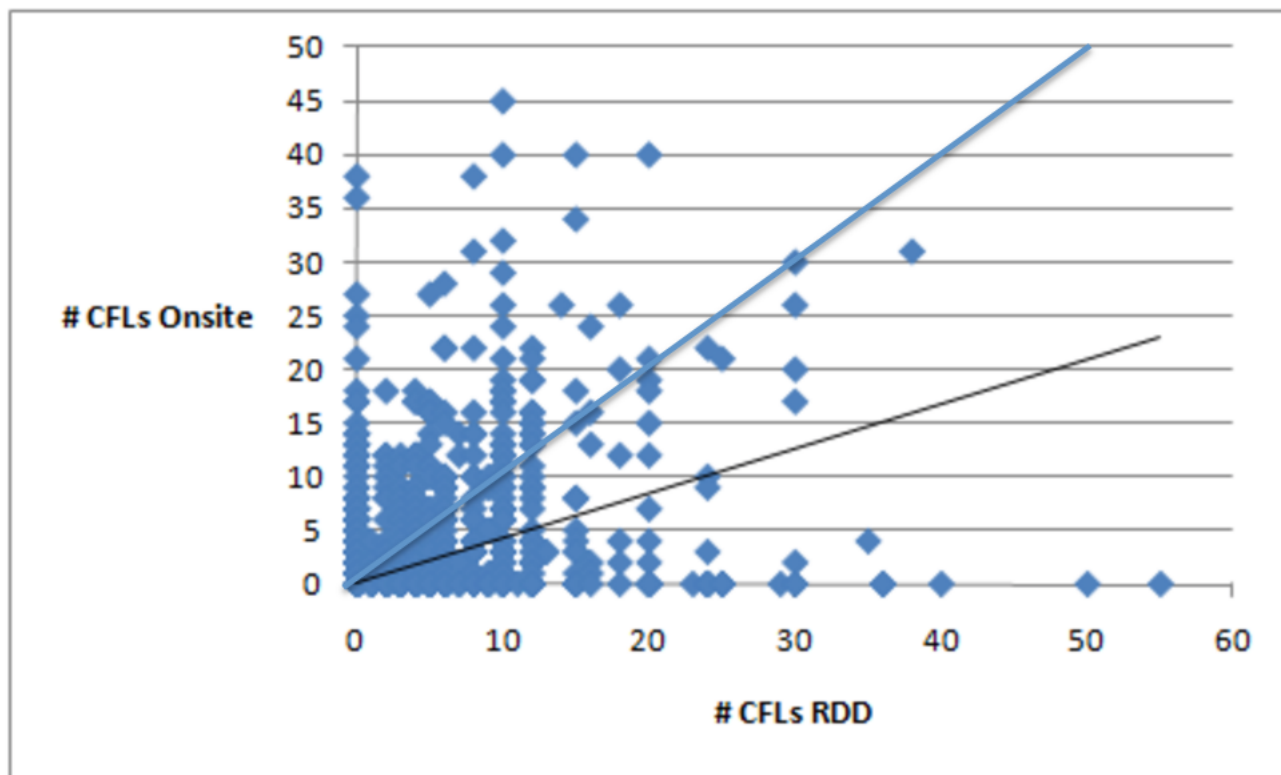
Notes: Excludes outliers and respondents not familiar with or aware of CFLs. Intercept set equal to zero. Not available for CPUC states.
Blue line represents expected correlation, black line represents actual correlation.
Source: NMR Group, Inc. Results of the multistate CFL modeling effort, Final. February 2, 2010. Connecticut Energy Efficiency Board.

An important corollary to these observations is that the best way to assess individual wants and needs is through observation and measurement. When the conditions are not yet in place which need to be observed researchers can evaluate their preferences by replicating the expected conditions as closely as possible. In this way they can see how the individuals are likely to behave.

Key Resources

This section outlines the resources that we consider to be top priority. Many of these should be considered "required reading" for lighting program staff.

Advanced Lighting Guidelines (New Buildings Institute)
www.algonline.com

The New Buildings Institute's (NBI) Advanced Lighting Guidelines (ALG) provides a comprehensive resource on lighting technologies and strategies for the non-residential sector. Suggestions are geared to lighting designers and engineers, architects and builders, educators and students, and energy efficiency and facilities managers. Data, research findings, and other information and recommendations are categorized by application and topic for ease of use. The information contained in the ALG is critical to the design of effective lighting programs and a subscription to this resource is highly recommended for program staff.

DesignLights™ Consortium
www.designlights.org

The DesignLights Consortium (DLC) is a collaborative effort among utilities and regional energy efficiency organizations that provides information on high-quality efficient lighting in commercial buildings. Among other resources, the DLC maintains a list of qualified, high-performance solid-state lighting products that meet a set of stringent criteria, including minimum light output, zonal lumen density, efficacy, color and color rendering, lumen maintenance, and manufacturer warranty.

This qualified product list could serve as a resource to allow lighting program staff to identify and incentivize high-quality solid-state lighting products.

LED Lighting Facts® (DOE)
www.lightingfacts.com

LED Lighting Facts is a program administered by the U.S. Department of Energy (DOE) that promotes truth-in-advertising by labeling light-emitting diode (LED) products with accurate, independently verified performance information in a clear label. LED Lighting Facts does not specify minimum performance criteria. In addition to labeling residential and non-residential solid-state lighting products, the LED Lighting Facts website includes a searchable database of all qualified products and numerous published and online resources outlining current performance and performance trends for LED replacement lamps and luminaires.

Of note are the services geared to energy efficiency program sponsors, which allow users to specify criteria and receive notification when new products are added that meet those criteria: www.lightingfacts.com/default.aspx?cp=content/utilities.

Figure 3. Sample Image of the Lighting Facts Label

Source: Image from DOE's Lighting Facts website: www.lightingfacts.com.

LED Lighting Facts® Product Snapshots
www.lightingfacts.com/default.aspx?cp=productsnapshot

The LED Lighting Facts product snapshots, published twice a year, represent analyses of the dataset underlying DOE's LED Lighting Facts product list. These documents are designed to help lighting retailers, distributors, designers, utilities, energy efficiency program sponsors, and other industry stakeholders understand the state of the LED market and its trajectory.

DOE Solid-State Lighting Program
www1.eere.energy.gov/buildings/ssl/

DOE's Solid-State Lighting Program provides a set of resources on LED lamp and luminaire performance. Resources include:

- CALiPER Testing: Reports outline results from independent testing of commercially available solid-state lighting products to provide a clear picture of the performance of current products. Reports are published bi-annually and include feedback from lighting manufacturers, efficiency program personnel, and utilities.

- GATEWAY Demonstration Projects: DOE has completed 19 GATEWAY demonstration projects, in which program staff work with property owners and managers to identify, install, and measure the performance of solid-state lighting in a variety of real-world installations and situations. In addition to measuring product performance and estimating energy savings, occupants are interviewed for feedback on light quality and suitability.

- Partnerships such as the Commercial Buildings Energy Alliance, Retailer Energy Alliances, and Municipal Solid-State Street Lighting Consortium, through which DOE

works with non-governmental organizations and industry associations to facilitate the development of performance criteria for solid-state lighting.

Daylighting Guide for Office Interiors (New Buildings Institute)
www.advancedbuildings.net/daylighting-office-interiors

This resource, provided by NBI, helps designers and others to understand the benefits of and best practices for daylighting in the office segment, which typically involves integrated lighting controls, efficient lighting, fenestration, window coverings, and special interior design features.

ENERGY STAR® (EPA, DOE)
www.energystar.gov

The ENERGY STAR program is a voluntary labeling program administered by DOE and the U.S. Environmental Protection Agency (EPA). Manufacturing partners must submit products to testing and pass stringent energy and quality criteria to qualify for the ENERGY STAR label. Products may then be labeled with the familiar ENERGY STAR logo and are included in the publicly available qualified product lists.

Lighting products included in this program are:
- Compact fluorescent and LED light bulbs
- Fluorescent and incandescent light fixtures
- Ceiling fans
- Decorative light strings

ENERGY STAR CFL Third Party Testing and Verification: Off-the-Shelf CFL Performance, Trends, and Implications

In an effort to ensure compliance with the ENERGY STAR criteria, EPA instituted a third party testing program that purchases products off the shelf and verifies that their performance meets the ENERGY STAR criteria. The results of this testing present an accurate picture of CFL performance and illustrate which lamp types perform reliably and which fall short. Energy efficiency program administrators are invited to nominate products and typically nominate some or all of the models for which they are providing rebates or incentives. D&R administers this program on behalf of EPA.

ENERGY STAR CFL Market Profile: Data Trends and Market Insights
www.drintl.com/publications.aspx

In 2010, D&R published the 2010 ENERGY STAR CFL Market Profile on behalf of DOE. This report provides a comprehensive overview of the residential CFL market, including voluntary and regulatory programs, installation rates, purchasing behavior, and guidance for energy efficiency programs.

2009 California Statewide Residential Appliance Saturation Study
Report: http://energy.ca.gov/appliances/rass/index.html
Database: http://websafe.kemainc.com/rass2009/

The California Residential Appliance Saturation Study, known as RASS, is a research effort funded by the California Energy Commission. The study relies primarily on mail surveys of customers to determine information on the installed base, use, and energy consumption of appliances and other energy-consuming end-uses. RASS has an online customer query tool that allows users to create custom reports with the data.

California Commercial End-Use Survey
Report: www.energy.ca.gov/ceus/
Database: http://capabilities.itron.com/CeusWeb/Chart.aspx

The California Commercial End-Use Survey (CEUS) is a survey of 2,790 randomly selected commercial facilities in the IOU territories. Detailed use and consumption data on interior and exterior lighting, as well as other end uses, were collected as part of this survey. Data were primarily gathered through on-site metering and reported at the segment level. CEUS has an online customer query tool that allows users to create custom reports with the data.

Advanced Lighting Baseline Study: Phases 1 and 2
www.CALMAC.org

This comprehensive study showcases data gathered from recent studies, in-store shelf surveys, and on-site audits. The primary focus of the study was to provide baseline data on key advanced lighting market indicators. Advanced lighting includes specialty shaped and dimmable CFLs, GU-24 base products, EISA-compliant halogen lamps, LED lamps/fixtures, and high-wattage CFLs.

Among other data, the study presents annual estimates of CFL sales, which declined significantly from 2008 to 2010.

Final Evaluation Report: Upstream Lighting Program
www.CALMAC.org

This program evaluation report set out to fulfill three main objectives: measure and verify the quantity of lighting measures installed by residential and non-residential customers, estimate gross energy and demand impacts of those measures, and provide the IOUs with an estimate of the program's net-to-gross.

The Science of Choice, Influence, and Effective Communication

In addition to the lighting literature reviewed for this study, we provide a synthesis of research on consumer behavior and decision making, based on previous research and in-house expertise. Program managers interested in learning more about this area of research should consider reading one or more of the following popular syntheses, which are fully grounded and reflective of the scientific research.

- *Nudge* (Thaler & Sunstein)
- *Switch* (Heath & Heath)

- *Made to Stick* (Heath & Heath)
- *The Social Animal* (Aronson)
- *How We Decide* (Lehrer)
- *Influence: Science and Practice* (Cialdini)

Context

California's energy efficiency strategic plan lays out two very ambitious goals:

1. Cut lighting energy consumption by 60-80 percent by 2020 and,
2. Transform the lighting market[1].

While it is clear that the California Public Utilities Commission and its collaborating regulatory bodies are looking to capture all available lighting energy savings and to ensure that those savings are retained, critical details are needed to fully understand the goals. What is the baseline against which the 60–80 percent cut is to be measured? What does it mean for the lighting market to be transformed?

One thing is clear—whether the baseline is 1990 levels or today's, whether transformation means ensuring half or 100 percent of all sales and installations are the most efficient lighting solution—cutting lighting energy consumption and changing the status quo in the market will require millions of people to choose the efficient options when designing, specifying, purchasing, and installing lighting products and solutions.

Is it possible to influence decisions at this scale? Yes, but to do so, SCE and PG&E must understand what science has revealed about the nature of human decision making and how to influence it.

What to Expect in the Rest of this Report

This report, therefore, focuses on how utilities can address and change customer decision making on a large scale to maximize savings at a reasonable level of expense and effort. In doing so, the following topics are addressed in independent, yet interrelated, sections:

- First, **The Science of Choice** provides an understanding of and new way of thinking about program research and design.
- Next, **Advanced Lighting Technologies** are discussed in detail to provide context for the remainder of the report. This discussion begins with a comparison of advanced, efficient technologies to incumbent, inefficient technologies in three main application categories: integral lamps (bulbs), linear lamps, and high bay/high output lighting. This section compares the key attributes of commonly used products and discussed benefits and possible pitfalls of focusing programs on those technologies. This section also explores advanced controls and integrated solutions.
- The **Non-residential Lighting** section of this report explores two possible approaches to addressing lighting in the non-residential sector: one in which lighting managers work with the "stream of influencers" for lighting decisions, and a segment-specific approach, in which lighting programs focus on particular segments of the non-residential sector.

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[1] Market transformation will be discussed at length later in the report.

- The **Residential Lighting** section looks first at what California has accomplished with CFLs in the residential sector, then presents data on the uptake of specialty CFLs and LEDs in homes.
- The report concludes with a discussion of **Market Transformation** in California and comparator regions and a **Recap** of the major findings and recommendations in the report, with a focus on priority data gaps that must be filled and program design approaches that will enable SCE and PG&E to more readily pursue California's lighting energy reduction goals.

The Science of Choice

What do we know about successfully influencing millions of choices?

Fortunately, there is more than 80 years of controlled and applied experimental research on how people think and what factors influence our choices. Most of this research is in the field of social psychology, and more recently in the fields of behavioral economics, neuroeconomics, and neuropsychology. Accessible syntheses of the findings from this literature have been published in the last several years; a bibliography is included under "Key Resources" in the previous section of this report.

For the purposes of this report, we focus on a few central findings from the research and those that are most readily applicable for program managers.

Most choices are automatic.

The first central finding from the scientific research is that most choices are automatic, or in technical terminology, heuristic.

Consider an example of human decision making in action. Brian Wansink, the Director of the Food and Brand Laboratory at Cornell University, is a bit of a practical joker and decided to conduct an experiment on 86 unwitting nutritional science experts attending a conference. The event included an ice cream social. There were two tables set up with the same ice creams. One table had medium-sized bowls and medium-sized ice cream scoops, while the other table had large bowls and large scoops; the guests served themselves. The people who used the large bowls and large scoops served themselves and ate more than 50 percent more ice cream![2]

Why? If you asked these experts whether foods like ice cream should be eaten in moderation and what serving sizes are appropriate, no doubt all have said one should eat such foods in moderation and take small portions, but they were not asked. Instead, they simply reacted automatically to their situation.

We are all of two minds.

The second central finding is that we are all of two minds. Each has its own characteristics, strengths, and weaknesses. The one responsible for making our automatic choices is described by some as the Doer, the Elephant, or by Thaler and Sunstein in their book *Nudge,* as the Homer Simpson. This cognitive unit is unconscious and operates effortlessly and very quickly. It communicates with the conscious brain via emotional signals.

The other cognitive unit is described variously as the Thinker, the Rider, and by Thaler and Sunstein as Mr. Spock, because it is the rational part of our brain, though the latter moniker definitely overstates its capabilities. We like to think of it more like Marge Simpson, a reasonable, reasoning person who can keep our inner Homer in check some of the time. This cognitive unit is self-aware; it is the part we talk to when we talk to ourselves. It is rational, but it is also slow, has limited capacity to handle multiple pieces of information at the same time, and requires energy and effort to operate.

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[2] Wansink, Brian, Koert van Ittersum, and James E. Painter (2006), "Ice Cream Illusions: Bowl Size, Spoon Size, and Serving Size," American Journal of Preventive Medicine, 145:5 (September), 240-243.

Chip and Dan Heath favor the metaphor of the Elephant and the Rider, which highlights both the strengths and weaknesses of each our two minds. The Elephant is strong, but easily distracted. If the elephant passes a water hole and wants to drink, there is nothing the rider can do to stop it. The Rider, however, is a thinker and planner, so if he plans ahead, he can chart a path that will not pass the waterhole.

This cognitive duality, recognized at least since Aristotle and possibly even earlier, is not just metaphorical. With modern medical, biological, and neurological research, we now know that it is a reflection of the basic physiology of the brain. The Thinker is our frontal cortex and the Doer is the rest of the brain. When they are in conflict, like when you are trying to resist taking a second piece of chocolate cake, both will show heightened neurological activity when viewed using functional magnetic resonance imaging (fMRI).

The Doer	The Thinker
The Elephant	The Rider
Homer Simpson	~~Mr. Spock~~ Marge Simpson
Unconscious	Self-Aware
Fast	Slow
Effortless	Effortful
Emotional	Rational
Rest of Brain	Frontal Cortex

Source: Thaler, R. and Sunstein, C. (2008). *Nudge: Improving decisions about health, wealth and happiness.* New Haven: Yale University Press; Heath and Heath. (2010) *Switch: How to change things when change is hard.* New York: Random House.

Most choices have to be automatic because we don't have the time or mental resources to consciously make all decisions required of us.

Conscious reasoning does not just require effort, it is an exhaustible resource.[3] Most of us have experienced this, especially those who have spent time with insistent young children; actively thinking and responding for an extended period is exhausting. Therefore, our brains are designed to be "cognitive misers,"[4] conserving our conscious mental reserves of energy for tasks that really require it. The only way we can operate effectively is to have most of our choices be automatic, which explains how we manage to do the following:

- Make 200 decisions about food every day.[5]

- Make 75 percent of purchase decisions in store…

- …in 2 to 7 seconds.[6]

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[3] Heath and Heath. (2010) *Switch: How to change things when change is hard.* New York: Random House.
[4] Aronson, E. (2011). *The social animal. (11th ed.).* New York: Worth/Freeman.
[5] Wansink, Brian (2010). *Mindless eating: Why we eat more than we think.* New York, NY: Bantam.

Choice Architecture

Situational Factors

If most of our decisions are automatic, what drives them? Situational factors, which include:

1. The default condition (status quo bias)
2. What we see other people doing (social norms/social proof)
3. Urgency, often due to limited supply, limited time (scarcity effect)
4. Whatever is readily at hand
5. Reminders, prompts, and other attention-getters
6. Relative cost/comparative value (contrast effect/anchoring and adjustment)
7. The number of things we have to choose among (choice overload/option paralysis)
8. Recommendations from people like us
9. Familiarity, confidence, and emotional associations (availability heuristic)

These factors are listed roughly in order of their importance and strength. The more factors present, the stronger the effect.

Choice architectures

The collection of situational factors that drive a choice is called the "choice architecture"[7]. All choices occur within a choice architecture and all choice architectures, whether consciously constructed or naturally occurring, will generate a particular pattern of responses within a population.

For example, making 401(k) enrollment require active selection of an investment fund and submission of paperwork (opt-in) results in only 30 percent enrollment, even after 6 months of employment. The result is that millions of people do not earn billions of dollars in compensation to which they are entitled. Changing the choice architecture so that new employees are automatically enrolled in a market tracking index fund, with the option of choosing another fund or not enrolling, results in 90 percent enrollment within the first 3 months.[8]

Thus, with an understanding of human decision making and the situational factors that influence it, it is possible to change choice architecture in a way that guides most people to the choice that is typically their best interest, while still leaving them the option of making a different choice.

Do all people act the same under the same conditions? No, but we all share certain hard-wired tendencies, so outcomes can be predicted for a population as a whole. The best example of what can be accomplished with carefully planned adjustment of a choice architecture to increase sales of energy-efficient lighting is probably Walmart's 18 Seconds Campaign to sell 100 million CFLs in 2007.

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[6] "The First Moment of Truth". (FMOT). Proctor and Gamble, reported by Nelson, E. and Ellison, S. "In a Shift, Marketers Beef Up Ad Spending Inside Stores" *Wall Street Journal.* September 21, 2005.
[7] Thaler, R. and Sunstein, C. (2008). *Nudge: Improving decisions about health, wealth and happiness.* New Haven: Yale University Press.
[8] Ibid. Save More Tomorrow 401(k) Plan, created by Richard Thaler and Shlomo Benartzi.

Case Study: Walmart's 18 Seconds Campaign[9]

Walmart set itself a goal of selling 100 million CFLs in one year. Not only did it meet that goal; it exceeded it by more than 35 percent, selling 137 million CFLs in 2007, or about one of every three CFLs sold in the United States.

How did Walmart do it? Mostly by using the behavioral tools described at the beginning of this section to radically readjust the choice architecture to favor CFLs.

Figure 4. Screw Base CFLs Imported for Final Sale in the United States
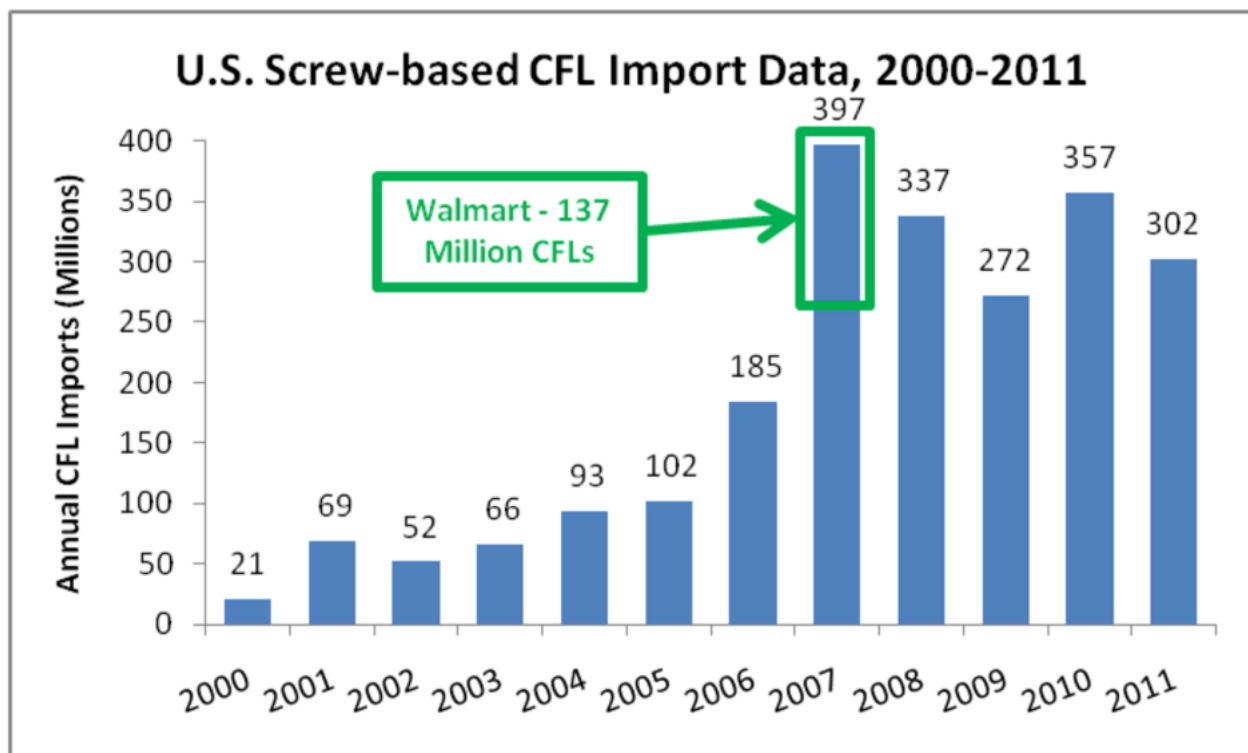
Source: U.S. Department of Commerce, U.S. International Trade Commission.
18seconds.org.

A classic marketing and merchandising account would describe Walmart's adjustments in terms of product, price, and placement. While this example relates to residential lighting, all the tools can be applied to any choice architecture, including those relevant to non-residential lighting.

- Product
  - Created cleaner, less cluttered packaging
  - Rebranded lamps "energy smart" bulbs
  - Simplified messaging to: "Saves $38 in energy"
  - Created an in-shelf education center – 10 types of CFL vs incandescent, with information on costs and savings
- Price
  - Negotiated a 20 percent price cut with GE: $7.58 vs. $9.58 (3-pack)

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[9] Walmart. . "Energy Effciency: Compact Fluorescent Light Bulbs".
http://walmartstores.com/Media/resources/12823281319983750.pdf. Accessed: 3/22/2012.

- Placement
  - Increased CFL shelf space by 40 percent
  - Stocked in a stand-alone section and also with incandescents
  - Placed CFLs at eye-level
  - Moved incandescents to the lower shelves below the corresponding CFLs
  - Installed in-aisle displays in grocery departments
  - Featured CFLs on the "Catch the Season" wall

Charles Fishman, writing in *Fast Company*, described the changes this way:

> "[Walmart] has made swirls the most prominent bulbs in the store: They are now on the top two or three shelves, at eye level, with the old-fashioned bulbs on the bottom. The prominence is eye-catching--three or four sections of shelves, with bright yellow and green packages of GE CFLs. Horizontally, the swirls form a band of energy savers that stretch down a third of the aisle. Vertically, each shelf unit is both energy savers and incandescent lamps -- 60-watt-equivalent swirls on top, old-fashioned 60-watts below….
>
> …The display, developed with GE, shows 10 categories of light bulbs, organized by room through a typical home, with a box showing the CFL appropriate in that area, the equivalent incandescent, and the energy savings a customer can reap from switching. Each category features a warm lifestyle photo of the room in question. Each box is color-coded to match color-coding on the shelves of CFL bulbs. – 12 feet of stock space devoted to display.[10]

Research in social psychology explains why these changes resulted in the dramatic increase in CFL sales.

Defaults
First, the increase in shelf space, promotion of CFLs to prime eye-level positions, and installation of in-aisle and "catch the season" displays made CFLs **the default** for impulse light bulb purchasers. With 75 percent of purchasing decisions made in-store, these changes alone would have dramatically shifted sales in favor of CFLs. However, this was just one of five behavioral tools Walmart used to guide customers' choices.

Prompts
Second, they improved the quality of and multiplied the number of **prompts** to purchase CFLs. Every package is a prompt and the improved packaging made each one much more effective. Increasing CFL shelf space by 40 percent increased the number of packages and thus the number of prompts. The additional placements outside the lighting department prompted a whole group of shoppers who might not have passed the lighting department to buy lightbulbs.

Mappings
Good mappings are important for promoting efficient lighting solutions. Efficient lighting products by definition have wattages that are much lower than those of the incandescents they replace. This creates a marketing challenge, as people have come to use wattage as a proxy for light output and don't actually know what a lumen is or how many a standard 60W, 75W, or 100W incandescent lamp produces. By placing the CFLs on shelves directly above the incandescents they replaced, Walmart created a masterfully intuitive, visual mapping that enabled people to find the right CFL without needing to learn what a lumen was or noticing the differing wattage.

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[10] Fishman, C. How many lightbulbs does it take to change the world? One. And you're looking at it. *Fast Company.* December 19, 2011.

Contrast Effect

Essentially all human judgments are relative. We judge whether something is big or small, expensive or cheap, by comparing it with something else. If no point of comparison is available, we look to what we can most readily recall. If we first see one thing and then another, we compare them to each other. Hence, discount stores' frequent use of "Their price: $500. Our price: $199" on price tags. This is called the contrast effect, or the anchoring and adjustment heuristic. Walmart used this effect in two ways. First, it introduced the $38 savings through simplified messaging on packages and in the educational display that would have made even the original $9.58 price seem lower. Second, it cut the price of the 3-bulb pack by 25 percent, to $7.58. In our minds, $9.58 is equal to $10, a two-digit number that seems like a sizable amount. However, $7.58 is in our minds $7, which is only one digit and seems significantly less than $10. This also had the effect of changing the per-bulb price from more than $3, a significant cost, to around $2, which seems inexpensive.

Simplified Choice and Reduced Uncertainty

The final behavioral tools Walmart brought to bear were simplification of choice and reduced uncertainty. It simplified choice to the ultimate extent with the displays in grocery aisles and on the "catch the season" wall: there was just one bulb option. The lighting department mapping made finding the right CFL easy, eliminating any uncertainty that might have derailed a purchase. The educational display had a similar purpose; it was intended to reduce doubt and uncertainty about the performance and light quality of the new product for the many customers who were not familiar with CFLs.

Table 1. Changes to Choice Architecture at Point-of-Purchase in Walmart to Favor CFLs

Category	Change	Defaults	Prompts	Mappings	Contrast Effect	Simplified Choice/ Reduced Uncertainty
Product	Cleaner, less cluttered packaging		X			
	"Energy smart" branded		X			
	"Saves $38 in energy"		X		X	
	In-shelf display – 10 types of CFL vs. incandescent lamps; costs and savings		X		X	X
Price	$7.58 vs. $9.58 (3-pack)				X	
	$2.52 vs. $3.19 (per bulb in 3-pack)				X	
Placement	Increased shelf space by 40 percent	X	X			
	Stocked together AND with incandescent lamps	X		X		X
	At eye-level	X	X	X		
	Right above similar incandescent lamps	X		X		
	In-aisle displays in grocery	X	X			X
	On "Catch the Season" wall	X	X			X

Walmart's merchandizing reshaped the choice architecture using five (or six, depending on how you count them) powerful behavioral tools.

Note that there were also factors outside Walmart stores that drove an increase in CFL sales. For example:

- Ads in Walmart print publications
- Major GE print advertising campaign to support the Walmart push
- PR: Fast Company, CNN's "In the Money," The Motley Fool, and Oprah promote CFLs
- High-level corporate commitment (CEO, hardware buyer, lighting merchant)
- Oil at $70 per barrel
- Hurricane Katrina

Nevertheless, the behavioral research and research on retail sales and promotion indicate that for products such as light bulbs, in-store factors are generally much more important than those outside the store.

Choice Overload

Having too many choices creates uncertainty and deters action—potentially a big problem in a post-EISA world. As the new efficiency standards take effect and new LED products arrive on the market, there has been a proliferation of lighting technologies, brands, and manufacturers. Consumers shopping at national home improvement stores who used to have to choose among incandescent, CFL, and halogen, are now faced with choices of incandescent lamps, EISA-compliant incandescent lamps, EISA-compliant halogens, CFLs, and LED lamps. Non-residential customers interested in purchasing LED lamps are faced with literally hundreds of choices.

Too much choice is not just moderately bad for program sponsors interested in encouraging adoption of new technologies, it is terrible. The classic experiment by Iyengar and Lepper illustrates why:

People visiting an upscale grocery store in Menlo Park, California encountered a jam-tasting display. One weekend, the display offered customers the opportunity to taste any of six unusual flavors of jam. On the second weekend, they could choose among 24 jams. All tasters were offered a $1 off discount coupon for that brand, but if they wished to purchase it, they had to go to the regular jam department in the market, which had 28 varieties of this brand of jam and dozens of varieties of other brands, to find the one they wanted.

About the same number and proportion of customers visited the store and encountered the display on each weekend. The extensive choice tasting display captured more attention and curiosity, attracting 60 percent of customers, compared to just 40 percent for the limited choice display. However, almost a third (30 percent) of those who encountered the limited choice display actually purchased jam, while only a tiny fraction (3 percent) of those who tasted jam from the extensive selection did so.

The critical observations are twofold: 1) limited choice was 10 times more effective at motivating purchases than extensive choice; and 2) extensive choice resulted in choice overload, discouraging people from making any purchase.

If choice is too extensive, people will revert to the status quo or not act at all. With the jam example, they didn't have to make a purchase. It is imperative that program managers ensure

that customers who are offered a choice of efficient products are presented with a limited set of choices rather than an extensive one.

	Extensive Choice	Limited Choice
Choices	24	6
Customers in Store	386	368
Encountered Display	62%	70%
Stopped	60%	40%
Purchased	**3%**	**30%**
Jams sampled (avg.) (range: 1 to 2)	1.50	1.38

Source: Iyengar, Sheena S., and Lepper, Mark R. 2000. When choice is demotivating: Can one desire too much of a good thing? *Journal of Personality and Social Psychology*, 79(6), 995-1006.

Incentives

Incentives are, of course, a tool regularly used by utilities to promote efficient products. They can be powerful tools for adjusting the perceived price of products and lowering the first price contrast with a less expensive incumbent technology. PG&E, SCE, and other utilities in California and beyond have used upstream incentives to manufacturers with great effect.

However, incentives that are directed at lowering prices should be used with care, as they have the potential to distort the market and customer perceptions of cost and value. If incentives lower the product price below that which manufacturers can meet in the absence of the incentive, it can create a permanent dependence, such that removal of the incentive creates a contrast effect that works to the detriment of the program. In this case, the new price would necessarily be higher than the incentivized price and would be perceived by customers as expensive relative to their established expectations, thereby lowering sales.

Incentives to market actors that encourage them to use other methods to boost sales do not suffer from this particular drawback, though they can still create dependence, making it difficult for the program sponsor to withdraw them.

Summary

Choice architectures drive most decisions.

Residential and non-residential lighting choices are shaped by existing choice architectures.

If you want to influence choices you need to:
- Understand the current choice architecture; and
- Figure out which tools will best enable you to reshape it to favor the choices you want people to make.

Tools that PG&E and SCE should consider, from strongest to weakest, include:
- Defaults/slanted odds
- Prompts
- Limited choice
- Clear mappings

- Reduced uncertainties and effort
- Contrast effects
- Incentives

Advanced Lighting Technologies

Reducing lighting energy consumption requires substituting new technologies or solutions for old, inefficient ones. Therefore, it makes sense to first assess the incumbent technologies, efficient solutions available to replace them, and any issues/concerns associated with their adoption.

Comparison of Incumbent and Efficient Technologies

Integral Lamp (Bulb) Applications

Replacement of incumbent inefficient integral lamp technologies with efficient lamps is cost-effective for CFLs and will be increasingly so for LEDs as prices fall. Programs should continue to target inefficient incumbent products for replacement wherever they are installed. However, there are a number of issues related to efficient bulbs that make them problematic for program implementers.

Incumbent	Efficient	Issues & Data Gaps
• Incandescent • Halogen • EISA-compliant halogen	• LED lamps	• Price • Variability in performance across models • Some uncertainty about lifetime and lumen maintenance • Incompatibility with controls • Production capacity [data gap] • Operation and maintenance (O&M) costs [data gap]
	• CFLs – Basic	• IOUs won't be able to claim savings
	• CFLs – Advanced	• Performance problems • Incompatibility with controls • Manufacturer and retailer profit [data gap]

Data Gaps:

1. Production capacity of LED manufacturers.
2. O&M costs for LED lamps.
3. Manufacturer and retailer profit for advanced CFLs.

Technology Comparison: Bulbs

Incandescent, halogen, and EISA-compliant halogen bulbs are the incumbent technologies for integral lamp applications. The incumbent inefficient technologies for this category are very inefficient, with efficacies around 15 lumens/watt, and have much shorter lifetimes (1,000 hours for incandescent). The efficient technology options for these applications include LED replacement lamps and CFLs. CFLs can last more than 10 times longer than incandescent

bulbs and EISA-compliant halogens, and 4 times longer than traditional halogens. In theory, LED lamps can last up to 5 times longer than CFLs, but that has not been fully validated, so most LED products do not advertize lifetimes greater than 25,000 hours. LED efficacies have theoretical maxima more than double those of CFLs, but current products are mostly just at parity. Replacement with CFLs is very cost-effective, while LEDs are still too expensive from a payback perspective.

Table 3. Technology Comparison: Bulbs

	LED Replacement Lamp (A Type)	CFL	Halogen	Incandescent
Lifetime (Hours)	25,000-50,000	10,000	2,500	750-1,000
Efficacy (lm/W)	52-65	55	14.6	13-16
Wattage	6-9	14-18	90	63-138
CRI	79-83	82	100	100
Color Temperature	2700-4000K	2700-5000K	2500-3400K	2700-3300K
Lumen Maintenance	Varies	Excellent	Good	Poor
Dimmability	Yes	Limited	Yes	Yes

Source: New Buildings Institute, "Fluorescent Lamps," *Advanced Lighting Guidelines*, accessed March 21, 2012 at <http://algonline.org/index.php?fluorescent-lamps>

Navigant Consulting, Inc., "Energy Savings Potential of Solid-State Lighting in General Illumination Applications: 2010 to 2030," U.S. DOE, February 2010

D&R International, Ltd., "LED Lighting Facts Product Snapshot: LED Luminaires," U.S. DOE, December 2011

Linear Lamp Applications

T8 and T12 lamps are the incumbent technologies for linear tube lamp applications. Efficient technologies for these applications include super-efficient T8s, low-wattage T8s, T5s, and LED replacement lamps.

The Advanced Lighting Guidelines warn of a potential "snapback" effect in which high-efficiency T8s may be intentionally or inadvertently replaced with less efficient T8 lamps or EISA-compliant T12s. This creates two problems: reduced lamp efficiency and potential ballast incompatibility that can lead to further performance issues. Behavioral research suggests that it might be sufficient to install a sticker prompt inside new or retrofitted efficient fixtures that says, "Use super T8 lamps only." T5 lamps are sized differently and require unique fixtures. This reduces the risk of snapback, but at an increased installation cost. New LED troffer luminaires avoid the issue of snapback, but come with performance uncertainty and higher first cost.

Incumbent	Efficient	Issues & Data Gaps
• T12 • T8	• Super-efficient T8	• Risk of snapback • O&M costs [data gap]
	• Low-wattage T8	• Slightly lower lumen output • Risk of snapback • O&M costs [data gap]
	• T5	• O&M costs [data gap] • Price [data gap]
	• LED replacement lamps	• Low lumen output and efficacy • O&M costs [data gap]

Data Gaps:

1. O&M costs for T12s, T8s, T5s, and LED replacement lamps.
2. Price data for T5s.

Technology Comparison: Linear Lamps

Fluorescent T12s have the highest wattage of all linear lamp technologies. T8 and T5 lamps use less energy, have long lifetimes, and provide excellent lumen maintenance. Some LED replacement lamps do not yet exceed linear fluorescents in efficacy and have much lower light output.

Table 4. Technology Options: Linear Tubes

	LED Replacement Lamp (Linear)	Fluorescent T5	High Efficiency T8	Fluorescent T8	Fluorescent T12
Lifetime (Hours)	25,000-50,000	20,000	24,000	24,000	20,000
Efficacy (lm/W)	72-91	103.6	97	93.8	74.3
Wattage	14-19	28	25	32	40
CRI	72-81	78	80	70-90	70
Lumen Maintenance	Varies	Excellent	Excellent	Excellent	Excellent
Dimmability	Yes	Yes	Yes	Yes	Yes

Source: New Buildings Institute, "Fluorescent Lamps," *Advanced Lighting Guidelines*, accessed March 21, 2012 at <http://algonline.org/index.php?fluorescent-lamps>

Navigant Consulting, Inc., "Energy Savings Potential of Solid-State Lighting in General Illumination Applications: 2010 to 2030," U.S. DOE, February 2010

D&R International, Ltd., "LED Lighting Facts Product Snapshot: LED Luminaires," U.S. DOE, December 2011

High Bay/High Output Applications

High bay/high output applications are dominated by the following incumbent technologies: low pressure sodium, high pressure sodium, mercury vapor, metal halide, and induction. Efficient options for these applications include LED luminaires, unsaturated ceramic metal halide fixtures, and induction lamps.

Incumbent	Efficient	Issues & Data Gaps
• Low pressure sodium • High pressure sodium • Mercury vapor • Metal halide • Induction	• LED luminaire	• Variability in performance across models • Some uncertainty about lifetime and lumen maintenance • Incompatibility with controls • O&M costs [data gap] • Price [data gap] • Performance of off-the-shelf products [data gap] • Production capacity [data gap]
	• Unsaturated ceramic metal halide	• O&M costs [data gap] • Price [data gap]
	• Induction	• O&M costs [data gap] • Performance of off-the-shelf products [data gap] • Price [data gap]

Data Gaps:

1. O&M costs for LED luminaires, unsaturated ceramic metal halide, and induction.
2. Price data for LED luminaires, unsaturated ceramic metal halide, and induction.
3. Performance of off-the-shelf LED and induction products.
4. Production capacity for LED manufacturers.

