RTR Appendix

Southern California Edison, Pacific Gas and Electric, Southern California Gas, and San Diego Gas and Electric ("Joint Utilities" or "Joint IOUs") developed Responses to Recommendations (RTR) contained in the evaluation studies of the 2013-2015 Energy Efficiency Program Cycle. This Appendix contains the Responses to Recommendations in the report:

RTR for the California Statewide Residential Lighting Customer Decision Study
(Opinion Dynamics, Calmac ID #PGE0419.01, ED WO #2101)

The RTR reports demonstrate the Joint Utilities' plans and activities to incorporate EM&V evaluation recommendations into programs to improve performance and operations, where applicable. The Joint IOUs' approach is consistent with the 2013-2016 Energy Division-Investor Owned Utility Energy Efficiency Evaluation, Measurement and Verification (EM&V) Plan[1] and CPUC Decision (D.) 07-09-043[2].

Individual RTR reports consist of a spreadsheet for each evaluation study. Recommendations were copied verbatim from each evaluation's "Recommendations" section.[3] In cases where reports do not contain a section for recommendations, the Joint IOUs attempted to identify recommendations contained within the evaluation. Responses to the recommendations were made on a statewide basis when possible, and when that was not appropriate (e.g., due to utility-specific recommendations), the Joint IOUs responded individually and clearly indicated the authorship of the response.

The Joint IOUs are proud of this opportunity to publicly demonstrate how programs are taking advantage of evaluation recommendations, while providing transparency to stakeholders on the "positive feedback loop" between program design, implementation, and evaluation. This feedback loop can also provide guidance to the evaluation community on the types and structure of recommendations that are most relevant and helpful to program managers. The Joint IOUs believe this feedback will help improve both programs and future evaluation reports.

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1 Page 336, "Within 60 days of public release of a final report, the program administrators will respond in writing to the final report findings and recommendations indicating what action, if any, will be taken as a result of study findings. The IOU responses will be posted on the public document website." The Plan is available at http://www.energydataweb.com/cpuc.

2 Attachment 7, page 4, "Within 60 days of public release, program administrators will respond in writing to the final report findings and recommendations indicating what action, if any, will be taken as a result of study findings as they relate to potential changes to the programs. Energy Division can choose to extend the 60 day limit if the administrator presents a compelling case that more time is needed and the delay will not cause any problems in the implementation schedule, and may shorten the time on a case-by-case basis if necessary to avoid delays in the schedule."

3 Recommendations may have also been made to the CPUC, the CEC, and evaluators. Responses to these recommendations will be made by Energy Division at a later time and posted separately.

Response to Recommendations (RTR) in Impact, Process, and Market Assessment Studies

Study Title: California Statewide Residential Lighting Customer Decision Study
Program: Lighting
Author: Opinion Dynamics
Calmac ID: PGE0419.01
ED WO: 2101
Link to Report: http://calmac.org/publications/CA_SW_LCDC_Study_FINAL_REPORT_2018-06-18.pdf

Item #	Page #	Findings	Best Practice / Recommendations (Verbatim from Final Report)	Recommendation Recipient	Disposition	Disposition Notes
				If incorrect, please indicate and redirect in notes.	Choose: Accepted, Rejected, or Other	Examples: Describe specific program change, give reason for rejection, or indicate that it's under further review.
1	51	The California lighting market is nearing transformation. The transformative effects are evidenced in the near universal awareness and penetration of energy efficient technologies, knowledge of their benefits, and a natural preference for the technologies.	This study suggests diminishing effects from mass market incentive-based energy efficiency lighting programs, such as the current upstream residential lighting programs administered by the California IOUs. Many customers are using LEDs and are willing to pay more for them, which signals high free-ridership rates. The IOUs that have not yet done so should consider sun-setting their mass market programs and replacing them with 1) offerings that target customer segments that lag behind in their adoption of energy efficiency lighting products; and 2) offerings that focus on informational and educational interventions as opposed to incentives.	PG&E, SCE, SDG&E	Other	California IOUs have already sunset A-Lamps from the Primary Lighting programs. The IOUs plan on utilizing upstream lighting program for decorative lamps and reflectors until 2020 when decorative and reflector lamps would be subject to T20 per CEC Draft Staff Report - Analysis of General Service Lamps (Expanded Scope). This would help market transformation early adoption of Title 20 and prepare for mandatory regulations. of all screw-in lamp categories until they are regulated. This will coincide with the timing of Statewide lighting program where new models can be tried and evaluated depending upon the response to the statewide Third-Party solicitation for Abstract (RFA). The purpose of the Upstream Lighting Program (aka Primary Lighting Program) is to encourage manufacturing, stocking, and purchasing of CEC-spec LEDs, not the purchase of all LEDs. In addition, past lighting impact evaluations (DNV-GL 2016, DNV-GL 2017) indicate that looking only at customer surveys responses can overestimate free ridership, which is why they included manufacturer and retailer interviewers when calculating free ridership. IOUs have seen an increase in demand for these specialty products (decorative lamps and reflectors) as a result of the upstream program rebate, which is an indicator of the influence of utility intervention and program success.
2	52	While many Californians are knowledgeable about LEDs and prefer them over other bulb technologies, some customers lag behind in their knowledge and adoption of the energy efficient technologies.	We recommend that the IOUs continue targeting underserved customer groups with incentives in the short-term until the effects of Title 20 standards are fully reflected in retailer stocking practices, because it will help accelerate the adoption of LEDs. To further improve targeting, the IOUs should consider using the results from the discrete choice modeling exercise and assign segments to each of its customers through a propensity scoring analysis and more pre-	PG&E, SCE, SDG&E	Other	All IOUs generally serve all sectors of the population; retailer locations include big box stores such as Costco, Walmart, Dollar Tree, and Dollar General and smaller discount stores like 97¢/98¢ discount stores in lower-income and hard-to-reach areas. In addition, retailers include Asian and Hispanic markets/stores that serve our diverse communities. Since the delivery channel is upstream, specific customers are not

