PUBLIC VERSION


# KCP&L Greater Missouri Operations Company

# MEEIA Cycle 2 2016-2018 Filing

*August 28, 2015*

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# Executive Summary

## A. Filing Background

The report herein outlines KCP&L Greater Missouri Operations Company (GMO or Company) request to establish a demand-side management (DSM) portfolio consistent with the Missouri Energy Efficiency Investment Act (MEEIA)[1] and the rules of the Missouri Public Service Commission (MPSC or Commission).[2] The MEEIA and the MPSC rules were established to support the state policy to value demand-side investments equal to traditional investments in supply and delivery infrastructure and allow recovery of all reasonable and prudent costs for delivery of cost-effective demand-side programs and to provide guiding principles for filing new programs and reporting.

On December 22, 2011, GMO filed a request before the MPSC to implement a suite of DSM programs in its service territory under MEEIA. After an extensive negotiation process with multiple stakeholders, the Company entered into a Stipulation & Agreement[3] that was approved by the Commission effective November 15, 2012. GMO DSM programs became effective on January 26, 2013, and will remain effective through December 31, 2015. In addition to aggressive energy and demand savings targets for GMO, the Commission approved a Demand Side Investment Mechanism (DSIM) that aligns the interests of the Company with helping its customers use energy more efficiently and removes significant barriers to the pursuit of cost-effective energy savings by GMO, as required by MEEIA. This initial approved plan is referred to as MEEIA Cycle 1.

This report supports GMO's request for approval of a portfolio of programs that would be in effect January 1, 2016 through December 31, 2018, or also referred to as MEEIA Cycle 2. MEEIA Cycle 2 will continue to build on the success of MEEIA Cycle 1 programs and leverage the learnings and experience gained from Cycle 1 to broaden the Company's DSM offerings, continue to improve customer participation, and enhance customer experience. The Company's MEEIA Cycle 2 proposed programs and cost recovery mechanism are similar to those offered in MEEIA Cycle 1 with some changes based on experience gained through stakeholder input; evaluation, measurement and verification (EM&V) results; potential study review; secondary evaluations and research; baseline changes; and program processes. In addition, an overarching goal of GMO and Kansas City Power & Light Company (KCP&L) is to offer the same portfolio of programs across its Missouri service territories and with the same plan period (2016-2018). Therefore, concurrent with this filing in its GMO service territory, KCP&L is also proposing a similar portfolio in its KCP&L-Missouri (KCP&L-MO) service territory.

The current DSIM recovery mechanism for GMO is a tracker that is specifically identified as a rate component of base rates for both residential and non-residential rates. It is not a rider similar to KCP&L or Ameren Missouri. The DSIM rate was established in ER-2012-0175 and implemented on January 26, 2013 as a result of Case No. ER-2012-0175. In this MEEIA Cycle 2 filing, the Company proposes to continue the tracker mechanism and recover the Cycle 2 and the remaining Cycle 1 DSIM components through the tracker mechanism. The components consist

[1] 393.1075 RSMo.
[2] MO PSC Rules 4 CSR 240-20.093, 4 CSR 240-20.094, 4 CSR 240-3.163 and 4 CSR 240-3.164.
[3] Non-Unanimous Stipulation and Agreement, Case No. EO-2012-0009.

of MEEIA program costs, MEEIA Throughput Disincentive and a Performance Incentive. If during the review process of this filing parties agree to convert the GMO MEEIA tracker recovery mechanism to a rider, the Company would be prepared to do so.

The summary table below compares GMO's proposed portfolio for Cycle 2 with Commission approved targets for Cycle 1 and actual results through June 30, 2015. As demonstrated in the table, the Company is continuing to offer a robust, cost-effective portfolio of programs that will deliver a strong level of energy and demand savings.

***Table 1-1 Summary of GMO MEEIA Cycle 1 and Proposed Cycle 2***

| | Cycle 1 Approved[1] Plan (35 months) | Cycle 1 Actual Deemed (Through 6/30/2015) | Cycle 2 Proposed (36 months) |
|---|---|---|---|
| Energy Savings (kWh) [2] | 161,280,888 | 115,618,698 | 232,357,748 |
| Demand Savings (kW)[2] | 66,525 | 46,567 | 172,553 |
| Program Costs | $43,944,072 | $31,826,531 | $53,251,981 |
| Shared Benefits[3] | $110,191,717 | $54,726,211 | $134,246,786 |
| TRC Cost Effectiveness | | 1.73[4] | 1.84 |
| Throughput Disincentive | $15,961,696 | $7,415,402 | $25,043,288 |
| Performance Incentive @ 100% Target Achievement | $3,559,192 | N/A | $10,000,000 |

(1) Plan approved as of July 2014, which was revised from January 2013 approval to reflect the inclusion of the Home Lighting Program in July 2014.
(2) Energy and Demand Savings for Cycle 1 are incremental for Demand Response Incentive program and Home Energy Reports, whereas Cycle 2 shows the sum of the annual first year savings for all programs.
(3) Approved and Actual are Net Shared Benefits; Proposed is Gross Shared Benefits.
(4) Through December 31, 2014.

## B. Highlights of Plan – Achievements and Plan

### Overall Savings / Budget Figures

This section presents the portfolio budgets, cumulative net energy savings and cumulative net demand savings for GMO for MEEIA Cycle 2 and also provides a comparison to MEEIA Cycle 1. The GMO portfolio program details are presented in Table 1-2. Figures 1-1 through 1-3 display budget, cumulative energy savings, and cumulative demand savings, respectively, for the period 2016-2018.

***Table 1-2 GMO Program Details***

| Program | Cumulative 2016-2018 | | |
|---|---|---|---|
| | MWh Savings | Peak MW Savings | Budget **HC** |
| Home Lighting Rebate | 45,649 | 4.70 | |
| Home Appliance Recycling Rebate | 8,106 | 1.35 | |
| Home Energy Report | 61,010 | 11.96 | |
| Online Home Energy Audit | n/a | n/a | |
| Whole House Efficiency | 8,408 | 2.70 | |
| Income-Eligible Multi-Family | 439 | 0.03 | |
| Income-Eligible Weatherization | 430 | 0.10 | |
| Residential Programmable Thermostat | 6,144 | 15.69 | |
| Business Energy Efficiency Rebate - Standard | 38,711 | 6.38 | |
| Business Energy Efficiency Rebate - Custom | 30,080 | 7.76 | |
| Strategic Energy Management | 12,128 | 2.84 | |
| Block Bidding | 17,604 | 3.05 | |
| Online Business Energy Audit | n/a | n/a | |
| Small Business Direct Install | 3,570 | 0.59 | |
| Business Programmable Thermostat | 79 | 0.20 | |
| Demand Response Incentive | - | 115.00 | |
| | | | |
| **Residential Total:** | 130,187 | 36.53 | |
| **Business Total:** | 102,171 | 135.83 | |
| **Research & Pilot** | n/a | n/a | |
| **Portfolio Total:** | **232,358** | **172.36** | |



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***Figure 1-1 GMO Annual Estimated Program Budget by Program ($ thousands) **HC*****

[redacted]

***Figure 1-2 GMO Cumulative Energy Savings by Program (MWh)***

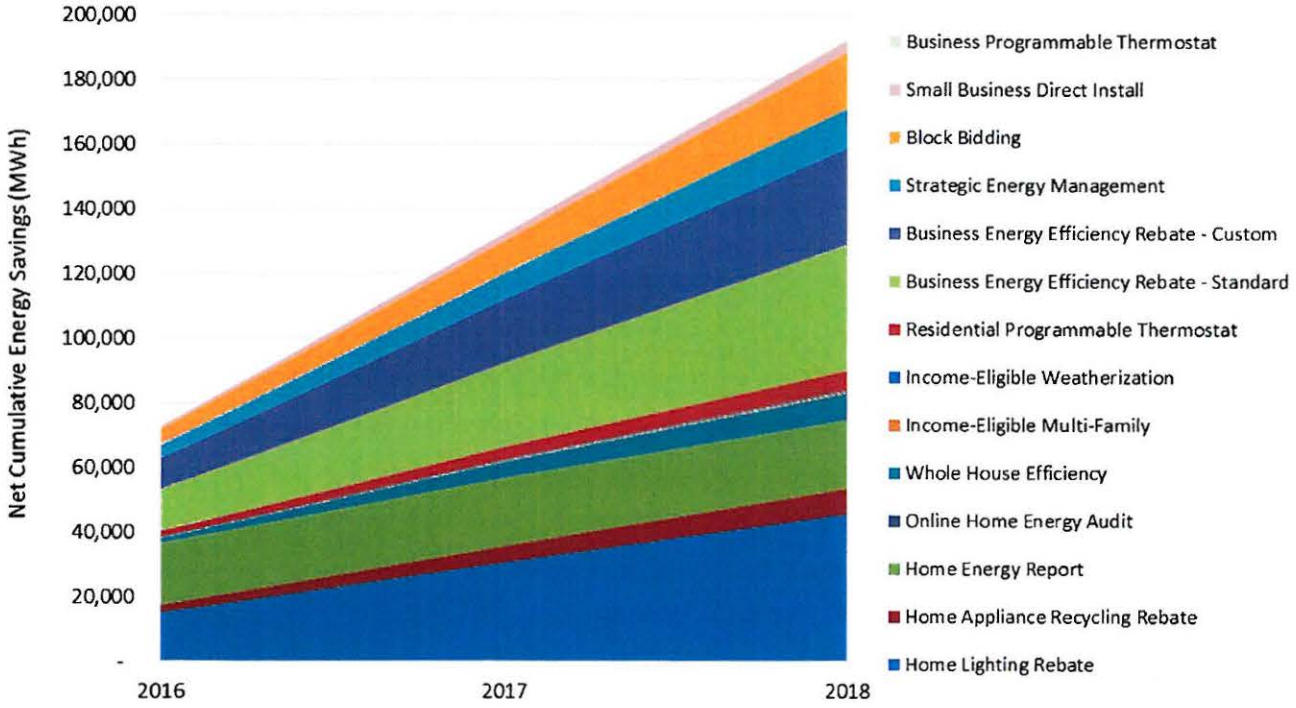




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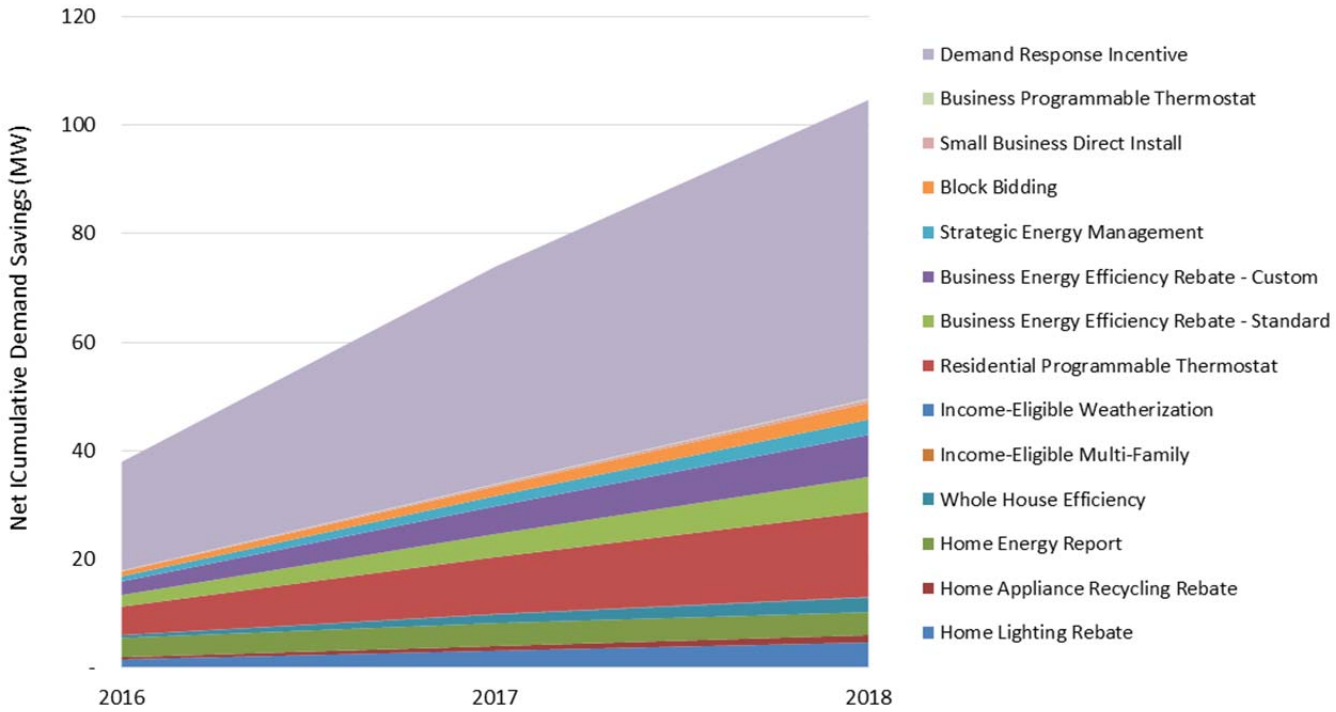
***Figure 1-3 GMO Cumulative Summer Peak Demand Savings by Program (MW)***




The Company proposes a realistic and achievable level of DSM programs investment and savings targets for the 2016-2018 period. This is evidenced by the growth in overall spend and savings as compared to the Company's MEEIA Cycle 1 offerings. The Company's planned DSM savings and spend achieved as a percent of retail sales and retail revenue in 2018 of MEEIA Cycle 2 (0.90% and 2.19%, respectively) is greater than the same actual percentages of 2014 in MEEIA Cycle 1 (0.70% and 1.77%, respectively). The detailed comparison is presented in Section 4H.

Conversely, the projected program savings targets were tempered by three major factors for the Cycle 2 filing:

- New Federal Appliance Standards;
- Fatigued Market Segments; and
- Lower Avoided Costs.

The new federal standards and fatigued market segments lead to reduced savings and potentially lower participation, respectively, while the lower avoided costs impacts the cost-effectiveness of measures considered for inclusion in the DSM portfolio. This is further discussed in Section 3F. Benefits Created / Overall Cost Effectiveness.

Table 1-3 presents- Cycle 2 program portfolio cost effectiveness for each subcategory of programs – residential, income-eligible, and non-residential (energy efficiency (EE) and demand response (DR)). The MEEIA Rules define the Total Resource Cost (TRC) as the preferred cost effectiveness test for the approval of DSM programs. With the exception of the income-eligible programs, all other programs' TRC cost effectiveness tests exceed 1.0. Each of these tests is further described in Section 2 of this report.

***Table 1-3 GMO Cycle 2 Portfolio Cost Effectiveness Summary***

| Program Type | TRC | UCT | RIM | RIM (Net Fuel) | SCT | PCT |
|---|---|---|---|---|---|---|
| Residential EE | 1.52 | 2.35 | 0.55 | 0.67 | 1.78 | 3.49 |
| Residential DR | 2.12 | 2.62 | 1.40 | 1.51 | 2.04 | 1.94 |
| Residential - Income-Eligible | 0.39 | 0.39 | 0.28 | 0.30 | 0.41 | - |
| Non-Residential EE | 1.72 | 2.86 | 0.92 | 1.29 | 1.93 | 2.03 |
| Non-Residential DR | 15.58 | 2.00 | 1.99 | 1.99 | 14.46 | 41.47 |
| Research & Pilot | - | - | - | - | - | - |
| **Total Portfolio** | **1.84** | **2.43** | **0.84** | **1.05** | **2.00** | **2.70** |

***Execution through Integrated Delivery Chain (KCP&L, GMO, Implementers, Market Partners & Customers)***

Since KCP&L began offering programs in 2005, it has used both internal program managers as well as external program implementers to execute its DSM portfolio. It is important to emphasize KCP&L and GMO's strong capabilities to offer DSM programs while leveraging the expertise of its highly qualified internal staff and collaborating with external implementers to meet savings targets.

KCP&L and GMO have also relied on national implementers as well as local energy non-profit agencies, such as Metropolitan Energy Center and Bridging the Gap, to deliver its programs to customers. The Company recognizes that it is important to leverage knowledge of our local partners to advance our programs. The Company has also worked directly with community action partner agencies in the delivery of income-eligible weatherization programs.

One of KCP&L and GMO's overarching goals is to offer the same portfolio of programs across the KCP&L-MO and GMO service territories. We believe that this will enhance customer participation and eliminate confusion of varying programs across our Missouri jurisdictions. While the majority of the programs offered in Cycle 1 were the same, some differences existed within the program offerings. While trade allies and customers acclimated to these differences as much as possible, we feel strongly that offering the same programs will eliminate inefficiencies in marketing and program delivery and streamline administrative accounting.

## C. Key Attributes / Differences from MEEIA Cycle 1

### Program Updates Based on Customer Needs

The Company values input from multiple stakeholders in the development of its programs. Over the past several months, the Company has engaged with the following stakeholders in order to present a strong portfolio to meet needs of customers, while still meeting the needs of the Company:

- Business customers
- Online residential panel
- Trade ally businesses
- Multi-family interest groups
- Program design consultant
- Program implementers
- DSM Advisory Group
- Environmental focused stakeholders
- Income-eligible focused stakeholders
- Company leadership

Based on input from the above stakeholders, our program design consultant (Applied Energy Group or AEG), and consideration of our most recent DSM potential study, the Company has created program recommendations for 2016-2018. The proposed programs are either 1) a continuation, 2) an adjustment or the discontinuation of current programs, or 3) in some cases the creation of completely new programs. The enhancement of the programs can be broken

down into three main strategies to be outlined in further detail in Section 4. These strategies include:

(1) Increase the ease of participation;

(2) Encourage deeper retrofits of homes and businesses; and

(3) Engage new market segments to participate.

Additional high level details of note on programs in MEEIA Cycle 2 are outlined below.

***Table 1-4 Select MEEIA Cycle 2 Program Details***

| MEEIA Cycle 2 Program | Details of Note |
|---|---|
| Home Lighting Rebate | Expected mixture of CFLs/LEDs moves from 65/35 in 2016 to 50/50 in 2018 |
| Business Standard | Additional new measures (including LED lighting) |
| Business Custom | • Move to flat $/kWh incentive rate<br>• Transition of 2015 projects will flow into 2016 |
| Programmable Thermostat | • Break out Residential and Business separately<br>• Recognize energy (kWh) savings of new learning thermostats installed |
| Income-Eligible Weatherization | Addition of an energy efficiency "kit" |
| New Residential and Business Programs<br>Residential: Whole Home Efficiency, Income Eligible Multi-family<br>Business: Small Business Direct Install, Block Bidding, Strategic Energy Management | Projected to be available 2nd Quarter 2016 |

### Demand Side Investment Mechanism (DSIM)

Based on the Company's analysis, successful implementation of DSM programs could bring gross shared benefits from both energy and capacity over the anticipated life of the programs on a net present value (NPV) basis of approximately $134 million. These benefits less program costs are approximately $81 million (net shared benefits).

Based on this analysis, benefits greatly exceed costs and support the Company's preferred plan[4], demonstrate positive financial benefits to its customers, and support the spirit and intention of the MEEIA Rules.

The Company is proposing a DSIM structure similar to the structure employed in MEEIA Cycle 1 that was agreed upon by stakeholders and approved by the MPSC. The proposed structure includes timely recovery of three components: Program Costs, the Throughput-Disincentive (TD), and a Performance Incentive.

The Company is requesting approval of continued utilization of a DSIM Tracker to begin collecting 100 percent of forecasted program costs and 100 percent of the forecasted TD, which is directly attributable to the demand-side programs approved in this filing. This is in addition to

[4] Per Integrated Resource Plan under EO-2015-2054

any future demand-side programs and tariffs that may be filed under the MEEIA requirements for the program period. Program costs include $53.2 million that will be incurred for implementation of the DSM programs. The TD represents the financial disincentive posed on the utility for each kWh saved as a result of successful implementation of EE and helps ensure that the Company is kept whole and not financially harmed or dis-incentivized from promoting EE. TD is $25 million and represents 24.04 percent for residential and 14.40 percent for non-residential of Gross Shared Benefit (GSB). The gross benefits utilized for purposes of determining the TD will be based on deemed savings and not EM&V UCT Gross Benefits.

The DSIM for Cycle 2 will also include an opportunity for the Company to earn a financial incentive based on its performance in meeting established savings goals. The allowance of an opportunity to earn a financial incentive allows the Company to value demand-side investments equally with supply-side investments consistent with the MEEIA state policy. The Company is requesting a performance incentive of up to $13 million or $10 million if 100% of planned energy and demand targets are met.

The MEEIA Cycle 1 DSIM was implemented as a tracker mechanism and DSIM components are currently being recovered in base rates. Any unrecovered DSIM program cost or TD, including any remaining true-up amounts that exist for Cycle 1 at the end of the three year plan period ending on December 31, 2015, will be adjusted in the next GMO rate case or sooner, if a rider is implemented. If during the MEEIA Cycle 2 review processes of this filing, parties agree to convert the GMO MEEIA tracker recovery mechanism to a rider, the Company would be prepared to do so. GMO has included an exemplar tariff to show a proposal for utilization of a Rider mechanism. If the proposed DSIM Tariff is approved as filed, the MEEIA Cycle 1 reconciliation of the balances from Cycle 1 and Performance Incentive will be recovered through a MEEIA Cycle 2 DSIM Rider, similar to the DSIM proposed for KCP&L.

### Future Considerations

Currently there are several initiatives occurring in the utility industry nationally and within the state, as well as initiatives specific to the Company that could impact the Company's proposed plan and its ability to recover its costs. These initiatives include, but are not limited to, EPA's Clean Power Plan, Missouri State Energy Plan, MEEIA Rulemaking, and the Company's evaluation, measurement, and verification for Cycle 1. Should any of these initiatives adversely impact the Company's plan or ability to recover its costs as approved, the Company reserves the right to discontinue programs and/or its plan. In the event that would occur, the Company will file a notice with the PSC indicating that it will discontinue programs and/or its plan. The Company will honor all requests for the programs received within 30 days of the notice.

The Company further addresses these actions within its proposed program tariffs.

## D. Collaborative Process to Approval

### Schedule

Cycle 1 programs are effective through December 31, 2015. The Company is proposing Cycle 2 programs to become effective January 1, 2016 through December 31, 2018 such that there is a continuous offering of DSM programs between Cycle 1 and Cycle 2. The Company has prior experience with ending programs and ramping programs down and back up again, and it has found that it can result in strained vendor relationships. It is difficult to communicate the regulatory process to customers and other stakeholders, and it can be administratively burdensome. The Company's goal in the proposed schedule is to minimize program interruption, avoid confusion and maintain positive relationships with all stakeholders and customers.

Per the MEEIA Rules, the Commission has 120 days to rule on the Company's proposed filing. This timing fits within the Company's intention to have tariffs effective on January 1, 2016 such that the Company can meet its obligations to customers and stakeholders and provide a seamless transition from Cycle 1 to Cycle 2. In order to accomplish this, the Company proposes

a series of technical conferences to collaborate with stakeholders on our portfolio program design, cost recovery mechanism, and other key topics. A detailed proposed schedule is outlined in Section 6.

### Alignment of Rules / Statute / Stakeholders / Utility

With guidance under the MEEIA legislation, the overarching intent of this proposal and filing by the Company is to show that DSM is a priority, important to our region and in everyone's (customer, community, stakeholders and company) best interest. The Company intends to show how the proposed plan designs and outlines an implementation plan that will do the following:

Meet MEEIA statute intent by:

- Promoting EE and DR programs in such a way that all customers benefit whether participating or not; and
- Treat DSM investments similar to supply side investments with a proposal for a DSIM that addresses the three cost/financial components that allows for equal treatment of supply and demand side investments.

Meet MEEIA Rules for applying for and delivering DSM programs by:

- Adhering to filing and submission requirements 4 CSR 240-3.163 & 4 CSR 240-3.164. (See Section 7 for all rule references in report)

Work with stakeholders to achieve objectives such as:

- Ensure that all customers can participate and benefit from the programs;
- Customers are not burdened by utility investments in DSM;
- Achieve high levels of DSM and move Missouri into comparable place regarding nationwide EE gains;
- Develop programs and target sectors based on best practices;
- Provide opportunities to invest in EE to make their businesses more efficient;
- Allow for comprehensive opportunities to invest in EE while improving appropriate levels of spend;
- Have clear, achievable business plan of EE investments that are fair to customers and meet objectives of stakeholders; and
- Provide demand side energy solutions that customers value while providing revenue opportunities equal to supply side investments.

To facilitate and allow the Company to accomplish all of the above, the Company requests that the Commission support the state policy by:

- Providing timely cost recovery;
- Ensuring that utility financial incentives are aligned with helping customers use energy more efficiently and in a manner that sustains utility customers incentives to use energy more efficiently;
- Providing timely earnings opportunities associated with cost effective measurable and verifiable savings.

SECTION | 2

# Customer Engagement and Benefits

The Missouri economy is impacted in a highly positive way by the successful promotion and execution of DSM programs that the Company has previously implemented and is now proposing for continuation. The Company is requesting to continue its investment in its residential and business customers so that they may use electricity more effectively, which produces numerous direct and indirect benefits. The benefits of EE extend well beyond lowering energy bills for customers.

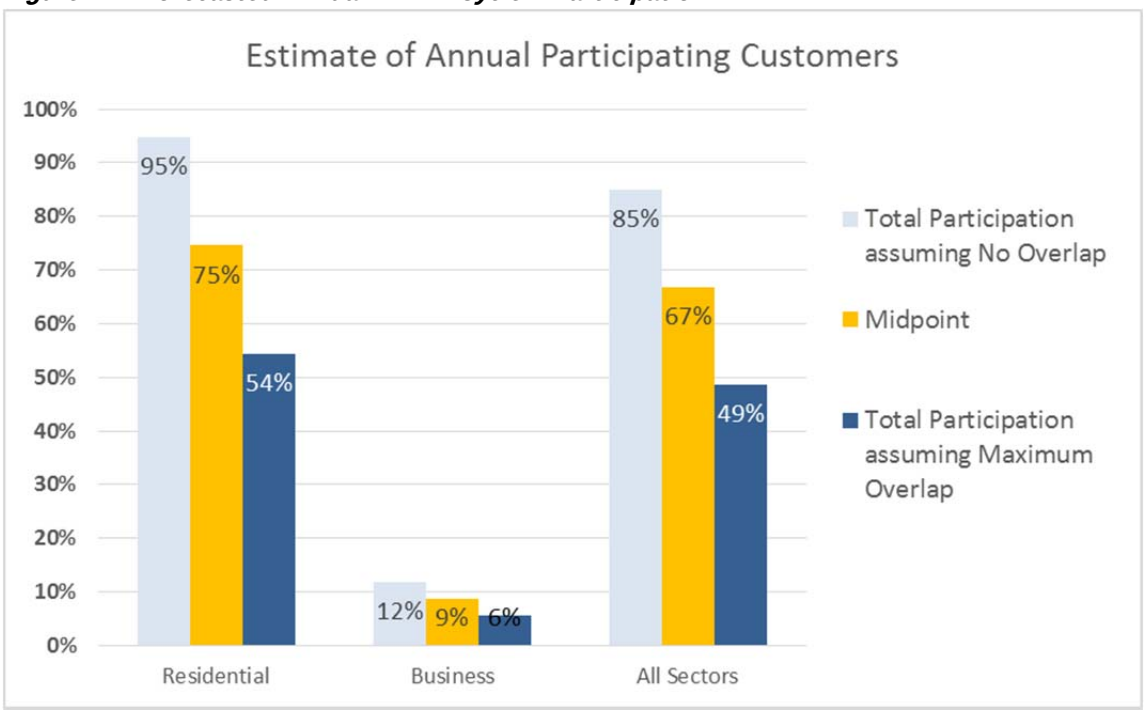
There are four beneficiaries of DSM programs: our customers, the local economy, the Company, and the environment. The sections below describe these benefits that support the Company's proposed plan.