Technology Comparison: High Bay/High Output

Mercury vapor, which makes up only 5 percent of inventory among these applications, is the worst-performing technology by several metrics.[11] The efficacy is half that of LED luminaires, and two-thirds that of induction lamps. In addition, mercury vapor has very poor color rendering, with only high pressure and low pressure sodium having worse CRIs.

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[11] U.S. DOE, "2010 U.S. Lighting Market Characterization," January 2012.

The performance of LED luminaires varies widely across models. Because there have been no testing programs targeting off-the-shelf products, it is difficult to be certain about how products perform in the field. Nevertheless, the majority of LED installations have been in high bay/ high output applications.

Induction lighting is an alternative efficient solution; however, California utility program managers report that poor performance of incentivized products led to customer dissatisfaction. At present there are no standardized performance qualification requirements for induction lamps or off-the-shelf verification. The DesignLights Consortium might be an appropriate forum for creating specifications, given its commercial focus and direct sponsorship by utilities interested in identifying induction products worth incentivizing.

While ceramic metal halide products have long lifetimes and high efficacy, their lumen maintenance is very poor.

Table 5. Technology Comparison: High Bay/High Output

	LED Outdoor Luminaires	Induction	Mercury Vapor	Metal Halide (Ceramic)	High Pressure Sodium	Low Pressure Sodium
Lifetime (hrs)	Varies	100,000	16,000-24,000	20,000	20,000-24,000	18,000-20,000
Efficacy (lm/W)	≤100, but increasing	70	< 50	85-90	70-120	100-185
Wattage	≤300	200	179-225	50-400	35-1000	90-180
CRI	60-90	80-88	45	80+	22	10
Color Temperature	3000-8000K	5000K	3200-7000K	3000K	1900-2200K	<2200K
Lumen Maintenance	Excellent*	Excellent	Poor	Poor	Excellent	Excellent
Dimmability	Yes*	Yes	Limited	Limited	Limited	Limited

Note: Test protocols for lumen maintenance for LED luminaires have not been standardized and models vary in quality. Some models have excellent lumen maintenance and are dimmable, while others do/are not.

Source: New Buildings Institute, "HID Lamps," *Advanced Lighting Guidelines*, accessed March 21, 2012 at <http://algonline.org/index.php?hid-lamps>

New Buildings Institute, "Other Light Sources," *Advanced Lighting Guidelines*, accessed March 21, 2012 at <http://algonline.org/index.php?other-light-sources>

Navigant Consulting, Inc., "Energy Savings Potential of Solid-State Lighting in General Illumination Applications: 2010 to 2030," U.S. DOE, February 2010

Lighting Controls and Integrated Solutions

Lighting Controls

Common lighting control technologies include dimmers, light sensors, motion detectors, timers, and energy management systems (EMS). All of these options have a reputation for unreliability among lighting contractors. Often, improper selection, placement, installation, or programming (for EMS) can lead to occupant dissatisfaction.[12] In addition, LED technologies are largely incompatible with controls.

When installed properly, however, these technologies can prove very effective. In a large-scale street lighting installation, the Northwest Energy Efficiency Alliance (NEEA) achieved energy savings of 20-40 percent using a combination of lamp-level controls networked to a central management server. In addition, NEEA saw reduced down-time and more productive maintenance schedules due to accurate and timely reporting.[13]

Control Types	Issues and Data Gaps
- Dimmers - Light sensors - Motion detectors - Timers - Energy management systems (EMS)	- Reputation for unreliability among lighting contractors - Improper selection, placement, and installation lead to occupant dissatisfaction - Limited data on performance and reliability of lighting controls [data gap]

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[12] Vaidya et al. "What's Wrong With Daylighting? Where it Goes Wrong and How Users Respond to Failure." The Weidt Group. Accessed March 20, 2012 at <www.daylighting.org/WeidtGroup-SS04_Panel7_Paper30.pdf>

[13] Energy Solutions. "NEA Study: Technology and Market Assessment of Networked Outdoor Lighting Controls." Prepared for Northwest Energy Efficiency Alliance. June 30, 2011.

Integrated Solutions

Integrated solutions combine efficient lighting and advanced lighting controls with other building design options that can decrease energy consumption for lighting. Elements of integrated solutions include windows, skylights, daylighting devices, automated window coverings, and proper space configuration. Integrated solutions can be installed only during new construction or extensive building renovations. Delamping – removing unnecessary light fixtures – is another effective strategy for reducing lighting energy.

A useful case study involves The New York Times building. Using an automated shading system and lighting controls such as independent dimming ballasts on each fixture and occupancy/photo sensors, the building saved 70 percent on lighting energy versus code.

Elements	Issues and Data Gaps
• Efficient luminaires • Advanced lighting controls • Windows, skylights, daylighting devices • Automated window coverings • Proper space configuration	• Can be done only during new construction or extensive building renovations • Requires capable design team

Issues and Recommendations for Efficient Technologies

Compact Fluorescent Lamps (CFLs)

CFLs are the most common efficient technology for bulb applications, filling nearly 30 percent of available sockets in California.[14] The great majority of installed CFLs are basic bare spirals. Going forward, IOUs in California will not be able to claim savings from these bulbs and must instead rely on specialty CFLs and LED replacement options. However, there is some concern regarding the performance of these specialty products and their practicality.

During off-the-shelf verification testing for the ENERGY STAR program, 47 percent of specialty CFLs failed at least one of the ten performance tests. Covered products fared worse, with two-thirds of tested models failing. Even basic CFLs had 21 percent of tested models fail at least one test. It is important to note that the rate of failures in testing is not likely to directly correspond to the rate of failures among the pool of products actually purchased; the pool of products purchased is a function of market share and is likely to be dominated by a small number of popular models from manufacturers that sell through the major retail outlets. Nevertheless, the current rates of specialty lamp failure are sufficiently high that there is a much greater likelihood that some of the failing products have a significant market share. The concern is that poor performance will generate dissatisfaction and rejection of the technology, possibly having a negative impact on the sponsoring utility.

We do not have a clear explanation for the high level specialty lamp verification testing failures. EPA is evaluating options for addressing the issue, but has not announced an official policy.

Figure 5. ENERGY STAR Third Party Testing Results as of August 1, 2011
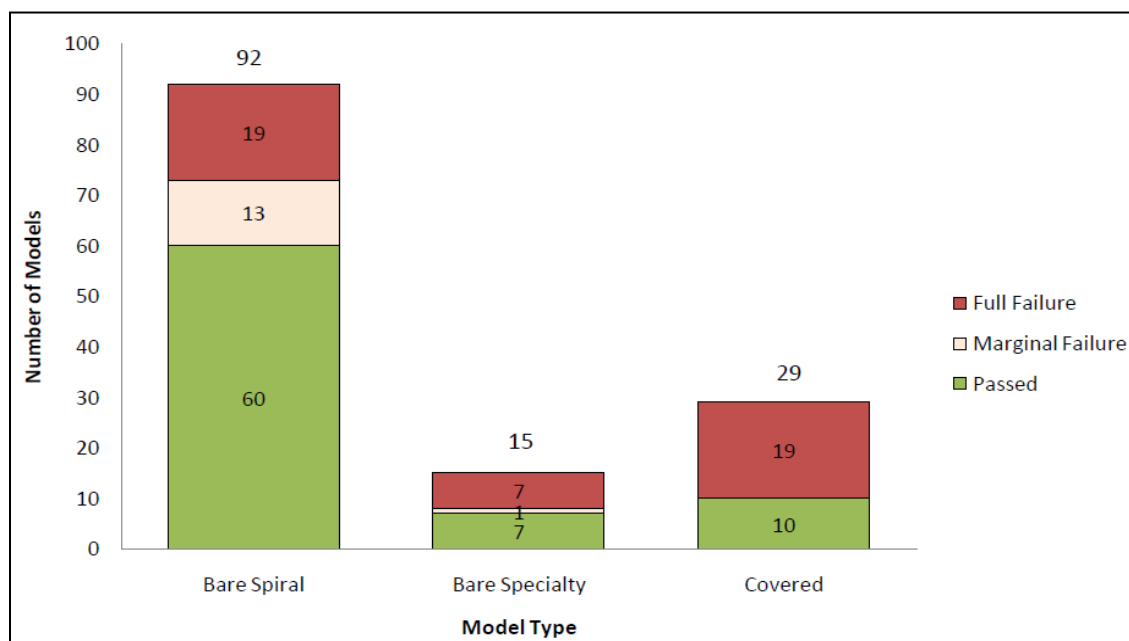
Source: D&R International, "ENERGY STAR CFL Third Party Testing and Verification Testing: Off-the-Shelf CFL Performance, Trends, and Implications," U.S. EPA, February 2012.

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[14] KEMA, Inc. "Final Evaluation Report: Upstream Lighting Program, Volume 1." Prepared for the California Public Utilities Commission, Energy Division. February 8, 2010.

LED A-Lamp Replacements

LED replacement lamps also have performance uncertainties. LED efficacy and light output are highly variable. There are many models available with similar or better performance than CFLs; though other parameters, such as CRI, can vary considerably. Not all products described as A-lamp replacements are truly omnidirectional, though the new ENERGY STAR specification will have criteria to address this. High first cost remains an issue. Specialty LED lamp products may develop market share faster, as people evaluate cost on a relative basis and the incumbent technology prices are already much higher than for general service/basic products.

Figure 6. A-Lamp Performance Compared to EISA, 2012-2019
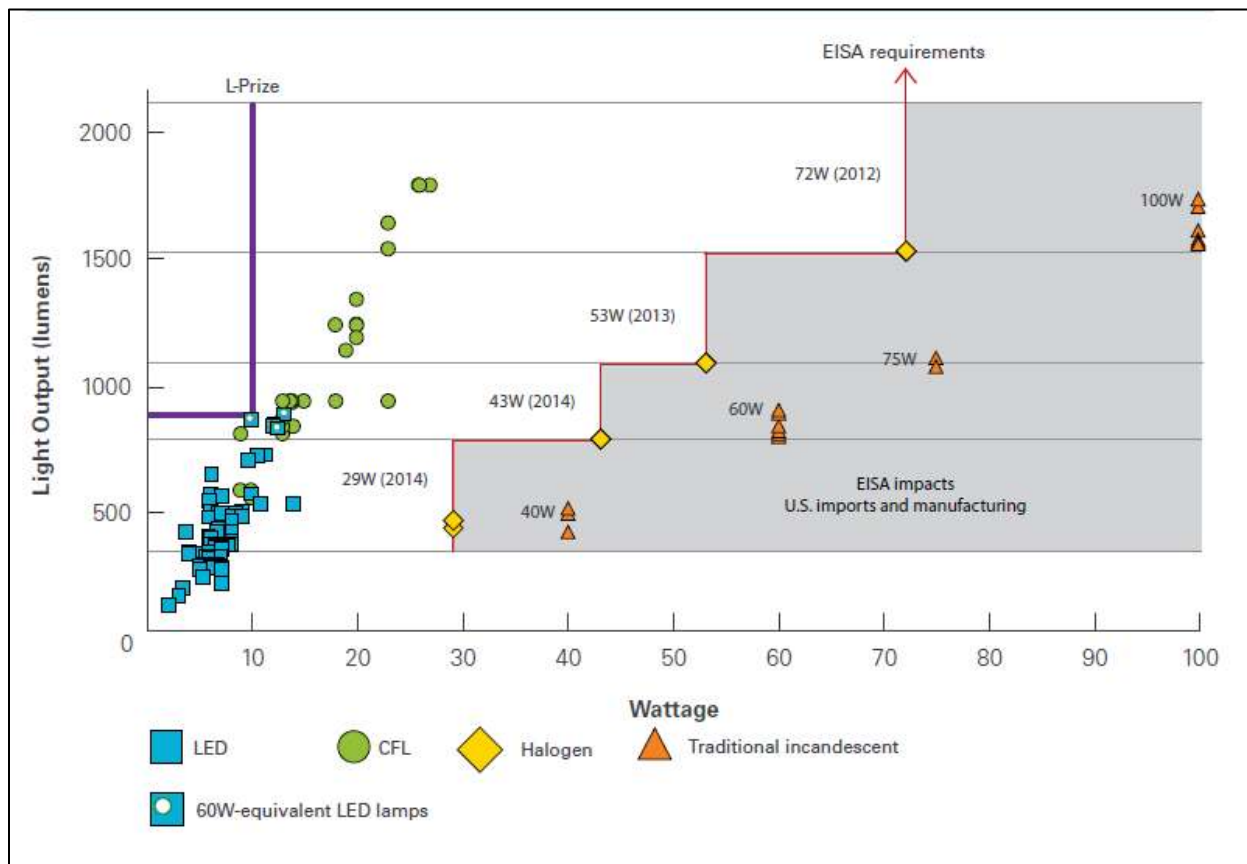
Source: D&R International, "LED Lighting Facts Product Snapshot: LED Replacement Lamps," U.S. DOE, May 2011.

LED Troffer Replacement Luminaires

Existing fluorescent lighting can also be replaced with new LED fixtures, rather than simply replacing lamps. Many manufacturers are marketing fixtures with the same shape as traditional tube fluorescent fixtures. The performance of these products, like all LED luminaires, varies widely, but products with high CRI and competitive efficacy are emerging. Advanced LED optics may enable generating more even illumination with fewer lamps.

Figure 7. Troffer Light Output and Efficacy
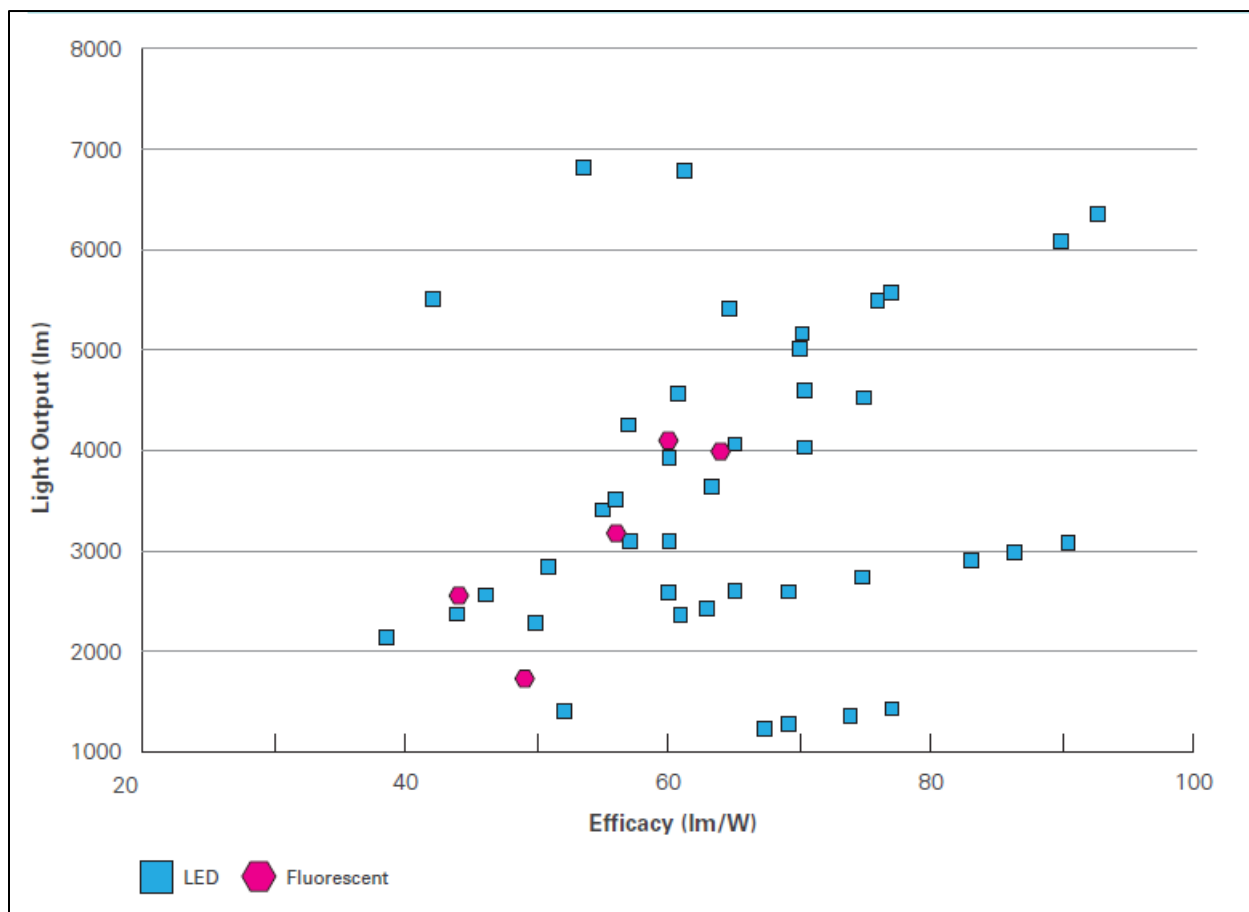
Source: D&R International, "LED Lighting Facts Product Snapshot: LED Luminaires," U.S. DOE, December 2011.

LED Performance Variability

There is a great degree of variability in color temperature and color rendering among linear LED replacement lamps. While linear fluorescent lamps typically have CRI ratings of at least 80, many LEDs do not meet that threshold.

Figure 8. Indoor LED Luminaire CRI and CCT
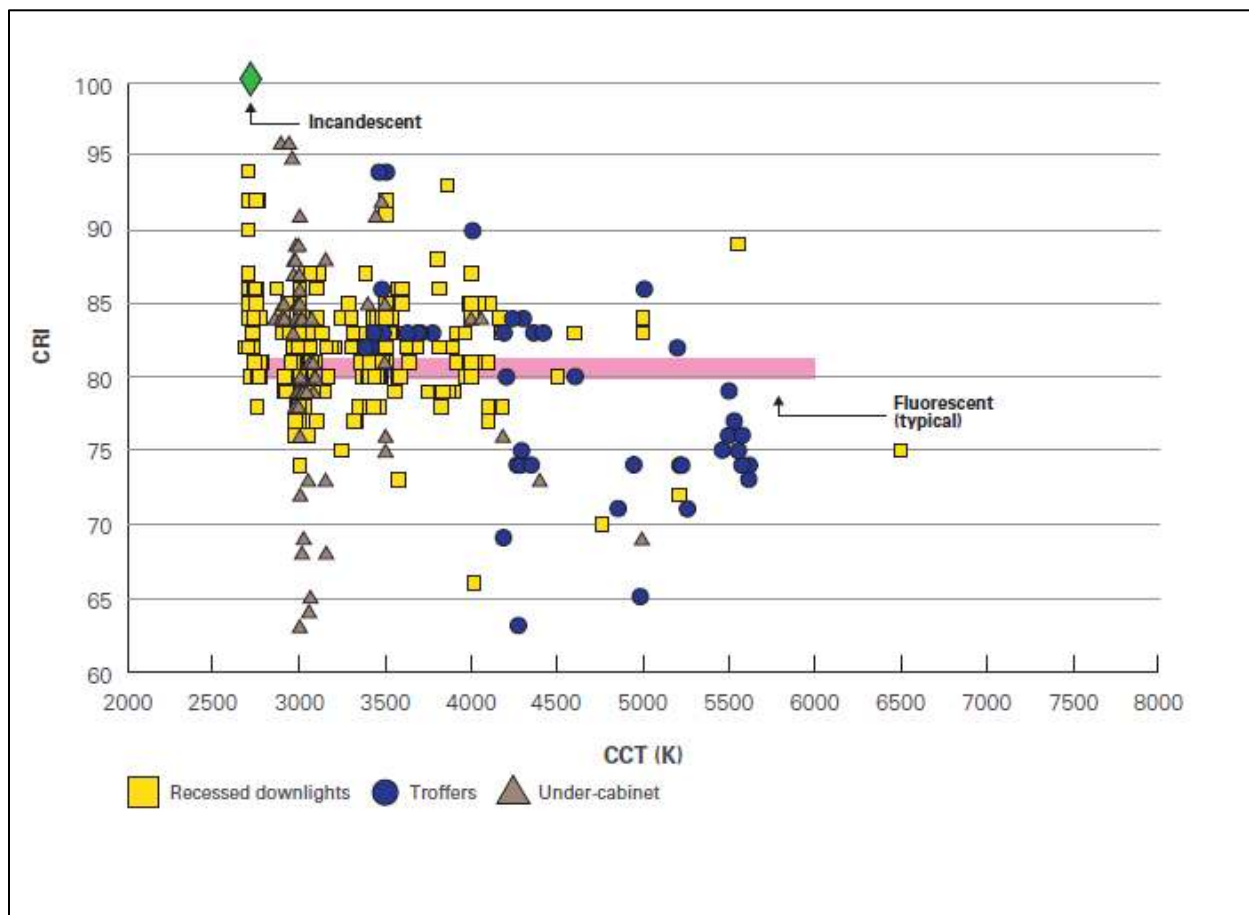
Source: D&R International, "LED Lighting Facts Product Snapshot: LED Luminaires," U.S. DOE, December 2011.

Programs for Identifying Top-Performing LED Products

There are several programs designed to identify the top-performing LED products:

- **DOE's LED Lighting Facts program** applies to all LED lamps and luminaires and provides a way to independently verify the performance of LED products. As of March 2012, there were more than 4,500 products from more than 300 manufacturers participating with LED Lighting Facts.[15]
- **The ENERGY STAR program** qualifies residential lamps and luminaires with independent 3rd party test data that shows that they meet specified performance criteria.
- **The DesignLights Consortium** (DLC) lists more than 9,500 models on its qualified products list and serves a parallel purpose to ENERGY STAR for commercial LED lighting.
- **DOE Commercial Building Energy Alliance** (CBEA) has been developing and publishing application-specific voluntary performance specifications for efficient products. It has published specifications on LED Site (Parking Lot) Lighting and High-Efficiency Parking Structure Lighting Technologies, which covers fluorescent, induction, and LED technologies.

Program implementers can use LED Lighting Facts, ENERGY STAR, the DLC, or the DOE CBEA Performance Specifications to identify products with acceptable or exemplary performance and ensure that only high-quality products receive incentives.

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[15] LED Lighting Facts, U.S. DOE, accessed March 20, 2012 at

Improvement in LED A-Lamp Performance

Many LEDs do not match the light output of incumbent technologies. In early 2011, the brightest LED A-lamps on the market could produce 800 lumens, approximately equal to 60W incandescents. Currently, the brightest lamps can match 75W incandescents (~1100 lumens). In its Multi-Year Program Plan (MYPP) for solid-state lighting, DOE projects LED A-lamps to produce enough light to be used in 75W incandescent applications by the end of 2012, and to have the lumen equivalency of 100W incandescent lamps by 2015. Projections based on data in the LED Lighting Facts Product Database suggest that the market is likely to exceed those expectations and deliver 1600 lumen lamps in 2013.

Figure 9. Past and Projected Growth of LED A-Lamp Light Output
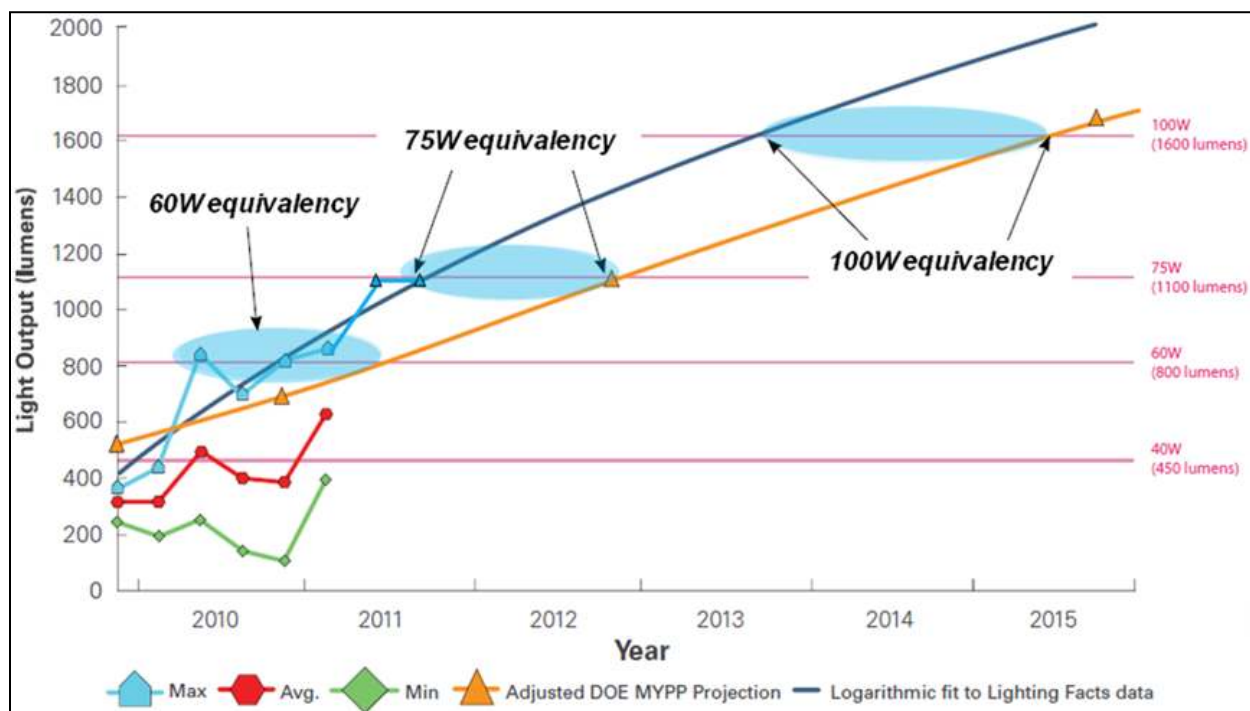
Source: D&R International, "Are They There Yet? The Status of LED Replacement Lamp Performance Based on the LED Lighting Facts Database," In the Association of Energy Service Professionals 22nd National Conference and Expo, February 6, 2012.

Bardsley Consulting, et al., "Solid-State Lighting Research and Development: Multi-Year Program Plan," U.S. DOE, March 2011.

LED A-Lamp Prices

The price of LED replacement bulbs (and LED products in general) remains high relative to other technology options, but it has been falling. DOE projects that by 2015, the price of an 840 lumen lamp (60W incandescent replacement) will be $8.40.

Figure 10. White Light Integrated LED Lamp Price Projection
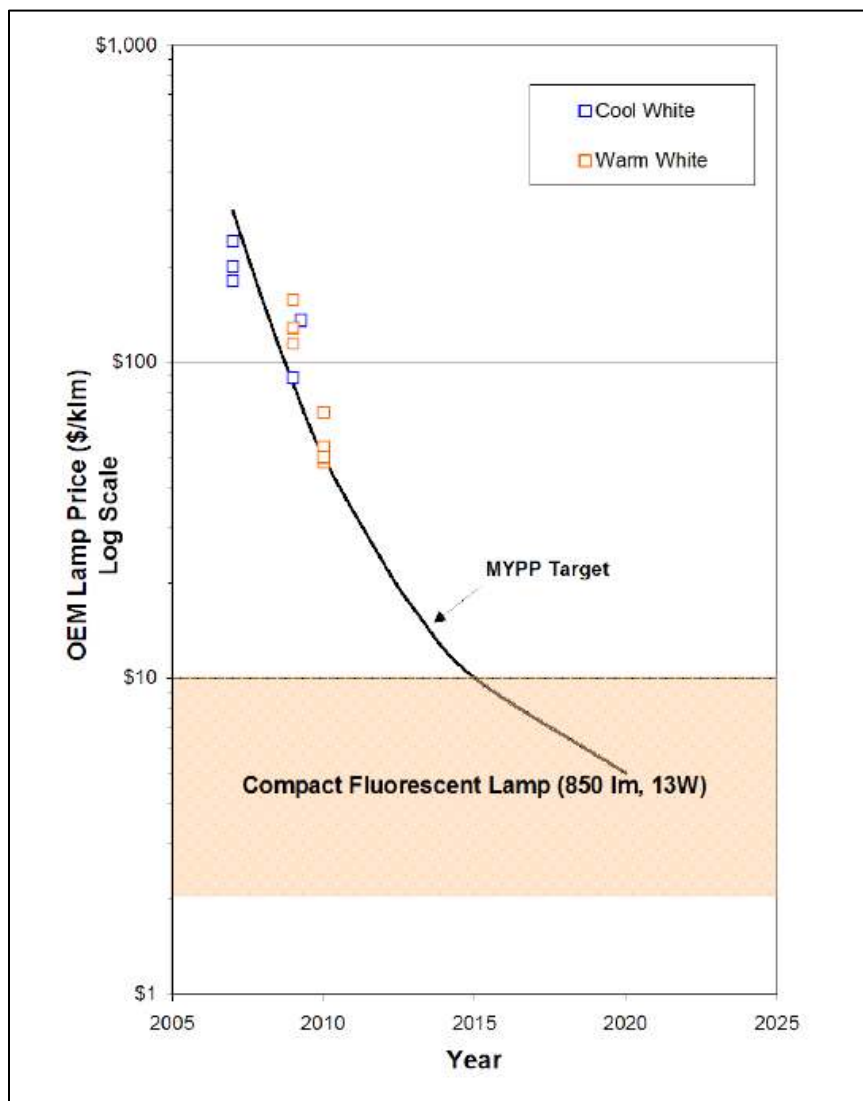
Note: Assumes current prices for compact fluorescent price range (13W self-ballasted compact fluorescent; non-dimmable at bottom and dimmable at top).

Source: Bardsley Consulting, et al., "Solid-State Lighting Research and Development: Multi-Year Program Plan," U.S. DOE, March 2011

Linear Fluorescent Lighting is Very Common

Linear fluorescent lighting makes up more than 80 percent of non-residential interior lighting. Less efficient T12s have historically dominated the installed base of non-residential interior lighting; however, the current market share of different fluorescent technologies is unknown.

Figure 11. Share of Installed Base in Non-Residential Sectors
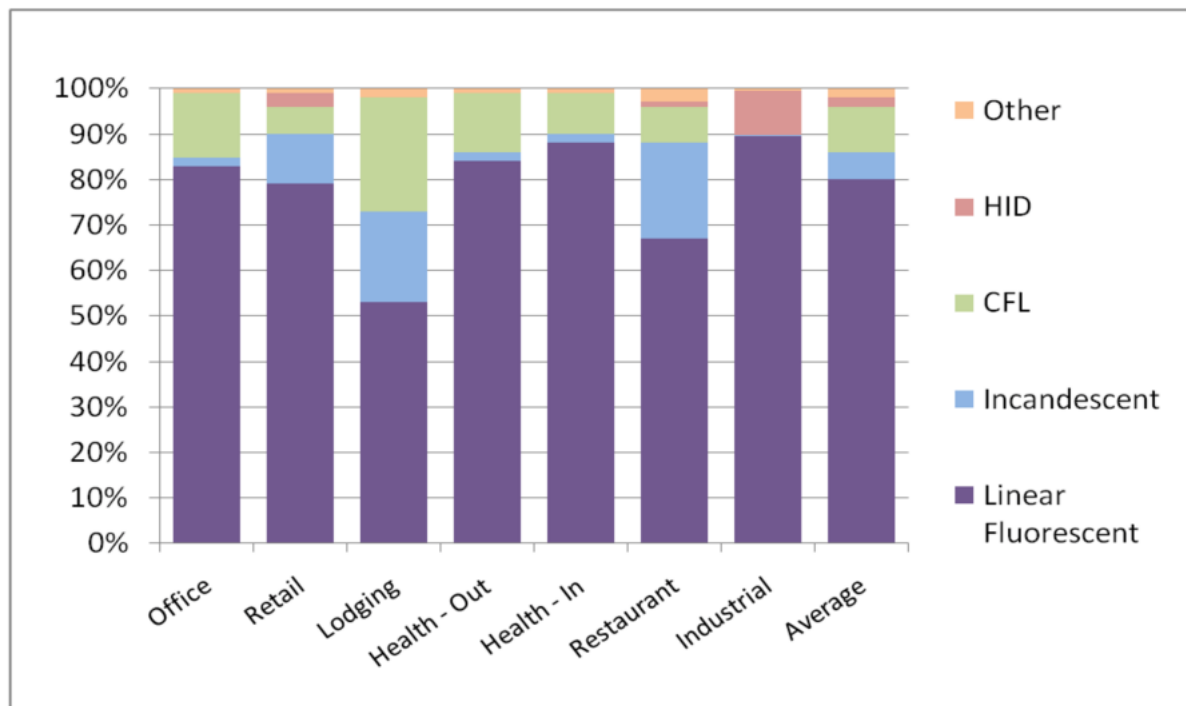
Source: Navigant Consulting, Inc. "2010 U.S. Lighting Market Characterization." U.S. DOE. January 2012.

Program Recommendations for Linear Lighting

There are four main options for improving the efficiency of T12 fixtures:

- Install T8 lamps and electronic ballasts.
- Install high-efficiency T8 lamps and ballasts.
- Install new T5 fixtures, lamps, and ballasts.
- Install new LED troffer luminaire fixtures.

As Figure 8 shows, high-efficiency T8s provide greater savings relative to T12s—35 kWh/year—than conventional T8s or T5s. Using advanced controls or LED luminaires can save even more energy.

Figure 12. Annual Energy Savings Relative to T12
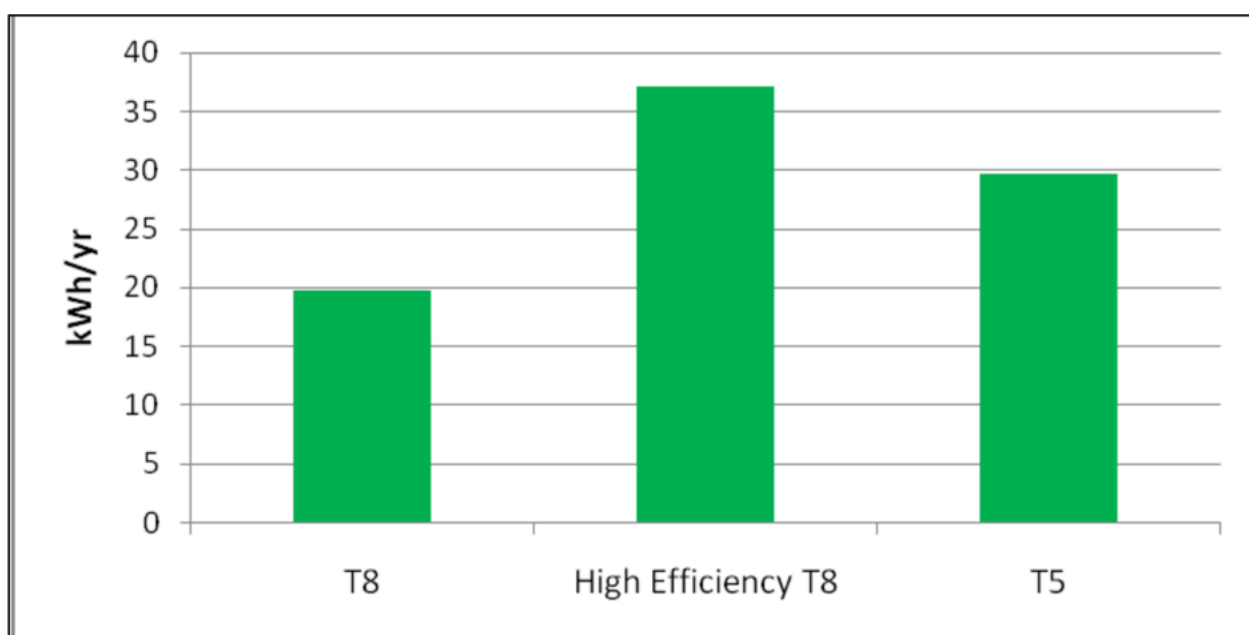
Source: Navigant Consulting, Inc., "Energy Savings Potential of Solid-State Lighting in General Illumination Applications: 2010-2030," U.S. DOE, February 2010.

U.S. DOE, "Energy-Efficient Hospital Lighting Strategies Pay off Quickly," July 2011.

Performance Tradeoffs of Fluorescent Tube Technologies

The performance of fluorescent lighting varies depending on the lamp diameter. While T5s have the highest efficacy ratings and best lumen maintenance, they fall slightly below T8 lamps in terms of lifetime and CRI. T12s have the worst performance among all technology options.

Figure 13. Linear Fluorescent Performance Comparison
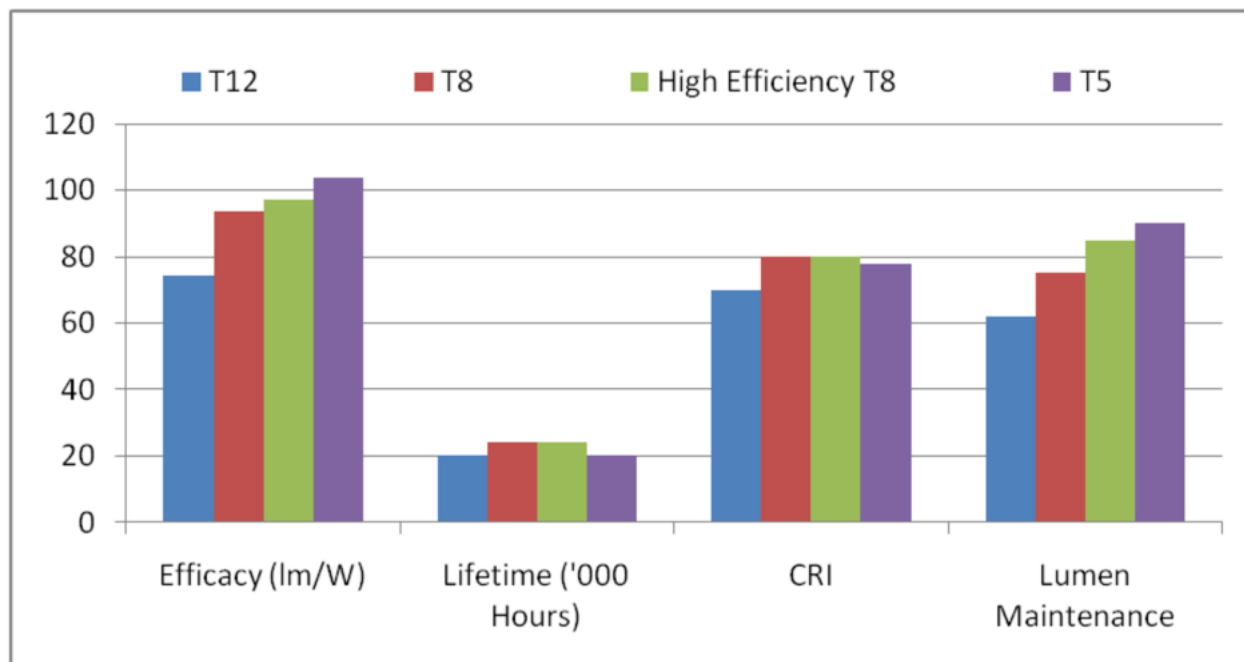
Source: Navigant Consulting, Inc., "Energy Savings Potential of Solid-State Lighting in General Illumination Applications: 2010-2030," U.S. DOE, February 2010.

U.S. DOE, "Energy-Efficient Hospital Lighting Strategies Pay off Quickly," July 2011.

Major Factors for Lighting Purchase Decisions

The major factors that determine how attractive a given efficient lighting technology is to a purchaser are:

- Price
- Lifetime and lumen maintenance
- Color performance
- Installation costs
- Operation and maintenance costs
- Applicability and compatibility with controls
- Extent of project scope

Data Gaps:

1. Price, installation costs, and O&M costs of non-residential options
2. Lifetime and lumen maintenance of LEDs beyond 20,000 hours

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Summary

There are numerous available efficient technologies and solutions capable of replacing existing inefficient products. For each of these potential technologies, the reviewed literature identified a variety of known issues.

Variable performance – The proliferation of products with a broad range of performance quality makes it difficult for purchasers to identify the best performers. Independent testing and performance standards like ENERGY STAR and DesignLights Consortium enable easy identification of superior products. In addition, the LightingFacts Energy Efficiency Sponsor Partner Resource enables creation and publishing of custom criteria.

Off-the-shelf performance – A high percentage of off-the-shelf specialty CFLs failed ENERGY STAR Third Party Verification Testing. It is not yet clear why so many specialty CFLs underperformed their stated specifications.

