EVERGREEN ECONOMICS

Independent EM&V Audit of the KCP&L-MO PY2017 Program Evaluations

Final Report

January 11, 2019

MichaelsEnergy

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1 Executive Summary

In April 2016, the Missouri Public Service Commission (the PSC) approved Missouri Energy Efficiency Investment Act (MEEIA) Cycle 2 DSM programs for the Great Plains Energy Services Incorporated (GPES) affiliate, Kansas City Power and Light (KCP&L) – KCP&L Missouri Operations Company (KCP&L-MO) (Case No. EO-2015-0240). Of the sixteen Cycle 2 programs approved in the MEEIA, KCP&L implemented fifteen no later than the second quarter of 2016.[1] All fifteen programs will terminate no later than March 31, 2019. The fifteen MEEIA Cycle 2 Programs are:

- **Business EER – Standard –** Offered to KCP&L legacy Missouri C&I customers, this program is designed to offer a diverse set of measures that have standardized measure savings and an incentive process that helps to improve accessibility to the customer. Eligible measures include air conditioning units, lighting and controls, refrigeration, water heating and appliances.
- **Business EER - Custom -** Offered to all KCP&L C&I customers, the program provides incentives for a broad range of projects that do not fit within the Business EER – Standard program. The program delivers rebates to projects that achieve a SCT score of 1.0 or higher.
- **Block Bidding -** Offers incentives to large C&I customers and trade allies to complete large projects that would be capped at $100,000 for Business EER - Custom and $400,000 for Business EER - Standard. Customers can reserve financial incentives ranging from $50,000 to $1 million for planned EE projects.
- **Strategic Energy Management –** Provides incentives for C&I customers to implement a continuous energy management improvement process that results in energy savings and reductions in energy intensity for industrial and large commercial clients
- **Small Business Lighting –** Available to small business customers, with an average monthly demand below 100 kW, the program provides energy assessments that includes information on potential energy savings and anticipated payback and offers higher incentives on specific lighting measures than the Standard program to help small business customers overcome financial barriers to adoption.
- **Business Programmable Thermostat** – Incentivizes commercial customers to use a Nest thermostat, and allow KCP&L to remotely operate their HVAC system during peak demand periods by sending a signal to participating thermostats.
- **Demand Response Incentive -** Provides rebates to C&I customers for curtailing their energy usage during system peak demand periods. When KCP&L calls an

[1] The Home Appliance Recycling Rebate (HARR) program had not been implemented by KCP&L at the time of the evaluations. It is not counted as an active program.

event, participants reduce their load toward a pre-defined firm power level to create the demand savings.

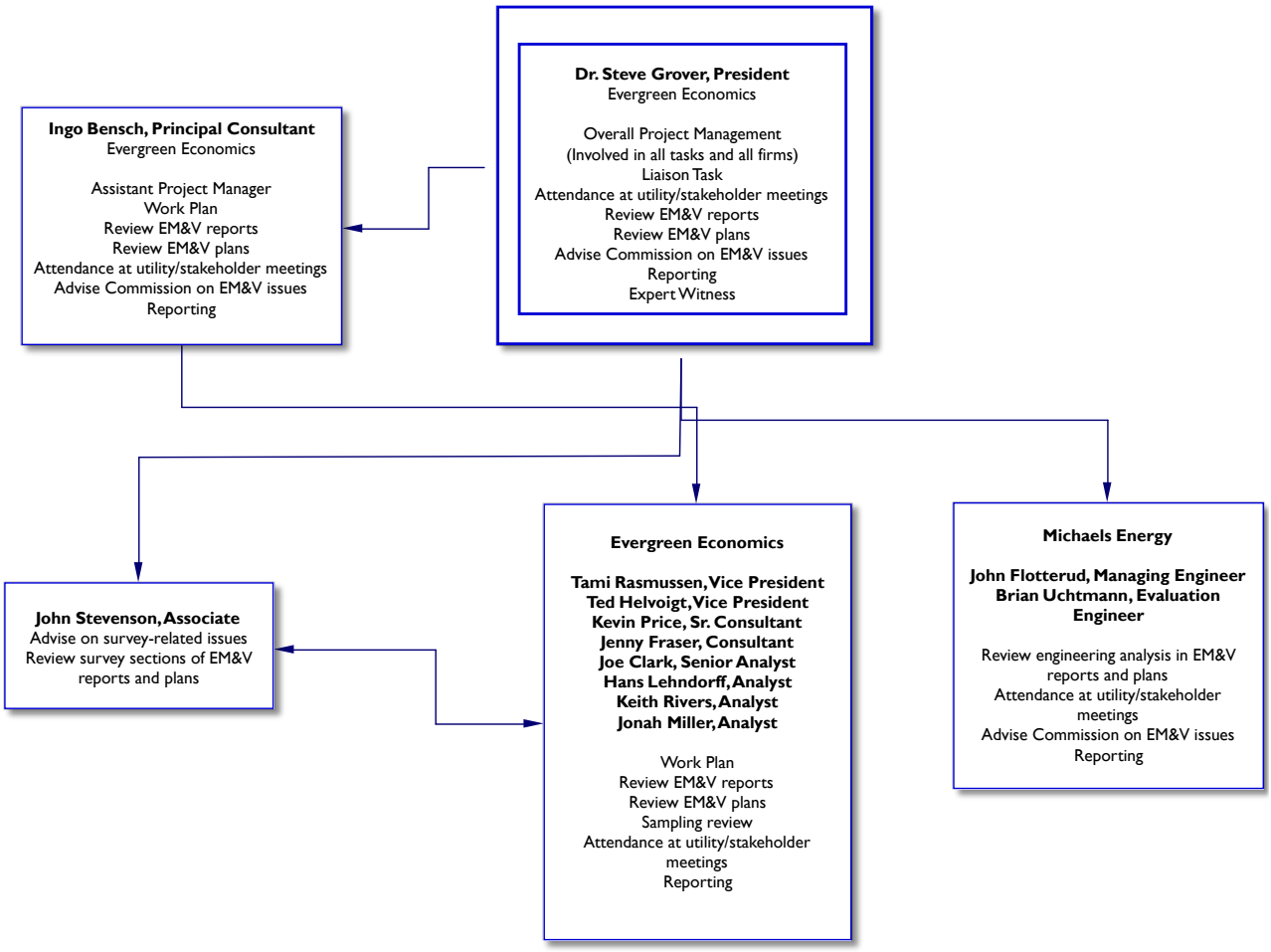
- **Whole House Efficiency –** Promotes home energy audits and comprehensive retrofits to encourage whole house improvements to existing homes. Customers are eligible for this program if they own or rent a residence and can receive assistance based on three tiers: Tier 1: Home Energy Assessment and Energy Savings Kit (ESK), Tier 2 – Weatherization Measures, and Tier 3 – HVAC Equipment.
- **Home Lighting Rebate –** Offers upstream incentives to partnering manufacturers and retailers in the KCP&L-MO and GMO service territories to discount the shelf-price of LED bulbs.
- **Home Energy Report (HER) Program -** Distributes single-page print reports by mail to educate residential customers about their home energy usage and provide them with information designed to encourage behavior change in energy use.
- **Income-Eligible Home Energy Report (HER) Program** - Identical to the HER program except report messaging focuses on low- or no-cost ways to save energy.
- **Residential Programmable Thermostat** – Incentivizes residential customers to use a Nest thermostat, and allow KCP&L to remotely operate their HVAC system during peak demand periods by sending a signal to participating thermostats.
- **Income-Eligible Multifamily –** Offers efficiency kits installed directly in residences, and installation of efficient lights into multifamily common areas to delivers long-term energy savings and bill reduction to residents in income-eligible multifamily housing.
- **Home Online and Business Online Energy Audit –** Provide access for small business and residential customers to an online tool to track and analyze their energy use and receive educational materials on energy savings for heating, cooling, lighting, and other electrical equipment. This program claims no savings.

To ensure that programs comply with Missouri's rules regarding electric utility resource planning, the PSC has rules requiring annual impact evaluations and process evaluations. Minimum requirements that evaluations must meet are stipulated in 4 CSR 240-22.070(8).

KCP&L-MO contracted with an evaluation team led by Navigant Consulting, Inc. (Navigant) that included Illume Advising LLC (Illume), and NMR GROUP, INC. (NMR). The evaluation team conducted comprehensive impact and process evaluations of KCP&L-MO's energy efficiency portfolio in PY2017. For the purposes of this report the evaluation team will be referred to as "the Navigant team".

In 2018, the Missouri PSC contracted with Evergreen Economics to serve in the capacity of EM&V Auditor. Figure 1 shows the audit team members and organization, the individual team members by firm, and the associated audit responsibilities.

Figure 1: Evergreen Audit Team Organization



The audit team is required to review program evaluation activities and provide comments on compliance with 4 CSR 240-22.070(8) and the overall quality, scope and accuracy of the program evaluation reports, as well as recommendations to improve the evaluation and reporting process. Key findings of the Evergreen team's review are summarized below.

1.1 Summary of Audit Conclusions and Recommendations

A review of PY2017 evaluation report indicates that the reports and appendices are well written, complete, and meet the minimum requirements for impact and process evaluations stipulated in 4 CSR 240-22.070(8). The evaluation methods and reports are also consistent with the best practices established for the industry. During the course of the audit, we have identified a few areas where we believe that the evaluations can be improved, and these recommendations are detailed throughout this audit report.

Many of the initial issues raised by the audit team on the draft evaluation reports were addressed in the final evaluation report. Because of the discussions and modifications made to the draft evaluation reports, we are not recommending any additional changes to the PY2017 savings.

The remaining issues are highlighted below, beginning with crosscutting issues relating followed by a few program-specific issues. For the remaining unresolved issues, the audit team and Navigant have already agreed to meet in early 2019 to develop solutions that will be applied to future evaluations.

Crosscutting Issues

Process for using secondary sources / Statewide TRM

During the review of the draft evaluation reports, the audit team had several conversations with Navigant regarding the need to outline a clear process on when in-state or out-of-state data are used to calculate savings. While this has been explained to some degree in the final evaluation report, there still does not appear to be a consistent process on how this is determined, other than evaluator judgment.

To help address this issue and make the entire process more consistent, we recommend that KCP&L utilize the statewide Missouri Technical Reference Manual (TRM)[2] when possible. The current Missouri TRM (updated March 31, 2017) can continue to be modified and updated as needed to meet program needs. If there are deviations from the official Missouri TRM values, then the evaluation report should clearly document why the alternative values are an improvement over the Missouri TRM.

Utilizing the statewide Missouri TRM would also have the advantage of applying consistent savings values and algorithms for Ameren MO and KCP&L for measures that are common to both utilities. The Missouri TRM can also be amended to include protocols for estimating free ridership and spillover, so that net savings can be assessed consistently across both utilities.

Self-report free ridership and spillover calculations

In the audit team comments on the draft evaluation reports, we noted some inconsistencies with how the free ridership and spillover self report questions were scored. Many of these questions utilize a 5-point rating scale, and for these questions we recommend that the scoring be done in even increments across the scale (i.e., 0=0%, 1=25%, 2=50%, 3=75%, 4=100%). For all questions utilizing a scale rating, we recommend

[2] The latest version of the Missouri TRM can be found at https://energy.mo.gov/sites/energy/files/MOTRMOrigins.pdf

that this incremental scoring be applied consistently for all questions used in the free ridership and spillover calculations.

This issue was addressed in the final evaluation report, but we are noting it here for documentation purposes.

Program-specific Issues

Home Lighting Rebate Program

Estimating potential spillover from an upstream lighting program is very challenging, since customers often do not realize how the program is influencing their lighting purchase decisions. The current method utilized by the Navigant evaluation team relies on intercept surveys of lighting purchasers to gauge the potential influence of several program components. It has a set of questions and scoring algorithm that is similar to that used to estimate free ridership.

While the intercept method has some advantages, a significant challenge is that there is a very limited amount of time in which to ask questions, as most respondents are not willing to answer questions at a store for more than a few minutes.

The current approach appears to do an adequate job of asking about the importance of several program factors (program events, information) on the choice of non-program LED's and these responses provide some idea of how important these factors are in the lighting purchase decision. Those respondents that provide the highest importance ratings are identified as spillover.

What this method is lacking, however, is a similar set of questions to get at non-program influences on these same bulb purchases. It may be that the program factors were important, but that other non-program influences were ***even more*** important. These could include the need for bulbs of special color or size, and/or the lower prices of the non-program options. From the current method, it is not possible to weigh the importance placed on the program versus non-program factors since the non-program factors were not addressed in the surveys. The Navigant team maintains that the current method does adequately address the non-program influences, but we believe that the survey should walk through possible non-program factors so that the respondents actively consider both sides when they provide their influence ratings.

We recognize that there is not enough time with the customer to add questions to the intercept survey – the resulting survey battery would be too long to reasonably administer at the store. But despite this, we believe that the non-program influences still need to be accounted for in the spillover estimate.

Given the disagreement on this issue along with the general difficulties with estimating spillover for this upstream program, the audit team and Navigant will meet in early 2019 to discuss developing a negotiated deemed spillover adjustment, which is a process that is used in other states.

Home Energy Reports

We understand that the PY2017 impact estimates for the HER program were based on a billing regression model that was estimated as part of the PY2016 evaluation. We are reiterating an issue that we first raised last year about how the model accounts for participation in other efficiency programs. We have been discussing this issue with Navigant and will meet with them in early 2019 to determine how the billing regression model should be revised to address this issue.

The issue we raised in the PY2016 audit relates to how participation in other efficiency programs is addressed in the impact analysis. The comparison between the treatment and control groups in the pre-period should include a comparison of participation rates in the other KCP&L/GMO energy efficiency programs ***during the pre-period***. It is not enough to simply adjust the regression results for the post period to account for 'uplift' that is attributable to the HER program.

Differences between the groups in program participation in the pre-period can affect the savings estimates in two ways. First, if there are differences in program participation rates, then some of the observed savings from the HER in the post-period should be attributed to the other efficiency programs. Second, the estimate of program uptake in the post-period will also be affected if there are already unequal levels of program participation in the pre-period. The magnitude of both these effects can be estimated by including a variable for program participation in the billing regression, if in fact there are differences in participation rates between treatment and control groups.

As noted above, we will be discussing this issue with Navigant in early 2019 and anticipate that it will be resolved for the next evaluation.

Whole House Efficiency

The PY2017 evaluation report has been updated to reflect reduced cooling EFLH, which addresses some of the previous concerns from the audit team about the estimated savings for this program.

The audit team and Navigant continue to disagree about the validity of the verified demand savings for early retirement CAC's, however. We believe that the estimated demand savings from the evaluation are higher than what can be reasonably be expected

for early retirements, even assuming that the pre-case CAC units are operating at 100 percent load during peak periods.

The audit team recommends a billing analysis approach going forward to verify the savings for early retirement cooling measures, which should address our concerns about the savings calculations and eliminate the need to set values for the various input parameters that are currently used in the savings calculations.

The audit team and Navigant met three times in 2018 to discuss these issues and were able to reach some mutually agreeable solutions for some of our concerns. Given this progress, we are not recommending any changes to the PY2017 savings values, and Navigant has agreed to work with the audit team in early 2019 to revise the estimation methods and address the remaining issues for the PY2018 evaluation.

As with the other outstanding issues, Navigant and the audit team will meet in early 2019 to determine a mutually agreeable approach for addressing these issues beginning with the PY2018 evaluations.

2 Introduction

The Missouri Energy Efficiency Investment Act (MEEIA) was passed in 2009, launching a new era for energy efficiency programs in Missouri. The Missouri Public Service Commission (the PSC) adopted four administrative rules (4 CSR 240-3.163, 4 CSR 240-3.164, 4 CSR 240-20.093 and 4 CSR 240-20.094) referred to as "MEEIA rules") to implement MEEIA.[3] MEEIA directs the PSC to permit electric corporations to implement Commission-approved demand side management (DSM) programs, with a goal of achieving cost-effective demand-side savings.

In 2009, the State of Missouri and KCP&L-MO reached an agreement that launched KCP&L-MO's suite of residential and commercial energy efficiency programs, which began in 2013 as MEEIA Cycle 1. The MEEIA Cycle 1 programs ended on December 31, 2015, for KCP&L-MO (Case No. EO-2012-0142). In early 2016, the PSC approved MEEIA Cycle 2 DSM programs for KCP&L-MO (Case No. EO-2015-0055). All Cycle 2 programs were implemented no later than the second quarter of 2016, and all will terminate no later than March 31, 2019. The MEEIA Cycle 2 programs are:

- **Business EER – Standard –** Offered to KCP&L legacy Missouri C&I customers, this program is designed to offer a diverse set of measures that have standardized measure savings and an incentive process that helps to improve accessibility to the customer. Eligible measures include air conditioning units, lighting and controls, refrigeration, water heating and appliances.
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[3] The PSC is currently in the process of revising the MEEIA rules.

offers higher incentives on specific lighting measures than the Standard program to help small business customers overcome financial barriers to adoption.

- **Business Programmable Thermostat** – Incentivizes commercial customers to use a Nest thermostat, and allow KCP&L to remotely operate their HVAC system during peak demand periods by sending a signal to participating thermostats.
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To ensure that programs comply with Missouri's rules regarding electric utility resource planning, the PSC has long-term resource planning rules that contain requirements for impact evaluations and process evaluations. The goal of the impact and process evaluations is "to develop the information necessary to evaluate the cost-effectiveness and improve the design of existing and future demand-side programs and demand-side rates, to improve the forecasts of customer energy consumption and responsiveness to demand-side programs and demand-side rates and to gather data on the implementation costs and

load impacts of demand-side programs and demand-side rates for use in future cost-effectiveness screening and integrated resource analysis."[4]

Key requirements of the evaluations as outlined in 4 CSR 240-22.070(8) include the following:

- Utilities are expected to complete annual full process and impact evaluations for each DSM program.
- **At a minimum, impact evaluations should:**
  1. "develop methods of estimating the actual load impacts of each demand-side program" using one or both of the following methods:
     a. "Comparisons of pre-adoption and post-adoption loads of program participants, corrected for the effects of weather and other intertemporal differences"; and
     b. "Comparisons between program participants' loads and those of an appropriate control group over the same time period".
  2. "develop load-impact measurement protocols that are designed to make the most cost-effective use of the following types of measurements, either individually or in combination: monthly billing data, load research data, end-use load metered data, building and equipment simulation models, and survey responses or audit data on appliance and equipment type, size and efficiency levels, household or business characteristics, or energy-related building characteristics".
  3. Develop protocols to collect data regarding demand-side program market potential, participation rates, utility costs, participant costs and total costs.
- **At a minimum, process evaluations should** address the following five questions:
  1. What are the primary market imperfections that are common to the target market segment?
  2. Is the target market segment appropriately defined or should it be further subdivided or merged with other segments?
  3. Does the mix of end-use measures included in the program appropriately reflect the diversity of end-use energy service needs and existing end-use technologies within the target segment?
  4. Are the communication channels and delivery mechanisms appropriate for the target segment?

[4] 4 CSR 240-22.070(8) Evaluation of Demand-Side Programs and Demand–Side Rates

5. What can be done to more effectively overcome the identified market imperfections and to increase the rate of customer acceptance and implementation of each end-use measure included in the program?

KCP&L-MO contracted with Navigant Consulting, Inc. (Navigant) as the Evaluation, Measurement & Verification (EM&V) contractor, to conduct comprehensive impact and process evaluations of KCP&L-MO's energy efficiency portfolio. Navigant conducted evaluations of both the commercial and residential energy efficiency programs.

In 2018, the PSC contracted with Evergreen Economics and Michaels Energy (the Evergreen team) to serve in the capacity of EM&V Auditor to review program evaluation activities and provide comments on compliance with 4 CSR 240-22.070(8) and the overall quality, scope and accuracy of the program evaluation reports. The following report presents Evergreen Economics' review of the KCP&L-MO program evaluations for program year 2017 (PY2017).

To conduct this review, the Evergreen team conducted the following activities:

- Thoroughly read each program's evaluation report in its entirety, summarizing key information on evaluation methodology, findings and recommendations for each program.
- Conducted a thorough review of all evaluation survey instruments and responses where available to confirm the methodologies used were reasonable and consistent with best practices and that reported findings aligned with the data collected.
- Reviewed, where available, specific evaluation tools and methodologies used for calculating program savings, including custom project savings calculations, and survey methods for developing net program impacts.

This report is organized into the following sections to help guide the reader through this summary of the key results:

- Section 3: Impact Evaluation Summary
- Section 4: Summary of Key Findings and Recommendations from the Process Evaluations
- Section 5: Review of Cost-Effectiveness Findings
- Section 6: Evergreen Team's Findings and Recommendations

3 Impact Evaluation Summary

This section summarizes the results and key findings and recommendations from the impact evaluations of KCP&L-MO's residential and business energy efficiency program portfolio. Note that the following programs do not have associated energy savings in 2017, and are omitted from exhibits in this section:

- Home Online Energy Audit
- Business Online Energy Audit

3.1 Summary of Impact Evaluation Methods

Navigant followed the Missouri Code of State Regulations 4 CSR-240-22-070 (8), completing impact evaluations for each KCP&L-MO program that reported energy savings in 2017. Missouri regulations state that programs should be evaluated using one or both of the methods and one or both of the protocols detailed below.