## A. Customer Benefits and Participation

The Company considers engaging customers with their energy use as a key driver to a positive relationship with their electric utility. Our customers have shown an increasing appetite for DSM programs, which is supported by an increase in participation and favorable feedback.

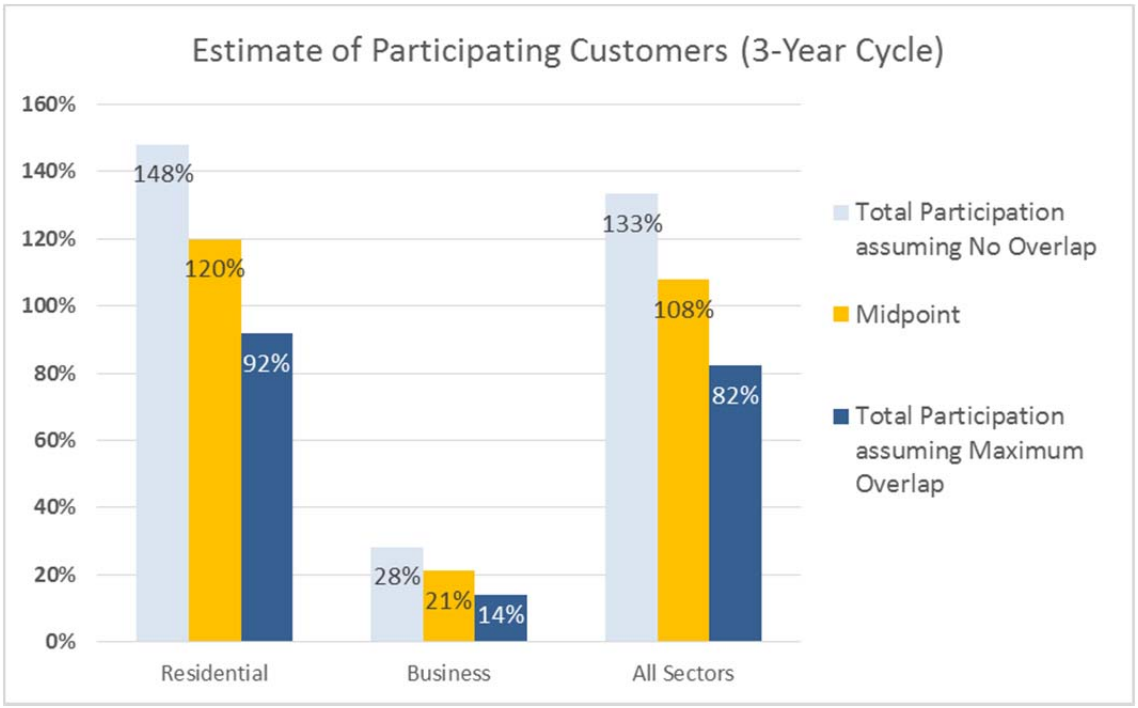
In Figure 2-1, we provide estimates of the annual participation in the DSM programs as a percent of total customers for the residential, business, and combined portfolios. Since tracking participation across a diverse set of programs, some of which are implemented upstream with limited knowledge of the ultimate customer, we provide a range of estimates. The high estimate is the annual total participation for all programs, which would assume no overlap of programs. The low estimate is simply the participation in the farthest reaching program (Home Energy Reports (HERs) for Residential and Standard Incentives for Business), which assumes the maximum overlap where all programs are servicing the same subset of customers. The actual participation will be somewhere in between, so we also provide a simple midpoint average.

***Figure 2-1 Forecasted Annual MEEIA Cycle 2 Participation***




In Figure 2-2, the same exercise is performed for the cumulative effects of the 3-year planning cycle. Some values here are greater than 100 percent, implying that some customers are being served multiple times.

***Figure 2-2 Forecasted 3-Year Cumulative MEEIA Cycle 2 Participation***




Annual participation by program is presented in Table 2-1. Each program has its own unique way of most appropriately representing participation, most of which correspond relatively well to a per-customer basis. For example, the Small Business Direct Install (SBDI) program is based upon the number of customers, but the Block Bidding program is based upon the number of Requests for Proposals (RFPs) issued within a year.

***Table 2-1 Forecasted MEEIA Cycle 2 Participation by Program***

| Program | Unit of Participation | 2016 | 2017 | 2018 |
|---|---|---|---|---|
| Home Lighting Rebate | Households* | 87,000 | 87,000 | 82,000 |
| Home Appliance Recycling Rebate | Households | 1,733 | 1,890 | 2,027 |
| Home Energy Report | Households | 132,000 | 132,000 | 132,000 |
| Whole House Efficiency | Households | 775 | 1,550 | 1,550 |
| Income-Eligible Multi-Family | Households | 90 | 185 | 185 |
| Income-Eligible Weatherization | Households | 130 | 130 | 130 |
| Residential Programmable Thermostat | Households | 4,433 | 4,433 | 4,433 |
| Business Energy Efficiency Rebate - Standard | Projects | 1,617 | 1,617 | 1,617 |
| Business Energy Efficiency Rebate - Custom | Projects | 1,575 | 1,629 | 1,653 |
| Strategic Energy Management | Customers in Cohort | 3 | 3 | 3 |
| Block Bidding | RFPs | 2 | 2 | 3 |
| Small Business Direct Install | Customers | 87 | 175 | 175 |
| Business Programmable Thermostat | Customers | 57 | 57 | 57 |
| Demand Response Incentive | Customers | 58 | 116 | 163 |

** Assuming an average of 6 bulbs per participating household for Home Lighting Rebate program*

In addition, it is important to note that in Cycle 1 approximately 20 percent (~57,000 customers) of our residential customers in GMO receive the HER and 100 percent have access to our Online Home Energy Audit tool. Thirty thousand KCP&L and GMO small business customers also have access to the Online Business Energy Audit program. The online energy audit programs recommend other EE programs to participating customers, which only increase awareness to our portfolio of programs. We are requesting in Cycle 2 to include an additional 75,000 customers to receive the Home Energy Report. By doing so, nearly 50 percent of our customers would then receive the report.

Participants and trade allies continue to highly rate their satisfaction with all programs. Specifically, we highlight the Business Energy Efficiency Rebate program in this example. Commercial Lithographing Company is representative of the direct impact that the Company's EE programs have on their business.

***Table 2-2 Example of MEEIA Program Impact***

| Cases Study | |
|---|---|
| Company: | Commercial Lithographing Company (Kansas City, MO) |
| Facility Type: | Industrial and Warehouse |
| Square Footage: | 150,000 sq ft. |
| Measures: | Comprehensive lighting retrofit and upgraded air compressors |
| Percentage of Project KCP&L Paid For: | 45.6% |
| Annual Energy Savings: | 658,239 kWh |

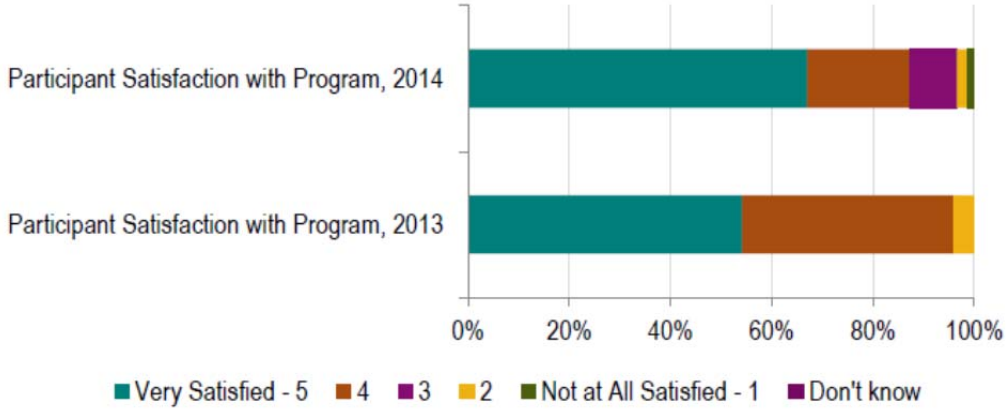
According to John Sloss, Vice President of Human Resources and Environmental Health and Safety,

> *"I would tell other businesses looking to upgrade to work with the suppliers they know and trust. We have a loyal group of contractors that we've worked with for years. We utilize those people*

*because they're the pros. They're the ones who know how to take advantage of the program KCP&L offers."*

The table below was extracted from the most recent GMO EM&V,[5] which highlights the overall satisfaction of our trade allies (contractors) who participate in the program.

***Figure 2-3 Trade Ally Participant Satisfaction, 2013 to 2014 Comparison***




*Source: GMO Trade Ally Survey*

The Company's residential customers' level of satisfaction is also a key driver to the program success and overall positive interactions with the customer. The Company designed the DSM portfolio and enhanced the participation entry points such that customers have low barriers to entry and can learn about how their actions can positively impact their electric bills. The Company expects participation in the Cycle 2 programs to have repeat participants, as well as many new participants. A strong customer education component is necessary as well to drive behavior change and participation in our programs.

**Customer Education**

Providing customers information and insight about their energy use is a primary objective of the Company as we aim to continue to be the trusted energy advisor to the marketplace. There are several known strategies to help affect customer's behavior regarding energy while keeping in mind an annual Accenture study has consistently found that the average utility customer spends just nine minutes thinking about energy usage. Unless the Company increases or deepens the importance of these minutes, customers are not likely to engage in EE programs or take action to reduce their usage.

An example of a program that is effective in accomplishing these two goals is our HER program. As mentioned earlier, the HER program is offered to approximately 55,000 customers in the GMO service territory. One of the primary purposes of the HER program is to deepen customer understanding of their energy consumption. To accomplish this, HERs contextualize each customer's energy usage by informing them of how their energy use compares to that of similar homes. The utility bill can tell a customer how much energy they used (in kWh) and how much they are being charged; however customers need additional personalized context in order to more fully understand and make better decisions regarding their usage. The reports can also

[5] GMO Evaluation Report – Final Draft, Program Year 2014, Figure 2-9

display a customer's usage over time and allow customers to understand how seasonality can impact their use.

HER programs also increase the frequency with which customers think about their energy usage. Customers primarily think about their energy use during discrete times, such as when they receive their monthly bill (particularly if it is a high bill), when they move to a new home, and when an outage occurs. Therefore it is fair to assume that most, if not all, of the nine minutes spent thinking about energy usage occurs during these times are negative experiences or stressful times. HERs, which are sent separate from the utility bill, create a new touch point for utilities to communicate with customers and increase the time customers spend thinking about their consumption. Data from HER deployments throughout the country have shown that customers are indeed spending time with the reports. For example, in a survey of over 10,000 customers across 12 utilities, 72 percent read their reports and 31 percent shared their reports with others, such as their family and friends. This means that HERs are increasing the amount of time recipients and non-recipients think about their energy use, creating a spillover effect that can influence even more customers.

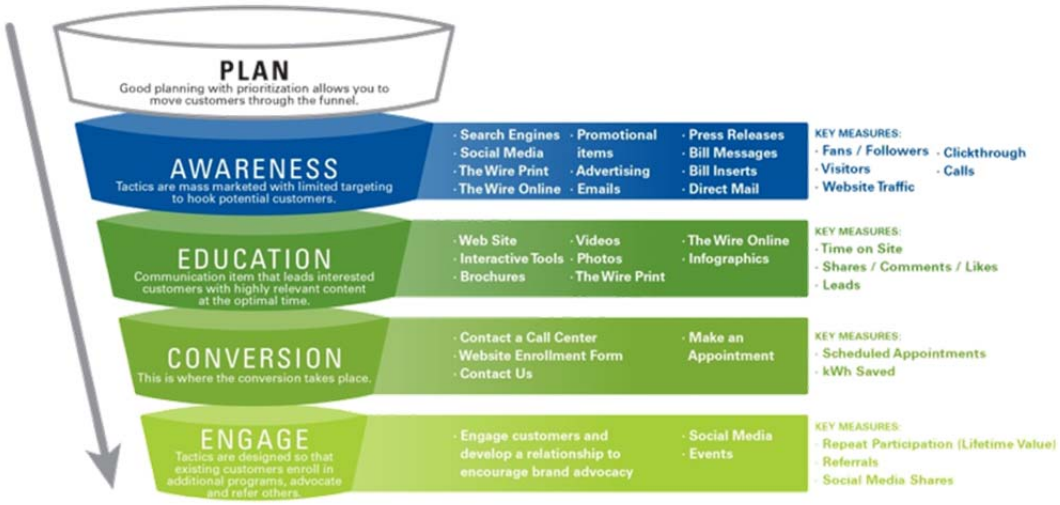
The Company also made the strategic decision to marry the HER report with an online home energy audit tool. The Company is offering the HER report and the online home energy audit tool with the same implementer such that a customer is able to receive the report, review their usage, and carry through with an additional step to perform an online energy audit. The online energy audit will provide the customer with instantaneous recommendations and suggestions based on their specific usage characteristics, appliances within their home, and physical characteristics of their home. The online home energy audit tool will provide recommendations on other programs that the Company offers to engage.

The Company will continue to work with the marketplace to find other ways to continue to engage the customers digitally with their energy usage, including but not limited to gamification, competitions and micro targeting.

### Promotion of Energy Efficiency as Win-Win

General awareness of the Company programs is another cornerstone building block to help move customers along the path to increased engagement. While awareness has increased during Cycle 1, we believe there is continued room for growth in awareness of our Missouri customers. Examples of tactics to enhance awareness and move customers along the funnel, shown in Figure 2-4, are listed in the program description write-ups in Appendix A.

***Figure 2-4 Example of Marketing Funnel***



**DSIM Bill Notifications**

The Company will be providing its customers information about MEEIA Cycle 2 in the following fashion over the next several months. The Company will insert a customer notification in the October billing statement. A copy of this insert is provided as an attachment.

The insert that will be placed in the upcoming customer bills is shown below:

***KCP&L Continues Energy Efficiency Programs and Cost-Recovery Mechanism***

*These programs have helped our customers save millions of kilowatt hours of electricity.*

*For years, KCP&L has offered energy-efficiency programs to our residential and business customers.*

*KCP&L was the first utility in Missouri to make such a strong commitment to energy efficiency, and we have created significant energy and cost savings as a result.*

*Because we know our energy-efficiency programs are successful, we plan to continue to offer a portfolio of programs for customers. These programs have helped us move toward a more sustainable energy future in a way that manages costs for the company and customers. Our portfolio includes instant rebates, low-cost energy audits and in-home products, like our programmable thermostat. We also plan to continue offering our portfolio of business programs. All are designed to help you reduce your energy usage and better control your bills.*

*On August 28, 2015, we filed a request with the Missouri Public Service Commission (MoPSC) to continue some programs and introduce new ones in early 2016.*

*If approved, you will continue to see the Demand-Side Investment Mechanism (DSIM) as a separate line item on monthly KCP&L bills. This charge reimburses KCP&L for costs spent on the programs, and establishes an incentive-sharing mechanism where the company and the customer may both benefit from program savings. Under the company's proposal, the current DSIM rate used to determine the charge on a residential and business customer's bill is expected to remain unchanged until the company's next general rate case. It will continue to be calculated by multiplying the kWh of usage by the rate that is currently in effect. Energy efficiency is a low-cost way to meet electricity needs and utilizing it will help keep bills affordable long term.*

*Energy efficiency puts the investment in our customers.*

*Energy efficiency helps keep electricity affordable for everyone, and helps defer the costs of constructing new power plants and generation units. That would be more expensive for both KCP&L and our customers. And, when you make energy-efficient improvements to your home or business, you continue to benefit by saving energy each year.*

| | |
|---|---|
| **Account Number** | 0000 0000 00 |
| **Billing Date** | 1/31/2016 |

| **Amount Billed** | | | | **$XX.XX** |
|---|---|---|---|---|
| Customer Charge | | @ | | $XX.XX |
| Energy Charge | | @ | | XX.XX |
| Energy Charge | | @ | | XX.XX |
| Energy Charge | | @ | | XX.XX |
| FAC | | @ | | XX.XX |
| DSIM Charge | 1,000 kWh | @ | 0.003110 | 3.11 |
| RESRAM Chg | | @ | | X.XX |
| City License Fee | | @ | | X.XX |
| City Sales Tax | | @ | | X.XX |
| **Total charge this service** | | | | **$XX.XX** |

*KCP&L's request with the Commission has been filed as Case No. EO-2015-2041 and it can be viewed at www.psc.mo.gov. You can contact KCP&L at 1-888-471-5275. You may also contact the Consumer Services Unit of the Missouri Public Service Commission for inquiries or to file a comment by calling (800) 392- 4211, or by email at pscinfo@psc.mo.gov.*

The above communication plan is intended to meet MEEIA rule requirement 3.163 (2) (A), (B).

## B. Local Economic Benefits – Jobs and Investment

Overall, economic activity and jobs are increased by the availability and promotion of DSM programs in the Company's service territories. According to American Coalition on Energy Efficient Economy (ACEEE), every one million dollars invested in EE supports approximately 17 direct and indirect jobs.[6]

### Trade Ally, Implementers, Economic Activity

Economic Activity: Trade Allies, consisting of a multitude of contractors in both of the residential, commercial and industrial (C&I) sectors, are positively impacted by the Company's DSM portfolio by offering additional incentives for customers to more efficiently use energy. In essence, the programs can help spur demand for contractors to promote existing and new technologies that would benefit customers.

According to Tom Hurley, Voss Lighting Kansas City Branch Manager,

> *"…the Program has opened the door for new business; it is an integral part of our proposals and our success. We have at least 1.5 additional staff as a result. We are a 6 million dollar branch and I guarantee that at least 15% of our business is a direct result of the Program."*

Jobs: According to the "Clean Jobs Missouri" report[7], nearly 40,000 people work in our state's clean energy industry, or approximately 8,500 work in the Kansas City area. Clean energy jobs include employees in renewable energy, EE, advanced transportation, greenhouse gas emission

[6] http://aceee.org/blog/2012/09/energy-efficiency-and-economic-opport

[7] *"Survey Results, Clean Jobs Missouri, Sizing Up Missouri's Clean Energy Jobs Base and Its Potential"*, presented by E2 (Environmental Entrepreneurs) and Missouri Energy Initiative, April 2015.

management, and accounting. The EE sector accounts for 83 percent of all clean energy jobs in Missouri.

The Company collaborates with selected implementers to have as much local presence as possible to execute the delivery of the Company's DSM programs. These jobs range from transactional to promotional to engineering to management.

In the current MEEIA Cycle 1, the Company contracts with implementers that employ full time equivalent employees (FTEs) in the Missouri area. Table 2-3 represents the approximate number of FTE's that were hired directly to support KCP&L and GMO MEEIA Cycle 1 programs locally.

***Table 2-3 Historical MEEIA Cycle 1 Implementation Contractor FTEs in Missouri***

| Program | Implementer | FTE (local) |
|---|---|---|
| Air Conditioning Upgrade Rebate Program | Proctor Engineering | 1.95 |
| Business Energy Efficiency Rebate Programs | CLEAResult | 13.00 |
| Home Lighting Rebate Program | CLEAResult | 3.80 |
| Home Appliance Rebate Program | CLEAResult | 0.20 |
| Appliance Recycling Program | JACO | 2.75 |
| Home Performance with ENERGY STAR® | Metropolitan Energy Center | 4.50 |
| Programmable Thermostat | Honeywell | 12.00 |
| | **Total** | **38.20** |

The Company expects similar amounts of FTE support from implementers in Cycle 2 with actual numbers determined through the implementation contractor Request for Proposal (RFP) process that will happen in late 2015. Additionally, KCP&L and GMO expect to have approximately 12 FTEs to implement and deliver these programs as proposed in 2016-2018. The positions at KCP&L and GMO are filled by highly skilled program managers, analysts, marketing and accounting personnel. These 12 FTEs will support DSM programs offered in its three service territories: KCP&L-MO, GMO, and KCP&L-KS.

## C. Cost-Effectiveness – Systematic Quantification of Benefits

### Customer Benefits (Participants and Non-Participants)

As a function of the MEEIA legislation, the Company is meeting the requirement of benefiting all customers participating and not participating in the DSM programs. This is accomplished by finding a balanced and optimized portfolio approach with respect to the relevant benefit-cost tests. There are four industry standard cost-effectiveness tests to gauge the economic merits of DSM measures, programs, or portfolios. Each test compares the benefits of the DSM activities to their costs – using the test's own unique perspectives and definitions – all defined in terms of NPV of future cash flows. Three of the four tests directly consider ways in which the customer is affected, as described below.

- **Total Resource Cost (TRC) Test** focuses on the economic impact of the DSM activities to society as a whole. The benefits are the avoided utility energy and capacity costs. The costs are the incremental costs of end-use measures implemented due to the program, including both customer and utility costs, plus the utility costs to administer, deliver and evaluate the program. Since the TRC ratio is greater than 1.0, such as is the primary requirement of the MEEIA rules, the portfolio delivers more economic benefit to all the Company ratepayers (including participants and non-participants) than the total cost of the programs.

  A variation of the TRC test is the Societal Cost Test (SCT). This metric differs from the standard TRC test in that probable environmental benefits are quantified and included in the numerator of the benefit-cost (B/C) ratio.

- **Participant Cost Test (PCT).** The benefits are the lifetime value of retail energy savings accrued by participating customers. The costs are those seen by the participant; in other words, the incremental measure costs minus the value of utility incentives paid

out to them. The Company value for this B/C ratio is significantly higher than 1.0, showing that participants overwhelmingly benefit from programs.

- **Rate Impact Measure (RIM)** quantifies the difference between the change in utility revenues and the change in costs incurred by utility for implementing the DSM portfolio. The RIM test attempts to show the effect of the DSM portfolio on customer rates. The benefits are the same as the TRC benefits, avoided utility energy and capacity costs, while the costs are the total cost of running the DSM programs (incentive and non-incentive costs) plus any lost revenue from the decreased purchases of energy.

  DSM portfolios almost always raise rates on a *per unit* basis (that is, the RIM ratio is less than 1.0 for the vast majority of DSM portfolios). Thus, costs typically outweigh benefits from the point of view of this test, but if the *absolute* energy use decreases to a greater extent than *per-unit* rates are increased over time — the TRC test will be greater than 1.0 and lower average utility bills will result. The Company's programs have a relatively high RIM ratio since the portfolio is very cost-efficient and has a strategic focus on peak demand and capacity savings. These savings provide targeted benefits such that economic system benefits are captured while significant lost revenues from decreased energy sales are not incurred.

  A variation of the RIM test is called the RIM Net Fuel test. This metric differs from the standard RIM test in that it does not include base fuel or fuel adjustment costs in the lost revenue calculation. This is because base fuel and fuel adjustment costs can be considered a pass-through cost to customers rather than utility revenue. The RIM Net Fuel test does include avoided fuel purchases in the lost revenue that is part of the denominator or cost portion of the metric, and therefore, the RIM Net Fuel test will result in higher net benefits than the standard RIM test.

The Company strives to have programs available to all who want to participate, but fully expects that some will not participate for a myriad of reasons related to their individual situations. Viewing the programs through the lenses of the cost-effectiveness metrics above allows all customers to understand that the Company's DSM investment is beneficial to them.

### DSM as a Long Term Resource in a Balanced Portfolio

The Company views DSM as a long term resource amongst a balanced portfolio. By investing in customers using electricity more efficiently, the choice of generation type asset becomes ultimately more effective. Consideration of the fourth and final cost-effectiveness metric, the UCT ensures that this perspective is also included in the program and portfolio design.

- **Utility Cost Test (UCT).** The benefits are the avoided utility energy and capacity costs, which are the same as the TRC and RIM benefits. The costs are the program administrator's incentive costs and administrative costs (a utility's costs to administer, deliver and evaluate the program). A more positive B/C ratio indicates the portfolio's relative fitness when compared to alternative, supply-side options that the Company may consider in long term, integrated resource planning.

The portfolio-level cost-effectiveness results are presented in Table 1-3 above and more detailed, program-level results are available in Table 3-9 and Appendix A.

**Matching DSM with Integrated Resource Plan (IRP): Option E – GMO**

In GMO's recent triennial IRP[8], DSM was outlined as the preferred option E in the analysis and report. This shows a sustainable plan to implement DSM programs in the short- and long-term and provides the most value to our customers by comparing to other generation assets. Comparing to the MEEIA Cycle 2 plan, the net revenue requirement is reduced $432.6 million over a plan without DSM programs.

## D. Environmental Benefits Now and Future Possible Avoidance

The benefits to the environment related to investments in DSM can easily be seen in the reduction of emissions related to the generation of electricity. Any kilowatt-hours not used by customers because of efficiency equate to reductions in kilowatt-hours and emissions generated at the power plant.

A potential future benefit related to the environment is the possible cost avoidance of compliance with future federal or state regulations related to the Clean Power Plan or other similar initiatives. For example, a reduced carbon footprint from DSM programs may defer or eliminate the need to build and finance chemical scrubbers, ultimately depending on the outcome of future IRPs.

The DSM programs, while targeting electricity savings in the Company's service territory, also provide corollary benefits for non-electric consumption, such as water savings and natural gas savings, as well as spillover effects on conservation that benefits neighboring jurisdictions. An example of co-benefits from water savings would be if low-flow fixtures are installed to reduce the consumption of electric water heaters and they also reduce the corresponding water consumption. Natural gas savings would accrue any time building shell improvements are made in a facility that uses natural gas for a portion of its space conditioning needs. The Company will look to partner with local natural gas utilities on program co-delivery where it makes sense to help capture the value of these savings even more effectively. An example of spillover effects would be if a customer in a nearby jurisdiction was motivated to install a high efficiency heating, ventilating, and air conditioning (HVAC) system after learning about the options and long-term benefits from Company marketing or educational efforts. None of these examples are quantified in the Company's plans, but all are real and tangible effects that are worth keeping in mind when considering high level strategy and policy.[9]

[8] GMO Case No. EO-2015-0252

[9] Company DSM program evaluations do attempt to quantify estimates of both spillover and free-ridership for electricity savings within the KCP&L and GMO service territories.

SECTION | 3

# DSM Experience to Date

KCP&L has a history of implementing DSM programs, beginning most significantly with the Comprehensive Energy Plan (CEP) adopted in 2005. Prior to that, KCP&L implemented various demand reduction and pricing programs throughout the 1990s.

Prior to the implementation of MEEIA Cycle 1, GMO invested in approximately $26.2 million in DSM programs. These programs were put into place in 2008 and 2009 after the merger between Aquila and KCP&L to provide similar programs to all Missouri customers as KCP&L-MO jurisdiction had developed programs as part of the original Comprehensive Energy Plan.

KCP&L and GMO first offered a similar suite of programs in its GMO service territory under MEEIA (Cycle 1). Those programs became effective January 27, 2013, and will remain in effect for 35 months through December 31, 2015. Through June 30, 2015, GMO has invested $31.8 million in Cycle 1.

The table below summarizes KCP&L and GMO's achievements in offering DSM programs since 2005 through June 2015.

***Table 3-1 KCP&L Historic DSM Program Summary (2005 - June 2015)***

| | Ex-Ante Annual Energy Savings (MWh) | Es-Ante Peak Demand Savings (MW) | Portfolio Investment ($) |
|---|---|---|---|
| **KCP&L-MO** | | | |
| Pre-MEEIA | 183,045 | 109.4 | $ 67,343,349 |
| MEEIA Cycle 1 | 63,497 | 28.3 | $ 14,308,176 |
| Total KCP&L-MO | 246,543 | 137.7 | $ 81,651,525 |
| **KCP&L-KS** | | | |
| DSM | 81,809 | 64.3 | $ 36,269,658 |
| Total KCP&L-KS | 81,809 | 64.3 | $ 36,269,658 |
| **GMO** | | | |
| Pre-MEEIA | 85,499 | 50.2 | $ 26,276,088 |
| MEEIA Cycle 1 | 115,619 | 46.7 | $ 31,826,531 |
| Total GMO | 201,118 | 96.9 | $ 58,102,620 |
| **Total** | **529,469** | **298.9** | **$ 176,023,803** |

## A. Successful Delivery of Programs

### Review of CEP Results

While the focus of this filing is programs under the MEEIA construct, the KCP&L and GMO have been working diligently to provide customers options for DSM programs prior to MEEIA for over ten years. A few program highlights of those efforts as a function of KCP&L's CEP are listed here for reference:

- Innovative thermostat DR program that grew to largest in region at the time with over 30,000 thermostats.