High first cost – The first cost of LED products is very high, but falling prices mean this issue is expected to diminish over time. In the meantime, lower lifetime costs can be persuasive. LEDs are guaranteed to have lower lifetime costs than incandescent, halogen, and mercury vapor lamps. Strength of cost-savings argument in other cases depends on avoided operation and maintenance costs, and actual LED product lifetimes. O&M costs are a data gap, but CA program managers indicated that they have good information on these for some applications.

Imperfect substitutes – Variability in color quality creates uncertainty about whether a given product will substitute for existing halogen or incandescent lamps in retail and other applications where color rendering is of high importance. It may be that specific combinations of CRI and CCT will be preferred substitutes, but this would need to be tested. It may be too early to target these applications, so for now it is better to target those applications where this is not an issue.

Non-Residential Lighting

Context

Of the energy used for lighting in the United States, 75 percent is consumed in the non-residential sector by only 25 percent of lamps. The underlying reason for this disparity is that average hours of use are between 6.8[16] and 11.2[17, 18] hours per day, compared to just 1.5 hrs per day[19] in the residential sector (in California). Lamp wattages are higher in the non-residential sector, as well. There are two important implications from these observations and one important corollary:

1) Annual energy savings per lamp will be 4 to 7 times higher in the non-residential sector than in the residential sector.

2) It is possible to rapidly transform the installed base. High hours of use mean that lamps burn out and are replaced much more frequently in the non-residential sector (up to 38 percent of lamps are replaced annually for some outdoor lighting applications[20]), so that saturation of the installed base with long-lived energy-efficient lamps will also occur more rapidly than in the residential sector. This latter conclusion assumes that market shares for efficient lamps are constant across the two sectors.

   Corollary: The higher the market shares of efficient lamps, the faster the rate of transformation.

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[16] KEMA, Inc. "Final Evaluation Report: Upstream Lighting Program, Volume 1." Prepared for the California Public Utilities Commission, Energy Division. February 8, 2010.

[17] For commercial sector lighting. Reported values for industrial and outdoor lighting are 13.0 and 11.7, respectively.

[18] Navigant Consulting, Inc. "2010 U.S. Lighting Market Characterization." Prepared for U.S. DOE. January 2012.

[19] D&R International, Ltd. "Better Data Better Design Market Insights: CFL Savings Take Another Hit." March 2012., based on KEMA, Inc. "Residential Lighting: Shedding Light on the Remaining Energy savings Potential in California." Proceedings of the 2011 International Energy Program evaluation Conference. 2011. Average hours of use for CFLs in CA in 2009 was 1.9 hrs/day, due to the higher rate of lamp failure and replacement among higher use lamps. .

[20] California Lighting Technology Center. "2010 Lighting Technology Overviews and Best-Practice Solutions." Prepared for the California Public Utilities Commission. 2010

Number of Lamps   Energy Use

	Number of Lamps	Energy Use
● Residential	71%	25%
● Commercial	25%	50%
● Industrial	2%	8%
● Outdoor	2%	17%
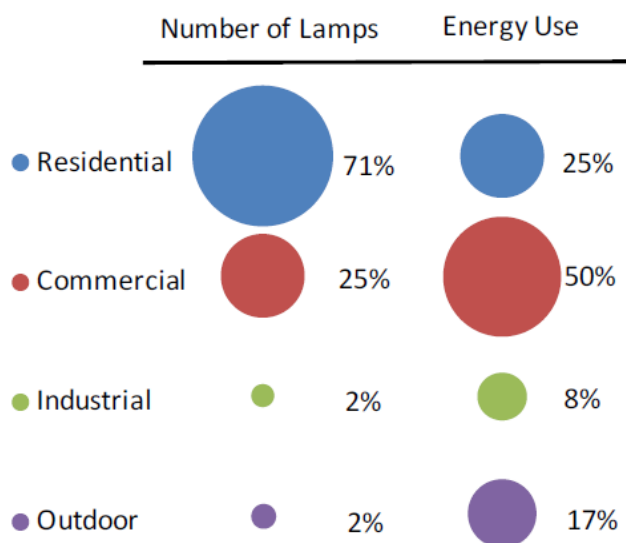
Source: Navigant Consulting, Inc. "2010 U.S. Lighting Market Characterization." U.S. DOE. January 2012.

We suggest that there are three broad strategies for reducing lighting energy use in the non-residential sector, which can be applied individually or in concert:

1. Target specific products or applications.
2. Identify and work with those who influence decisions about lighting installations.
3. Target specific, high-potential segments of the sector.

The first of these approaches is discussed above in the Advanced Lighting Technologies section of this report. The second and third approaches are discussed below.

The "Stream-of-Influencers" Approach
to Driving Higher Rates of Adoption of Energy-Efficient Non-Residential Lighting

The theory behind the stream-of-influencers approach is simple: Why hunt through the forest when you can wait by the waterhole?

To increase the uptake of efficient lighting solutions, efficiency program managers must somehow reach those organizations that are planning to undertake new construction, major renovation, or small-scale lighting installation projects while they are in the process of designing, specifying, and procuring products.

For most organizations, such projects are infrequent and the period in which lighting decisions can be influenced is brief. Their interest and retention of information related to efficient lighting will be extremely low during the vast majority of the time, when they are not in the midst of planning the project. Thus, it is extremely difficult and resource intensive to reach these organizations through traditional marketing strategies. Trying to reach them is like hunting through a vast forest in search of scarce game.

Just as the hunter can improve his chances of catching dinner by staking out the water hole, energy efficiency program managers can best encourage adoption of energy-efficient lighting solutions by working with the companies that all organizations engaged in lighting upgrades small and large must engage—electrical engineers, architects, distributors, installation contractors, and manufacturers.

According to the literature, these market actors strongly influence the choice of lighting product and are centralized, easily identified nodes through which multiple lighting decisions are funneled daily.

Figure 15 shows the flow of influence for lighting installations. There are two types of events: replacements/small-scale renovations, which typically involve distributors and electrical contractors; and new construction/large-scale renovations, which typically involve architects or electrical engineers and electrical contractors.

Figure 15. Non-Residential Stream of Influencers
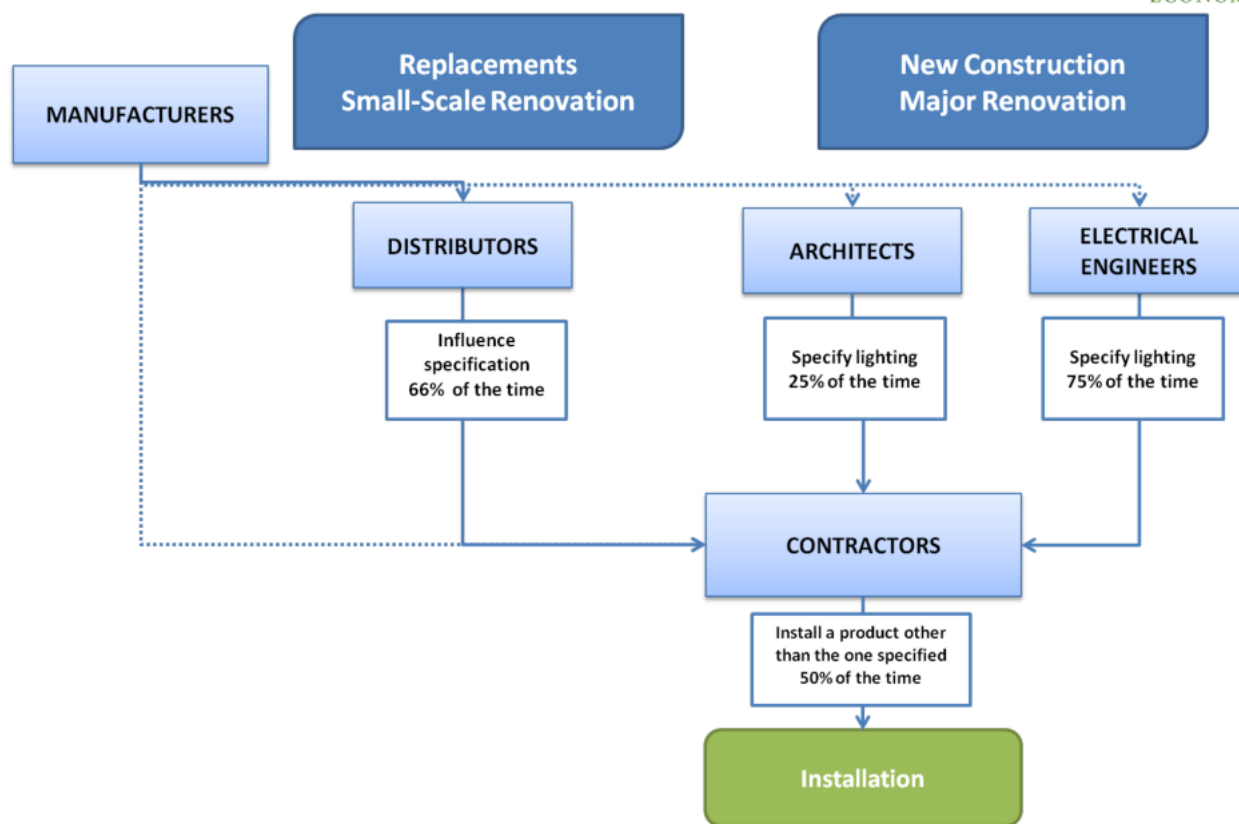
Source: Xenergy, Inc. "Commercial and Industrial Lighting Study". Prepared for the Northwest Energy Efficiency Alliance. 2000.
Kema, Inc., et al. "High Bay Lighting Market Effects Study: FINAL REPORT." Prepared for the California Public Utilities Commission. June 18, 2010.

Replacements and Small-Scale Renovation

For replacements and small-scale renovation projects, distributors are the key influencer, with contractors playing a supporting role. Nearly 90 percent of all lighting distributors offer lighting design services and two-thirds of the time, a distributor is directly involved in lighting design, product specification, and selection. Distributors ultimately influence all of the purchasing decisions of their electrical contractor customers by how they stock, price, place, and promote their products.

Distributors sometimes sell directly to building owners or managers who install the replacement products themselves, but frequently they sell to contractors who are hired to install products, particularly when a fixture or ballast is being replaced.

Electrical contractors' role remains significant because they typically have latitude to substitute products or lighting solutions and will often do so if a less expensive option is available or if the specified product cannot be procured easily.

A study in 2000[21] found that **half the time** contractors installed a product **other than the one specified**. It is critical to encourage contractors to seek efficient products in all installations, but it is equally, if not more important to encourage distributors to stock higher quantities of efficient products at reduced cost, thereby indirectly encouraging contractors to use efficient products.

New Construction and Major Renovation

For new construction and major renovation projects, lighting is specified by architects about 25 percent of the time and by electrical engineers about 75 percent of the time. Again, the contractor may not adhere to an architect or engineer's lighting specification if the specified product is not readily available or a less expensive model is available.

While lighting may be the first priority of energy efficiency program managers, it is usually one of the lowest priorities for electrical engineers and architects, and one of the last items installed during the renovation and construction. This means designers will turn to tried and true solutions and lighting is more likely to be a target for cost cutting or simplification, particularly if projects run over budget or behind schedule.

Flow of Product

The flow of influence tells only part of the story. One can encourage the purchase of efficient products only where efficient products are available. Products that are not readily availability or have high first cost will often not even be considered.

As indicated in Figure 16, manufacturers and distributors play the largest role in determining which products are available in the market. Manufacturers have the most direct influence on product availability and price because changes in manufacturer pricing are magnified through the supply chain.

General Electric, Philips, and Osram Sylvania dominate the screw base and linear fluorescent lamp categories. Prominent CFL manufacturers include these three, as well as TCP and Feit Electric. Solid-state lighting is manufactured by the large players, as well as many smaller manufacturers, though there are a few dominant chip makers (e.g., Cree Lighting, Lighting Sciences Group, and Nichia), some of whom (e.g., Cree) are moving toward vertical integration.

The flow of products reemphasizes the role of distributors. Only 10 percent of products are purchased directly from the manufacturer; the remaining 90 percent pass through distributors.

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[21] Xenergy, Inc. "Commercial and Industrial Lighting Study, Volume 1." Prepared for the Northwest Energy Efficiency Alliance. Decenber 2000.

Figure 16. The Flow of Lighting Products
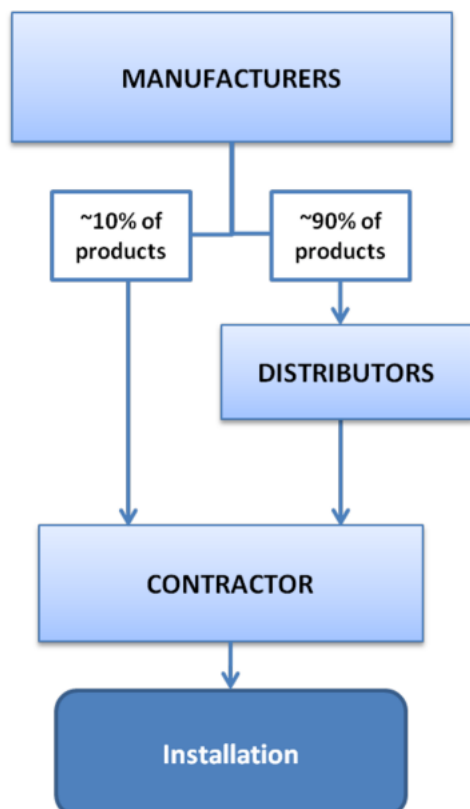
Source: Xenergy, Inc. "Commercial and Industrial Lighting Study". Prepared for the Northwest Energy Efficiency Alliance. 2000.
Kema, Inc., et al. "High Bay Lighting Market Effects Study: FINAL REPORT." Prepared for the California Public Utilities Commission. June 18, 2010.

The Choice Architectures of Non-Residential Lighting Market Actors

From the flow of influence and products, we see that there are several classes of market actors whose choice architectures influence which lighting solutions are selected and installed.

The greatest and fastest energy savings will be achieved if efficient lighting solutions become the default or at least the preferred option for each market actor. Whether this is practical or cost-effectively achievable depends on the strength of the factors shaping the current choice architecture and utility program managers' abilities to change these.

Electrical engineers tend to favor familiar products and solutions to avoid uncompensated redesigns. Currently, these products and solutions are not the most efficient ones. Making the efficient solution the trusted and familiar one would result in higher market penetration for these products. There is not enough data in the published literature that we reviewed to know what strategies might accomplish this goal. Filling this data gap should be a priority for SCE and PG&E.

Table 6. Choice Architecture of Non-Residential Market Actors

Market Actor	Choice Architecture
Manufacturers	• Promote products with highest profit • Participate in a highly competitive market
Architects	• Prefer to design creative, artistic space • Prefer expensive materials when working on time and materials contracts • Focus on cost-cutting when working on fixed-price contracts
Electrical Engineers	• Rely on familiar techniques to reduce callbacks • Seek to please architects to earn repeat business • Typically work on jobs with fixed-price contracts – prefer cost cutting and familiarity
Distributors	• Typically paid on commission based on products sold
Contractors	• Rely on familiar techniques to reduce callbacks • Typically work on jobs with fixed-price contracts – prefer familiar technologies; Choice is driven by availability and price • Rely heavily on distributors for advice and guidance

Source: Xenergy, Inc. "Commercial and Industrial Lighting Study". Prepared for the Northwest Energy Efficiency Alliance. 2000.

Architects may be able to induce engineers to try out new approaches because electrical engineers seek to please architects to earn their repeat business. Absent this motivation, electrical engineers are under pressure to keep costs low. Thus, measures that reduce the cost of products/solutions will also make those solutions more attractive to electrical engineers.

Distributors are typically paid on commission based on product sold. In the short-term, interventions that increase their margin per unit sold will be attractive. In the long-term, longer-lived products will lower their sales volumes and may necessitate developing new business models, such as retaining ownership of the installed fixtures and lamps and providing lighting as a service.

The tendency for electrical contractors to reverse decisions made by others earlier in the chain is most likely when neither they nor their distributors have been involved in developing the lighting design or specifications, i.e., for major renovations and new construction.

> **Data Gaps:**
>
> 1. Profitability of efficient technologies vs. incumbent technologies.
> 2. Strength of drivers other than profit.
> 3. Market actors' current views of efficient lamps and controls.
> 4. What it will take to make the efficient lighting solution the preferred option for each market actor.
> 5. The extent to which market actors specialize in particular technologies, sectors, or end-uses.
> 6. Availability of advanced technologies among distributors.

Segment-Specific Approach

Another strategy for maximizing the effectiveness of non-residential lighting programs is to identify and target the non-residential segments that either consume the most lighting energy or have characteristics that make them likely to be receptive to adopting efficient solutions.

PG&E and SCE have already identified priority segments based on similar criteria. We were asked to focus on four of these: retail buildings, office buildings, restaurants, and manufacturing facilities. The literature review revealed that some reliable high-level data on these segments are available, but detailed saturation and use data (particularly data by room or application), as well as the distribution of consumption within the segments, are not.

Non-Residential Lighting by Segment

Data collected in California show that the office and retail segments consume the largest portion of energy attributable to lighting, and in absolute terms represent the greatest opportunity for energy savings. The great majority of energy consumption and potential savings in all sectors is for indoor rather than outdoor lighting. How efficiently these savings can be captured and the utilities' rates of return on investment will depend on two additional factors (in a solely segment-focused strategy): the average hours of use and the portion of savings potential controlled by a limited number of decision makers.

Hours of use, as noted above, can serve as a proxy for the rate at which savings would accumulate if lighting were replaced, as well as for the rate at which installed stock turns over. Hours of use thus serves as a proxy for the utilities' rate of return. In specific cases this also depends on the delta watts between the previous lighting solution and the efficient replacement, but the conservative assumption is that the utility will be able to estimate the average hours of use and average baseline wattage within the segment across a large number of sockets.

California data reveals that office and retail segments have the second- and third-highest average hours of use, reinforcing the appropriateness of their choice as priority segments. Interestingly, the restaurant segment has the highest hours of use. Its total energy consumption is still a fraction of either office or retail, but the finding suggests that the segment is worth additional attention. The high hours of use mean that replacing lamps in the restaurant segment would provide greater annual energy savings per lamp and faster return on investment for the utility and the building owner or manager.

Figure 17. Lighting Electricity Use in California by Segment

Lighting Electricity Usage (GWh/yr)
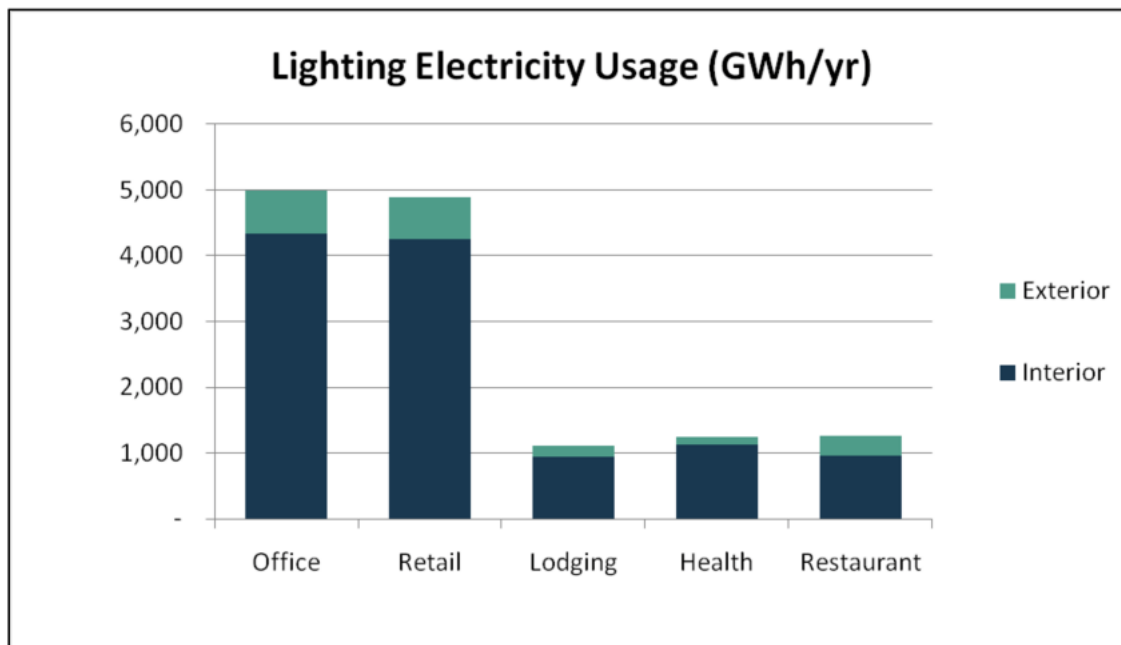
Source: Itron, Inc. "California Commercial End-Use Survey." Prepared for the California Energy Commission. March 2006.

Figure 18. Average Annual Hours of Use for Interior Lighting in California by Segment

Interior Lighting Average Annual Hours of Use
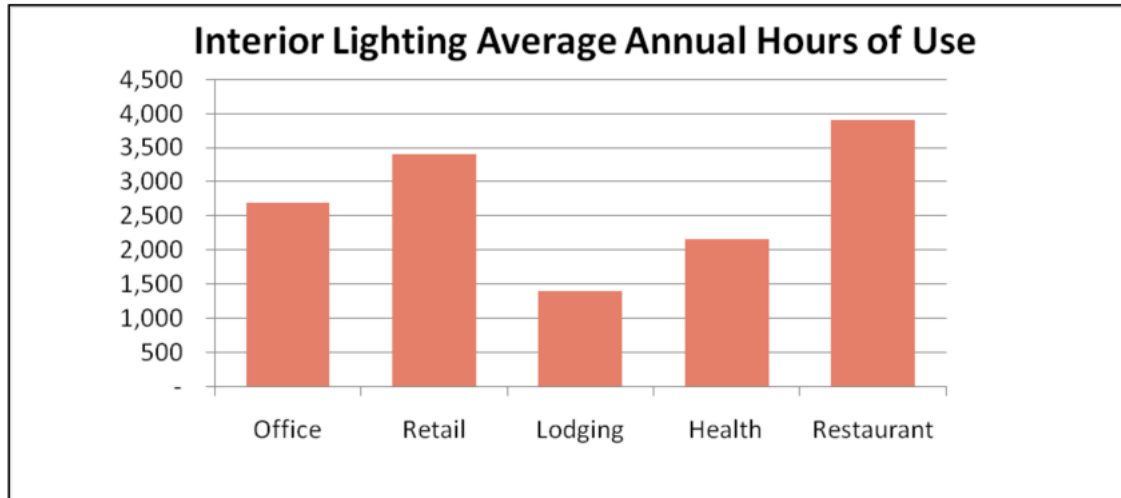
Notes: Aggregate energy use for exterior lighting in these segments is minimal and thus has been omitted.
Source: KEMA, Inc. "Final Evaluation Report: Upstream Lighting Program, Volume 1." Prepared for the California Public Utilities Commission, Energy Division. February 8, 2010.

Combining segment- and technology-specific strategies enables greater targeting and refinement of program designs.

As noted in the advanced technology section, 80 percent of all lamps outside the residential sector are linear fluorescent and should be targeted for replacement with super-efficient T8 lamps, low wattage T8 lamps, efficient ballasts, and, where appropriate, T5 lamps. Nonetheless, the per-lamp savings for replacing linear fluorescents are relatively modest.

Replacing incandescent and halogen lamps with advanced lighting (specialty CFL or LED) is another story. Retail, lodging, and restaurant segments contain large numbers of highly inefficient incandescent and halogen lamps. However, light quality is a critical factor for some applications in these segments, especially restaurant and retail. Inducing facility owners and managers to replace these lamps may depend on LED lamps' ability to deliver light quality perceived as equivalent or superior to incandescent and halogen lamps; this is not yet the case.

It is also worth noting, however, that CFL penetration is quite high in all three segments, suggesting that the light quality issue may be overstated.

Bright Spots Analyses:

Program design and evaluation often focus on barriers to technology adoption, but our understanding of the barriers is often flawed or incomplete and one set of barriers is eliminated only to discover another.

Throughout this section, we recommend what are referred to as bright spots analyses. A bright spot is a segment or specific market actor that has naturally occurring, unexpectedly high saturation or sales of efficient products. A bright spots analysis uses these bright spots as beacons to enable identification of the complete suite of situational factors that led to natural adoption, which can then be used as a framework or template for accelerating adoption within that segment and other segments.

We recommend SCE and PG&E conduct a bright spots analysis in these sectors to understand what shaped the choice architectures and led to the decisions to install efficient lamps among so many market actors within the segment. The results of this analysis can then inform outreach strategy and interventions for the remainder of the segment.

Figure 19. Distribution of Interior Lighting in the United States by Segment and Lamp Type
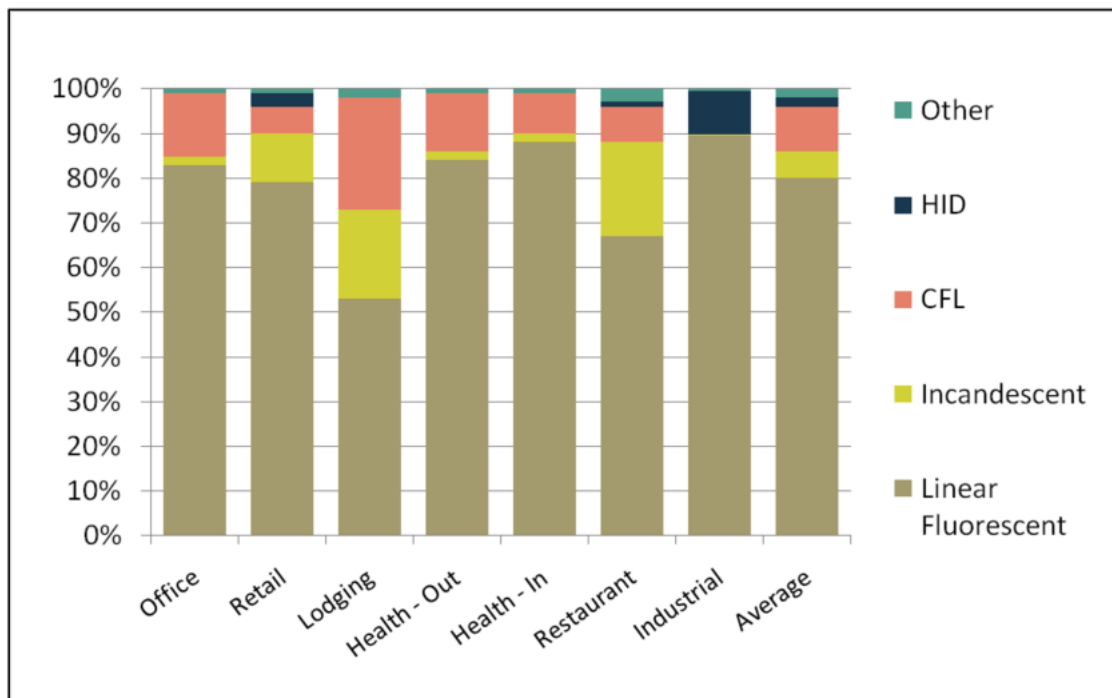
Note: Incandescent lighting includes halogen lighting.
Source: Navigant Consulting, Inc. "2010 U.S. Lighting Market Characterization." U.S. DOE. January 2012.

Advanced lighting controls can offer another path to energy savings outside the residential sector, especially because as many as 88 percent of fixtures in the commercial sector are controlled by simple on/off switches.[22] DOE's GATEWAY case studies demonstrate that additional energy savings of up to 22-28 percent are possible when compared to new efficient lighting installations without controls[23].

Our literature review does not indicate whether controls are reliable and deliver energy savings where currently installed. Individual case studies show that advanced controls, when installed and used properly, can significantly reduce lighting energy consumption, but there are also case studies documenting instances where controls were installed incorrectly or used in a way that rendered them irrelevant, yielding no energy savings.[24]

Retail, office, grocery, and outpatient health care represent additional opportunities. We were surprised by the apparent levels of saturation of advanced lighting controls in some segments. Retail and health care have close to 10 percent of their lighting on timers; offices, health care, and educational buildings have high rates of motion detector installation.

The high levels of natural adoption of a technology are bright spots that indicate that, for some portions of the segment, conditions are already in place that favor the adoption of the technology. By conducting empirical research, PG&E and SCE can identify the cluster(s) of enabling situational factors, which can then be used to increase adoption within that segment and possibly in others as well.

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[22] KEMA, Inc. "Business Sector Market Assessment and Baseline Study: Existing Industrial Facilities Vol. 1." Prepared for the Vermont Department of Public Service, September 25, 2009.

[23] The full list of GATEWAY reports is available at: www1.eere.energy.gov/buildings/ssl/gatewaydemos_results.html (accessed 3/20/2012). Savings estimates were derived from the reports for the Albertsons Grocery, Manchester, New Hampshire, and Raley's Supermarket Case Studies.

[24] Vaidya, P., McDougall, T., Steinbock, J., Douglas, J., and Eijadi, D. "What's Wrong with Daylighting? Where It Goes Wrong and How Users Respond to Failure." Proceedings of ACEEE Summer Study, Panel 7, Page 30, August, 2004
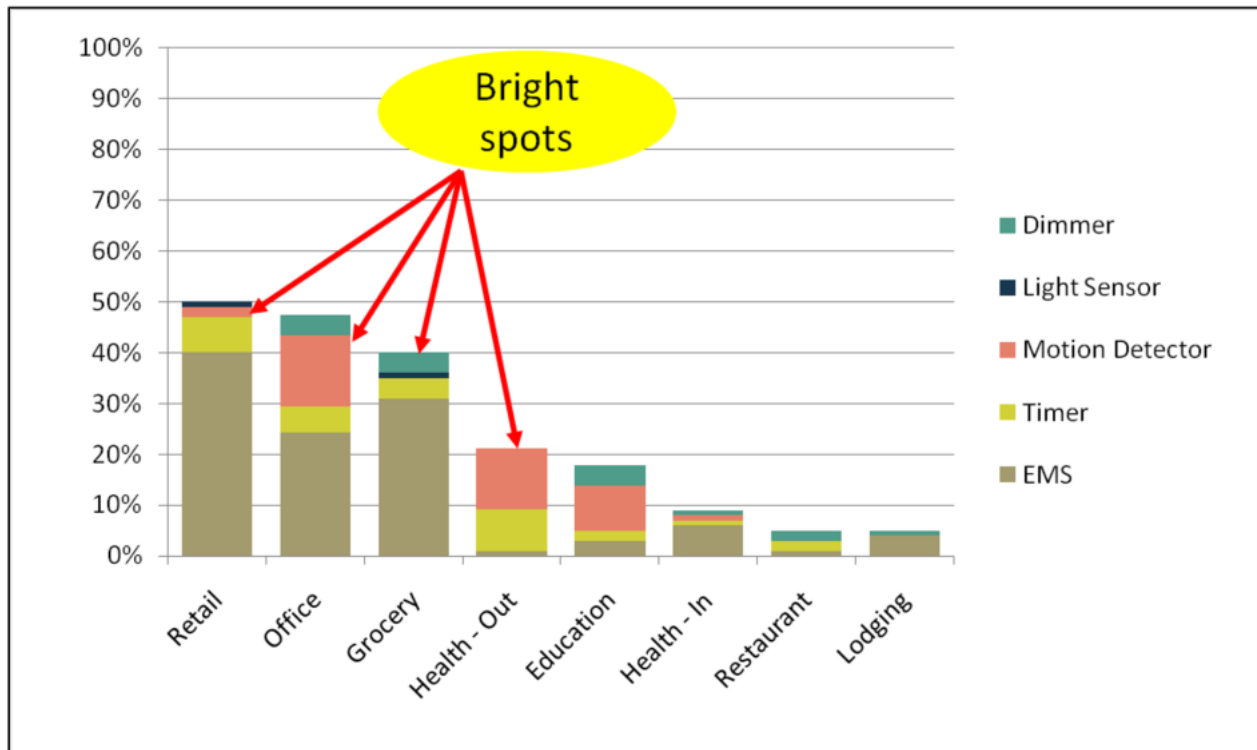
Note: All other controls are simple on/off switches.
Source: Navigant Consulting, Inc. "2010 U.S. Lighting Market Characterization." U.S. DOE. January 2012.

Data Gap:

1. Data is needed on the savings potential of each control type.

While absolute energy consumption from exterior non-residential outdoor lighting is relatively small compared to the residential and commercial interior sectors (17 percent vs. 25 percent and 50 percent, respectively), consumption per lamp is typically higher, because these are virtually always high wattage applications with high hours of use.[25] Exterior lighting represents 17 percent of lighting energy consumption, yet only 2 percent of lamps in the United States, indicating a relatively high level of consumption per lamp compared to other sectors.

Among these, outdoor area and flood lighting have the largest shares of lamps. A surprisingly large portion of these lamps (20 percent) are extremely inefficient incandescent lamps; these are a potentially high value target that will offer fast payback to both the utility and the lamp owner.

The majority of non-residential exterior lighting installations are high-intensity discharge (HID) lighting. HID lighting is typically higher wattage than incandescent and fluorescent lighting[26], but also is considerably more efficient, which reduces the potential delta watts per lamp. The efficient technologies still have the advantage of longer lifetimes, so cost-effectiveness of replacement depends on several factors: the existing operation and maintenance costs; the potential for delamping or otherwise reducing the total lumens used to light the space using advanced optics to create more even distribution of footcandles; and the potential for installing lighting controls to lower output and consumption when the space is not occupied.

There is one particularly bright spot in the distribution of lamp types by application--the 4–5 percent saturation of LED lamps in garages and parking lots. Given the newness of the technology and the current price premiums, it is astonishing to see this level of penetration. PG&E and SCE should consider investigating where this natural adoption is occurring and the choice architecture driving it.

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[25] According to Navigant Consulting, Inc. in the 2010 U.S. Lighting Market Characterization, average wattage for outdoor lamps is 151 compared to 42W and 46W for commercial and residential lamps, respectively. Average use is 11.7 hrs/day, compared to 11.2 and 1.8 hrs/day for commercial and residential interior lamps, respectively.

[26] See the Advanced Lighting Technologies section of this report for a detailed comparison of lamp types.
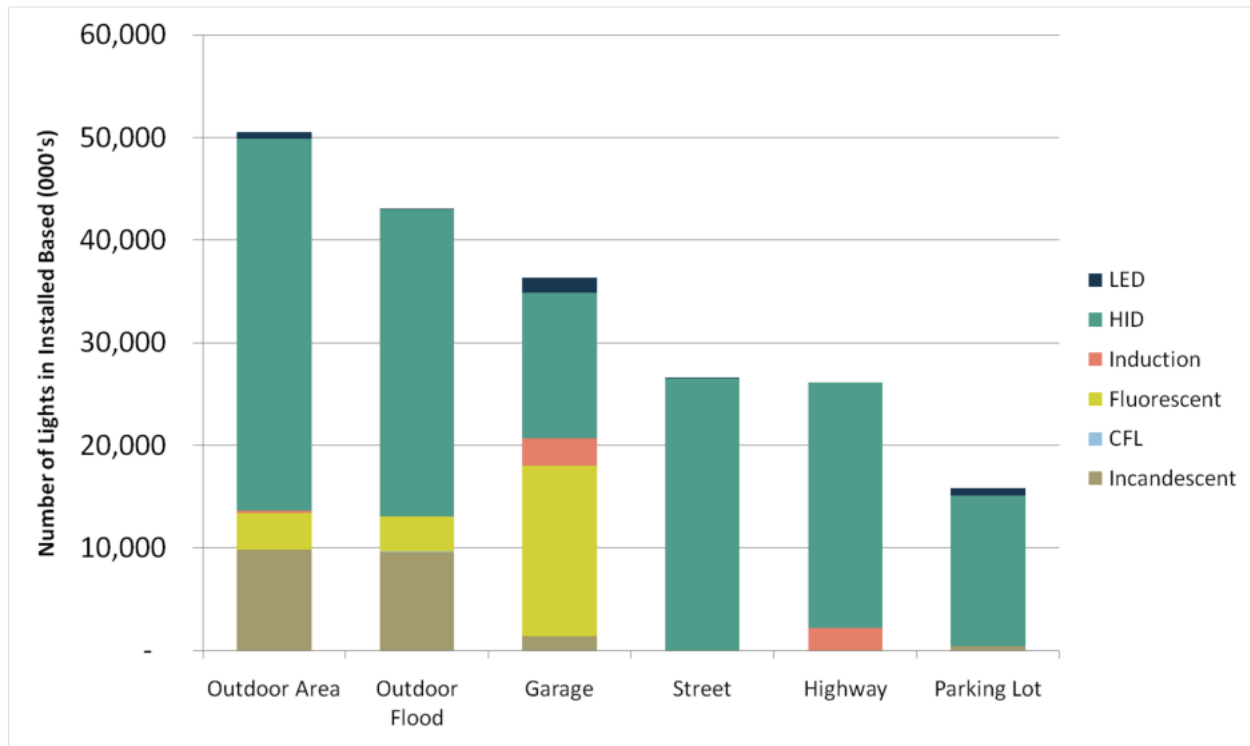
Source: Navigant Consulting, Inc. "Energy Savings Estimates of Light Emitting diodes in Niche Lighting Applications." U.S. DOE. January 2011.

Data Gaps:

1. Distribution of floor space within a given segment. Is most of the floor space concentrated in a small number of buildings? Is the energy intensity within these large buildings comparable to that of the segment as a whole?
2. How concentrated is control over floor space/buildings of a given space type?

Residential Lighting

Context

Nationwide, homes contain 71 percent of lamps, but those lamps consume only 25 percent of the energy used for lighting. (See Figure 22.) This discrepancy means that savings per lamp are necessarily lower in the residential sector and, thus, a greater number of lamps must be changed (relative to other sectors) to achieve a given amount of energy savings. Furthermore, the installed base of lamps turns over more slowly in this sector than in others.

Figure 22. Share of Lamps and Lighting Energy Use by Sector
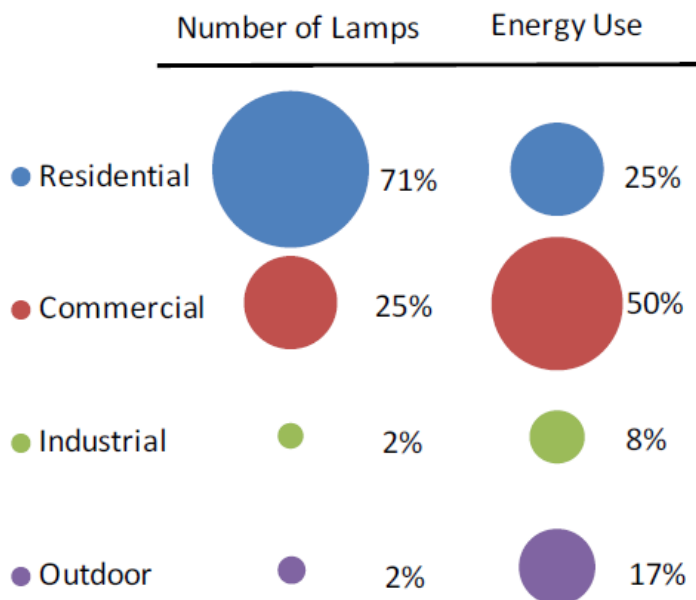
	Number of Lamps	Energy Use
● Residential	71%	25%
● Commercial	25%	50%
● Industrial	2%	8%
● Outdoor	2%	17%

Source: Navigant Consulting, Inc. "2010 U.S. Lighting Market Characterization." U.S. DOE. January 2012.

CFLs

Installed Base

Nevertheless, there remains substantial energy savings potential from lighting improvements in the residential sector. Only about half of the sockets that could have CFLs in them do have CFLs in them, even in California, which had the highest CFL saturation of any state in 2009.