1) Impact Evaluation Methods

"At a minimum, comparisons of one or both of the following types shall be used to measure program and rate impacts in a manner that is based on sound statistical principles:

a) Comparisons of pre-adoption and post-adoption loads of program or demand-side rate participants, corrected for the effects of weather and other intertemporal differences.
b) Comparisons between program and demand-side rate participants' loads and those of an appropriate control group over the same time period."

2) Load Impact Measurement Protocols

"The evaluator shall develop load impact measurement protocols designed to make the most cost-effective use of the following types of measurements, either individually or in combination:

a) Monthly billing data, hourly load data, load research data, end-use load metered data, building and equipment simulation models, and survey responses.
b) Audit and survey data on appliance and equipment type, size and efficiency levels, household or business characteristics, or energy-related building characteristics."

Table 1 below summarizes Navigant's methods and protocols, for each. The labels in columns two and three align with the Missouri requirements discussed above.

Table 1: Impact Evaluation Methods and Protocols

Program	Impact Method	Impact Protocol	Description
Commercial and Industrial Programs			
Business EER - Standard	1a	2a and 2b	• Deemed measure savings review • Tracking database review • Onsite verification
Business EER - Custom	1a	2b	• Tracking database review • Engineering desk review • Telephone verifications
Small Business Lighting	1a	2a and 2b	• Deemed measure savings review • Tracking database review • Onsite verification and lighting logger study
Business Programmable Thermostat	1b	2b	• Deemed measure savings review • Tracking database review
Demand Response Incentive	1a	2a	• Tracking database review • Econometric and customer baseline analysis
Block Bidding	1a	2b	• Tracking database review • Engineering desk reviews
Strategic Energy Management	1a	2b	• Tracking database review • Engineering desk review
Residential Programs			
Whole House Efficiency	1a	2b	• Deemed measure savings review • Tracking database review
Home Lighting Rebate	1a	2b	• Engineering desk review • Tracking database review • In-store intercept surveys
Income-Eligible Home Energy Report	1b	2a	• Billing Analysis
Home Energy Report	1b	2a	• Billing Analysis
Residential Programmable Thermostat	1b	2b	• Deemed measure savings review • Tracking database review
Income-Eligible Multifamily	1a	2b	• Deemed measure savings review • Tracking database review

3.1.1 Net-to-Gross Calculation Methods

Navigant developed net-to-gross (NTG) ratios for selected KCP&L programs to estimate net program savings. Net savings are the portion of total estimated savings that are directly attributable to a specific energy efficiency program. Net savings estimates typically account for one or more of the following:

- **Free Ridership (FR) -** program savings attributable to program participants who would have implemented a program measure or practice in the absence of the program.
- **Participant Spillover (PSO) -** additional energy savings achieved when a program participant installs energy efficiency measures or practices as a result of the program's influence outside the efficiency program.
- **Nonparticipant Spillover (NPSO) -** additional energy savings achieved when a nonparticipant implements energy efficiency measures or practices because of the program's influence (e.g., through exposure to the program).

The net-to-gross ratio for each program adjusts gross program savings to account for the presence of free ridership, participant spillover, and non-participant spillover. The general formula for calculating the net-to-gross ratio is:

NTG Ratio = 1 – FR rate + PSO rate + NPSO rate

Navigant conducted research to develop net-to-gross ratios for six programs, the Business EER Standard, Business EER Custom, Block Bidding, Small Business Lighting, Whole House Efficiency, and Home Lighting Rebate programs.

Navigant estimated free ridership, participant spillover, and non-participant spillover for the Small Business Lighting program using a self-report survey method. The approach used surveys designed to assess the likelihood that participants would have installed some or all of the energy efficiency measures incentivized by the program even if the program had not existed. The participant surveys were based on a framework developed by Energy Trust of Oregon.

Table 2 below summarizes the method used for each program.

Table 2: Net Savings Methods*

Program	Estimated in 2017	Savings are Inherently Net	Deemed Value (1.00)	Prior Year Value
Commercial Programs				
Business EER - Standard				X
Business EER - Custom	X			
Block Bidding				X
Strategic Energy Management			X	
Small Business Lighting				X
Business Programmable Thermostat		X		
Demand Response Incentive		X		
Residential Programs				
Whole House Efficiency				X
Home Lighting Rebate	X			
Income-Eligible Home Energy Report		X		
Home Energy Report		X		
Residential Programmable Thermostat		X		
Income-Eligible Multifamily			X	X

*Online Home and Business Energy Audit programs had no reported savings in 2017

3.2 Summary of Impact Evaluation Findings

In this section, we provide a summary of the energy savings goals and accomplishments across KCP&L-MO's energy efficiency program portfolio. Table 3 and Table 4 show KCP&L-MO's energy efficiency targets, *ex ante* gross values, *ex post* gross values, the evaluated *ex post* net savings (evaluated) and net achievement compared to the targets for energy savings (kWh) and demand reductions (kW), respectively. To ensure clarity, these terms are defined as follows:

- **Ex *Ante* Gross Savings:** Annualized savings reported by KCP&L-MO, or calculated using tracked program activity to TRM savings values.
- ***Ex Post* Gross Savings:** Annualized savings calculated and provided by the evaluation team.
- **Net Savings *Ex Post*:** *Ex post* savings multiplied by the net-to-gross ratio, accounting for free ridership, spillover effect and market effects.
- **PSC-Approved Targets:** Annualized savings targets for the residential and commercial and industrial (C&I) sectors.

Table 3: KCP&L-MO Portfolio Energy Savings in PY2017, KWh

Program	Ex Ante Gross Savings	Ex Post Gross Savings	Gross Realization Rate	NTG Ratio	Net Savings Ex Post	PSC – Approved 3-Year Targets	% of Target Reached
Business EER - Standard	64,591,701	53,934,257	84%	96%	51,776,886	58,370,690	89%
Business EER - Custom	8,241,136	8,186,228	99%	61%	4,993,599	44,361,460	11%
Block Bidding	225,771	328,092	145%	65%	214,030	10,059,398	2%
Strategic Energy Management	16,267,234	20,470,641	126%	100%	20,470,641	9,027,253	227%
Small Business Lighting	2,738,396	2,262,998	83%	87%	1,973,334	3,509,634	56%
Business Programmable Thermostat	97,944	53,955	55%	100%	53,995	98,406	55%
Demand Response Incentive*	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Commercial Portfolio	**92,162,182**	**85,236,171**	**92%**	**93%**	**79,482,485**	**125,426,841**	**63%**
Whole House Efficiency	6,287,651	6,080,786	97%	82%	4,986,244	17,468,256	29%
Home Lighting Rebate	12,300,090	11,766,279	96%	83%	9,667,740	24,692,870	39%
Income-Eligible Home Energy Report	2,145,453	2,145,453	100%	100%	2,145,453	1,682,756	127%
Home Energy Report	15,858,510	15,858,510	100%	100%	15,858,510	13,861,941	114%
Residential Programmable Thermostat	4,798,794	2,960,386	62%	100%	2,960,386	4,388,076	67%
Total Residential Portfolio	**41,390,498**	**38,811,414**	**94%**	**92%**	**35,618,333**	**62,093,899**	**57%**
Income-Eligible Multifamily	5,333,998	4,183,846	78%	100%	4,183,846	10,577,132	40%
Total Multifamily Portfolio	**5,333,998**	**4,183,846**	**78%**	**100%**	**4,183,846**	**10,577,132**	**40%**
Total**	**138,886,679**	**128,231,431**	**92%**	**93%**	**119,284,625**	**198,097,872**	**60%**

*The Demand Response Incentive program does not report energy savings, only demand savings
**Totals may not sum due to rounding

Overall, in PY2017, year two of the three-year cycle, the portfolio saw gross evaluated savings of an estimated 128,231,431 kWh, a gross realization rate of 92%**.** Total portfolio net savings were estimated at 119,284,625 kWh. The portfolio achieved approximately 60% the three-year MEEIA Cycle 2 energy target, which is a cumulative 3-year target, indicating the programs in aggregate, are progressing toward meeting the MEEIA Cycle 2 targets.

The residential portfolio achieved 57 percent of the three-year target net savings goal in 2017 with a 35,618,333 kWh. The Home Energy Report program contributed the highest savings and had the highest savings relative to its target, with 114 percent of its three-year goal achieved in 2017. The Home Lighting Rebate was the next highest contributor to the overall residential savings with 9,667,740 kWh, which is 39 percent of the 3-year target.

The C&I portfolio reported both higher savings and achieved more of its 3 year goal than the residential portfolio in 2017. The C&I portfolio saw 79,482,485 net savings in 2017, or 63 percent of its 3-year goals. The Business EER – Standard program saw the largest savings in terms of total savings, achieving net savings of 51,776,886 kWh or 89 percent of the three-year goal. The Block Bidding and Strategic Energy Management programs which saw savings for the first time beginning in 2017, with the Block Bidding programing achieving net savings of 214,030 kWh or two percent of the 3-year target, and Strategic Energy Management program achieving net savings of 20,470,641 kWh or 227 percent of the 3-year target.

Table 4 displays the KCP&L results for demand savings. In PY2017, year two of the three-year cycle, the portfolio saw gross evaluated demand savings of an estimated 46,898 kW, a gross realization rate of 98%. Total portfolio net demand savings were estimated at 44,946 kW. The portfolio achieved approximately 68% the three-year MEEIA Cycle 2 demand savings target, which is a cumulative 3-year target, indicating the programs are in aggregate progressing toward meeting the targets.

Table 4: KCP&L-MO Portfolio Demand Savings in PY2017, KW

Program	Ex Ante Gross Savings	Ex Post Gross Savings	Gross Realization Rate	NTG Ratio	Net Savings Ex Post	PSC – Approved Targets	% of Target Reached
Business EER - Standard	11,024	8,409	76%	96%	8,073	10,934	74%
Business EER - Custom	1,113	1,524	137%	61%	929	12,128	8%
Block Bidding	19	61	321%	64%	39	1,744	2%
Strategic Energy Management	0	0	N/A	N/A	0	2,021	0%
Small Business Lighting	454	368	81%	87%	321	562	57%
Business Programmable Thermostat	267	309	116%	100%	309	268	115%
Demand Response Incentive	13,768	12344	90%	100%	12,344	15,000	82%
Total Commercial Portfolio	**26,645**	**23,015**	**86%**	**96%**	**22,015**	**42,657**	**52%**
Whole House Efficiency	2,377	4,058	171%	82%	3,327	4,332	77%
Home Lighting Rebate	1,232	1,315	107%	83%	1,087	2,498	44%
Income-Eligible Home Energy Report	319	296	93%	100%	296	474	62%
Home Energy Report	3,462	3,469	100%	100%	3,469	2,866	121%
Residential Programmable Thermostat	13,120	14,294	109%	100%	14,294	11,967	119%
Total Residential Portfolio	**20,510**	**23,432**	**114%**	**96%**	**22,473**	**22,137**	**102%**
Income-Eligible Multifamily	547	458	84%	100%	458	1,543	30%
Total Multifamily Portfolio	**547**	**458**	**84%**	**100%**	**458**	**1,543**	**30%**
Total*	**47,702**	**46,905**	**98%**	**96%**	**44,946**	**66,337**	**68%**

*Totals may not sum due to rounding

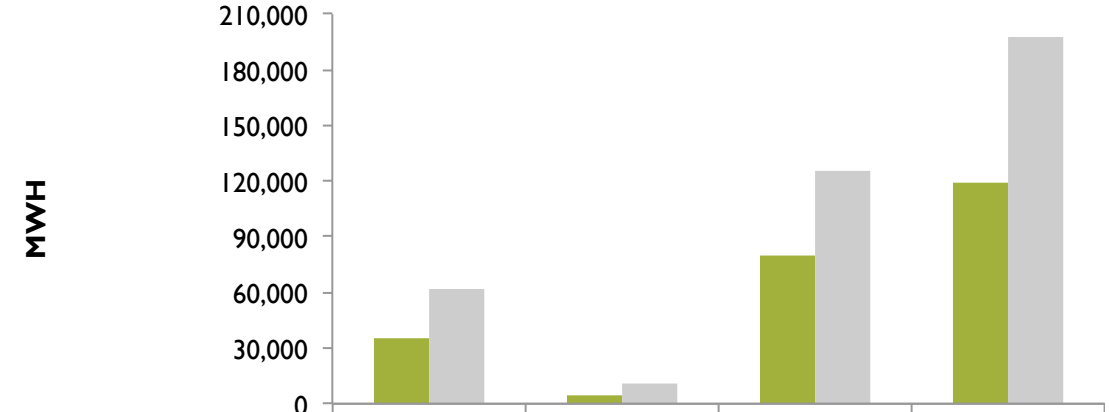
Table 5 shows estimated free ridership, spillover, and non-participant spillover rates along with the final net-to-gross ratios across the KCP&L-MO 2017 program portfolio.

Table 5: KCP&L-MO Portfolio Estimated Free Ridership, Spillover and NTG Ratio

Program	Free Ridership	Participant Spillover	Non-participant Spillover	NTG Ratio
Business EER - Standard	0.05	0.002	0.004	0.96
Business EER - Custom	0.41	0.02	0	0.61
Block Bidding - Standard	N/A	N/A	N/A	0.96
Block Bidding - Custom	N/A	N/A	N/A	0.61
Strategic Energy Management	N/A	N/A	N/A	1.00
Small Business Lighting	0.14	0.002	0.01	0.87
Business Programmable Thermostat	N/A	N/A	N/A	1.00
Demand Response Incentive	N/A	N/A	N/A	1.00
Whole House Efficiency	0.33	0.02	0.14	0.82
Home Lighting Rebate	0.38	0.21	0	0.83
Income-Eligible Home Energy Report	N/A	N/A	N/A	1.00
Home Energy Report	N/A	N/A	N/A	1.00
Residential Programmable Thermostat	N/A	N/A	N/A	1.00
Income-Eligible Multifamily	N/A	N/A	N/A	1.00

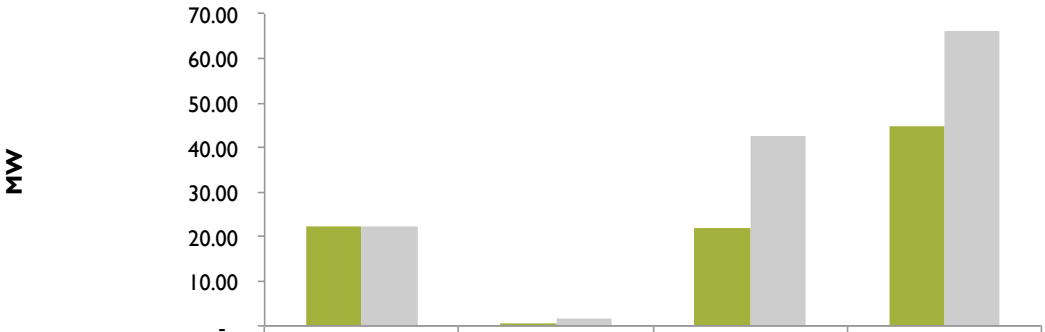
The following figures present summaries of 2017 net program savings compared to the three-year (2016-2018) MEEIA Cycle 2 program goals. Figure 2 and Figure 3 display the PY2017 net energy and demand savings targets and ex-post achievements by sector, as reported by evaluators. The residential and commercial portfolios, as well as the portfolio as a whole, are on track to meet or exceed the three-year MEEIA Cycle 2 goals.

Figure 2: Energy Savings and Achievements by Sector: PY2017 MWh



	Residential	Multifamily	C&I	Total
MWH ExPost Net Savings	35,618	4,183	79,482	119,283
MWH 2017 Target Savings	62,093	10,577	125,426	198,096

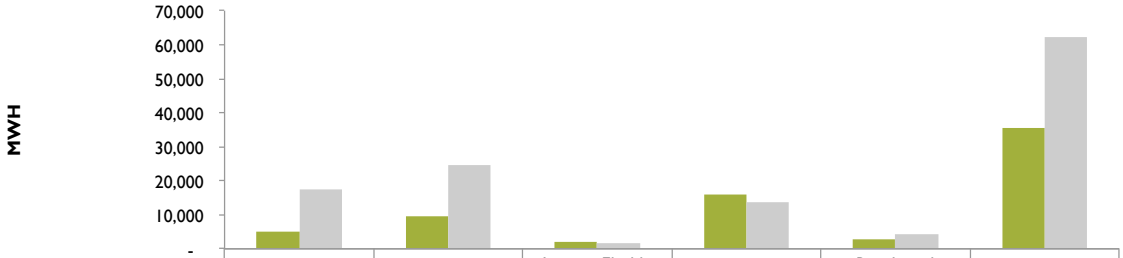
Figure 3: Demand Savings Targets and Achievements by Sector: PY2017 MW



	Residential	Multifamily	C&I	Total
MW ExPost Net Savings	22.44	0.45	22.02	44.91
MW 2017 Target Savings	22.13	1.54	42.66	66.33

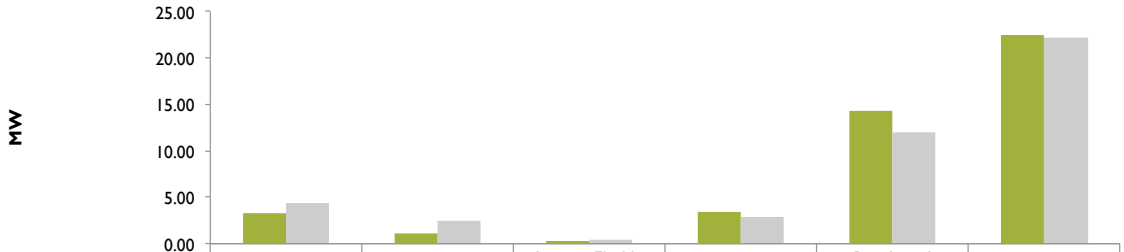
Figure 4 and Figure 5 present the findings for the 2017 energy target and demand savings goals and accomplishments across all five residential programs.

Figure 4: Residential Programs Planned and Evaluated Savings: PY2017 MWh



	Whole House Efficiency	Home Lighting Rebate	Income-Eligible Home Energy Report	Home Energy Report	Residential Programmable Thermostat	Total Residential
MWH ExPost Net Savings	4,986	9,668	2,145	15,859	2,960	35,618
MWH 2017 Target Savings	17,468	24,693	1,683	13,861	4,388	62,094

Figure 5: Residential Programs Planned and Evaluated Savings: PY2017 MW



	Whole House Efficiency	Home Lighting Rebate	Income-Eligible Home Energy Report	Home Energy Report	Residential Programmable Thermostat	Total Residential
MW ExPost Net Savings	3.33	1.09	0.30	3.47	14.29	22.48
MW 2017 Target Savings	4.33	2.50	0.47	2.87	11.97	22.14

At the portfolio level, the residential sector portfolio is on track to meet the MEEIA Cycle 2 energy and demand savings goals, achieving 57 percent of the net energy savings target of 62,094 MWh, and 102 percent of its net demand savings target of 22.14 MW. The Home Energy Report programs and Residential Programmable Thermostat program contributed the most savings to the residential portfolio.

The 2017 Whole House Efficiency saw a gross realization rate of 97 percent, achieving 6,080 MWh of verified gross energy savings. The program achieved 4,986 MWh of verified net energy savings, 29 percent of the three-year MEEIA Cycle 2 target. The program achieved 3.33 MW of verified net coincident demand savings, 77 percent of the PY2016-PY2018 MEEIA target.

The Home Lighting Rebate Program achieved 111,776 MWh of verified gross energy savings at the customer meter in PY2017, for a realization rate of 96 percent. Net energy savings totaled 9,668 MWh, or 39 percent of the three-year MEEIA Cycle 2 target. The

program achieved 1,315 kW of verified gross demand savings at the customer meter in PY2017, for a realization rate of 107 percent. The net demand savings totaled 1,087 kW, or 44 percent of the three-year MEEIA target.