- Increased the participation of C&I DR program by 20 fold in little over a year ending with over 50 MW of capacity.
- Partnered with the local gas utility to co-deliver a comprehensive Home Performance with ENERGY STAR® program.
- Built a strong local HVAC contractor base that demonstrated increased close rates on HVAC sales significantly by having the Company rebate to overcome barrier to investing in efficiency.

As a result of the programs during the 2005-2009 CEP timeframe, KCP&L's investments:

- Created 115 MWs of resource capacity;
    - Generated $80 million of local and national economic activity, including the creation of over 70 new jobs (60 within the Kansas City metropolitan area); and
- Reduced carbon dioxide ($CO_2$) emissions equivalent to the removal of nearly 7,000 cars from the road.

### Evaluation, Measurement and Verification (EM&V) Studies

KCP&L and GMO has had over 20 EM&V studies for implemented DSM programs with overwhelmingly positive results. For example, Opinion Dynamics Corporation (ODC) reviewed both GMO and KCP&L's C&I EE Rebate programs in 2010 and 2008, respectively.[10] For KCP&L, ODC reported a 114 percent gross realization rate for energy savings and a 119 percent gross realization rate for demand reduction for custom projects.

More recently, GMO EM&V was conducted for 2013 (Final) and for 2014 (preliminary), identifying programs with successful implementation, program enhancement opportunities and recommending cessation of some programs. For the programs that GMO continues to implement, the realization rates of the efficiency measures and NTG indicators are very similar to what was originally formulated.

GMO has acted prudently to take action as a result of unfavorable EM&V results. For example, two measures that were not cost effective within GMO's Residential Lighting and Appliance program were removed and this action was approved by the Commission to become effective October 22, 2014[11]. In addition, GMO prudently recommended to freeze the Multi-Family Rebate Program and ENERGY STAR® New Homes Program when they were determined to not be cost effective due to low level of participation[12]. Ultimately, if a planned program proves to not be working as verified by EM&V results, the Company will change course or discontinue the program according to the MEEIA Rules as necessary.

### Prudent Expenditure of Program Funds

GMO also recently underwent a prudence review as prescribed by MEEIA rules to evaluate the proper spending of the MEEIA funds for demand side programs. The staff report showed no imprudence from GMO decision makers during the 2013-2014 period reviewed. An excerpt from the Executive Summary is outlined below:

> *The Missouri Public Service Commission ("Commission") Staff ("Staff") reviewed and analyzed a variety of items in examining whether Kansas City Power & Light Greater Missouri Operations ("GMO" or "Company") prudently incurred costs associated with it*

[10] KCP&L Case No. EO-2012-0008 and GMO Case No. EO-2012-0009.
[11] File No. ET-2015-0076, Tariff File No. JE-2015-0125
[12] File No. ET-2015-0161, Tariff File No. JE-2015-0237

*demand-side programs and demand-side programs investment mechanism which were approved by the Commission in Case Nos. EO-2012-0009 and EO-2014-0355. Based on its review, Staff identified a minor concern related to GMO's calculation of interest expense discussed in detail in this Report. As a result of its review and analyses as explained below, Staff found no imprudence on the part of GMO's decision makers for the period of January 26, 2013 through December 31, 2014.*[13]

Additionally, the personnel that manage and make decisions for the GMO MEEIA programs are the same that manage and make decisions for the KCP&L-MO MEEIA programs.

### Portfolio Implementation Framework

Successful implementation of a portfolio typically requires a combination of tactics to ensure potential customers and program partners are aware of the programs and that the Company and its implementation contractors take steps to reduce and manage risk, as well as address free ridership and spillover associated with the programs and portfolio. These tactics are described in detail below.

### Trade Ally Network

Trade allies are contractors, engineers, or program partners who have registered with a utility DSM program and are executing EE or DR initiatives in cooperation with the utility program. Developing an educated and quality trade ally network is a key element to transforming the marketplace. The Company has developed a successful network of trade allies that deliver existing DSM programs to date and is taking steps to further expand the effectiveness of this network moving forward.

Trade allies are often the first point of contact for a customer in need of new equipment and/or systems. For example, a residential customer who is in need of HVAC equipment will likely contact their HVAC contractor (trade ally) first to resolve the issue. This demonstrates that trade allies have a unique, and sometimes first, opportunity to make customers aware of Company DSM programs and educate the customer on the benefits of energy efficient equipment and/or systems. Therefore, the Company has made it a priority to establish a strong trade ally network with our DSM business programs.

Within our Cycle 1 business rebate program, the Company's implementer has three full-time staff assigned to outreach to and to interact exclusively with trade allies. This arm of the implementation team has executed over 1,000 trade ally meetings with this network since January 2015 and collaborates closely with the Company's program managers to ensure the best possible combination of customer and trade ally experience.

The trade ally network is pivotal to the success of the Company's business rebate program and achieving savings targets. The implementer's trade ally team employs a three-pronged approach to reach this network. First, the team develops relationships with trade associations and societies to connect with potential allies through these trusted organizations. Examples include Association of Energy Engineers and Building Operator Maintenance Association. In addition, the trade ally team supports the Company in such venues as delivering informational presentations, staffing booths at organization conferences, and providing input to articles that are provided through the Company's newsletter to trade allies and large customers.

Second, the team collaborates with local equipment distributors where energy efficient equipment is often specified and purchased in order to introduce another opportunity to connect

[13] GMO Case No. EO-2015-0180.

with installing contractors. These distributors often host lunch and learn meetings where the outreach team educates contractors about program participation.

Third, the trade ally staffs' daily routine focuses on one-on-one meetings with trade allies to educate them on the Company's programs, assist them to submit complete applications to streamline the approval process and be the trade allies' overall internal advocate to bring projects to completion. These opportunities provide the base framework that additional communication points such as email announcements and large scale forums layer on top of.

To further highlight the benefits of a trade ally-utility partnership, the Company has offered larger scale meetings with its trade allies and provided awards and public recognition. For example, in September 2014, the Company hosted an EE Forum with nearly 300 trade allies and business customers in attendance. Additionally, many manufacturers, several of whom are also active trade allies, sponsored booths to educate attendees on their latest equipment or technology. The Company also collaborated with multiple subject matter experts who presented training sessions on topics such as advanced LED lighting, Property Assessed Clean Energy financing, air compressor usage and building automation. Furthermore, three outstanding projects and a platinum sponsorship manufacturer/local trade ally were honored for their contributions to the Company's continued program success. The event was highly successful, much praised and requested by the market as an annual event.

Additionally, in July 2015, the Company hosted a trade ally exclusive forum with the stated intent of clarifying details on winding down the MEEIA Cycle 1 program, previewing anticipated changes for the MEEIA Cycle 2 program, and garnering feedback via roundtable discussion with the trade allies themselves. This event was offered as two identical sessions, breakfast and lunch, to best fit the trade allies' schedules. The attendance exceeded Company expectations with over 100 total trade allies. The roundtable session in both meetings included exceptional trade ally interaction and conversation. Ultimately, the overall event produced positive trade ally feedback and interest in future events.

### *Outreach, Marketing and Communications*

Outreach, marketing and communications are a critical mechanism for ensuring customers and trade allies are aware of, and participate in, the portfolio of programs. A portion of the education and marketing budget from each individual DSM program is directed toward coordinating the overall strategy in a concerted way that reinforces the KCP&L and GMO DSM brand. More detail about the Company's marketing approach is outlined in section 4E.

### *Portfolio Risk Management*

The DSM portfolio incorporates multiple strategies to manage risk, including:

- Diversification of offerings among multiple programs and customer groups.
- The Company's rigorous RFP and performance-contracting process to select and appropriately guide implementation contractors.
- Program tracking using software based tools to allow real-time insight into trends and program adaptability to changing market conditions.
- Minimization of free ridership and maximization of spillover through using proven, best practice measures, program delivery mechanisms, etc. (see Minimize Net to Gross Impacts below).
- Conduct periodic evaluations and incorporation of resulting recommendations for process improvements as they are received.

Other program-specific elements of risk management are provided in the program detail later in this report.

### *Minimize Net-to-Gross (NTG) Impacts*

NTG ratios adjust the gross energy and demand savings associated with a program to reflect the overall effectiveness of the program, taking into account free riders, spillover (participant and non-participant) and market effects. Free riders, spillover and market effects, as determined from an impact evaluation, are defined as:

- Free Riders: Customers who participate in EE programs that would have engaged in the efficient behavior in the absence of the program.
- Spillover (Participant and Non-Participant): Customers who engage in energy efficient behavior due to some influence of a program but who do not participate in a program. For an example of participant spillover, if a customer were to purchase a compact fluorescent light (CFL) bulb from the Home Lighting Rebate Program and then chooses to purchase an ENERGY STAR® clothes dryer not part of a program after learning about the benefits of EE.
- Market Effects: A change in the structure of the market or behavior of customers in a market that is reflective of an increase (or decrease) in the adoption of energy-efficient products, services or practices that is casually related to programs.

Spillover and Market Effects act in an opposing direction of free ridership. Spillover and Market Effects increases a program's energy and demand savings while free ridership diminishes a program's savings.

The Company will make an effort to minimize free ridership and maximize spillover by,

- Modifying incentives to respond to market prices, as needed and practical.
- Verifying customer eligibility to ensure the customer is a Company customer, as practical.
- Increase marketing of the Company's DSM portfolio and educational tools such as the Online Home and Business Energy Audit.

The Company's program adjustments to address free ridership, spillover and market effects will not be intended to negatively impact program implementation or continuity and will adhere to program tariffs (e.g. program managers will not modify incentive levels with a frequency that would compromise program stability and the customer experience).

## B. Detailed Descriptions of Programs

The Cycle 2 DSM portfolio is comprised of eight residential programs, eight business programs, and a pilot program that will deliver an effective and balanced portfolio of energy and peak demand savings opportunities across all customer segments to meet the Company's objectives defined in the Executive Summary. Each program was designed to leverage the optimal mix of best-practice measures and technologies, delivery strategies, and target markets in order to most effectively deliver programs and measures to the Company's customers.

The programs are listed with a brief description in Table 3-2 and Table 3-3 for residential and business customers, respectively.

***Table 3-2 Proposed Residential DSM Program Descriptions***

| Residential DSM Programs | |
|---|---|
| Home Lighting Rebate | Instant incentives at qualifying retailers for CFLs and LEDs. |
| Home Appliance Recycling Rebate | Incentive for recycling an older, working refrigerator or freezer. Customers may also recycle room air conditioners and dehumidifiers during a scheduled pickup for a refrigerator or freezer. |
| Home Energy Report | Behavior program utilizing customized energy reports sent periodically to households. |
| Online Home Energy Audit | Online energy audit tool. |
| Whole House Efficiency | To participate in Option 2, customers must complete Option 1.<br>• Option 1. Home Energy Audit and Direct Install<br>• Option 2. Air Sealing, Insulation and Windows<br>• Option 3. HVAC Equipment |
| Income-Eligible Multi-Family | The program is comprised of two tiers:<br>• Tier 1. Home Kit<br>• Tier 2. Common Area Lighting |
| Income-Eligible Weatherization | The program is comprised of two tiers:<br>• Tier 1. Home Kit<br>• Tier 2. Weatherization |
| Residential Programmable Thermostat | Direct load control program that cycles and curtails central air conditioners by way of a remote-controlled switch. |

***Table 3-3 Proposed Business DSM Program Descriptions***

| Business DSM Programs | |
|---|---|
| Business Energy Efficiency Rebate – Standard | Customers may receive incentives by installing efficient measures from a pre-qualified list of options. |
| Business Energy Efficiency Rebate – Custom | Customers may receive incentives for non-prescriptive measures. |
| Strategic Energy Management | Provides energy education, technical assistance, and coaching for very large C&I customers in order to drive behavioral change and transformation of the company culture. |
| Block Bidding | The utility purchases blocks of electricity savings by issuing a RFP to eligible customers and third-party suppliers, representing reduced electric usage from non-conventional projects that may not be eligible or appropriately incentivized to participate in other programs. |
| Online Business Energy Audit | Online energy audit tool. |
| Small Business Direct Install | Small business customers that typically do not have the staffing or financial resources to engage in EE activities receive targeted marketing and attractive incentives (70 percent of the full cost) for qualifying DSM measures. |
| Business Programmable Thermostat | Direct load control program that cycles and curtails central air conditioners by way of a remote-controlled switch. |
| Demand Response Incentive | Interruptible tariff program for customers that can reduce load by at least 25 kW during times of system peak congestion. |

The following table summarizes the recommended changes to the residential portfolio:

***Table 3-4 Program Recommendations for Residential DSM Portfolio***

| Residential Portfolio… | | |
|---|---|---|
| **Continuing** | **Ending** | **New** |
| Home Lighting Rebate | Air Conditioning Upgrade Rebate | Income-Eligible Multi-Family |
| Home Appliance Recycling Rebate | Residential Appliance | Whole House Efficiency |
| Home Energy Report | Home Performance with ENERGY STAR® | |
| Online Home Energy Audit | ENERGY STAR® New Homes[14] | |
| Income-Eligible Weatherization | Multi-family Rebate[15] | |
| Residential Programmable Thermostat | | |

Those programs that the Company is proposing to continue will have modifications in the delivery of the program and/or incentive range; however, the main elements of the program will remain the same. For example, the Home Lighting Rebate program will focus more on the promotion of LEDs, rather than CFLs, to achieve energy savings as the market continues to evolve. Another significant change includes our proposal to claim energy savings (in addition to demand savings) for the programmable thermostat program. The proposed programmable thermostat program will largely concentrate on replacing existing thermostats that are becoming technologically obsolescent with a learning thermostat.

The Company is proposing two new residential programs: Income-Eligible Multi-Family and Whole House Efficiency programs. The Income-Eligible Multi-Family program is proposed to meet the needs of this traditionally underserved segment. While Cycle 1's Air Conditioning Upgrade Rebate (ACUR) Program will be ending, there are many elements of the program that will be provided for in the proposed Whole House Efficiency Program. For example, the Company will continue to provide a rebate for early replacement of an air conditioning unit, but it is also proposing a lower rebate for units that have failed and need to be replaced. This program also includes some concepts of GMO's Home Performance with ENERGY STAR® program. The Whole House Efficiency Program is designed so that it is a more comprehensive program such that the customer is presented with options to reduce energy costs, improve comfort, and promote better indoor quality.

These residential programs are further described in Appendix A.

The following table summarizes the recommended changes to the Company's business, or non-residential portfolio:

[14] Program tariff frozen by Commission Order in February 2015
[15] Program tariff frozen by Commission Order in February 2015

***Table 3-5 Program Recommendations for Business DSM Portfolio***

| Business Portfolio… | | |
|---|---|---|
| **Continuing** | **Ending** | **New** |
| Business Custom Rebates | Building Operator Certification | Block Bidding |
| Business Standard Rebates | | Small Business Direct Install |
| Online Business Energy Audit Tool | | Strategic Energy Management |
| Business Programmable Thermostat | | |
| Demand Response Incentive | | |

Similar to residential programs, the business programs that the Company is proposing to continue will have modifications in the delivery of the program and/or incentive range; however, the main elements of the program will remain the same.

The Company is proposing to end its Building Operator Certification (BOC) program at the conclusion of Cycle 1. The BOC program has been offered as an educational program to GMO business customers circa 2008. During this time period, there have been approximately 200 KCP&L-MO and 50 GMO customers that have graduated from the program. However, participation has decreased over the past several years as the program has matured. Participation has generally been from office, industrial, and municipal government segments. While we feel it is important to continue to educate these customers on EE, we propose to utilize that funding on programs that would benefit a broader segment of customers and realize greater energy savings.

We propose three new business programs to enhance our offering to business customers: block bidding, SBDI, and strategic energy management (SEM). Below is a brief description of the new business programs:

- Block bidding: The utility purchases blocks of electricity savings by issuing a RFP to eligible customers and third party suppliers, representing reduced electric usage from non-conventional projects that may not be eligible or appropriately incentivized to participate in other programs.
- SBDI: Small business customers that typically do not have the staffing or financial resources to engage in EE activities receive targeted marketing and attractive incentives (70 percent of the full cost) for qualifying DSM measures.
- SEM: Provides energy education, technical assistance, and coaching for large C&I customers in order to drive behavioral change and transformation of the company culture.

These business programs are further described in Appendix A.

### Differences between Missouri Jurisdictions

The differences between KCP&L and GMO's Missouri jurisdictions warrant identification. These differences led to varying participation rates between the jurisdictions. As shown in Table 3-6, while KCP&L-MO and GMO are of similar size and structure, other qualitative differences exist.

***Table 3-6 Comparison of KCP&L MO and GMO, 2014***[16]

| Operating Company | Total Customers | Total Sales (MWh) | Total Revenues (thousands) |
|---|---|---|---|
| KCP&L-MO | 273,515 | 8,348,673 | $824,705 |
| GMO | 316,583 | 8,290,664 | $802,845 |

These differences between KCP&L-MO and GMO include:

- KCP&L-MO is more urban. In-person program deliveries may be more effective and gain more traction due to customer proximity, whereas mailed kits or upstream measures may be more effective in GMO due to the geographic spread.
- While KCP&L-MO pre-MEEIA programs began earlier than GMO, GMO MEEIA programs began approximately 18 months prior to KCP&L-MO. We believe that GMO has more awareness building and opportunities for low-hanging fruit measures (e.g., residential lighting).
- Need for additional long-term capacity as identified in recent IRP filings[17].

Historically, the KCP&L-MO and GMO DSM portfolios have been comprised of different programs and incentive levels for energy efficient measures. The DSM portfolio proposed in the MEEIA Cycle 2 filing has eliminated any programmatic differences between the KCP&L-MO and GMO programs. KCP&L and GMO are proposing that customers now have access to the same programs, with the same incentive levels, regardless of the jurisdiction in which they reside.

KCP&L and GMO's DSM programs have a strategic focus on peak demand and capacity savings due to system needs identified in the most recent IRPs, particularly in GMO. Therefore, the DSM portfolios have a focus toward peak-saving measures such as efficient cooling systems, DR, and commercial lighting measures. These savings provide targeted benefits from avoided capacity resources, exhibiting a downward pull on rates and system costs.

## C. Implementation Plan for Cycle 2 Programs

Defining a robust implementation plan for Cycle 2 programs is a critical step in smooth transition from Cycle 1. The section below outlines the Company's use of implementation contractors, emphasizes the importance of the continued utilization of a tracking mechanism, and outlines the key milestones for implementing Cycle 2 programs.

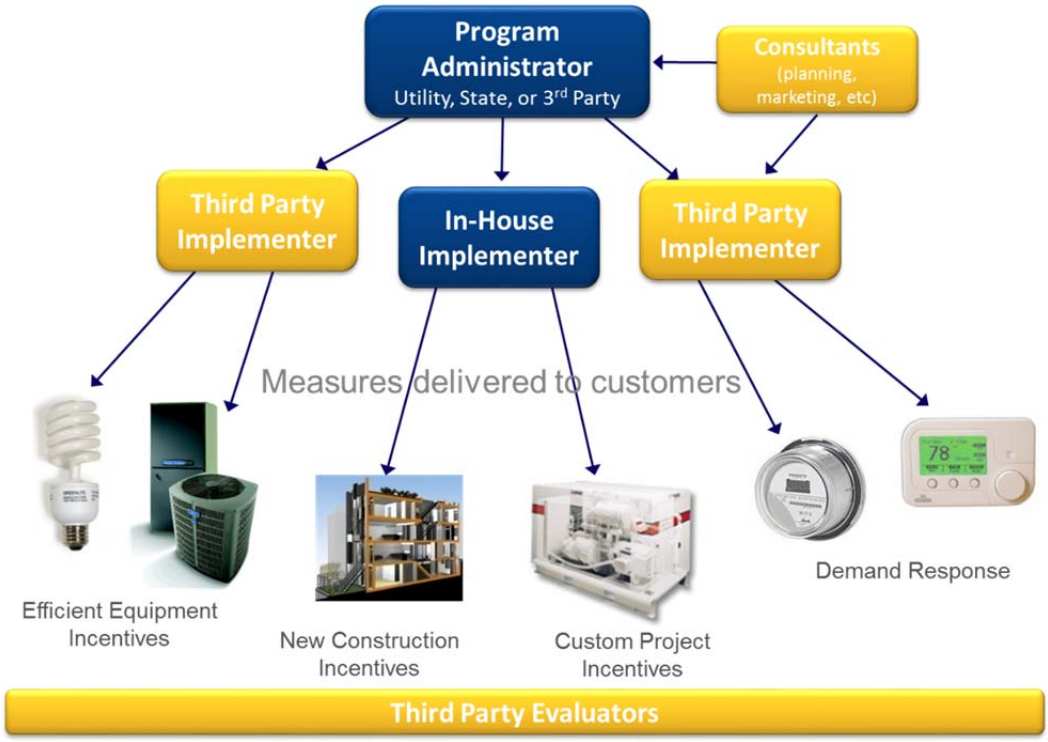
### Use of Implementation Contractors

DSM portfolios are typically implemented using a combination of in-house resources and outsourced implementation contractors. On one end of the spectrum are completely outsourced initiatives, where an implementation contractor delivers all DSM programs on behalf of the utility. However, on the other end of the spectrum, are completely in-house initiatives that rely solely on utility staff and personnel. Utilities typically utilize a combination of in-house resources and a

[16] GMO Non Case Related Filing BIRR-2015-1126: HIGHLY CONFIDENTIAL Annual Report 2014
[17] GMO Case No. EO-2015-0252

network of contractors and vendors (implementer contractors) that may provide additional expertise or economies of scale, as shown in Figure 3-1. The Company currently utilizes a network of implementation contractors to implement the majority of their programs with in-house marketing staff and program managers overseeing implementation activities.

***Figure 3-1 Example DSM Portfolio Delivery Structure***




The DSM portfolio is proposed to begin on January 1, 2016 and comprises a combination of existing and new programs. Upon approval of the tariffs, the Company will work with its internal program managers and implementation contractors to finalize the program offering, develop a marketing plan, and determine a reporting schedule.

The implementation contractors will primarily be responsible for:

- Assisting or leading the design and execution of program marketing materials.
- Establishing and maintaining relationships with trade allies/retailers/etc.
- Ensuring the successful delivery of programs and installation of measures.
- Processing incentives.
- Tracking program data.

DSM program implementers help utilities design, launch, and implement their DSM portfolio programs, and implementers provide services for all types of programs for all sectors. Typically, most implementers offer services for both residential and non-residential sectors, while some specialize in certain program types or subsectors. For example, some implementers that operate within the C&I sector may specialize in small business or institutional programs, while those operating in the residential sector may specialize in income-eligible programs. Implementers can also provide a range of services to a utility including marketing, rebate processing, call center, and customer outreach.

The Company's internal program manager manages the relationship with the selected implementer and activities may include the following:

- Invoice submittal and approval

- Customer participation submitted within the Company's tracking mechanism
- Resolution of any customer issues
- Call center and rebate process activities (as applicable)
- Development of strategy to achieve targets
- Contractual issues
- Identification of developing national trends/changes in other utility programs

The level of implementer involvement is dependent on each program. For example, on the Home Lighting Rebate program, an implementer establishes relationships with individual retail stores, manages the store inventory and rebate level, and has "feet on the ground" within the Company's service territory to perform in-store demonstrations and ensure adequate inventory levels. However, the implementer does not perform call center, marketing, or rebate process activities since the rebate is offered as an in-store discount. However, in contrast, the Company's business rebate program's implementer has energy advisors to interact with customers on audits and questions, an engineering staff to perform rebate calculations, a marketing function, a trade ally staff member, and other support staff.

The Company will engage new and existing implementers in an RFP(s) for delivery of its Cycle 2 programs. The Company will solicit proposals for new programs, as well as issue RFPs for the majority of its existing programs to refresh pricing and statements of work.

The evaluation of proposals and implementer selection process will run in a "parallel path" with the MEEIA Cycle 2 filing, technical conferences, and negotiations, and will require significant coordination to complete execution for program launch by January 1, 2016, assuming regulatory approval.

As shown in Table 3-7, the implementation schedule and milestones are aggressive and will vary slightly depending on whether the program is continuing from Cycle 1 or if a program is new (as described in Tables 3-4 and 3-5). Due to the compressed filing schedule, the Company anticipates launching new programs (such as the Whole House Efficiency program) as late as the end of the second quarter of 2016 to allow for selected implementers to ramp up operations and gain participation. We have addressed this delayed start of programs in our energy savings targets and it is further discussed in Section 3D.

***Table 3-7 Key Milestones for Cycle 2***

| Key Milestones | Schedule |
|---|---|
| File regulatory plan for Cycle 2 with MPSC | August 28, 2015 |
| Define implementation requirements, write RFPs as necessary | August 2015 |
| Issue RFPs mid August (immediately following the Cycle 2 filing), evaluate proposals, negotiate, and award contracts | August 18 – Sept. 30, 2015 |
| Program roll out:<br>• Develop marketing materials and website<br>• Implementer training on tracking mechanism<br>• Trade ally communication | Q4 2015 |
| Finalize Commission approval of MEEIA Cycle 2 portfolio | December 1, 2015 |
| Continuing MEEIA Cycle 2 programs are launched | January 1, 2016 |
| New Cycle 2 programs are launched | January 1 – June 30, 2016 |

### Tracking Systems

An indirect program cost that is integral to the success of any DSM portfolio is a robust tracking mechanism. A tracking tool is used for assembling, accounting, analyzing and reporting on program costs, budgets, savings and targets. Currently, the Company uses AEG's VisionDSM tracking system.

The Company intends to continue the improvement of tracking and visibility of programs for internal and external uses that are driven primarily by a robust platform integrating data from multiple implementer and other sources. An additional benefit of enhanced tracking tools is the ability to amass customer information in order to better understand customer behavior and improve marketing opportunities.

**Economies of Scale Strategy for Implementation in Cycle 2**

As the Company continues to evolve DSM offerings and operate more efficiently, there is continued opportunity for consolidation of services and creation of a cohesive delivery of various functions to deliver enhanced DSM programs to our customers. As the Company prepares for the RFP process, a few key areas of operations and delivery will be strongly evaluated for improved customer experience: 1) customer contact center related to programs, 2) rebate processing, and 3) marketing support. Each of these three areas would only enhance the Company's delivery to its customers.

## D. Transition Plans from Cycle 1 to Cycle 2

The Company is cognizant of the transition complexity from Cycle 1 programs to Cycle 2 programs. In general, it must be recognized that utility rebates applied for in Cycle 1 may not be complete (paid for by the utility or customer rebate requested) until Cycle 2. Therefore, the Company will make every attempt to marry the program costs and savings with the cycle upon which the rebate was incurred. We have developed a plan to address the market transition as well as the Company's internal accounting and tracking to close Cycle 1 and move to Cycle 2.

The program transition plans fall into four main categories:

1) Existing Cycle 1 programs that will continue for Cycle 2 and for the most part remain unchanged. In addition, lead times for project/rebate completion are a significant consideration. Therefore, existing Cycle 1 programs can be further categorized as:
    a. Those continuing Cycle 1 programs with long lead time from project pre-approval to completion.
    b. Those continuing Cycle 1 with shorter transition/lead time.
2) Existing Cycle 1 programs that we propose to terminate with Cycle 1 (December 31, 2015).
3) Newly proposed programs that will launch during Cycle 2.