Figure 23. Regional CFL Saturation in 2009
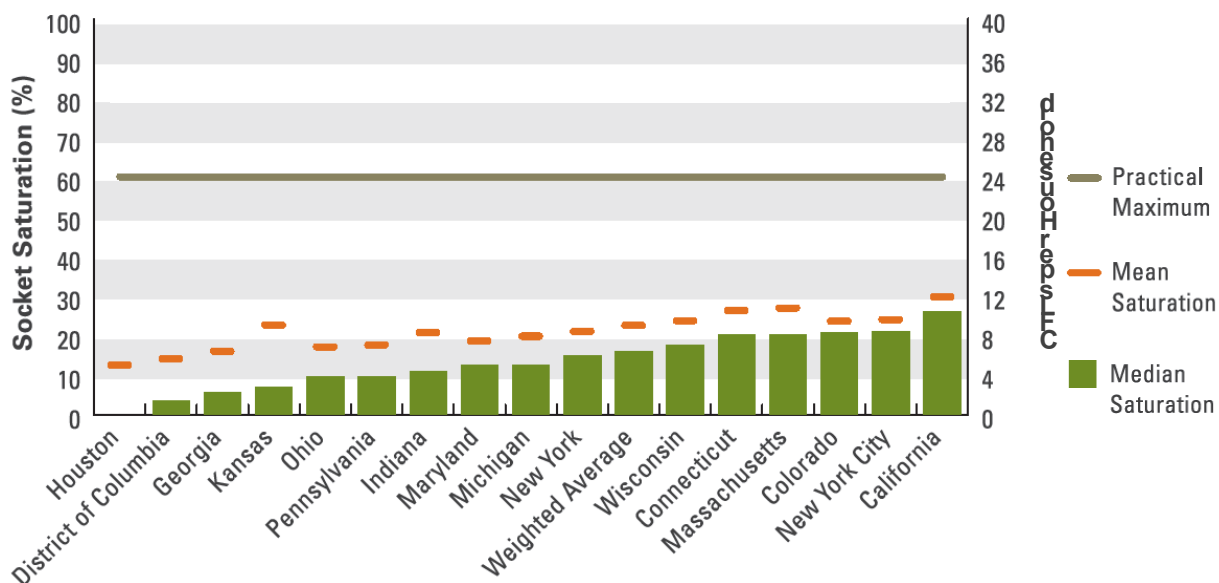
Source: D&R International. "ENERGY STAR CFL Market Profile: Data Trends and Market Insights." U.S. DOE. September 2010.

CFLs were also more evenly distributed across households in California than in other states. This is evident to some extent in the much greater congruence of mean and median saturation levels. Table 7 shows even more clearly how California compares to several other states and cities, indicating that outside California, a small minority of homes contain the great majority of CFLs, while the majority of homes have only a few. Of those areas for which data is available, California has the smallest proportions of homes with low CFL socket saturations.

Table 7. Proportion of Homes with Low CFL Socket Saturation in 2009

	Percent of Homes with CFL Saturation of 25% or Less	Percent of Homes with CFL Saturation of 30% or Less
California	61	70
New York	82	86
New York City	78	86
Ohio	88	91
District of Columbia	85	92
Houston	88	92
Samples Average	72	79
Sample Average (Excluding CA)	84	89

Note: All data represent the percent of homes in the sample with CFL saturation at or below the specified level. They have not been adjusted to account for possible differences between the homes sampled and the broader population of homes in a given state or city.

Source: D&R International. "ENERGY STAR CFL Market Profile: Data Trends and Market Insights." DOE. September 2010.

Shipments and Market Share

The volume of CFLs shipped for final sale in the United States doubled from 2005 to 2006 and doubled again in 2007. CFL shipments declined somewhat after the peak in 2007, but remained about 15–20 percent of the lamp market through 2011.

Figure 24. CFL and Incandescent Lamp Shipments and CFL Market Share in the United States
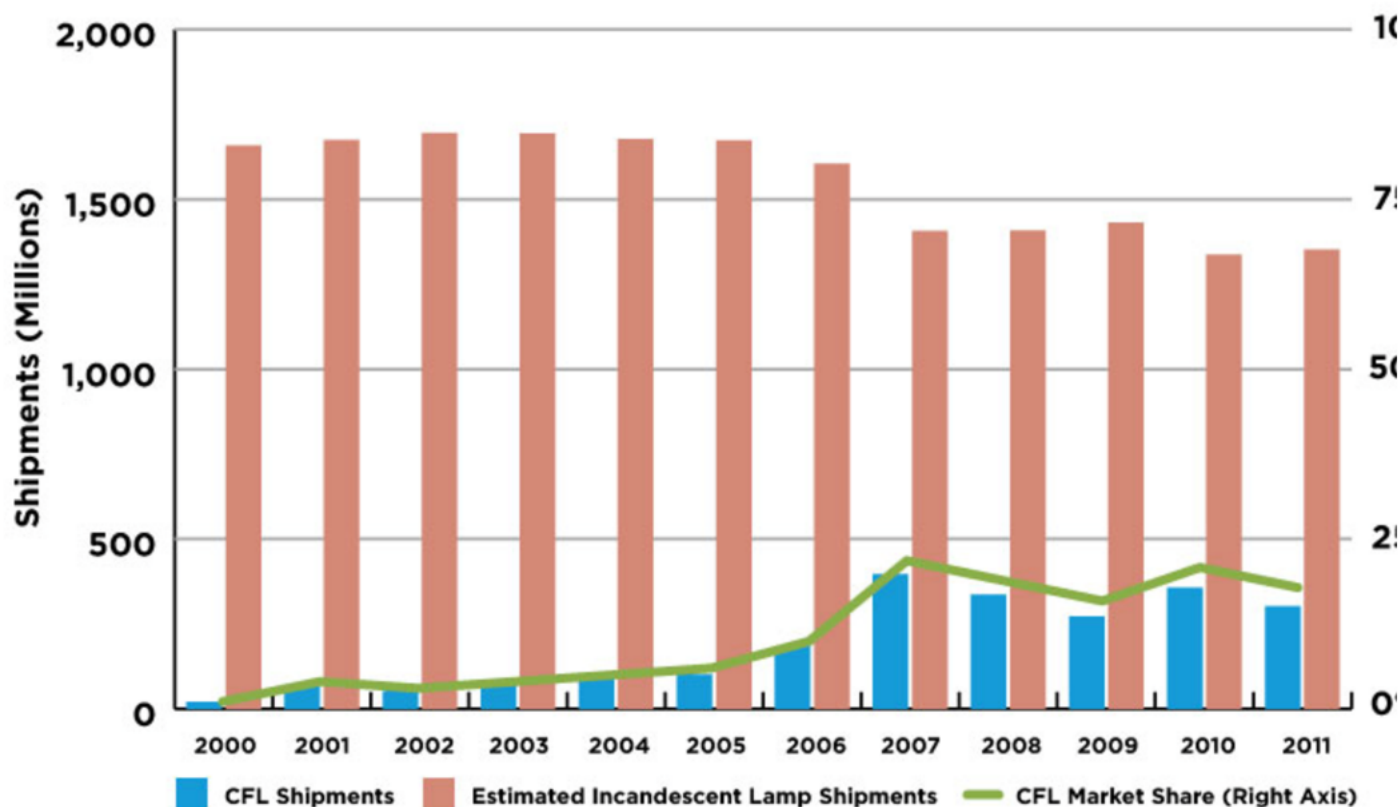
Note: Nearly all of the CFLs sold in the United States are imported. Thus, CFL imports can be used as a proxy for CFL shipments.

Source: D&R International. "ENERGY STAR CFL Market Profile: Data Trends and Market Insights." DOE. September 2010.
D&R analysis of CFL import data for 2010 and 2011

Total lamp sales have remained fairly constant over the last decade, indicating that CFL sales are primarily replacing incandescent lamp sales rather than increasing the total number of lamps sold. This finding suggests that lamp failure (and replacement) is the key driver of lamp sales. If households were practicing early replacement (replacing inefficient lamps with CFLs before they burn out), we would see a short-term increase in total lamp sales, before the effect of CFLs' longer lifetimes becomes apparent.

Household Placement

In the aggregate, households in California exhibit no strong preferences for one type of lamp over another for particular rooms, as evidenced by the near identical distribution of CFLs and sockets among rooms. There are some minor differences between the two distributions, likely due to the greater presence of fixtures for which CFLs are not well suited in certain rooms, e.g., garages and dining rooms.

Figure 25. Distribution of Sockets and CFLs by Room in California in 2009
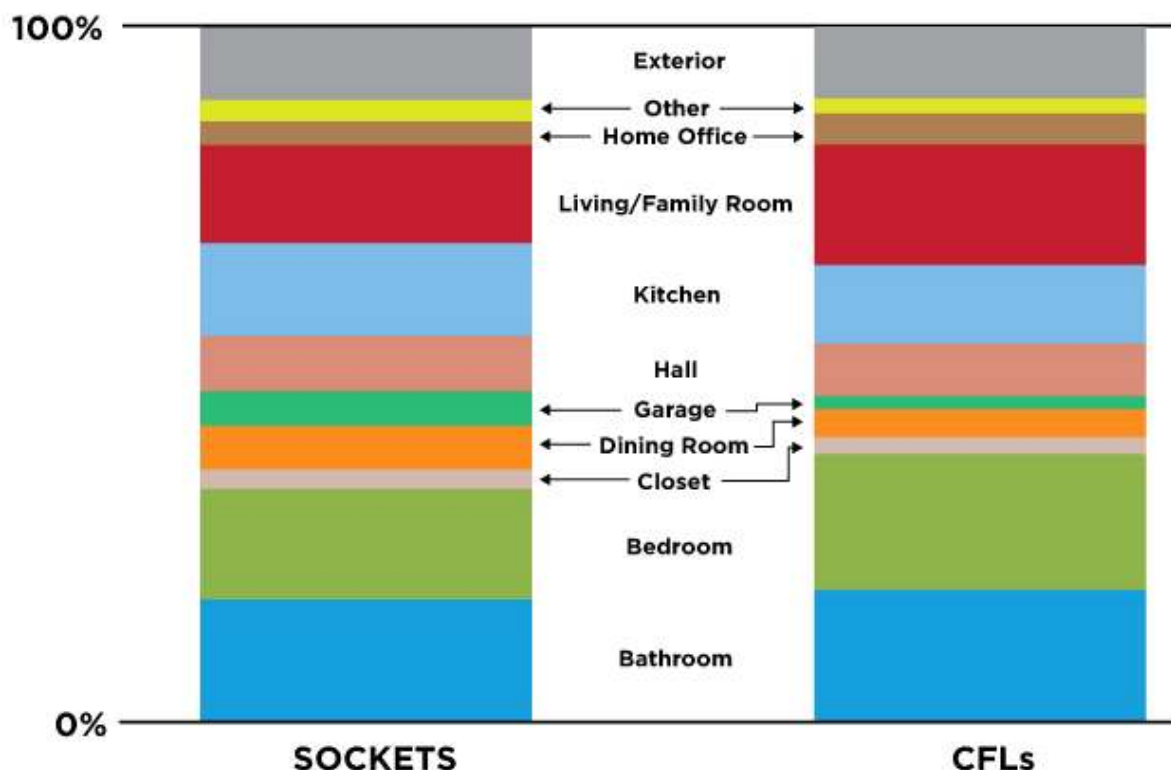
Source: D&R International. "ENERGY STAR CFL Market Profile: Data Trends and Market Insights." DOE. September 2010.

Data Gap:

1. Due to their minimal market penetration to date, it is not yet known whether consumers prefer certain locations for LED lamps. It seems likely that as long as LED lamps are expensive and perceived as high status products they will be preferred for more visible and possibly more frequently used sockets.

Advanced Lighting

Specialty CFLs

As of 2009, homes in California contained very few specialty CFLs. Medium screw base (MSB) sockets that accept A-line and globe shape bulbs and are controlled by on/off switches constitute 45 percent of all sockets. Sixteen out of every 45 of these sockets (35 percent) contain CFLs. Pin-base sockets account for another 20 percent of all sockets. The remaining 35 percent of sockets take small screw base, specialty size, dimmable, or 3-way lamps, or some combination thereof. Fewer than 4 out of every 35 (11 percent) of these sockets contain CFLs.

Table 8. Residential Socket Penetration and Potential in California in 2009

Socket, Shape, Control	Percent of All Sockets (%)	Current CFL Socket Saturation (%)	Remaining Potential Compared to Current Saturation (%)
Medium Screw, General Service (A-Line, Globe), On/Off	45	16	180
Medium Screw, Specialty Size, On/Off	14	2	670
Medium Screw, All Sizes, Dimmable/3-Way	10	1	650
Small Screw, All Sizes, On/Off	8	<1	4,000
Small Screw, All Sizes, Dimmable/3-Way	3	<1	Negligible
Pin-Base, All Sizes, All Controls	20	15*	Negligible
All Sockets	100	19 (34 fluorescents)	–

Note: Based on data collected through on-site visits conducted as part of the evaluation of California's 2006-08 Upstream Lighting Program. The second column shows what percent of all lamps in sockets of a given type are CFLs.

Source: D&R International. "ENERGY STAR CFL Market Profile: Data Trends and Market Insights." DOE. September 2010.

The small number of specialty CFLs in California homes in 2009 was also reflected in the availability of specialty CFLs in stores. In 2009, dimmable and 3-way CFLs constituted only 2 percent of the MSB lamps and 4 percent of the MSB lamp packages available in stores in California. Table 9 shows how all the MSB lamps and lamp packages stocked in California retail stores were distributed by lamp type. The small presence of specialty CFLs suggests that these lamp types accounted for a similarly small volume of sales.

Table 9. Distribution of Medium Screw Base Lamps and Lamp Packages by Lamp Type in California Stores in 2009

Lamp Type	Percent of MSB Lamps	Percent of MSB Lamp Packages
ADVANCED		
High-wattage CFLs (>30 Watts)		
High-wattage spiral	0%	0%
High-wattage tube	0%	0%
High-wattage reflector/flood	0%	0%
Specialty CFLs: dimmable		
Dimmable spiral	1%	2%
Dimmable reflector/flood	1%	1%
Specialty CFLs: 3-way		
3-way spiral	0%	1%
Other advanced MSB CFLs (≤30 Watts)		
Reflector/flood	4%	4%
A-lamp	6%	8%
Globe	2%	2%
Candelabra (MSB)	0%	0%
Tube	3%	4%
Bug Light	0%	0%
LEDs	1%	2%
NON-ADVANCED		
Halogen	7%	12%
Basic CFLs (≤30 Watts)	31%	26%
Incandescent	43%	37%
Other lamp types	0%	0%
Total MSB Lamps	**100%**	**100%**
Number of MSB Lamps	**239,335**	**94,646**

Source: KEMA, Inc. "Advanced Lighting Baseline Study: Phases 1 and 2." August 1, 2011.

LED Lamps

As of 2010, very few LED lamps had been sold in California. Only one out of every thousand lamps in California homes in 2008-2009 was an LED. The Advanced Lighting Baseline Study report published in 2011 presents lamp sales data for selected sales channels. The report shows that while LED lamp sales grew from 2008 to 2010, in 2010 they still accounted for only a tiny fraction (<1 percent) of the medium screw base lamps sold through the three channels examined. KEMA is collecting newer data now.

Table 10. Lamps Installed in California Homes

Lamp Type	2008-2009
LEDs	0.10%
All other lamp types	99.9%
Total	100%

Source: KEMA, Inc. "Advanced Lighting Baseline Study: Phases 1 and 2." August 1, 2011.

Table 11. LED Unit Sales as a Percent of All Medium Screw Base Lamp Sales in California (Selected Channels)

Channel	2008	2009	2010	2011
Hardware	0.04%	0.23%	0.24%	?
Drug	0.00%	0.00%	0.00%	?
Large Grocery	0.00%	0.01%	0.01%	?

Source: KEMA, Inc. "Advanced Lighting Baseline Study: Phases 1 and 2." August 1, 2011.

Can advanced lighting replace the basic CFL in sales and energy savings? As discussed above, price is currently a big barrier for LED lamps, and production capacity could also be a problem. Specialty CFLs could fill the gap, but utility program sponsors need to ensure that the products they promote perform as promised or risk consumer dissatisfaction.

Data Gaps:

1. Estimate of current specialty CFL lamp saturation in California by type.
2. LED lamps sales since 2009 in California.

Market Transformation

Residential

Rebating CFLs

As seen in the previous section, California has made considerable progress in transforming the lamp market in the residential sector, demonstrated by the large proportion of sockets that are now filled with CFLs.

Financial incentives have no doubt played a large role in this transformation. One way to measure the effect of incentives is to see what happens when incentives are removed. This is a natural experiment that has occurred in many places around the United States.

One example is the removal of incentives in PG&E's service territory in late 2009. An examination of sales data for a warehouse-format retailer during that time shows that CFL sales dropped 60 percent when incentives stopped. In Hawaii, incentives were removed at the end of 2008 for six months, leading to a similar 62 percent decline in CFL sales that was immediate and sustained; when incentives were restored, CFL sales rebounded.

Figure 26. CFL Pack Sales Respond to the Availability of Incentives

Source: Confidential data provided to D&R by a national CFL manufacturer.

Promoting Specialty CFLs

Many utilities are now shifting the focus of their programs away from bare spiral CFLs and toward specialty CFLs and other advanced lighting products. To what extent can specialty CFL sales compensate for the loss of basic CFL savings?

The California IOUs have succeeded in shifting a sizable portion of their incentives to specialty CFLs. Specialty lamps account for 31 percent and 38 percent of lamps incented by PG&E and SCE, respectively. It appears possible to achieve close to full replacement: CFLs now account for at least 65 percent of incented bulb sales in Vermont. Vermont Energy Investment Corporation believes the sales shown in Figure 2 for January and February 2012 likely occurred in 2011. If this is true, advanced lighting sales in 2011 were about equal to basic lighting sales at their peak in 2008.

Figure 27. Annual Incented Bulb Sales per 1,000 Residents
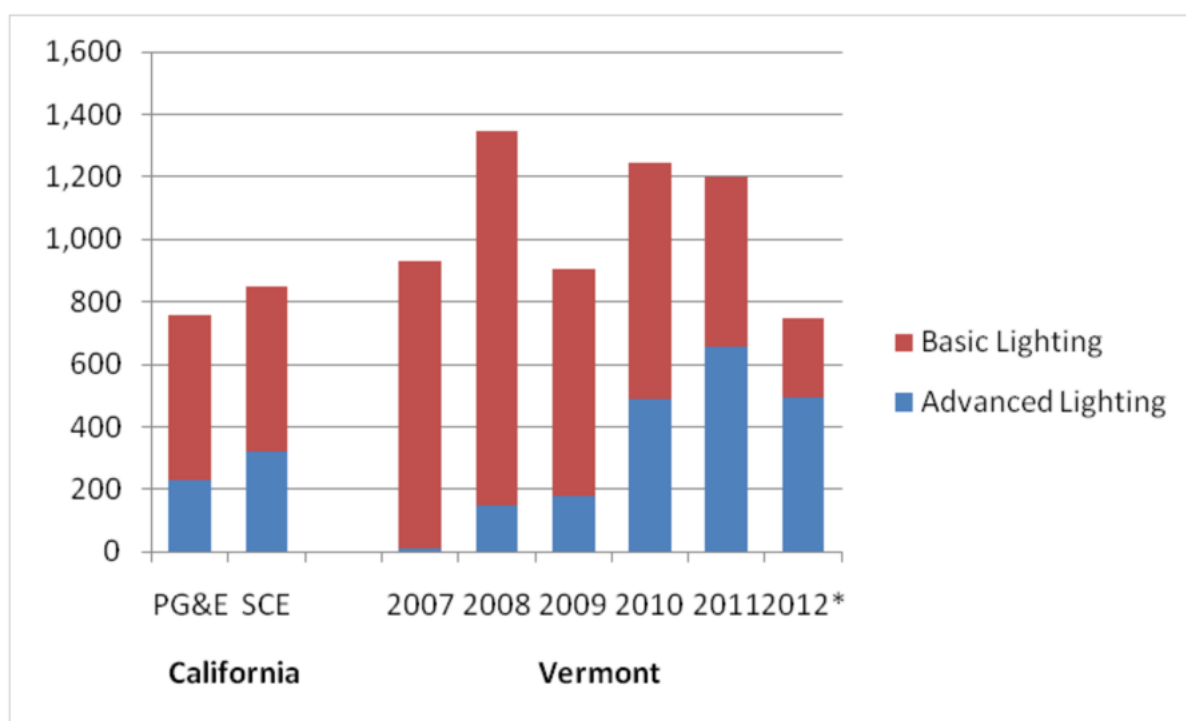
Note: Data for PG&E are from 2010 through Q3-2011. Data for SCE are from 2009 through 2011. Data for Vermont in 2012 are from January and February only and might represent 2011 sales not reported until 2012.

Source: Data provided by PG&E, SCE, and Vermont Energy Investment Corporation.

Efficiency Vermont has used a variety of techniques to spur sales of specialty CFLs, including:
- A low price point (99 cents) for specialty CFLs
- Simple, effective signage (see Figure 28)
- End caps, free-standing displays in aisle and at check-out
- Print and radio media campaign

Efficiency Vermont reports that the great majority of sales come from stores that use in-aisle pallets, end-caps, and check-out displays to promote CFLs. The organization has ceased the media component of its campaign to see if it is necessary for sustained CFL sales.

Efficiency Vermont's observation about the power of a 99-cent price point and in-aisle displays is supported by data D&R gathered incidentally as part of its Measuring Marketing Impacts study, in which the presence of an in-aisle display (similar to a drop-ship pallet) for 99-cent bare spirals increased sales 300 to 700 percent at participating stores.[27]

Figure 28. Signage Used by Efficiency Vermont to Promote Specialty CFLs

Source: Vermont Energy Investment Corporation

Data Gap:

1. Full lighting category sales data for major retail sales channels
    – With and without incentives
    – For California and comparator regions

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[27] Unpublished data collected in 2006. D&R International.

Shaping the Choice Architecture to Increase Sales of Efficient Lamps

Program designs can be structured in ways that shift the choice architecture to favor efficient lighting. Programs can take either a prescriptive or a non-prescriptive (performance-based) approach. A prescriptive approach would make certain changes to the choice architecture obligatory.

Under the prescriptive approach, program sponsors specify what changes to the choice architecture retailers must make to qualify for incentives. Such changes could include:

- Requiring favorable treatment for efficient lamps
  - o Continuous or regularly scheduled end-caps
  - o In-aisle pallets/displays
  - o Preferred shelf and aisle placement
  - o Promotion of multipacks
- Restricting placement and promotion of inefficient lamps

Under the non-prescriptive approach, program sponsors pay for measurable and verifiable performance, providing incentives only for sales over a pre-negotiated and agreed upon baseline, changes in market share, or energy saved. A non-prescriptive approach may be more appropriate for retailers that are pushing incandescent and EISA-compliant halogen lamps, as some large home improvement centers are doing. One example of a non-prescriptive approach is the "Market Lift" model, depicted in Figure 29.

Figure 29. The Market Lift Model Contrasted with the Conventional Approach
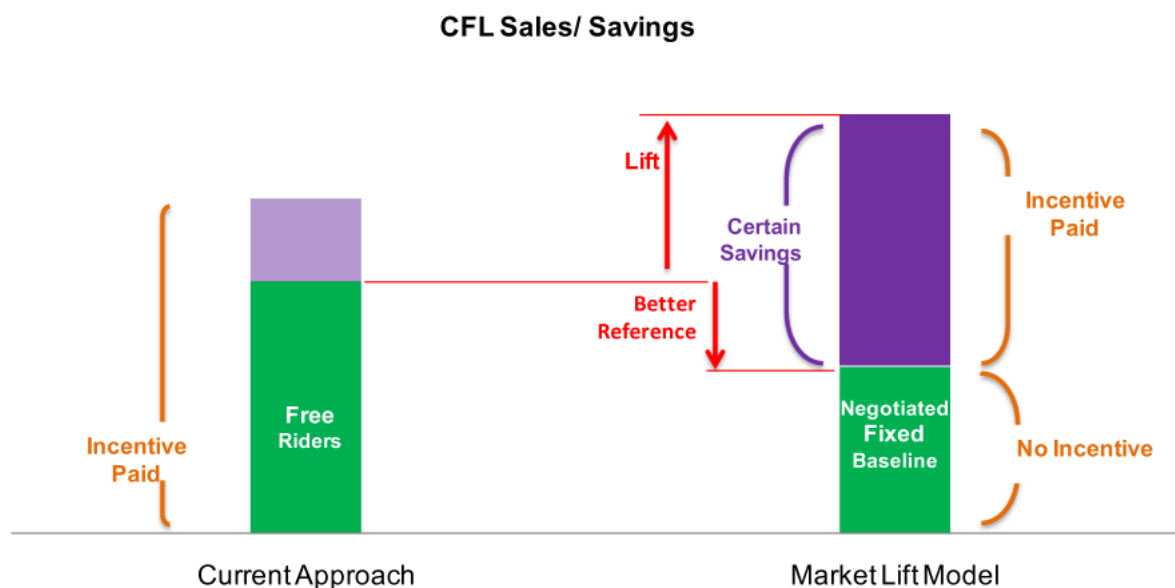
Source: D&R International, Ltd. [unpublished]

Non-Residential

In the non-residential sector, the key is to shape the choice architectures at each critical node in the flow of influence.

Figure 30. Flow of Influence in the Non-Residential Lighting Market
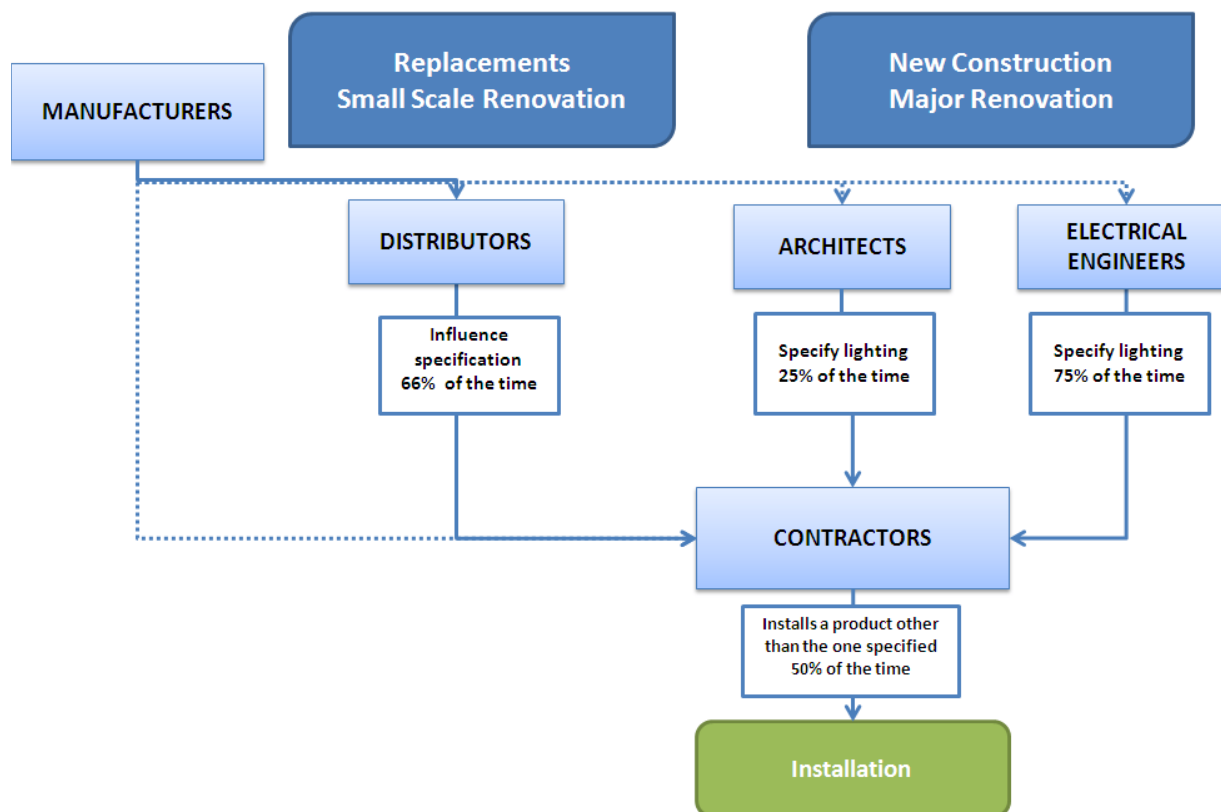
Source: Xenergy, Inc. "Commercial and Industrial Lighting Study". Prepared for the Northwest Energy Efficiency Alliance. 2000; Kema, Inc., et al. "High Bay Lighting Market Effects Study: FINAL REPORT." Prepared for the California Public Utilities Commission. June 18, 2010.

Regardless of the approach selected, program sponsors would be wise to learn from Walmart's model of a lighting choice architecture. This model, described in more detail in The Science of Choice section of this report, includes the following elements:

- Make the efficient lighting solution the default choice or as close as you can get.

- Multiply prompts and make purchasing the efficient lighting solution as easy as possible.

- Simplify choice and message, and reduce visual complexity.

- Create clear, intuitive mappings and reduce uncertainty.

- Shift perception of cost vs. value with contrast effects.

In some cases, more sophisticated approaches may be needed, like the training and certification on advanced lighting controls, which California IOUs have already begun to do through the California Advanced Lighting Controls Training Program (CALCTP).

Conclusion

Overall

Most lighting decisions are quick and automatic, so structuring programs to influence customers most directly at the time that they are making decisions can have a huge effect on program results. This is true for the residential and non-residential sectors, though the tools used to influence each sector differ.

There are advanced technologies that can deliver superior energy performance and better light quality than many incumbent lighting technologies. However, some—particularly LEDs and specialty CFLs—show extreme performance variability among models. **Maintaining strict performance criteria for LEDs and specialty CFLs** is vital to ensuring that only high-quality products are incentivized or promoted.

Setting performance criteria for these products, working with programs such as LED Lighting Facts and ENERGY STAR to identify good products, and conducting third-party verification testing can all help **ensure that promoted products perform as expected**.

Addressing LED production capacity now can ensure that manufacturers are able to meet the increased demand that will result from successful LED lighting programs.

Non-Residential Lighting

There are three broad strategies that could be used to reduce lighting energy use in the non-residential sector:

1. Target specific products or applications.
2. Identify and work with those who influence decisions about lighting installations.
3. Target specific, high-potential segments of the sector.

The second strategy will likely be most effective in the non-residential sector. Working with market actors will allow utilities to reach large numbers of customers at the point where the decision is made. By focusing on the major market actors that influence product distribution and customer decision-making, utilities can shape the choice architectures of these influencers to make efficient lighting the default. Distributors and electrical engineers are particularly influential.

Opportunity also lies in targeting specific segments, particularly where one segment can serve as a bright spot for others. The situational factors that naturally lead to success in one segment may be able to be replicated in others.

Residential Lighting

California's lighting programs have led to the highest levels of CFL saturation in the nation. Even with this success, there is still considerable opportunity to expand the adoption of efficient lighting and advanced lighting technologies.

Like non-residential programs, residential programs must focus on shaping a favorable choice architecture, particularly for advanced lighting technologies. Prescriptive program designs, such as the efforts implemented by Walmart in 2007, or a market lift program can alter the choice architectures for consumers and lead to greater levels of efficient lighting saturation.

Data Gap	Follow-On Research that Will Fill the Gap
All Sectors	
Current choice architectures	2010-12 CPUC and IOU sponsored lighting market research for residential and nonresidential sectors
Prices for advanced lighting and incumbent technologies	
Importance of drivers other than profit in decisions about what products to specify, stock, install, and promote	
Other conditions which determine market actor product selection, promotion, and pricing of incumbent and efficient technologies	
LED production capacity and projected growth by lamp type	
Output of current choice architectures: i.e. historic and current full lighting category sales data (and comparator regions if current incentive programs are driving significant sales of efficient products in the non-residential sector)	
Changes to choice architecture likely to make the efficient solution the preferred or recommended option for each class of trade ally	
Behavioral tools applicable given situational factors shaping the current choice architecture	
Incentive structures which would induce each class of market actor to make the efficient lighting solution the preferred option	
Other	
Performance of off-the-shelf LED and induction lamps and luminaires, and lighting controls	

Non-Residential Lighting	
Current choice architectures	
Profit/sales drivers for advanced lighting products compared to incumbent technologies for manufacturers, distributors, architects, electrical engineers, and electrical contractors (trade allies)	2010-12 SCE and PG&E sponsored lighting market research for nonresidential sector
Availability of advanced technologies among distributors	
Market actors' current views and of efficient lamps and controls	
Methods used by market actors to promote product and design options including efficient lamps and controls to customers	
The extent to which market actors specialize in particular technologies, space types, or end-uses	
Operation and maintenance costs for incumbent non-residential lighting by lamp type, application, and segment	
Other conditions which determine market actor product selection, promotion, and pricing of incumbent and efficient technologies	
Output of current choice architectures: major distributors' historic and current full lighting category sales data. (If current incentive programs are driving significant sales of efficient products in the non-residential sector, also need data with and without incentives for California and comparator regions)	TBD
Changes to choice architecture likely to make the efficient solution the preferred or recommended option for different classes of manufacturer and retailer	
Incentive structures that would induce each class of market actor to make the efficient lighting solution the preferred option	2010-12 SCE and PG&E sponsored lighting market research for nonresidential sector
Other	
Large and robust dataset on energy savings by application, segment, and solution (lamp type, control, integrated)	2010-12 CPUC sponsored lighting impact evaluation for the nonresidential sector
Residential Lighting	
Current choice architectures	
Output of past and current choice architectures , i.e., full lighting category sales data for major retail sales channels with and without incentives for California and comparator regions	2010-12 CPUC sponsored lighting impact evaluation and market research for the nonresidential sector
Insight into customer wants and needs, e.g., current (2012) LED and specialty CFL saturation in California, by lamp type, wattage and location and/or customer response to in-store choice-engineered pricing and promotion strategies for advanced lighting products compared to a control	

Changes manufacturer and retailer choice architectures likely to make efficient lighting products the preferred or a more preferred choice for consumers	
Incentive structures and levels needed to induce each class of manufacturer and retailer to favor the efficient product	

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THE ENERGY EFFICIENCY MARKET EXPERTS

Appendix B – Interview and Survey Guides

Commercial Customer Advanced Lighting Retrofit Telephone Survey Guide

Overview:
The Evergreen team is conducting nonresidential lighting market research for advanced lighting technologies in three specific nonresidential segments: retail, restaurants, and offices. This end-use customer telephone survey is a small component of the larger research project that includes nonresidential lighting market actor interviews. We are planning to conduct a total of 400 surveys, 200 for SCE and 200 for PG&E (contingent on sufficient populations of advanced retrofit projects in retail, restaurant, and office establishments). The surveys will be conducted with participating SCE and PG&E nonresidential retail, restaurant and office customers who received an "advanced" lighting retrofit between 2010 and 2012.

Customers, particularly nonresidential sector, require advanced lighting solutions that are not one-size fits all. The research is addressing the market complexities by focusing on a subset of high priority customer segments, with a focus on advanced lighting adopters to understand the motivations underlying such purchase decisions. Much research has been done to determine market barriers, and this initial phase of customer research is intended to explore the bright spots – why and how early adopters made their decision to go "above and beyond" a more typical retrofit. This effort is intended to inform a broader and more comprehensive effort that might be conducted in a subsequent research phase.

"Advanced":
The evaluation team, with input from the IOU program teams, has identified that projects with certain LEDs and/or certain controls are considered "advanced." Advanced LEDs include downlights, LED fixtures, and LED lamps. Advanced controls including Energy Management Systems (EMS) and daylighting controls.

A project without the LEDs or controls listed above can still be considered "advanced" if the project has either occupancy sensors or photocells installed on T5 or induction lamp fixtures.

Sample Frame:
We are using participant tracking data as the sample frame source because we lack readily available data sources that indicate advanced lighting adopters within the general population.

Coordination:
We have participated in several coordination calls with ED consultants so we have an understanding of how our research overlaps and complements recent or planned related efforts. We are aware of recently published reports and we will review those and reference them in our work products as applicable. We have also made efforts to collaborate with similar survey efforts to ensure consistency and leverage analysis (e.g., data preparation) that has already been done on similar IOU tracking data.

Survey Batteries:

The survey is divided into an introduction and four general sections. The sections address key survey topics that were identified as priorities by the evaluation team with significant input from the SCE and PG&E program managers. The table below shows the survey topics or research questions addressed in each survey battery:

Survey battery	Survey topic / Research question
Section A – Background	*Identify the type of organization / building*
Section B – Installation Process	*Who was involved in specifying lighting equipment? To what degree were they involved?*
	How long did the specification/design process take?
	How long did the installation/retrofit process take?
Section C – Measure-specific Questions	*Verification of what was installed*
	Why did the customer install what they installed?
	Are participants satisfied with their lighting equipment?
Section D – Lighting Strategy Action Plan	*Awareness of Lighting Strategy Action Plan goals?*
	Do customers who conducted "advanced" retrofits believe they can do any more to further reduce their lighting usage?

Sample Frame Variables:

IOU: Either "SCE" or "PG&E".

Business Type: "Retail", "Restaurant", "Office", or "Unknown". For "Unknown" businesses, confirm that they are a retail shop, restaurant, or office. Thank and terminate if they are otherwise.

Contact Name: The first and last name of the contact for the rebate.

Contact Address: The address where the retrofit took place.

MEASURE: Measure – installed "high tech" lighting equipment, per IOU tracking database

---

Int. 1. Hello, my name is _____ and I am calling from CIC Research on behalf of **<IOU>**. This is not a sales call. May I please speak with **<CONTACT NAME>**?

Int. 2. [If contact not available, say] Is there a good time to call back in order to speak with **<CONTACT NAME>**? When?

[RECORD TIME; SCHEDULE CALL BACK]

Int. 3. [If Int. 2 = no / not available / no good time] Is there someone else at your business who is knowledgeable about your company's lighting retrofit at **<CONTACT ADDRESS>** that I may be able to speak with? May I please speak with them?

[RECORD NAME: _____]

[If "No", Thank and Terminate]

Int. 4. Hello, my name is _____ and I am calling from CIC Research on behalf of **<IOU>**. I'm calling because our records show that your business received a rebate from **<IOU>** for purchasing and installing lighting equipment. You are listed as the primary contact. According to our records, you had new high tech energy efficient lighting products installed at **<CONTACT ADDRESS>**. Do you recall this?

1. Yes
2. No [Return to **Int. 3.**]
88. Don't Know [Return to **Int. 3.**]
99. Refused [Return to **Int. 3.**]

Int. 5. [If **Int. 4.** = 1] Are you the best person to speak with about your business' experience with **<IOU>**'s rebate program, specifically related to this installation?

1. Yes
2. No [Return to **Int. 3.**]
88. Don't Know [Return to **Int. 3.**]
99. Refused [Return to **Int. 3.**]

[IF NEEDED] Your utility, **<IOU>**, would like to better understand how businesses like yours think about their lighting retrofit projects. We are also helping to evaluate businesses' experiences with the **<IOU>** rebate program. Your input is very important to help improve the energy programs offered by **<IOU>**.

[IF **Int. 5.** = 1] Great! I want to ensure you that this is not a sales call and we will keep everything you say confidential. Nothing you say will be attributed to yourself or your company, and all results will be reported in aggregate. The purpose of this interview is to inform **<IOU>**'s program design to better serve customers like yourself, or you in upcoming years. We appreciate your participation and assistance with this research!

Q 1. First, what is your job title?

1. Plant Manager
2. Facility Manager
3. Energy Manager
4. President/CEO
5. Owner/Co-owner/Partner/Member of LLP
6. General Manager
77. Other (Specify: _____)
88. Don't Know
99. Refused

Q 2. What is the main business activity at this facility? [DO NOT READ LIST; IF 2 ANSWERS ARE GIVEN, PROBE FOR WHICH ONE IS <u>MAIN</u> ACTIVITY.]