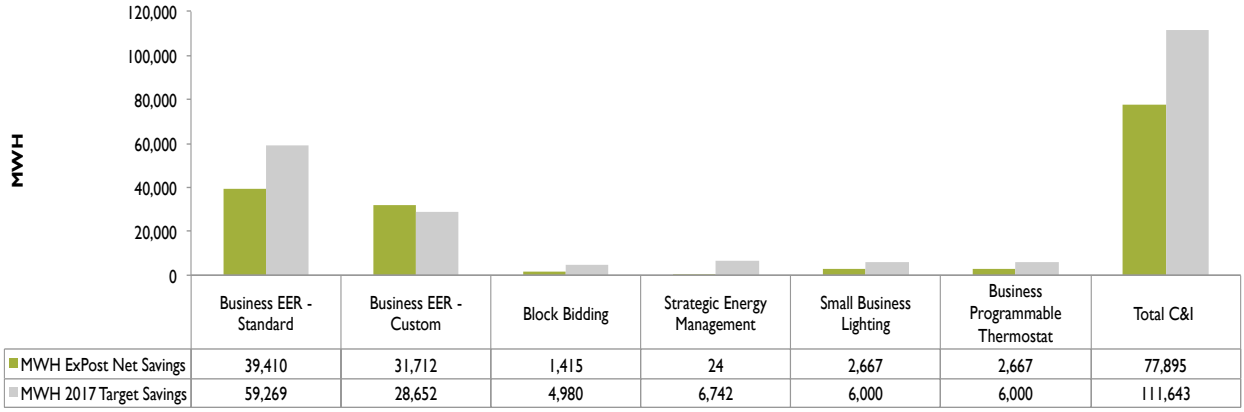
The Home Energy Report (HER) programs are on track or have exceeded the three-year MEEIA Cycle 2 targets. The combined savings from the three waves of HER program customers amounted to 15,858,510 kWh energy savings at the customer meter in PY2017 for a realization rate of 100 percent. The program achieved 114 percent of the three-year MEEIA Cycle 2 target. The standard HER program achieved 3,462 kW demand savings at the customer meter in PY2017 for a realization rate of 100 percent. The program achieved 121 percent of the three-year MEEIA Cycle 2 target.

The Income Eligible HER program achieved 2,145,453 kWh energy savings at the customer meter in PY2017 for a realization rate of 100 percent. The program achieved 127 percent of the three-year MEEIA Cycle 2 target. The Income Eligible HER program achieved 296 kW demand savings at the customer meter in PY2017 for a realization rate of 93 percent. The program achieved 62 percent of the 3-year Cycle 2 MEEIA target.

The Residential Programmable Thermostat program also performed well against the 3-year Cycle 2 MEEIA target. The program saved an estimated 2,960,386 kWh at the customer meter in PY2017 for a realization rate of 62 percent and 67 percent of the 3-year Cycle 2 MEEIA target. The program achieved 14,294 kW of demand impact in PY2017 for a realization rate of 109 percent, meeting 119 percent of the 3-year MEEIA target.

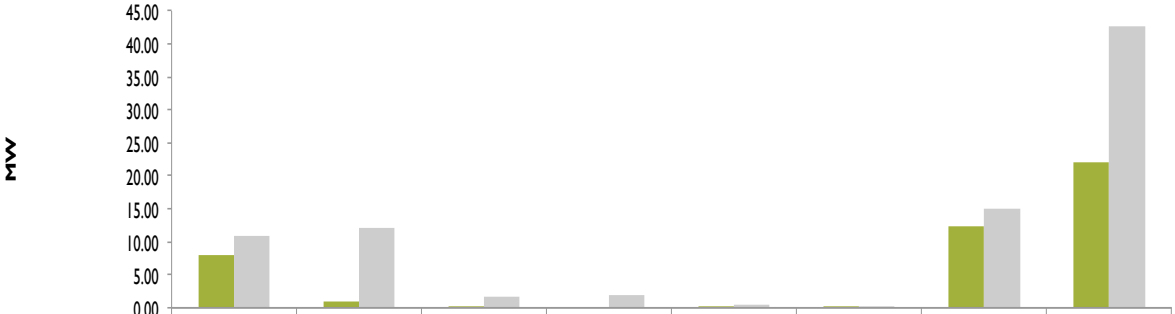
Figure 6 and Figure 7 summarize the 3-year Cycle 2 MEEIA target savings and evaluated savings for each Commercial sector program for the 2017 program year.

Figure 6: Planned and Evaluated Savings: PY2017 MWh



	Business EER - Standard	Business EER - Custom	Block Bidding	Strategic Energy Management	Small Business Lighting	Business Programmable Thermostat	Total C&I
MWH ExPost Net Savings	39,410	31,712	1,415	24	2,667	2,667	77,895
MWH 2017 Target Savings	59,269	28,652	4,980	6,742	6,000	6,000	111,643

Figure 7: C&I Program Planned and Evaluated Savings: PY2017 MW



	Business EER - Standard	Business EER - Custom	Block Bidding	Strategic Energy Management	Small Business Lighting	Business Programmable Thermostat	Demand Response Incentive	Total C&I
MW ExPost Net Savings	8.07	0.92	0.04	0.00	0.32	0.31	12.34	22.00
MW 2017 Target Savings	10.93	12.13	1.74	2.02	0.56	0.27	15.00	42.65

At the portfolio level, the commercial sector program portfolio is on track to meet the MEEIA Cycle 2 energy and demand savings goals, achieving 63 percent of the net energy savings target of 125,426 MWh, and 52 percent of its net demand savings target of 42.65 MW. The Business EER – Standard program contributed the majority of savings to the portfolio.

The PY2017 Business EER – Standard program had 1,768 projects achieving 53,934 MW of verified gross savings and 8.41 MW verified gross demand savings. This represents an 84 percent realization rate for energy savings and a 76 percent realization rate for demand savings. The program achieved 51.77 MWh of verified net energy savings, meeting 89 percent of the three year MEEIA Cycle 2 target. The program achieved 8.07 MW of verified net demand savings, 74 percent of the PY2016-PY2018 MEEIA target. Lighting projects represented 99 percent of the program savings with HVAC, motors, drives and compressors and compressed air upgrades contributing the remaining one percent.

The PY2017 Business EER – Custom program had 67 projects achieving 8,186 MW of verified gross savings and 1.54 MW verified gross demand savings. This represents a 99 percent realization rate for energy savings and a 137 percent realization rate for demand savings. The program achieved 4,994 MWh of verified net energy savings, meeting 11 percent of the three-year MEEIA Cycle 2 target. The program achieved 0.92 MW of verified net demand savings, eight percent of the three-year MEEIA Cycle 2 target.

The Small Business Lighting Program achieved 2,145 MWh of verified gross energy savings at the customer meter in PY2017, for a realization rate of 83 percent. Net energy savings totaled 1,973 MWh, or 56 percent of the three-year MEEIA Cycle 2 target. The program achieved 368 kW of verified gross demand savings at the customer meter in PY2017, for a realization rate of 81 percent. The net demand savings totaled 321 kW, or 57 percent of the three-year MEEIA Cycle 2 target.

The Business Programmable Thermostat program saved an estimated 53,955 kWh of energy savings at the customer meter in PY2017 for a realization rate of 55 percent. The program achieved 55 percent of the three-year MEEIA Cycle 2 target. The program achieved 309 kW of demand impact in PY2017 for a realization rate of 116 percent, meeting 115 percent of the three-year MEEIA Cycle 2 target.

Lastly, the Demand Response Incentive program achieved 82 percent of the three-year MEEIA Cycle 2 target. The program saw 12,344 kW in demand impacts in PY2017 for a realization rate of 90 percent. Reported and verified demand impacts are based on the amount of electricity curtailed, not whether customers met their FPL. Navigant did not calculate energy savings as KCP&L does not claim energy savings for the Demand Response Incentive program.

3.3 Summary of Key Impact Evaluation Recommendations

3.3.1 Recommendation Adoption Tracking

The Navigant 2017 KCP&L EM&V report provided impact evaluation recommendations for the Cycle 2 program portfolio. This section reviews the adoption status of these recommendations. The Navigant 2017 KCP&L EM&V report does not explicitly provide information of the status of the 2016 recommendations. Consequently, the Evergreen team cannot provide information on whether the 2016 recommendations were adopted in all cases. A list of PY2016 recommendations and adoption status is included in Table 6.

Table 6: PY2016 Impact Evaluation Recommendation Tracking

Program	EM&V PY2016 Recommendation	Program Response
Business Energy Efficiency Program – Standard	During the tracking data review, the evaluation team found that the IC's project files had a difference in quantity and savings versus KCP&L's electronic tracking database. Navigant suggests KCP&L consider adding quality control (QC) steps to make sure these two data sources match.	Not Adopted. Remains in recommendations 2017
	Account for actual building types to accurately predict the savings. Currently, all tracked savings assume performance variables that reflect operation of an office building.	Not Adopted. Remains in recommendations 2017
	Use a single data source for all lighting measure inputs.	Not reported as an issue in 2017
	Account for low in-service rates due to lights in storage or inability to locate fixtures.	Not Adopted. Remains in recommendations 2017

Business Energy Efficiency Rebate - Custom Program	Maintain the International Energy Conservation Code (IECC) 2012 baseline for lighting power density based on the building area approach.	Not reported as an issue in 2017
	Include the total quantity installed value in the program-tracking database especially for lighting projects.	Not reported as an issue in 2017
	Provide a column in the tracking database that has a brief narrative describing the installed energy efficient measures or equipment.	Not Adopted. Remains in recommendations 2017
	Ensure alignment between the electronic program tracking database and project files.	Not reported as an issue in 2017
	Align the peak demand calculations with the GM C&I peak time period. If zero peak demand savings are claimed please indicate reason why.	Not Adopted. Remains in recommendations 2017
	For lighting projects collect and record information on whether the space is conditioned and custom lighting operating hours.	Not reported as an issue in 2017
	For lighting projects ensure CFs, lighting controls, WHF, and peak demand are correctly employed.	Not reported as an issue in 2017
	For lighting projects, collect both pre-and post-retrofit trending data to improve verification and avoid using assumptions or a prescriptive approach.	Not reported as an issue in 2017
	For new construction lighting projects use the Building Area or Space-by-Space method rather than using a representative baseline of fixtures.	Not reported as an issue in 2017
	For new construction projects, use zero for the baseline incremental cost.	Not reported as an issue in 2017

Small Business Lighting Program	Include incremental cost in the tracking database.	Not Adopted. Remains in recommendations 2017
	Ensure alignment between the electronic program tracking database and project files.	Not reported as an issue in 2017
	Include a primary key code that will link directly to the KCP&L deemed measure savings database used to support the MEEIA Cycle 2 reported savings filed for the program.	Not reported as an issue in 2017
	Use a single authoritative reference to look up the various values used in the calculations (for example, WHFs, CFs, etc.). The evaluation team recognizes MO is currently working on a TRM, but it is not the active reference for the state. Until that time, Navigant suggests using the Illinois TRM to ensure a consistent reference source.	Not reported as an issue in 2017
	Navigant recommends accounting for actual building types to accurately predict the savings.	Not reported as an issue in 2017
	Navigant recommends using an ISR of 99% while calculating the reported savings.	Not Adopted. Remains in recommendations 2017
	Navigant used an ISR of 99% based on findings from the onsite verification. This was mainly due to lights in storage or an inability to locate the fixtures.	Not reported as an issue in 2017
Business Programmable Thermostat	Reconcile data collected by Nest and CLEAResult so the Nexant system records the following data: Account Number, Premise Number, Thermostat Serial Number, Installation Date, Rush Hour Rewards Activation Date, and Seasonal Savings Enrollment Date.	Not reported as an issue in 2017
	Maintain a list of active device serial numbers during each event. This would allow Navigant to verify program participation and DR impact by event more accurately.	Not reported as an issue in 2017
Demand Response Incentive	No Recommendations.	
Whole House Efficiency Program	Confirm that tracking database includes parameters that were excluded in PY2016, including heating capacity for heat pumps, HSPF, Baseline and efficient EER and SEER values, number of floors in residence, home age, and equipment age.	Not reported as an issue in 2017

	Amend processes used to calculate the program's reported savings to align with the algorithms and sources used by the evaluation team.	Not Adopted. Remains in recommendations 2017
Home Lighting Rebate Program	Revise energy and demand savings calculations to account for leakage, assumed to be 12% of HLR LED bulb sales (KCP&L-MO currently makes no adjustment for leakage).	Not reported as an issue in 2017
	Assume a lifetime ISR of 94.2% for all HLR LED bulb sales (KCP&L-MO currently makes no adjustment for ISR).	Not reported as an issue in 2017
	Estimate net savings separately for standard and specialty LEDs rather than using a program- wide NTG ratio, as the mix of standard and specialty LEDs could vary from year to year.	Not reported as an issue in 2017
	Assume an NTG ratio of 85.8% for standard LEDs and 76.2% for specialty LEDs.	Not reported as an issue in 2017
	Reduce annual HOU from 938 hours to 840 hours for HLR LED bulb sales installed in residential settings.	Not Adopted. Remains in recommendations 2017
	Reduce peak CF from 0.095 to 0.08 for HLR LEDs bulb sales installed in residential settings.	Not reported as an issue in 2017
	Account for 4% C&I cross-sector sales contribution of HLR LED bulb sales by applying HOU and CF values of 3,306 and 0.6, respectively.	Not Adopted. Remains in recommendations 2017
Home Energy Report	Continue to use Oracle-reported savings for tracking purposes.	Continues to be adopted
	KCP&L-MO should meet with the program implementer, Opower, to discuss how the income-eligible cohort was selected, and how the messaging in their reports was targeted.	Not reported as an issue in 2017
Income-Eligible Multifamily Program	Include more detailed information on inputs used and baseline values for DI measures, particularly for low-flow showerheads and aerators as these had differing realization rates; this indicates input assumptions are not fully matching those used in verification.	Not reported as an issue in 2017

3.3.2 PY2017 Recommendations

Navigant provided recommendations from the PY2017 program evaluations that seek to guide and improve future impact evaluations. Table 7 presents the evaluator recommendations by program

Table 7: PY2017 Impact Evaluation Recommendations

Program	EM&V PY2017 Recommendation
Business Energy Efficiency Program – Standard	Include a value in the Quantity Removed field for any instances where the quantity replaced is more than one such that the efficient wattage represents the number of baseline lamps replaced
	For all non-lighting measures, include the size of the product installed to ease calculation of the savings
	Include additional QC of reported efficient wattage to check if it aligns closely with deemed savings assumed wattage
	Calculate deemed savings by building type
	Improve predictions by including building type in savings estimate
	Account for lower ISR due to some lights being in storage
	Use results of onsite logger analysis for lighting measures for HOU, CF, and WHF
Business Energy Efficiency Rebate - Custom Program	Provide a column in the tracking database that has a brief narrative describing the installed energy efficient measures or equipment.
	Track savings values for all the implemented eligible measures.
	Track project cost and incremental cost for each project, when possible.
	Consolidate a list of Custom measure categories for both tracking and marketing.
	Provide a detailed introduction to each measure category on the website.
	Continue to submit well- organized project files to help the impact evaluation process.
	Monitor project files for consistency when more projects enter in PY2018.
	For Custom lighting operating hours, collect a detailed operating schedules(8:00am - 7:00pm on weekdays et al.). This helps determine the coincidence factors and creation of lighting operating hours.
	For projects that lighting fixtures operate 24/7 annually, make sure use 1.0 as the coincidence factor.
	If occupancy sensors or special lighting controls are installed as part of the lighting upgrade, make sure claim additional savings for the installation of lighting controls.

	Align the peak demand calculations with the KCP&L C&I peak period, particularly for non-lighting projects. If zero peak demand savings are claimed, please indicate reasons why.
	If hourly data analysis could be performed, better to not use 2- degree interval of temperature or other bin data analysis approach.
Small Business Lighting Program	Include additional QC of reported efficient wattage to check if it aligns closely with deemed savings assumed wattage
	Consider including incremental cost in the tracking database, which will help for calculating the benefit-cost ratios.
	Use an ISR of 99% while calculating the reported savings
	Reduce negative savings by training contractors to replace fixtures like for like and not fixtures that replace more than one lamp when only one lamp is being replaced.
	Consider creating deemed savings by measure and building type using the HOU and CF by building type determined from onsite verification.
Business Programmable Thermostat	Consider running an assessment with the thermostat telemetry data to identify why some thermostats did not participate in some RHR events. Such information could lead to process improvements in the future of the program.
	The process evaluation identified that many customers wanted text message notification as well as Nest App push notification for their event notification. These forms of notification are already offered by KCP&L. Navigant recommends increased marketing of event notification options to improve customer awareness of events and customer satisfaction.
	The process evaluation identified that some customers took additional energy saving actions during events. KCP&L should consider using AMI data to identify non-thermostat related impacts during event hours.
	Navigant recommends including tips on alternative forms of savings electricity outside of thermostat use in customer survey. These types of tips could increase future energy savings.
Demand Response Incentive	Navigant recommends that KCP&L send Navigant a unique list of customers for tracking data. In addition, the evaluation team recommends that KCP&L ensures Navigant receives the same interval data as A2A.
Whole House Efficiency Program	Navigant recommends the program implementer ensure that the tracking database contains all data needed to track installed program measures and calculate program savings. This includes all equipment specifications and household characteristics for baseline and efficient measure installations.

	Accurately tracking equipment specifications is especially important for Tier 3 HVAC units. The program implementer should consider ways to accurately track these values for removed units and identify whether those values are nameplate or measured. Measured SEER and energy efficiency ratio values are preferable. However, if nameplate values are tracked, Navigant will consider approaches to leverage those SEER and energy efficiency ratio values to reflect measured values through the application of an adjustment factor.
	Navigant also recommends that the program implementer consider ways to ensure that participating HVAC units comply with the program's Operations Manual, particularly the SEER values of units to be removed by the program. The program's Operations Manual limits the maximum SEER rating for units that can be removed and participate in the program to 10. In some instances (less than 1% of units) the removed units had SEER ratings higher than 10. Consider options to limit this such as additional staff training to thoroughly review applications and a quality control checklist to verify this data point.
	Finally, Navigant recommends that the program implementer amend the methodology used to calculate the program's reported savings to align with the algorithms, inputs, and sources used to calculate the evaluated savings as detailed in Appendix J. Alignment will bring realization rates closer to 100% (or 1.0) while providing more accurate data for tracking progress toward targets and overall program management.
Home Lighting Rebate Program	Account for leakage, assumed to be 14% of HLR LED bulb sales (GMO currently makes no adjustment for leakage)
	Retain an annual HOU of 840 hours for HLR standard LED bulb sales installed in residential settings
	Adopt an annual HOU of 986 for HLR specialty LED bulb sales installed in residential settings
	Account for the C&I cross-sector sales contribution of HLR LED bulb sales by applying HOU and CF values of 3,306 and 0.6, respectively, to 4% of the bulbs sold through the program
	Assume a NTG ratio of 88% for standard LEDs and 71% for specialty LEDs
Home Energy Report	Conduct an analysis of demand impacts using advanced metering infrastructure (AMI) data from a sample of treatment and control customers. While the Oracle methodology is robust, it does not include customers from KCP&L. Navigant suggests using a post-only difference approach (most customers will not have AMI data available for the pre-period) to confirm the applicability of Oracle's demand reduction estimate to the KCP&L program.
	Continue to use Oracle-reported savings for tracking purposes.
	Evaluate the reported savings every 2-3 years to monitor continued consistency between evaluated savings and implementer-reported savings.

Income-Eligible Multifamily Program	The tracking data and savings calculations provided by KCP&L and Nexant are appropriate for the program. The tracking data included type, quantity, and location of measures, which was sufficient to review the measures. Detailed information for the two custom measures (combined for GMO and KCP&L- MO) was not included in the original tracking data; instead, measures were simply listed as custom. Navigant recommends that detailed custom measure data is captured in the tracking data moving forward.

4 Process Evaluation Summary

This section summarizes key methods and findings from the PY2017 process evaluations of KCP&L-MO's residential and business energy efficiency program portfolio. The first subsection summarizes the process evaluation methods used by the Navigant evaluation team, and includes an assessment of how the process evaluation aligns with the minimum requirements for demand-side process evaluations set forth by the Missouri Code of State Regulations (CSR). The second subsection reviews the status of the program evaluation recommendations from the PY2016 evaluations.

4.1 Summary of Process Evaluation Methods and Alignment with Missouri CSR Minimum Requirements

The residential and commercial program evaluations adopted a wide range of process evaluation methods. Table 8 below summarizes the process evaluation methods applied for each program.

Table 8: Process Evaluation Method Summary

Program	Methods	Description
Business EER - Standard	• Program Staff Interviews • Participant Survey Results Review	The evaluation team conducted program staff interviews, reviewed program materials, and reviewed implementer administered customer survey results.
Business EER - Custom	• Program Staff Interviews • Program Material Review • Customer Survey • Trade Ally Survey	The evaluation team completed 29 surveys among participants and trade allies.
Block Bidding	• Program Staff Interviews • Program Material Review • Participant Interviews	The evaluation team conducted in-depth interviews with the two program participants.
Strategic Energy Management	• Program Staff Interviews • CLEAResult Interviews • Participant Survey • Program Material Review	Two staff interviews with the program manager and implementation contractor and seven participant interviews.
Small Business Lighting	• Program Staff Interviews • Participant Web Survey • Program Material Review	Two staff interviews with the program manager and implementation contractor. Review of implementer administered participant surveys.
Business Programmable Thermostat	• Program Staff Interview • Program Material Review • Customer Survey	One staff interview with the program manager and analysis of customer surveys.
Demand Response Incentive	• Program Staff Interviews • Program Material Review	Interviews with the program manager and implementation contractor.
Whole House Efficiency	• Program Staff Interviews • Program Material Review	Two staff interviews with the program manager and implementation contractor.
Home Lighting Rebate	• Program Staff Interviews • In-store Intercept Surveys	Two staff interviews with the program manager and implementation contractor. 218 customer interviews.
Home Energy Reports	• Program Staff Interviews • Program Material Review • Customer Survey • Evaluation Survey	Two staff interviews with the program manager and implementation contractor. Review of implementer administered participant surveys.
Residential Programmable Thermostat	• Program Staff Interviews • Program Material Review • Customer Survey	One staff interview with the program manager and analysis of customer surveys.
Income-Eligible	• Program Staff Interviews	Two staff interviews with the program

Program	Methods	Description
Multifamily	• Program Material Review	manager and implementation contractor.
Home and Business Online Energy Audits	• Program Staff Interviews • Program Material Review • Customer Survey	Two staff interviews with the program manager and implementation contractor.