The Company has developed communication plans for each program as they align with the different categories above to ensure that all interested parties will have touch points in regards to the change or continuation.

There are four core audiences we will engage and partner with to be successful. These groups include:

- Customers;
- Contractors;
- Stakeholders (External/Internal); and
- Implementation Contractors.

Communication with these audiences will be done using a variety of medium, including but not limited to:

- Contractor forum events (Business and Residential);
- E-mail notifications;
- Website updates to www.kcpl.com;
- Program application language;
- In-person meetings with contractors, customers, stakeholders.

Brief descriptions of the programs associated with the three outlined sections are below.

**Existing Cycle 1 programs that will continue mainly intact for Cycle 2**

Existing Cycle 1 programs that will continue for Cycle 2 and for the most part remain unchanged are:

- Business Energy Efficiency Rebate Programs;
- Home Energy Reports;
- Home Lighting;
- Appliance Recycling;
- Income-Eligible Weatherization; and
- Programmable Thermostat.

***Long Lead Time Programs: Business Energy Efficiency Custom/Standard, Home Energy Reports***

*Business Energy Efficiency Rebates – Custom/Standard Close Out*

- Cycle 1: All completed projects and payments as of January 31, 2016 will be booked to Cycle 1.
- Cycle 2: December 15, 2015 is the last day for customers to submit an application for Cycle 1 rebate levels. All applications received by this date should be preapproved by January 31, 2016 and will receive a firm 6 month preapproval (no extensions) to run no later than July 31, 2016. All final paperwork and supporting documentation must be in by July 31, 2016. Projects pre-approved by January 31, 2016 under Cycle 1 rebate levels and completed between January 31, 2016 and July 31, 2016 will be considered Cycle 2 for budget and savings. All new projects received for pre-approval after December 16, 2015 will be evaluated under Cycle 2 framework.

*Home Energy Reports*

HERs has a potentially long lead time based on the amount of information needed to start the process for new recipients of the letter in the next wave. This is primarily based on the amount of integration of information technology needed to create the randomized control trial to properly measure the impact of the reports. The existing recipients will continue with the same schedule and have minimal transition.

***Short Lead Time Programs: Home Lighting, Home Recycling, Income-Eligible Weatherization, Programmable Thermostat***

The Company proposes to continue with Home Lighting Rebate, Home Appliance Recycling, and Income-Eligible Weatherization programs with minimal changes. The transition for these programs can be managed primarily with proper notification and managing the minimal lead time (4-6 weeks) to signal the need to close out paperwork from implementers and customers.

The programmable thermostat program will be evolving into a different model of delivery that is further described into Section 4D. The existing programmable thermostat participants will be supported by a customer service operation and also be utilized for demand curtailment events during the summer seasons.

**Existing Cycle 1 programs that GMO proposes to terminate with Cycle 1**

Existing Cycle 1 programs that we propose to terminate with Cycle 1 include:

- Residential Lighting and Appliance;
- Home Performance with ENERGY STAR®;
- Building Operator Certification; and
- Air Conditioning Upgrade Rebate.

*Residential Appliance Program*

The Company is not proposing the Residential Appliance rebate program in Cycle 2 (formerly known as Residential Lighting and Appliances) and therefore will message the market that all rebates offers will expire December 31, 2015. Eligible customers will be able to submit their final rebate paperwork by January 15, 2016.

*Home Performance with ENERGY STAR® (HPWES).*

In the GMO service territory, the Company is not proposing to offer the HPWES program in Cycle 2. The Company will follow a similar plan to when KCP&L-MO ended the HPWES program in mid-2014, which was done pre-MEEIA. A customer must have their rebate application sent in by December 12, 2015 and the customer will receive their rebate as long as they complete eligible projects and provide complete documentation. This program was not offered in MEEIA for KCP&L-MO.

*Building Operator Certification (BOC).*

The Company is proposing to end its BOC program at the conclusion of Cycle 1. The BOC program has been offered as an educational program to KCP&L-MO and GMO business customers circa 2008. During this time period, there have been approximately 200 KCP&L-MO and 50 GMO customers that have graduated from the program. However, participation has decreased over the past several years as the program has matured. Participants were generally from office, industrial, and municipal government segments. While we feel it is important to continue to educate these customers on EE, we propose to utilize that funding on programs that would benefit a broader segment of customers and realize greater energy savings. The last classes offered in Kansas City were starting in March 2015 (Level II) and April 2015 (Level I).

*Air Conditioning Upgrade Rebate (ACUR).*

ACUR program will evolve into the Whole House Efficiency program to be delivered with the audit. Contractors will be made aware of the naming convention change. Applications for the current ACUR program rebates will be accepted through December 12, 2015. Communication with contractors via meetings and e-mails will be essential to educating about the differences in the program going forward for Cycle 2.

**Newly proposed programs that will launch in Cycle 2**

The Company proposes launching five new programs in 2016 (two residential and three business). Due to the start-up nature of the programs and compressed timing of the filing and implementation contractor RFP, the programs will likely not be fully operational until the second quarter of 2016 and savings targets have been reflected to address such starting date. The Company will work with the chosen contractors to make sure the proper awareness and promotion of these programs are available to accelerate the adoption by customers. More details of the process for each program can be found in Appendix A – Detailed Program Descriptions.

## E. Cost Effectiveness Details

The Company engaged with AEG in the design of its Cycle 2 program portfolio. Program designs were constructed for the 20-year period from 2016 through 2035. Industry standard cost-effectiveness tests were performed in order to gauge the economic merits of the measures, programs and portfolio. Each test compares the benefits of a DSM program to its costs using its own unique perspectives and definitions. The definitions for the four standard tests most commonly used were described in Section 2C.

- Total Resource Cost Test (TRC)
- Utility Cost Test (UCT)
- Participant Cost Test (PCT)
- Rate Impact Measure Test (RIM)

- Societal Cost Test (SCT)
- Rate Impact Measure (net fuel) Test

The software used to perform the cost-effectiveness analyses and tests is DSMore, an industry leading tool developed and licensed by Integral Analytics based in Cincinnati, Ohio and used by many utilities and states around the country. The DSMore cost-effectiveness modeling tool takes hourly prices and hourly energy savings from the specific measures/technologies considered for the DSM program, and then correlates both to weather. This tool uses more than 30 years of historic weather variability to model expected weather variance appropriately. In turn, this allows the model to capture the low probability, but high consequence weather events and apply appropriate value to them. This captures a more accurate and realistic view of the value of DSM measures while developing outputs consistent with the California Standard Practice Manual. The input data gathered for the model is listed in Table 3-6.

***Table 3-8 Cost-Effectiveness Model Inputs***

| General Inputs | Specific-Project Inputs |
|---|---|
| Retail Rate ($/kWh) | Utility Project Costs (Administrative & Incentives) |
| Commodity Cost ($/kWh) | Direct Participant Project Costs ($/Participant) |
| Demand Cost ($/kW-Year) | Project Life (Years) |
| Environmental Damage Cost ($/kWh) | kWh/Participant Saved (Net and Gross) |
| Discount Rate (%) | kW/Participant Saved (Net and Gross) |
| Growth Rate (%) | Number of Participants |
| Line Losses (%) | |

AEG analyzed the cost-effectiveness of all measures identified. Measures that were cost-effective on a stand-alone basis (with no program administrative costs) from the TRC perspective were bundled into programs and re-screened for cost-effectiveness with the appropriate program costs included. Except for the income-eligible programs, the programs were designed to be cost-effective with a TRC benefit-to-cost ratio greater than 1.0. Measures were bundled based on the end-use, the sector, and the implementation or delivery method.

***Table 3-9 GMO Cycle 2 Program Cost Effectiveness Results***

| Program | TRC | UCT | RIM | RIM (Net Fuel) | SCT | PCT |
|---|---|---|---|---|---|---|
| Home Lighting Rebate | 1.75 | 2.96 | 0.55 | 0.68 | 2.15 | 3.40 |
| Home Appliance Recycling Rebate | 1.47 | 1.70 | 0.48 | 0.58 | 1.56 | 7.63 |
| Home Energy Report | 1.30 | 1.30 | 0.48 | 0.58 | 1.27 | - |
| Whole House Efficiency | 1.22 | 2.38 | 0.66 | 0.78 | 1.34 | 1.89 |
| Income-Eligible Multi-Family | 0.43 | 0.43 | 0.30 | 0.32 | 0.44 | - |
| Income-Eligible Weatherization | 0.37 | 0.37 | 0.27 | 0.28 | 0.38 | - |
| Business Energy Efficiency Rebate - Standard | 2.35 | 3.88 | 0.98 | 1.45 | 2.77 | 2.51 |
| Business Energy Efficiency Rebate – Custom | 1.30 | 2.52 | 0.95 | 1.31 | 1.39 | 1.35 |
| Strategic Energy Management | 1.21 | 1.21 | 0.64 | 0.81 | 1.20 | 7.78 |
| Block Bidding | 1.94 | 3.83 | 0.90 | 1.29 | 2.10 | 2.33 |
| Small Business Direct Install | 1.33 | 1.30 | 0.66 | 0.84 | 1.60 | 3.82 |
| Residential Programmable Thermostat | 2.12 | 2.62 | 1.40 | 1.51 | 2.04 | 1.94 |
| Business Programmable Thermostat | 2.06 | 2.52 | 1.83 | 2.03 | 1.98 | 1.14 |
| Demand Response Incentive | 17.54 | 1.99 | 1.99 | 1.99 | 16.25 | 60.00 |
| Online Home Energy Audit | - | - | - | - | - | - |
| Online Business Energy Audit | - | - | - | - | - | - |
| Research & Pilot | - | - | - | - | - | - |
| **Total Portfolio** | **1.84** | **2.43** | **0.84** | **1.05** | **2.00** | **2.70** |

## F. Factors Influencing Program Savings

When developing plans for the aggressive pursuit of DSM savings and benefits, the Company attempted to raise the bar relative to historic programmatic levels and aim high among peer-group benchmarks. However, three major extrinsic factors played a constraining role in influencing the projected programs savings for the Cycle 2 filing:

- New Federal Appliance Standards;
- Fatigued Market Segments; and
- Lower Avoided Costs.

The new federal standards and fatigued market segments lead to reduced savings and potentially lower participation, respectively, while the lower avoided costs impacts the cost-effectiveness of measures considered for inclusion in the DSM portfolio. These factors are discussed in detail below.

### New Federal Appliance Standards Increase Baselines and Reduce Savings

Changes to federal appliance standards can significantly impact the energy and demand savings associated with energy efficient measures and equipment. As federal standards increase the minimum efficiency requirements of measures, the energy savings potential of existing energy efficient measures decrease. Newer, more EE measures need to come to market to maintain or improve the energy savings potential. The recent changes to federal appliance standards have not been met with similar improvements in energy efficient appliances, resulting in a general decrease in energy savings potential. This has been found for lighting, appliances and residential HVAC equipment.

The United States Congress passed the Energy Independence and Security Act of 2007 (EISA) to promote EE through performance standards for electronic appliances and lighting. In particular, the legislation set efficiency standards for 'general service' light bulbs.

The efficiency standards are being implemented in two phases:

- *Phase 1.* From 2012 to 2014, standard light bulbs were required to transition to use approximately 20 to 30 percent less energy than traditional incandescent light bulbs (attain a minimum efficacy level of approximately 20 lumens per watt, depending on the lamp type). By institutionalizing this new baseline, the program savings available to the Company for general service lighting were dramatically reduced.
- *Phase 2*. Beginning in 2020, there must be an additional 60 percent reduction in light bulb energy use (attain a minimum efficacy level of approximately 45 lumens per watt, depending on the lamp type).

New federal standards went into effect for residential appliances and equipment between 2014 and 2015. The following residential standards impacted the Company's program portfolio:

- Heat pump standards increased in January 2015 on the cooling side from SEER 13 to SEER 14, as well as on the heating side from HSPF 7.7 to HSPF 8.2.
- Clothes washer standards increased in March 2015 from a modified energy factor (MEF) of 1.26 to an MEF of 1.72 for top loaders and will increase again on January 1, 2018 to MEF of 2.0 or above.
- Clothes dryer standards raised the minimum EF from 3.01 to 3.73 effective June 1, 2015.
- Refrigerator and freezer standards increased in September 2014 by 25 percent vs. the previous NAECA standard.
- Room air conditioner standards increased in June 2014 from 9.8 EER to 11.0 EER, an improvement of 11 percent.
- Water heater standards increased in April 2015 such that units above 55 gallons will be required to be heat pump water heaters with energy factors (EF) of 2.0 or above. Units 55 gallons or smaller will be required to have an EF of 0.95 or above.

All savings values included in this plan and filing are relative to the most current baseline standards as described above, and will be reflected in the Company's programs and technical resource manual (TRM)[18].

If standards and baseline levels change in future years, we will also reflect those changes in the plan for new equipment or measures that are installed after the standard onset date. For example, if an efficient lamp such as a CFL with a measure life of five years is installed after the 2020 standard, all years of its measure life are credited lower savings relative to the new, more stringent standard. If it is installed before the standard onset, however, all years of the measure life are credited with higher savings relative to the standard at the time of install.

Another way to look at this is that we assume that at the time of the purchase decision, the equipment efficiency is locked in for the equipment lifetime in either the efficient or the baseline scenario, so if a standard changes in the middle of that lifetime, there is no effect on the pre-existing purchase decision or the energy consumption in either scenario.

This assumption aligns very closely with reality for large capital measures, but is sometimes complicated when considering lighting in particular, due to the relatively recent phenomenon of different lamp types having substantially different lifetimes. For example, if a CFL (65 lumens per watt) has a five-year average lifetime and is installed in 2018, it would (on average) last through 2023. If an EISA compliant halogen with lower efficacy (18 lumens per watt) has a 3-year average lifetime, it would last until 2021, whereupon the customer would theoretically need

[18] See Appendix D

to replace the lamp with a more efficient halogen per the 2020 standard (now 45 lumens per watt). In this plan and portfolio, we make the simplifying assumption that inventories are likely to make lamps from the previous standard available for some time afterwards, and further that these effects would be small and discounted far into the future, making this assumption align closely with reality for lamps as well.

### Realized Savings are Lower than Planned Savings Due to Fatigued Market Segments

Market conditions in the Company's service territory have led to an exhaustion of a large portion of the low hanging fruit among a particular subset of early-adopting customers. These relatively easy-to-reach projects have intuitively been the first to be addressed in the queues of program implementers and trade allies. As these opportunities have been capitalized on in the early years of the programs, it is now a natural time to reimagine the programs in terms of measure offerings, marketing and delivery approach, new target market segments, and the like. A further description of the Company's approach is outlined in Section 4.

Some examples of adaptations to this are provided here: As the era of large CFL savings draws closer to an end, lighting programs are making the shift to LED technologies. As straight-forward business projects become less frequent, we are introducing more customized approaches that have proven to drive new and/or deep savings in other jurisdictions, such as strategic energy management, block bidding (custom reverse auction), residential behavioral programs, and a greater focus on interactive thermostats for both energy and peak demand savings.

### Declining Market Value of Energy (Lower Avoided Costs)

Large macro-level factors have driven down the cost of the marginal kilowatt-hour in energy markets in the Midwest as well as nationwide. The fracking and shale gas boom has propelled the United States into the number one rank among worldwide oil and natural gas producing nations. This fundamental shift in the global landscape and oversupply has caused natural gas commodity prices to plummet, which in turn has caused electric power market prices to drop, especially considering during the critical system peak times when Midwest marginal generation is almost exclusively fired by natural gas power plants. Electric power market demand has been low as well, which also contributes to lower clearing prices. Flat or declining load forecasts have been attributed to a sluggish economic recovery, the impacts of federal equipment codes and standards (see above), and successful DSM programs, among other things. This leads to a lower value of avoided cost benefits and a higher hurdle rate for DSM programs and measures to achieve before they are cost effective. Because of this, many measures that were once cost effective are no longer justifiable, reducing overall savings potential.

In the planning process, the Company factored these external headwinds along with strategies to expand and enhance overall DSM efforts to arrive at a level that is aggressive and suitable to address all of the portfolio objectives. More detail on this, as well as benchmarks relative to peer utilities, is provided in Section 4.H.

SECTION | 4

# New Path for DSM Programs

The primary objectives identified by the Company that shape the design of the proposed DSM portfolio include:

- Satisfy the TRC Test cost-effectiveness criterion by maintaining a benefit to cost ratio greater than 1.0 at the portfolio level, with the exception of income-qualified initiatives, which are allowed to bypass this criterion.
- Provide low-cost capacity reductions which require less capital outlay than traditional supply-side resources in order to provide grid relief at peak system times. Therefore, DSM programs and measures are selected that focus primarily on peak demand impacts rather than annual energy impacts, while considering each service territory's unique needs.
- Increase customer satisfaction by delivering DSM programs that provide a positive customer experience and highlight the KCP&L brand.
- Offer DSM program offerings appropriate for the Company's Missouri service territories; considering climate, culture, and market while also providing consistency to all of the Company's customers.
- Minimize environmental risk by reducing supply-side emissions within uncertain regulatory times (EPA actions, etc.).
- Address internal and external stakeholder requests.
    - Include whole building approaches to guide customers to a more comprehensive investment in their home/facility.
    - Consider multi-family initiatives and combined heat and power (CHP) initiatives.

In order to meet the above DSM portfolio objectives, it is essential that the MEEIA established state policy to value demand-side investments equal to traditional investments in supply and delivery infrastructure, and allowing for recovery of all reasonable and prudent costs of delivering cost-effective demand-side programs, be supported by the Commission.

The proposed DSIM addresses recovery of program costs, TD share that is intended to recover lost margin revenues, and any earned performance incentive award. GMO is proposing to continue recovering these costs in a DSIM tracker. If during the review process of this filing parties agree to convert the GMO MEEIA tracker recovery mechanism to a rider, the Company would be prepared to do so.

With the MEEIA Cycle 2 filing, the Company strives to balance increasing customer awareness of the DSM portfolio and encouraging past participants to take additional EE actions for their homes and businesses. For those that haven't yet thought about EE, we want to lower barriers to entry and educate them on the benefits of EE and opportunities with the Company's DSM programs. For those that have engaged in efficiency and programs, we want to provide opportunities for them to dive into "deeper" retrofits that explore savings with more substantial long term savings.

The Company has seen an increase in program achievements as the portfolio has matured and with an increase in portfolio investment, as shown in Table 4-1. The Company strives to continue to increase the DSM portfolio achievements by striking a balance between improving participation for new customers and increasing savings for past participants.

***Table 4-1 DSM Portfolio Goals and Achievements***

| | Annual Energy Savings (MWh) | Peak Demand Savings (MW) | Portfolio Investment (thousand $) |
|---|---|---|---|
| | | | |
| Pre-MEEIA | 85,449 | 50.2 | $26,276 |
| | | | |
| Total MEEIA Cycle 1 *(thru June 2015)* | 115,619 | 46.7 | $31,827 |
| | | | |
| 2016 MEEIA Cycle 2 | 73,042 | 37.99 | $16,121 |
| 2017 MEEIA Cycle 2 | 78,456 | 59.56 | $17,777 |
| 2018 MEEIA Cycle 2 | 80,860 | 74.99 | $19,354 |

In additional to simplifying participation and encouraging deeper retrofits, the Cycle 2 portfolio has been designed to:

- *Explore different market segments*. The DSM portfolio includes programs for multi-family customers, income-eligible customers, and small and medium business customers that are a relatively "un-tapped" market in the Company's service territories.
- *Encourage peak demand reduction*. Programmable thermostats and communicating thermostats are evolving quickly and the Company is planning to engage customers on managing peak demand and energy through their thermostat.
- *Enhance marketing*. The Company will continue to use "branded house" strategy for program names to help customers become aware of EE offerings while leveraging the KCP&L brand. In the MEEIA Cycle 2 filing, the Company will continue to increase capabilities in understanding customer behavior and targeted marketing tactics.
- *Provide delivery flexibility*. The proposed Cycle 2 DSM portfolio is designed to allow for program flexibility and responsive to shifts in program strategy based on current unknowns becoming clearer.

The proposed Cycle 2 DSM portfolio is comprised of eight residential programs, eight non-residential programs, and one pilot program that will deliver an effective and balanced portfolio of energy and peak demand savings opportunities across all customer segments to meet the Company's objectives defined earlier in this report. Each program was designed to leverage the optimal mix of best-practice measures and technologies, delivery strategies, and target markets in order to most effectively deliver programs and measures to the Company's customers.

The programs are listed with a brief description in Table 3-2 and Table 3-3 above for residential and business customers respectively. The following sections describe the new path for the DSM portfolio in detail.

## A. Ease of Participation – Kits, Audit, Prescriptive, Online Tools

For customers that haven't yet engaged with the electric utility as a "trusted energy advisor," the Company strives with this MEEIA Cycle 2 to make the ease of participation in our programs for customers even easier. The programs are designed to provide multiple opportunities to allow customers to select the opportunity that best suits their needs. A number of programs are provided at little or no cost to the customer and only require an appointment with a contractor. Incentive levels for prescriptive measures are transparent and clearly marked and rebate applications made available online.

- Up-stream lighting discount – simplest participation process, with instant rebates for qualifying light bulbs available to customers at the register when they shop at participating retailers. The

program does not require the customer to complete any paperwork or include a time lag to receive the incentive.

- Direct install kits – allow for quick savings in harder to reach income-eligible markets. Customers just need to schedule an appointment and be home during the visit, the measures and installation are provided at no cost.
- Home energy audit – free/low cost in-home energy audit and direct installation of low-cost measures. Customers just need to schedule an appointment and be home during the visit, all services and measures are provided at no cost. The Company will utilize as an education tool and opportunity to inform customers about their energy usage and the DSM programs.
- Prescriptive rebates – straightforward amounts to help customers quickly understand what rebates they will receive for taking action. Applications will be available online for easy access.
- Online tools – allow customers to engage when they might be most likely if they are paying their bills. Customers will have access to educational materials as well as information about the Company's DSM programs that can save them energy and money.
- Small business customer rebates and direct install measures – incentives of up to 70 percent of installation costs are available. Customers are provided a free audit to identify lighting opportunities. The customer must schedule an appointment, review the audit results and approve the proposal. The contractor will conduct the audit, install the lighting equipment and process the paperwork.
- Explore partnership with gas utilities (specifically Laclede) - leverage joint marketing and synergy of delivery of programs, specifically targeted programs include Income-Eligible Multi-Family and Whole House Efficiency.

## B. Deeper Retrofits and Engagement

For customers that have previously participated in a DSM program, the Company offers programs to help them provide the next level of "deeper" EE retrofits.

During Cycle 1, the Company noted a large percentage of C&I customer participation included lighting options. A large focus on Cycle 2 business program offerings will be to bring those customers further along the adoption curve to more comprehensive savings measures in lighting and non-lighting end uses. A more comprehensive list of prescriptive measures and simple incentive formulation of the custom program will help customers feel more comfortable with how the Company supports their investments.

Additionally, with a SEM program, the Company will be able to engage with a handful of large customers who can look at projects holistically for their business and develop operational savings as well as capital investments.

The Block Bidding program encourages customers and third-party suppliers to creatively propose non-conventional projects that may not fit into a business EE rebate prescriptive or custom project. Proposals are solicited for blocks of energy and funding is awarded based upon the cost per energy saved and project cost-effectiveness.

CHP projects, while not specifically identified as a separate program in the portfolio plan, are another example of a more comprehensive look at energy that can be evaluated under the Business Custom program. Customer segments that are most likely to present CHP projects are those that have high electric load factors and large heat requirements like industrial processors, hospitals and manufacturers. Those customers that are committed to holistic look at energy in this manner can provide opportunities to evaluate further. Preliminary economic analysis of these types of projects indicate that projects of larger than 1 MW capacity are most likely worth further analysis to confirm cost effectiveness. Applicable and eligible projects can be included as a special option within the

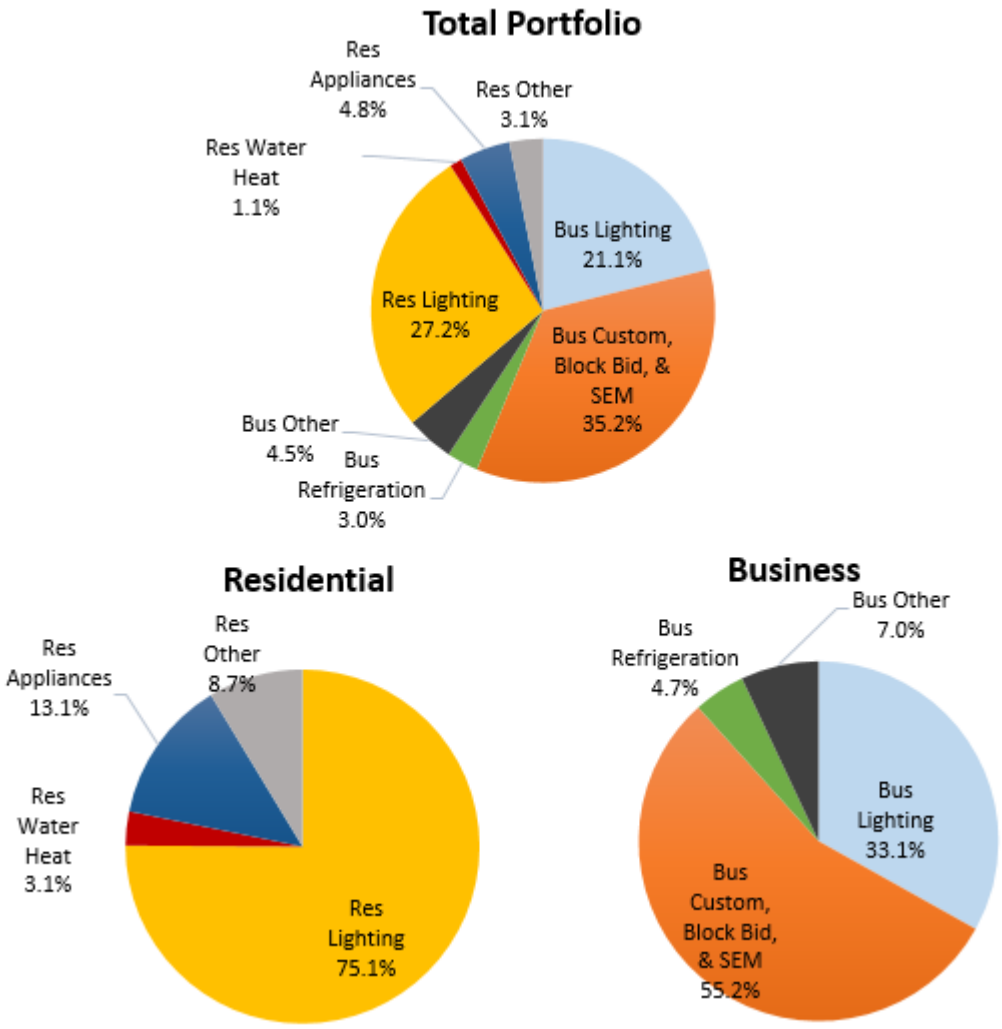
Business Custom program that pays an incentive based on the installed generating capacity of the unit at system peak, rather than the traditional Custom incentive based on first-year energy savings.

On the residential side, the Whole House Efficiency program brings customers along the path to further investment in their home by offering an introductory walkthrough audit to identify key areas for investment and direct installation of low-cost measures, providing quick wins for savings. The audit results will be used as an education tool and opportunity to inform customers about their energy usage and the other program opportunities. Customers have multiple opportunities and are rewarded with bonus incentives for purchasing and installing multiple measures.