1. Offices (non-medical)
2. Restaurant/Food Service
3. Retail Stores
4. Food Stores (grocery/liquor/convenience)
5. Agricultural (farms, greenhouses)
6. Warehouse
7. Health Care
8. Education
9. Lodging (hotel/rooms)
10. Public Assembly (church/fitness/theater/library/museum/convention)
11. Services (hair/nail/massage/spa/gas/repair)
12. Industrial (food processing plant/manufacturing)
13. Laundry (coin-operated/commercial laundry facility/dry cleaning)
14. Condo Association/Apartment Manager (garden style/mobile home park/high-rise/townhouse)
15. Public Service (fire/police/postal/military)
77. Other (Specify: _____)
88. Don't Know
99. Refused

[If Q 2 ≠ 1, 2 or 3, Thank and Terminate. Say: *Thank you. Unfortunately we are only interested in speaking to certain types of organizations, and not <Q 2>. I will update our records regarding what type of organization you are. I appreciate your time, and sorry for the confusion***]**

Q 3.   [If **Q 2** = 1] Which of the following types of offices best describes this facility? Would you say... [READ LIST; ACCEPT ONE]

1. Administration and management
2. Financial/Legal
3. Insurance/Real Estate
4. Data Processing/Computer Center
5. Mixed-Use/Multi-tenant
6. Lab/Research and Development Facility
7. Software Development
8. Government Services
9. Office with Warehouse
10. Contractor's Offices
11. Telecommunications Center (call center)
12. Travel Services (travel agent)
77. Other (Specify: _____)
88. Don't Know
99. Refused

Q 4.   [If **Q 2** = 2] Which of the following types of restaurants or food service best describes this facility? Would you say... [READ LIST; ACCEPT ONE]

1. Fast Food/Self Service
2. Specialty/Novelty Food Service
3. Table Service
4. Bar/Tavern/Nightclub/Other Entertainment
5. Caterer
77. Other (Specify: _____)
88. Don't Know
99. Refused

Q 5. [If **Q 2** = 3] Which of the following types of retail stores best describes this facility? Would you say... [READ LIST; ACCEPT ONE]

1. Department/Variety Store
2. Retail Warehouse/Club
3. A Shop in an Enclosed Mall
4. A Shop in a Strip Mall
5. Auto/Truck/Motorcycle Sales
6. Art Gallery
7. Auction House
8. Heavy Equipment Sales
9. Facility is a Mall/Strip Mall
77. Other (Specify: _____)
88. Don't Know
99. Refused

Q 6. Does your organization own, lease, or manage your space?

1. Own
2. Lease
3. Manage
77. Other (Specify: _____)
88. Don't Know
99. Refused

Q 7. [If **Q 6** = 2] How long is the remaining term of your lease?

1. 1 year
2. 2 years
3. 3 years
4. 4 years
5. 5 years
6. 6 years
7. 7 years
8. 8 years
9. 9 years
10. 10 years
11. More than 10 years
12. Month to month
77. Other (Specify: _____)
88. Don't Know
99. Refused

Q 8. Does your organization pay the electric utility bill at this location?

1. Yes
2. No
77. Other (Specify: _____)
88. Don't Know
99. Refused

Q 9. What is the approximate total square footage at your location?

_____ [Enter #]
88. Don't Know
99. Refused

Q 10. [If **Q** 9 = 88] Would you say the floor area is… (READ CHOICES)

1. Less than 1,500 square feet?
2. 1,500 to 5,000 square feet?
3. 5,000 to 10,000 square feet?
4. 10,000 to 25,000 square feet?
5. 25,000 to 50,000 square feet?
6. 50,000 to 75,000 square feet?
7. 75,000 to 100,000 square feet?
8. Over 100,000 square feet?
88. Don't Know
99. Refused

Q 11. Which of the following statements best describes the role your business has in making lighting purchase decisions at this facility. [READ LIST; ONE ANSWER ONLY]

1. Very active – we're involved in all phases and have veto power.
2. Somewhat active – we approve decisions and provide some input and review.
3. Slightly active – we have a voice, but it's not the dominant voice.
4. Not active at all – we're part of a larger organization.
5. Or, not active at all – our business doesn't get involved in these issues.
77. Other (Specify: _____)
88. Don't Know
99. Refused

Thanks. Now I would like to talk with you about the lighting installation that happened at your building, located at **<CONTACT ADDRESS>**.

Q 12. What types of businesses or individuals were involved in specifying or recommending the types of lighting equipment you installed? [DO NOT READ LIST BUT PROBE TO CODE ANSWER GIVEN] (PROBE WELL:) Any others?

1. Lighting designer or architect
2. General contractor
3. Electrical contractor
4. Engineer
5. Lighting contractor
6. Lighting distributor
7. Lighting manufacturer representative
8. Corporate headquarters
9. In-house facility manager(s)
10. Property management company
11. Friend/Family/Colleague
12. Trade association (Specify: _____)
77. Other (Specify: _____)
88. Don't Know
99. Refused

[If more than one type mentioned in **Q 12**, ask **Q 13**. If only one mentioned in **Q 12**, populate **Q 13** with the response from **Q 12**]

Q 13. Which company or individual had the greatest influence on your organization's selection of lighting equipment? Was it ...(READ ANSWERS GIVEN IN Q12) [ACCEPT ONE]

1. Lighting designer or architect
2. General contractor
3. Electrical contractor
4. Engineer
5. Lighting contractor
6. Lighting distributor
7. Lighting manufacturer representative
8. Corporate headquarters
9. In-house facility manager(s)
10. Property management company
11. Friend/Family/Colleague
12. Trade association (Specify: _____)
77. Other (Specify: _____)
88. Don't Know
99. Refused

Q 14. [If **Q 13** = 1, 2, 3, 4, 5, 6 or 7; OTHERWISE SKIP TO Q22] How did you come into contact with the **<Q 13>**? Did... [READ LIST; ACCEPT ONE]

1. They contact you?
2. You contact them?
3. Or had you worked with the **<Q 13>** before?
77. Other (Specify: _____)
88. Don't Know
99. Refused

Q 15. [ASK IF **Q 14** = 3; OTHERWISE SKIP TO Q16] In relation to this project, did the **<Q 13>** approach you about your lighting installation or did you contact them?

1. I was Approached by **<Q 13>**
2. I contacted **<Q 13>**
77. Other (Specify: _____)
88. Don't Know
99. Refused

Q 16. Did the **\<Q 13\>** encourage you to install specific types of lighting equipment?

    1. Yes
    2. No
    77. Other (Specify: _____)
    88. Don't Know
    99. Refused

Q 17. [ASK IF **Q 16** = 1; otherwise skip to Q22] What types of equipment did they encourage? Any others? [DO NOT READ CHOICES; ACCEPT MULTIPLES]

    1. LED task lighting (for a desk or similar application)
    2. LED ambient lighting (for a hallway or other space)
    3. High performance T8
    4. T8 fluorescent fixtures
    5. T10 fluorescent fixtures
    6. T12 fluorescent fixtures
    7. T5 fluorescent fixtures
    8. Electronic ballasts
    9. Magnetic ballasts
    10. Reflectors
    11. Screw-in CFLs
    12. Hardwired CFLs
    13. CFL exit signs
    14. LED exit signs
    15. Incandescents
    16. Cold Cathodes
    17. Halogens
    18. HIDs (High Intensity Discharge)
    19. Induction lighting
    20. Time clock lighting controls
    21. Occupancy sensor lighting controls
    22. Photocell lighting controls
    23. An EMS
    77. Other (Specify: _____)
    88. Don't Know
    99. Refused

Q 18. [ASK IF **Q 16** = 1] Did the equipment that the <**Q 13**> specified ultimately get installed?

1. Yes
2. No
77. Other (Specify: _____)
88. Don't Know
99. Refused

Q 19. [ASK If **Q 18** = 2; otherwise skip to Q20?] Why did something else get installed? [OPEN-ENDED; RECORD RESPONSE VERBATIM]

_____

Q 20. On a scale of 1 to 10, where "1" is "not at all important" and "10" is "extremely important", how important was the input from the <**Q 13**> you worked with in deciding which specific equipment to install?

__ [Enter 1 – 10]
88. Don't Know
99. Refused

Q 21. [ASK If **Q 20** < 4] Why do you say that? [OPEN-ENDED; RECORD RESPONSE VERBATIM]

_____

Q 22. How long did the lighting specification or design process take? (PROBE TO CODE)

1. Less than 1 week
2. 1-2 weeks
3. 2-3 weeks
4. 3-4 weeks
5. 1-2 months
6. 2-3 months
7. 3-4 months
8. 4-5 months
9. Over 5 months
77. Other (Specify: _____)
88. Don't Know
99. Refused

Q 23. On a scale of 1 to 10, where "1" is "not at all satisfied" and "10" is "extremely satisfied", how satisfied were you with the amount of time the lighting specification or design process took, overall?

___ [Enter 1 – 10]
88. Don't Know
99. Refused

Q 24. [ASK If **Q 23** < 4] Why do you say that? [OPEN-ENDED; RECORD RESPONSE VERBATIM]

_____

Now I would like to ask you a couple of questions about the length of the retrofit.

Q 25. How long did the lighting retrofit take?

1. Less than 1 week
2. 1-2 weeks
3. 2-3 weeks
4. 3-4 weeks
5. 1-2 months
6. 2-3 months
7. 3-4 months
8. 4-5 months
9. Over 5 months
77. Other (Specify: _____)
88. Don't Know
99. Refused

Q 26. How long did you initially *plan for* the lighting retrofit to take? (PROBE TO CODE)

1. Less than 1 week
2. 1-2 weeks
3. 2-3 weeks
4. 3-4 weeks
5. 1-2 months
6. 2-3 months
7. 3-4 months
8. 4-5 months
9. Over 5 months
77. Other (Specify: _____)
88. Don't Know
99. Refused

Q 27. On a scale of 1 to 10, where "1" is "not at all satisfied" and "10" is "extremely satisfied", how satisfied were you with the amount of time the lighting retrofit took, overall?

___ [Enter 1 – 10]
88. Don't Know
99. Refused

Q 28. [If **Q 27** < 4] Why do you say that? [OPEN-ENDED; RECORD RESPONSE VERBATIM]

_____

Now I would like to ask you some questions about [2 types of] equipment you had installed.

[IF A RESPONDENT HAS 2 OR MORE MEASURES, THE SURVEY WILL ONLY ASK ABOUT 2 MEASURES]

[REPEAT **Q 29** – **Q 41** FOR TWO INSTALLED MEASURES]

Q 29. Our records show that you had **<MEASURE>** installed at this facility. Is that correct?

1. Yes
2. No
77. Other (Specify: _____)
88. Don't Know
99. Refused

Q 30. [ASK If **Q 29** = 2] Just to confirm, you did NOT have any **<MEASURE>** installed at your building, located at **<CONTACT ADDRESS>**. Correct?

1. Correct – not installed [skip back to **Q 29** for second measure, or to **Q 41** if only one measure or if first measure already asked about]
2. Incorrect – equipment was installed
77. Other (Specify: _____)
88. Don't Know
99. Refused

Q 31. What was the single main reason you had **<MEASURE>** installed at your facility? [DO <u>NOT</u> READ CHOICES; ONE ANSWER ONLY]

1. Cost savings
2. Energy savings / lower energy bill
3. Previous equipment failed
4. Better lighting
5. To be "high-tech"
6. To be "green" / help the environment
7. Corporate practice / direction from corporate
8. The rebate
9. Past participation in similar program
10. Recommended by general / electrical contractor
11. Recommended by lighting contractor
12. Recommended by lighting designer
77. Other (Specify: _____)
88. Don't Know
99. Refused

Q 32. Are there any other reasons you had **<MEASURE>** installed at your facility? [DO <u>NOT</u> READ CHOICES; ACCEPT MULTIPLES]

1. Equipment cost savings
2. Saving energy
3. Lower energy bill
4. Previous equipment failed
5. Better lighting
6. To be "high-tech"
7. To be "green" / help the environment
8. Corporate practice / direction from corporate
9. The rebate
10. Past participation in similar program
11. Recommended by general / electrical contractor
12. Recommended by lighting contractor
13. Recommended by lighting designer
77. Other (Specify: _____)
88. Don't Know
99. Refused

Q 33. Why did you choose to install the specific **<MEASURE>** installed at your facility, as opposed to other, similar **<MEASURE>**? [OPEN-ENDED; RECORD RESPONSE VERBATIM]

_____

[**NOTE:** QUESTIONS Q 34 – Q 39 WILL ONLY BE ASKED FOR LAMP/FIXTURE MEASURES]

Q 34. On a scale of 1 to 10, where "1" is "not at all satisfied" and "10" is "extremely satisfied", how satisfied are you with the *light quality* of the **<MEASURE>** installed at your facility?

___ [Enter 1 – 10]
88. Don't Know
99. Refused

Q 35. [ASK If **Q 34** < 4] Why do you say that? [OPEN-ENDED; RECORD RESPONSE VERBATIM]

_____

Q 36. [Ask for Measure 1 – ABC] On a scale of 1 to 10, where "1" is "not at all satisfied" and "10" is "extremely satisfied", how satisfied are you with the *light output – the amount of light* – of the **<MEASURE>** installed at your facility?

___ [Enter 1 – 10]
88. Don't Know
99. Refused

Q 37. [ASK If **Q 36** < 4] Why do you say that? [OPEN-ENDED; RECORD RESPONSE VERBATIM]

_____

Q 38. [Ask for Measure 1 – ABC] On a scale of 1 to 10, where "1" is "not at all satisfied" and "10" is "extremely satisfied", how satisfied are you with the *physical appearance* of the **<MEASURE>** installed at your facility?

___ [Enter 1 – 10]
88. Don't Know
99. Refused

Q 39. [ASK If **Q 38** < 4] Why do you say that? [OPEN-ENDED; RECORD RESPONSE VERBATIM]

_____

[**Note:** Questions Q 40 – Q 41will only be asked for controls measures]

Q 40. [Ask for Measure ABC – XYZ] On a scale of 1 to 10, where "1" is "not at all satisfied" and "10" is "extremely satisfied", what is your level of satisfaction with the **<MEASURE>** installed at your facility?

___ [Enter 1 – 10]
88. Don't Know
99. Refused

Q 41. [ASK If **Q 40** < 4] Why do you say that? [OPEN-ENDED; RECORD RESPONSE VERBATIM]

_____

SECTION D – LIGHTING STRATEGY ACTION PLAN

Q 42. Changing subjects now, are you aware of California's "Lighting Strategy Action Plan" which has a goal of 60-80% reductions in commercial lighting energy usage by the year 2020?

1. Yes
2. No
77. Other (Specify: _____)
88. Don't Know
99. Refused

Q 43. Do you think you could reduce your facility's lighting energy usage any further?

1. Yes
2. No
77. Other (Specify: _____)
88. Don't Know
99. Refused

Q 44. [ASK If **Q 43** = 2] Why not? [RECORD RESPONSE VERBATIM]

_____

Q 45. Those are all of the questions I have for you. Are there any other comments you would like to make about your lighting retrofit or participation in the rebate program with **<IOU>**? [OPEN-ENDED; RECORD RESPONSE VERBATIM]

_____

Thank you very much for your time. Have a nice day. [TERMINATE]

Manufacturer Representatives In-depth Interview Guide

Background

Data from three groups of market actors are expected to inform the design of utility commercial lighting programs. The programs want to promote the most efficient lighting practices (consistent with Advanced Lighting Guidelines).

Purpose

The target for this interview guide is manufacturer's representatives. Due to the different roles of manufacturer's reps, many of the questions may apply to only a subset of respondents. The overall objective of this interview guide is to elicit information about commercial lighting choices in specific market segments – offices, retail, and restaurants. To achieve this objective we aim to:

➢ Understand the respondent's business and customer base.

➢ Identify respondent's role in the commercial lighting market.

➢ Identify the factors that influence customer lighting choice (who and what).

➢ Understand the roles of manufacturer's representatives in product stocking, and lighting design across the three market-segments.

Note: There are at least three types of manufacturer reps.

1. Regional representatives who work directly for the manufacturer.

2. Local manufacturer's representatives who represent more than one company

   a. That sell to the design community

   b. That sell to distributors

Hi, my name is _____, and I'm calling from **[Research Into Action, Evergreen]** on behalf of the California utilities. We are an independent firm hired to help the utilities to improve their programs for commercial customers seeking lighting upgrades. My questions will take about 30 minutes, depending upon how much you have to say. Can you discuss this now, or would it be better to schedule a time to talk?

[Get contacts full name, email address and telephone number.]

[If scheduled, immediately send an email with the date and time of the call and an Outlook appointment (with reminder ½ hour before call).]

[Send reminder email one day prior to call if scheduled more than 3 days in advance. (Text for email will be provided.)]

[Indicate:]

1 Manufacturer's representative - works directly for manufacturer
2 Manufacturer's representative for multiple companies (determine who they sell to in interview)

Date:
Respondent:
Interviewer:
Length of interview:
Disposition:

I'd like to start by finding out a bit about you, your company, and your job.

Q 1. What does (company name) do? [anything else?] – [Confirm that they sell lighting equipment to distributors, contractors, designers, or end-users]. [Probe to learn more about who company serves directly and how they get business (word of mouth, cold-call marketing, etc.)]

   Q 1.1. MF – how many companies does your firm represent? [if very small specialty lighting only, ask more about the products and where they are used.)

   Q 1.2. Does your company represent lighting manufacturers with a specialty market such as landscape lighting or decorative lighting?

   Q 1.3. How many employees does your firm have?

Q 2. What is your job?

   Q 2.1. Title, and responsibilities/description

   Q 2.2. Length at company

   Q 2.3. Length in lighting industry

Q 3. Do you track the products that qualify for utility retrofit rebates?

   Q 3.1. If Yes: How?

Q 4. What do you like about the utility rebate programs?

Q 5. Any suggestions for improvement?

I'd like to understand how new lighting products get into the market. I'm especially interested in "advanced lighting products" such as LED lighting and advanced controls. As we go through these questions please tell me if there are any differences in the new products available for retrofits versus other types of lighting projects.

Q 6.   What types of advanced lighting products do the companies that you represent have?

Q 7.   And how do you get these products into the market?

Q 7.1. Who do you promote them to?

Q 7.2. How do you convince designers to specify them? Or

Q 7.3. How do you get distributors to carry them?

Q 7.4. What barriers are there to increasing the market share of these products? What do you do to overcome them?

Q 7.5. Who usually adopts new products first? And why?

Q 7.6. What things tend to accelerate adoption of new products?

Q 8.   Do manufactures ever try to promote certain products over others? Why?

Q 8.1. How do they do this?

Q 8.1.1. incentives – to who, how do they work,

Q 8.1.2. influence distributor stocking – how does this work

Q 9.   Do you provide incentives for certain products?

Q 9.1. If yes – for what products? [how do you decide to provide an incentive – how does this work?]

Q 9.2. If yes – who do they provide the incentive to?

Q 10. If yes – what type of incentive is it?

We are especially interested in the lighting retrofit market (Define retrofit market more here)

Q 11. How much of your work pertains to the following types of lighting projects….

        Q 11.1. New construction or complete remodel of a facility (gut rehab)

        Q 11.2. Retrofit (replace existing lighting fixture for another)

Q 12. What types of advanced lighting products are available for the retrofit market?

Q 13. How new are they? [PROBE: When did product enter marketplace? How

Q 14. At what level are they being adopted? [PROBE: How are new technologies being adopted? Are retrofit customers coming to you for new products or are you reaching out to them?]

Q 15. Are certain market segments adopting new technologies more than others? Why?

Q 16. Are the new products being used in certain applications more than others? Why?

Q 17. What could be done to accelerate their adoption?

Q 18. Are lighting controls installed in the retrofit market? Probe for…

        Q 18.1. Types of control

        Q 18.2. Why? [code? Specific needs? Beyond code?]

        Q 18.3. How common are these?

Q 18.4. Any problems/issues with codes in retrofit situation.

Q 19. Are you ever directly involved in commercial lighting retrofit projects? (If No – skip to Q20)

Q 19.1. In general, who contacts you about projects? [Probe to understand their role]

Q 19.2. And what is it that they want – are there specific problems or issues they are they trying to solve with their lighting projects?

Q 19.3. What is your role – what specific services do you offer or provide?

Q 19.4. Does your role vary between the market segments, for example offices as opposed to retail? What about restaurants?

Q 20. Are you ever asked to specify equipment for retrofit projects? In what situations? How do you determine what to specify?

Q 21. Who generally specifies equipment for retrofit projects?

Q 21.1. Does this vary by sector?

Q 22. Who determines the lighting array? Does the lighting load calculations?

Q 22.1. Does this vary by sector?

FUTURE CHANGES

Finally, I'd like to talk to you about what you see happening with commercial lighting market in the next five years.

Q 24. Are there any energy efficient products or approaches that you think are likely to become more prevalent in the next five years?

Q 24.1. [If yes] What, and in what applications?

Q 24.2. What do you think is needed to increase the rate at which ___ is adopted? (anything else?) [Possible probes: information – to whom?, lower costs, more product, improved product?]

Those are all my questions – before I let you go, is there anything you'd like to add, anything you think I should have asked about or that we should keep in mind as we conduct this research into nonresidential lighting retrofit projects in California?

Thank you very much for your time on the phone today!

Lighting Distributor In-depth Interview Guide

Background

Data from three groups of market actors are expected to inform the design of utility non-residential lighting programs. The programs want to promote the most efficient lighting practices (consistent with Advanced Lighting Guidelines).

Purpose

The target for this interview guide is lighting distributors. The overall objective of this interview guide is to elicit information about nonresidential lighting choices in specific market segments – offices, retail, and restaurants. To achieve this objective we aim to:

- ➢ Understand the respondent's business and customer base.
- ➢ Understand how a lighting retrofit project flows from the end-user upstream & identify influence points
- ➢ Understand the role of the distributor in the lighting retrofit market
- ➢ Identify what is stocked and how this effects what is installed (if at all)
- ➢ Identify the prevalence of advanced lighting options in the retrofit market

Hi, my name is _____, and I'm calling from **[Research Into Action, Evergreen]** on behalf of the California utilities. We are an independent firm hired to help the utilities to improve their programs for commercial customers seeking lighting upgrades. My questions should take about 20 minutes, depending upon how much you have to say. Can you discuss this now, or would it be better to schedule a time to talk?

[Screen for correct person – person who knows most about lighting equipment]

[Get contacts full name, email address and telephone number.]

[If scheduled, immediately send an email with the date and time of the call and an Outlook appointment (with reminder ½ hour before call).]

[Send reminder email one day prior to call if scheduled more than 3 days in advance. (Text for email will be provided.)]

Date:
Respondent:
Interviewer:
Length of interview:
Disposition:

I'd like to start by finding out a bit about you, your company, and your job.

We are interested in talking to distributors that have experience with lighting retrofits. For the purposes of this research, "retrofit" projects are where existing lighting is replaced, as opposed to new construction or "gut" rehabs.

Q 1.   What does (company name) do? Anything else? – [if not mentioned, confirm that they distribute commercial lighting equipment]

Q 2.   What is your job?

Q 2.1.   Title, and responsibilities/description

Q 2.2.   Length at company

Q 2.3.   What, if any, other experience in lighting industry?

Q 3.   In the past two years, has your company provided lighting products for retrofit projects that received incentives through a utility rebate program?

Q 3.1.   [If Yes] – about how many?

ROLE OF DISTRIBUTOR

I'd like to ask you some questions specific to the lighting retrofit market. Again, by retrofit I mean where a business is replacing existing lighting, NOT new construction or "gut" rehabs.

Q 4.   I'd like to start by understanding how your company gets involved in lighting retrofit projects and the role your company plays in these projects. How does this typically work?

[Interviewer note: we want the following information]:

Q 4.1.   Who contacts you for retrofit projects?

Q 4.2.   Who is the your "customer" for retrofit jobs? [If (a), probe, "What do you mean by ESCOs?" and have them define]

a.   ESCOs

b. Manufacturer reps

c. Installation contractors

d. Other

Q 4.3.   When in the process are you contacted about a project?

Q 4.4.   What do your customers want/ask for?

Q 4.5.   Specific services your company offers or provides

Q 4.6.   Is there typically a designer involved?

Q 4.7.   Who, if anyone, does the lighting level calculations for a retrofit project?

Q 4.8.   If no designer and no lighting calculations – who determines the new lighting array, and how?

a. Distributor employee

b. Manufacturer rep

c. ESCO

d. Other

SPECIFYING PRODUCTS

Q 5.   [If not answered in Q7 g] How often, if at all, does your firm provide equipment specifications in retrofit projects?

Q 5.1.   Who does the specifying? (employee, manufacturers rep, other?)

[If respondent does the specifying]:

Q 6.   What types of buildings do you specify lighting for?

Q 6.1.   Office retrofits? If yes: how does this typically work? [if different from process flow described in Q7]

Q 6.2.   Retail retrofits? If yes: how does this typically work? [if different from process flow described in Q7]

Q 6.3.   Restaurant retrofits? [if different from process flow described in Q7]

Q 7.   What type of lighting do you typically specify In retrofit projects? Does the efficiency of the lighting being specified vary by job?

Q 7.1.   If yes, what drives the efficiency differences? [who is specifying, market segment, building type]

[probe to understand]

Q 7.2.   If there consistency in the differences

Q 7.3.   Is anyone specifying below code [or, do you receive orders for products below code?] – if so, under what circumstances [who, where, why, is it changed?]

Q 7.4.   Above code – if so, under what circumstances [who, where, why]

Q 8.   In retrofit projects, what are end-users asking for? What do they want from the lighting project?

Q 8.1.   Are they looking for energy efficiency, or lower energy bills? If so…

Q 8.1.1.   Beyond code? Specific items?

Q 8.1.2.   What types of projects?

Q 8.1.3.   Why are they asking for this?

Q 9.   [If not yet addressed] Do end-users ever ask for lighting that is more efficient than code?

Q 9.1.   What types of end users?

Q 9.2.   Why?

Q 9.3.   What products are specified?

Q 10. In general, who influences what gets installed in retrofit situations? How do they influence it?

Q 11. Do you ever try to influence what gets installed? When? Why? How?

I'd like to ask you about some specific products and whether you stock them, and if your customers are asking for them.

Q 12. What influences what types of lighting you stock? [Probe for product types and negotiations between manufacturer reps. We want to understand what's motivating them].

LED Products

Thinking about LED lighting products...

Q 13. How does your company determine what products to stock? [Probe: Ask them about negotiation between manu reps – what do they want to carry, how does it show up on your shelf].

Q 14. Do you have any LED lighting products (besides exit signs) in stock?

Q 15. Do you have LED lighting for high and medium bay applications in stock?

Q 16. [If not in stock] About how much time would it take to get them?

      a.   One day or less

      b.   Two days to one week

      c.   Two to four weeks

      d.   More than four weeks

Q 17. What about LED HID products? Are these products currently in stock?

Q 18. [If not in stock] About how much time would it take to get them?

      a.   One day or less

b. Two days to one week

c. Two to four weeks

d. More than four weeks

Q 19. In the past two years about how many times were these LED HID products included in specifications or requested by contractors?

Q 19.1. For what types of projects?

Q 19.2. For what types of buildings?

Q 20. Does the relative availability of LED HIDs effect what is installed? [IF YES] in what ways? (probes: efficiency, quantity, manufacturer)?

Q 21. What about LED point source products? Are these products currently in stock?

Q 22. [If not in stock] About how much time would it take to get them?

a. One day or less

b. Two days to one week

c. Two to four weeks

d. More than four weeks

Q 23. In the past two years about how many times were these products included in specifications or requested by contractors?

Q 23.1. For what types of projects?

Q 23.2. For what types of buildings?

Q 24. Does the relative availability of LED point source products effect what is installed? [IF YES] in what ways? (probes: efficiency, quantity, manufacturer)?

Q 25. What about LED retrofit kits? Are these products currently in stock?

Q 26. [If not in stock] About how much time would it take to get them?

a. One day or less

b. Two days to one week

c. Two to four weeks

d. More than four weeks

Q 27. In the past two years about how many times were these products included in specifications or requested by contractors?

Q 27.1. For what types of projects?

Q 27.2. For what types of buildings?

Q 28. Does the relative availability of LED retrofit kits effect what is installed? [IF YES] in what ways? (probes: efficiency, quantity, manufacturer)?

Dimming Ballasts

Q 29. What about dimming ballasts… Do you regularly stock these? Are they currently in stock?

Q 30. [If not in stock] About how much time would it take to get them?

a. One day or less

b. Two days to one week

c. Two to four weeks

d. More than four weeks

Q 31. Does the relative availability of dimming ballasts effect what is installed? [IF YES] in what ways? (probes: efficiency, quantity, manufacturer)?

Q 32. How often do your customers request dimming ballasts? [If necessary, prompt: Would you say it is:]

a. Never

b. A couple of times in the past year.

c. About once a month

d. Two – three times a month

e. Weekly

f. More than once per week

Q 33. How, if at all, does the use of dimming ballasts vary between retrofit and new construction projects?

Q 34. And for the retrofit projects, in what sectors do you think that most of the dimming ballasts are being installed?

Step Dimming Ballasts

Q 35. What about step dimming ballasts… Do you regularly stock these? Are they currently in stock?

Q 36. [If not in stock] About how much time would it take to get them?

a. One day or less

b. Two days to one week

c. Two to four weeks

d. More than four weeks

Q 37. Does the relative availability of step dimming ballasts effect what is installed? [IF YES] in what ways? (probes: efficiency, quantity, manufacturer)?

Q 38. How often do your customers request step dimming ballasts? [If necessary, prompt]: Would you say it is:

a. Never

b. A couple of times in the past year.

c. About once a month

d. Two – three times a month

e. Weekly

f. More than once per week

Q 39. How, if at all does the use of step dimming ballasts vary between retrofit and new construction projects?

Q 40. And for the retrofit projects, in what sectors do you think most of the step-dimming ballasts are being installed?

Controls / EMS Lighting Integration

Q 41. What about lighting controls… how often are controls specified in retrofit projects?

Q 42. What are the specific/specialized controls you stock? (looking for general types here, not a catalog)

Q 43. Are there controls that are particularly hard to get or take longer?

Q 43.1.   Which ones?

Q 44. For the others, about how long would it take to get them?

a.   One day or less

b.   Two days to one week

c.   Two to four weeks

d.   More than four weeks

Q 45. Does the relative availability of Controls/EMS Lighting effect what is installed? [IF YES] in what ways? (probes: efficiency, quantity, manufacturer)?

Q 46. How often do your customers request controls above code? [If necessary, prompt: Would you say it is:]

a.   Never

b.   A couple of times in the past year.

c.   About once a month

d.   Two – three times a month

e.   Weekly

f.   More than once per week

Q 47. Are there certain types of projects or certain market segments that more commonly include controls?

Q 48. How, if at all does the use of lighting controls vary between retrofit and new construction projects?

Q 49. What about lighting controls linked to an EMS – are these commonly part of retrofit projects you've been involved in?

Q 50. And for the retrofit projects, in what sectors do you think that most of the above code lighting controls are being installed?

Q 51. Do you track what products qualify for utility program retrofit rebates?

Q 51.1. [If Yes]: How?

Q 51.2. [If Yes]: Do the utility rebate programs affect what you keep in stock? In what way?

[Ask questions 35 & 36 only if you have time]

Q 52. What do you like about the utility rebate programs?

Q 53. Any suggestions for improvement? [get it quick and shut it down quickly]

FUTURE CHANGES

Finally, I'd like to talk to you about what you see happening with non-residential lighting in the next five years.

Q 54. Are there any energy efficient products or approaches that you think are likely to become more prevalent in the next five years?

Q 54.1. [If yes] What, and in what applications?

Q 54.2. What do you think is needed to increase the rate at which ____ is adopted? (anything else?) [possible probes: information – to whom?, lower costs, more product, improved product?]

Those are all my questions. Before I let you go, is there anything you'd like to add, anything that you think I should have asked about or that we should keep in mind as we conduct this research into non-residential lighting retrofit projects in California?

Thank you very much for your time on the phone today!

Contractor In-depth Interview Guide

Background:

Data from three groups of market actors are expected to inform the design of utility non-residential lighting programs. The programs want to promote the most efficient lighting practices (consistent with Advanced Lighting Guidelines).

Purpose:

The target for this interview guide is lighting (or general) contractors. The overall objective of this interview guide is to elicit information about nonresidential lighting choices in specific market segments—offices, retail, and restaurants. To achieve this objective we aim to:

- Understand the respondent's business and customer base.
- Identify customer motivations for lighting retrofits in specific market segments
- Identify the factors that influence customer lighting choice (who and what)
- Understand the roles of contractors in lighting level calculations, design, product selection, and customer influence across three market segments.

We expect to ask only one market segment set of each trade ally. We also expect that we will have an easier time finding professionals with experience in office retrofits than retail or restaurants. Because of this, we will ask the restaurant and retail set of any trade ally with experience in those segments, to ensure we have responses for each segment.

Hi, my name is _____, and I'm calling from **[Research Into Action, Evergreen]** on behalf of the California utilities. We are an independent firm hired to help the utilities to improve their programs for commercial customers seeking lighting upgrades. My questions will take about 30 minutes, depending upon how much you have to say. Can you discuss this now, or would it be better to schedule a time to talk?

[Screen for correct person – owner, manager, person who knows the most about their commercial lighting projects.]

[Get contacts full name, email address and telephone number.]

[If scheduled, immediately send an email with the date and time of the call and an Outlook appointment (with reminder ½ hour before call).]

[Send reminder email one day prior to call if scheduled more than 3 days in advance. (Text for email will be provided.)]

Date:
Respondent:
Interviewer:
Length of interview:
Disposition:

I'd like to find out a little bit more about your company.

We are interested in talking to contractors that have experience with lighting retrofits. Retrofits are projects in which existing lighting is replaced, as opposed to new construction or "gut" rehabs.

Q 1. What does (company name) do? [anything else?] [indicate if the lighting contractor is mainly doing retrofit and if they are an ESCO]

   Q 1.1.   (I'd like to get an idea of the size of your company) How many employees?

Q 2. In the past two years, have you worked on any commercial lighting retrofit projects? [if necessary, see description above.]

Q 3. If yes: I'd like to learn a bit more about lighting retrofit projects in general...

   Q 3.1.   How do [you] [your company] typically get involved in lighting retrofit projects?

   Q 3.2.   In general, who contacts you about projects? [Probe to understand their role, and at what point in the project the lighting design occurs – how early are they brought in?]

   Q 3.3.   What is your company's role – what specific services do you offer or provide?

Q 4. Have you completed lighting retrofit projects...

   Q 4.1.   In office spaces?   [If yes, about how many?]

   Q 4.2.   What about in retail stores?   [If yes, about how many?]

   Q 4.3.   And what about restaurants?   [If yes, about how many?]

Q 5. In what way does your company's role vary between the market segments, for example office retrofits as opposed to retail? What about restaurants?

[If NO projects completed in any of these segment ask 3 – 7 (else skip to 8)]:

Review Note: These questions are included to get some information about the market in general, and the number of rest, retail and office lighting retrofits relative to other sectors.

Q 6. In what business sectors do you do the most of your lighting retrofits?

Q 7. What about lighting projects in new construction? Are there specific sectors or segments you most commonly work in?

Q 8. Have you heard of CalCTP certification?   [If no – skip to 9]

   Q 8.1.   Is your company CalCTP certified? [if yes – skip to next section]

   Q 8.2.   Are any of your electricians CalCTP certified?

Q 9. In the past two years have you completed commercial lighting retrofit projects that received incentives through utility programs? [If no, or DK – Thank and terminate]

   Q 9.1.   How do you know what products qualify for utility rebates? [Interviewer probe for using website, keep a list, distributor knows, other ways]

   Q 9.2.   What do you like about the utility rebate programs?

   Q 9.3.   Any suggestions for improvement?

Thank and terminate.

[Continue interview if Q2 = yes for any of the segments]

I'd like to ask some questions about you and your job.

Q 10. What is your job title and how long have you had this job?

Q 11. What are your main responsibilities? [probe if necessary: sales, project specification, project management)

    Q 11.1. [if list includes many not related to lighting, percent of time on lighting projects]

Q 12. How long have you worked in the lighting industry?

Q 13. Have you heard of CalCTP certification? [If no – skip to 15]

    Q 13.1. Is your company CalCTP certified?

    Q 13.2. Are any of your electricians CalCTP certified?

Q 14. In the past two years have you completed commercial lighting retrofit projects in California that received incentives through utility programs? [if no or don't know – skip to next section]

    Q 14.1. How do you know what products qualify for utility rebates? [interviewer probe for using website, keep a list, distributor knows, other ways]

    Q 14.2. What do you like about the utility rebate programs?

    Q 14.3. Any suggestions for improvement?

SECTOR-SPECIFIC QUESTIONS (RESTAURANTS, RETAIL, AND OFFICES)

I'd like to ask specifically about your experience working with several market segments we are interested in: offices, restaurants, & retail.

Offices

You said that you completed lighting retrofits in offices in the past two years. I'd like to learn a bit more about those projects.

Q 15. Please describe a "typical" office lighting retrofit project…

    Q 15.1. Why it is done?

Q 15.2. Type and size of space

Q 15.3. Ownership structure [tenant, owner occupied]

Q 16.How does your company get involved in these office lighting retrofits?

Q 16.1. Who contacts you?

Q 16.2. And what do they want? [Do they ask for a bid? If so, is this on work that is already specified? Are they looking for help figuring out what to do, lower bills, better lighting?] Anything else?

Q 17.Thinking about office lighting retrofit projects specifically, who are your main contacts [or customers]? [If necessary – for example, are they general contractors, A&E firms, the building owner, the business owner, someone in a corporate office?]

Q 18.How often do you have office lighting retrofit customers that are willing to consider going above code, or that explicitly ask for the most energy efficient products or design?

Now I'd like to talk about lighting designs in offices…

Q 19.Is there usually a plan or lighting design worked out for office lighting retrofits before you are brought in?

Q 19.1. [If not:] How do you figure out what to install?

Q 19.2. [If yes:] Who does the lighting calculations, when does it happen?

Q 19.3. Who has done the lighting design?

Q 19.4. Are the products specified in the design generally what end up being installed? [when, why and how]

Q 19.5. In what cases do the specified products change?

Q 20. Thinking about these office lighting retrofits, who typically makes the final decision about what is ultimately installed? [Probe: an individual such as owner, local or remote, contractor, engineer, designer]

Q 21. How, if at all, have you been able to influence the equipment ultimately installed in these projects?

Q 22. What drives the decision regarding the type of lighting installed?

Q 22.1. Anything else? [Probes: company specifications, initial cost, operating cost, efficiency, aesthetics of fixture, color rendition, availability, rebates, company policies, contractor, rebates, what they were shown...]

I have a few questions about some specific technologies....

Q 23. Do you ever recommend LED lighting products in office retrofits?

Q 23.1. [If no] What stops you from recommending or installing LED products?

Q 23.2. [If yes ask:]

Q 23.2.1. Is this to replace ambient fixtures?

Q 23.2.2. Point-source?

Q 23.2.3. HID/high bay/mid bay or other types of lighting?

Q 23.2.4. Any other uses or installation of LED you see in office space.

Q 24. How often do your customers end up installing these LED fixtures?

Q 24.1. [If 0% < frequency < 100%] Why do some take the recommendations and some don't? Does it vary by type [ambient, point source, HID etc.]

Q 24.2. Are there challenges with getting the ambient LED equipment you've [recommended][specified]?

Q 25. Are there specific issues associated with any of the LED technologies you install that prevent wider adoption… [ambient LED, point-source, HID… refer to any LED application already mentioned to understand if there are any issues with cost, availability, applications, confidence in performance, or installation issues with any of the technologies.]

Q 26. Do you ever recommend or install dimming ballasts in office retrofits?

Q 26.1. [If no] What stops you from recommending or installing dimming ballasts? Step dimming ballasts?

Q 26.2. [If yes ask:]

Q 26.2.1. How often are these continuous dimming ballasts?

Q 26.2.2. Step-dimming ballasts?

Q 27. How often do your customers take the recommendation?

Q 27.1. [If 0% < frequency < 100%] Why do some take the recommendations and some don't?

Q 27.2. Are there challenges with getting the step dimming ballast equipment you've [recommended][specified]?

Q 28. Are there specific issues associated with any of the dimming ballast technologies you install that prevent wider adoption… [refer to any applications already mentioned to understand if there are any issues with cost, availability, applications, confidence in performance, or installation issues with any of the technologies.]

Q 29. Do you ever recommend integrating lighting into the Energy Management Systems in office retrofits?

Q 29.1. [If no] What stops you from integrating lighting into the EMS system?

Q 29.2. [If yes] In what situations? Why?

Q 29.2.1. How often do your customers take the recommendation?

Q 29.2.2. [If 0% < frequency < 100%] Why do some take the recommendations and some don't?

Q 30. Are there other control strategies you commonly install in office retrofits?

Q 30.1. Any that frequently result in call backs, or any that don't seem to work as expected?