The Department of Economic Development set forth minimum requirements for demand-side program process evaluations, in 4 CSR 240-22.070(9).[5] At a minimum, process evaluations should answer the following five key questions:

- **Question 1:** What are the primary market imperfections common to the target market segment?
- **Question 2:** Is the target market segment appropriately defined, or should it be further subdivided or merged with other market segments?
- **Question 3:** Does the mix of end-use measures included in the program appropriately reflect the diversity of end-use energy service needs and existing end-use technologies within the target market segment?
- **Question 4:** Are the communication channels and delivery mechanisms appropriate for the target market segment?
- **Question 5:** What can be done to more effectively overcome the identified market imperfections and to increase the rate of customer acceptance and implementation of each end-use measure included in the program?

Each program evaluation provided a response to all five questions. The full text response to these questions is provided as Appendix A to this report. Evergreen reviewed each text response to determine if the process evaluations provided a substantive response to each question. Across the program evaluations, we found that most provided a thoughtful, substantive response to each question, although in some cases the response was largely similar or identical to previous year evaluations. Table 9 below presents an assessment of the responses to the five key questions across the program evaluations. For each question, we assign a score of 1, 2 or 3:

- **1** indicates an updated, substantive response clearly linked to process evaluation findings.

[5] *Rules of Department of Economic Development, Division 240 - Public Service Commission, Chapter 22 - Electric Utility Resource Planning*. 2011. https://www.sos.mo.gov/cmsimages/adrules/csr/current/4csr/4c240-22.pdf

- **2** indicates a response that is different from the previous program year evaluation but is not linked to process evaluation findings or is not substantive in nature.
- **3** indicates that the response has not changed at all from the previous year process evaluation.

The evaluations provide substantive, updated responses to the five key questions that are clearly linked to the most recent evaluation findings.

Table 9: Assessment of Response to Minimum Required Process Evaluation Questions

Program	Question 1: Primary Market Imperfections	Question 2: Target Market Segment	Question 3: Diversity of End-Use Needs	Question 4: Communication Channels and Delivery Mechanisms	Question 5: Overcoming Market Imperfections
Business EER - Standard	1	1	1	1	1
Business EER - Custom	1	1	1	1	1
Block Bidding	1	1	1	1	1
Strategic Energy Management	1	1	1	1	1
Small Business Lighting	1	1	1	1	1
Business Programmable Thermostat	1	1	1	1	1
Demand Response Incentive	1	1	1	1	1
Whole House Efficiency	1	1	1	1	1
Home Lighting Rebate	1	1	1	1	1
Income-Eligible Home Energy Report	1	1	1	1	1
Home Energy Report	1	1	1	1	1
Residential Programmable Thermostat	1	1	1	1	1
Income-Eligible Multifamily	1	1	1	1	1
Online Energy Audit for Homes and Businesses	1	1	1	1	1

* **1 =** Updated, substantive linked to process evaluation findings. **2** = Different from the previous program year evaluation but is not linked to process evaluation or not substantive in nature. **3** = Response has not changed at all from the previous year process evaluation.

4.2 PY2017 Process Evaluation Findings and Recommendations

This subsection presents overall program process evaluation findings and evaluator recommendations.

4.2.1 Process Evaluation Findings

Navigant presented the process evaluation findings for each program in terms of responses to key evaluation research questions, and responses to the five required process evaluation questions set forth in 4 CSR 240-22.070(9). Overall, the process evaluation findings are complete, thorough and respond to the mandated questions.

In the following sections we summarize key process evaluation findings across five topic areas, customer satisfaction, program participation, program marketing, program delivery and program implementation changes.

4.2.1.1 Customer and Trade Ally Satisfaction

KCP&L programs appear to be performing to customer and trade ally satisfaction. Navigant evaluated customer or trade ally satisfaction for nine programs. Across these programs, in general customer and trade ally satisfaction is high. The satisfaction results reported indicate that the programs are well-run and meeting needs of customers and trade allies. Table 10 below presents a summary of satisfaction results across the nine programs where satisfaction research was conducted.

Table 10: Customer and Trade Ally Satisfaction Findings Summary

Program	Process Evaluation Findings Summary
Business EER - Standard	Customer satisfaction is high with participant's surveyed rating the program an average score of 9, with 10 being the highest score and indicating extremely satisfied.
Business EER - Custom	End-user participant satisfaction is high with 80% of participants being very likely to participate in future KCP&L programs. Some trade allies are dissatisfied with the project application process and time required to complete a project through the Custom program.
Block Bidding	Direct satisfaction research was not conducted; however, both program participants were unaware that they had participated in the Block Bidding program.
Strategic Energy Management	Direct satisfaction research was not conducted; however, three of the seven participants interviewed felt that the rebates received do not offset the Energy Efficiency rider making it difficult for large customers to cost-justify participating in the programs.
Small Business Lighting	Customer satisfaction is high, with the six customers giving an average score over 9 with 10 being extremely satisfied. Many of the trade allies increased participation in the second year.
Programmable Thermostat Programs	Program satisfaction was relatively with 76% and 63% of respondents rating their overall all experiences with RHR and SS, respectively, as satisfied and very satisfied.
Whole House Efficiency	Participants are generally very satisfied with the program, with some variation based on the program track they participated in. Participant's satisfaction with the three rebate options ranged from and average of 4.1 to 4.7 on a 5-point scale. One finding of the process evaluation is that few participants in ESK went on to perform more substantial energy efficiency upgrades. KCP&L program manager intends to do additional follow-up marketing to past participants as a result.
Home Energy Report	Navigant reviewed the customer engagement tracker survey and found that 72% of customers responding agree or strongly agree that they like the reports.
Online Energy Audit	Navigant reviewed the customer engagement tracker survey for the HER. 73% of customers surveyed who have used the Energy Analyzer are satisfied with it.

4.2.1.2 Program Participation

The Navigant evaluation found that across all programs, in general, program participation met expectations. The Evergreen team noted that participation information was not included for several programs. Table 11 below provides a summary of participation findings from the evaluation.

Table 11: Program Participation Findings Summary

Program	Process Evaluation Findings Summary
Business EER - Standard	The program had 1016 projects in PY2017 in the KCP&L-MO territory.
Business EER - Custom	The program had 67 projects in PY2017.
Block Bidding	Two lighting projects were completed in PY2017.
Strategic Energy Management	The program recruited 16 participants in PY2017.
Small Business Lighting	While explicit participation numbers were not provided, the evaluation notes that the program has surpassed its 3-year target in only 2 years.
Programmable Thermostat Programs	The programs will eliminate nearly all marketing in PY2018 because they're close to the program's enrollment capacity.
Demand Response Incentive	In PY2017 the target market expanded to include customers with smaller loads as the list of Tier 1 customers.
Whole House Efficiency	Specific participation data not provided in the evaluation. Few participants are taking a true whole house approach and participating in more than one program tier. It was noted that participation had increased in PY2017 compared to PY2017.
Home Lighting Rebate	No specific participation information was provided. Just fewer than 400,000 incentivized bulbs were sold.
Home Energy Reports	In PY2017, the program targeted over 102,000 customers to receive five HERs. An additional 25,000 customers served as a control group. 29% of customers either did not recall receiving the report or did not read the report. Of the respondents who recalled the reports, 72% like the reports and 61% talk to other people about the reports.
IE Multifamily	No specific participation information was provided
Online Energy Audit	In PY2017, more than 14,235 customers in the combined KCP&L-MO and GMO territories completed the online WUM audit.

4.2.1.3 Program Marketing and Awareness

Across the programs, Navigant found that most programs have good customer awareness, and that KCP&L is employing appropriate marketing approaches. The Evergreen team found that reporting on marketing and program awareness in the Navigant evaluation is satisfactory, and the results are summarized in Table 12.

Table 12: Program Marketing and Awareness Findings Summary

Program	Process Evaluation Findings Summary
Business EER - Standard	KCP&L developed targeted marketing materials for certain segments to help explain benefits of implementing energy conservation. For example, KCP&L developed a good, better, best marketing campaign for high bay lighting to make comparing LED high bay fixtures to metal halide or linear fluorescent fixtures more straightforward.
Business EER - Custom	KCP&L created a more targeted marketing campaign for PY2017, based on identified industries with the most potential for new Custom projects. The results of marketing to often take time to materialize, yet the efforts are worthwhile even if results are not immediately seen. Targeting new sectors with awareness and marketing is valuable and important for maintaining high net savings and program staff feels they are seeing responses that will translate into future projects in the pipeline.
Block Bidding	The Block Bidding program's target market is KCP&L's largest customers. KCP&L reached out to new customers in four key market segments: large industrial, property management firms, new construction projects, and national TAs.
Strategic Energy Management	SEM team works with its key accounts team to identify high energy usage customers with approximately 10 MWh of annual consumption and then validates whether these customers have the savings potential to participate in the program by conducting onsite visits.
Small Business Lighting	Communication channels and delivery mechanisms are working for the program, leading to the success of the program as evidence by the fact that it surpassed its 3-year target after 2 years of participation.
Programmable Thermostat Programs	The program focused marketing efforts on increasing DIY thermostat activation for the RHR program through language on the online portal, email reminders and phone reminders.
Demand Response Incentive	Targeted email marketing was executed in PY2017. High usage customers were identified through CLEAResult's propensity modeling and received emails asking them to inquire about the DRI program. Also in PY2017, the product manager initiated phone and email notifications 24 hours and 4 hours before events started.

Program	Process Evaluation Findings Summary
Whole House Efficiency	The program has been marketing to participating customers by email. The campaign consists of a series of emails that guide customers that participated in one tier through the steps, and benefits of participating in other program tiers. The program has also been marketing on social media websites and conducting in-store product demonstrations at home improvement stores.
Home Lighting Rebate	The program did not update marketing materials in PY2017 and does not plan to do so in PY2018. However, during in-store intercept visits, the team found the ENERGY STAR logo to be present on nearly all-marketing materials.
Home Energy Report	The program uses two primary communication channels: paper mailed reports and emails.
Income-Eligible Multifamily	Communication channels and delivery are appropriate given the direct interaction with property owners/managers and tenants.
Online Energy Audit	All communication channels and delivery mechanisms are appropriate for the target market segments. In PY2017, the program used multiple communication channels including targeted emails, Facebook ads and boosted posts, banner ads on the KCP&L website, messaging on HERs, and bill inserts to guide residential customers to the tools, particularly the WUM section.

4.2.1.4 Program Operations and Delivery

The Navigant evaluation provides adequate and appropriate information on program operations and delivery. The evaluation found that overall, the KCP&L programs are operating as designed and being delivered to the target market effectively, with few significant challenges. Table 13 below provides a summary of key findings for each program.

Table 13: Program Operations and Delivery Findings Summary

Program	Process Evaluation Findings Summary
Business EER - Standard	Program operations and program delivery are working well, with high program satisfaction. The Standard program is complementary other Business EER programs by providing rebates for the more typical capital projects. KCP&L is working to better align the two programs. From the customer perspective, the Standard program and the Custom program are one program not two programs. Most of the measures that are not covered by Standard are covered by another program. The program is not intended to stand-alone from the customer perspective but be considered an integrated C&I portfolio.
Business EER - Custom	Program operations and program delivery are working well, with high program satisfaction. The Custom program also serves new construction projects. Beginning in PY2016, LED retrofit lighting projects were moved from the Custom program to the Standard program. The Custom program still serves new construction LED lighting projects and LED lighting projects with greater than 8,000 hours of annual use.
Block Bidding	No participation under this program in PY2017.
Strategic Energy Management	The program is designed in a manner consistent with other SEM programs. While participants are in the early stages of the program operations and program delivery are working well.
Small Business Lighting	Navigant's findings indicate the SBL program is operating well in the territory, almost surpassing the 3-year MEEIA Cycle 2 target by the end of PY2017. Navigant's process research indicates that the program was successful in its second year, exhausting all funding in KCP&L-MO before the end of PY2017.
Programmable Thermostat Programs	A new product manager took over the Residential and Business PT programs and brought in several new processes and program changes. In PY2017, the program focused marketing efforts on increasing DIY thermostat activation for the RHR program. KCP&L-MO will eliminate nearly all marketing in PY2018 because they're close to the program's enrollment capacity.
Demand Response Incentive	Most customers did not meet their contracted expected peak demand during event periods on days with a similar temperature to the event days. KCP&L has identified recruitment of customers with smaller demand savings potential as an area for improvement. Additionally, KCP&L's product manager has taken great efforts to improve communication channels and ensure delivery mechanisms are appropriate for the DRI program.

Program	Process Evaluation Findings Summary
Whole House Efficiency	Navigant's process evaluation research found that participants and trade allies are generally very satisfied and program operations and delivery are working well. The program had more participation in PY2017 due to increased customer outreach via email campaigns and social media marketing, as well as growing partnerships with trade allies. Additionally, Navigant found that the program Operations Manual identifies lack of education for both end-use consumers and trade allies as a primary barrier to residential energy efficiency upgrades, along with high upfront costs-particularly for HVAC purchases.
Home Lighting Rebate	Program operations and program delivery are working well, with high program satisfaction among suppliers and customers. In PY2017 the program experiences a substantial program design change due to the program's success at being close to its 3-year net-savings target in only 2 years.
Home Energy Report	In PY2017 the program format remained unchanged and will not change in PY2018. However, in PY2018, KCP&L will be upgrading its customer system, which will result in one missed electronic HER and will require updates to the Oracle data ingest process.
Income-Eligible Multifamily	Navigant found that communication channels and delivery are appropriate given the direct interaction with property owners/managers and tenants and the program includes appropriate measures for its current targets.

4.2.1.5 Program Implementation Challenges

Table 14 provides a summary of key findings for each program that relate to program implementation challenges.

Table 14: Program Implementation Challenges Findings Summary

Program	Process Evaluation Findings Summary
Business EER - Standard	The primary implementation challenge noted by Navigant is low participant awareness of program non- lighting measures. The effect from other end uses was less than 1%, but other programs such as the Custom program cover many of those measures.
Business EER - Custom	The primary implementation challenge noted by Navigant is low participant awareness of program non- lighting measures and projects that qualify for Custom incentives. KCP&L product managers and implementation contractor have taken substantial efforts for the purpose of moving the KCP&L-MO Custom program forward including focusing on the new construction marketing, launching a midstream HVAC program, studying the benefits of retro-commissioning projects and restricting the incentive for the program for PY2018.
Block Bidding	Navigant found that large customers targeted by the Block Bidding program have often opted out of KCP&L's rebate program because incentive caps precluded them from getting out the same value they are putting in to the program. Secondly, large projects are complex and have long lead times that do not fit into annual rebate program timelines. However, a new component, the Buy Now option, helps overcome the second barrier, which allows customers whose project timelines do not align with the scheduled auction dates.
Strategic Energy Management	Navigant noted that the primary implementation challenge was the time and money needed to participate in the program; however, KCP&L is considering creating a Shared Energy Manager position to help the customers save both time and money. Additionally, Navigant found that some participants felt the rebates received do not offset the Energy Efficiency rider making it difficult for the large customers to cost-justify participating in programs.
Small Business Lighting	The SBL program is running well and as intended. However, Navigant found that the primary market imperfection common to the target market for the SBL program is that most of the customers that qualify for the project have fewer resources such as time and money to pursue the efficient lighting projects. Overall, the SBL program ran successfully but exhausted all funding before the end of the cycle. Moving forward, Navigant suggest the implementer and KCP&L considers changes to future program so that they can last the entire cycle.
Programmable Thermostat Programs	Navigant found that KCP&L is close to reaching enrollment goals for Cycle 2, thus, it's redirecting efforts from enrollment to continuing thermostat activation and designing a process to handle thermostat participants that move out of their home.
Demand Response	Navigant found that there are two main barriers for participating in the DRI program, including: (1) businesses do not have automatic load curtailment; and (2)

Program	Process Evaluation Findings Summary
Incentive	for some customers, the point of contact (as indicated on the contract) neglected to pass the event notification onto the individual who can manually curtail load at the customer site.
Whole House Efficiency	Based on the participant survey, one of the most common suggested improvements were advertising the WHE program more so that more customers could benefit from it. Navigant suggests that the program should continue to pursue strategies to increase customer participation in more than one program tier, including expanding the initiative to have Tier 3 trade allies implement Tier 2 building shell measures for their customers. Additionally, the program Operations Manual identifies lack of education for both end-use consumers and trade allies as a primary barrier to residential energy efficiency upgrades, along with high upfront costs—particularly for HVAC purchases. Surveyed participants and trade allies alike support that view.
Home Energy Report	The primary challenge for the program is that many customers do not read the home energy reports; 29% of CET survey respondents either did not recall receiving the report or did not read the report.
Income-Eligible Multifamily	The primary difficulty in this market is tenants are often not allowed to make significant alterations, and property owners and landlords have little incentive to increase efficiency because they usually do not pay—directly or indirectly, for utilities. However, the program has prioritized direct outreach and in-person interaction with building owners/managers to increase awareness of the IEMF program and energy efficiency opportunities.

4.3 Summary of Key Process Evaluation Recommendations

Based on the evaluation findings, Navigant provided overall evaluation conclusions and recommendations. Additionally, Navigant provided 15 overarching recommendations that they term, "the most important recommendations resulting from Navigant's process evaluation activities for PY2017" PY2017 Evaluation Report, p. xliii). These recommendations are:

- An overall recommendation is to use the Standard program to help increase participation in other C&I programs.
- Navigant recommends KCP&L develop strategies to leverage previous program participation in lighting measures to encourage participation in other end use measures.
- When sending out the rebate check, KCP&L could consider including additional documentation on what the rebate is about, why they received it, and other programs that are available.
- Monitor the effect of switching to a specialty-focused program in PY2018.

- Continue program incentives and marketing, despite reduced budget.
- Focus marketing efforts on benefits of ENERGY STAR LEDs.
- KCP&L could consider providing more tips to help IE-HER customers shift their usage to reduce coincident peak demand.
- The program should continue to keep abreast of new ways to use and save energy to provide up-to-date tips.
- The program may want to consider signing up more customers for email reports so that customers can receive messaging from both channels.
- KCP&L took major strides in PY2017 to increase Rush Hour Rewards activation rate for DIY customers. KCP&L should continue this effort to close the gap of thermostats that have not yet been activated.
- Navigant recommends KCP&L consider working with property owners on access to the thermostat program in future program years and MEEIA Cycle 3. At the moment, the program is less accessible for multi-family housing to participate in. Access to this market could provide more energy savings and DR impact.
- Navigant recommends that KCP&L considers expanding the BYOD program measure in MEEIA Cycle 3. BYOD is common in other jurisdictions and is cheaper than the DIY and DI measure.
- KCP&L should continue to refine propensity modeling to select customers for the program.
- As the DRI program continues to grow, KCP&L should consider that having both large and smaller customers can lead to a dilution of focus and specific feedback to both customer groups. KCP&L is actively addressing this issue through the implementation of account managers who check in with program participants throughout the program year.
- Navigant recommends continuing to work on event behavior management in PY2018.

4.4 Status Of 2016 Process Evaluation Recommendations

The evaluators tracked and reported KCP&L-MO's response to process evaluation recommendations made in the 2016 evaluation reports. This section reviews the adoption.

Table 15 below presents the PY2016 process evaluation recommendations by project and the evaluators' assessment of KCP&L-MO's response.