While online and digital tools can provide an easy way to engage customers, if designed well can also engage customers to dig deeper into their understanding and ultimately use of energy in their homes. This is evidenced by the more prescriptive nature of how customers use energy and what they are doing with it.

Below is a figure depicting the breakdown by Cycle 2 cumulative energy savings (MWh) by end use, showing that lighting now comprises less than 50 percent of planned savings, although portions of the Block Bidding and Strategic Energy Management savings may include some lighting savings. This represents a much greater focus on diversity of load, customers, and program delivery.

***Figure 4-1 Cycle 2 Cumulative Energy Savings by End Use***



## C. Newly Targeted Market Segments

In Cycle 1, the Company continued in many respects with program offerings, marketing, and messaging aimed at the "average" or "typical" customer. Bolstered with key account representatives, program staff, a trade ally network, and outreach and education efforts, this is an effective way to reach those customers.

As the Company portfolio grows and becomes more sophisticated; it has become apparent that not everyone is the "average" or "typical" customer. We have identified a number of important and unique target market segments that require a more customized structure and approach.

- Income-Eligible – customers do not typically have funds to invest in EE nor do they have awareness of measures, often have larger concerns, etc.
- Multi-family – split agent/actor problem where owner is in charge of equipment purchases, but renter pays the energy bills. Often overlaps with income-eligible concerns stated above.
- Small Business – so busy, often preoccupied – need to make this very simple, easy, and economically attractive for them. Significant savings to be had and also significant returns to local businesses and the community.

While the needs of customers that typically fall in the category of "low income" are important and sometimes underserved, the Income-Eligible programs as designed do not pass the TRC test. These programs are allowed to be MEEIA programs per MEEIA rules. The Company is cognizant that every dollar spent on non-cost effective programs impacts overall customer rates negatively and therefore a need to balance the proper level of spending on these programs is important to all customers. Additionally, The Missouri Commission has made known recently that it may provide an order in KCP&L-MO to put Income-Eligible programs in base rates instead of MEEIA programs. While the Company looks forward to working with stakeholders on the best way to handle this investment balance, the proposal does include an increase in overall spend in the sector in 2016-2018. The table below highlights the increased level of investment in MEEIA Cycle 2 for the Income-Eligible customer segment.

***Table 4-2 GMO Income-Eligible DSM Program Spending **HC*****

| Program | 2014 | 2015 (June to date) | 2016 | 2017 | 2018 |
|---|---|---|---|---|---|
| Income-Eligible Multi-Family ** | | | | | |
| Income-Eligible Weatherization ** | | | | | |
| **Total** | $345,938 | $144,335 | $448,901 | $604,761 | $604,761 |

## D. Demand Response

The Company believes there is significant value in managing the peak demand of our customers and believe that the MEEIA Rules allow for such programs to help customers benefit themselves and other customers. DR programs that the Company is proposing for Cycle 2 have two distinct differences than Cycle 1:

1) Thermostat technology has evolved significantly and DR customer interaction will improve. In addition, the Company is proposing to claim energy savings associated with DR enabled behavioral thermostats.
2) The Demand Response Incentive program is proposed to be offered in both of its Missouri jurisdictions under MEEIA guidelines with an avoided cost structure similar the cost of building a combustion unit.

### Thermostat Technology

Programmable thermostats and associated communicating technology is evolving quickly and the Company is planning on taking the next step to engage with customers on managing peak demand and energy usage through their thermostat. In MEEIA Cycle 1, the Company embarked on a multi-site, multi-technology study with the Electric Power Research Institute (EPRI) to evaluate the energy and demand savings potential from multiple technologies.

While KCP&L-MO does not have results yet from its EPRI Smart Thermostat study, various similar studies have been published within the industry that substantiate our expected findings; that is, two way communicative, "learning" thermostats have significant electric energy capabilities.

- A study released by Cadmus found that Wi-Fi enabled thermostats saved 16 percent on cooling electricity usage[19]
- The Energy Trust of Oregon recently released a study of learning thermostats used with electric heat pump heating. The study found a savings of 12 percent on heating electricity use.[20]

Furthermore, the inherent capability of being able to communicate and receive data from the thermostat and verify that it is installed and programmed will be a clear indication of whether or not behavior is changing and equipment run time is being reduced (ultimately saving kWh usage) from what it might have otherwise been.

### Traditional Programmable Thermostats

Traditional programmable thermostats allow customers to set a pre-programmed schedule for raising or lowering the temperature in their home, but do not have built-in intelligence to modify the programmed schedule due to changing conditions or customer preferences. While the ability to pre-program thermostats can be a convenient feature and save energy for some households, there are challenges and difficulties with programmable thermostats in the long-term. Many people find that they are not intuitive and are hard to program. Ultimately, programs that are created are often overridden at some point – people change and their schedules change - and then are not reprogrammed.

### Learning Thermostats

Unlike a traditional programmable thermostat, a learning thermostat:

- Understands a customer, their schedule and the temperatures they are comfortable with when they are home or away.
- Understands a customer's home: how tight or leaky it is and how efficiently their heating and cooling systems are functioning as opposed to just how frequently they are running.
- Understands the external and internal environment: Occupancy, humidity, light, and weather data are all incorporated within their algorithms.

A learning thermostat uses all of these features to meticulously and automatically create a custom schedule and thermal profile for a customer's home, which is constantly adapting and optimizing a customer's equipment in its environment as habits change.

[19] Wi-Fi Programmable Controllable Thermostat Pilot Program Evaluation; prepared for The Electric and Gas Program Administrators of Massachusetts; prepared by Cadmus Group, September 2012, p. 21.
[20] Energy Trust of Oregon Nest Thermostat Heat Pump Control Pilot Evaluation, by Apex Analytics, Oct. 10, 2014, p. 1-1.

Once the learning thermostat has learned a customer's habits and their home's thermal profile, a learning thermostat can reduce a customer's HVAC runtime by 20 percent relative to un-programmed thermostats holding a constant temperature.

Learning thermostats are uniquely capable of achieving savings while continuing to provide outstanding customer comfort – a critical combination that has paved the way for this technology's success. A learning thermostat leverages its vast set of sensors and sophisticated algorithms to deliver a suite of features that help to painlessly capture available energy savings.

Unlike other thermostats that suffer from schedule decay and a loss of engagement, learning thermostat savings persist year after year. Learning thermostats help customers save energy in an elegant and user-friendly way, making the device a very effective addition to the Company's MEEIA portfolio, as demonstrated by a number of recent studies:

- Vectren, an electricity and gas utility in southern Indiana, recently released a study of learning thermostats and found that they saved 14 percent on air-conditioning electric usage (the study also found gas heating savings of 12.5 percent).[21]
- NIPSCO, an electric and gas utility in northern Indiana, did a similar study of learning thermostats and found 16 percent savings on air-conditioning electric usage and 13 percent on gas heating savings.[22]
- Learning thermostat manufacturers have done their own study on learning thermostat users across the country and found an average 17 percent savings on air-conditioning electric usage (as well as 10 percent gas heating savings).[23]

### Thermostat Approach to Demand Response

For Cycle 2, the Company will continue striving to increase customer satisfaction and customer engagement as it pertains to our DR programs. This will entail utilizing "learning" thermostats and leveraging their unique capabilities to use what they learn about each customer's comfort range, occupancy patterns, and the thermal characteristics of their home to determine a customized approach to DR. For each participant, the Company will combine pre-cooling, temperature setbacks, and cycling to achieve the maximum load reduction possible while still maintaining an outstanding customer experience.

### Demand Response Incentive

The Company is requesting DR programs be an integral part of the MEEIA Cycle 2 portfolio of programs due to the fact that decreasing the potential to hit the Company's system peak is a valuable goal driven by DR. Historically, the Company has offered an "MPower" rider to business customers who could curtail or shift electric demand of 25 kW or more. In MEEIA Cycle 1, GMO included this program as an offering, but KCP&L-MO had the tariff for the program remain outside of the MEEIA program suite. For Cycle 2, we are proposing that the newly named Demand Response Incentive program, similar to prior MPower, is included in both jurisdictions' MEEIA suite of programs. Moving these programs within MEEIA is in line with the intent of the MEEIA rules for DR especially with the recent RICE-NESHAP rules causing the primary demand reduction action to transition from diesel generation to more standard curtailment or load shifting.

[21] Evaluation of the 2013-2014 Programmable and Smart Thermostat Program; prepared for Vectren Corporation; prepared by Cadmus Group, January 29, 2015, p. 3.
[22] Evaluation of the 2013-2014 Programmable and Smart Thermostat Program; prepared for Northern Indiana Public Service Company; prepared by Cadmus Group, January 22, 2015, p. 3.
[23] Energy Savings from the Nest Learning Thermostat: Energy Bill Analysis Results, Nest Labs, February 2015, p. 6.

DR programs are truly unique from EE since the participant is most often required to have more than a "one-time" investment in efficient measures and equipment. For that reason, the continual relationship and coordination with participants is essential in order for GMO and KCP&L-MO to maintain a solid base of available capacity reduction. Therefore, while the overall capacity needs of the Company can shift from year to year, it is important not to fluctuate the DR program offerings and risk causing customer confusion or fatigue that would decrease participation.

For the Company to adequately recognize and maintain steady and reliable DR programs, it is important to use valuation and planning practices with a long-term perspective, similar to supply-side options that put "steel in the ground." As a result, the Company uses the cost of new entry (CONE) of a representative simple-cycle natural gas combustion turbine (CT) as a proxy for the avoided capacity cost. The Company used this value in all years of the MEEIA cycle 2 planning horizon for all demand side programs so there would not be a disconnect between the value of the reduction of peak demand from EE as well as DR.

While the avoided costs for the DR programs now more fully align with the true value, the Company is still cognizant of the actual capacity needs as presented in the IRP. Therefore, the plan includes significantly more growth in DR in the GMO territory as compared with the KCP&L-MO jurisdiction.

### Avoided Cost Economics

The Company is proposing an adjusted look at avoided costs for all programs (including both DR and EE) due to the shortened nature of MEEIA three year cycles compared to IRP 20 year horizons. This entails viewing the avoided cost of capacity as the levelized cost of a new generating unit in all years of the MEEIA Cycle 2 planning horizon.

This change to a single value based on CONE for a CT is necessary to provide consistency for the value of DR and the demand component of EE. This is one of three perspectives generally taken in the DSM industry, each of which can be valid given the appropriate circumstances and objectives. The three perspectives are provided below with some explanatory detail and a publicly available example.

*Perspective 1) Allow Avoided Cost of Capacity to Float with the Market*

This is the most uncertain method with respect to future planning and is used most frequently when DSM programs are delivered in an open-market environment. An example is the "State of Pennsylvania DSM – 2013 Act 129 Demand Response Study":

> "In PJM, the majority of the regional capacity resources are secured during a Base Residual Auction. This auction is held in May, three years prior to the delivery year. A delivery year begins on June 1st and ends on May 31st of the following calendar year. The avoided cost of capacity values the Pennsylvania EDCs will use to assess the cost-effectiveness of their 2012 DR programs were established in May 2009 and are shown below in Table D 1 along with the zonal capacity prices for the next three delivery years."[24]

*Perspective 2) Start at Market Prices for Capacity and ramp up to CONE over time*

This method is a hybrid approach that recognizes dynamic market prices in the near term but also recognizes the need for future certainty, often in a vertically-integrated utility environment. An example is the "Ameren Missouri 2013 DSM potential study Vol 4":

[24] See Table D.1. on Page 22 - http://www.puc.pa.gov/pcdocs/1230512.docx

> Base case: "The Ameren forward view of the market price for capacity is based on the assumption that electric load continues to grow and that there is a finite amount of generation in the market. When load approaches supply, new generation will be needed and the system will incur the Cost of New Entry (CONE) for a peaking generator."[25]

*Perspective 3) Use a Single Value for Avoided Capacity Costs based on CONE for all years*

This method most strongly focuses on the long-term value of demand-side resources in the planning process. An example is the "Idaho Power 2011 IRP Appendix C":

> "The marginal resource Idaho Power is trying to avoid with DSM efforts for summer on peak hours is the construction of a simple cycle combustion turbine. The estimated levelized capacity cost of building a new SCCT is approximately $94 per kW over a 30-year expected plant life. For demand response or direct load control DSM programs operating during the summer peak, the $94 per kW becomes the cost threshold for program cost-effectiveness."[26]

As mentioned above, the Company is using Perspective 3 in its MEEIA Cycle 2 plans. Simply using the market price as in Perspective 1 is not representative of the long-term view and primarily vertically-integrated nature of the Company's business. Using Perspective 2, where the market price for capacity is ramped up to the full cost of a CT results in a seesaw effect for the price of avoided capacity as successive MEEIA plans are conducted. If the near-term market conditions are allowed to set the agenda and dictate the long-term valuation each time a new analysis is performed, it will be difficult to plan, design, and manage programs.

## E. Marketing Enhancements

### Integrated Marketing Communications Approach

The Company continues to demonstrate that integrated marketing communications delivers the highest levels of awareness building and program participation. Customers need multiple exposures to a message before taking action, thus, we believe that the "surround sound" approach of having multiple, carefully orchestrated messages in multiple channels over sustained periods of time works. Figure 4-2 below displays different tactics to accomplish "surround sound".

[25] See Page 2-14 and 4-1 – https://www.ameren.com/-/media/Missouri-Site/Files/environment/renewables/irp/irp-chapter8-appendixb-vol4.pdf?la=en
[26] See Page 67 – http://www.idahopower.com/pdfs/AboutUs/PlanningForFuture/irp/2011/2011IRPAppendixCTechnicalAppendix.pdf

***Figure 4-2 Surround Sound Marketing Tactics***


The surround sound approach is optimized around the marketing funnel (Figure 2-4), which represents the path customers take from awareness to education to conversion, and, finally, continued engagement. The Company drives customers from awareness to conversion by matching marketing campaign elements to customers' informational needs at various points within the marketing funnel. Customers are then supported through the engagement portion of the funnel when other MEEIA programs in which they have not yet participated are cross-promoted to them.

***Figure 4-3 Marketing Path Toward Customer Engagement***


Finally, as the Company develops campaigns, it considers seasonality and coordination with other customer touch points, such as starting electric service. When efforts focus on timely and relevant opportunities to connect with customers already primed by seasonality or natural interaction with the Company, the likelihood they will participate in programs is increased. Campaigns provide the greatest return on investment when all elements are strategically planned, have relevance to specific audiences and work in concert with each other.

### Targeted Marketing Communications

The Company includes targeted marketing communications in the mix of strategies that make up the larger integrated marketing communications approach. While mass marketing casts a wide net, targeted marketing is like spearfishing.

To capture individual customers and push them through the marketing funnel, three elements are needed:

1. A well-defined target audience;
2. Messaging that is relevant to that audience; and
3. Distribution at relevant times and integration with other marketing.

***Target Audience Definition***

While all eligible customers may participate in programs (and are reached via mass marketing tactics), some customers are more likely to participate. The Company has increasing capability to leverage a variety of internal data sources to develop profiles of these customers. For example, data such as current participant attributes, Nielsen and Acxiom segmentation, usage patterns, and digital body language are stitched together. This reveals a set of customers who will likely participate if contacted via targeted marketing communications.

***Message Development***

Once an audience is defined, relevant and impactful messaging is developed. In the past three years, The Company has learned how programs are understood, received and used by their residential and commercial customers. In preparation for Cycle 2, the Company will dig deeper into those perceptions via primary and secondary research to more fully understand how the proposed and continuing programs are perceived and used by our customers, as well as customers' decision making process and the benefits they find most motivating. These insights will enable the continued creation of messaging that will resonate with and be motivating to customers.

***Distribution and Integrated Marketing***

Direct, targeted marketing is most successful when customers have already been exposed to messaging through mass marketing awareness tactics, as part of a larger integrated marketing strategy. Importantly, the targeted message must also reach them at a time when they are already primed by either seasonality or something occurring in their life that MEEIA programs can help with.

For instance, the Company runs email campaigns that are automatically triggered when customers take certain actions. When customers start service with the Company and opt in to receive email communications, they receive a series of welcome emails that provide helpful tips and information, including MEEIA programs. These emails generate higher-than-average open and click-through rates, indicating this content is highly relevant to them.

Triggered campaigns also are utilized to encourage customers to finish the process of participating in a program. For example, receiving a check up on your air conditioner is the first of several steps in the process to receiving the ACUR. When customers complete that step, they receive an email reminding them of the benefits of replacing their air conditioning unit and recapping the next steps in the process.

**Program Names**

The Company continues to utilize the "branded house" strategy for program names to help customers become aware of EE offerings while leveraging the KCP&L brand. This provides cost efficiency instead of needing to educate our customers about what a disparate variety of "named" programs mean.

The program names are comprised of straightforward key words that describe literally what customers receive or experience when they participate. When the program names are preceded by the KCP&L brand name, the credibility of that brand name is transferred to the individual programs, which helps customers know they can place trust in the offering. It also ties individual programs into one cohesive portfolio. To further support this cohesion, in Cycle 2 the Company may explore a portfolio-level descriptor to provide an additional label that can be used to refer to the programs as a whole, under the branded house of offerings.

## F. Delivery Flexibility

For the reasons outlined in this section, the Company feels strongly that program flexibility and adaptability are vital to the health and success of program implementation. We, therefore, propose to file general tariffs with some values such as incentive levels given in ranges instead of specific

values, or given as a reference to an external and accessible document such as a website or portal, which can be changed as needed by program management without the resource-intensive process of a tariff revision involving significant investment of time by both the Company and external stakeholders.

This proposal in no way reduces the Company's commitment to collaborate and communicate openly with the MPSC and stakeholders regarding said programmatic adjustments during regular program reviews, roundtables, and updates. In fact, a website would be more accessible to MPSC staff, not to mention customers, trade allies, and program staff.

We outline below the rationale for this that would ensure planned campaigns remain flexible and responsive to shifts in program strategy based on current unknowns becoming clearer, the need to balance costs versus participation through the year, and other unanticipated variables.

### Market Drivers / Implementer Capabilities

The market can change significantly from the time of the planning period (2015) to the end of the MEEIA Cycle 2 (2018). While the Company has anticipated some market changes (e.g., residential lighting and appliance standards), the plan will need to be flexible enough to react to changes as they occur to keep customers engaged in the program while minimizing free ridership and maximizing spillover.

Flexibility can be provided in a few ways:

1. Allow for flexible incentive ranges to respond to market prices.
2. Allow for the budget to be shifted between programs and/or budget categories as long as variance does not exceed the 20 percent total value, as outlined in MEEIA rule 4 CSR 240-20.094.

> *Pursuant to the provisions of this rule, 4 CSR 240-2.060, and section 393.1075, RSMo, an electric utility shall file an application with the commission for modification of demand-side programs by filing information and documentation required by 4 CSR 240-3.164(4) when there is a variance of twenty percent (20%) or more in the approved demand-side plan three-year budget and/or any program design modification which is no longer covered by the approved tariff sheets for the program.*

3. Continue to utilize a portion of the budget for research and pilot programs. The budget would be earmarked for innovative programs and alternative methods to increase energy and demand savings, such as continuations of the recent EPRI pilot that the Company began in the KCP&L-MO service territory. Research and pilot programs include opportunities for the Company to remain innovative and continually provide customers with cutting-edge, effective programs to reduce their energy and demand consumption.

The Company will work closely with the implementation contractors throughout the MEEIA Cycle 2 to anticipate market changes, tailor marketing and promotional tactics and materials, and better understand customer interactions with the DSM programs. The implementation contractors selected will have the experience and knowledge to inform the DSM programs, improving implementation processes, marketing and promotional tactics, program tracking, etc.

### Incentive Ranges

The Company will continue to provide program details, including customer eligibility, incentive levels and program applications, as applicable, on www.kcpl.com to allow for proper visibility during the course of the program cycle. The incentives were set for planning purposes and will be reviewed with the chosen implementation contractor and throughout the MEEIA Cycle 2 to determine if modifications are needed to reflect market conditions. The actual incentive offerings can be adjusted with the Company proposed

continuation of the 11-step process outlined in the residential and business umbrella tariffs. If other tariff related (non-incentive) changes need to be made the Company will follow appropriate steps to file for amended tariffs.

The Company's tariffs are set up such that each tariff highlights the key framework of the programs, but allows straight forward, easy to understand details including specific measures and incentive levels to be outlined via www.kcpl.com. The proposed ranges for incentives to be offered during MEEIA Cycle 2 listed by measure are included in Appendix B.

### Research & Pilot Programs

The Company knows that technology and innovation will drive the evolution of DSM programs and therefore has included a budget allowance for research and pilot programs. The marketplace is evolving quickly and research is being done to help utilities understand what customers want from EE.

A few examples of areas of research and potential pilot programs are listed below. At the point of the filing, specific research or pilot program has not been confirmed to progress in Cycle 2.

- The digital customer engagement space is evolving quickly and can be utilized in many ways to help support and bolster participation in EE and DR programs. Digital tools utilizing behavioral science, gamification and loyalty techniques are now available to drive customer behavior. These tools can move customers over time from on website actions to more complex, real-world actions like completion of an audit, reduction of energy consumption through operational decisions and investment in efficient measures for their home or business. An additional related solution is a KCP&L branded e-commerce marketplace that offers energy products and services.
- The Company is researching options for a program that would engage teachers, school administrators and students about EE. There are several implementers in this space, and the programs vary in delivery and scope. Some implementers provide information directly at the schools through interactive sessions or educational materials.
- Commercial mid-stream lighting programs provide an opportunity to achieve more market penetration for customer sectors that might be missed by traditional standard and custom programs. Similar to a residential program in that an instant discount is provided, the commercial program though is delivered at distributor level directly to contractors primarily working on behalf of small and mid-size businesses.
- EPRI continually explores efficient technologies and deployment strategies for utility DSM programs. The Company will look to build on the ongoing research involvement from the "smart thermostat" studies conducted by EPRI as well as other studies involving efficient technologies.

## G. Recovery Mechanism Changes

### Transition from Tracker to Rider

The current Demand Side Investment Mechanism (DSIM) covers the MEEIA Cycle 1 Plan Period of January 26, 2013 through December 31, 2015, includes recovery of Program Costs, TD-NSB (net shared benefits), and Performance Incentive through a tracker mechanism. In GMO's general rate case No. ER-2012-0175, GMO established a DSIM rate for this tracker that used an estimate of annual MEEIA program costs and ninety percent (90%) of the estimated annualized GMO TD-NSB Share, based on the MEEIA Cycle 1 plan. The Performance Incentive will not be earned until the end of the plan period after the completion of EM&V. The MEEIA Programs' costs and TD-NSB Share will be trued-up at the end of the plan period, as described in paragraphs 6a and 6b of the Stipulation & Agreement dated October 29,

2012 filed in Docket EO-2012-0009. This true-up adjustment would be reflected in base rates in GMO's next filed general rate case, unless a rider mechanism is established prior to recovery.

For the Cycle 2 Plan outlined in this report, GMO is proposing utilization of a DSIM that will recover all Cycle 2 Program Costs, TD, and earned Performance Incentive, including any final true up or unrecovered amounts related to Cycle 1 Program Costs, Throughput Disincentive, and earned Performance Incentive, initially through the same existing tracker mechanism but later converted to a Rider mechanism. This conversion could occur as early as implementation of the MEEIA Cycle 2 or at the Company's next rate case.

The proposed recovery mechanism for GMO will function similar to the current DSIM rate for GMO, where there are separate rates for residential and non-residential customers. When the Rider for GMO is included in rates, it will function similarly to the KCP&L-MO DSIM Rider effective under Tariff Sheet No. 49.

**How Does The Proposed Mechanism Work?**

To help mitigate the financial risk to earnings associated with DSM investment, the Company is proposing a DSIM that allows for 100 percent prospective recovery of Program Costs, recovery of TD based on deemed savings, and an opportunity to earn a performance incentive utilizing EM&V results as outlined in Appendix C. For MEEIA Cycle 2, the Company would prefer to use a rider mechanism (Rider) for purposes recovering and collecting MEEIA Cycle 2's Program Costs, TD, and its earned Performance Incentive via a DSIM rate. Because a tracker currently exists that reflects a certain level of costs in base rates, a rider is not initially practical. As such, the Company proposes to continue the current deferred accounting approach as MEEIA Cycle 1 until such time as a rider can be implemented. This Rider would also include any future demand side programs and tariffs which may be filed under the MEEIA requirements for the program plan period. We have proposed all of the elements in this case to reflect a Rider such that if parties are in agreement, the Rider mechanism can easily be implemented.

The MEEIA Cycle 1 tracker reflects a deferred account balance which includes the differences between what is being recovered in the tracker and the actual experience incurred. The residential balance in the deferred account is estimated to be about $7.5 million over-recovered by the end of the plan period and the non-residential balance is estimated to be approximately $9.0 million under-recovered. The Cycle 1 stipulation and agreement sets out an amortization period of two years to either recover or give back to customers these balances at the next general rate case. If a rider is implemented in Cycle 2, these balances could be addressed sooner.

The MEEIA Cycle 2 tracker would become effective on January 1, 2016 and would be for the MEEIA programs covering the period of January 1, 2016 (the expected effective date for program implementation) through December 31, 2018 (the anticipated date of the program plan completion period). The MEEIA Cycle 2 tariff includes provisions for any unrecovered Program Costs, TD-NSB, and earned Performance Incentive from MEEIA Cycle 1. This inclusion is necessary to capture actual program costs and TD-NSB incurred compared to revenues collected since the DSIM began. Once earned, the DSIM will include the Performance Incentive expected to be earned once MEEIA Cycle 1 EM&V is complete. The Cycle 1 Performance Incentive is estimated to be earned and recorded in earnings with recovery starting January 2017 or sooner and will be collected over a two year period. It is anticipated that a DSIM Rider will become effective prior to or concurrent with recovery of the Performance Incentive from the MEEIA Cycle 1 programs. While the DSIM rate in the DSIM Rider will reflect inclusion of all MEEIA cost components of MEEIA Cycle 2 and any un-recovered costs for MEEIA Cycle 1, including Performance Incentive, the DSIM rate will continue to be reflected on customer bills as one line item.

The DSIM Rider is attached in Appendix E and is illustrative of the DSIM Rider the Company would prefer to implement with this MEEIA filing or soon thereafter. The Company is also requesting

approval of the suite of demand side programs and tariffs attached to the application that will replace the existing tariffs for demand response and energy efficiency. The new tariffs replace those currently in effect under the current recovery mechanism or new demand side programming. All programs, once approved, would operate under the new recovery mechanism.

**Rider Details**

Initial Rate Calculation- The proposed DSIM Cycle 2 reflects the recovery of MEEIA Program costs, TD Share and a Performance Incentive Award, including interest. The rate to be charged to residential and non-residential classes will initially remain unchanged from the current amounts identified in base rates. When the rates are converted to a Rider, the DSIM Rider will be determined by dividing the total of the estimated program costs plus 100% of the estimated TD Share for residential and non-residential classes for the six month period from January through June or July through December costing period. Those costing periods will be divided by the projected energy (kWh) sales for each class, excluding estimated opt-outs and lighting class, over that same period six month period. The Rider will be based on semi-annual collection of 100 percent of the forecasted program costs and 100 percent of the forecasted throughput disincentive collected contemporaneously with their incurrence, with true-ups to match billed revenues to the costs and throughput disincentive experienced.

While the Cycle 2 Performance Incentive will eventually be included as a component of recovery in the DSIM Rate, no dollars will be earned until the conclusion of EM&V at the end of Cycle 2. A Performance Incentive dollar amount is not expected to be included in the DSIM rate until completion of the EM&V and approval by the Commission to begin recovery. Once earned, the Performance Incentive will be collected through the DSIM rate over a two year period.

The DSIM Charge is applicable to all GMO Retail Rate Schedules with the exception of Lighting Schedules and customers who opt out of participation under the current MEEIA rules.