Q 31. Are there specific issues associated with any of the control technologies you install that prevent wider adoption… [EMS integration, demand response programming, wireless controls, occupancy sensors… refer to any control application already mentioned to understand if there are any issues with cost, availability, applications, confidence in performance, or installation issues with any of the technologies.]

Restaurants

You said that you completed lighting retrofits in restaurants in the past two years. I'd like to learn a bit more about those projects.

Q 32. How would you describe your "typical" restaurant lighting retrofit project… what types of spaces are these, how large?

Q 32.1. Type [e.g., National/regional chains, specialty, high end, fast food…]

Q 32.2. Size [typical size in square footage]

Q 32.3. Ownership structure [franchise, single owner, multiple locations, corporate ownership]

Q 33. What is the most common way that your company gets involved in these restaurant lighting retrofits?

Q 33.1. Who contacts you about projects?

Q 33.2. And do they typically want – what problem are they trying to solve?

Q 34. Thinking about restaurant lighting retrofit projects specifically, who are your main contacts [or customers]?

Q 34.1. [If necessary – for example, are they general contractors, A&E firms, the building owner, the business owner, someone in a corporate office or HQ?]

Q 35. How often do you have restaurant lighting retrofit customers that are willing to consider going above code, or that explicitly ask for the most energy efficient products or design?

Now I'd like to talk about lighting designs in restaurants…

Q 36. Is there usually a lighting plan or design worked out for restaurant lighting retrofits before you are brought in?

Q 36.1. [If not:] How do you figure out what to install?

Q 36.2. [If yes:] Who does the calculations, when does it happen?

Q 36.3. Who has done the lighting design?

Q 36.4. Are the products specified in the design generally what end up being installed? [when, why and how]

Q 36.5. In what cases do the specified products change?

Q 37. Thinking about these restaurant lighting retrofits, who typically makes the final decision about what is ultimately installed? [Probe: an individual such as owner, local or remote, contractor, engineer, designer]

Q 38. How, if at all, have you been able to influence the equipment ultimately installed in these projects?

Q 39. What drives the decision regarding the type of lighting installed? Anything else? [Probes: company specifications, initial cost, operating cost, efficiency, aesthetics of fixture, color rendition, availability, rebates, company policies]

I have a few questions about some specific technologies….

Q 40. Do you ever recommend LED lighting products in restaurant lighting retrofits?

   Q 40.1. [If no] What stops you from recommending or installing LED products?

   Q 40.2. [If yes ask:]

      Q 40.2.1. Is this to replace ambient fixtures?

      Q 40.2.2. Point-source?

      Q 40.2.3. HID/high bay/mid bay or other types of projects?

      Q 40.2.4. Any other uses or installation of LED you see in restaurant space?

Q 41. How often do your customers end up installing these fixtures? Does it vary by type [ambient, point source, HID etc.]

   Q 41.1. [If 0% < frequency < 100%] Why do some take the recommendations and some don't?

   Q 41.2. Are there challenges with getting the ambient LED equipment you've [recommended][specified]?

Q 42. Are there specific issues associated with any of the LED technologies you install that prevent wider adoption… [ambient LED, point-source, HID… refer to any LED application already mentioned to understand if there are any issues with cost, availability, applications, confidence in performance, or installation issues with any of the technologies.]

Q 43. Do you ever recommend or install dimming ballasts in restaurant retrofits?

   Q 43.1. [If no] What stops you from recommending or installing dimming ballasts? Step dimming ballasts?

   Q 43.2. [If yes ask:]

Q 43.2.1. How often are these continuous dimming ballasts?

Q 43.2.2. Step-dimming ballasts?

Q 44. How often do your customers end up installing this equipment?

Q 44.1. [If 0% < frequency < 100%] Why do some take the recommendations and some don't?

Q 44.2. Are there challenges with getting the step dimming ballast equipment you've [recommended][specified]?

Q 45. Are there specific issues associated with any of the dimming ballast technologies you install that prevent wider adoption… [refer to any applications already mentioned to understand if there are any issues with cost, availability, applications, confidence in performance, or installation issues with any of the technologies.]

Q 46. Do you ever recommend integrating lighting into the Energy Management Systems in restaurant retrofits?

Q 46.1. [If no] What stops you from integrating lighting into the EMS system?

Q 46.2. [If yes] In what situations?   Why?

Q 46.2.1. How often do your customers accept this recommendation?

Q 46.2.2. [If 0% < frequency < 100%] Why do some take the recommendations and some don't?

Q 47. Are there other control strategies you commonly install in restaurant retrofits?

Q 47.1. Any that frequently result in call backs, or any that don't seem to work as expected?

Q 48. Are there specific issues associated with any of the control technologies you install that prevent wider adoption… [EMS integration, demand response programming, wireless

controls, occupancy sensors… refer to any control application already mentioned to understand if there are any issues with cost, availability, applications, confidence in performance, or installation issues with any of the technologies.]

Advanced Lighting Survey 2012-2013 - SCE & PG&E Tables by Utility by Business Type

Q4. Which of the following types of restaurants or food service best describes this facility? BY Utility > Q2. Business Type

		Utility								
		Southern California Edison				Pacific Gas & Electric Company				
		Q2. Business Type				Q2. Business Type				
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)
Fast Food/Self Service	Count	0	1	0	1	0	0	0	0	
	Row %	0.0%	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	
	Col %	0.0%	50.0%	0.0%	50.0%	0.0%	0.0%	0.0%	0.0%	
Specialty/Novelty Food Service	Count	0	0	0	0	0	0	0	0	
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Table Service	Count	0	1	0	1	0	2	0	2	
	Row %	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	
	Col %	0.0%	50.0%	0.0%	50.0%	0.0%	100.0%	0.0%	100.0%	
Bar/Tavern/Nightclub/Other Entertainment	Count	0	0	0	0	0	0	0	0	
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Caterer	Count	0	0	0	0	0	0	0	0	
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Other	Count	0	0	0	0	0	0	0	0	
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Total	Count	0	2	0	2	0	2	0	2	
	Row %	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	
	Col %	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	

Retail stores

You said that you completed lighting retrofits in retails in the past two years. I'd like to learn a bit more about those projects.

Q 49. How would you describe your "typical" retail lighting retrofit project… what types of spaces are these, how large?

Q 49.1. Type [eg. Chains, big box, specialty, mall stores]

Q 49.2. Size [typical size in square footage]

Q 49.3. Ownership structure [we assume they are rarely owner occupied, but will confirm]

Q 50. What is the most common way that your company gets involved in these retail lighting retrofits?

  Q 50.1. Who contacts you about retail projects?

  Q 50.2. And do they typically want – what problem are they trying to solve?

Q 51. Thinking about retail lighting retrofit projects specifically, who are your main contacts [or customers]? [If necessary – for example, are they general contractors, A&E firms, the building owner, the business owner, someone in a corporate office or HQ?]

Q 52. How often do you have retail lighting retrofit customers that are willing to consider going above code, or that explicitly ask for the most energy efficient products or design?

Now I'd like to talk about lighting designs in retail spaces…

Q 53. Is there usually a lighting design worked out for retail lighting retrofits before you are brought in?

  Q 53.1. [If not:] How do you figure out what to install?

  Q 53.2. [If yes:] Who does the lighting calculations, when does it happen?

  Q 53.3. Who has done the lighting design?

  Q 53.4. Are the products specified in the design generally what end up being installed? (when, why and how)

  Q 53.5. In what cases do the specified products change?

Q 54. Thinking about these retail lighting retrofits, who typically makes the final decision about what is ultimately installed? [Probe: an individual such as owner, local or remote, contractor, engineer, designer]

Q 55. How, if at all, have you been able to influence the equipment ultimately installed in these projects?

Q 56. What drives the decision regarding the type of lighting installed? Anything else? [Probes: company specifications, initial cost, operating cost, efficiency, aesthetics of fixture, color rendition, availability, rebates, company policies]

I have a few questions about some specific technologies….

Q 57. Do you ever recommend LED lighting products in retail lighting retrofits?

Q 57.1. [If no] What stops you from recommending or installing LED products?

Q 57.2. [If yes ask:]

Q 57.2.1. Is this to replace ambient fixtures?

Q 57.2.2. Point-source?

Q 57.2.3. HID/high bay/mid bay or other types of projects?

Q 57.2.4. Any other uses or installation of LED you see in retail space?

Q 58. How often do your customers end up installing these fixtures?

Q 58.1. Does it vary by type [ambient, point source, HID etc.]

Q 58.2. [If 0% < frequency < 100%] Why do some take the recommendations and some don't?

Q 58.3. Are there challenges with getting the ambient LED equipment you've [recommended][specified]?

Q 59. Are there specific issues associated with any of the LED technologies you install that prevent wider adoption… [ambient LED, point-source, HID… refer to any LED application already mentioned to understand if there are any issues with cost, availability, applications, confidence in performance, or installation issues with any of the technologies.]

Q 60. Do you ever recommend or install dimming ballasts in retail retrofits?

    Q 60.1. [If no] What stops you from recommending or installing dimming ballasts? Step dimming ballasts?

    Q 60.2. [If yes ask:]

        Q 60.2.1. How often are these continuous dimming ballasts?

        Q 60.2.2. Step-dimming ballasts?

Q 61. How often do your customers end up installing this equipment?

    Q 61.1. [If 0% < frequency < 100%] Why do some take the recommendations and some don't?

    Q 61.2. Are there challenges with getting the step dimming ballast equipment you've [recommended][specified]?

Q 62. Are there specific issues associated with any of the dimming ballast technologies you install that prevent wider adoption… [refer to any applications already mentioned to understand if there are any issues with cost, availability, applications, confidence in performance, or installation issues with any of the technologies.]

Q 63. Do you ever recommend integrating lighting into the Energy Management Systems in retail retrofits?

    Q 63.1. [If no] What stops you from integrating lighting into the EMS system?

    Q 63.2. [If yes] In what situations?   Why?

        Q 63.2.1. How often do your customers accept this recommendation?

        Q 63.2.2. [If 0% < frequency < 100%] Why do some take the recommendations and some don't?

Q 64. Are there other control strategies you commonly install in retail retrofits?

Q 64.1. Any that frequently result in call backs, or any that don't seem to work as expected?

Q 65. Are there specific issues associated with any of the control technologies you install that prevent wider adoption… [EMS integration, demand response programming, wireless controls, occupancy sensors… refer to any control application already mentioned to understand if there are any issues with cost, availability, applications, confidence in performance, or installation issues with any of the technologies.]

FUTURE CHANGES

Finally, I'd like to talk to you about what you see happening with non-residential lighting in the next five years.

Q 66. Are there any energy efficient lighting products or approaches that you think are likely to become more prevalent in the next five years?

Q 66.1. [If yes:] What, and in what applications

Q 66.2. What do you think is needed to increase the rate at which ____ is adopted? [anything else?] [possible probes: information – to whom?, lower costs, more product, improved product?]

Those are all my questions – before I let you go, is there anything you'd like to add, anything you think I should have asked about or that we should keep in mind as we conduct this research into commercial lighting retrofit projects in California?

Thank you very much for your time on the phone today! Is it okay if I contact you again in case I have any follow up questions?

Appendix C – Commercial Customer Advanced Lighting Retrofit Telephone Survey Results – Banner Tables

Q1. What is your job title? BY Utility > Q2. Business Type

| | | Southern California Edison | | | | Pacific Gas & Electric Company | | | | Total | | | |
| | | Q2. Business Type | | | | Q2. Business Type | | | | Q2. Business Type | | | |
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Plant Manager	Count	2	0	1	3	3	0	0	3	5	0	1	6
	Row %	66.7%	0.0%	33.3%	100.0%	100.0%	0.0%	0.0%	100.0%	83.3%	0.0%	16.7%	100.0%
	Col %	1.9%	0.0%	1.1%	1.5%	6.8%	0.0%	0.0%	4.8%	3.4%	0.0%	0.9%	2.3%
Facility Manager/Bldg Mgr	Count	9	0	11	20	9	0	4	13	18	0	15	33
	Row %	45.0%	0.0%	55.0%	100.0%	69.2%	0.0%	30.8%	100.0%	54.5%	0.0%	45.5%	100.0%
	Col %	8.7%	0.0%	11.6%	10.0%	20.5%	0.0%	23.5%	20.6%	12.2%	0.0%	13.4%	12.5%
Energy Manager	Count	1	0	0	1	3	0	0	3	4	0	0	4
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.0%	0.0%	0.0%	0.5%	6.8%	0.0%	0.0%	4.8%	2.7%	0.0%	0.0%	1.5%
President/CEO	Count	12	0	5	17	6	0	1	7	18	0	6	24
	Row %	70.6%	0.0%	29.4%	100.0%	85.7%	0.0%	14.3%	100.0%	75.0%	0.0%	25.0%	100.0%
	Col %	11.7%	0.0%	5.3%	8.5%	13.6%	0.0%	5.9%	11.1%	12.2%	0.0%	5.4%	9.1%
Owner/Co-owner/Partner/Member of LLP/VP	Count	15	1	31	47	7	1	5	13	22	2	36	60
	Row %	31.9%	2.1%	66.0%	100.0%	53.8%	7.7%	38.5%	100.0%	36.7%	3.3%	60.0%	100.0%
	Col %	14.6%	50.0%	32.6%	23.5%	15.9%	50.0%	29.4%	20.6%	15.0%	50.0%	32.1%	22.8%
General Manager	Count	28	1	25	54	5	0	4	9	33	1	29	63
	Row %	51.9%	1.9%	46.3%	100.0%	55.6%	0.0%	44.4%	100.0%	52.4%	1.6%	46.0%	100.0%
	Col %	27.2%	50.0%	26.3%	27.0%	11.4%	0.0%	23.5%	14.3%	22.4%	25.0%	25.9%	24.0%
Property Manager	Count	5	0	4	9	3	0	0	3	8	0	4	12
	Row %	55.6%	0.0%	44.4%	100.0%	100.0%	0.0%	0.0%	100.0%	66.7%	0.0%	33.3%	100.0%
	Col %	4.9%	0.0%	4.2%	4.5%	6.8%	0.0%	0.0%	4.8%	5.4%	0.0%	3.6%	4.6%
Operation Manager / Production	Count	6	0	5	11	3	1	3	7	9	1	8	18
	Row %	54.5%	0.0%	45.5%	100.0%	42.9%	14.3%	42.9%	100.0%	50.0%	5.6%	44.4%	100.0%
	Col %	5.8%	0.0%	5.3%	5.5%	6.8%	50.0%	17.6%	11.1%	6.1%	25.0%	7.1%	6.8%
Administrative Assistant/Receptionist/Secretary	Count	7	0	4	11	0	0	0	0	7	0	4	11
	Row %	63.6%	0.0%	36.4%	100.0%	0.0%	0.0%	0.0%	0.0%	63.6%	0.0%	36.4%	100.0%
	Col %	6.8%	0.0%	4.2%	5.5%	0.0%	0.0%	0.0%	0.0%	4.8%	0.0%	3.6%	4.2%
Controller/Accountant/Acct. Mgr	Count	4	0	2	6	1	0	0	1	5	0	2	7
	Row %	66.7%	0.0%	33.3%	100.0%	100.0%	0.0%	0.0%	100.0%	71.4%	0.0%	28.6%	100.0%
	Col %	3.9%	0.0%	2.1%	3.0%	2.3%	0.0%	0.0%	1.6%	3.4%	0.0%	1.8%	2.7%
Sales/Sales Mgr/Service	Count	7	0	3	10	0	0	0	0	7	0	3	10
	Row %	70.0%	0.0%	30.0%	100.0%	0.0%	0.0%	0.0%	0.0%	70.0%	0.0%	30.0%	100.0%
	Col %	6.8%	0.0%	3.2%	5.0%	0.0%	0.0%	0.0%	0.0%	4.8%	0.0%	2.7%	3.8%
Purchasing/Procurement/Distribution/Parts	Count	3	0	3	6	1	0	0	1	4	0	3	7
	Row %	50.0%	0.0%	50.0%	100.0%	100.0%	0.0%	0.0%	100.0%	57.1%	0.0%	42.9%	100.0%
	Col %	2.9%	0.0%	3.2%	3.0%	2.3%	0.0%	0.0%	1.6%	2.7%	0.0%	2.7%	2.7%
Project/Program Mgr	Count	4	0	0	4	0	0	0	0	4	0	0	4
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	3.9%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	2.7%	0.0%	0.0%	1.5%
Technician	Count	0	0	1	1	3	0	0	3	3	0	1	4
	Row %	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%	0.0%	100.0%	75.0%	0.0%	25.0%	100.0%
	Col %	0.0%	0.0%	1.1%	0.5%	6.8%	0.0%	0.0%	4.8%	2.0%	0.0%	0.9%	1.5%

(continued)

Q1. What is your job title? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	103	2	95	200	44	2	17	63	147	4	112	263
	Row %	51.5%	1.0%	47.5%	100.0%	69.8%	3.2%	27.0%	100.0%	55.9%	1.5%	42.6%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Q3. Which of the following types of offices best describes this facility? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Administration and management	Count	45	0	0	45	24	0	0	24	69	0	0	69
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	43.7%	0.0%	0.0%	43.7%	54.5%	0.0%	0.0%	54.5%	46.9%	0.0%	0.0%	46.9%
Financial/Legal	Count	0	0	0	0	1	0	0	1	1	0	0	1
	Row %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	2.3%	0.0%	0.0%	2.3%	0.7%	0.0%	0.0%	0.7%
Insurance/Real Estate	Count	1	0	0	1	1	0	0	1	2	0	0	2
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.0%	0.0%	0.0%	1.0%	2.3%	0.0%	0.0%	2.3%	1.4%	0.0%	0.0%	1.4%
Data Processing/Computer Center	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.0%	0.0%	0.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.7%
Mixed-Use/Multi-tenant	Count	1	0	0	1	1	0	0	1	2	0	0	2
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.0%	0.0%	0.0%	1.0%	2.3%	0.0%	0.0%	2.3%	1.4%	0.0%	0.0%	1.4%
Lab/Research and Development Facility	Count	2	0	0	2	0	0	0	0	2	0	0	2
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.9%	0.0%	0.0%	1.9%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	1.4%
Software Development	Count	1	0	0	1	1	0	0	1	2	0	0	2
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.0%	0.0%	0.0%	1.0%	2.3%	0.0%	0.0%	2.3%	1.4%	0.0%	0.0%	1.4%
Government Services	Count	0	0	0	0	5	0	0	5	5	0	0	5
	Row %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	11.4%	0.0%	0.0%	11.4%	3.4%	0.0%	0.0%	3.4%
Office with Warehouse	Count	50	0	0	50	6	0	0	6	56	0	0	56
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	48.5%	0.0%	0.0%	48.5%	13.6%	0.0%	0.0%	13.6%	38.1%	0.0%	0.0%	38.1%
Contractor's Offices	Count	2	0	0	2	3	0	0	3	5	0	0	5
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.9%	0.0%	0.0%	1.9%	6.8%	0.0%	0.0%	6.8%	3.4%	0.0%	0.0%	3.4%
Telecommunications Center (call center)	Count	0	0	0	0	2	0	0	2	2	0	0	2
	Row %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	4.5%	0.0%	0.0%	4.5%	1.4%	0.0%	0.0%	1.4%
Travel Services (travel agent)	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	103	0	0	103	44	0	0	44	147	0	0	147
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%

Q4. Which of the following types of restaurants or food service best describes this facility? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Fast Food/Self Service	Count	0	1	0	1	0	0	0	0	0	1	0	1
	Row %	0.0%	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%
	Col %	0.0%	50.0%	0.0%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%	25.0%
Specialty/Novelty Food Service	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Table Service	Count	0	1	0	1	0	2	0	2	0	3	0	3
	Row %	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
	Col %	0.0%	50.0%	0.0%	50.0%	0.0%	100.0%	0.0%	100.0%	0.0%	75.0%	0.0%	75.0%
Bar/Tavern/Nightclub/Other Entertainment	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Caterer	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	0	2	0	2	0	2	0	2	0	4	0	4
	Row %	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
	Col %	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%

Q5. Which of the following types of retail stores best describes this facility? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Department/Variety Store	Count	0	0	12	12	0	0	1	1	0	0	13	13
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	12.6%	12.6%	0.0%	0.0%	5.9%	5.9%	0.0%	0.0%	11.6%	11.6%
Retail Warehouse/Club	Count	0	0	28	28	0	0	1	1	0	0	29	29
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	29.5%	29.5%	0.0%	0.0%	5.9%	5.9%	0.0%	0.0%	25.9%	25.9%
A Shop in an Enclosed Mall	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.1%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.9%
A Shop in a Strip Mall	Count	0	0	16	16	0	0	3	3	0	0	19	19
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	16.8%	16.8%	0.0%	0.0%	17.6%	17.6%	0.0%	0.0%	17.0%	17.0%
Auto/Truck/Motorcycle Sales/Boat	Count	0	0	21	21	0	0	2	2	0	0	23	23
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	22.1%	22.1%	0.0%	0.0%	11.8%	11.8%	0.0%	0.0%	20.5%	20.5%
Art Gallery	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Auction House	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Heavy Equipment Sales	Count	0	0	5	5	0	0	1	1	0	0	6	6
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	5.3%	5.3%	0.0%	0.0%	5.9%	5.9%	0.0%	0.0%	5.4%	5.4%
Facility is a Mall/Strip Mall	Count	0	0	0	0	0	0	1	1	0	0	1	1
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.9%	5.9%	0.0%	0.0%	0.9%	0.9%
Other free-standing stores	Count	0	0	7	7	0	0	8	8	0	0	15	15
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	7.4%	7.4%	0.0%	0.0%	47.1%	47.1%	0.0%	0.0%	13.4%	13.4%
Farm supply	Count	0	0	2	2	0	0	0	0	0	0	2	2
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	2.1%	2.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	1.8%
Auto supply/tires	Count	0	0	3	3	0	0	0	0	0	0	3	3
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	3.2%	3.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.7%	2.7%
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	0	0	95	95	0	0	17	17	0	0	112	112
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%

Q6. Does your organization own, lease, or manage your space? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Own	Count	43	0	46	89	30	0	8	38	73	0	54	127
	Row %	48.3%	0.0%	51.7%	100.0%	78.9%	0.0%	21.1%	100.0%	57.5%	0.0%	42.5%	100.0%
	Col %	43.4%	0.0%	48.4%	45.4%	68.2%	0.0%	47.1%	60.3%	51.0%	0.0%	48.2%	49.0%
Lease	Count	53	2	48	103	12	1	9	22	65	3	57	125
	Row %	51.5%	1.9%	46.6%	100.0%	54.5%	4.5%	40.9%	100.0%	52.0%	2.4%	45.6%	100.0%
	Col %	53.5%	100.0%	50.5%	52.6%	27.3%	50.0%	52.9%	34.9%	45.5%	75.0%	50.9%	48.3%
Manage	Count	3	0	1	4	2	1	0	3	5	1	1	7
	Row %	75.0%	0.0%	25.0%	100.0%	66.7%	33.3%	0.0%	100.0%	71.4%	14.3%	14.3%	100.0%
	Col %	3.0%	0.0%	1.1%	2.0%	4.5%	50.0%	0.0%	4.8%	3.5%	25.0%	0.9%	2.7%
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	99	2	95	196	44	2	17	63	143	4	112	259
	Row %	50.5%	1.0%	48.5%	100.0%	69.8%	3.2%	27.0%	100.0%	55.2%	1.5%	43.2%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Q7. How long is the remaining term of your lease? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
1 year	Count	7	0	8	15	0	0	1	1	7	0	9	16
	Row %	46.7%	0.0%	53.3%	100.0%	0.0%	0.0%	100.0%	100.0%	43.8%	0.0%	56.2%	100.0%
	Col %	15.9%	0.0%	19.5%	17.2%	0.0%	0.0%	14.3%	6.7%	13.7%	0.0%	18.8%	15.7%
2 years	Count	7	1	4	12	3	0	2	5	10	1	6	17
	Row %	58.3%	8.3%	33.3%	100.0%	60.0%	0.0%	40.0%	100.0%	58.8%	5.9%	35.3%	100.0%
	Col %	15.9%	50.0%	9.8%	13.8%	42.9%	0.0%	28.6%	33.3%	19.6%	33.3%	12.5%	16.7%
3 years	Count	8	0	7	15	1	0	1	2	9	0	8	17
	Row %	53.3%	0.0%	46.7%	100.0%	50.0%	0.0%	50.0%	100.0%	52.9%	0.0%	47.1%	100.0%
	Col %	18.2%	0.0%	17.1%	17.2%	14.3%	0.0%	14.3%	13.3%	17.6%	0.0%	16.7%	16.7%
4 years	Count	4	0	3	7	0	0	0	0	4	0	3	7
	Row %	57.1%	0.0%	42.9%	100.0%	0.0%	0.0%	0.0%	0.0%	57.1%	0.0%	42.9%	100.0%
	Col %	9.1%	0.0%	7.3%	8.0%	0.0%	0.0%	0.0%	0.0%	7.8%	0.0%	6.2%	6.9%
5 years	Count	5	0	5	10	1	0	1	2	6	0	6	12
	Row %	50.0%	0.0%	50.0%	100.0%	50.0%	0.0%	50.0%	100.0%	50.0%	0.0%	50.0%	100.0%
	Col %	11.4%	0.0%	12.2%	11.5%	14.3%	0.0%	14.3%	13.3%	11.8%	0.0%	12.5%	11.8%
6 years	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	2.4%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	1.0%
7 years	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	2.4%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.1%	1.0%
8 years	Count	3	0	0	3	1	0	0	1	4	0	0	4
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	6.8%	0.0%	0.0%	3.4%	14.3%	0.0%	0.0%	6.7%	7.8%	0.0%	0.0%	3.9%
9 years	Count	0	0	0	0	1	0	0	1	1	0	0	1
	Row %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	14.3%	0.0%	0.0%	6.7%	2.0%	0.0%	0.0%	1.0%
10 years	Count	0	0	3	3	0	0	1	1	0	0	4	4
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	7.3%	3.4%	0.0%	0.0%	14.3%	6.7%	0.0%	0.0%	8.3%	3.9%
More than 10 years	Count	0	1	1	2	0	1	0	1	0	2	1	3
	Row %	0.0%	50.0%	50.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	66.7%	33.3%	100.0%
	Col %	0.0%	50.0%	2.4%	2.3%	0.0%	100.0%	0.0%	6.7%	0.0%	66.7%	2.1%	2.9%
Month to month	Count	6	0	4	10	0	0	0	0	6	0	4	10
	Row %	60.0%	0.0%	40.0%	100.0%	0.0%	0.0%	0.0%	0.0%	60.0%	0.0%	40.0%	100.0%
	Col %	13.6%	0.0%	9.8%	11.5%	0.0%	0.0%	0.0%	0.0%	11.8%	0.0%	8.3%	9.8%

(continued)

Q7. How long is the remaining term of your lease? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
No longer there	Count	2	0	3	5	0	0	0	0	2	0	3	5
	Row %	40.0%	0.0%	60.0%	100.0%	0.0%	0.0%	0.0%	0.0%	40.0%	0.0%	60.0%	100.0%
	Col %	4.5%	0.0%	7.3%	5.7%	0.0%	0.0%	0.0%	0.0%	3.9%	0.0%	6.2%	4.9%
<1 year	Count	2	0	1	3	0	0	1	1	2	0	2	4
	Row %	66.7%	0.0%	33.3%	100.0%	0.0%	0.0%	100.0%	100.0%	50.0%	0.0%	50.0%	100.0%
	Col %	4.5%	0.0%	2.4%	3.4%	0.0%	0.0%	14.3%	6.7%	3.9%	0.0%	4.2%	3.9%
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	44	2	41	87	7	1	7	15	51	3	48	102
	Row %	50.6%	2.3%	47.1%	100.0%	46.7%	6.7%	46.7%	100.0%	50.0%	2.9%	47.1%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Q8. Does your organization pay the electric utility bill at this location? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Yes	Count	95	2	85	182	40	2	16	58	135	4	101	240
	Row %	52.2%	1.1%	46.7%	100.0%	69.0%	3.4%	27.6%	100.0%	56.2%	1.7%	42.1%	100.0%
	Col %	93.1%	100.0%	89.5%	91.5%	93.0%	100.0%	94.1%	93.5%	93.1%	100.0%	90.2%	92.0%
No	Count	7	0	10	17	3	0	1	4	10	0	11	21
	Row %	41.2%	0.0%	58.8%	100.0%	75.0%	0.0%	25.0%	100.0%	47.6%	0.0%	52.4%	100.0%
	Col %	6.9%	0.0%	10.5%	8.5%	7.0%	0.0%	5.9%	6.5%	6.9%	0.0%	9.8%	8.0%
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	102	2	95	199	43	2	17	62	145	4	112	261
	Row %	51.3%	1.0%	47.7%	100.0%	69.4%	3.2%	27.4%	100.0%	55.6%	1.5%	42.9%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Q9. Square footage at your location BY Utility By Q2. Business Type

Q9. Square footage at location		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
700	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
800	Count	0	0	0	0	0	1	0	1	0	1	0	1
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	2.6%	0.0%	33.3%	0.0%	0.6%
900	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
1000	Count	0	0	0	0	0	0	1	1	0	0	1	1
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.7%	2.6%	0.0%	0.0%	1.2%	0.6%
1100	Count	0	0	0	0	1	0	0	1	1	0	0	1
	Row %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	4.2%	0.0%	0.0%	2.6%	1.1%	0.0%	0.0%	0.6%
1200	Count	0	0	1	1	0	0	1	1	0	0	2	2
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.4%	0.7%	0.0%	0.0%	7.7%	2.6%	0.0%	0.0%	2.4%	1.1%
1500	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
1600	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.4%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.6%
1705	Count	0	0	0	0	1	0	0	1	1	0	0	1
	Row %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	4.2%	0.0%	0.0%	2.6%	1.1%	0.0%	0.0%	0.6%
1800	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.4%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.6%
2000	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.4%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.6%
2300	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%

(continued)

Q9. Square footage at your location BY Utility By Q2. Business Type

Q9. Square footage at location		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
2400	Count	0	0	2	2	0	0	0	0	0	0	2	2
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	2.9%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	1.1%
2500	Count	0	0	1	1	1	0	1	2	1	0	2	3
	Row %	0.0%	0.0%	100.0%	100.0%	50.0%	0.0%	50.0%	100.0%	33.3%	0.0%	66.7%	100.0%
	Col %	0.0%	0.0%	1.4%	0.7%	4.2%	0.0%	7.7%	5.1%	1.1%	0.0%	2.4%	1.7%
2700	Count	0	0	0	0	0	0	1	1	0	0	1	1
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.7%	2.6%	0.0%	0.0%	1.2%	0.6%
3000	Count	2	0	1	3	3	0	0	3	5	0	1	6
	Row %	66.7%	0.0%	33.3%	100.0%	100.0%	0.0%	0.0%	100.0%	83.3%	0.0%	16.7%	100.0%
	Col %	3.0%	0.0%	1.4%	2.2%	12.5%	0.0%	0.0%	7.7%	5.5%	0.0%	1.2%	3.4%
3300	Count	0	0	0	0	1	0	0	1	1	0	0	1
	Row %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	4.2%	0.0%	0.0%	2.6%	1.1%	0.0%	0.0%	0.6%
3500	Count	0	0	2	2	1	0	2	3	1	0	4	5
	Row %	0.0%	0.0%	100.0%	100.0%	33.3%	0.0%	66.7%	100.0%	20.0%	0.0%	80.0%	100.0%
	Col %	0.0%	0.0%	2.9%	1.5%	4.2%	0.0%	15.4%	7.7%	1.1%	0.0%	4.9%	2.8%
3600	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.4%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.6%
3800	Count	0	1	0	1	1	0	0	1	1	1	0	2
	Row %	0.0%	100.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	50.0%	50.0%	0.0%	100.0%
	Col %	0.0%	100.0%	0.0%	0.7%	4.2%	0.0%	0.0%	2.6%	1.1%	33.3%	0.0%	1.1%
3900	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.4%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.6%
4000	Count	2	0	2	4	2	0	0	2	4	0	2	6
	Row %	50.0%	0.0%	50.0%	100.0%	100.0%	0.0%	0.0%	100.0%	66.7%	0.0%	33.3%	100.0%
	Col %	3.0%	0.0%	2.9%	2.9%	8.3%	0.0%	0.0%	5.1%	4.4%	0.0%	2.4%	3.4%
4500	Count	1	0	3	4	0	0	0	0	1	0	3	4
	Row %	25.0%	0.0%	75.0%	100.0%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%	75.0%	100.0%
	Col %	1.5%	0.0%	4.3%	2.9%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	3.7%	2.3%
4700	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.4%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.6%
5000	Count	2	0	4	6	0	0	1	1	2	0	5	7
	Row %	33.3%	0.0%	66.7%	100.0%	0.0%	0.0%	100.0%	100.0%	28.6%	0.0%	71.4%	100.0%
	Col %	3.0%	0.0%	5.8%	4.4%	0.0%	0.0%	7.7%	2.6%	2.2%	0.0%	6.1%	4.0%

(continued)

Q9. Square footage at your location BY Utility By Q2. Business Type

Q9. Square footage at location		Southern California Edison — Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Pacific Gas & Electric Company — Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Total — Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
5200	Count	1	0	1	2	0	0	0	0	1	0	1	2
	Row %	50.0%	0.0%	50.0%	100.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	50.0%	100.0%
	Col %	1.5%	0.0%	1.4%	1.5%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	1.2%	1.1%
5300	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
5500	Count	0	0	0	0	0	1	0	1	0	1	0	1
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	2.6%	0.0%	33.3%	0.0%	0.6%
6000	Count	2	0	4	6	1	0	1	2	3	0	5	8
	Row %	33.3%	0.0%	66.7%	100.0%	50.0%	0.0%	50.0%	100.0%	37.5%	0.0%	62.5%	100.0%
	Col %	3.0%	0.0%	5.8%	4.4%	4.2%	0.0%	7.7%	5.1%	3.3%	0.0%	6.1%	4.5%
6200	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
6500	Count	0	0	2	2	1	0	0	1	1	0	2	3
	Row %	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%	0.0%	100.0%	33.3%	0.0%	66.7%	100.0%
	Col %	0.0%	0.0%	2.9%	1.5%	4.2%	0.0%	0.0%	2.6%	1.1%	0.0%	2.4%	1.7%
6800	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.4%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.6%
7000	Count	1	0	3	4	0	0	0	0	1	0	3	4
	Row %	25.0%	0.0%	75.0%	100.0%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%	75.0%	100.0%
	Col %	1.5%	0.0%	4.3%	2.9%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	3.7%	2.3%
7200	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
7368	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
7500	Count	0	0	1	1	0	0	1	1	0	0	2	2
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.4%	0.7%	0.0%	0.0%	7.7%	2.6%	0.0%	0.0%	2.4%	1.1%
7700	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
7800	Count	0	0	2	2	0	0	0	0	0	0	2	2
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	2.9%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.4%	1.1%

(continued)

Q9. Square footage at your location BY Utility By Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
Q9. Square footage at location		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
8000	Count	7	0	1	8	0	0	0	0	7	0	1	8
	Row %	87.5%	0.0%	12.5%	100.0%	0.0%	0.0%	0.0%	0.0%	87.5%	0.0%	12.5%	100.0%
	Col %	10.4%	0.0%	1.4%	5.8%	0.0%	0.0%	0.0%	0.0%	7.7%	0.0%	1.2%	4.5%
8500	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
8888	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
9000	Count	3	0	0	3	0	0	0	0	3	0	0	3
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	4.5%	0.0%	0.0%	2.2%	0.0%	0.0%	0.0%	0.0%	3.3%	0.0%	0.0%	1.7%
9408	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.4%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.6%
9999	Count	0	0	0	0	1	0	0	1	1	0	0	1
	Row %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	4.2%	0.0%	0.0%	2.6%	1.1%	0.0%	0.0%	0.6%
10000	Count	6	0	4	10	1	0	0	1	7	0	4	11
	Row %	60.0%	0.0%	40.0%	100.0%	100.0%	0.0%	0.0%	100.0%	63.6%	0.0%	36.4%	100.0%
	Col %	9.0%	0.0%	5.8%	7.3%	4.2%	0.0%	0.0%	2.6%	7.7%	0.0%	4.9%	6.2%
11000	Count	2	0	1	3	0	0	1	1	2	0	2	4
	Row %	66.7%	0.0%	33.3%	100.0%	0.0%	0.0%	100.0%	100.0%	50.0%	0.0%	50.0%	100.0%
	Col %	3.0%	0.0%	1.4%	2.2%	0.0%	0.0%	7.7%	2.6%	2.2%	0.0%	2.4%	2.3%
11300	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.4%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.6%
11520	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
11900	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
12000	Count	1	0	1	2	0	0	0	0	1	0	1	2
	Row %	50.0%	0.0%	50.0%	100.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	50.0%	100.0%
	Col %	1.5%	0.0%	1.4%	1.5%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	1.2%	1.1%
12283	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.4%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.6%

(continued)

Q9. Square footage at your location BY Utility By Q2. Business Type

Q9. Square footage at location		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
12500	Count	0	0	0	0	0	0	1	1	0	0	1	1
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.7%	2.6%	0.0%	0.0%	1.2%	0.6%
13000	Count	0	0	3	3	0	0	0	0	0	0	3	3
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	4.3%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	1.7%
13760	Count	0	0	0	0	1	0	0	1	1	0	0	1
	Row %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	4.2%	0.0%	0.0%	2.6%	1.1%	0.0%	0.0%	0.6%
14000	Count	0	0	3	3	0	0	0	0	0	0	3	3
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	4.3%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	1.7%
14400	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
15000	Count	3	0	1	4	0	0	1	1	3	0	2	5
	Row %	75.0%	0.0%	25.0%	100.0%	0.0%	0.0%	100.0%	100.0%	60.0%	0.0%	40.0%	100.0%
	Col %	4.5%	0.0%	1.4%	2.9%	0.0%	0.0%	7.7%	2.6%	3.3%	0.0%	2.4%	2.8%
16000	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
16170	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
17000	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.4%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.6%
18000	Count	4	0	1	5	1	0	0	1	5	0	1	6
	Row %	80.0%	0.0%	20.0%	100.0%	100.0%	0.0%	0.0%	100.0%	83.3%	0.0%	16.7%	100.0%
	Col %	6.0%	0.0%	1.4%	3.6%	4.2%	0.0%	0.0%	2.6%	5.5%	0.0%	1.2%	3.4%
19000	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
20000	Count	0	0	3	3	1	0	1	2	1	0	4	5
	Row %	0.0%	0.0%	100.0%	100.0%	50.0%	0.0%	50.0%	100.0%	20.0%	0.0%	80.0%	100.0%
	Col %	0.0%	0.0%	4.3%	2.2%	4.2%	0.0%	7.7%	5.1%	1.1%	0.0%	4.9%	2.8%
21000	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%

(continued)

Q9. Square footage at your location BY Utility By Q2. Business Type

Q9. Square footage at location		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
22000	Count	1	0	0	1	1	0	0	1	2	0	0	2
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	4.2%	0.0%	0.0%	2.6%	2.2%	0.0%	0.0%	1.1%
24000	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.4%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.6%
25000	Count	1	0	3	4	1	0	0	1	2	0	3	5
	Row %	25.0%	0.0%	75.0%	100.0%	100.0%	0.0%	0.0%	100.0%	40.0%	0.0%	60.0%	100.0%
	Col %	1.5%	0.0%	4.3%	2.9%	4.2%	0.0%	0.0%	2.6%	2.2%	0.0%	3.7%	2.8%
30000	Count	1	0	1	2	0	0	0	0	1	0	1	2
	Row %	50.0%	0.0%	50.0%	100.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	50.0%	100.0%
	Col %	1.5%	0.0%	1.4%	1.5%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	1.2%	1.1%
31000	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
35000	Count	1	0	2	3	0	0	0	0	1	0	2	3
	Row %	33.3%	0.0%	66.7%	100.0%	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%	66.7%	100.0%
	Col %	1.5%	0.0%	2.9%	2.2%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	2.4%	1.7%
40000	Count	1	0	1	2	0	0	0	0	1	0	1	2
	Row %	50.0%	0.0%	50.0%	100.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	50.0%	100.0%
	Col %	1.5%	0.0%	1.4%	1.5%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	1.2%	1.1%
45000	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
48000	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.4%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.6%
53000	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
60000	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.4%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.6%
75000	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
92000	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.4%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.2%	0.6%