Table 15: PY2016 Process Evaluation Recommendation Tracking

Program	Recommendation	Adopted
Business EER - Standard	Work with trade allies to increase participant awareness of the non-lighting measures.	Y
	Specialize its training to specific markets such as property management and data centers.	Y
	Provide trade ally training for under-performing end uses such as HVAC, motors, and building controls.	Y
Business EER - Custom	Focus on increasing awareness of non-lighting projects by engaging customers in the early planning phases and increasing outreach efforts to large customers, trade allies, design professionals, and architects.	Y
	Introduce a building controls program for the medium to larger customers and continue engagement for those customers who have already made energy efficiency improvements.	Y
	Maintain flexibility on adjusting the incentive structure to best balance participation with Block Bidding.	Y
	Continue previous efforts of defining the target markets and meeting with large customers, trade allies, and design professionals through dedicated events or specific program outreach.	Y
	Engage in outreach and training to smooth the application process for customers and trade allies and continue to expand the customer express application offerings for straightforward or replicable measures.	Y
Block Bidding	Keep in communication with trade allies (TAs) and large customers and give adequate notice about upcoming Block Bidding auctions to better fit the long lead times of larger projects.	Y
	Monitor the PY2017 participation and consider expanding the Block Bidding program to encompass mid-sized customers if kilowatt-hour goals for PY2017 are not met.	Y
	Assess the balance between Block Bidding and other KCP&L programs, potentially through a mid-year review, to ensure that the program is capturing a new market.	N
	Conduct periodic reviews with customers to ensure that direct contact remains the best communication channel.	Y
Strategic Energy Management	The market imperfections identified through this program were the time and money needed to participate energy saving behaviors. This program addresses the barrier of cost by providing technical staff, training, and	Y

	support at little to any cost for participating customers. The barrier of time is something that can likely be better addressed through this program in several ways	
	In the future, the program may have to target smaller customers with a more diverse mixture of building types and operations.	Y
	The program identifies and addresses the major end uses for these sites, but several end uses may need special attention to maintain the program savings realized. Navigant suggests that KCP&L consider creating a program that could address measures that require regular maintenance or upkeep to realize savings.	Y
	The current model of account managers introducing the customers to the program has worked well with these large clients and marketing for this program is limited. When the program considers expanding to a larger number of customers, a more proactive approach may need to be considered to meet program goals	Y
Small Business Lighting	Provide more marketing materials to participants and trade allies	Y
	Increase the rebate cap	Y
	Offer ongoing open field tool training	N
Whole House Efficiency	Consider geotargeting online advertising or mailings to neighborhoods with a high density of older homes.	Y
	Consider whether it would be feasible to provide cost estimates—and ideally payback period estimates—for recommended measures within the Energy Savings Kit home assessment report.	Y
	Explore whether additional advertising or trade ally marketing support could increase participation in less popular measures.	Y
	Consider a more comprehensive energy audit rather than Energy Savings Kit for customers with a higher level of EE knowledge.	Y
	Consider whether a series of personalized follow-up contacts from the EEP would build on the trust established during the Energy Savings Kit and encourage more participation in other KCP&L programs.	Y
Home Lighting Rebate	KCP&L-MO should monitor the effects of further expanding program offerings in grocery stores, drugstores, and online and continue regular and open communications with the implementation contractor (IC).	Y
	Monitor the cost-effectiveness of the newly added component incorporating grocery store, drugstore, and online retailers.	N
	While satisfaction is high, the program might benchmark its incentive levels to comparable programs in other jurisdictions and/or explore the cost-effectiveness of raising incentives.	Y

	Marketing materials could be improved to distinguish and explain the differences between ENERGY STAR and non-ENERGY STAR LEDs and consistently use the ENERGY STAR logo and highlight the benefits of ENERGY STAR.	N
	Ensure that retailers are training their employees and encourage that they are actively educating customers about ENERGY STAR LEDs and how to select the correct bulb for their needs.	Y
Home Energy Reports	KCP&L may want to focus this research on the IE-HER group because that wave is not meeting savings expectations.	Y
	KCP&L could consider including questions on the CET survey or conducting a separate survey to understand customer satisfaction with the different parts of the HER program.	Y
Home Online Energy Audit	KCP&L could consider strategies or promotions to encourage customers to return to the tools more frequently.	Y
	KCP&L can consider surveys or interviews with residential and small and medium business customers to better understand how they are using the tools and what would make them more useful.	Y
Programmable Thermostats	Continuing to monitor the market for how the Nest solution compares to competition can help ensure the program is matching the market.	Y
	In the coming PY consider targeting Honeywell replacements for customers with large HVAC loads per thermostat.	Y
	The mix of end-use measures included in the program (i.e., PTs) meets the needs of the existing market. However, there are other vendors of similar solutions that could be benchmarked toward the ability to handle multiple thermostat vendors and additional program functionality.	Y
	Due to high program participation, consider focusing on marketing channels that best allow targeting Honeywell replacements for customers with large HVAC loads per thermostat.	Y
	Monitor program savings targets in addition to enrollment goals to ensure that program cost-effectiveness remains high.	Y
Demand Response Incentive	Consider data management processes to streamline data collection, storage and retrieval.	Y
	Consider tying program payments to the amount of impact per customer.	Y
	Consider how to scale outreach as program begins to target smaller savings opportunities.	Y

5 Review of Cost-Effectiveness

Navigant calculated the cost-effectiveness for the individual KCP&L-MO energy efficiency and demand response programs, as well as the cost-effectiveness of the portfolios of energy efficiency and demand response programs. Navigant calculated cost-effectiveness using the five standard benefit-cost ratios that calculate cost-effectiveness from the vantage points of different stakeholder groups:

- **Total Resource Cost (TRC) Test –** compares the benefits and costs from the perspective of all utility customers, including energy program participants and nonparticipants.
- **Societal Cost Test (SCT)** - compares the benefits and costs to all stakeholders in the utility service territory, state, or nation as a whole
- **Utility Cost Test (UCT)–** compares the benefits and costs to the utility implementing the program
- **Participant Cost Test (PCT)–** compares the benefits and costs from the perspective of the customer installing the measure
- **Ratepayer Impact Measure (RIM) Test –** compares the benefits and costs from the perspective on non-participating ratepayers, and the impact of energy programs on customer rates.

Navigant conducted these tests in a manner consistent with the 2001 California Standard Practice Manual (SPM).[6] For this evaluation audit, Navigant provided output files that included measure specific cost and benefit inputs, detailed load shapes, electricity avoided costs, program administration costs, electricity rates, and other assumptions including discount rates.

The Evergreen team reviewed residential and commercial summary findings from the portfolio reports and the output files for each program and at the portfolio level to confirm that calculations were performed correctly. The specific audit tasks undertaken were to:

- Confirmed summary values included in the final evaluation report matched the values in the results file; and
- Confirmed that the reported costs matched the costs input into the cost-effectiveness input files, including administrative costs, incentive costs, and participant incremental equipment costs;

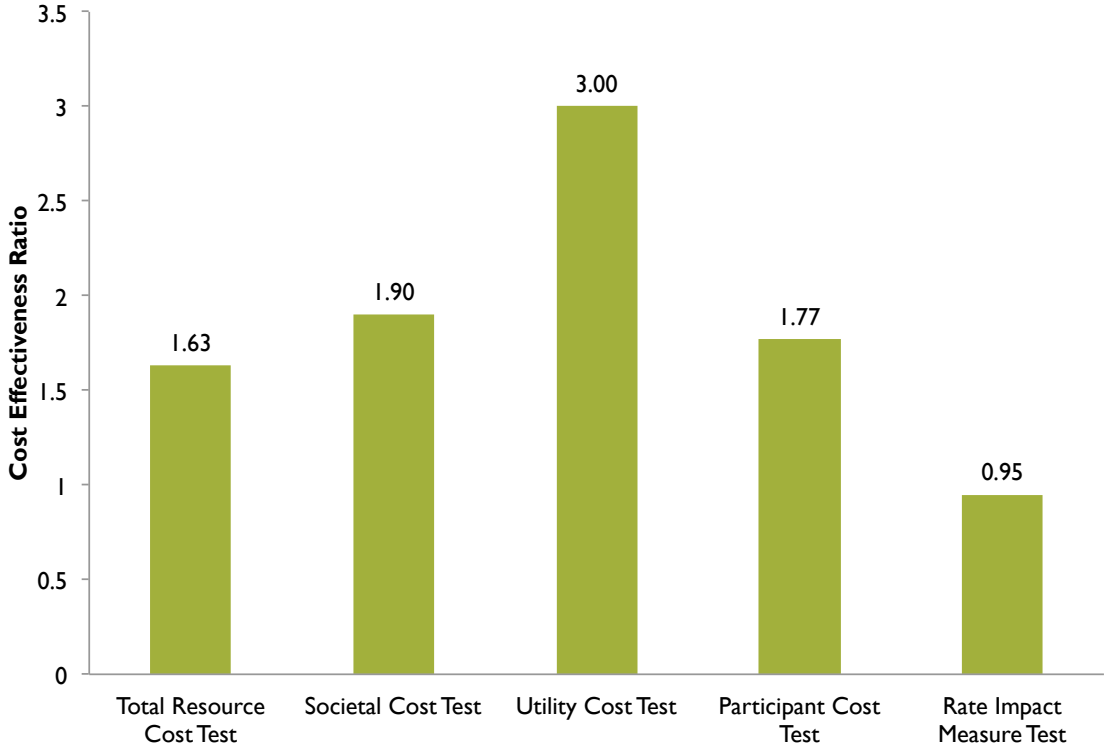
[6] California Public Utilities Commission. October 2001. "California Standard Practice Manual: Economic Analysis of Demand-Side Programs and Projects." http://www.cpuc.ca.gov/NR/rdonlyres/004ABF9D-027C-4BE1-9AE1- CE56ADF8DADC/0/CPUC_STANDARD_PRACTICE_MANUAL.pdf

- Reviewed avoided cost of energy and demand values and confirmed Navigant used appropriate values to calculated program level benefits;
- Confirm that measures received appropriate cost-effectiveness input values, from appropriate sources, consistent with the sources used in the Navigant evaluation reports (i.e., kWh savings, expected usable life (EUL), incremental cost);
- Confirmed that discount rates were appropriate.

5.1 Cost-Effectiveness Results

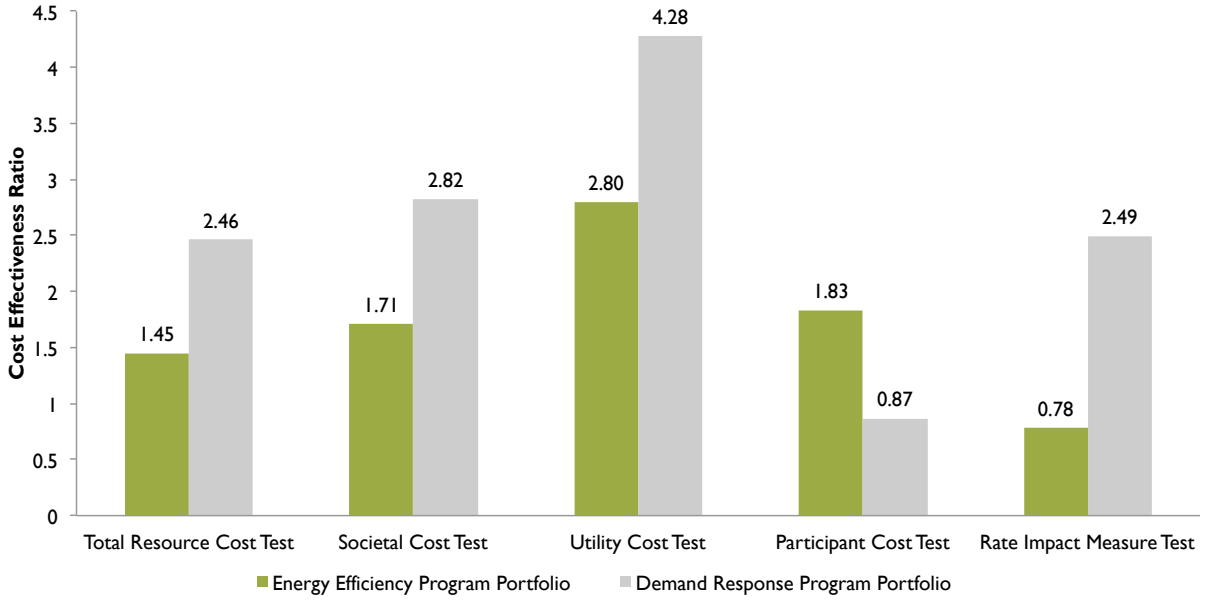
The overall KCP&L-MO program portfolio is cost-effective for the second year of MEEIA Cycle 2, PY2017. As Figure 8 shows, MO's overall energy efficiency and DR portfolio is cost-effective for all tests except the Rate Impact Test; the Rate Impact Test is the most conservative cost-effectiveness test.

Figure 8: KCP&L-MO Portfolio Level Cost-Effectiveness Test Results



Looking at the energy efficiency and demand response portfolios separately, Navigant reported similar results to the overall program. Figure 9 presents the results of the cost-effectiveness tests for the KCP&L-MO's energy efficiency and demand response portfolios. The energy efficiency portfolio is cost-effective across all tests except the Rate Impact Measure Test, while the demand response portfolio is cost-effective across all tests except the Participant Cost Test.

Figure 9: KCP&L-MO Cost-Effectiveness Test Results – Energy Efficiency and Demand Response Portfolios



While the portfolio was cost-effective in PY2017, individual program cost- effectiveness varied. Table 16 on the following page presents the program specific cost-effectiveness test results. We also present the cost- effectiveness results for PY2016 for comparison.

Table 16: Cost-Effectiveness Test Results

Program	TRC		SCT		UCT		PCT		RIM	
	2016	2017	2016	2017	2016	2017	2016	2017	2016	2017
Business EER - Standard	1.48	1.54	1.71	1.84	2.54	3.63	1.93	1.53	0.71	0.93
Business EER - Custom	1.08	1.02	1.39	1.27	1.48	1.65	2.19	1.32	0.63	0.73
Block Bidding	N/A	0.56	N/A	0.71	N/A	0.66	N/A	2.06	N/A	0.44
Strategic Energy Management	N/A	5.06	N/A	5.42	N/A	5.06	N/A	14.10	N/A	0.63
Small Business Lighting	0.74	1.00	0.85	1.20	0.86	1.64	1.63	1.34	0.46	0.72
Business Programmable Thermostat	2.09	1.82	2.42	2.11	2.83	2.91	0.97	0.30	1.97	2.41
Demand Response Incentive	13.56	7.59	13.56	7.59	3.02	2.42	433.33	INF*	3.02	2.42
Whole House Efficiency	0.88	1.19	1.09	1.41	1.40	1.98	1.15	1.68	0.69	0.71
Home Lighting Rebate	1.69	1.12	1.98	1.24	2.05	1.77	4.26	3.14	0.51	0.44
Income-Eligible Home Energy Report	0.59	0.43	0.59	0.43	0.59	0.43	INF*	INF*	0.34	0.24
Home Energy Report	2.06	1.26	2.06	1.26	2.06	1.26	INF*	INF*	0.54	0.43
Residential Programmable Thermostat	1.63	2.33	1.89	2.70	2.06	4.67	1.21	0.76	1.39	2.50
Income-Eligible Multifamily	0.85	1.29	0.95	1.41	0.85	1.29	INF*	INF*	0.35	0.40

* Ratios are infinite because there are positive benefits and no participant costs.

Using the PCT test, all programs are cost-effective from the participant perspective, except the Business and Residential Programmable Thermostat Programs. Ten programs are not cost-effective under the RIM test.

6 Audit Conclusions

A review of PY2017 evaluation report indicates that the reports and appendices are well written, complete, and meet the minimum requirements for impact and process evaluations stipulated in 4 CSR 240-22.070(8). The evaluation methods and reports are also consistent with the best practices established for the industry. During the course of the audit, we have identified a few areas where we believe that the evaluations can be improved, and these recommendations are detailed throughout this audit report.

Many of the initial issues raised by the audit team on the draft evaluation reports were addressed in the final evaluation report. Because of the discussions and modifications made to the draft evaluation reports, we are not recommending any additional changes to the PY2017 savings.

The remaining issues are highlighted below, beginning with crosscutting issues relating followed by a few program-specific issues. For the remaining unresolved issues, the audit team and Navigant have already agreed to meet in early 2019 to develop solutions that will be applied to future evaluations.

Crosscutting Issues

Process for using secondary sources / Statewide TRM

During the review of the draft evaluation reports, the audit team had several conversations with Navigant regarding the need to outline a clear process on when in-state or out-of-state data are used to calculate savings. While this has been explained to some degree in the final evaluation report, there still does not appear to be a consistent process on how this is determined, other than evaluator judgment.

To help address this issue and make the entire process more consistent, we recommend that KCP&L utilize the statewide Missouri Technical Reference Manual (TRM)[7] when possible. The current Missouri TRM (updated March 31, 2017) can continue to be modified and updated as needed to meet program needs. If there are deviations from the official Missouri TRM values, then the evaluation report should clearly document why the alternative values are an improvement over the Missouri TRM.

Utilizing the statewide Missouri TRM would also have the advantage of applying consistent savings values and algorithms for Ameren MO and KCP&L for measures that are common to both utilities. The Missouri TRM can also be amended to include protocols

[7] The latest version of the Missouri TRM can be found at https://energy.mo.gov/sites/energy/files/MOTRMOrigins.pdf

for estimating free ridership and spillover, so that net savings can be assessed consistently across both utilities.

Self-report free ridership and spillover calculations

In the audit team comments on the draft evaluation reports, we noted some inconsistencies with how the free ridership and spillover self report questions were scored. Many of these questions utilize a 5-point rating scale, and for these questions we recommend that the scoring be done in even increments across the scale (i.e., 0=0%, 1=25%, 2=50%, 3=75%, 4=100%). For all questions utilizing a scale rating, we recommend that this incremental scoring be applied consistently for all questions used in the free ridership and spillover calculations.

This issue was addressed in the final evaluation report, but we are noting it here for documentation purposes.

Program-specific Issues

Home Lighting Rebate Program

Estimating potential spillover from an upstream lighting program is very challenging, since customers often do not realize how the program is influencing their lighting purchase decisions. The current method utilized by the Navigant evaluation team relies on intercept surveys of lighting purchasers to gauge the potential influence of several program components. It has a set of questions and scoring algorithm that is similar to that used to estimate free ridership.

While the intercept method has some advantages, a significant challenge is that there is a very limited amount of time in which to ask questions, as most respondents are not willing to answer questions at a store for more than a few minutes.

The current approach appears to do an adequate job of asking about the importance of several program factors (program events, information) on the choice of non-program LED's and these responses provide some idea of how important these factors are in the lighting purchase decision. Those respondents that provide the highest importance ratings are identified as spillover.

What this method is lacking, however, is a similar set of questions to get at non-program influences on these same bulb purchases. It may be that the program factors were important, but that other non-program influences were ***even more*** important. These could include the need for bulbs of special color or size, and/or the lower prices of the non-program options. From the current method, it is not possible to weigh the importance placed on the program versus non-program factors since the non-program factors were not addressed in the surveys. The Navigant team maintains that the current method does

adequately address the non-program influences, but we believe that the survey should walk through possible non-program factors so that the respondents actively consider both sides when they provide their influence ratings.

We recognize that there is not enough time with the customer to add questions to the intercept survey – the resulting survey battery would be too long to reasonably administer at the store. But despite this, we believe that the non-program influences still need to be accounted for in the spillover estimate.

Given the disagreement on this issue along with the general difficulties with estimating spillover for this upstream program, the audit team and Navigant will meet in early 2019 to discuss developing a negotiated deemed spillover adjustment, which is a process that is used in other states.

Home Energy Reports

We understand that the PY2017 impact estimates for the HER program were based on a billing regression model that was estimated as part of the PY2016 evaluation. We are reiterating an issue that we first raised last year about how the model accounts for participation in other efficiency programs. We have been discussing this issue with Navigant and will meet with them in early 2019 to determine how the billing regression model should be revised to address this issue.

The issue we raised in the PY2016 audit relates to how participation in other efficiency programs is addressed in the impact analysis. The comparison between the treatment and control groups in the pre-period should include a comparison of participation rates in the other KCP&L/GMO energy efficiency programs ***during the pre-period***. It is not enough to simply adjust the regression results for the post period to account for 'uplift' that is attributable to the HER program.

Differences between the groups in program participation in the pre-period can affect the savings estimates in two ways. First, if there are differences in program participation rates, then some of the observed savings from the HER in the post-period should be attributed to the other efficiency programs. Second, the estimate of program uptake in the post-period will also be affected if there are already unequal levels of program participation in the pre-period. The magnitude of both these effects can be estimated by including a variable for program participation in the billing regression, if in fact there are differences in participation rates between treatment and control groups.

As noted above, we will be discussing this issue with Navigant in early 2019 and anticipate that it will be resolved for the next evaluation.

Whole House Efficiency

The PY2017 evaluation report has been updated to reflect reduced cooling EFLH, which addresses some of the previous concerns from the audit team about the estimated savings for this program.

The audit team and Navigant continue to disagree about the validity of the verified demand savings for early retirement CAC's, however. We believe that the estimated demand savings from the evaluation are higher than what can be reasonably be expected for early retirements, even assuming that the pre-case CAC units are operating at 100 percent load during peak periods.

The audit team recommends a billing analysis approach going forward to verify the savings for early retirement cooling measures, which should address our concerns about the savings calculations and eliminate the need to set values for the various input parameters that are currently used in the savings calculations.