Monthly interest will be calculated for the monthly cumulative over- and under- monthly balances for MEEIA Programs' costs; TD Share and any earned Performance Incentive Award. The monthly interest rate will be GMO's monthly short-term borrowing rate at that particular time.

True-Up- It is the intent of the Rider that the Company shall ultimately bill customers for an amount as close as reasonably practicable to the actual MEEIA Program costs incurred, the TD Share, and any earned Performance Incentive Award as provided for herein. Therefore, after the Rider is implemented, on a semi-annual basis, the Company will file an adjustment or "true-up" for actual performance achieved based on monthly tracking of actual program costs and actual TD as outlined above.

**Rider Components**

***Program Costs***

Program Costs- The Plan includes MEEIA Programs' costs of $53,251,981 which are based on the planned budgets for the 17 MEEIA Programs (8 residential, 8 business and the Research & Pilot program) to be delivered over approximately 36 months beginning January 1, 2016 and ending December 31, 2018. Consistent with the MEEIA rules, actual program costs will include the incremental cost of planning, developing, implementing, monitoring, and evaluating demand-side programs. In addition, all costs incurred by or on behalf of the collaborative process, including but not limited to costs for incremental consultants, employees and administrative expenses, will be included in the program costs. General administrative costs will be included on the basis of the estimated budget for each program. Indirect costs associated with DSM programs, including but not limited to costs of a market potential study, advertising, and/or the Company's portion of a statewide technical resource manual, will be included in the program costs.

### *TD Share*

TD Share- The TD Share is the sum of the gross shared benefits over the MEEIA Plan period multiplied by 24.04 percent for residential and 14.40 percent for non-residential (rounded). The energy and demand savings will be based on actual measures installed and tracked each month, and their associated deemed energy (kWh) savings and deemed demand (kW) savings and deemed lifetimes. For purposes of calculating the gross shared benefits, a net-to-gross (NTG) ratio of 1.00 will be used for all programs. The gross shared benefits is the sum of the NPV[27] of avoided utility costs over the measures' lives discounted using the GMO weighted average cost of capital rate (6.5841 percent). The total TD Share during the 36 month planning period is expected to be $25,043,288. For more detail on the components of the calculation see section 5E. Both the TD Share expected dollars and gross shared benefits referenced herein were discounted utilizing the approved Weighted Average Cost of Capital (WACC) of 6.5841 percent to reflect the time value of money.

This is different from the MEEIA Cycle 1 TD-NSB in that the Cycle 1 similar component was based on net shared benefits where program costs were subtracted for gross benefits. The reason for the change is to reduce the risk attributable to either understating or overstating program costs. While this is a budget, many of the expected costs are simply unknown because many of the vendors have not been established. This has a major impact on recovery the appropriate Throughput Disincentive. The second change is the use of a deemed level for each program measure (using a net to gross of 1). In Cycle 1, the Home Appliance Recycling program and CFLs within the Home Lighting Rebate program reflected a net to gross of less than 1. It is the Company's position that the overall TD Share should reflect the recovery of all margins lost from reduced sales from each program.

The annual shared benefits were developed by using the DSMore modeling software to determine the incremental energy benefits attributable to the reduced kWh for each program in the portfolio. The capacity benefits were developed based on capacity, transmission and distribution costs attributable to reduced kW peak demand for each of the programs in the portfolio.

EM&V shall not be utilized to calculate the gross shared benefits for the purposes of determining the amount of the TD Share and will instead be calculated by the Company monthly based on actual measures installed and deemed values outlined in the TRM located in Appendix D.

The applicable accounting standard which most directly addresses the requirements for the recognition of revenues under such alternative revenue programs is Financial Accounting Standards Board (FASB) Accounting Standards Codification (ASC) 980-605-25 "Alternative Revenue Programs". ASC 980-605-25 sets three conditions revenues resulting from alternative revenue programs such as the DSIM. First, the program must be established by order for the regulatory commission allowing for automatic adjustment of future rates. Second, the amount of revenue for the period must be objectively determinable and probable of recovery. Lastly, the revenues must be collected with 24 months of the period in which they are recognized. If the TD Share is subjected to subsequent recalculation the Company would not be able to recognize the revenue in the periods that sales were reduced which would not result in alignment of utility financial incentives.

### *Performance Incentive Award*

Performance Incentive Award- After the MEEIA Programs are completed from Cycle 2, EM&V will be performed by an independent consultant to include full retrospective application of NTG ratios at the program level for all MEEIA Programs for the determination of the sum of the incremental annual energy and demand savings for January 1, 2016 through the end of Cycle 2 MEEIA Programs.

[27] Discounted to the program plan year start for the installed measure/claimed savings

Dividing the sum of the annual energy savings for January 1, 2016 through December 31, 2018 by the Commission approved energy savings target determines the kWh performance achievement level (expressed as a percentage). Dividing the sum of the annual demand savings for January 1, 2016 through December 31, 2018 by the Commission-approved demand savings target determines the kW performance achievement level (expressed as a percentage). If the Company can achieve the reduction in kWh and kW demand, as measured through EM&V, the Company will receive recovery of a performance incentive to be included in the DSIM Charge and recovered over two years.

The kWh performance achievement level (expressed as a percentage) will be weighted 50% and the kW performance achievement level (expressed as a percentage) will be weighted 50% to determine the overall level of achievement for the Plan when determining the Performance Incentive Award amount as illustrated in Appendix I. This weighting is based on the percentage split between capacity and energy gross benefits brought by successful implementation of the MEEIA programs.

In order to determine actual performance against the sum of the incremental energy and demand savings targets, the sum of the incremental energy and demand savings targets will be adjusted downward at the end of the 36 month Plan by accounting for the actual kWh retail sales of the opt-out customers over the portion of the Plan period for which they were opted out, divided by the kWh retail sales for commercial and industrial/non-residential classes less Lighting over the same Plan period. An example of the opt-out customers' adjustment to the sum of annual energy and demand savings targets calculations is attached as Appendix J.

The Company will potentially earn a performance incentive using the Final EM&V Report reflecting the full program plan period. The Performance Incentive at 100% (or $10 million) requested by the Company represents 7.5% of the overall gross program benefits or 12.5% of overall net benefits. To determine the actual Performance Incentive payout, the Company will utilize EM&V results to determine the actual energy and demand savings achieved. The Company will calculate the performance achievement level (expressed as a percentage) utilizing the actual savings for the three year plan period as determined by EM&V compared to the estimated savings targets, adjusted for opt outs. For a full explanation of the EM&V plan and how the EM&V results will be used to calculate the Performance Incentive, please Appendix C.

Based on the results of the EM&V, the Company will be provided an opportunity to earn a performance incentive of up to $13.0 million or $10 million if 100% of energy and demand savings targets are met.

The Company will file its supporting documents of the EM&V and change the DSIM Charge to begin recovery of the performance incentive, if any, within a year after the completion of the plan. If GMO's performance falls below 60 percent of the kWh/kW target, GMO would not receive a performance incentive. If it exceeds 130 percent of the threshold, it would receive a performance incentive of up to $13.0 million. An example of how this performance incentive will be calculated is included in Appendix I. The percentage of target and the performance incentive are interpolated linearly between award levels.

The following is the Performance Incentive Award table.

***Table 4-3 GMO MEEIA Performance Incentive Award Table***

| Percent of kWh (50%)/kW (50%) Target** | Performance Incentive Award ($MM) |
|---|---|
| ≤ 60 | $0.00 |
| 70 | $7.00 |
| 80 | $8.00 |
| 90 | $9.00 |
| 100 | $10.00 |
| 110 | $11.00 |
| 120 | $12.00 |
| ≥ 130 | $13.00 |

** Based on percentage split of Gross Shared Benefits

Energy and Demand Savings Targets- Energy savings targets (kW and kWh) for the Performance Incentive are set based on the addition of annual kW and kWh savings of each program with the following exceptions. The exceptions are a function of aligning benefits captured with targets. Details of these programs are listed below.

- Programmable Thermostat (Residential and Business): Energy and demand targets (kW and kWh) are set based on new installs or upgrades that occur only during the plan period. Due to the assumed 10-year measure life of the programmable thermostat, the targets do not take into account thermostats installed prior to the plan period.
- DR Incentive: Targets are set based on total kW capacity available during that summer period. It is not based on incremental kW capacity achieved because the measure life is one-year and the Company must incent customers every year to continue participation and achieve kW reduction.
- Home Energy Reports: Targets are set based on the expected energy (kWh) savings for each year during the plan period. The program has a one year measure life and because the Company must continue to invest in sending the letter every year to continue savings, we have set energy savings to reflect such.

## DSIM Accounting Practices

The Company follows Generally Accepted Accounting Principles (GAAP) for financial accounting. GAAP encompasses the conventions, rules, and procedures necessary to define accepted accounting practice at a particular time. Further, the Company maintains their books and records in accordance with the Federal Energy Regulatory Commission's Uniform System of Accounts.

The Company will utilize FERC Account 908 Customer Assistance Expenses to track direct MEEIA-related program costs. Payroll taxes and benefits loadings on direct labor incurred in support of MEEIA programs will be charged to FERC Account 408.1 Taxes Other Than Income Taxes, Utility Operating Income and FERC Account 926 Employee Pensions and Benefits, respectively.

The Company has established an accounting distribution coding system to all for the proper classification of program costs for MEEIA-related DSM programs. The accounting distribution utilizes the following components:

- Account – The prescribed accounts mandated by FERC in the Code of Federal Regulations for the classification of assets, liabilities, revenues and expenses.
- Department – A code assigned to specific operational areas to identify the group responsible for the cost.
- Operating Unit - The operating unit identifies the jurisdiction associated with the cost.
- Project – The project id identifies the MEEIA program associated with the cost.
- Work ID – Additional codes to further specify the type of work or specific purpose for the cost.
- Resource – Identifies types of costs used to complete projects, or what was used to get the work done. A primary example would be labor vs. non-labor items.

Taken in their entirety, the combination of codes above will allow for the proper classification and clear delineation of costs. These codes will be expanded as needed to accommodate the programs included in this MEEIA filing.

The Company will utilize FERC Accounts 440 Residential Sales, 442 Commercial and Industrial Sales and 445 Other Sales to Public Authorities based on the customer class of customers billed DSIM sales.

The amount of DSIM sales billed to customers for program costs and TD Share will be compared with the actual amount of program costs incurred and TD Share earned with the differences recognized as a debit (over-collection) or credit (under-collection) to sales in the FERC Accounts referenced above and the corresponding credit (over-collection) or debit (under-collection) recorded in FERC Account 254 Other Regulatory Liabilities or FERC Account 182.3 Other Regulatory Assets, as appropriate.

Monthly interest calculated for the monthly cumulative balances of over- and under- collection of balances for MEEIA Programs costs, TD Share and any earned Performance Incentive Award will be recognized as a debit (over-collection) or credit (under-collection) to FERC Account 431 Other Interest Expense and the corresponding credit (over-collection) or debit (under-collection) recorded in FERC Account 254 Other Regulatory Liabilities or FERC Account 182.3 Other Regulatory Assets as appropriate.

### Impact on Customers

For estimates of the impact on customer bills and rates, see Appendix H.

### Impact on Financials / Credit Ratings

Table 4-4 following presents the projected impacts of the proposed programs costs and DSIM recoveries, including incentive components such as TD and performance incentives, over 2016 – 2022 on projected Company earnings. This analysis assumes 100 percent achievement of kWh and kW savings, program cost budgets and performance incentives.

***Table 4-4 MEEIA Cycle 2 Plan Impacts on Company Earnings **HC*****

| | NPV* | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|---|
| Operating Revenues | | | | | | | |
| Lost Margins | | | | | | | |
| Program Cost | | | | | | | |
| Throughput Disincentive | | | | | | | |
| Performance Incentive | | | | | | | |
| Total Operating Revenues | | | | | | | |
| Operating Expenses | | | | | | | |
| Program Costs | | | | | | | |
| Total Operating Expenses | | | | | | | |
| Operating Income | | | | | | | |
| Interest & Carrying Cost Charges | | | | | | | |
| Income (Loss) Before Income Taxes | | | | | | | |
| Income Taxes | | | | | | | |
| Net Income (Loss) | | | | | | | |

**NPV – The NPV at the WACC of 6.5841%*

It should be noted that the although the impact of lost margin from reduced kWh sales resulting from the MEEIA Cycle 2 programs differs in timing and absolute amount from the amount of TD recoveries under the DSIM, the NPV for both are nearly equal, which demonstrates that the TD adequately addresses the lost margins. In addition, in spite of the fact that the performance incentive is proposed to be collected over two years (presumably in 2020 and 2021), accounting requirements mandate the recognition of the revenues in Company earnings in the year in which it is anticipated to be objectively determined (assumed to be 2019 in this projection).

Table 4-5 below reflects the projected impacts of the MEEIA Cycle 2 Plan with incentive components, including TD and performance incentive, on certain of Great Plains Energy, Incorporated's (GPE) consolidated key credit metrics: Debt /Total Capital, Funds from Operations (FFO)/Debt and FFO/Interest. GPE's current five-year forecast covers the years 2015-2019. The 2019 baseline metrics are used for 2020 in the following analysis solely for the purpose of showing the impact of the MEEIA Cycle 2 Plan.

***Table 4-5 MEEIA Cycle 2 Plan with Incentive Components Impact on Key Credit Metrics **HC*****

| | Metric | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|
| **Baseline Credit Metrics** | **Debt / Total Capitalization** | | | | | |
| | **FFO / Debt** | | | | | |
| | **FFO / Interest** | | | | | |
| **MEEIA 2016-18 Plan Impacts** | **Debt / Total Capitalization** | | | | | |
| | **FFO / Debt** | | | | | |
| | **FFO / Interest** | | | | | |
| **Credit Metrics w/ MEEIA 2016-18 Plan** | **Debt / Total Capitalization** | | | | | |
| | **FFO / Debt** | | | | | |
| | **FFO / Interest** | | | | | |

The results of this analysis demonstrates that the overall impacts of the MEEIA Cycle 2 with DSIM, including incentive components, are small but generally positive and supportive of credit quality. Certain individual year's impacts are negative which reflects the timing differences in lost margin impacts and TD recoveries discussed above. The analysis above supports the conclusion that the DSIM as proposed aligns with Company incentives.

Table 4-6 below reflects the projected impacts of the MEEIA Cycle 2 Plan without incentive components, including TD and performance incentive, on certain of GPE's consolidated key credit metrics.

***Table 4-6 MEEIA Cycle 2 Plan without Incentive Components Impact on Key Credit Metrics **HC*****

| | Metric | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|
| **Baseline Credit Metrics** | **Debt / Total Capitalization** | | | | | |
| | **FFO / Debt** | | | | | |
| | **FFO / Interest** | | | | | |
| **MEEIA 2016-18 Plan Impacts** | **Debt / Total Capitalization** | | | | | |
| | **FFO / Debt** | | | | | |
| | **FFO / Interest** | | | | | |
| **Credit Metrics w/ MEEIA 2016-18 Plan** | **Debt / Total Capitalization** | | | | | |
| | **FFO / Debt** | | | | | |
| | **FFO / Interest** | | | | | |

If the TD and performance incentive components of the DSIM are not included, each of GPE's key credit metrics is negatively impacted. This analysis demonstrates that the inclusion of these incentive components of the DSIM are essential to align the DSIM with the Company's financial incentives.

As noted previously, these analyses assume the continuation of the current DSIM recovery mechanism through a tracker in base rates with the rates updated as of each general rate case. If the conversion to a rider is assumed the results are similar but slightly more positive due to the more timely recovery of costs and incentives resulting from the adjustment of rates every six months rather than with the next general rate proceeding.

**Utility Incentive Alignment Discussion**

Prior to the passage of the MEEIA legislation and the MEEIA Rules 4 CSR 240-3.163, 4 CSR 240-3.164, 4 CSR 240-20.093, and 4 CSR 240-20.093, Missouri utilities' EE recovery method took a rearview mirror approach to recovery by waiting until a rate case before addressing costs incurred between one rate case to the next, and then would only allow recovery of past program expenses.

MEEIA established a state policy to value demand-side investments equal to traditional investments in supply and delivery infrastructure, and allowed for recovery of all reasonable and prudent costs of delivering cost-effective demand-side programs.

In order to allow the Commission to do all of the above, a Missouri utility must create a DSIM framework that will address the three main components of a DSIM, including timely cost recovery, alignment of financial incentive, and timely earning opportunities.

Recovery of the direct program costs includes recovery of the direct costs associated with program administration (including evaluation), implementation, and rebates to program participants, all of which are necessary to obtain the benefits EE can provide. Timely recovery is also required for the impact of reduced sales on the utility.

The impact of reduced sales on utility financial performance is not about providing additional earnings to the utility, but rather about keeping the utility whole, consistent with its existing

regulatory framework and as required by MEEIA. Without proper alignment of utility financial incentives, EE causes negative effects to the utility's financial performance as both earnings and cash flows suffer. Providing alternative recovery, dollar-for-dollar, of these fixed costs reverses the negative financial effects, known as the TD, associated with EE. In order for TD recovery to be recognized in 2016-2018 the amount of such recovery must be objectively determinable at the time. In order to meet this requirement the Company has proposed the use of deemed savings and gross shared benefits. If the TD is subjected to subsequent recalculation the Company would not be able to recognize the revenue in the periods that sales were reduced which would not result in alignment of utility financial incentives.

The effect on shareholder value compared to supply side alternatives recognizes the opportunity cost to the utility of substituting EE for supply-side alternatives. Demand-side resources cannot be valued equally to supply-side resources without providing an equivalent opportunity to enhance shareholder value. Providing timely earnings opportunities moves demand-side resources beyond a break-even proposition and allows fair competition with supply-side alternatives; thus allowing the utility to value the two options equally.

## H. Achievable Potential Discussion

### Current Proposed Plan

This DSM plan for Cycle 2 was designed to build upon the existing Company programs and the 2013 demand-side resource potential study while incorporating new research on best practices and dialogue with the Company and stakeholders. The plan incorporates all lessons learned from previous program years, as well as from EM&V results.

The proposed plan moves the Company forward in many significant ways toward the MEEIA goal of achieving all cost effective savings. To accompany all the enhancements and improvements mentioned in previous sections, the plan builds on our strong history of program implementation with substantial increases in savings goals and spending.

The Company's most recent potential study performed in 2013 provided helpful insight when appropriately adjusted for planning as follows: First, when measure roll-off or expiration occurs in the future, we have adjusted the program projections such that these are assumed to require additional program effort and incentive budget, whereas the potential study assumed these would happen automatically. Second, we have incorporated all Company-specific evaluation reports and results to date, including savings assumptions.

### Net-to-Gross (NTG) Ratios

For the purpose of setting achievable targets and for calculating the Shared Benefits, NTG ratios are assumed to be 1.0 for all measures within a program.

While onboarding new implementation partners and contractors and simultaneously unifying the once disparate portfolios across KCP&L and GMO's Missouri jurisdictions, our plan takes an aggressive stance to reach new markets, achieve higher savings, and meet more stringent cost-effectiveness hurdles. The plans increase the savings dramatically relative to historic marks, approaching levels of one percent of annual retail sales, which place it in good standing among our

peer group of leading Midwestern DSM programs (see Table 4-7 and related figures below)[28]. The increases in spending place the planned budgets at a level in good standing relative to the peer group and above actuals for the Company in 2014.

***Table 4-7 Overall Portfolio Savings and Cost Benchmarking Relative to Midwest Peer Group***

| Utility | Year | State | Total DSM Savings as % of Retail Sales | Total DSM Spending as % of Retail Revenue |
|---|---|---|---|---|
| Empire Electric | 2014 | MO | 0.06% | 0.26% |
| Westar | 2013 | KS | 0.01% | 0.22% |
| MidAmerican | 2014 | IA | 0.99% | 3.53% |
| Commonwealth Edison | 2014 | IL | 1.02% | 1.25% |
| Ameren Illinois | 2014 | IL | 0.94% | 2.05% |
| Ameren Missouri | 2014 | MO | 0.98% | 1.32% |
| KCP&L MO | 2014 | MO | 0.50% | 0.77% |
| KCP&L MO | 2016 | MO | 0.80% | 1.79% |
| KCP&L MO | 2017 | MO | 0.85% | 1.80% |
| KCP&L MO | 2018 | MO | 0.89% | 1.86% |
| KCP&L GMO | 2014 | MO | 0.70% | 1.77% |
| KCP&L GMO | 2016 | MO | 0.82% | 1.96% |
| KCP&L GMO | 2017 | MO | 0.87% | 2.05% |
| KCP&L GMO | 2018 | MO | 0.90% | 2.19% |

[28] Sources: Retail Sales & Revenue from EIA Form 861 "Retails_Sales_2013.xls" ; Savings and Spend from ESource DSM Insights database of public filings http://dsmexplorer.esource.com/documents/MidAmerican%20-%205.1.2015%20-%202014%20Annual%20Report%20-%20EEP-2012-002.pdf

***Figure 4-4 Total DSM Portfolio Savings a Percentage of Retail Sales***

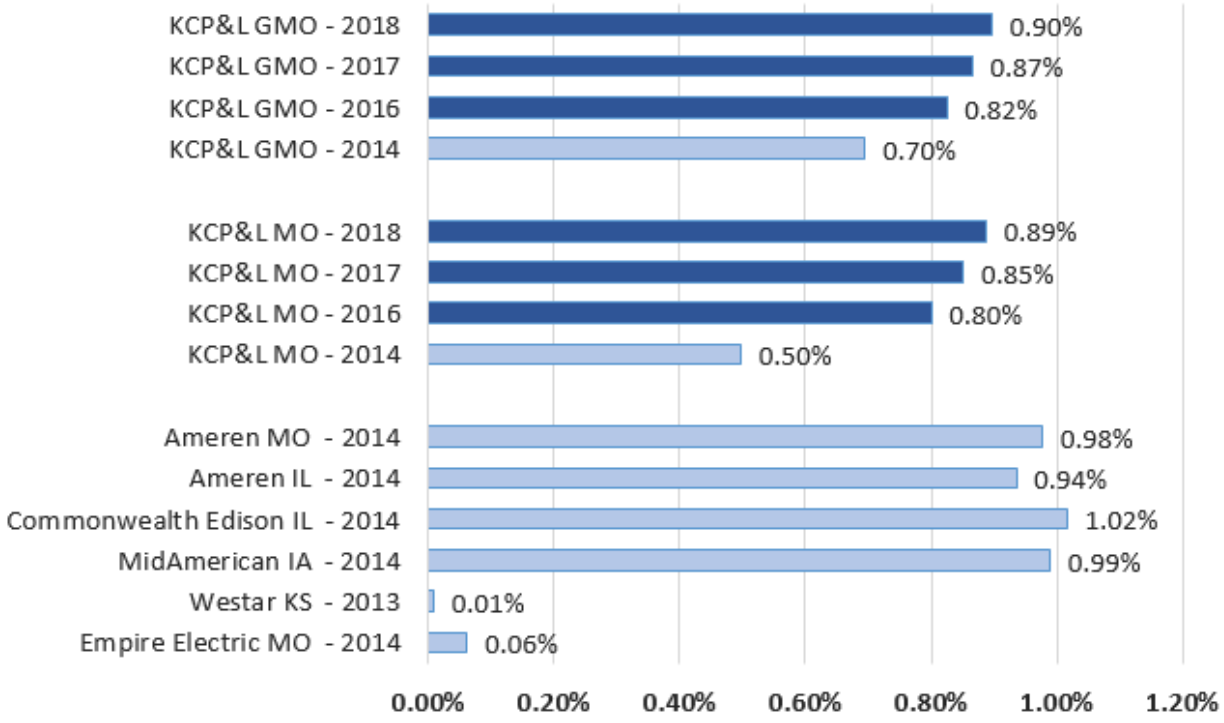
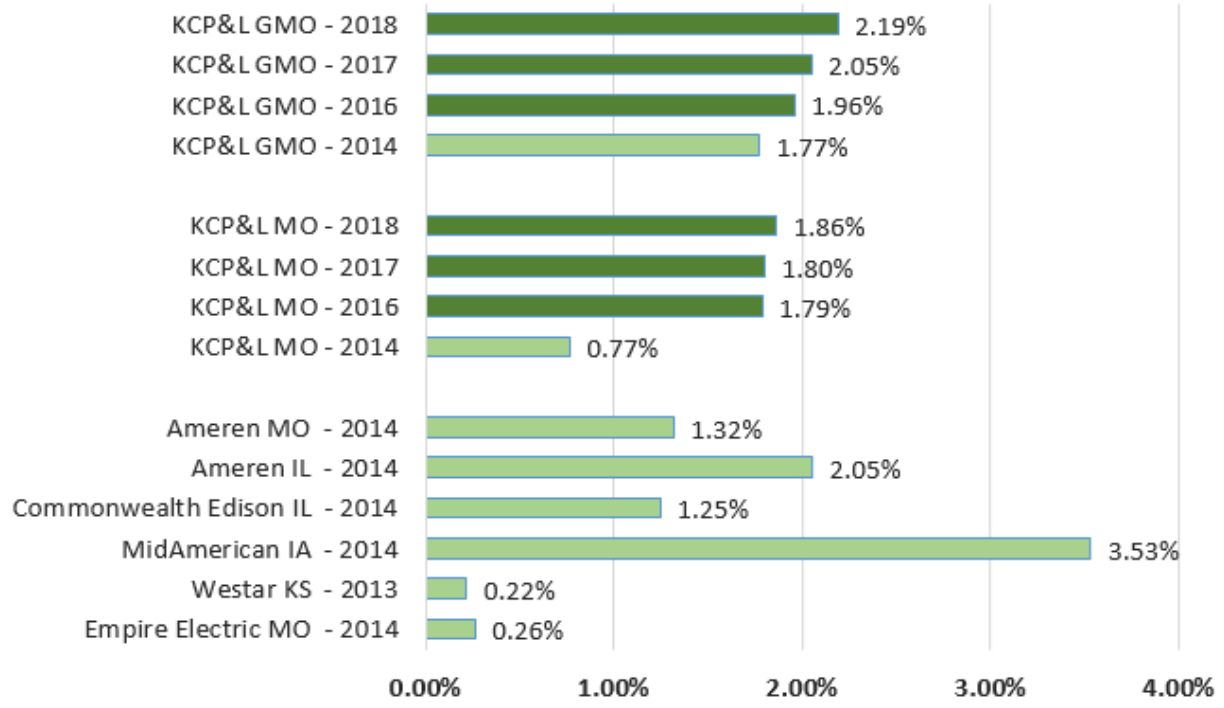



***Figure 4-5 Total DSM Portfolio Spend as a Percentage of Retail Revenue***



It should be noted that programs in Illinois and Iowa have had long histories of DSM implementation and higher market maturity than Missouri, contributing to their relatively higher levels of saving and spending in the benchmarks. DSM efforts in Westar and Empire are still building momentum and are earlier on the adoption curve than the Company.

The Company's planned savings and budgets represent an aggressive portfolio plan for the next MEEIA filing and implementation cycle, with a significant increment relative to historic efforts and placement in the mid to high range of performance metrics for our benchmarking peer group.

# I. Technical Resource Manual and Simplifying EM&V process

**New TRM Format**

The Company's new proposed TRM format is a consolidated and interactive table containing all the key variables and assumptions necessary to characterize the measures for implementation, tracking, and evaluation purposes. The TRM document is available in Appendix D. Each measure characterization is populated with the following parameters, based on the Company's default planning values:

- Measure Name
- Program
- Market Segment
- End Use
- Unit Definition
- Incremental Measure Cost ($/unit)
- Electric Energy Savings (Annual kWh/unit)
- Nameplate Demand Savings (kW/unit)
- Peak Coincidence Factor
- Coincident Peak Demand Savings (kW/unit)
- Annual Operating Hours (if applicable)
- Measure Life (years)
- Measure Efficiency Value and Definition
- Baseline Efficiency Value and Definition
- Description of Electric Energy Savings Algorithm
- Incentive Amount ($) and Description
- Assumed or Evaluated NTG for conversion of TRM gross values to net values
- Data Source(s)

Based on an MS Excel file with interactive formulas to calculate savings, the formulas can be inspected and interrogated to observe how the default planning values are constructed and calculated. The TRM does not include programs or measures that are abstract, unique, or customized, which would not lend themselves to such a standardized format. These excluded programs include: block bidding, strategic energy management, business EE custom incentives, HERs, and business DR incentives.