(continued)

Q9. Square footage at your location BY Utility By Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
Q9. Square footage at location		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
120000	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
260000	Count	0	0	0	0	1	0	0	1	1	0	0	1
	Row %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	4.2%	0.0%	0.0%	2.6%	1.1%	0.0%	0.0%	0.6%
300000	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
334361	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.5%	0.0%	0.0%	0.7%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
780000	Count	0	0	0	0	1	0	0	1	1	0	0	1
	Row %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	4.2%	0.0%	0.0%	2.6%	1.1%	0.0%	0.0%	0.6%
1000000	Count	0	0	0	0	1	0	0	1	1	0	0	1
	Row %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	4.2%	0.0%	0.0%	2.6%	1.1%	0.0%	0.0%	0.6%
1800000	Count	0	0	0	0	1	0	0	1	1	0	0	1
	Row %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	4.2%	0.0%	0.0%	2.6%	1.1%	0.0%	0.0%	0.6%
Total	Count	67	1	69	137	24	2	13	39	91	3	82	176
	Row %	48.9%	0.7%	50.4%	100.0%	61.5%	5.1%	33.3%	100.0%	51.7%	1.7%	46.6%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Q9. Statistics	Mean	24232.9	3800.0	13111.5	18482.5	166840.2	3150.0	7030.8	105176	61843.6	3366.7	12147.5	37693.0
	Median	10000.0	3800.0	7800.0	9000.0	6250.0	3150.0	5000.0	5500.0	9999.0	3800.0	7250.0	8000.0

Q10. Would you say the floor area is . . . BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Less than 1500 square feet	Count	0	0	1	1	1	0	0	1	1	0	1	2
	Row %	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%	0.0%	100.0%	50.0%	0.0%	50.0%	100.0%
	Col %	0.0%	0.0%	4.2%	1.8%	5.9%	0.0%	0.0%	4.8%	2.1%	0.0%	3.6%	2.6%
1500 to 5000 square feet	Count	6	0	4	10	2	0	1	3	8	0	5	13
	Row %	60.0%	0.0%	40.0%	100.0%	66.7%	0.0%	33.3%	100.0%	61.5%	0.0%	38.5%	100.0%
	Col %	20.0%	0.0%	16.7%	18.2%	11.8%	0.0%	25.0%	14.3%	17.0%	0.0%	17.9%	17.1%
5000 to 10,000 square feet	Count	5	1	3	9	1	0	1	2	6	1	4	11
	Row %	55.6%	11.1%	33.3%	100.0%	50.0%	0.0%	50.0%	100.0%	54.5%	9.1%	36.4%	100.0%
	Col %	16.7%	100.0%	12.5%	16.4%	5.9%	0.0%	25.0%	9.5%	12.8%	100.0%	14.3%	14.5%
10,000 to 25,000 square feet	Count	2	0	4	6	3	0	1	4	5	0	5	10
	Row %	33.3%	0.0%	66.7%	100.0%	75.0%	0.0%	25.0%	100.0%	50.0%	0.0%	50.0%	100.0%
	Col %	6.7%	0.0%	16.7%	10.9%	17.6%	0.0%	25.0%	19.0%	10.6%	0.0%	17.9%	13.2%
25,000 to 50,000 square feet	Count	10	0	8	18	2	0	0	2	12	0	8	20
	Row %	55.6%	0.0%	44.4%	100.0%	100.0%	0.0%	0.0%	100.0%	60.0%	0.0%	40.0%	100.0%
	Col %	33.3%	0.0%	33.3%	32.7%	11.8%	0.0%	0.0%	9.5%	25.5%	0.0%	28.6%	26.3%
50,000 to 75,000 square feet	Count	4	0	0	4	3	0	0	3	7	0	0	7
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	13.3%	0.0%	0.0%	7.3%	17.6%	0.0%	0.0%	14.3%	14.9%	0.0%	0.0%	9.2%
75,000 to 100,000 square feet	Count	1	0	1	2	2	0	0	2	3	0	1	4
	Row %	50.0%	0.0%	50.0%	100.0%	100.0%	0.0%	0.0%	100.0%	75.0%	0.0%	25.0%	100.0%
	Col %	3.3%	0.0%	4.2%	3.6%	11.8%	0.0%	0.0%	9.5%	6.4%	0.0%	3.6%	5.3%
Over 100,000 square feet	Count	2	0	3	5	3	0	1	4	5	0	4	9
	Row %	40.0%	0.0%	60.0%	100.0%	75.0%	0.0%	25.0%	100.0%	55.6%	0.0%	44.4%	100.0%
	Col %	6.7%	0.0%	12.5%	9.1%	17.6%	0.0%	25.0%	19.0%	10.6%	0.0%	14.3%	11.8%
Total	Count	30	1	24	55	17	0	4	21	47	1	28	76
	Row %	54.5%	1.8%	43.6%	100.0%	81.0%	0.0%	19.0%	100.0%	61.8%	1.3%	36.8%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	0.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Q11. Which of the following statements best describes the role your business has in making lighting purchase decisions at this facility? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Very active - we're involved in all phases and have veto power	Count	57	2	47	106	32	2	11	45	89	4	58	151
	Row %	53.8%	1.9%	44.3%	100.0%	71.1%	4.4%	24.4%	100.0%	58.9%	2.6%	38.4%	100.0%
	Col %	55.9%	100.0%	51.1%	54.1%	72.7%	100.0%	64.7%	71.4%	61.0%	100.0%	53.2%	58.3%
Somewhat active - we approve decisions and provide some input and review	Count	19	0	22	41	8	0	3	11	27	0	25	52
	Row %	46.3%	0.0%	53.7%	100.0%	72.7%	0.0%	27.3%	100.0%	51.9%	0.0%	48.1%	100.0%
	Col %	18.6%	0.0%	23.9%	20.9%	18.2%	0.0%	17.6%	17.5%	18.5%	0.0%	22.9%	20.1%
Slightly active - we have a voice, but it's not the dominant voice	Count	15	0	9	24	3	0	3	6	18	0	12	30
	Row %	62.5%	0.0%	37.5%	100.0%	50.0%	0.0%	50.0%	100.0%	60.0%	0.0%	40.0%	100.0%
	Col %	14.7%	0.0%	9.8%	12.2%	6.8%	0.0%	17.6%	9.5%	12.3%	0.0%	11.0%	11.6%
Not active at all - we're part of a larger organization	Count	4	0	5	9	0	0	0	0	4	0	5	9
	Row %	44.4%	0.0%	55.6%	100.0%	0.0%	0.0%	0.0%	0.0%	44.4%	0.0%	55.6%	100.0%
	Col %	3.9%	0.0%	5.4%	4.6%	0.0%	0.0%	0.0%	0.0%	2.7%	0.0%	4.6%	3.5%
Not active at all - our business doesn't get involved in these issues	Count	7	0	9	16	1	0	0	1	8	0	9	17
	Row %	43.8%	0.0%	56.2%	100.0%	100.0%	0.0%	0.0%	100.0%	47.1%	0.0%	52.9%	100.0%
	Col %	6.9%	0.0%	9.8%	8.2%	2.3%	0.0%	0.0%	1.6%	5.5%	0.0%	8.3%	6.6%
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	102	2	92	196	44	2	17	63	146	4	109	259
	Row %	52.0%	1.0%	46.9%	100.0%	69.8%	3.2%	27.0%	100.0%	56.4%	1.5%	42.1%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Q12. What types of firms or individuals specified or recommended the types of lighting equipment you installed? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Lighting designer or architect	Count	1	0	0	1	2	0	0	2	3	0	0	3
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.0%	0.0%	0.0%	0.5%	4.5%	0.0%	0.0%	3.2%	2.0%	0.0%	0.0%	1.1%
General contractor	Count	1	0	4	5	0	0	0	0	1	0	4	5
	Row %	20.0%	0.0%	80.0%	100.0%	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%	80.0%	100.0%
	Col %	1.0%	0.0%	4.2%	2.5%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	3.6%	1.9%
Electrical contractor	Count	13	0	13	26	12	0	4	16	25	0	17	42
	Row %	50.0%	0.0%	50.0%	100.0%	75.0%	0.0%	25.0%	100.0%	59.5%	0.0%	40.5%	100.0%
	Col %	12.6%	0.0%	13.7%	13.0%	27.3%	0.0%	23.5%	25.4%	17.0%	0.0%	15.2%	16.0%
Engineer	Count	3	0	0	3	1	0	0	1	4	0	0	4
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	2.9%	0.0%	0.0%	1.5%	2.3%	0.0%	0.0%	1.6%	2.7%	0.0%	0.0%	1.5%
Lighting contractor	Count	32	2	30	64	14	0	7	21	46	2	37	85
	Row %	50.0%	3.1%	46.9%	100.0%	66.7%	0.0%	33.3%	100.0%	54.1%	2.4%	43.5%	100.0%
	Col %	31.1%	100.0%	31.6%	32.0%	31.8%	0.0%	41.2%	33.3%	31.3%	50.0%	33.0%	32.3%
Lighting distributor	Count	3	0	3	6	1	0	0	1	4	0	3	7
	Row %	50.0%	0.0%	50.0%	100.0%	100.0%	0.0%	0.0%	100.0%	57.1%	0.0%	42.9%	100.0%
	Col %	2.9%	0.0%	3.2%	3.0%	2.3%	0.0%	0.0%	1.6%	2.7%	0.0%	2.7%	2.7%
Lighting manufacturer representative	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.4%
Corporate headquarters	Count	2	0	1	3	0	0	1	1	2	0	2	4
	Row %	66.7%	0.0%	33.3%	100.0%	0.0%	0.0%	100.0%	100.0%	50.0%	0.0%	50.0%	100.0%
	Col %	1.9%	0.0%	1.1%	1.5%	0.0%	0.0%	5.9%	1.6%	1.4%	0.0%	1.8%	1.5%
In-house facility manager(s)	Count	5	0	3	8	5	1	0	6	10	1	3	14
	Row %	62.5%	0.0%	37.5%	100.0%	83.3%	16.7%	0.0%	100.0%	71.4%	7.1%	21.4%	100.0%
	Col %	4.9%	0.0%	3.2%	4.0%	11.4%	50.0%	0.0%	9.5%	6.8%	25.0%	2.7%	5.3%
Property management company	Count	1	0	1	2	0	0	0	0	1	0	1	2
	Row %	50.0%	0.0%	50.0%	100.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	50.0%	100.0%
	Col %	1.0%	0.0%	1.1%	1.0%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.9%	0.8%
Friends/family/colleague	Count	3	0	1	4	0	0	0	0	3	0	1	4
	Row %	75.0%	0.0%	25.0%	100.0%	0.0%	0.0%	0.0%	0.0%	75.0%	0.0%	25.0%	100.0%
	Col %	2.9%	0.0%	1.1%	2.0%	0.0%	0.0%	0.0%	0.0%	2.0%	0.0%	0.9%	1.5%
Trade associations	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Edison (SCE)/PG&E Rep.	Count	33	1	34	68	11	1	5	17	44	2	39	85
	Row %	48.5%	1.5%	50.0%	100.0%	64.7%	5.9%	29.4%	100.0%	51.8%	2.4%	45.9%	100.0%
	Col %	32.0%	50.0%	35.8%	34.0%	25.0%	50.0%	29.4%	27.0%	29.9%	50.0%	34.8%	32.3%

(continued)

Q12. What types of firms or individuals specified or recommended the types of lighting equipment you installed? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Owner of building	Count	3	0	1	4	0	0	1	1	3	0	2	5
	Row %	75.0%	0.0%	25.0%	100.0%	0.0%	0.0%	100.0%	100.0%	60.0%	0.0%	40.0%	100.0%
	Col %	2.9%	0.0%	1.1%	2.0%	0.0%	0.0%	5.9%	1.6%	2.0%	0.0%	1.8%	1.9%
Contractor - DK what kind	Count	2	0	2	4	0	0	0	0	2	0	2	4
	Row %	50.0%	0.0%	50.0%	100.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	50.0%	100.0%
	Col %	1.9%	0.0%	2.1%	2.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	1.8%	1.5%
Energy/Environmental Consultant	Count	0	0	0	0	3	0	0	3	3	0	0	3
	Row %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	6.8%	0.0%	0.0%	4.8%	2.0%	0.0%	0.0%	1.1%
Environmental Contractor	Count	0	0	0	0	1	0	0	1	1	0	0	1
	Row %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	2.3%	0.0%	0.0%	1.6%	0.7%	0.0%	0.0%	0.4%
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Don't Know	Count	9	0	12	21	0	0	0	0	9	0	12	21
	Row %	42.9%	0.0%	57.1%	100.0%	0.0%	0.0%	0.0%	0.0%	42.9%	0.0%	57.1%	100.0%
	Col %	8.7%	0.0%	12.6%	10.5%	0.0%	0.0%	0.0%	0.0%	6.1%	0.0%	10.7%	8.0%
Refused	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	103	2	95	200	44	2	17	63	147	4	112	263
	Row %	51.5%	1.0%	47.5%	100.0%	69.8%	3.2%	27.0%	100.0%	55.9%	1.5%	42.6%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Q13. Which of the company or individuals had the greatest influence on your organization's selection of lighting equipment? BY Utility > Q2. Business Type

| | | Southern California Edison | | | | Pacific Gas & Electric Company | | | | Total | | | |
| | | Q2. Business Type | | | | Q2. Business Type | | | | Q2. Business Type | | | |
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Lighting designer or architect	Count	1	0	0	1	2	0	0	2	3	0	0	3
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.1%	0.0%	0.0%	0.6%	4.5%	0.0%	0.0%	3.2%	2.2%	0.0%	0.0%	1.2%
General contractor	Count	1	0	4	5	0	0	0	0	1	0	4	5
	Row %	20.0%	0.0%	80.0%	100.0%	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%	80.0%	100.0%
	Col %	1.1%	0.0%	4.8%	2.8%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	4.0%	2.1%
Electrical contractor	Count	12	0	13	25	12	0	4	16	24	0	17	41
	Row %	48.0%	0.0%	52.0%	100.0%	75.0%	0.0%	25.0%	100.0%	58.5%	0.0%	41.5%	100.0%
	Col %	12.8%	0.0%	15.7%	14.0%	27.3%	0.0%	23.5%	25.4%	17.4%	0.0%	17.0%	16.9%
Engineer	Count	3	0	0	3	1	0	0	1	4	0	0	4
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	3.2%	0.0%	0.0%	1.7%	2.3%	0.0%	0.0%	1.6%	2.9%	0.0%	0.0%	1.7%
Lighting contractor	Count	31	2	30	63	14	0	7	21	45	2	37	84
	Row %	49.2%	3.2%	47.6%	100.0%	66.7%	0.0%	33.3%	100.0%	53.6%	2.4%	44.0%	100.0%
	Col %	33.0%	100.0%	36.1%	35.2%	31.8%	0.0%	41.2%	33.3%	32.6%	50.0%	37.0%	34.7%
Lighting distributor	Count	3	0	2	5	0	0	0	0	3	0	2	5
	Row %	60.0%	0.0%	40.0%	100.0%	0.0%	0.0%	0.0%	0.0%	60.0%	0.0%	40.0%	100.0%
	Col %	3.2%	0.0%	2.4%	2.8%	0.0%	0.0%	0.0%	0.0%	2.2%	0.0%	2.0%	2.1%
Lighting manufacturer representative	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.1%	0.0%	0.0%	0.6%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.4%
Corporate headquarters	Count	0	0	0	0	0	0	1	1	0	0	1	1
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.9%	1.6%	0.0%	0.0%	1.0%	0.4%
In-house facility manager(s)	Count	3	0	3	6	3	1	0	4	6	1	3	10
	Row %	50.0%	0.0%	50.0%	100.0%	75.0%	25.0%	0.0%	100.0%	60.0%	10.0%	30.0%	100.0%
	Col %	3.2%	0.0%	3.6%	3.4%	6.8%	50.0%	0.0%	6.3%	4.3%	25.0%	3.0%	4.1%
Property management company	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Friends/family/colleague	Count	2	0	1	3	0	0	0	0	2	0	1	3
	Row %	66.7%	0.0%	33.3%	100.0%	0.0%	0.0%	0.0%	0.0%	66.7%	0.0%	33.3%	100.0%
	Col %	2.1%	0.0%	1.2%	1.7%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	1.0%	1.2%
Trade associations	Count	0	0	2	2	3	0	1	4	3	0	3	6
	Row %	0.0%	0.0%	100.0%	100.0%	75.0%	0.0%	25.0%	100.0%	50.0%	0.0%	50.0%	100.0%
	Col %	0.0%	0.0%	2.4%	1.1%	6.8%	0.0%	5.9%	6.3%	2.2%	0.0%	3.0%	2.5%
Edison (SCE)/PG&E Rep.	Count	32	0	26	58	7	1	4	12	39	1	30	70
	Row %	55.2%	0.0%	44.8%	100.0%	58.3%	8.3%	33.3%	100.0%	55.7%	1.4%	42.9%	100.0%
	Col %	34.0%	0.0%	31.3%	32.4%	15.9%	50.0%	23.5%	19.0%	28.3%	25.0%	30.0%	28.9%

(continued)

Q13. Which of the company or individuals had the greatest influence on your organization's selection of lighting equipment? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Owner of building	Count	3	0	0	3	0	0	0	0	3	0	0	3
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	3.2%	0.0%	0.0%	1.7%	0.0%	0.0%	0.0%	0.0%	2.2%	0.0%	0.0%	1.2%
Contractor - DK what kind	Count	2	0	2	4	0	0	0	0	2	0	2	4
	Row %	50.0%	0.0%	50.0%	100.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	50.0%	100.0%
	Col %	2.1%	0.0%	2.4%	2.2%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	2.0%	1.7%
Energy/Environmental Consultant	Count	0	0	0	0	2	0	0	2	2	0	0	2
	Row %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	4.5%	0.0%	0.0%	3.2%	1.4%	0.0%	0.0%	0.8%
Environmental Contractor	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	94	2	83	179	44	2	17	63	138	4	100	242
	Row %	52.5%	1.1%	46.4%	100.0%	69.8%	3.2%	27.0%	100.0%	57.0%	1.7%	41.3%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Q14. How did you come into contact with them? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
They contact you	Count	58	1	61	120	21	0	11	32	79	1	72	152
	Row %	48.3%	0.8%	50.8%	100.0%	65.6%	0.0%	34.4%	100.0%	52.0%	0.7%	47.4%	100.0%
	Col %	69.9%	50.0%	89.7%	78.4%	67.7%	0.0%	73.3%	68.1%	69.3%	33.3%	86.7%	76.0%
You contact them	Count	14	1	3	18	6	1	4	11	20	2	7	29
	Row %	77.8%	5.6%	16.7%	100.0%	54.5%	9.1%	36.4%	100.0%	69.0%	6.9%	24.1%	100.0%
	Col %	16.9%	50.0%	4.4%	11.8%	19.4%	100.0%	26.7%	23.4%	17.5%	66.7%	8.4%	14.5%
You work with them before	Count	11	0	4	15	4	0	0	4	15	0	4	19
	Row %	73.3%	0.0%	26.7%	100.0%	100.0%	0.0%	0.0%	100.0%	78.9%	0.0%	21.1%	100.0%
	Col %	13.3%	0.0%	5.9%	9.8%	12.9%	0.0%	0.0%	8.5%	13.2%	0.0%	4.8%	9.5%
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	83	2	68	153	31	1	15	47	114	3	83	200
	Row %	54.2%	1.3%	44.4%	100.0%	66.0%	2.1%	31.9%	100.0%	57.0%	1.5%	41.5%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Q15. In relation to this project, did they approach you about your lighting installation or did you contact them? BY Utility > Q2. Business Type

		Utility												
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
I was approached by <Q13>	Count	4	0	1	5	0	0	0	0	4	0	1	5
	Row %	80.0%	0.0%	20.0%	100.0%	0.0%	0.0%	0.0%	0.0%	80.0%	0.0%	20.0%	100.0%
	Col %	40.0%	0.0%	25.0%	35.7%	0.0%	0.0%	0.0%	0.0%	30.8%	0.0%	25.0%	29.4%
I contacted <Q13>	Count	6	0	3	9	3	0	0	3	9	0	3	12
	Row %	66.7%	0.0%	33.3%	100.0%	100.0%	0.0%	0.0%	100.0%	75.0%	0.0%	25.0%	100.0%
	Col %	60.0%	0.0%	75.0%	64.3%	100.0%	0.0%	0.0%	100.0%	69.2%	0.0%	75.0%	70.6%
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	10	0	4	14	3	0	0	3	13	0	4	17
	Row %	71.4%	0.0%	28.6%	100.0%	100.0%	0.0%	0.0%	100.0%	76.5%	0.0%	23.5%	100.0%
	Col %	100.0%	0.0%	100.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%

Q16. Did they encourage you to install specific types of lighting equipment? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Yes	Count	62	1	57	120	28	1	12	41	90	2	69	161
	Row %	51.7%	0.8%	47.5%	100.0%	68.3%	2.4%	29.3%	100.0%	55.9%	1.2%	42.9%	100.0%
	Col %	75.6%	50.0%	85.1%	79.5%	84.8%	100.0%	85.7%	85.4%	78.3%	66.7%	85.2%	80.9%
No	Count	20	1	10	31	5	0	2	7	25	1	12	38
	Row %	64.5%	3.2%	32.3%	100.0%	71.4%	0.0%	28.6%	100.0%	65.8%	2.6%	31.6%	100.0%
	Col %	24.4%	50.0%	14.9%	20.5%	15.2%	0.0%	14.3%	14.6%	21.7%	33.3%	14.8%	19.1%
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	82	2	67	151	33	1	14	48	115	3	81	199
	Row %	54.3%	1.3%	44.4%	100.0%	68.8%	2.1%	29.2%	100.0%	57.8%	1.5%	40.7%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Q17. What types of equipment did they encourage? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
LED task lighting (for a desk or similar application)	Count	0	0	0	0	0	0	1	1	0	0	1	1
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.3%	2.4%	0.0%	0.0%	1.4%	0.6%
LED ambient lighting (for a hallway or other space)	Count	1	0	3	4	1	1	0	2	2	1	3	6
	Row %	25.0%	0.0%	75.0%	100.0%	50.0%	50.0%	0.0%	100.0%	33.3%	16.7%	50.0%	100.0%
	Col %	1.6%	0.0%	5.3%	3.3%	3.6%	100.0%	0.0%	4.9%	2.2%	50.0%	4.3%	3.7%
High performance T8	Count	3	0	0	3	2	0	0	2	5	0	0	5
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	4.8%	0.0%	0.0%	2.5%	7.1%	0.0%	0.0%	4.9%	5.6%	0.0%	0.0%	3.1%
T8 fluorescent fixtures	Count	7	0	13	20	6	0	2	8	13	0	15	28
	Row %	35.0%	0.0%	65.0%	100.0%	75.0%	0.0%	25.0%	100.0%	46.4%	0.0%	53.6%	100.0%
	Col %	11.3%	0.0%	22.8%	16.7%	21.4%	0.0%	16.7%	19.5%	14.4%	0.0%	21.7%	17.4%
T10 fluorescent fixtures	Count	2	0	3	5	1	0	0	1	3	0	3	6
	Row %	40.0%	0.0%	60.0%	100.0%	100.0%	0.0%	0.0%	100.0%	50.0%	0.0%	50.0%	100.0%
	Col %	3.2%	0.0%	5.3%	4.2%	3.6%	0.0%	0.0%	2.4%	3.3%	0.0%	4.3%	3.7%
T12 fluorescent fixtures	Count	2	0	2	4	1	0	0	1	3	0	2	5
	Row %	50.0%	0.0%	50.0%	100.0%	100.0%	0.0%	0.0%	100.0%	60.0%	0.0%	40.0%	100.0%
	Col %	3.2%	0.0%	3.5%	3.3%	3.6%	0.0%	0.0%	2.4%	3.3%	0.0%	2.9%	3.1%
T5 fluorescent fixtures	Count	9	0	7	16	15	0	7	22	24	0	14	38
	Row %	56.2%	0.0%	43.8%	100.0%	68.2%	0.0%	31.8%	100.0%	63.2%	0.0%	36.8%	100.0%
	Col %	14.5%	0.0%	12.3%	13.3%	53.6%	0.0%	58.3%	53.7%	26.7%	0.0%	20.3%	23.6%
Electronic ballasts	Count	1	0	0	1	1	0	0	1	2	0	0	2
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.6%	0.0%	0.0%	0.8%	3.6%	0.0%	0.0%	2.4%	2.2%	0.0%	0.0%	1.2%
Magnetic ballasts	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.8%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.4%	0.6%
Reflectors	Count	0	0	2	2	0	0	0	0	0	0	2	2
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	3.5%	1.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	2.9%	1.2%
Screw-in CFLs	Count	0	0	0	0	1	0	1	2	1	0	1	2
	Row %	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	50.0%	100.0%	50.0%	0.0%	50.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	3.6%	0.0%	8.3%	4.9%	1.1%	0.0%	1.4%	1.2%
Hardwired CFLs	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CFL exit signs	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
LED exit signs	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

(continued)

Q17. What types of equipment did they encourage? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Incandescents	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cold Cathodes	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Halogens	Count	0	0	0	0	0	0	1	1	0	0	1	1
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.3%	2.4%	0.0%	0.0%	1.4%	0.6%
HIDs (High Intensity Discharge)	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Induction lighting	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Time clock lighting controls	Count	2	0	0	2	1	0	0	1	3	0	0	3
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	3.2%	0.0%	0.0%	1.7%	3.6%	0.0%	0.0%	2.4%	3.3%	0.0%	0.0%	1.9%
Occupancy sensor lighting controls	Count	18	0	12	30	4	0	1	5	22	0	13	35
	Row %	60.0%	0.0%	40.0%	100.0%	80.0%	0.0%	20.0%	100.0%	62.9%	0.0%	37.1%	100.0%
	Col %	29.0%	0.0%	21.1%	25.0%	14.3%	0.0%	8.3%	12.2%	24.4%	0.0%	18.8%	21.7%
Photocell lighting controls	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
An EMS	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Fluorescents - DK type	Count	12	0	14	26	2	0	1	3	14	0	15	29
	Row %	46.2%	0.0%	53.8%	100.0%	66.7%	0.0%	33.3%	100.0%	48.3%	0.0%	51.7%	100.0%
	Col %	19.4%	0.0%	24.6%	21.7%	7.1%	0.0%	8.3%	7.3%	15.6%	0.0%	21.7%	18.0%
Lighting - DK type	Count	8	0	6	14	1	0	0	1	9	0	6	15
	Row %	57.1%	0.0%	42.9%	100.0%	100.0%	0.0%	0.0%	100.0%	60.0%	0.0%	40.0%	100.0%
	Col %	12.9%	0.0%	10.5%	11.7%	3.6%	0.0%	0.0%	2.4%	10.0%	0.0%	8.7%	9.3%
Ballasts - DK type	Count	2	0	0	2	3	0	0	3	5	0	0	5
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	3.2%	0.0%	0.0%	1.7%	10.7%	0.0%	0.0%	7.3%	5.6%	0.0%	0.0%	3.1%
Don't Know	Count	13	0	9	22	2	0	1	3	15	0	10	25
	Row %	59.1%	0.0%	40.9%	100.0%	66.7%	0.0%	33.3%	100.0%	60.0%	0.0%	40.0%	100.0%
	Col %	21.0%	0.0%	15.8%	18.3%	7.1%	0.0%	8.3%	7.3%	16.7%	0.0%	14.5%	15.5%
Other	Count	2	1	1	4	1	0	1	2	3	1	2	6
	Row %	50.0%	25.0%	25.0%	100.0%	50.0%	0.0%	50.0%	100.0%	50.0%	16.7%	33.3%	100.0%
	Col %	3.2%	100.0%	1.8%	3.3%	3.6%	0.0%	8.3%	4.9%	3.3%	50.0%	2.9%	3.7%
Refused	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

(continued)

Q17. What types of equipment did they encourage? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Total	Count	62	1	57	120	28	1	12	41	90	2	69	161
	Row %	51.7%	0.8%	47.5%	100.0%	68.3%	2.4%	29.3%	100.0%	55.9%	1.2%	42.9%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Q18. Did the equipment that they specified ultimately get installed? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Yes	Count	62	1	56	119	28	1	12	41	90	2	68	160
	Row %	52.1%	0.8%	47.1%	100.0%	68.3%	2.4%	29.3%	100.0%	56.2%	1.2%	42.5%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
No	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	62	1	56	119	28	1	12	41	90	2	68	160
	Row %	52.1%	0.8%	47.1%	100.0%	68.3%	2.4%	29.3%	100.0%	56.2%	1.2%	42.5%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Q20. Importance of input from <Q13> in deciding which specific equipment to install BY Utility By Q2. Business Type

Q20. Importance		Southern California Edison				Pacific Gas & Electric Company				Total			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
1 - Not at all important	Count	0	0	4	4	0	0	0	0	0	0	4	4
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	7.4%	3.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.1%	2.5%
2	Count	0	0	0	0	1	0	0	1	1	0	0	1
	Row %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	3.6%	0.0%	0.0%	2.4%	1.1%	0.0%	0.0%	0.6%
3	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.6%	0.0%	0.0%	0.9%	0.0%	0.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.6%
4	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.9%	0.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.5%	0.6%
5	Count	1	0	2	3	2	0	0	2	3	0	2	5
	Row %	33.3%	0.0%	66.7%	100.0%	100.0%	0.0%	0.0%	100.0%	60.0%	0.0%	40.0%	100.0%
	Col %	1.6%	0.0%	3.7%	2.6%	7.1%	0.0%	0.0%	4.9%	3.4%	0.0%	3.0%	3.2%
6	Count	2	0	2	4	0	0	0	0	2	0	2	4
	Row %	50.0%	0.0%	50.0%	100.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	50.0%	100.0%
	Col %	3.3%	0.0%	3.7%	3.4%	0.0%	0.0%	0.0%	0.0%	2.2%	0.0%	3.0%	2.5%
7	Count	4	0	6	10	2	0	1	3	6	0	7	13
	Row %	40.0%	0.0%	60.0%	100.0%	66.7%	0.0%	33.3%	100.0%	46.2%	0.0%	53.8%	100.0%
	Col %	6.6%	0.0%	11.1%	8.6%	7.1%	0.0%	8.3%	7.3%	6.7%	0.0%	10.6%	8.3%
8	Count	11	0	10	21	5	0	4	9	16	0	14	30
	Row %	52.4%	0.0%	47.6%	100.0%	55.6%	0.0%	44.4%	100.0%	53.3%	0.0%	46.7%	100.0%
	Col %	18.0%	0.0%	18.5%	18.1%	17.9%	0.0%	33.3%	22.0%	18.0%	0.0%	21.2%	19.1%
9	Count	8	0	6	14	5	0	0	5	13	0	6	19
	Row %	57.1%	0.0%	42.9%	100.0%	100.0%	0.0%	0.0%	100.0%	68.4%	0.0%	31.6%	100.0%
	Col %	13.1%	0.0%	11.1%	12.1%	17.9%	0.0%	0.0%	12.2%	14.6%	0.0%	9.1%	12.1%
10 - Extremely important	Count	34	1	23	58	13	1	7	21	47	2	30	79
	Row %	58.6%	1.7%	39.7%	100.0%	61.9%	4.8%	33.3%	100.0%	59.5%	2.5%	38.0%	100.0%
	Col %	55.7%	100.0%	42.6%	50.0%	46.4%	100.0%	58.3%	51.2%	52.8%	100.0%	45.5%	50.3%
Total	Count	61	1	54	116	28	1	12	41	89	2	66	157
	Row %	52.6%	0.9%	46.6%	100.0%	68.3%	2.4%	29.3%	100.0%	56.7%	1.3%	42.0%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Q20. Statistics	Mean	9.0	10.0	8.1	8.6	8.6	10.0	9.1	8.8	8.9	10.0	8.3	8.6
	Median	10.0	10.0	9.0	9.5	9.0	10.0	10.0	10.0	10.0	10.0	9.0	10.0

Q22. How long did the lighting specification or design process take? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Less than 1 week	Count	54	1	56	111	13	1	11	25	67	2	67	136
	Row %	48.6%	0.9%	50.5%	100.0%	52.0%	4.0%	44.0%	100.0%	49.3%	1.5%	49.3%	100.0%
	Col %	59.3%	50.0%	65.1%	62.0%	35.1%	50.0%	78.6%	47.2%	52.3%	50.0%	67.0%	58.6%
1 - 2 weeks	Count	19	1	12	32	15	0	1	16	34	1	13	48
	Row %	59.4%	3.1%	37.5%	100.0%	93.8%	0.0%	6.2%	100.0%	70.8%	2.1%	27.1%	100.0%
	Col %	20.9%	50.0%	14.0%	17.9%	40.5%	0.0%	7.1%	30.2%	26.6%	25.0%	13.0%	20.7%
2 - 3 weeks	Count	8	0	7	15	0	0	1	1	8	0	8	16
	Row %	53.3%	0.0%	46.7%	100.0%	0.0%	0.0%	100.0%	100.0%	50.0%	0.0%	50.0%	100.0%
	Col %	8.8%	0.0%	8.1%	8.4%	0.0%	0.0%	7.1%	1.9%	6.2%	0.0%	8.0%	6.9%
3 - 4 weeks	Count	3	0	1	4	3	0	0	3	6	0	1	7
	Row %	75.0%	0.0%	25.0%	100.0%	100.0%	0.0%	0.0%	100.0%	85.7%	0.0%	14.3%	100.0%
	Col %	3.3%	0.0%	1.2%	2.2%	8.1%	0.0%	0.0%	5.7%	4.7%	0.0%	1.0%	3.0%
1 - 2 months	Count	6	0	5	11	4	0	0	4	10	0	5	15
	Row %	54.5%	0.0%	45.5%	100.0%	100.0%	0.0%	0.0%	100.0%	66.7%	0.0%	33.3%	100.0%
	Col %	6.6%	0.0%	5.8%	6.1%	10.8%	0.0%	0.0%	7.5%	7.8%	0.0%	5.0%	6.5%
2 - 3 months	Count	0	0	0	0	2	0	0	2	2	0	0	2
	Row %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	5.4%	0.0%	0.0%	3.8%	1.6%	0.0%	0.0%	0.9%
3 - 4 months	Count	0	0	1	1	0	1	0	1	0	1	1	2
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%	0.0%	100.0%	0.0%	50.0%	50.0%	100.0%
	Col %	0.0%	0.0%	1.2%	0.6%	0.0%	50.0%	0.0%	1.9%	0.0%	25.0%	1.0%	0.9%
4 - 5 months	Count	0	0	1	1	0	0	1	1	0	0	2	2
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.2%	0.6%	0.0%	0.0%	7.1%	1.9%	0.0%	0.0%	2.0%	0.9%
Over 5 months	Count	1	0	2	3	0	0	0	0	1	0	2	3
	Row %	33.3%	0.0%	66.7%	100.0%	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%	66.7%	100.0%
	Col %	1.1%	0.0%	2.3%	1.7%	0.0%	0.0%	0.0%	0.0%	0.8%	0.0%	2.0%	1.3%
No design process, they just changed the bulbs	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.2%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.4%
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	91	2	86	179	37	2	14	53	128	4	100	232
	Row %	50.8%	1.1%	48.0%	100.0%	69.8%	3.8%	26.4%	100.0%	55.2%	1.7%	43.1%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Q23. How satisfied were you with the amount of time the lighting specification or design process took, overall? BY Utility By Q2. Business Type

Q23. Satisfaction		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
1 - Not at all satisfied	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.4%
2	Count	0	0	2	2	0	0	0	0	0	0	2	2
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	2.2%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	0.8%
5	Count	3	0	2	5	0	0	0	0	3	0	2	5
	Row %	60.0%	0.0%	40.0%	100.0%	0.0%	0.0%	0.0%	0.0%	60.0%	0.0%	40.0%	100.0%
	Col %	3.0%	0.0%	2.2%	2.6%	0.0%	0.0%	0.0%	0.0%	2.2%	0.0%	1.8%	2.0%
6	Count	0	0	0	0	2	0	2	4	2	0	2	4
	Row %	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	50.0%	100.0%	50.0%	0.0%	50.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	5.1%	0.0%	11.8%	6.9%	1.4%	0.0%	1.8%	1.6%
7	Count	4	0	4	8	3	0	1	4	7	0	5	12
	Row %	50.0%	0.0%	50.0%	100.0%	75.0%	0.0%	25.0%	100.0%	58.3%	0.0%	41.7%	100.0%
	Col %	4.0%	0.0%	4.3%	4.1%	7.7%	0.0%	5.9%	6.9%	5.0%	0.0%	4.6%	4.8%
8	Count	12	0	18	30	7	0	3	10	19	0	21	40
	Row %	40.0%	0.0%	60.0%	100.0%	70.0%	0.0%	30.0%	100.0%	47.5%	0.0%	52.5%	100.0%
	Col %	12.0%	0.0%	19.6%	15.5%	17.9%	0.0%	17.6%	17.2%	13.7%	0.0%	19.3%	15.9%
9	Count	22	0	13	35	3	1	1	5	25	1	14	40
	Row %	62.9%	0.0%	37.1%	100.0%	60.0%	20.0%	20.0%	100.0%	62.5%	2.5%	35.0%	100.0%
	Col %	22.0%	0.0%	14.1%	18.0%	7.7%	50.0%	5.9%	8.6%	18.0%	25.0%	12.8%	15.9%
10 - Extremely satisfied	Count	59	2	52	113	24	1	10	35	83	3	62	148
	Row %	52.2%	1.8%	46.0%	100.0%	68.6%	2.9%	28.6%	100.0%	56.1%	2.0%	41.9%	100.0%
	Col %	59.0%	100.0%	56.5%	58.2%	61.5%	50.0%	58.8%	60.3%	59.7%	75.0%	56.9%	58.7%
Total	Count	100	2	92	194	39	2	17	58	139	4	109	252
	Row %	51.5%	1.0%	47.4%	100.0%	67.2%	3.4%	29.3%	100.0%	55.2%	1.6%	43.3%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Q23. Statistics	Mean	9.3	10.0	9.0	9.1	9.1	9.5	8.9	9.1	9.2	9.8	9.0	9.1
	Median	10.0	10.0	10.0	10.0	10.0	9.5	10.0	10.0	10.0	10.0	10.0	10.0