The audit team and Navigant met three times in 2018 to discuss these issues and were able to reach some mutually agreeable solutions for some of our concerns. Given this progress, we are not recommending any changes to the PY2017 savings values, and Navigant has agreed to work with the audit team in early 2019 to revise the estimation methods and address the remaining issues for the PY2018 evaluation.

As with the other outstanding issues, Navigant and the audit team will meet in early 2019 to determine a mutually agreeable approach for addressing these issues beginning with the PY2018 evaluations.

Appendix A: Full Process Evaluation Responses to Minimum Question Requirements

The following appendix provides a summary of the detailed responses to minimum process evaluation requirement questions.

Table 17: Minimum Process Evaluation Questions

Issue Number	Question
Issue 1	What are the primary market imperfections common to the target market segment?
Issue 2	Is the target market segment appropriately defined, or should it be further subdivided or merged with other market segments?
Issue 3	Does the mix of end-use measures included in the program appropriately reflect the diversity of end-use energy service needs and existing end-use technologies within the target market segment?
Issue 4	Are the communication channels and delivery mechanisms appropriate for the target market segment?
Issue 5	What can be done to more effectively overcome the identified market imperfections and to increase the rate of customer acceptance and implementation of each end-use measure included in the program?

Table 18: Issue 1 - What are the primary market imperfections common to the target market segment?

Program	2016 Summary Response	2017 Summary Response
Business EER - Standard	The C&I customer—and especially the smaller customer—has limited resources, including time and money, to devote to researching and implementing energy conservation. • The Standard program is successfully building market awareness of energy efficiency options. 76% of survey respondents were not originally planning to implement energy efficient measures, and 87% indicated that without the program they would have chosen less efficient options. Further, almost half (48%) of respondents indicated they went on to purchase additional energy efficient measures due to program participation and rebates. • KCP&L is successfully engaging the smaller C&I customers; the participant survey indicated that 78% of participants had less than 100 employees. The participant survey also indicated that many customers rely on the trade ally's advice regarding energy efficiency as 68% of customers heard about the rebate through their contractor. And finally, 76% of the customers had not selected the purchased equipment prior to learning about the program. • The Standard program has influenced the trade allies: 53% of respondents showed that they now offer higher efficiency equipment as their first recommendation to their customers, and 63% of the respondents are adding new high efficiency products to their offerings.	Smaller C&I customers have limited resources for researching energy conservation. Developing targeted marketing materials can help these customers implement energy conservation measures. • KCP&L focused on developing targeted marketing materials for certain segments to help explain the benefits of implementing energy conservation. For example, KCP&L developed a good, better, best marketing campaign for high bay lighting to make comparing LED high bay fixtures to metal halide or linear fluorescent fixtures more straightforward. Alongside this marketing campaign, they created a sales incentive specifically for LED high bays for the trade-allies to encourage them to sell before the end of the year. While most high bay measures were installed in larger facilities such as industrial sites or warehouses, over 30% of the high bay projects in PY2017 were installed in Retail, School, Office, and Other building types. This indicates that high bay measures are present in many building types and marketing campaigns may increase uptake of these measures independent of facility size. The good, better, best analysis for high bays also provided a framework that the business owner could use for other applications.
Business EER - Custom	Customers have a limited awareness of the breadth of end uses and projects that qualify for Custom incentives.	The custom program targets various, complex projects that require concerted effort beyond those in the standard program. In doing so, it rewards participants with greater savings and value by going beyond the lowest price point or fastest payback.

Program	2016 Summary Response	2017 Summary Response
Block Bidding	The caps for the Standard and Custom programs create a barrier for large customers whose projects could be into the millions of dollars.	Large customers targeted by the Block Bidding program pose two unique challenges, which KCP&L is actively trying to address. First, large customers have often opted out of KCP&L's rebate programs because incentive caps precluded them from getting out the same value that they are putting in to the program, limiting the pool of Block Bidding-eligible customers. Second, large projects are complex and have long lead times (often 18+ months) that do not fit into annual rebate program timelines. KCP&L took the following steps to address these problems: • For PY2017, KCP&L used a split cap, meaning that projects that are over the Custom program's incentive cap of $100,000 or the Standard program's incentive cap of $400,000 will be eligible to participate in the Block Bidding program. o Both completed projects for PY2017 exceeded their Custom incentive cap. • A new component, the Buy Now option, helps overcome the second barrier by allowing customers whose project timelines do not align with the scheduled auction dates to still take advantage of BB funds. o Both completed projects for PY2017 used the Buy Now option. • KCP&L is flexible in extending project completion dates if the project or TA demonstrates sufficient movement toward completion.

Program	2016 Summary Response	2017 Summary Response
SEM	The primary market imperfections are that customers have a limited amount of time and money to devote to energy conservation. • There are number of factors that are cost- or time-prohibitive for many C&I customers: • The cost of having an outside expert perform an extensive onsite assessment • The cost and time to submit a report outlining identified measures • The cost and time to develop the onsite expertise on how to implement the recommended measures In addition, many C&I customers do not have the time needed to oversee or facilitate an effort such as SEM.	The primary market imperfections are that customers have a limited amount of time and money to devote to energy conservation. • There are number of factors that are cost- or time-prohibitive for many C&I customers: • The cost of having an outside expert perform an extensive onsite assessment • The cost and time to submit a report outlining identified measures • The cost and time to develop the onsite expertise on how to implement the recommended measures In addition, many C&I customers do not have the time needed to oversee or facilitate an effort such as SEM.
Small Business Lighting	The primary market imperfection common to the target market for this program is that most SBL customers have less resources and money to pursue the EE projects. • Typically, small business customers tend to be on fixed tight budget and cannot afford to spend extra resources, time, and money on energy efficiency projects. Participant survey results support this, as 70% of the survey respondents suggested that they would have either not installed efficient lights or would have postponed the installation by at least a year in the absence of the program.	A major market imperfection identified through this program was the time and money needed to participate in these types of activities. KCP&L is considering creating a Shared Energy Manager position to help the customers save both time and money.

Program	2016 Summary Response	2017 Summary Response
Business Programmable Thermostat	The primary market imperfection the PT programs address is that residential and small commercial customers have little incentive to reduce electricity usage during peak periods given the rate structures in place at most utilities. As a result, utilities use thermostat programs to obtain needed demand reductions using opt-in designs. • KCP&L can call curtailment events during which Nest cycles participants' HVAC systems to achieve aggregate demand reductions. If DR resources are large enough, they can offset enough demand to delay or avoid the need to purchase power at spot market prices or invest in new sources of generation to meet peak summer demand. DR is a form of negative generation and can be called on during periods of high demand in the same manner as a peaking power plant might be built and brought online to serve the same end, but at a lower cost. • In addition, the Nest learning thermostat adjusts to customer behavior year-round enabling energy savings throughout the year—not only during event hours. Unlike the previous Honeywell thermostats, customers can remotely control their Nest devices, which also enable year-round energy savings.	Utilities use residential and small commercial thermostat DR programs to obtain needed demand reductions. The programs address the fact that traditional rate structures do not provide customers appropriate incentives to reduce electricity usage during peak periods. • KCP&L calls curtailment events during which Nest cycles participants' HVAC systems to achieve aggregate demand reductions. If DR resources are large enough, they can offset enough demand to delay or avoid the need to purchase power at spot market prices or invest in new sources of generation to meet peak summer demand. DR is a form of negative generation and can be called on during periods of high demand in the same manner as a peaking power plant might be built and brought online to serve the same end, but at a lower cost. • In addition, the Nest learning thermostat adjusts to customer behavior year-round; this enables energy savings throughout the year, not only during event hours. Unlike the previous Honeywell thermostats, customers can remotely control their Nest devices, which also enable year-round energy savings.
Demand Response Incentive	A barrier to participating in the DRI program is that businesses do not have automatic load curtailment. • Manual load shedding limits the ability of these businesses to participate in DR programs like DRI that require them to reduce a significant amount of load with minimal notice. Securing automated load reduction technologies is not currently cost-effective for many customers and cannot be accomplished using the financial incentives provided by the DRI program alone. As such, a subset of businesses is not able to participate in this program.	Two main barriers for participating in the DRI program are: (1) businesses do not have automatic load curtailment; and (2) for some customers, the point of contact (as indicated on the contract) neglected to pass the event notification onto the individual who can manually curtail load at the customer site.

Program	2016 Summary Response	2017 Summary Response
Whole House Efficiency	The program operations manual identifies lack of education for both end-use consumers and trade allies as a primary barrier to residential energy efficiency upgrades, along with high upfront costs—particularly for HVAC purchases. Surveyed participants and trade allies alike support that view. • Some participants in the Home Energy Audit and Energy Savings Kit program track indicated a desire for more detailed information than is provided in the home assessment report, particularly on measure costs. • The surveyed HVAC trade allies indicated that the primary barriers to residential customers upgrading to high efficiency HVAC equipment are cost and an unwillingness to replace equipment that is still functioning. o As shown in Figure 7-1, while nearly all (83%) trade allies stated that the high cost was one of the top three barriers, most trade allies rated the unwillingness to do an early replacement project as the most significant barrier (42% vs. 21% for high cost). Trade allies also indicated that the program had a significant effect on their customers' willingness to replace still-functioning equipment, indicating that the program is having some success in addressing this barrier.	The program Operations Manual identifies lack of education for both end-use consumers and trade allies as a primary barrier to residential energy efficiency upgrades, along with high upfront costs—particularly for HVAC purchases. Surveyed participants and trade allies alike support that view. • Cost continues to be a barrier to residential energy efficiency upgrades, especially for HVAC purchases. However, increased Tier 3 participation may be an indicator that the program is having some success addressing this barrier by affecting customers' willingness to replace still- functioning equipment. This aligns with the reports from trade allies during the PY2016 surveys and with input provided by the program's product manager and implementation manager in PY2017.

Program	2016 Summary Response	2017 Summary Response
Home Lighting Rebate	The program seeks to address imperfections of price, availability, and consumer knowledge of efficient lighting choices. The program has made strong progress on each, offering incentives that reduce the shelf price of LEDs, diversifying the retail channels and venues through which consumers can buy supported LEDs, and engaging in marketing and educational campaigns that explain the benefits of energy efficient lighting.	The program seeks to address imperfections of price, availability, and consumer knowledge of efficient lighting choices. The program has made strong progress on each, offering incentives that reduce the shelf price of LEDs, diversifying the retail channels and venues through which consumers can buy supported LEDs, and engaging in marketing and educational campaigns that explain the benefits of energy efficient lighting. The great success of the program in PY2016 led to budget reductions to maintain Cycle 2 portfolio spending caps. Therefore, the program now focuses primarily on reducing the shelf price and increasing the availability of specialty LEDs.
Income-Eligible Home Energy Report	Some residential customers do not understand how their behaviors, appliances, and electronic devices can affect their energy use and contribute to their monthly bills. Customers are also unaware of cost-effective strategies to reduce energy in their home. • The PY2016 program targeted over 125,000 customers for the HER program and over 20,000 for the IE-HER program to receive reports. • Based on responses to the CET survey, 71% of treatment customers agree that KCP&L provides tools to help customers learn about energy use. • While more customers cite the similar homes comparison as a feature they like about the home energy reports, a small number of customers question the accuracy of the similar homes comparison.	Some residential customers do not understand how their behaviors, appliances, and electronic devices can affect their energy use and contribute to their monthly bills. Customers are also unaware of cost-effective strategies to reduce energy in their home. • The PY2017 program targeted over 102,000 customers to receive five HERs. An additional 25,000 customers served as a control group in the experimental design. The PY2017 IE-HER program targeted over 15,000 customers to receive five HERs, with 9,000 customers in the control group. • Based on responses to the CET, 73% of treatment customers agree that KCP&L provides tools to help customers learn about energy use. Furthermore, 71% of treatment customers report that the energy efficiency tips on the report are useful, while 61% report that the HERs help the customer make better decisions to use and save energy.

Program	2016 Summary Response	2017 Summary Response
Home Energy Report	Some residential customers do not understand how their behaviors, appliances, and electronic devices can affect their energy use and contribute to their monthly bills. Customers are also unaware of cost-effective strategies to reduce energy in their home. • The PY2016 program targeted over 125,000 customers for the HER program and over 20,000 for the IE-HER program to receive reports. • Based on responses to the CET survey, 71% of treatment customers agree that KCP&L provides tools to help customers learn about energy use. • While more customers cite the similar homes comparison as a feature they like about the home energy reports, a small number of customers question the accuracy of the similar homes comparison.	Some residential customers do not understand how their behaviors, appliances, and electronic devices can affect their energy use and contribute to their monthly bills. Customers are also unaware of cost-effective strategies to reduce energy in their home. • The PY2017 program targeted over 102,000 customers to receive five HERs. An additional 25,000 customers served as a control group in the experimental design. The PY2017 IE-HER program targeted over 15,000 customers to receive five HERs, with 9,000 customers in the control group. • Based on responses to the CET, 73% of treatment customers agree that KCP&L provides tools to help customers learn about energy use. Furthermore, 71% of treatment customers report that the energy efficiency tips on the report are useful, while 61% report that the HERs help the customer make better decisions to use and save energy.
Residential Programmable Thermostat	The primary market imperfection the PT programs address is that residential and small commercial customers have little incentive to reduce electricity usage during peak periods given the rate structures in place at most utilities. As a result, utilities use thermostat programs to obtain needed demand reductions using opt-in designs.	Utilities use residential and small commercial thermostat DR programs to obtain needed demand reductions. The programs address the fact that traditional rate structures do not provide customers appropriate incentives to reduce electricity usage during peak periods.

Program	2016 Summary Response	2017 Summary Response
Income-Eligible Multifamily	The target market for this program is a low-income, multifamily resident, targeting both owners and tenants. This market has limited capital availability and low awareness of EE options. • The primary difficulty in this market is the inability of income-eligible tenants to afford EE measures, as well as the limited incentive for the owners to increase EE when the tenants pay the utility bills. Another obstacle to this market is lack of knowledge—many customers may not be aware of the extent to which increasing EE could lower their energy use and their energy bills.	The target market for this program is low income, multifamily residents, targeting both owners and tenants. Program implementation staff reports that a key barrier to penetrating the target market is the ability to identify qualifying properties (discussed in more detail in Question 2.) In addition, as found in the PY2016 evaluation, the target market generally has limited capital availability and low awareness of energy efficiency options. • The program has prioritized direct outreach to building owners/managers to increase awareness of the IEMF program and energy efficiency opportunities. Program staff reports that the direct outreach and in-person efforts have been the most effective outreach strategy to increase program awareness and encourage participation among this customer segment.

Table 19: Issue 2 - Is the target market segment appropriately defined, or should it be further subdivided or merged with other market segments?

Program	2016 Summary Response	2017 Summary Response
Business EER - Standard	KCP&L has a well-defined target market (C&I) for the Standard program. No further subdivisions appear necessary given current program participation. • All three of KCP&L's C&I customer classes have participated in the Standard program. • KCP&L has made a concerted effort to engage trade allies, as this group interacts with the customer in the early stages of a new project. Engaging the customer early in the process has been a key goal for all the C&I programs. • Contractors (68%) and the KCP&L website (11%) are the primary sources from which participants are learning about the Standard program's measures. These resources and self-outreach are promising, though they indicate there is a potential opportunity to increase cross-program promotion (4%) as a way for customers to gain awareness about the program	KCP&L has a well-defined target market (C&I) for the Standard program. No further subdivisions appear necessary given current program participation. • All of KCP&L's C&I customer classes have participated in the Standard program. • KCP&L considers the Custom program complimentary to the Standard program since both programs target some of the same customers but focus on different measures. • KCP&L is actively tracking the sales cycle to understand sales conversion from prospective to completed projects in the targeted market. They are working to identify areas to improve sales conversions of all customer types.

Program	2016 Summary Response	2017 Summary Response
Business EER - Custom	KCP&L-MO has a well-defined target market for the Custom program. • All three of KCP&L-MO's C&I customer classes have participated in the Custom program. The program does tend to have more participants from the Tier 1 industrial and large commercial sectors due to their ability to implement larger projects with end uses not captured in the Standard program. • KCP&L-MO has made a concerted effort to engage trade allies and design professionals as these two groups interact with the customer in the early stages of new construction or facility expansion. Engaging the customer as early in their design process as possible has been a key goal for the C&I programs. • KCP&L-MO has been identifying the four greatest vertical sectors for opportunities; these are data centers, manufacturing, K-12 schools, and municipalities.	KCP&L is narrowing its target market segment for the purpose of new customer acquisition. The program would benefit from continued alignment of its trade ally network with these efforts. • KCP&L identified K-12 schools, data centers, and new construction projects as its target market segments for the Custom program in PY2017. • One customer was a school and one customer was a data center in PY2017. • Navigant confirmed with CLEAResult that new construction projects are tracked within the program tracking system. Navigant will request this information in PY2018 to better understand whether new construction participation is increasing in response to program efforts.
Block Bidding	While a participant may win a bid, they may not be able to implement energy efficient projects. • In PY2016 there were three winning bids out of five auctions. However, only one customer successfully implemented their project. • Navigant recommends monitoring customer participation for PY2017. If the initial bidding processes do result in the level of kilowatt-hour savings anticipated, KCP&L could expand the marketing of this program to the medium-sized customer.	The target market is defined as any customer or trade ally with a large enough capacity to exceed the Custom or Standard incentive cap, and achieve 1 million kWh in savings. KCP&L saw limited participation amongst existing customers in past years and in response is looking to update the Block Bidding target market to increase participation.

Program	2016 Summary Response	2017 Summary Response
SEM	KCP&L has a well-defined target market for the SEM program. KCP&L's SEM team works with its key accounts team to identify high energy usage customers with approximately 20 MWh of annual consumption and then validates whether these customers have the savings potential to participate in the program by conducting onsite visits. • To achieve this ideal megawatt-hour threshold, KCP&L targets customers from the industrial sector and commercial customers from the public sector (customers with multiple sites that have shared knowledge and experiences between their sites, which includes healthcare, municipalities, and schools). • This limited market fits well with the program structure; it also helps facilitate group training and the ability for sites to interact at a similar level during the training. In the future, the program may have to target smaller customers with a more diverse mixture of building types and operations. As this occurs, the program should carefully construct the cohorts so that customers with similar operations are grouped together. This way training can be targeted to meet the needs of these customers and peer interaction will be more valuable for the participants.	KCP&L has a well-defined target market for the SEM program. KCP&L's SEM team works with its key accounts team to identify high energy usage customers with approximately 10 MWh of annual consumption and then validates whether these customers have the savings potential to participate in the program by conducting onsite visits. • To achieve this ideal megawatt-hour threshold, KCP&L targets customers from the industrial, commercial, and public (customers with multiple sites that have shared knowledge and experiences between their sites, including healthcare, municipalities, and schools) sectors.

Program	2016 Summary Response	2017 Summary Response
Small Business Lighting	KCP&L has a well-defined target market for the SBL program. The SBL program targets small business customers who have a peak demand of 100 kW or lower at a single site31. Targeting customers with this lower demand identifies the small business owner who characteristically has limited resources in time and money. The SBL program removes these obstacles to encourage participation. Additionally, when a trade ally applies for an incentive through the SBL program, their application goes through a pre-approval process where the program team checks the eligibility of the project. This way the program team makes sure the projects coming through are eligible for the SBL program. Continue current efforts as they are showing traction with both trade allies and participants.	KCP&L made some small adjustments in PY2017 to the qualification criteria to further define the customer segment for the SBL program. • The SBL program targets small business customers who have an average monthly coincident peak demand of 100 kW or lower. This kilowatt cap applies if it is a single account and single meter, or if there is a single account with multiple meters, or if the customer has multiple accounts and multiple meters. The previous threshold was 250 kW for multiple meters or multiple accounts, but KCP&L and the implementer changed this to better target the small business customer. The lower demand helps to identify the small business owner who could benefit from additional incentives and education about efficient lighting measures. • Some additional groups that might benefit from the higher incentives and additional energy efficiency (EE) education are non-profit organizations such as churches or community centers. These organizations tend to have limited budgets for improvements. However, in some cases these organizations did not qualify for the SBL program due to their coincident demand being higher than 100 kW. • All applications submitted to the SBL program by a trade ally goes through a preapproval process where the implementer confirms that the project is eligible for the program. This allows for the program to be consistent in which customers are part of the SBL program.