### Improvements in Transparency for Implementation and Evaluation

The first incarnation of the TRM, in MS Excel table format, provides a transparent and intuitive central resource for implementers, trade allies, customers, regulators, planners, and evaluators to access the relevant measure characteristics and calculations. This allows easier access to the measure values so that projects can be planned, savings and incentives can be estimated, and processing and evaluation are expedited.

Measure values are defined on "per unit" basis whenever possible in an attempt to utilize the most intuitive unit definition for each measure. For example, lighting equipment measures are most frequently specified in terms of "per bulb," while an efficient cooling system is specified in terms of "per ton of cooling capacity" to enable customers to estimate the savings, incentives, and costs of their own unique project a number of bulbs or tons that is unknown a priori.

An eventual evolution of the TRM would be to post it in table form online and add interactive features. A portal could be constructed to host change-tracking/version control abilities, allowing measures to be updated as new evaluation data becomes available throughout the program implementation; all the while archiving and storing old values in a history for reference and documentation.

Sources for the TRM are below:

1) KCP&L/GMO Potential Study
2) GMO 2013/2014 EM&V
3) Secondary sources (Illinois TRM, published reports, etc.)

For further detail of all sources, see workpapers as described in Section 6.

SECTION | 5

# Supporting Detail for New Path

The Company continues to strive to learn from customer feedback in how to best develop programs. Below are a few examples of work done in the marketplace to better understand what customers and stakeholders would like from DSM programs.

## A. Customer Feedback / EM&V Results

The following areas are some ways that the Company has incorporated feedback in the development of its programs.

- EM&V documentation of customer feedback - Navigant continues to provide valuable feedback in the EM&V process to hear from trade ally and participants in our programs. The feedback in the EM&V includes direct customer testimonials and insights to awareness, satisfaction and opportunities to improve the programs.
- Large customer interaction – The Company has seven professionals dedicated to interacting with our largest 250 business customers daily regarding their energy use and including how to be more efficient. These interactions are captured and provided to program managers to better understand their motivations to take efficiency actions.
- Large customer survey (Esource) – The Company recently conducted a survey with the help of Esource (an electric utility consultant) to engage and learn from our business customers regarding many topics included EE and DR.
- Online customer advisory panel - The Company has an online panel that is to set up as an ongoing mechanism to provide high speed results that attempt to be representative of the Company's residential customer base. This is utilized to give insight into reactions to current programs or "hypothetical" situations to determine how people would behave or take action.
- Trade Ally forums (residential/commercial) – The Company offers forums with customers to interact and gain insight and feedback from this critical sector that has a major influence over energy efficient behavior in our territories.
- Multi-family working groups – Within the last 18 months, the Company has begun participating in national and local multi-family sector EE working groups to better understand the stakeholders, influencers and needs of the some-time difficult to reach market segment. ACEEE has provided good insight into program design and Blue Hills Community Services in Kansas City, Missouri has convened a good cross section group to understand all the stakeholders and how to overcome barriers to help this sector.

**Key Conclusions**

Below are a few key conclusions that we have determined based on the above:

- Multi-family is an underserved sector that there is much support to gain traction in promoting and influencing EE to building owners and tenants.
- Residential customers continue to confirm that they generally think of money savings instead of energy savings as a primary motivator in their EE actions. There will continue to be opportunities to cross-promote programs as overall awareness has room to grow.

- Residential customers are generally satisfied with programs but are not as sure or satisfied with the energy savings received by participating.
- Business customers and trade allies like straight forward, easy to understand and complete rebate structures as opposed to highly technical and involved calculations for incentives.

## B. Cost Allocation of Income-Eligible and Pilot Programs

While the exact nature of the future pilot programs (designated under Research & Pilot) is yet to be determined, the Company will split the costs of the programs 50/50 among residential and non-residential customers with the intent to explore programs that hit both market segments equally.

Additionally, all Income-Eligible programs dollars spent (including TD) are split equally among residential and non-residential customer class types for recovery following precedence set in regards to the weatherization program with a previous stipulation and agreement under Case No. EO-2014-0095.

## C. Tracking of Benefits – Deemed Measure Lives and Benefits

In the creation of the 2016-2018 MEEIA Cycle 2 plan, the Company used DSMore version 8.0.00 to calculate the NPV of the avoided costs (avoided energy and demand savings) for each measure on a per unit basis for each program year. For tracking and reporting purposes during the course of the program cycle, the Company will use this per unit savings to calculate the monthly benefits based on actual monthly program activity.

This method allows the Company to streamline the monthly benefits calculations and does not require running DSMore each month, which is a very time consuming process. For example, the avoided energy and demand savings from a DSMore model run for a standard measure with 5,000 units equals a DSMore model run for one unit multiplied by 5,000. This is the case because no other inputs are being changed except participation quantity. For custom projects it will be calculated on a per kWh basis for avoided energy costs and per kW basis for avoided demand costs. The relationship between kWh/kW and avoided energy/demand costs is also linear since no other inputs are changed. Thus, it is only necessary to run the DSMore model once for each program year, rather than every month, to determine the monthly Shared Benefits.

## D. Reporting

**Annual Report – Variance**

The Company will comply with the rule to present annual reports except requests a variance to the rule regarding timing of annual reports.

This is covered more in depth in “Variances” section in Appendix G.

## E. Throughput Disincentive Change

The Company is proposing a change to the calculation to the Throughput Disincentive (TD). During MEEIA Cycle 1, the Company experienced two types of factors impact on the Throughput Disincentive.

1) Uncertainty and risk associated with actual costs compared to program costs.

2) Uncertainty and risk associated with actual measure participation compared to budgeted measure participation.

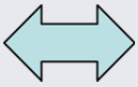
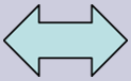
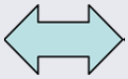
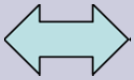
Therefore, the Company is proposing to adjust the Throughput Disincentive to mitigate the risk of issue #1. The TD is proposed to be calculated as a percentage of the total Benefits (or Gross Shared Benefits) created by MEEIA programs. By using a Gross Shared Benefit (i.e. not reducing

by program costs), the uncertainty and risk of budget to actual spend is removed while determining the throughput disincentive.

While the risk and uncertainty of budget to actual of the program costs is removed in this proposal there still remains a risk associated with #2, actual participation as compared with budgeted.

Actual TD dollar amount can vary from participation primarily based on the type of measures, customer end use and the primary season of usage reduction. For example, a measure that has low demand reduction and high energy reduction might not create as much benefits, but have high TD and vice versa.

***Figure 5-1 Impact of Increasing Value of Factor on SB and TD***

| Increasing Factor | Shared Benefits | Throughput Disincentive | Comment |
|---|---|---|---|
| Demand Savings to Energy Savings Ratio (kW/kWh) |  |  | Capacity avoided costs greater than energy avoided costs |
| Non-Residential to Residential Energy (kWh) Savings Ratio |  |  | Residential has higher lost margins |
| Rate Case Frequency |  |  | Time between rate cases equals unrecovered |
| Rate Case Margin |  |  | Rate change equals unrecovered |

For GMO, in MEEIA Cycle 1 the TD-NSB percentage was agreed in stipulation EO-2014-0095 as 13.55 percent (rounded). For the MEEIA Cycle 2 proposed plan, the updated TD percentage is 24.04 for residential and 14.40 for non-residential percent (rounded).

The Throughput Disincentive calculation and the inputs to the calculation are defined below.

Throughput Disincentive Calculation

Throughput Disincentive (TD) = Gross Shared Benefits x TD %; where,

Gross Shared Benefits = (Avoided Energy ($/kWh), Capacity ($/kW) and T&D ($/kW) costs x deemed kWh/kW savings of measure x deemed measure life x # of measures) x discount rate by year

TD % = (lost revenue margin associated with kWh of measures installed x discount rate) / Gross Shared Benefits

***Table 5-1 Throughput Disincentive Inputs Status***

| Category | Is it updated? | When is it set? | Description |
|---|---|---|---|
| Actual Installed Measures | Only tracked in current tracker mechanism | With general rate case or when converted to Rider | Actual number of measures installed in each program during the Cycle |
| Deemed kWh/kW Savings | Not updated during 3 year program cycle. | Fixed at the time of approval. | Energy and demand savings per measure – varies by measure (see TRM – Appendix D) |
| Deemed Measure Life | Not updated during 3 year program cycle. | Fixed at the time of approval. | Expected useful life of demand side savings measure – varies by measure (see TRM – Appendix D) |
| Avoided Costs | Not updated during 3 year program cycle. | Fixed at the time of approval. | Costs not incurred due to energy and demand reduction - |
| Discount Rate | Not updated during 3 year program cycle. | Fixed at the time of approval. | Discount rate used to calculate the real dollars |
| TD % | Not updated during 3 year program cycle. | Fixed at the time of approval. | % of Shared Benefits used to calculated Throughput Disincentive |

As found in the Shared Benefits spreadsheet in workpapers, total Lost Margin equals $25,043,288 and total benefits equal $134,246,786 which translates to the TD percentage of 24.04 percent for residential and 14.40 percent for non-residential (rounded).

SECTION | 6

# Collaborative Process to Approval

## A. Technical Conference Schedule

The Company proposes a set of six technical conferences to cover an array of topics that will likely be of interest to the stakeholders in the approval process. The Company conducted a pre-technical conference with stakeholders on June 30, 2015 to provide an overview of our filing.

The Company is flexible on topics, the total number of discussions, and exact dates of the technical conferences, but the Company is prepared to have weekly discussions in person and/or via conference call/webinar when appropriate to expedite the approval process and overall understanding of our filing. Because our KCP&L-MO and GMO filings are very similar, we propose to combine the discussions for both in the technical conferences.

***Figure 6-1 Proposed Technical Conference Schedule***

| MEEIA Cycle 2<br>Proposed Technical Conference Schedule | |
|---|---|
| Dates/Subjects can be flexible based on stakeholder interest | |
| **9/11/2015** | **Technical Conference (TC) #1** |
| | Overview - Exec Summary of Filing<br>Portfolio Targets<br>DSIM<br>Program Details - Residential Programs<br>Lighting<br>Income-Eligible Programs |
| **9/18/2015** | **Technical Conference #2** |
| | Marketing Strategy<br>Program Details - Business Programs<br>Demand Response - (Including Thermostat)<br>CHP<br>Overall Transition Plan - Business Programs |
| **9/25/2015** | **Technical Conference #3** |
| | TRM Details - Sources<br>Net to Gross Assumptions<br>Baselines and Deemed Savings<br>Avoided Cost Assumptions |

| | |
|---|---|
| **10/2/2015** | **Technical Conference #4** |
| | Recovery Mechanism<br>Financial Accounting TD %<br>Lost Margin Recovery<br>Performance Incentive |
| **10/9/2015** | **Technical Conference #5** |
| | Recovery Mechanism Cont'd<br>Rate Assumptions<br>GMO Tracker to Rider potential |
| **10/12/2015** | **Technical Conference #6** |
| | Additional Topics / Time<br>Stakeholder Interest |

## B. Stakeholder Access to Information

The Company will also provide both public and highly confidential work papers associated with the proposed MEEIA 2 filing in supplementary attachments to support the detail of this filing. Work papers will include:

- Navigant 2013 Potential Study
- 2013 GMO Final Evaluation, Measurement & Verification report
- Technical Resource Manual supporting sources
- Program Design Tool analysis spreadsheets
- DSMore Batch Tool and template file
- IRP Load Forecast spreadsheet
- Shared Benefits spreadsheet
- Financial analysis impact spreadsheet
- Customer Rate Impact
- Rate Calculation and Cycle 1 Balance
- IRP comparison spreadsheet
- CEP support presentation

## C. Key Factors and Company Positions for Approval

### Business Risk Impact

The utility incentive related to the DSIM is intended to put the utility's earnings ability on a level playing field with generation supply resources. The incentive is not intended to be a windfall profit to the utility, but instead a stabilizing factor that will allow for growth in DSM applications that will benefit all stakeholders. The earnings analysis provided in Table 4-3 demonstrates that the incentive mechanism as proposed by the Company essentially keeps the Company whole.

If the current DSIM recovery mechanism is modified to preclude current recognition of TD revenues by making it subject to retroactive determination, or if the performance incentive does not put the utility's earnings ability on a level playing field with generation supply resources, this would exacerbate regulatory lag and discourage potential investors leading to a discount on the

Company's stock price and an increase in the cost of equity capital. In addition, the rating agencies consider many quantitative and qualitative factors when reviewing a company's credit ratings. If the DSIM recovery mechanism does not balance the risk of both customers and the Company, the agencies may perceive this as a regulatory environment that is less than supportive to the utility. In Moody's Investors Service rating methodology, as much as half of the weighting is based on the qualitative analysis of the company's regulatory framework and ability to recover costs and earn returns. Their view of relative credit supportiveness considers the prevalence of automatic cost recovery provisions and reduced regulatory lag. Standard & Poor's rating methodology also relies on qualitative analysis of the company's regulatory environment that includes an assessment of the company's ability to recover all operating and capital cost in full and the timeliness of cost recovery to avoid cash flow volatility.

**Utility Incentives Alignment & Policy Context**

1) The Policy Goal of MEEIA is as follows: To encourage more efficient energy use and cost-effective demand-side programs;

2) Value demand-side investments equal to traditional investments in supply and delivery infrastructure and allow recovery of all reasonable and prudent costs of delivering cost-effective demand-side programs and, in support of those goals, the Commission shall:

    a. Provide timely cost recovery for utilities;
    b. Ensure that utility financial incentives are aligned with helping customers use energy more efficiently and in a manner that sustains or enhances utility customers' incentives to use energy more efficiently; and
    c. Provide timely earnings opportunities associated with cost-effective, measurable and verifiable efficiency savings.

The Company's requested DSIM includes a request of recovery of estimated program costs, a portion of TD, and any earned performance incentive based on EM&V results. The recovery of TD proposed by the Company will help mitigate the negative financial impacts that are currently present for utility investment in DR and EE programs. The TD represents the financial disincentive posed on the utility for each kWh saved as a result of successful implementation of EE and helps ensure that the Company is kept whole and not financially harmed or dis-incentivized from promoting EE.

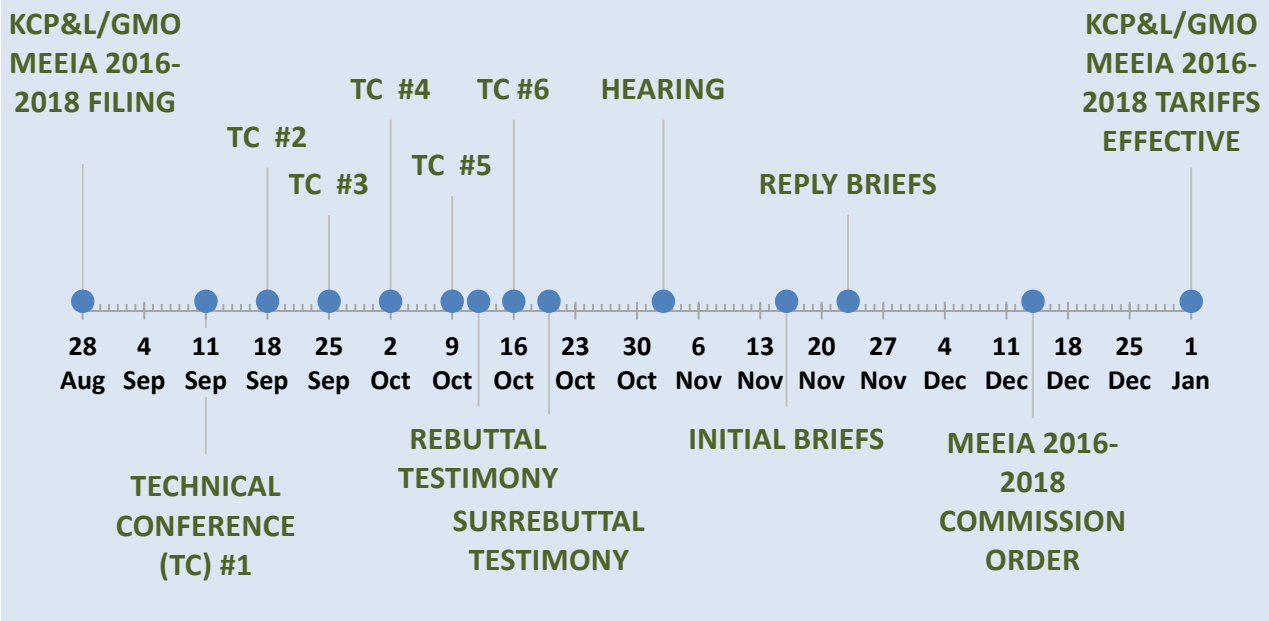
However, absent a DSIM that addresses and mitigates the financial Throughput Disincentive (TD) that exists, the Company will be unable to continue the current level of DR and EE programs or increase the level of funding for these programs. In addition, if the TD is subject to retrospective recalculation the Company will not be able to currently recognize the TD revenues which would result in a negative impact on Company earnings until the final amount of TD is determined. As a result, it is essential that the TD be based on deemed savings and benefits in order to objectively determined in the period in which it is calculated.

In this filing, the Company has demonstrated these programs meet the cost effectiveness test and these programs have been shown to be less costly to customers than the alternative of no programs and unmitigated peak demand and energy usage. The untapped potential for the Company's demand-side programs exists because it is never easy to get customers to pay more today to save an even greater amount later. This is true even under the best economic conditions and has always been the major impediment to sustainable, aggressive, cost-effective, DR and EE program implementation.

## D. Achievable Time Schedule

The Company proposes an aggressive but achievable timeline in order to allow for continuation of programs to maintain customer momentum and allow for synchronization of the three-year cycle of programs between its Missouri jurisdictions.

***Figure 6-2 Proposed Timeline***



SECTION | 7

# MEEIA Rule Requirements

| MEEIA Rules Filing Requirements | | | | |
|---|---|---|---|---|
| **Rule #** | | | **Report Section** | **Expert Witness** |
| **4 CSR 240-20.093** | | | | |
| 2 | A-K | Application to establish, continue or modify a DSIM | 4.G. | Rush |
| 6 | | Disclosure on Customers' Bills of DSIM example | 2.A. | Winslow |
| | | | | |
| **4 CSR 240-20.094** | | | | |
| 2 | A | Progress towards goal of all cost effective demand side savings | 4.H. | Winslow |
| 3 | A | Demand Side programs and program plans | | |
| | 1 | are consistent with goal achieving all cost effective demand side savings | 4.H. Table 1-3 and Table 3-9 | Winslow |
| | 2 | Have reliable EM&V plans | 4.G., 4.I. and Appendix C | Winslow |
| | 3 | are included in the electric utilities preferred plan to evaluate the NPV of revenue reqt's | 2.C. | Nelson |
| | D | Tariff Sheets associated with DSM filing | Appendix E | Rush |
| | | | | |
| **4 CSR 240-3.163** | | | | |
| 2 | | Supporting Information for establishment of a DSIM | | |
| | A | Customer Notice example | 2.A. | Winslow |
| | B | Example customer bill | 2.A. | Winslow |
| | C | Description of design and operation of DSIM | 4.G. | Rush |
| | D | Estimates of the effects of DSIM on customer rates and average bills | 4.G. and Appendix H | Rush |
| | E | Estimates of effect of the utility incentive component on earnings and key credit metrics | 4.G. | Foltz |
| | F | Explanation of all costs to be recovered under DSIM | 4.G. | Foltz |
| | G | Explanation of Business Risk to utility | 6.C. | Foltz |
| | H | A proposal on how utility incentives component of DSIM are aligned to help customers use energy efficiently. | 4.G. and 6.C. | Winslow |
| | I | Annual Reports | 5.D. and Appendix G | Winslow |
| | J | DSIM rate adjustment clause tariff sheets | 4.G. and Appendix E | Rush |
| | K | Explanation of DSIM rate adjustment including over/under and program changes | 4.G. | Rush |
| 11 | | Variances for good cause | Appendix G | Rush |
| | | | | |

| **4 CSR 240-3.164** | | | | |
|---|---|---|---|---|
| 2 | | File or provide reference to the following information: | | |
| | A | Market Potential Study | Found in case No. | |
| | 1 | Documentation of Assumptions, definitions, methodologies, etc | EO-2014-0095 | Nelson |
| | 2 | Description of Process to identify broadest possible lists of measures | EO-2014-0095 | Nelson |
| | 3 | Description of Process to determine Technical, Economic, Market Potential for 20 yr horizon | EO-2014-0095 | Nelson |
| | 4 | Identification and discussion of 20 yr baseline and energy forecasts | EO-2014-0095 | Nelson |
| | 4 | Discuss any differences of 20 yr forecasts from most recent IRP | EO-2014-0095 | Nelson |
| | 4A | Treatment of Opt out customers | EO-2014-0095 | Nelson |
| | 4B | Building Codes and Standards addressed | EO-2014-0095 | Nelson |
| | 4C | Changes in CHP applications | EO-2014-0095 | Nelson |
| | 4D | 3rd party or naturally occurring demand side savings | EO-2014-0095 | Nelson |
| | B | Cost effectiveness for each DSM program and total for all programs | 1.B. and 3.E. | |
| | 1 | TRC Test - detailed description of avoided cost assumptions | 3.E., 4.D. and DSMore Template file | Nelson |
| | 2 | UCT, PT, NPT, SCT | 3.E. | Nelson |
| | 3 | Impacts on Annual Rev req'ts and NPV of ann rev req'ts as result of IRP 20 yr horizon | 2.C. | Nelson |
| | C | Program Write-ups | Appendix A | |
| | 1 | Customers Targeted | Appendix A | Nelson |
| | 2 | Measures Included | Appendix A | Nelson |
| | 3 | Customer Incentives | Appendix A | Nelson |
| | 4 | Proposed Promotional Techniques | Appendix A | Nelson |
| | 5 | Specification of whether administrated by utility or 3rd party | Appendix A | Nelson |
| | 6 | Projected gross and net annual energy savings | Appendix A | Nelson |
| | 7 | Projected annual energy savings targets and cumulative energy savings targets | Appendix A | Nelson |
| | 8 | Projected gross and net annual demand savings | Appendix A | Nelson |
| | 9 | Projected annual demand savings targets and cumulative demand savings targets | Appendix A | Nelson |
| | 10 | NTG factors | Appendix A | Nelson |
| | 11 | Size of potential market and projected penetration rates | Appendix A | Nelson |
| | 12 | Any market transformation elements included in the program and an EM&V plan for estimating, measuring and verifying the energy and capacity savings that the market transformation efforts expected to achieve. | Appendix A | Nelson |
| | 13 | EM&V plan including at least the proposed evaluation schedule and the proposed approach to achieving the evaluation goals pursuant to 4 CSF 240-1163(7) and 4 240-20.093(7). | Appendix A | Nelson |

| | | | | |
|---|---|---|---|---|
| | 14 | Budget information in the following categories: | Appendix A | Nelson |
| | A | Admin costs listed separately for utility and program administrator | Appendix A | Nelson |
| | B | Program incentive costs | Appendix A | Nelson |
| | C | Estimated equipment costs | Appendix A | Nelson |
| | D | Estimated installation costs | Appendix A | Nelson |
| | E | EM&V costs | Appendix A | Nelson |
| | F | Misc itemized costs (could be allocation of total costs of overhead) | Appendix A | Nelson |
| | 15 | Description of any strategies to minimize free riders | Appendix A | Nelson |
| | 16 | Description of any strategies used to maximize spillover | Appendix A | Nelson |
| | 17 | Proposed implementation schedule | Appendix A | Nelson |
| | D | Demonstration and Explanation of how DSM programs are expected to achieve all cost effective DSM savings | 2.C. and 4.all | Nelson |
| | E | Identify DSM programs supported by other utilities (electric or gas) | 4.A. | Winslow |
| 3 | | Designation of Program Pilots - include questions that pilot is expected to address, proposed geography, duration, etc | 4.F. | Winslow |
| 6 | | Variances for good cause | Appendix G | Rush |

**BEFORE THE PUBLIC SERVICE COMMISSION**
**OF THE STATE OF MISSOURI**

| | | |
|---|---|---|
| In the Matter of KCP&L Greater Missouri Operations Company's Notice of Intent to File an Application for Authority to Establish a Demand-Side Programs Investment Mechanism | ) ) ) ) | File No. EO-2015-0241 |

**AFFIDAVIT OF TIM M. RUSH**

**STATE OF MISSOURI** )
) **ss**
**COUNTY OF JACKSON** )

Tim M. Rush, being first duly sworn on his oath, states:

1. My name is Tim M. Rush. I work in Kansas City, Missouri, and I am employed by Kansas City Power & Light Company as Director, Regulatory Affairs.

2. I participated in the preparation of the foregoing KCP&L Greater Missouri Operations Company – Missouri MEEIA 2016-2018 Report as identified in said Report, Section 7.

3. I have knowledge of the matters set forth in said Report and that such matters are true and accurate to the best of my knowledge, information and belief.

Tim M. Rush

Subscribed and sworn before me this 28th day of August, 2015.

Notary Public

My commission expires: Feb. 4 2019

NICOLE A. WEHRY
Notary Public - Notary Seal
State of Missouri
Commissioned for Jackson County
My Commission Expires: February 04, 2019
Commission Number: 14391200

**BEFORE THE PUBLIC SERVICE COMMISSION**
**OF THE STATE OF MISSOURI**

| | | |
|---|---|---|
| In the Matter of KCP&L Greater Missouri Operations Company's Notice of Intent to File an Application for Authority to Establish a Demand-Side Programs Investment Mechanism | ) ) ) ) | File No. EO-2015-0241 |

**AFFIDAVIT OF KIMBERLY H. WINSLOW**

**STATE OF MISSOURI** )
) **ss**
**COUNTY OF JACKSON** )

Kimberly H. Winslow, being first duly sworn on her oath, states:

1. My name is Kimberly H. Winslow. I work in Kansas City, Missouri, and I am employed by Kansas City Power & Light Company as Director, Energy Solutions.

2. I participated in the preparation of the foregoing KCP&L Greater Missouri Operations Company – Missouri MEEIA 2016-2018 Report as identified in said Report, Section 7.

3. I have knowledge of the matters set forth in said Report and that such matters are true and accurate to the best of my knowledge, information and belief.

Kimberly H. Winslow
Kimberly H. Winslow

Subscribed and sworn before me this 28th day of August, 2015.

Nicole A. Wehry
Notary Public

My commission expires: Feb. 4, 2019

NICOLE A. WEHRY
Notary Public - Notary Seal
State of Missouri
Commissioned for Jackson County
My Commission Expires: February 04, 2019
Commission Number: 14391200

**BEFORE THE PUBLIC SERVICE COMMISSION**
**OF THE STATE OF MISSOURI**

| | | |
|---|---|---|
| In the Matter of KCP&L Greater Missouri Operations Company's Notice of Intent to File an Application for Authority to Establish a Demand-Side Programs Investment Mechanism | ) ) ) ) | File No. EO-2015-0241 |

**AFFIDAVIT OF MARK A. FOLTZ**

**STATE OF MISSOURI** )
) **ss**
**COUNTY OF JACKSON** )

Mark A. Foltz, being first duly sworn on his oath, states:

1. My name is Mark A. Foltz. I work in Kansas City, Missouri, and I am employed by Kansas City Power & Light Company as Senior Project Director.