			cisely identify customers for targeting and outreach. Propensity scoring analysis involves regression modeling and allows to assign all IOU customers in one of the segments derived as part of this study. Reaching underserved customers through targeted retailer outreach can be an effective strategy as well, as these underserved customer segments are more likely to shop at Big Box and Dollar/Discount retailers such as Walmart, Dollar Tree, and Dollar General. It should be noted that a subset of customers from the underserved groups may qualify for the IOUs' Energy Savings Assistance (ESA) program. Findings ways to channel qualifying customers into the ESA program can be a beneficial targeting and outreach strategy that will help the IOUs to further market transformation by capitalizing on the ESA program benefits.			targeted for participation in other low-income programs such as Energy Savings Assistance Program (ESA).
3	53	While customers demonstrate a good understanding of LEDs in general, their knowledge of LED quality markers is lacking. In fact, the indicators of LED quality vary considerably. Furthermore, the indicators of LED quality vary, with customers using multiple markers to define what a quality LED means to them. Finally, despite a general preference for LEDs, not all customers have an easy time finding the products that fit their needs.	We recommend that the IOUs consider continuing educational outreach at point-of-sale to educate customers on the variability in LED technology quality as well as the range of product options in terms of brightness and light color.	PG&E, SCE, SDG&E	Agree	The Primary Lighting program works directly with the manufacturers who make the products and ship to retailer locations. Point of sale may not be a cost-effective mechanism for education due to the shift away from "big box stores" to a greater number of smaller hard-to-reach locations. The IOUs are looking for innovative and creative marketing solutions from the upcoming Third-Party statewide solicitation efforts, to educate and inform consumers. All IOU rebated products already support the volunteer standards of the CEC specification. T20 already addresses quality issues in A-Lamps. There are no quality mechanism for reflectors until 2020 per CEC Draft Staff Report - Analysis of General Service Lamps (Expanded Scope).
4	53	The study results indicate low resistance to Title 20 standards from the customer perspective. Our study has a limited insight into manufacturer and retailer compliance and the anticipated speed with which noncompliant products will disappear from the retailer shelves.	The IOUs should consider conducting additional research into manufacturer, distributor, and retailer compliance, including compliance of online lighting retailers, and, based on the results of the research, encouraging compliance and ensuring code readiness for Tier 2 standards of Title 20. This will help ensure successful and more rapid market transition. We also recommend that the IOUs supplement this strategy with additional customer education about the rationale behind Tier 2 standards and encourage compliance can further accelerate market transformation.	PG&E, SCE, SDG&E	Other	The products incentivized through Upstream Lighting Program are CEC-Spec which is a voluntary precursor to Title 20 Tier 2. IOUs work with the manufacturers and do not directly work with the retailers. The participating manufacturers are required to abide by the standards requirements and follow compliance guidelines to be eligible to participate in the program. C&S team at PG&E is already working on a compliance study with retailers and the results can be available soon. Again, the IOUs are looking for innovative and creative marketing solutions from the upcoming Third-Party statewide solicitation efforts.
5	54	CRI is one of the parameters used to set quality specifications for LED products by the CEC as well as part of Tier 2 Title 20 standards. Our research suggests that most customers are unaware of CRI. Our research, however, is limited in understanding the impact of the various CRI specifications on customer satisfaction with LED products and therefore whether educational efforts around CRI are an important and worthy endeavor.	The IOUs should consider conducting additional research into the importance of light rendering accuracy to customer satisfaction with LEDs. Such research could be valuable when deciding on the scope and degree of educational efforts needed around CRI as well as the value of Tier 2 CRI specifications from the customer perspective.	PG&E, SCE, SDG&E	Other	The IOUs are already supporting the CEC volunteer standard which is equal to the Tier 2 Title 20 standards for CRI, so customers are purchasing high quality products already. The IOUs are looking for innovative and creative marketing solutions from the upcoming Third-Party statewide solicitation efforts, especially concerning the best possible solution to address the CRI awareness, if needed.