Program	2016 Summary Response	2017 Summary Response
Demand Response Incentive	The target market segment is defined as all commercial customers that can reduce their demand to at least 25 kW below estimated peak usage when a curtailment event is called between June 1 and September 30 of a given year. To date, the program has focused on customers with the highest savings potential to maintain a cost-effective program. There is still an opportunity to recruit as the program is cost-effective. In PY2016, the program had eight Tier 1 participants. In PY2017 and PY2018 the target market will need to expand to include customers with smaller loads as the list of Tier 1 customers will have been exhausted after PY2016. KCP&L is working with CLEAResult on methods to accomplish this task. When the program expands, Navigant suggests focusing on reaching high impact customers first to best maintain cost-effectiveness.	The target market segment is defined as all commercial customers that can reduce their demand to at least 25 kW below estimated peak usage when a curtailment event is called between June 1 and September 30 of a given year.
Whole House Efficiency	KCP&L's primary target audience for this program is broadly defined as owners of single-family homes, although 2-4 unit residences and renters are also eligible. KCP&L's product manager indicated that the program is especially interested in engaging homeowners with older heat pumps because of the high potential for electricity savings. Surveyed trade allies note that the customers that participate in energy efficiency programs tend to be higher income households in the suburbs. When asked if there are customer types who would benefit from the program but are not currently participating, one trade ally specifically noted neighborhoods with many older homes as a good target for weatherization measures (Brookside, Waldo) and downtown. Consider geotargeting online advertising or mailings to neighborhoods with a high density of older homes.	KCP&L's primary target audience for this program is broadly defined as owners of single-family homes, although 2-unit to 4-unit residences and renters are also eligible. • The program continues to target single-family homes and 2-unit to 4-unit residences. The implementation team has employed participant targeting techniques to identify homes with large savings potential based on the concentration of single-family homes within a community, the age of those homes, previous program participation patterns in the community, and demographics.

Program	2016 Summary Response	2017 Summary Response
Home Lighting Rebate	The program appropriately defines the target market as all residential customers, although the evaluation results suggest that targeted marketing may help recruit additional hard- to-reach (HTR) customers (i.e., income-eligible households, renters, non-English speaking households, bargain store shoppers). The evaluation found that HTR shoppers are less familiar with LEDs and less likely to report buying LEDs in the past 6 months. Based on consumer survey responses, it appears that HTR customers have less familiarity and experience with energy efficient lighting, especially LEDs. For example: o Income-eligible and renter respondents were significantly less likely than their counterparts (non-income-eligible and homeowner) to be somewhat or very familiar with LEDs. o Less than one-third of frequent bargain store shoppers reported purchasing LEDs in the past 6 months, while roughly three-fifths of non/infrequent bargain stores shoppers (61%) reported doing so. Navigant suggests that the program consider sharpening its educational and marketing efforts geared toward HTR customers. Continue to partner with bargain stores, and, if possible, offer less expensive ENERGY STAR LEDs that exceed the life and light quality of CFLs at bargain stores.	The program appropriately defines the target market as all residential customers. PY2016 results suggested that targeted marketing may help recruit additional hard-to-reach (HTR) customers (i.e., income-eligible households, renters, non-English speaking households, bargain store shoppers), but the recent incentive budget reductions have limited the ability of KCP&L-MO and the IC to expand outreach to HTR customers. • Although many materials are available in both English and Spanish, the program did not develop marketing that specifically targeted HTR customers. This is appropriate given the need to manage HTR program expenditures to the remaining budget. The program will continue to provide incentives and marketing support for standard LEDs in the discount channel, which disproportionately serves the HTR population.

Program	2016 Summary Response	2017 Summary Response
Income-Eligible Home Energy Report and Home Energy Report	The target market segment is appropriately defined as residential customers in single family homes. The initial waves included the highest energy users. As the program adds waves, the new waves include customers beyond the highest energy users. In 2014, KCP&L-MO added the IE-HER program to the portfolio to expand the reports to additional customer segments.	The target market segment is appropriately defined as residential customers in single- family homes. • The initial waves included the highest energy users. • As the program adds waves, the new waves include customers beyond the highest energy users. For example, the 2016 wave includes customers that have lower baseline energy use (about 25 kWh per day compared to 32 kWh per day for the 2014 High Users wave). • IE-HER targets low income customers with messaging that focuses on low cost and no cost energy-saving tips.
Residential and Business Programmable Thermostats	The target market is residential and small commercial customers. It is appropriately defined because large C&I customers have the Demand Response Incentive program. This program, which addresses both residential and C&I customers, is well accepted by the market. Currently the target market does not need to be further subdivided as it is meeting and exceeding program targets. In the coming PY consider targeting Honeywell replacements for customers with large HVAC loads per thermostat.	The target market appropriately addresses residential and small commercial customers. The Demand Response Incentive (DRI) program provides DR opportunities for large C&I customers.

Program	2016 Summary Response	2017 Summary Response
Income-Eligible Multifamily	The market for income-eligible multifamily is well-defined and does not need to be consolidated or expanded because the program explicitly defines the population using Federal Poverty Guidelines. • KCP&L-MO defines the target market of income-eligible customers as multifamily properties that are either subsidized or occupied by more than 50% tenants who have household incomes below 200% of the Federal Poverty Income Guidelines, which translates to less than $23,760 per year for a single person or $48,600 per year for a family of four.	The market for income-eligible multifamily is currently defined using the federal poverty level income guidelines and is largely limited to federally subsidized properties as identified in the National Housing Preservation database. Program staff report that a key barrier to participation is determining other non-subsidized properties that might be eligible for participation in the IEMF program. • KCP&L-MO defines the target market of income-eligible customers as multifamily properties that are either subsidized or occupied by more than 50% tenants who have household incomes below 200% of federal poverty level income guidelines, which translates to less than $23,760 per year for a single person or $48,600 per year for a family of four.

Table 20: Issue 3 - Does the mix of end-use measures included in the program appropriately reflect the diversity of end-use energy service needs and existing end-use technologies within the target market segment?

Program	2016 Summary Response	2017 Summary Response
Business EER - Standard	While the Standard program addresses a participant's HVAC, lighting, and refrigeration energy end-uses, 89% of the rebate activity in PY2016 was for lighting measures. • The Standard program complements the other Business EER programs by providing rebates for the more typical capital projects. • Almost three-quarters of trade allies surveyed (72%) replied with no additional measures suggested. For those suggesting measures (two out of 19), there was no clear overlap in suggestions, with one suggesting only including lighting controls (dimmers) and the other suggesting low volume HVAC measures for consideration.	While the Standard program addresses a participant's water heating, lighting, refrigeration, and manufacturing energy end-uses, 95% of the projects in PY2017 were for lighting measures. • The Standard program complements the other Business EER programs, specifically the Custom program, by providing rebates for the more straightforward projects. KCP&L is working to better align the two programs. • From the customer perspective, the Standard program and the Custom program are one program not two programs. Most of the measures that are not covered by Standard are covered by another program. The program is not intended to stand alone from the customer perspective but be considered an integrated C&I portfolio.
Business EER - Custom	The Custom program addresses the participant's energy end uses that do not fall under KCP&L-MO's other C&I programs.	The Custom program complements the Standard program and provides a diverse mix of end-use measures that do not qualify for Standard rebates. Projects with incentives of more than $100,000 exceed the Custom cap and will be eligible for the Block Bidding program.

Block Bidding	The Block Bidding program addresses participant energy end uses for energy efficient projects that exceed the financial caps of KCP&L's other C&I programs. The Block Bidding program encompasses all end uses and addresses projects saving more than 1 million kWh per year. These projects could possibly go across multiple buildings or properties to allow for greater savings. For PY2017, projects that are over the Custom program's rebate cap of $100,000 or the Standard program's rebate cap of $400,000 will be eligible to participate in the Block Bidding program. Navigant recommends monitoring the balance between programs to ensure goals are continuously being met. The Block Bidding program is a complement to KCP&L's Business EER – Custom and Standard programs. As a combination, these three programs will address the EE needs of the large C&I customer. KCP&L could monitor the end uses and the quantity of savings in these three programs to ensure the program is capturing a new market.	The Block Bidding program addresses participants' need for large energy efficient projects that exceed the financial caps of KCP&L's other C&I programs. While the program should remain open-ended in terms of the measures that are eligible, KCP&L is working to identify specific end use measures for targeted marketing that are most likely to make up these larger projects. • The Block Bidding program encompasses all end uses and addresses projects that save more than 1 million kWh per year. Projects can be implemented across multiple buildings or properties to allow for greater savings. • KCP&L initiated informal conversations with new TAs and players in the aforementioned target segments, and past customers, to better understand which end use measures fit these customers' specific needs. • Both completed projects for PY2017 were lighting upgrades for customers who exceeded their Custom cap across several different projects.

SEM	The SEM program addresses all the major energy end-uses for a participant. The SEM program focuses on behavior-based and no-cost/low-cost measures that may fall under any major end use. For the SEM program, it is difficult to answer this question as the measures implemented are on a case-by-case basis. Overall, the SEM program can address any end use at a facility if there are possible behavior- based, no-cost/low-cost measures available. Other Business EER programs like Standard and Custom are available to address non-behavior-based needs. several end uses may need special attention to maintain the program savings realized. Navigant suggests that KCP&L consider creating a program that could address measures that require regular maintenance or upkeep to realize savings. These measures include air compressor leak detection and repair and boiler tune ups. These measures have significant effects on the site's energy usage; however, due to their short measure life, they need to be maintained on a regular basis.	The SEM program addresses all the major energy end-uses for the majority of participants. • The SEM program focuses on behavior-based and no cost/low cost measures that may fall under any major end use. • Overall, the SEM program can address any end use at a facility if there are possible behavior- based, no cost/low cost measures available. Other Business EER programs like Standard and Custom are available to address non-behavior-based needs.
Small Business Lighting	The SBL program provides lighting measures for small business customers. with 62% of the trade ally survey respondents indicating they were happy with the program offerings. • For trade allies providing suggestions for other measures, there was not a clear, consistent suggestion. Suggestions included breaking out exterior to more detailed measures, specifically targeting plug-in CFLs, and allowing all linear replacement lengths instead of the current limited categories. Continue with lighting as the only end use at this time as it is a significant end use for small businesses. Continue to monitor trade ally feedback for potential additional measures that should be considered for program inclusion.	The lighting measures provided by the SBL program cover the wide range of lighting types that may be present in a small business. Expanding to other end-use categories may be worth considering for Cycle 3 as part of a small business direct install program. • The incentives available for the SBL program range from less than $1 for a 28 W 4-foot fluorescent lamp to more than $450 for LED high bay fixtures replacing a fixture with more than 750 W. This large range in available rebates exemplifies the diversity of lighting measures available in the SBL program. • If the SBL program were to expand to another end-use category, other rebates could focus on heating or cooling measures, water saving measures, or refrigeration measures.

Demand Response Incentive	The mix of end-use measures included in the program appropriately reflects the diversity of end-use energy service needs and existing end-use technologies within the target segment. Participants control how they meet their demand reduction obligations through curtailing or rescheduling end uses, using backup generators, or both. End-use options that can be chosen include but are not limited to: rescheduling use to off-peak time; temporarily shutting down factory production lines; reducing motor, process, lighting, and cooling loads; and turning off or lowering water heater set points. For DRI customers that produce their own onsite electricity, it would be useful for KCP&L-MO to develop a method to include their net power received in the interval data.	The mix of end-use measures included in the program appropriately reflects the diversity of end-use energy service needs and existing end-use technologies within the target segment. • There was no change in mix of end-use measures in PY2017. Participants control how they meet their demand reduction obligations through curtailing or rescheduling end uses, using backup generators, or both. • End-use options that can be chosen include but are not limited to: rescheduling use to off-peak time; temporarily shutting down factory production lines; reducing motor, process, lighting, and cooling loads; and turning off or lowering water heater set points. • In PY2017, the energy consultants (ECs) and CLEAResult representatives worked with many existing customers to confirm that their end-use technologies contracted to curtail were in fact curtailable before the event season to help ensure surprises did not occur during event season.

Whole House Efficiency	Across the three program tiers, the program offers measures that cover most of the common energy end uses in residential homes. However, most energy savings and participation comes from AC units and heat pumps, with little participation in the heat pump water heater, air sealing, or insulation measures. Weatherization trade allies perceive that the program has not provided the same level of marketing support to them as it provided to the HVAC trade allies. Navigant's review of the marketing materials provided by KCP&L supports that perception. Weatherization trade allies expressed a desire to see the windows incentive reinstated. A few participants also mentioned that the program would improve by adding incentives for windows and appliances. Navigant recognizes that KCP&L dropped the windows incentives due to cost- effectiveness problems in previous PYs. • In anticipation of the program possibly adding an HVAC tune-up measure, Navigant asked HVAC trade allies a question about the barriers facing customers regarding HVAC tune-ups. The clear majority of trade allies agreed that the primary barriers are lack of customer awareness of the need for tune-ups and the perception that their HVAC equipment is still functioning properly. Explore whether additional advertising or trade ally marketing support could increase participation in less popular measures. Explore ways to highlight the synergies of the program's different tiers to achieve a better overall result for customers. One example could be identifying the level of weatherization improvement that would allow the selection of a lower SEER/Heating Seasonal Performance Factor (HSPF) HVAC unit. While the HVAC unit would be less efficient, the improved weatherization could allow a similar experience for the customer at a reduced total cost.	Across the three program tiers, the program offers measures that cover most of the common energy end uses in residential homes. However, most energy savings and participation comes from air conditioning units and heat pumps, with little participation in the heat pump water heater, air sealing, or insulation measures. STATUS: Participation across all measure tiers increased in PY2017, including more than triple participation in Tier 3 measures in PY2017 compared to PY2016. This increase resulted in PY2017 verified energy savings that were more than double the amount in PY2016. The WHE program added several new measures in PY2017 and phased out others. • Tier 1: LED bulbs of varying wattage values contributed 5% and 1% of verified gross energy and demand savings, respectively, in PY2017. A new furnace filter alarm measure contributed an additional 0.02% and 0.01% of verified gross energy and demand savings, respectively. • Tier 2: Window measures were phased out completely in PY2017. The 13 windows that came through the program during the phase out contributed an additional 0.01% and 0.003% of verified gross energy and demand savings, respectively. • Tier 3: The program added new HVAC tune-up, refrigerant charge adjustment, and coil cleaning measures. These new measures contributed 17% of energy savings and 18% of demand savings in PY2017.

Home Lighting Rebate	The program appropriately supports LED bulbs only, having dropped CFLs in PY2016 in keeping with market trends and conditions. The evaluation results suggest that adding LED downlight, retrofit kits, and integrated fixtures could diversity the end-uses for this technology. • While interviewees believed that the program should continue supporting LED bulbs, suppliers suggested adding LED downlight and retrofit kits and fixtures. If possible, work with the IC to determine if adding LED downlight and retrofit kits and integrated fixtures to the program would further program goals to achieve savings and increase adoption.	The program supported standard and specialty LEDs through PY2017, but it will focus mainly on specialty bulbs in PY2018 to maintain budget integrity. This design makes sense given the budget constraints. • Suppliers interviewed in PY2016 suggested that the program add LED downlight and retrofit kits and integrated LED fixtures. In-depth interviews with program and IC staff in PY2017 suggest that they are considering these additions for MEEIA Cycle 3. • The program budgetary constraints mean that KCP&L-MO must decide how to spend limited funds in an efficient manner. However, this focus on specialty bulbs may strain KCP&L-MO's ability to achieve gross and net savings targets given lower specialty sales and NTG ratios. If this occurs, KCP&L could provide a special offer on standard LEDs in PY2018 to meet overall MEEIA Cycle 2 targets, although this is unlikely, as KCP&L's Product Manager has indicated, based on portfolio performance, they are unlikely to invest further funds towards the HLR program in MEEIA Cycle 2.

Home Energy Report and Income-Eligible Home Energy Report	Home energy reports provide a diverse set of suggestions that target all residential end uses. The focus of the report is to modify behaviors; therefore, the program does not offer rebates for specific measures but does promote rebates provided through other KCP&L programs. These tips include many low- and no-cost actions as well as suggestions to buy efficient equipment and appliances. The IE-HER program highlights more low- and no-cost ways to save energy. The tips cover the main residential electricity end uses: lighting, HVAC, electronics, water heating, appliances, and pools. The program should continue to keep abreast of new ways to use and save energy to provide up-to-date tips. The program should also monitor trends in prices that may affect the affordability of tips.	HERs provide a diverse set of suggestions that target all residential end uses. The focus of the report is to modify behaviors; therefore, the program does not offer rebates for specific measures but does promote rebates provided through other KCP&L programs. • These tips include many low cost and no cost actions and suggestions to buy efficient equipment and appliances. • The tips cover the main residential electricity end uses: lighting, HVAC, electronics, water heating, appliances, and pools. • The print reports also cross-promoted Nest thermostats and rebates for air conditioners or heat pumps through KCP&L-MO programs. The email reports included messaging on Energy Analyzer, air conditioner tune-ups, rebates on a new air conditioners or heat pumps, seasonal umbrella messaging about KCP&L programs, Nest thermostats, and in-home assessments. • Based on the evaluation survey, 10%-20% of treatment customers own smart home assistants, home security, smart light bulbs, or smart appliances.

Residential and Business Programmable Thermostat	The program aligns with the overall diversity of end-use energy service needs and existing technologies by using the cooling end-use for DR purposes. This is appropriate as it is the highest contributor to peak demand in the residential and small C&I sector. If the program does not meet participant goals, KCP&L could consider researching if including more thermostat options would reduce a possible barrier to participation. In the future, competition among PT vendors and evolving technological developments could lead to the market shifting from one vendor toward another. Navigant suggests KCP&L monitor the market to avoid missing market trends. The mix of end-use measures included in the program (i.e., PTs) meets the needs of the existing market. However, there are other vendors of similar solutions that could be benchmarked toward the ability to handle multiple thermostat vendors and additional program functionality.	The program aligns with the overall diversity of end-use energy service needs and existing technologies by using the cooling end-use for DR purposes. This is appropriate because it is the highest contributor to peak demand in the residential and small C&I sector. This was noted in the PY2016 evaluation report and found to be consistent in PY2017. • In the future, competition among PT vendors and evolving technological developments could lead to the market shifting from one vendor toward another. Navigant suggests KCP&L monitor the market to avoid missing market trends. The BYOD segment of the RHR population is small. KCP&L could consider expanding the BYOD customer segment through targeted marketing in MEEIA Cycle 3. BYOD programs are comparatively inexpensive to operate and a way that many utilities run thermostat programs successfully.
Income-Eligible Multifamily	Navigant found that the program includes appropriate measures for its current targets. • The program includes the following end-use measures: aerators, low-flow showerheads, water pipe insulation, lighting, and smart power strips. Common area measures include lighting and an option for custom measures for those measures deemed to be appropriate for that property. The custom program encompasses all end-uses, and therefore addresses all EE potential in the target market segment.	As in PY2016, Navigant found that the program includes appropriate measures for its current targets. • The program includes the following end-use measures: aerators, low flow showerheads, water pipe insulation, lighting, and smart power strips. • Common area measures include lighting and an option for custom measures for measures deemed appropriate for that property. • The custom program encompasses all end uses and, therefore, addresses all energy efficiency potential in the target market segment.

Table 21: Issue 4 - Are the communication channels and delivery mechanisms appropriate for the target market segment?

Program	2016 Summary Response	2017 Summary Response
Business EER - Standard	The Standard program primarily marketed to and recruited customers through one-on-one conversations with the larger customers and working with the trade ally network for medium to smaller customers. High participant satisfaction is one indication that the program's communication channels and delivery mechanisms are generally appropriate for the target market segment. Of the trade ally respondents, 60% were somewhat to extremely satisfied with the marketing materials they received, 72% were satisfied with the training they received, and 82% felt the training was of the right length (not too long or too short).	The IC for the Standard program works one on one with the larger customers. Medium and smaller customers are addressed through the trade-ally network. In addition, there is also targeted marketing for some sectors with historically lower participation. Due to the high level of participation in the Standard program, these channels are appropriate for the target market. • KCP&L developed additional channels for communication by creating high quality targeted videos for property managers and special energy conservation coffee for schools and universities. • Of the program participants that participated in the implementer administered survey, more than 85% of the participants indicated that they participated in the program due to the available rebate and or recommendations from the contractor. This is in line with the low FR found in the PY2016 survey. It also indicates that communications about KCP&L programs is leading to participation in these programs. • The program staff has identified that the majority of errors with rebate form submittal is found with new trade allies and has worked on training to reduce these errors.
Business EER - Custom	In PY2016, there was an increase in the program's outreach efforts. The marketing or recruitment of the Custom program was conducted through face-to-face interactions with customers, trade allies,	Marketing and outreach in PY2017 refocused and emphasized training and awareness in a few key target market segments over broader sales messaging. KCP&L should continue these efforts as trade allies feel there is still

Program	2016 Summary Response	2017 Summary Response
	energy consultants, and design firms, with the focus to increase participant awareness of the program in the early stages of a project. As mentioned above, PY2016 was a transition year for the Custom program; therefore, it is unclear if the low actual savings were caused by this transition or the marketing efforts. Navigant recognizes that KCP&L-MO creates a custom express application process for certain straightforward and replicable measures. KCP&L-MO also focuses on smoothing the application process through outreach and training efforts. Navigant recommends continuing these efforts with more customers and contractors, especially non-lighting contractors.	room for improvement in training and support for new customer acquisition. • KCP&L created a more targeted marketing campaign for PY2017, based on identified industries with the most potential for new Custom projects. The results of marketing to often take time to materialize, yet the efforts are worthwhile even if results are not immediately seen. Targeting new sectors with awareness and marketing is valuable and important for maintaining high net savings and program staff feel they are seeing responses that will translate into future projects in the pipeline.
Block Bidding	Commercial customers with identified savings of 1 GWh or more per year prefer a direct marketing approach. An auction house conducted the marketing and recruitment of the Block Bidding program; this is consistent with other similar programs nationally. The Block Bidding program defines the program eligibility to KCP&L's commercial customers, trade allies, or ESCOs who have identified savings of 1 GWh or more per year. As such, Overlay's direct contact to these market segments was an appropriate delivery mechanism. The main communication channel for the Block Bidding program is direct contact with the large customer by KCP&L, its IC, or the auctioneer. Navigant feels this is appropriate given the diversity and needs of the large customer base,	The two participants interviewed for the completed PY2017 Block Bidding projects were unaware that their projects were Block Bidding projects and had never heard of the program before. This was for two reasons—first, large customers often have multiple people in different roles or departments handling separate aspects of energy efficiency projects, and while upper management may be aware of the Block Bidding program, information is not being disseminated to individual project managers. Second, while KCP&L provides targeted informational trainings and touch points for auction participants throughout the Block Bidding process, it does not provide similar support for Buy Now participants.