Q25. How long did the lighting retrofit take? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Less than 1 week	Count	75	2	81	158	22	1	13	36	97	3	94	194
	Row %	47.5%	1.3%	51.3%	100.0%	61.1%	2.8%	36.1%	100.0%	50.0%	1.5%	48.5%	100.0%
	Col %	77.3%	100.0%	90.0%	83.6%	53.7%	50.0%	81.2%	61.0%	70.3%	75.0%	88.7%	78.2%
1 - 2 weeks	Count	16	0	7	23	11	1	2	14	27	1	9	37
	Row %	69.6%	0.0%	30.4%	100.0%	78.6%	7.1%	14.3%	100.0%	73.0%	2.7%	24.3%	100.0%
	Col %	16.5%	0.0%	7.8%	12.2%	26.8%	50.0%	12.5%	23.7%	19.6%	25.0%	8.5%	14.9%
2 - 3 weeks	Count	6	0	0	6	3	0	0	3	9	0	0	9
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	6.2%	0.0%	0.0%	3.2%	7.3%	0.0%	0.0%	5.1%	6.5%	0.0%	0.0%	3.6%
3 - 4 weeks	Count	0	0	0	0	0	0	1	1	0	0	1	1
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.2%	1.7%	0.0%	0.0%	0.9%	0.4%
1 - 2 months	Count	0	0	1	1	4	0	0	4	4	0	1	5
	Row %	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%	0.0%	100.0%	80.0%	0.0%	20.0%	100.0%
	Col %	0.0%	0.0%	1.1%	0.5%	9.8%	0.0%	0.0%	6.8%	2.9%	0.0%	0.9%	2.0%
2 - 3 months	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
3 - 4 months	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.9%	0.4%
4 - 5 months	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Over 5 months	Count	0	0	0	0	1	0	0	1	1	0	0	1
	Row %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	1.7%	0.7%	0.0%	0.0%	0.4%
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	97	2	90	189	41	2	16	59	138	4	106	248
	Row %	51.3%	1.1%	47.6%	100.0%	69.5%	3.4%	27.1%	100.0%	55.6%	1.6%	42.7%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Q26. How long did you initially plan for the lighting retrofit to take? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Less than 1 week	Count	51	2	55	108	16	1	6	23	67	3	61	131
	Row %	47.2%	1.9%	50.9%	100.0%	69.6%	4.3%	26.1%	100.0%	51.1%	2.3%	46.6%	100.0%
	Col %	63.0%	100.0%	79.7%	71.1%	45.7%	50.0%	50.0%	46.9%	57.8%	75.0%	75.3%	65.2%
1 - 2 weeks	Count	21	0	12	33	14	1	5	20	35	1	17	53
	Row %	63.6%	0.0%	36.4%	100.0%	70.0%	5.0%	25.0%	100.0%	66.0%	1.9%	32.1%	100.0%
	Col %	25.9%	0.0%	17.4%	21.7%	40.0%	50.0%	41.7%	40.8%	30.2%	25.0%	21.0%	26.4%
2 - 3 weeks	Count	4	0	1	5	4	0	0	4	8	0	1	9
	Row %	80.0%	0.0%	20.0%	100.0%	100.0%	0.0%	0.0%	100.0%	88.9%	0.0%	11.1%	100.0%
	Col %	4.9%	0.0%	1.4%	3.3%	11.4%	0.0%	0.0%	8.2%	6.9%	0.0%	1.2%	4.5%
3 - 4 weeks	Count	2	0	0	2	0	0	1	1	2	0	1	3
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	66.7%	0.0%	33.3%	100.0%
	Col %	2.5%	0.0%	0.0%	1.3%	0.0%	0.0%	8.3%	2.0%	1.7%	0.0%	1.2%	1.5%
1 - 2 months	Count	3	0	1	4	1	0	0	1	4	0	1	5
	Row %	75.0%	0.0%	25.0%	100.0%	100.0%	0.0%	0.0%	100.0%	80.0%	0.0%	20.0%	100.0%
	Col %	3.7%	0.0%	1.4%	2.6%	2.9%	0.0%	0.0%	2.0%	3.4%	0.0%	1.2%	2.5%
2 - 3 months	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
3 - 4 months	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
4 - 5 months	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Over 5 months	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	81	2	69	152	35	2	12	49	116	4	81	201
	Row %	53.3%	1.3%	45.4%	100.0%	71.4%	4.1%	24.5%	100.0%	57.7%	2.0%	40.3%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Q27. How satisfied were you with the amount of time the lighting specification or design process took, overall? BY Utility By Q2. Business Type

Q27. Satisfaction		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
1 - Not at all satisfied	Count	0	0	2	2	0	0	0	0	0	0	2	2
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	2.2%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.8%	0.8%
3	Count	0	0	0	0	0	0	1	1	0	0	1	1
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.9%	1.6%	0.0%	0.0%	0.9%	0.4%
5	Count	2	0	1	3	2	0	1	3	4	0	2	6
	Row %	66.7%	0.0%	33.3%	100.0%	66.7%	0.0%	33.3%	100.0%	66.7%	0.0%	33.3%	100.0%
	Col %	2.0%	0.0%	1.1%	1.5%	4.7%	0.0%	5.9%	4.8%	2.8%	0.0%	1.8%	2.3%
6	Count	2	0	1	3	0	0	1	1	2	0	2	4
	Row %	66.7%	0.0%	33.3%	100.0%	0.0%	0.0%	100.0%	100.0%	50.0%	0.0%	50.0%	100.0%
	Col %	2.0%	0.0%	1.1%	1.5%	0.0%	0.0%	5.9%	1.6%	1.4%	0.0%	1.8%	1.6%
7	Count	2	0	2	4	2	0	1	3	4	0	3	7
	Row %	50.0%	0.0%	50.0%	100.0%	66.7%	0.0%	33.3%	100.0%	57.1%	0.0%	42.9%	100.0%
	Col %	2.0%	0.0%	2.2%	2.0%	4.7%	0.0%	5.9%	4.8%	2.8%	0.0%	2.7%	2.7%
8	Count	6	0	13	19	10	0	2	12	16	0	15	31
	Row %	31.6%	0.0%	68.4%	100.0%	83.3%	0.0%	16.7%	100.0%	51.6%	0.0%	48.4%	100.0%
	Col %	5.9%	0.0%	14.0%	9.7%	23.3%	0.0%	11.8%	19.4%	11.1%	0.0%	13.6%	12.0%
9	Count	18	0	18	36	3	1	1	5	21	1	19	41
	Row %	50.0%	0.0%	50.0%	100.0%	60.0%	20.0%	20.0%	100.0%	51.2%	2.4%	46.3%	100.0%
	Col %	17.8%	0.0%	19.4%	18.4%	7.0%	50.0%	5.9%	8.1%	14.6%	25.0%	17.3%	15.9%
10 - Extremely satisfied	Count	71	2	56	129	26	1	10	37	97	3	66	166
	Row %	55.0%	1.6%	43.4%	100.0%	70.3%	2.7%	27.0%	100.0%	58.4%	1.8%	39.8%	100.0%
	Col %	70.3%	100.0%	60.2%	65.8%	60.5%	50.0%	58.8%	59.7%	67.4%	75.0%	60.0%	64.3%
Total	Count	101	2	93	196	43	2	17	62	144	4	110	258
	Row %	51.5%	1.0%	47.4%	100.0%	69.4%	3.2%	27.4%	100.0%	55.8%	1.6%	42.6%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Q27. Statistics	Mean	9.5	10.0	9.2	9.3	9.1	9.5	8.6	9.0	9.4	9.8	9.1	9.2
	Median	10.0	10.0	10.0	10.0	10.0	9.5	10.0	10.0	10.0	10.0	10.0	10.0

Q29. Our records show that you had MEASURE #1 installed at this facility. Is that correct? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Yes	Count	100	2	85	187	43	2	17	62	143	4	102	249
	Row %	53.5%	1.1%	45.5%	100.0%	69.4%	3.2%	27.4%	100.0%	57.4%	1.6%	41.0%	100.0%
	Col %	99.0%	100.0%	93.4%	96.4%	97.7%	100.0%	100.0%	98.4%	98.6%	100.0%	94.4%	96.9%
No	Count	1	0	6	7	1	0	0	1	2	0	6	8
	Row %	14.3%	0.0%	85.7%	100.0%	100.0%	0.0%	0.0%	100.0%	25.0%	0.0%	75.0%	100.0%
	Col %	1.0%	0.0%	6.6%	3.6%	2.3%	0.0%	0.0%	1.6%	1.4%	0.0%	5.6%	3.1%
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	101	2	91	194	44	2	17	63	145	4	108	257
	Row %	52.1%	1.0%	46.9%	100.0%	69.8%	3.2%	27.0%	100.0%	56.4%	1.6%	42.0%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Q30. Just to confirm, you did NOT have any MEASURE #1 installed at your building, located at <ADDRESS>. Correct? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Correct	Count	0	0	5	5	1	0	0	1	1	0	5	6
	Row %	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%	0.0%	100.0%	16.7%	0.0%	83.3%	100.0%
	Col %	0.0%	0.0%	83.3%	71.4%	100.0%	0.0%	0.0%	100.0%	50.0%	0.0%	83.3%	75.0%
Incorrect - equipment was installed	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	16.7%	14.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%	12.5%
Other	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	100.0%	0.0%	0.0%	14.3%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	0.0%	12.5%
Total	Count	1	0	6	7	1	0	0	1	2	0	6	8
	Row %	14.3%	0.0%	85.7%	100.0%	100.0%	0.0%	0.0%	100.0%	25.0%	0.0%	75.0%	100.0%
	Col %	100.0%	0.0%	100.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%

Q31. What was the single main reason you had MEASURE #1 installed at your facility? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
The Rebate / Equipment savings	Count	1	0	3	4	0	0	0	0	1	0	3	4
	Row %	25.0%	0.0%	75.0%	100.0%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%	75.0%	100.0%
	Col %	1.0%	0.0%	3.5%	2.2%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	2.9%	1.6%
Saving energy	Count	47	1	39	87	31	1	14	46	78	2	53	133
	Row %	54.0%	1.1%	44.8%	100.0%	67.4%	2.2%	30.4%	100.0%	58.6%	1.5%	39.8%	100.0%
	Col %	48.0%	50.0%	45.9%	47.0%	73.8%	50.0%	82.4%	75.4%	55.7%	50.0%	52.0%	54.1%
Lower energy bill/saving money	Count	19	1	12	32	5	0	1	6	24	1	13	38
	Row %	59.4%	3.1%	37.5%	100.0%	83.3%	0.0%	16.7%	100.0%	63.2%	2.6%	34.2%	100.0%
	Col %	19.4%	50.0%	14.1%	17.3%	11.9%	0.0%	5.9%	9.8%	17.1%	25.0%	12.7%	15.4%
Previous equipment failed	Count	0	0	0	0	0	0	1	1	0	0	1	1
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.9%	1.6%	0.0%	0.0%	1.0%	0.4%
Better lighting	Count	5	0	5	10	0	0	0	0	5	0	5	10
	Row %	50.0%	0.0%	50.0%	100.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	50.0%	100.0%
	Col %	5.1%	0.0%	5.9%	5.4%	0.0%	0.0%	0.0%	0.0%	3.6%	0.0%	4.9%	4.1%
To be "high-tech"	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.4%
To be "green" / help the environment	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Corporate practice / direction from corporate	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Past participation in similar program	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Recommended by general / electrical contractor	Count	5	0	6	11	0	0	0	0	5	0	6	11
	Row %	45.5%	0.0%	54.5%	100.0%	0.0%	0.0%	0.0%	0.0%	45.5%	0.0%	54.5%	100.0%
	Col %	5.1%	0.0%	7.1%	5.9%	0.0%	0.0%	0.0%	0.0%	3.6%	0.0%	5.9%	4.5%
Recommended by lighting contractor	Count	9	0	6	15	3	0	0	3	12	0	6	18
	Row %	60.0%	0.0%	40.0%	100.0%	100.0%	0.0%	0.0%	100.0%	66.7%	0.0%	33.3%	100.0%
	Col %	9.2%	0.0%	7.1%	8.1%	7.1%	0.0%	0.0%	4.9%	8.6%	0.0%	5.9%	7.3%
Recommended by lighting designer	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
They were free	Count	2	0	2	4	0	0	0	0	2	0	2	4
	Row %	50.0%	0.0%	50.0%	100.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	50.0%	100.0%
	Col %	2.0%	0.0%	2.4%	2.2%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	2.0%	1.6%
Safety/security	Count	0	0	1	1	2	1	1	4	2	1	2	5
	Row %	0.0%	0.0%	100.0%	100.0%	50.0%	25.0%	25.0%	100.0%	40.0%	20.0%	40.0%	100.0%
	Col %	0.0%	0.0%	1.2%	0.5%	4.8%	50.0%	5.9%	6.6%	1.4%	25.0%	2.0%	2.0%
So the lights would turn off when nobody there	Count	3	0	4	7	0	0	0	0	3	0	4	7
	Row %	42.9%	0.0%	57.1%	100.0%	0.0%	0.0%	0.0%	0.0%	42.9%	0.0%	57.1%	100.0%
	Col %	3.1%	0.0%	4.7%	3.8%	0.0%	0.0%	0.0%	0.0%	2.1%	0.0%	3.9%	2.8%

(continued)

Q31. What was the single main reason you had MEASURE #1 installed at your facility? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
So don't have to touch the light switches with dirty hands	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.4%
Make property more marketable	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Recommended by SCE/PG&E	Count	4	0	5	9	0	0	0	0	4	0	5	9
	Row %	44.4%	0.0%	55.6%	100.0%	0.0%	0.0%	0.0%	0.0%	44.4%	0.0%	55.6%	100.0%
	Col %	4.1%	0.0%	5.9%	4.9%	0.0%	0.0%	0.0%	0.0%	2.9%	0.0%	4.9%	3.7%
Convenience	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	0.4%
Better control of the lighting	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Reduce maintenance cost	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Aesthetics/look better	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Less heat	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Clearance issues	Count	1	0	0	1	1	0	0	1	2	0	0	2
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.0%	0.0%	0.0%	0.5%	2.4%	0.0%	0.0%	1.6%	1.4%	0.0%	0.0%	0.8%
Other	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.4%
Total	Count	98	2	85	185	42	2	17	61	140	4	102	246
	Row %	53.0%	1.1%	45.9%	100.0%	68.9%	3.3%	27.9%	100.0%	56.9%	1.6%	41.5%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Q32. Are there any other reasons you had MEASURE #1 installed at your facility? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
The Rebate / Equipment savings	Count	2	0	0	2	0	0	0	0	2	0	0	2
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	2.0%	0.0%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	1.4%	0.0%	0.0%	0.8%
Saving energy	Count	10	0	6	16	4	0	1	5	14	0	7	21
	Row %	62.5%	0.0%	37.5%	100.0%	80.0%	0.0%	20.0%	100.0%	66.7%	0.0%	33.3%	100.0%
	Col %	10.0%	0.0%	7.0%	8.5%	9.3%	0.0%	5.9%	8.1%	9.8%	0.0%	6.8%	8.4%
Lower energy bill/saving money	Count	7	0	13	20	5	0	1	6	12	0	14	26
	Row %	35.0%	0.0%	65.0%	100.0%	83.3%	0.0%	16.7%	100.0%	46.2%	0.0%	53.8%	100.0%
	Col %	7.0%	0.0%	15.1%	10.6%	11.6%	0.0%	5.9%	9.7%	8.4%	0.0%	13.6%	10.4%
Previous equipment failed	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Better lighting	Count	9	0	5	14	2	0	2	4	11	0	7	18
	Row %	64.3%	0.0%	35.7%	100.0%	50.0%	0.0%	50.0%	100.0%	61.1%	0.0%	38.9%	100.0%
	Col %	9.0%	0.0%	5.8%	7.4%	4.7%	0.0%	11.8%	6.5%	7.7%	0.0%	6.8%	7.2%
To be "high-tech"	Count	0	0	0	0	1	0	0	1	1	0	0	1
	Row %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	2.3%	0.0%	0.0%	1.6%	0.7%	0.0%	0.0%	0.4%
To be "green" / help the environment	Count	2	0	0	2	1	0	0	1	3	0	0	3
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	2.0%	0.0%	0.0%	1.1%	2.3%	0.0%	0.0%	1.6%	2.1%	0.0%	0.0%	1.2%
Corporate practice / direction from corporate	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Past participation in similar program	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Recommended by general / electrical contractor	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Recommended by lighting contractor	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Recommended by lighting designer	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
No / None	Count	59	1	60	120	27	2	12	41	86	3	72	161
	Row %	49.2%	0.8%	50.0%	100.0%	65.9%	4.9%	29.3%	100.0%	53.4%	1.9%	44.7%	100.0%
	Col %	59.0%	50.0%	69.8%	63.8%	62.8%	100.0%	70.6%	66.1%	60.1%	75.0%	69.9%	64.4%
They were free	Count	0	0	1	1	1	0	0	1	1	0	1	2
	Row %	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%	0.0%	100.0%	50.0%	0.0%	50.0%	100.0%
	Col %	0.0%	0.0%	1.2%	0.5%	2.3%	0.0%	0.0%	1.6%	0.7%	0.0%	1.0%	0.8%
Safety/security	Count	4	0	1	5	4	0	0	4	8	0	1	9
	Row %	80.0%	0.0%	20.0%	100.0%	100.0%	0.0%	0.0%	100.0%	88.9%	0.0%	11.1%	100.0%
	Col %	4.0%	0.0%	1.2%	2.7%	9.3%	0.0%	0.0%	6.5%	5.6%	0.0%	1.0%	3.6%

(continued)

Q32. Are there any other reasons you had MEASURE #1 installed at your facility? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
So the lights would turn off when nobody there	Count	4	0	0	4	0	0	0	0	4	0	0	4
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	4.0%	0.0%	0.0%	2.1%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	0.0%	1.6%
So don't have to touch the light switches with dirty hands	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Make property more marketable	Count	3	0	0	3	0	0	0	0	3	0	0	3
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	3.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	2.1%	0.0%	0.0%	1.2%
Recommended by SCE/PG&E	Count	1	0	1	2	0	0	0	0	1	0	1	2
	Row %	50.0%	0.0%	50.0%	100.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	50.0%	100.0%
	Col %	1.0%	0.0%	1.2%	1.1%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	1.0%	0.8%
Convenience	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.0%	0.0%	0.0%	0.5%	0.0%	0.0%	0.0%	0.0%	0.7%	0.0%	0.0%	0.4%
Better control of the lighting	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Reduce maintenance cost	Count	1	0	0	1	1	0	0	1	2	0	0	2
	Row %	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	1.0%	0.0%	0.0%	0.5%	2.3%	0.0%	0.0%	1.6%	1.4%	0.0%	0.0%	0.8%
Aesthetics/look better	Count	0	0	1	1	0	0	1	1	0	0	2	2
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	1.2%	0.5%	0.0%	0.0%	5.9%	1.6%	0.0%	0.0%	1.9%	0.8%
Less heat	Count	1	1	0	2	0	0	0	0	1	1	0	2
	Row %	50.0%	50.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	50.0%	50.0%	0.0%	100.0%
	Col %	1.0%	50.0%	0.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.7%	25.0%	0.0%	0.8%
Clearance issues	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Don't Know	Count	1	0	1	2	0	0	1	1	1	0	2	3
	Row %	50.0%	0.0%	50.0%	100.0%	0.0%	0.0%	100.0%	100.0%	33.3%	0.0%	66.7%	100.0%
	Col %	1.0%	0.0%	1.2%	1.1%	0.0%	0.0%	5.9%	1.6%	0.7%	0.0%	1.9%	1.2%
Other	Count	0	0	0	0	1	0	0	1	1	0	0	1
	Row %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	2.3%	0.0%	0.0%	1.6%	0.7%	0.0%	0.0%	0.4%
Refused	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	100	2	86	188	43	2	17	62	143	4	103	250
	Row %	53.2%	1.1%	45.7%	100.0%	69.4%	3.2%	27.4%	100.0%	57.2%	1.6%	41.2%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Q34. How satisfied are you with the light quality of the MEASURE #1 installed at your facility? BY Utility By Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
Q34. Satisfaction		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
9	Count	0	0	1	1	0	0	1	1	0	0	2	2
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	50.0%	33.3%	0.0%	0.0%	33.3%	20.0%	0.0%	0.0%	40.0%	25.0%
10 - Extremely satisfied	Count	0	1	1	2	1	1	2	4	1	2	3	6
	Row %	0.0%	50.0%	50.0%	100.0%	25.0%	25.0%	50.0%	100.0%	16.7%	33.3%	50.0%	100.0%
	Col %	0.0%	100.0%	50.0%	66.7%	100.0%	100.0%	66.7%	80.0%	100.0%	100.0%	60.0%	75.0%
Total	Count	0	1	2	3	1	1	3	5	1	2	5	8
	Row %	0.0%	33.3%	66.7%	100.0%	20.0%	20.0%	60.0%	100.0%	12.5%	25.0%	62.5%	100.0%
	Col %	0.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Q34. Statistics	Mean	.	10.0	9.5	9.7	10.0	10.0	9.7	9.8	10.0	10.0	9.6	9.8
	Median	.	10.0	9.5	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0

Q36. How satisfied are you with the light output of MEASURE #1 installed at your facility? BY Utility By Q2. Business Type

Q36. Satisfaction		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
9	Count	0	0	2	2	0	0	1	1	0	0	3	3
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	100.0%	66.7%	0.0%	0.0%	33.3%	20.0%	0.0%	0.0%	60.0%	37.5%
10 - Extremely satisfied	Count	0	1	0	1	1	1	2	4	1	2	2	5
	Row %	0.0%	100.0%	0.0%	100.0%	25.0%	25.0%	50.0%	100.0%	20.0%	40.0%	40.0%	100.0%
	Col %	0.0%	100.0%	0.0%	33.3%	100.0%	100.0%	66.7%	80.0%	100.0%	100.0%	40.0%	62.5%
Total	Count	0	1	2	3	1	1	3	5	1	2	5	8
	Row %	0.0%	33.3%	66.7%	100.0%	20.0%	20.0%	60.0%	100.0%	12.5%	25.0%	62.5%	100.0%
	Col %	0.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Q36. Statistics	Mean	.	10.0	9.0	9.3	10.0	10.0	9.7	9.8	10.0	10.0	9.4	9.6
	Median	.	10.0	9.0	9.0	10.0	10.0	10.0	10.0	10.0	10.0	9.0	10.0

Q38. How satisfied are you with the physical appearance of the MEASURE #1 installed at your facility? BY Utility By Q2. Business Type

Q38. Satisfaction		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
7	Count	0	0	0	0	0	0	1	1	0	0	1	1
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	33.3%	20.0%	0.0%	0.0%	25.0%	14.3%
9	Count	0	0	0	0	1	0	0	1	1	0	0	1
	Row %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	100.0%
	Col %	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	20.0%	100.0%	0.0%	0.0%	14.3%
10 - Extremely satisfied	Count	0	1	1	2	0	1	2	3	0	2	3	5
	Row %	0.0%	50.0%	50.0%	100.0%	0.0%	33.3%	66.7%	100.0%	0.0%	40.0%	60.0%	100.0%
	Col %	0.0%	100.0%	100.0%	100.0%	0.0%	100.0%	66.7%	60.0%	0.0%	100.0%	75.0%	71.4%
Total	Count	0	1	1	2	1	1	3	5	1	2	4	7
	Row %	0.0%	50.0%	50.0%	100.0%	20.0%	20.0%	60.0%	100.0%	14.3%	28.6%	57.1%	100.0%
	Col %	0.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Q38. Statistics	Mean	.	10.0	10.0	10.0	9.0	10.0	9.0	9.2	9.0	10.0	9.3	9.4
	Median	.	10.0	10.0	10.0	9.0	10.0	10.0	10.0	9.0	10.0	10.0	10.0

Q40. What is your level of satisfaction with the MEASURE #1 installed at your facility? BY Utility By Q2. Business Type

| Q40. Satisfaction | | Southern California Edison | | | | Pacific Gas & Electric Company | | | | Total | | | |
| | | Q2. Business Type | | | | Q2. Business Type | | | | Q2. Business Type | | | |
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
1 - Not at all satisfied	Count	3	0	4	7	0	0	0	0	3	0	4	7
	Row %	42.9%	0.0%	57.1%	100.0%	0.0%	0.0%	0.0%	0.0%	42.9%	0.0%	57.1%	100.0%
	Col %	3.0%	0.0%	4.8%	3.8%	0.0%	0.0%	0.0%	0.0%	2.2%	0.0%	4.0%	2.9%
2	Count	1	0	1	2	2	0	0	2	3	0	1	4
	Row %	50.0%	0.0%	50.0%	100.0%	100.0%	0.0%	0.0%	100.0%	75.0%	0.0%	25.0%	100.0%
	Col %	1.0%	0.0%	1.2%	1.1%	5.0%	0.0%	0.0%	3.4%	2.2%	0.0%	1.0%	1.6%
3	Count	0	0	4	4	2	0	0	2	2	0	4	6
	Row %	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%	0.0%	100.0%	33.3%	0.0%	66.7%	100.0%
	Col %	0.0%	0.0%	4.8%	2.2%	5.0%	0.0%	0.0%	3.4%	1.4%	0.0%	4.0%	2.5%
4	Count	0	0	1	1	3	0	1	4	3	0	2	5
	Row %	0.0%	0.0%	100.0%	100.0%	75.0%	0.0%	25.0%	100.0%	60.0%	0.0%	40.0%	100.0%
	Col %	0.0%	0.0%	1.2%	0.5%	7.5%	0.0%	5.9%	6.8%	2.2%	0.0%	2.0%	2.1%
5	Count	2	0	3	5	2	0	1	3	4	0	4	8
	Row %	40.0%	0.0%	60.0%	100.0%	66.7%	0.0%	33.3%	100.0%	50.0%	0.0%	50.0%	100.0%
	Col %	2.0%	0.0%	3.6%	2.7%	5.0%	0.0%	5.9%	5.1%	2.9%	0.0%	4.0%	3.3%
6	Count	0	0	1	1	2	0	0	2	2	0	1	3
	Row %	0.0%	0.0%	100.0%	100.0%	100.0%	0.0%	0.0%	100.0%	66.7%	0.0%	33.3%	100.0%
	Col %	0.0%	0.0%	1.2%	0.5%	5.0%	0.0%	0.0%	3.4%	1.4%	0.0%	1.0%	1.2%
7	Count	4	0	2	6	3	0	2	5	7	0	4	11
	Row %	66.7%	0.0%	33.3%	100.0%	60.0%	0.0%	40.0%	100.0%	63.6%	0.0%	36.4%	100.0%
	Col %	4.0%	0.0%	2.4%	3.3%	7.5%	0.0%	11.8%	8.5%	5.0%	0.0%	4.0%	4.5%
8	Count	14	0	15	29	6	0	4	10	20	0	19	39
	Row %	48.3%	0.0%	51.7%	100.0%	60.0%	0.0%	40.0%	100.0%	51.3%	0.0%	48.7%	100.0%
	Col %	14.1%	0.0%	17.9%	15.8%	15.0%	0.0%	23.5%	16.9%	14.4%	0.0%	18.8%	16.0%
9	Count	17	0	9	26	8	1	1	10	25	1	10	36
	Row %	65.4%	0.0%	34.6%	100.0%	80.0%	10.0%	10.0%	100.0%	69.4%	2.8%	27.8%	100.0%
	Col %	17.2%	0.0%	10.7%	14.1%	20.0%	50.0%	5.9%	16.9%	18.0%	33.3%	9.9%	14.8%
10 - Extremely satisfied	Count	58	1	44	103	12	1	8	21	70	2	52	124
	Row %	56.3%	1.0%	42.7%	100.0%	57.1%	4.8%	38.1%	100.0%	56.5%	1.6%	41.9%	100.0%
	Col %	58.6%	100.0%	52.4%	56.0%	30.0%	50.0%	47.1%	35.6%	50.4%	66.7%	51.5%	51.0%
Total	Count	99	1	84	184	40	2	17	59	139	3	101	243
	Row %	53.8%	0.5%	45.7%	100.0%	67.8%	3.4%	28.8%	100.0%	57.2%	1.2%	41.6%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Q40. Statistics	Mean	9.0	10.0	8.3	8.7	7.6	9.5	8.5	7.9	8.6	9.7	8.3	8.5
	Median	10.0	10.0	10.0	10.0	8.5	9.5	9.0	9.0	10.0	10.0	10.0	10.0

Q29a. Our records show that you had MEASURE #2 installed at this facility. Is that correct? BY Utility > Q2. Business Type

		Utility												
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Yes	Count	27	0	23	50	3	0	0	3	30	0	23	53
	Row %	54.0%	0.0%	46.0%	100.0%	100.0%	0.0%	0.0%	100.0%	56.6%	0.0%	43.4%	100.0%
	Col %	96.4%	0.0%	85.2%	90.9%	100.0%	0.0%	0.0%	100.0%	96.8%	0.0%	85.2%	91.4%
No	Count	1	0	3	4	0	0	0	0	1	0	3	4
	Row %	25.0%	0.0%	75.0%	100.0%	0.0%	0.0%	0.0%	0.0%	25.0%	0.0%	75.0%	100.0%
	Col %	3.6%	0.0%	11.1%	7.3%	0.0%	0.0%	0.0%	0.0%	3.2%	0.0%	11.1%	6.9%
Other	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	3.7%	1.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.7%	1.7%
Total	Count	28	0	27	55	3	0	0	3	31	0	27	58
	Row %	50.9%	0.0%	49.1%	100.0%	100.0%	0.0%	0.0%	100.0%	53.4%	0.0%	46.6%	100.0%
	Col %	100.0%	0.0%	100.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%

Advanced Lighting Survey 2012-2013 - SCE & PG&E Tables by Utility by Business Type

Q30a. Just to confirm, you did NOT have any MEASURE #2 installed at your building, located at <ADDRESS>. Correct? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Correct	Count	1	0	4	5	0	0	0	0	1	0	4	5
	Row %	20.0%	0.0%	80.0%	100.0%	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%	80.0%	100.0%
	Col %	100.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	100.0%
Incorrect - equipment was installed	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	1	0	4	5	0	0	0	0	1	0	4	5
	Row %	20.0%	0.0%	80.0%	100.0%	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%	80.0%	100.0%
	Col %	100.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	100.0%	100.0%

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Q31a. What was the single main reason you had MEASURE #2 installed at your facility? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
The Rebate / Equipment savings	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Saving energy	Count	14	0	9	23	1	0	0	1	15	0	9	24
	Row %	60.9%	0.0%	39.1%	100.0%	100.0%	0.0%	0.0%	100.0%	62.5%	0.0%	37.5%	100.0%
	Col %	51.9%	0.0%	40.9%	46.9%	33.3%	0.0%	0.0%	33.3%	50.0%	0.0%	40.9%	46.2%
Lower energy bill/saving money	Count	4	0	2	6	1	0	0	1	5	0	2	7
	Row %	66.7%	0.0%	33.3%	100.0%	100.0%	0.0%	0.0%	100.0%	71.4%	0.0%	28.6%	100.0%
	Col %	14.8%	0.0%	9.1%	12.2%	33.3%	0.0%	0.0%	33.3%	16.7%	0.0%	9.1%	13.5%
Previous equipment failed	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Better lighting	Count	2	0	2	4	0	0	0	0	2	0	2	4
	Row %	50.0%	0.0%	50.0%	100.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	50.0%	100.0%
	Col %	7.4%	0.0%	9.1%	8.2%	0.0%	0.0%	0.0%	0.0%	6.7%	0.0%	9.1%	7.7%
To be "high-tech"	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
To be "green" / help the environment	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Corporate practice / direction from corporate	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Past participation in similar program	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Recommended by general / electrical contractor	Count	2	0	1	3	1	0	0	1	3	0	1	4
	Row %	66.7%	0.0%	33.3%	100.0%	100.0%	0.0%	0.0%	100.0%	75.0%	0.0%	25.0%	100.0%
	Col %	7.4%	0.0%	4.5%	6.1%	33.3%	0.0%	0.0%	33.3%	10.0%	0.0%	4.5%	7.7%
Recommended by lighting contractor	Count	3	0	3	6	0	0	0	0	3	0	3	6
	Row %	50.0%	0.0%	50.0%	100.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	50.0%	100.0%
	Col %	11.1%	0.0%	13.6%	12.2%	0.0%	0.0%	0.0%	0.0%	10.0%	0.0%	13.6%	11.5%
Recommended by lighting designer	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
They were free	Count	0	0	2	2	0	0	0	0	0	0	2	2
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	9.1%	4.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%	3.8%
Safety/security	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
So the lights would turn off when nobody there	Count	0	0	2	2	0	0	0	0	0	0	2	2
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	9.1%	4.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	9.1%	3.8%

(continued)

Q31a. What was the single main reason you had MEASURE #2 installed at your facility? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
So don't have to touch the light switches with dirty hands	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Make property more marketable	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Recommended by SCE/PG&E	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	4.5%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.5%	1.9%
Convenience	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Better control of the lighting	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Reduce maintenance cost	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Aesthetics/look better	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Less heat	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Clearance issues	Count	2	0	0	2	0	0	0	0	2	0	0	2
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	7.4%	0.0%	0.0%	4.1%	0.0%	0.0%	0.0%	0.0%	6.7%	0.0%	0.0%	3.8%
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	27	0	22	49	3	0	0	3	30	0	22	52
	Row %	55.1%	0.0%	44.9%	100.0%	100.0%	0.0%	0.0%	100.0%	57.7%	0.0%	42.3%	100.0%
	Col %	100.0%	0.0%	100.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%

Q32a. Are there any other reasons you had MEASURE #2 installed at your facility? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
The Rebate / Equipment savings	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Saving energy	Count	1	0	4	5	0	0	0	0	1	0	4	5
	Row %	20.0%	0.0%	80.0%	100.0%	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%	80.0%	100.0%
	Col %	3.7%	0.0%	17.4%	10.0%	0.0%	0.0%	0.0%	0.0%	3.3%	0.0%	17.4%	9.4%
Lower energy bill/saving money	Count	1	0	4	5	0	0	0	0	1	0	4	5
	Row %	20.0%	0.0%	80.0%	100.0%	0.0%	0.0%	0.0%	0.0%	20.0%	0.0%	80.0%	100.0%
	Col %	3.7%	0.0%	17.4%	10.0%	0.0%	0.0%	0.0%	0.0%	3.3%	0.0%	17.4%	9.4%
Previous equipment failed	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	3.7%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	3.3%	0.0%	0.0%	1.9%
Better lighting	Count	1	0	2	3	0	0	0	0	1	0	2	3
	Row %	33.3%	0.0%	66.7%	100.0%	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%	66.7%	100.0%
	Col %	3.7%	0.0%	8.7%	6.0%	0.0%	0.0%	0.0%	0.0%	3.3%	0.0%	8.7%	5.7%
To be "high-tech"	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
To be "green" / help the environment	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Corporate practice / direction from corporate	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Past participation in similar program	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Recommended by general / electrical contractor	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	3.7%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	3.3%	0.0%	0.0%	1.9%
Recommended by lighting contractor	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Recommended by lighting designer	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
No / None	Count	20	0	12	32	3	0	0	3	23	0	12	35
	Row %	62.5%	0.0%	37.5%	100.0%	100.0%	0.0%	0.0%	100.0%	65.7%	0.0%	34.3%	100.0%
	Col %	74.1%	0.0%	52.2%	64.0%	100.0%	0.0%	0.0%	100.0%	76.7%	0.0%	52.2%	66.0%
They were free	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	3.7%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	3.3%	0.0%	0.0%	1.9%
Safety/security	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	3.7%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	3.3%	0.0%	0.0%	1.9%

(continued)

Q32a. Are there any other reasons you had MEASURE #2 installed at your facility? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
So the lights would turn off when nobody there	Count	1	0	1	2	0	0	0	0	1	0	1	2
	Row %	50.0%	0.0%	50.0%	100.0%	0.0%	0.0%	0.0%	0.0%	50.0%	0.0%	50.0%	100.0%
	Col %	3.7%	0.0%	4.3%	4.0%	0.0%	0.0%	0.0%	0.0%	3.3%	0.0%	4.3%	3.8%
So don't have to touch the light switches with dirty hands	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Make property more marketable	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Recommended by SCE/PG&E	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Convenience	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Better control of the lighting	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Reduce maintenance cost	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Aesthetics/look better	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Less heat	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Clearance issues	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Don't Know	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	4.3%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.3%	1.9%
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Refused	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	27	0	23	50	3	0	0	3	30	0	23	53
	Row %	54.0%	0.0%	46.0%	100.0%	100.0%	0.0%	0.0%	100.0%	56.6%	0.0%	43.4%	100.0%
	Col %	100.0%	0.0%	100.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%

Q40a. What is your level of satisfaction with the MEASURE #2 installed at your facility? BY Utility By Q2. Business Type

Q40a. Satisfaction		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
1 - Not at all satisfied	Count	0	0	1	1	0	0	0	0	0	0	1	1
	Row %	0.0%	0.0%	100.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	100.0%
	Col %	0.0%	0.0%	4.5%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.5%	1.9%
4	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	3.7%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	3.3%	0.0%	0.0%	1.9%
5	Count	1	0	0	1	0	0	0	0	1	0	0	1
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	3.7%	0.0%	0.0%	2.0%	0.0%	0.0%	0.0%	0.0%	3.3%	0.0%	0.0%	1.9%
7	Count	2	0	0	2	0	0	0	0	2	0	0	2
	Row %	100.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	100.0%
	Col %	7.4%	0.0%	0.0%	4.1%	0.0%	0.0%	0.0%	0.0%	6.7%	0.0%	0.0%	3.8%
8	Count	5	0	3	8	0	0	0	0	5	0	3	8
	Row %	62.5%	0.0%	37.5%	100.0%	0.0%	0.0%	0.0%	0.0%	62.5%	0.0%	37.5%	100.0%
	Col %	18.5%	0.0%	13.6%	16.3%	0.0%	0.0%	0.0%	0.0%	16.7%	0.0%	13.6%	15.4%
9	Count	3	0	6	9	0	0	0	0	3	0	6	9
	Row %	33.3%	0.0%	66.7%	100.0%	0.0%	0.0%	0.0%	0.0%	33.3%	0.0%	66.7%	100.0%
	Col %	11.1%	0.0%	27.3%	18.4%	0.0%	0.0%	0.0%	0.0%	10.0%	0.0%	27.3%	17.3%
10 - Extremely satisfied	Count	15	0	12	27	3	0	0	3	18	0	12	30
	Row %	55.6%	0.0%	44.4%	100.0%	100.0%	0.0%	0.0%	100.0%	60.0%	0.0%	40.0%	100.0%
	Col %	55.6%	0.0%	54.5%	55.1%	100.0%	0.0%	0.0%	100.0%	60.0%	0.0%	54.5%	57.7%
Total	Count	27	0	22	49	3	0	0	3	30	0	22	52
	Row %	55.1%	0.0%	44.9%	100.0%	100.0%	0.0%	0.0%	100.0%	57.7%	0.0%	42.3%	100.0%
	Col %	100.0%	0.0%	100.0%	100.0%	100.0%	0.0%	0.0%	100.0%	100.0%	0.0%	100.0%	100.0%
Q40a. Statistics	Mean	8.9	.	9.0	9.0	10.0	.	.	10.0	9.0	.	9.0	9.0
	Median	10.0	.	10.0	10.0	10.0	.	.	10.0	10.0	.	10.0	10.0

Q42. Are you aware of the California's "Lighting Strategy Action Plan" which has a goal of 60-80% reductions in commercial lighting energy usage by the year 2020? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Yes	Count	30	1	22	53	15	1	3	19	45	2	25	72
	Row %	56.6%	1.9%	41.5%	100.0%	78.9%	5.3%	15.8%	100.0%	62.5%	2.8%	34.7%	100.0%
	Col %	29.7%	50.0%	23.4%	26.9%	34.1%	50.0%	17.6%	30.2%	31.0%	50.0%	22.5%	27.7%
No	Count	71	1	72	144	29	1	14	44	100	2	86	188
	Row %	49.3%	0.7%	50.0%	100.0%	65.9%	2.3%	31.8%	100.0%	53.2%	1.1%	45.7%	100.0%
	Col %	70.3%	50.0%	76.6%	73.1%	65.9%	50.0%	82.4%	69.8%	69.0%	50.0%	77.5%	72.3%
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	101	2	94	197	44	2	17	63	145	4	111	260
	Row %	51.3%	1.0%	47.7%	100.0%	69.8%	3.2%	27.0%	100.0%	55.8%	1.5%	42.7%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Q43. Do you think you could reduce your facility's lighting energy usage any further? BY Utility > Q2. Business Type

		Utility											
		Southern California Edison				Pacific Gas & Electric Company				Total			
		Q2. Business Type				Q2. Business Type				Q2. Business Type			
		Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total	Offices (non-medical)	Restaurant/Food Service	Retail Stores	Total
Yes	Count	31	1	28	60	23	2	3	28	54	3	31	88
	Row %	51.7%	1.7%	46.7%	100.0%	82.1%	7.1%	10.7%	100.0%	61.4%	3.4%	35.2%	100.0%
	Col %	36.9%	50.0%	34.6%	35.9%	53.5%	100.0%	20.0%	46.7%	42.5%	75.0%	32.3%	38.8%
No	Count	53	1	53	107	20	0	12	32	73	1	65	139
	Row %	49.5%	0.9%	49.5%	100.0%	62.5%	0.0%	37.5%	100.0%	52.5%	0.7%	46.8%	100.0%
	Col %	63.1%	50.0%	65.4%	64.1%	46.5%	0.0%	80.0%	53.3%	57.5%	25.0%	67.7%	61.2%
Other	Count	0	0	0	0	0	0	0	0	0	0	0	0
	Row %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	Col %	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Total	Count	84	2	81	167	43	2	15	60	127	4	96	227
	Row %	50.3%	1.2%	48.5%	100.0%	71.7%	3.3%	25.0%	100.0%	55.9%	1.8%	42.3%	100.0%
	Col %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%