Program	2016 Summary Response	2017 Summary Response
	and suggests periodic reviews with customers to ensure participants indicate this is the best communication pathway.	
SEM	KCP&L directly markets the SEM program to its customers through key accounts. This is appropriate as these accounts prefer a personalized approach in place of a broad-focused marketing effort. Larger energy consumers prefer a personalized approach where the benefits of the program to their specific facility are discussed. KCP&L's passive approach for the program has been successful in recruiting 16 participants for the 2016 pilot year. No participant interviews were slated for the SEM program for PY2016 evaluation. However, this will be a focus of the team's PY2017 process evaluation activities. Marketing for this program is extremely limited, and the current model of account mangers introducing the customers to the program has worked well with these large clients. When the program considers expanding to a larger number of customers, a more proactive approach may need to be considered to meet program goals.	KCP&L directly markets the SEM program to its customers through key accounts. This is appropriate as these accounts prefer a personalized approach in place of a broad-focused marketing effort. • Larger energy consumers prefer a personalized approach where the benefits of the program to their specific facility are discussed. • KCP&L's approach for the program successfully recruited 16 participants for PY2017.
Small Business Lighting	Communication channels and delivery mechanisms are working for the program as-is though there are opportunities for further improvement. Over 90% of participants surveyed indicated no	Communication channels and delivery mechanisms are working for the program as- is, though there are opportunities for further improvement. • The effective communication channels helped lead to the success of the SBL program as evidenced by

Program	2016 Summary Response	2017 Summary Response
	other methods of learning about the program were needed. However, trade ally survey participants identified opportunities for potential marketing and communication improvements, with only 50% indicating they were aware of and had received program marketing materials. Five out of 12 trade ally survey respondents suggested that there should be more direct marketing to customers. Another five (out of 12) respondents suggested that more marketing support should be provided to trade allies and contractors. This is a typical finding in a process evaluation—trade allies almost always recommend additional marketing efforts. Further, all participant respondents except one said that they do not think that any improvements are needed. However, with only 50% of the trade allies aware of the marketing materials, KCP&L has an opportunity to provide additional training and marketing materials to the trade ally network toward boosting awareness. Navigant suggests monitoring marketing efforts by trade allies and consider opportunities for further encouraging co-promotion to amplify marketing messages during targeted promotional periods to drive responses.	the fact that it surpassed its 3-year target in only 2 years. Also, KCP&L clearly communicated the amount of remaining funding on the webpage when the programs started to get close to exhausting funds near the end of PY2017. Finally, the webpage clearly indicated the availability of other programs such as the Standard program if the projects did not meet the SBL eligibility criteria. The implementer reached out to all SBL customers and communicated about the early ending of the program and gave them directions on when they needed to submit projects for inclusion. • For the SBL program, KCP&L developed two case studies for targeted marketing, one of a bank and one of a gift boutique. These case studies provide useful information to potential program participants. However, there is no a way to access these case studies directly on the webpage. Increasing the amount of material available online may increase participation if the program starts up again in Cycle 3.
Demand Response Incentive	Navigant found that the communication channels and delivery mechanisms are intermittent. While communication with program participants takes place at the start of the season, the program could	Although room for improvement exists, KCP&L's product manager has taken great efforts to improve communication channels and ensure delivery mechanisms are appropriate for the DRI program.

Program	2016 Summary Response	2017 Summary Response
	benefit from more continuous communication throughout the DR season. CLEAResult leverages KCP&L's energy consultant's one-on-one relationships with customers who have high savings opportunities (referred to as Tier 1 customers) for recruiting purposes. KCP&L cross promotes DRI with the Business EER program. While methods of communication are sufficient at current program size, Navigant recommends more continuous communication with customers throughout the DR season. Assuming the program continues to grow, more methods of communication may be needed for individualized program assistance. In addition, Navigant encourages continued partnership with internal programs such as the current partnership with the Business EER program to cross-promote programs.	During the PY2017 event season, the product manager found that their email notifications were going to certain customers' spam email folder. The DRI team has ensured their email notifications are going to the appropriate contact at the customer site by asking customers to mark the DRI email account as not spam. • Every interaction with a customer becomes an opportunity to cross-promote programs. KCP&L does not partake in blind prospecting when recruiting participants. Instead, KCP&L recruits customers for the DRI program using customer contacts from other energy efficiency programs such as KCP&L's suite of C&I programs. In PY2017, with the introduction of customer propensity modeling by the program implementer, KCP&L expanded the pool of potential participants outside of existing energy efficiency programs. • Targeted email marketing was executed in PY2017. High usage customers were identified through CLEAResult's propensity modeling and received emails asking them to inquire about the DRI program. The product manager has a full marketing plan for PY2018 that includes targeted email and direct mail marketing. The marketing plan also includes DR forums in which potential customers and participating customers are invited to a lunch forum to learn about the program. The product manager expects to recruit new participants through the forum.
Whole House Efficiency	Participating customers report a high level of overall satisfaction with the program, with some	Participating customers report a high level of overall satisfaction with the program, with some variations based

Program	2016 Summary Response	2017 Summary Response
	variations based on the program track in which they participated. High participant satisfaction is one indication that the program's communication channels and delivery mechanisms are generally appropriate for the target market segment. Given the substantial role that trade allies play in delivering this program, trade ally satisfaction is another important indicator. Trade allies indicate somewhat lower levels (though ratings are within expected values) of program satisfaction than participants do, particularly regarding rebate amounts and the marketing support provided by the program. When trade allies were asked how the program could improve, the most common answer was "more marketing directly to customers" (cited by 39% of trade allies), followed by "more marketing support for contractors/trade allies" (21%). These are common responses from trade allies in program evaluation surveys; trade allies frequently perceive that the program can do more marketing and advertising than individual trade allies are capable of funding. Consider a more comprehensive energy audit rather than Energy Savings Kit for customers with a higher level of EE knowledge. Consider offering Energy Auditor /Insulation and Air Sealing trade allies additional training and easy-to-understand program information that they can leave behind with customers so that customers understand the program process from start to	on the program track in which they participated.

Program	2016 Summary Response	2017 Summary Response
	finish. If the program chooses to reinstate the HVAC tune-up rebate, consider developing an awareness campaign or educational materials that would assist trade allies in persuading their customers of the need for tune- ups.	
Home Lighting Rebate	KCP&L-MO and the IC market the program widely through mass media (including the Internet) and within retail stores, but there is room for improvement. KCP&L-MO marketing aligned with the portfolio-level "We're great at energy efficiency" campaign, but the marketing material reviewers observed that materials did not consistently reference ENERGY STAR lighting. There are opportunities to improve marketing targeted at HTR populations. Except for one retailer, point of purchase materials had Spanish translations only in fine print as opposed to being in full-sized font. Additionally, during the consumer survey, none of the 14 frequent bargain store respondents reported seeing any marketing or displays; on the other hand, more than two- fifths of other shoppers (42%) reported seeing marketing or displays. The team emphasizes that promotional efforts carry a consistent portfolio theme. The program could possibly shift to a system of consistently referencing and highlighting ENERGY STAR and using the ENERGY STAR logo whenever possible to differentiate from non-ENERGY STAR models.	KCP&L-MO and the IC market the program widely through mass media (including the internet) and within retail stores. This strategy matches the current program budget and has been suitable to meet sales and savings targets through PY2017. • The program has met—and sometimes exceeds—sales and savings targets with their current HLR marketing efforts. As described above, these efforts have served to increase sales of program-supported bulbs. • Budget constraints advise against revising the marketing efforts for PY2018.

Program	2016 Summary Response	2017 Summary Response
Home Energy Report and Income-Eligible Home Energy Report	The HER program uses two primary communication channels: paper mailed reports and emails. All treatment customers received five paper reports in PY2016. Customers with email addresses on file also received monthly email reports. Customers could also access an online portal to monitor energy use through the Home Online Energy Audit. The timing and frequency of messaging through these channels is appropriate given the need to provide information through multiple mediums over time so participants can monitor the effect of any efficiency and consumption changes they make. The program may want to consider signing up more customers for email reports so that customers can receive messaging from both channels. Navigant notes that this would require capturing and sharing more customer emails with Opower, which may or may not be feasible given the program resources.	The HER program uses two primary communication channels: paper mailed reports and emails. • All treatment customers received four paper reports in PY2017. • Customers with email addresses on file (about 19% of the HER program and 17% of the IE-HER program) also received monthly email reports. • Customers could also access an online portal to monitor energy use through the Home Online Energy Audit.
Residential and Business Programmable Thermostat	Marketing has been successful, as KCP&L exceeded its initial PY target of 1,000 thermostats for the KCP&L-MO territory for PY2016. CLEAResult handles marketing via email to customers that were previously in the thermostat program. In addition, the CLEAResult technicians cross-	KCP&L has successfully reached enrollment targets. In fact, in PY2017, marketing ramped down a bit to reduce new enrollment. Marketing efforts in PY2017 focused on increasing thermostat activation for the Rush Hour Rewards program. • As in PY2016, the CLEAResult technicians cross-promoted the Residential PT program with the

Program	2016 Summary Response	2017 Summary Response
	promote the Residential PT program with the WHE's Energy Savings Kit program and in the HER program mailers.	Whole House Efficiency's (WHE's) Energy Savings Kit program but ceased promotion through HER program mailers in November 2017 due to intended enrollment slowdown. • Other methods of communication have been through social media and participant promotion through peer-to-peer word-of-mouth communication between customers. • Many survey respondents who were dissatisfied with event notification channels requested notification through means that are already available (such as text or push notifications). Navigant recommends re-educating customers on notification channels for the upcoming DR season. • Additionally, evaluation surveys revealed that additional education and communication regarding program goals and purposes would be useful to customers.
Income-Eligible Multifamily	Communication channels were initially not appropriate for the program, but the delivery system for the tenant measures is appropriate. Communication channels and delivery are appropriate given the direct interaction with the end- user (tenant). The program is DI for the tenants, and they are not required to fill out any paperwork as a part of the program. KCP&L identified property owners as the most promising points of contact for recruiting program participants. Compared to property managers, property owners have the authority and capital to make decisions and commit to larger projects with	Communication channels focus largely on direct outreach and in-person contacts. Several additional communication and outreach channels are used, including leveraging partnerships with the MHDC, USDA, and other organizations involved in low income housing. • Communication channels and delivery are appropriate given the direct interaction with property owners/managers and tenants. • The program also works with MHDC, US Department of Agriculture (USDA), and other organizations to identify potential building owners and/or buildings eligible to participate in the

Program	2016 Summary Response	2017 Summary Response
	deeper energy savings. Further, this opened up additional opportunities with the same property owner, as owners often have more than one property. During the interview, the program manager at KCP&L indicated that there was not sufficient information on the website for property owners and managers to pursue participation in the program in an efficient manner. Working with the property owners directly is an appropriate communication mechanism. Navigant recommends including high frequency custom measures in a prescriptive manner in future PYs to ease implementation.	program. • Program staff report that direct outreach has been the most effective method of increasing awareness about the IEMF program.

Table 22: Issue 5 - What can be done to more effectively overcome the identified market imperfections and to increase the rate of customer acceptance and implementation of each end-use measure included in the program?

Program	2016 Summary Response	2017 Summary Response
Business EER - Standard	KCP&L's success with lighting within the Standard program is strong. The effect from other end uses was 11%, which could indicate an opportunity to further expand non-lighting measure usage through follow-ups with trade allies to identify measures to consider for a marketing and education push. Of the 19 trade allies surveyed, 17 respondents had lighting as their primary measure. Consider trade ally training specifically for the non-lighting end uses such as HVAC, motors, and building controls. Increasing trade ally awareness of the other measures in the Standard program could increase the number of trade allies that specializes in non-lighting equipment. Consider establishing an online tracking system for customers and trade allies to monitor the status of the application and rebate check.	In PY2017, KCP&L continued to have strong success with the efficient lighting measures in the Standard program. The effect from other end uses was less than 1%, but other programs such as the Custom program cover many of those measures. • KCP&L has had great success with the lighting rebates. Even after lowering rebate amounts in the fall of 2017, the participation remained strong in the Standard program through the end of the program cycle.

Business EER - Custom	This will be a focus for 2017 as participation ramps up. Low participation due to carryover from MEEIA Cycle 1 did not provide sufficient information to draw conclusions for this question. Navigant recommends continuing to develop and periodically review best practices of the current outreach efforts to maintain momentum.	There is opportunity for KCP&L to address the market imperfections identified in the previous questions by leveraging last year's outreach efforts, tailoring the project sales pitch, and providing greater support for trade allies. • Customers' and trade allies' feedback indicated that the rebate amount paid out was not always worth the effort the process required. To address this, as stated in Question 2, KCP&L wants increased emphasis on the non-energy benefits of a project, to sell the solution, not just the incentive. Tailoring the outreach and sales proposition language based on the type of customer and measure will help attract customers for whom the rebate alone is not enough to justify the time or cost of a project. For example, some customers indicated that making their business greener was a factor that would further motivate them to consider EE.

Block Bidding	The Block Bidding program's pilot year in PY2016 provided a winning bid and valuable insight into the needed characteristics of a successful auction. The research planned for 2017, as participation builds, will focus on identifying the effectiveness of the programs ability to overcome the market imperfections noted in Question 1. Navigant recommends remaining in communication with customers on the appropriate amount of notification time needed for their participation. Block Bidding participants tend to have larger projects with a high capital investment and long lead times. As such, it is difficult for these customers to react quickly to offerings. In PY2017, KCP&L lowered the incentive caps for Custom to $100,000 and Standard to $400,000, which may increase the participation for Block Bidding. KCP&L may consider a mid-year review to see how effective this change is on Block Bidding and adjust the caps accordingly.	The Block Bidding program can begin to address some of the challenges encountered in the past years. Better awareness amongst the correct decision-makers will be key to increasing traction, and continuing to fine-tune the eligibility requirements will ensure greater, more successful participation. KCP&L should seek to better understand the organizational and decision-making structures of its larger customers and identify and generate awareness among those who drive energy efficiency projects. • This may be a single person, but, as found in this year's participant interviews, is more likely a network of key players whose combined awareness and buy-in to the program is necessary to generate program participation. • KCP&L should continue its customized, one-on-one outreach efforts targeting new Block Bidding customers, but should also apply this individualized approach to current large customers using other rebate programs to understand how they can better utilize the Block Bidding program.
SEM	The program needs more time to complete training and other activities before Navigant can appropriately answer this question. The processes and approaches are consistent with other programs evaluated by Navigant. However, because savings have yet to be reported, the evaluation team is waiting to collect more data before providing input on this issue. This will be the focus for PY2017 research.	Three of the seven participants interviewed felt the rebates received do not offset the Energy Efficiency rider making it difficult for the large customers to cost-justify participating in KCP&L's Business Energy Efficiency programs.

Small Business Lighting	Overall, the SBL program is running smooth and as intended.	Overall, the SBL program ran successfully but exhausted all funding before the end of the cycle. Moving forward, the implementer and KCP&L could consider changes to future programs so that they can last the entire cycle. • Ending a program mid cycle even if it is due to over participation, can be disruptive to customers and trade-allies. It may also be preferable for planning purposes if the program lasts the entire cycle. Navigant provides recommendations below on potential ways to address this issue moving forward: • Increase the 3-year program budget o Decrease the incentive levels.
Demand Response Incentive	KCP&L has identified recruitment of customers with smaller demand savings potential as an area for improvement. In addition, KCP&L is reworking the EPD calculation.	KCP&L has implemented targeted marketing to recruit new customers. In addition, KCP&L has refined curtailment plans and expectations (i.e., the EPD values and FPLs) with current customers.

Whole House Efficiency	Based on the participant survey, one of the most common suggested improvements across program tracks was simply advertising the WHE program more so that more customers could benefit from it. This reflects the overall high level of program satisfaction. Some participants specifically mentioned television and radio advertising as an effective way to reach other customers like them. • Some Home Energy Audit and Energy Savings Kit participants indicated lower satisfaction with the quality of information provided in the home energy assessment report, particularly regarding measure costs and cost-effectiveness. • Some HVAC Equipment participants expressed minor dissatisfaction with the time it took to receive the rebate, which may be abated with more upfront communication about when to expect the rebate check and who it will be coming from (the program or the trade ally). • Participants in the Weatherization Measures program tier expressed confusion about the steps necessary to participate and would benefit from a more detailed explanation of what to expect throughout the program process.	Based on the participant survey, one of the most common suggested improvements was advertising the WHE program more so that more customers could benefit from it. This reflects the overall high level of program satisfaction. Some participants specifically mentioned television and radio advertising as an effective way to reach other customers like them.

Home Lighting Rebate	The program has made a great deal of progress on addressing the primary imperfections of price, availability, and customer knowledge of efficient lighting. However, consumers continue to purchase light bulbs based on price and wattage, and in-home use suggests they buy ENERGY STAR and non-ENERGY STAR bulbs in nearly equal proportions. One-quarter of respondents remain unfamiliar with LEDs.	Navigant verified that the KCP&L-MO HLR program has achieved 93% of reported savings and 75% of its MEEIA Cycle 2 net savings targets cumulatively over PY2016 and PY2017. • Given strong realization rates and progress toward net savings goals, the HLR program has shown great success in increasing consumer acceptance and implementation of ENERGY STAR- qualified LED bulbs.
Home Energy Report and Income-Eligible Home Energy Report	Most treatment customers read or look at the report, and many talk about the report with others. However, there may be an opportunity to engage the 16% of customers who either did not recall the report or did not look at the report • 16% of CET survey respondents either did not recall receiving the report or did not read the report. However, 95% of CET respondents who recall receiving a home energy report state that they read or looked at the report. • Of survey respondents who recall the reports, 78% like the reports and 57% talk to other people about the reports.	Most treatment customers read or look at the report, and many talk about the report with others. However, there may be an opportunity to engage the 29% of customers who either did not recall the report or did not look at the report. • Of CET survey respondents, 29% either did not recall receiving the report or did not read the report. • Of CET respondents who recalled the reports, 72% like the reports and 61% talk to other people about the reports. • Based on responses to the evaluation survey, customers are most likely to recall the neighbor comparison (92%) and then energy-saving tips (62%) but give higher ratings to the tips (7.1 on a 10-point scale) compared to the neighbor comparison (6.2).

Residential and Business Programmable Thermostat	KCP&L surpassed enrollment goals for PY2016 and has developed a plan to improve installation rates for DIY customers. Cost-effectiveness should continue to be monitored as the program further develops to ensure it remains on target. • In PY2017, the utility plans to increase reminders to DIY customers who delay installing their thermostat.	KCP&L is close to reaching enrollment goals for Cycle 2; thus, it is redirecting efforts from enrollment to continuing thermostat activation and designing a process to handle thermostat participants that move out of their home. • As noted in the PY2016 findings, KCP&L emphasized RHR activation in PY2017 and will continue this effort in PY2018.
Income-Eligible Multifamily	Multifamily is a difficult segment to target in most jurisdictions. • Tenants are often not allowed to make significant alterations, and property owners and landlords have little incentive to increase efficiency because they usually do not pay—directly or indirectly, for utilities. • Recommendations to overcome this challenge are presented in the following section.	As noted in PY2016, multifamily is a difficult segment to target in most jurisdictions. However, the program has taken steps to overcome these difficulties, including new outreach/targeting strategies and the addition of the custom program path during PY2016; these steps have opened up energy efficiency opportunities for customers interested in end uses beyond the standard measures offered in the IEMF program. • The first custom measures installed in the IEMF program occurred during PY2017 and included an air sealing measure. • Program staff report that they would like to prioritize the custom program path during PY2018 to drive greater participation in custom measures.