2. I participated in the preparation of the foregoing KCP&L Greater Missouri Operations Company – Missouri MEEIA 2016-2018 Report as identified in said Report, Section 7.

3. I have knowledge of the matters set forth in said Report and that such matters are true and accurate to the best of my knowledge, information and belief.

Mark A. Foltz

Subscribed and sworn before me this 28th day of August, 2015.

Notary Public

My commission expires: Feb. 4 2019

NICOLE A. WEHRY
Notary Public - Notary Seal
State of Missouri
Commissioned for Jackson County
My Commission Expires: February 04, 2019
Commission Number: 14391200

**BEFORE THE PUBLIC SERVICE COMMISSION**
**OF THE STATE OF MISSOURI**

| | | |
|---|---|---|
| In the Matter of KCP&L Greater Missouri Operations Company's Notice of Intent to File an Application for Authority to Establish a Demand-Side Programs Investment Mechanism | ) ) ) ) | File No. EO-2015-0241 |

**AFFIDAVIT OF TIMOTHY M. NELSON**

**STATE OF MISSOURI** )
) **ss**
**COUNTY OF JACKSON** )

Timothy M. Nelson, being first duly sworn on his oath, states:

1. My name is Timothy M. Nelson. I work in Kansas City, Missouri, and I am employed by Kansas City Power & Light Company as Manager, Market Intelligence.

2. I participated in the preparation of the foregoing KCP&L Greater Missouri Operations Company – Missouri MEEIA 2016-2018 Report as identified in said Report, Section 7.

3. I have knowledge of the matters set forth in said Report and that such matters are true and accurate to the best of my knowledge, information and belief.

Timothy M. Nelson

Subscribed and sworn before me this 28th day of August, 2015.

Notary Public

My commission expires: Feb 4, 2019

NICOLE A. WEHRY
Notary Public - Notary Seal
State of Missouri
Commissioned for Jackson County
My Commission Expires: February 04, 2019
Commission Number: 14391200

APPENDIX | A

# KCP&L-GMO Detailed Program Write-Ups

This appendix provides detail on key elements of each program in the portfolio, satisfying the requirements of Rule: 3.164 - (2) C.

### Home Lighting Rebate

| | |
|---|---|
| **Objective** | Increase the penetration of efficient lighting in customer homes by incentivizing the purchase of ENERGY STAR® qualified lighting. |
| **Target Market** | Residential customers as well as lighting manufacturers and local retailers. |
| **Description** | The Home Lighting Rebate Program incentivizes the purchase and installation of efficient lighting utilizing an upstream strategy to provide customers incentives on qualifying CFL and LED light bulbs at participating retailers. Customers receive an instant incentive at the point-of-purchase. The incentives vary depending upon the type of light bulb, manufacturer and associated retail cost. |
| **Implementation Strategy** | KCP&L-GMO will engage a third-party implementation contractor to efficiently obtain the energy savings goals while adhering to the budget. The implementation contractor will:<br>• Establish relationships with lighting manufacturers and retailers throughout KCP&L-GMO's service territory.<br>• Provide in-store promotional materials and retail sales staff training.<br>• Track program performance, including tracking sales data, reviewing sales data for accuracy and payment to retailers.<br>• Periodically report progress towards program goals and opportunities for improvement.<br>KCP&L-GMO will work with the implementation contractor to market the program to customers and educate retailer sales staff. Marketing efforts to increase customer awareness may include, but not be limited to:<br>• Bill inserts<br>• Newspaper advertisements<br>• Internet placement<br>• Point-of-Purchase materials (hang tags, posters) |
| **Risk Management** | Upstream programs simplify the participation process for residential customers, eliminating the need to complete and submit a rebate application. However, upstream programs typically have higher free ridership and leakage outside of the service territory. A number of steps will be taken to reduce free ridership and leakage while increasing spillover, including:<br>• KCP&L-GMO will work with the implementation contractor to select retailers located well within KCP&L-GMO's service territory to reduce leakage outside of the service territory.<br>• The Home Lighting Rebate Program will be cross-marketed with KCP&L-GMO's other Residential DSM Programs (e.g. bill inserts will promote multiple programs).<br>• Incentives will be modified as needed to respond to the market price of qualifying light bulbs, with a goal of the incentive being no higher than 50% of the incremental cost.<br>• KCP&L-GMO will work with the implementation contractor and third party evaluator to understand any market transformation elements that arise from this upstream program. |

**Measures & Incentives**

The measures and incentives were set for planning purposes and may be modified to reflect market conditions.

| Measure | Unit | Average Incentive per Unit |
|---|---|---|
| CFL | per Bulb | $1.35 |
| LED | per Bulb | $5.00 |

**Estimated Participation**

The analysis assumed that a customer would purchase 6 light bulbs, on average.

**Estimated Incremental Customer Participation**

| Measure | 2016 | 2017 | 2018 |
|---|---|---|---|
| CFL | 56,550 | 52,200 | 41,000 |
| LED | 30,450 | 34,800 | 41,000 |

**Projected Energy & Demand Savings Target**

A NTG ratio of 100% was applied to the energy and demand savings.

**Projected Net Savings per Measure**

| Measure | Unit | Net kWh Savings per Unit | Net kW Savings per Unit |
|---|---|---|---|
| CFL | per Bulb | 28 | 0.0029 |
| LED | per Bulb | 31 | 0.0031 |

**Projected Net Incremental Program Savings**

| Net MWh Savings | | | Net MW Savings | | |
|---|---|---|---|---|---|
| 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| 15,254 | 15,481 | 14,914 | 1,57 | 1.59 | 1.53 |

**Estimated Program Budget**

**Estimated Annual Budget **HC****

| | 2016 | 2017 | 2018 |
|---|---|---|---|
| Incentives | | | |
| Delivery | | | |
| Administration | | | |
| Education & Marketing | | | |
| Evaluation | | | |
| **Total** | | | |

**Cost-Effectiveness**

**Total Program Cycle Cost-Effectiveness**

| TRC | UCT | RIM | RIM Net Fuel | SCT | PCT |
|---|---|---|---|---|---|
| 1.75 | 2.96 | 0.55 | 0.68 | 2.15 | 3.40 |



HIGHLY CONFIDENTIAL

## Home Appliance Recycling Rebate

| | |
|---|---|
| **Objectives** | Promote the removal and retirement of inefficient appliances. |
| **Target Market** | All residential customers. |
| **Description** | The program incentivizes residential customers to remove inefficient refrigerators and freezers from the electric system and dispose of them in an environmentally safe and responsible manner. The refrigerator/freezer must be in working conditioner, between 10 and 32 cubic feet in size, and a 2001 model or older. The refrigerators and freezers are picked-up at no cost to the customer.<br>Room air conditioners and dehumidifiers may be picked-up free of charge during a scheduled trip for a qualifying refrigerator/freezer. Customers are limited to 2 refrigerator and freezer rebates and 3 room air conditioners or dehumidifiers per household. |
| **Implementation Strategy** | KCP&L-GMO will select an implementation contractor that demonstrates a record of providing the services offered and responsibly disposing the appliances. It is likely that a single provider will be engaged to perform, or subcontract for, all the services.<br>The implementation contractor will be responsible for:<br>• Scheduling pickups from customer homes, verification of appliance qualification, and appliance removal from customer homes.<br>• Rebate processing.<br>• Program tracking.<br>• Periodically report progress towards program goals and opportunities for improvement.<br>The implementation contractor will work with KCP&L-GMO to develop innovative and creative marketing strategies and materials. Marketing may include, but not be limited to, bill inserts, newspaper/community newsletter advertisements, community events, billboards, radio advertisements and the KCP&L-GMO website. The program will include an educational component that informs customers about the benefits of recycling their inefficient appliances and environmentally responsible disposal of appliances. |
| **Risk Management** | Experience at other utilities and discussions with implementation contractors suggest that program cost-effectiveness hinges on volume because unit disposal costs can be reduced by ensuring higher volumes. The implementation contractor will need to use extensive and effective marketing to obtain the volumes.<br>There is a high probability that customers will buy a new appliance to replace the recycled unit. The planning energy and demand savings could be lowered if a customer that recycles a secondary appliance simply buys a new unit and begins utilizing their former primary unit as a secondary unit. The program will attempt to influence consumer behavior by encouraging residential customers to avoid replacing recycled secondary refrigerators or freezers.<br>Appliance recycling programs typically have higher free ridership rates, primarily due to:<br>(1) Customers that were planning to replace their appliance prior to participating in the program.<br>(2) Customers that were not using their appliance prior to participating in the program.<br>In an effort to reduce free ridership, the implementation contractor will emphasize and enforce the requirement that the appliance is plugged in and in operating condition at the time of pick-up. In an effort to increase spillover, the program will be cross-marketed with KCP&L-GMO's other Residential DSM Programs (e.g. bill inserts will promote multiple programs). |

**Measures & Incentives**

The measures and incentives were set for planning purposes and may be modified to reflect market conditions. The program will provide, on average, a $50 incentive for each refrigerator and freezer recycled. There will be no incentive for room air conditioners and dehumidifiers recycled. Customers are limited to 2 refrigerator and freezer rebates per household per program year and 3 room air conditioners or dehumidifiers recycled.

**Estimated Participation**

**Estimated Incremental Customer Participation**

| Measure | 2016 | 2017 | 2018 |
|---|---|---|---|
| Dehumidifier | 90 | 97 | 103 |
| Freezer | 270 | 310 | 340 |
| Refrigerator | 1,193 | 1,293 | 1,374 |
| Room Air Conditioner | 180 | 190 | 210 |

**Projected Energy & Demand Savings Target**

A NTG ratio of 100% was applied to the energy and demand savings.

**Projected Net Savings per Measure**

| Measure | Unit | Net kWh Savings per Unit | Net kW Savings per Unit |
|---|---|---|---|
| Dehumidifier | per Unit | 139 | 0.035 |
| Freezer | per Unit | 1,201 | 0.191 |
| Refrigerator | per Unit | 1,190 | 0.190 |
| Room Air Conditioner | per Unit | 121 | 0.114 |

**Projected Net Incremental Program Savings**

| Net MWh Savings | | | Net MW Savings | | |
|---|---|---|---|---|---|
| 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| 2,489 | 2,717 | 2,899 | 0.42 | 0.45 | 0.48 |

**Estimated Program Budget**

**Estimated Annual Budget **HC****

| | 2016 | 2017 | 2018 |
|---|---|---|---|
| Incentives | | | |
| Delivery | | | |
| Administration | | | |
| Education & Marketing | | | |
| Evaluation | | | |
| **Total** | | | |

**Cost-Effectiveness**

**Total Program Cycle Cost-Effectiveness**

| TRC | UCT | RIM | RIM Net Fuel | SCT | PCT |
|---|---|---|---|---|---|
| 1.47 | 1.70 | 0.48 | 0.58 | 1.56 | 7.63 |



HIGHLY CONFIDENTIAL

## Home Energy Report

| | |
|---|---|
| **Objectives** | Reduce consumption via socially- and information-driven behavioral change and raise general awareness of energy efficiency and KCP&L-GMO's DSM programs. |
| **Target Market** | Residential single family homes. |
| **Description** | The Home Energy Report Program provides individualized energy use information to customers while simultaneously offering recommendations on how to save energy and money by making small changes to energy consuming behaviors. Energy reports are sent periodically to customer households to give them self-awareness and a peer comparison of their energy usage. Customers are also provided access to an online tool to track energy consumption and offer tips to reduce usage. Social competitiveness increases behavior to reduce energy consumption. |
| **Implementation Strategy** | KCP&L-GMO will select an implementation contractor that specializes in developing and issuing residential energy reports. The implementation contractor will utilize experimental design to select report recipients and a control group, design the reports and develop customized energy reduction tips with input from KCP&L-GMO. The program will cross-promote and market the KCP&L-GMO DSM portfolio. |
| **Risk Management** | Potential issues/risks to be aware of:<br>• The program may undergo a meaningful change in customer responsiveness and evaluation paradigms in the coming years.<br>• Research is being conducted on the persistence of savings after the program has ended. The program has been assumed to have a one year measure life and therefore has a relatively high-cost of energy savings on a lifetime or levelized cost basis.<br>• Customer attrition may reduce the potential achievable program savings. The implementation contractor may account for customer attrition by adding new customers each year during designated periods.<br>The program provides a significant opportunity to promote KCP&L-GMO's residential DSM programs via the customer reports and the online tool, thereby resulting in increased program spillover. However, the spillover impact will need to be carefully determined through an impact evaluation. |
| **Measures & Incentives** | Customers receive personalized energy reports, but there is no monetary incentive. |
| **Estimated Participation** | **Estimated Number of Participating Households**<br>2016: 132,000 \| 2017: 132,000 \| 2018: 132,000 |
| **Projected Energy & Demand Savings Target** | A NTG ratio of 100% was applied to the energy and demand savings. The average savings per household is a planning estimate, the implementation contractor will aim to achieve the total net savings provided in the table.<br>**Projected Net Incremental Program Savings**<br>Net MWh Savings: 2016: 18,964 \| 2017: 20,975 \| 2018: 21,071<br>Net MW Savings: 2016: 3.53 \| 2017: 4.22 \| 2018: 4.22 |

**Estimated Program Budget**

Customers do not receive a monetary incentive. The delivery budget includes the administration as well as the education and marketing budgets.

**Estimated Annual Budget **HC****

| | 2016 | 2017 | 2018 |
|---|---|---|---|
| Delivery | | | |
| Administration | | | |
| Evaluation | | | |
| **Total** | | | |

**Cost-Effectiveness**

**Total Program Cycle Cost-Effectiveness**

| TRC | UCT | RIM | RIM Net Fuel | SCT | PCT |
|---|---|---|---|---|---|
| 1.30 | 1.30 | 0.48 | 0.58 | 1.27 | n/a |



HIGHLY CONFIDENTIAL

## Online Home Energy Audit

| | |
|---|---|
| **Objectives** | Encourage energy education and conservation, as well as further engagement in the broader portfolio of DSM programs. |
| **Target Market** | Residential customers. |
| **Description** | The program provides customers access to a free online tool to analyze the energy efficiency of their home, educational materials regarding energy efficiency and conservation, and information on KCP&L-GMO DSM Programs.<br>The program goals include:<br>• Increase awareness of household energy consumption.<br>• Educate residential customers about the benefits of energy efficiency and the opportunities to reduce energy consumption.<br>• Increase awareness of and participation in other KCP&L-GMO DSM programs. |
| **Implementation Strategy** | KCP&L-GMO will engage a third-party contractor to develop and maintain the online tool(s). |
| **Risk Management** | The Online Home Energy Audit Program is an educational program that informs customers of household energy consumption and methods to reduce energy usage. KCP&L-GMO will strategize ways to highlight the audit tool on the KCP&L-GMO website and increase customer engagement. |
| **Measures & Incentives** | There are no monetary incentives. |
| **Estimated Participation** | Program participation was not estimated for this program. |
| **Projected Energy & Demand Savings Target** | Program savings were not estimated for this program since it is deemed an educational program. |
| **Estimated Program Budget** | **Estimated Annual Budget **HC**** |

| | 2016 | 2017 | 2018 |
|---|---|---|---|
| Delivery | | | |
| Administration | | | |
| Education & Marketing | | | |
| Evaluation | | | |
| **Total** | | | |

| | |
|---|---|
| **Cost-Effectiveness** | n/a |



HIGHLY CONFIDENTIAL

## Whole House Efficiency

**Objectives**

Encourage whole-house improvements to existing homes by promoting home energy audits and comprehensive retrofit services.

**Target Market**

Residential customers that own/rent a residence or are building a new residence as well as HVAC contractors for trade ally participation.

**Description**

The Whole House Efficiency Program consists of 3 Options:

**Option 1: Home Energy Audit.** The customer receives an in-home energy audit and direct installation of low-cost measures. The audit will identify potential efficiency improvements. The low-cost measures to be installed include: faucet aerator, low-flow showerhead, advanced power strip, water heater tank wrap, hot water pipe insulation and CFLs.

**Option 2: Weatherization Measures.** Customers that have completed Tier 1 are eligible to receive incentives for the purchase and installation of air sealing, insulation and ENERGY STAR® windows.

**Option 3: HVAC Equipment.** Customers are eligible to receive incentives for qualifying HVAC equipment installed by a participating contractor. Customers are not required to participate in Tier 1 or 2. Qualifying measures include heat pump water heaters, ECM furnace fans, heat pump ductless mini splits, central air conditioners and heat pumps. Early retirement incentives are provided to customers with central air conditioners and/or heat pumps in operable condition and at least 5 years of age.

Customers that install multiple items will be provided a bonus incentive per the requirements listed in the chart.

| Requirements | Bonus Incentive |
|---|---|
| Air Sealing and ENERGY STAR® Windows | $300 |
| Tier 2 + CAC/HP | $100 |
| Tier 2 + Early Retirement CAC/HP | $150 |
| Tier 2 + HP Replace Electric Resistance | $200 |

Residential customers that rent a residence must receive the written approval of the homeowner/landlord to participate in the program.

The program goals include:

- Demonstrate persistent energy savings.
- Encourage energy saving behavior and whole house improvements.
- Help residential customers reduce their electricity bills.
- Educate customers about the benefits of installing high efficiency HVAC equipment.
- Develop partnerships with HVAC contractors to bring efficient systems to market.

This is a new program for the 2016-2018 implementation cycle.

**Implementation Strategy**

KCP&L-GMO will explore partnering with Missouri Gas Energy to promote and implement the Whole House Efficiency Program. KCP&L-GMO will engage a third-party implementation contractor to efficiently obtain the savings goals while adhering to the budget. The implementation contractor will:

- Hire/sub-contract local staff to perform home audits and direct measure installation.
- Engage customers and schedule home audit appointments.
- Provide customer service support.
- Establish relationships with local HVAC contractors to work with the program installing energy efficient HVAC equipment and infiltration measures.
- Process rebate applications, including review and verification of applications and payment of customer rebates.
- Track program performance, including customer and HVAC contractor participation as well as quality assurance/quality control (QA/QC).
- Periodically report progress towards program goals.

KCP&L-GMO will work with the implementation contractor to market the program to residential customers and HVAC contractors utilizing the following approaches:

- Direct outreach to customers, including bill inserts, newspaper advertisements, email blasts, direct mail, bill messaging, and community events.
- Engage contractors to promote awareness of and use rebates to help sell qualifying equipment.

**Risk Management**

It is important that the measures are properly installed and customer satisfaction is high. Therefore, it is crucial to engage experienced contractors. To enroll in the program, it is recommended that contractors provide KCP&L-GMO with (1) proof of insurance on an annual basis and (2) at least two customer references. KCP&L-GMO and/or the implementation contractor should conduct QA/QC of a random group of completed projects by project type and contractor. The QA/QC process should include verification of the equipment installed and customer satisfaction with the contractor and the program.

A number of steps will be taken to reduce free ridership and increase spillover, including:

- Incentives will be modified as needed to respond to the market price of qualifying measures, with a goal of the incentive being no higher than 50% of the incremental cost.
- KCP&L-GMO will work with the implementation contractor to properly set the rebate levels to ensure customers have adequate buy-in to the program.
- Cross-market the program with KCP&L-GMO's other Residential DSM Programs
- Encourage customers to participate in all three tiers.

**Measures & Incentives**

The measures and incentives were set for planning purposes and may be modified to reflect market conditions. Incentives may be modified to account for new installation versus retrofit.

Customers could pay up to $50 to receive the home energy audit and direct measure installation.

**Option 2 Incentive per Unit**

| Measure | Unit | Incentive per Unit |
|---|---|---|
| Air Sealing | per sq. ft. | $0.08, up to $300 |
| Ceiling Insulation, R-38 | per sq. ft. | $0.30, up to $500 |
| Wall Insulation, R-5 | per sq. ft. | $0.65, up to $150 |
| ENERGY STAR® Windows | per Window | $75, up to $750 |

**Option 3 Incentive per Unit**

| Measure | Unit | Replace/ New | Early Retirement | Replace Electric Resistance Heat |
|---|---|---|---|---|
| Heat Pump Water Heater | per Unit | $500 | n/a | n/a |
| ECM Furnace Fan | per Unit | $150 | n/a | n/a |
| Heat Pump Ductless Mini-Split | per Unit | $300 | n/a | n/a |
| SEER ≥15 Central Air Conditioner | per Unit | $125 | $250 | n/a |
| SEER ≥16 Central Air Conditioner | per Unit | $200 | $400 | n/a |
| SEER ≥15, HSPF ≥8.5 Heat Pump | per Unit | $150 | $300 | $800 |
| SEER ≥16, HSPF ≥8.5 Heat Pump | per Unit | $300 | $600 | $1,000 |
| SEER ≥17, HSPF ≥8.6 Heat Pump | per Unit | $500 | $900 | $1,200 |

**Bonus Incentive per Customer**

| Requirements | Bonus Incentive |
|---|---|
| Air Sealing and ENERGY STAR® Windows | $300 |
| Tier 2 + CAC/HP | $100 |
| Tier 2 + Early Retirement CAC/HP | $150 |
| Tier 2 + HP Replace Electric Resistance | $200 |

**Estimated Participation**

The analysis assumed the square feet of a customer home.

**Estimated Incremental Customer Participation**

| Measure | 2016 | 2017 | 2018 |
|---|---|---|---|
| Home Audit & Direct Install | 775 | 1,550 | 1,550 |
| Air Sealing | 395 | 791 | 791 |
| Ceiling Insulation, R-38 | 158 | 317 | 317 |
| Wall Insulation, R-5 | 40 | 79 | 79 |
| ENERGY STAR® Windows | 69 | 136 | 136 |
| Heat Pump Water Heater | 50 | 100 | 100 |
| ECM Furnace Fan | 16 | 33 | 33 |
| Heat Pump Ductless Mini-Split | 95 | 190 | 190 |
| SEER ≥15 Central Air Conditioner | 158 | 317 | 317 |
| SEER ≥15 Central Air Conditioner, Early Retirement | 53 | 107 | 107 |
| SEER ≥16 Central Air Conditioner | 110 | 235 | 235 |
| SEER ≥16 Central Air Conditioner, Early Retirement | 37 | 75 | 75 |
| SEER ≥15, HSPF ≥8.5 Heat Pump | 33 | 74 | 74 |
| SEER ≥15, HSPF ≥8.5 HP, Early Retirement | 9 | 19 | 19 |
| SEER ≥15, HSPF ≥8.5 HP, Replace Electric Resistance Heat | 12 | 28 | 28 |
| SEER ≥16, HSPF ≥8.5 Heat Pump | 22 | 46 | 46 |
| SEER ≥16, HSPF ≥8.5 HP, Early Retirement | 2 | 6 | 6 |
| SEER ≥16, HSPF ≥8.5 HP, Replace Electric Resistance Heat | 3 | 10 | 10 |
| SEER ≥17, HSPF ≥8.6 Heat Pump | 6 | 12 | 12 |

**Projected Energy & Demand Savings Target**

A NTG ratio of 100% was applied to the energy and demand savings. The average savings per customer for the Tier 1 Home Audit is a planning estimate, actual customer savings will vary.

**Projected Net Savings per Measure**

| Measure | Unit | Net kWh Savings per Unit | Net kW Savings per Unit |
|---|---|---|---|
| Home Audit & Direct Install | per Home | 573 | 0.062 |
| Air Sealing | per sq. ft. | 0.23 | 0.0001 |
| Increased Ceiling Insulation | per sq. ft. | 0.52 | 0.0003 |
| Increased Wall Insulation | per sq. ft. | 0.72 | 0.0004 |
| ENERGY STAR Windows | per sq. ft. | 2.05 | 0.0008 |
| Heat Pump Water Heater | per unit | 1,766 | 0.084 |
| Efficient ECM Fan | per unit | 608 | 0.340 |
| Heat Pump Ductless Mini Split | per ton | 1,315 | 0.817 |
| Air Conditioner SEER 15 | per ton | 150 | 0.089 |
| Air Conditioner SEER 15, Early Retirement | per ton | 486 | 0.234 |
| Air Conditioner SEER 16 | per ton | 210 | 0.089 |
| Air Conditioner SEER 16, Early Retirement | per ton | 547 | 0.234 |
| Heat Pump SEER 15 | per ton | 173 | 0.054 |
| Heat Pump SEER 15, Early Retirement | per ton | 2,222 | 0.891 |
| Heat Pump SEER 15, Replace Electric Resistance Heat | per ton | 4,720 | 1.765 |
| Heat Pump SEER 16 | per ton | 234 | 0.054 |
| Heat Pump SEER 16, Early Retirement | per ton | 2,283 | 0.891 |
| Heat Pump SEER 16, Replace Electric Resistance Heat | per ton | 4,780 | 1.765 |
| Heat Pump SEER 17 | per ton | 321 | 0.093 |

**Projected Net Incremental Program Savings**

| Net MWh Savings | | | Net MW Savings | | |
|---|---|---|---|---|---|
| 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| 1,621 | 3,394 | 3,394 | 0.52 | 1.09 | 1.09 |

**Estimated Program Budget**

**Estimated Annual Budget **HC****

| | 2016 | 2017 | 2018 |
|---|---|---|---|
| Incentives | | | |
| Delivery | | | |
| Administration | | | |
| Education & Marketing | | | |
| Evaluation | | | |
| **Total** | | | |

**Cost-Effectiveness**

**Total Program Cycle Cost-Effectiveness**

| TRC | UCT | RIM | RIM Net Fuel | SCT | PCT |
|---|---|---|---|---|---|
| 1.22 | 2.38 | 0.66 | 0.78 | 1.34 | 1.89 |



HIGHLY CONFIDENTIAL

## Income-Eligible Multi-Family

| | |
|---|---|
| **Objective** | Deliver long-term energy savings and bill reductions to income-eligible customers in multi-family housing and multi-family common area energy savings. |
| **Target Market** | Income-eligible residential homeowners and renters that are below 200% of the Federal poverty level and reside in multi-family housing as well as multi-family buildings with income-eligible residents. |
| **Description** | The program includes 2 tiers:<br>**Tier 1. Multi-Family Kits.** Direct installation of low-cost measures for income-eligible homeowners and renters in multi-family housing, at no cost to the participant. The measures installed include: faucet aerator, low-flow showerhead, advanced power strip, hot water pipe insulation and CFL/LEDs.<br>**Tier 2. Multi-Family Common Areas.** Installation of lighting measures in multi-family common areas, at no cost to the participant. |
| **Implementation Strategy** | KCP&L-GMO will engage a third-party implementation contractor to:<br>• Identify and establish relationships with multi-family building owners that have a number of income-eligible residents.<br>• Engage customers and schedule appointments.<br>• Track program performance.<br>• Periodically report progress towards program goals.<br>KCP&L-GMO will work with the implementation contractor to market the program to income-eligible customers and multi-family building owners utilizing the following approaches:<br>• Direct outreach to customers, including bill inserts, direct mail, bill messaging, community events and community organizations.<br>• Engage building owners to promote awareness of and use of the program.<br>The implementation contractor framework could include providing owners of multi-family buildings with a single point of contact or Coordinator for in-unit and common area/building system measures. The Coordinator's duties could include:<br>• Determining eligibility and ensuring eligible customers are aware of the available incentives from all utilities.<br>• Assisting in the application process for the Company's residential and business improvements. In addition, where other utilities are participating, assisting with those applications.<br>• Providing a seamless point of contact for navigating the various incentive offers provided by the Company and other utilities.<br>• Maintaining a relationship with the existing business trade ally network and providing information and guidance to assist them with the bid process for installation work.<br>• Understanding and maintaining a network of assistance agencies and making referrals for financing and repairs, seeking to remove barriers to participation.<br>• Providing case studies and education, and working with business development teams to ensure proper outreach is occurring.<br>• Coordinating marketing materials to provide an easy to understand process for participation.<br>• Maintaining working relationships with and providing outreach and education to stakeholders such as lenders, Missouri agencies, and other identified parties.<br>This is a new program for the 2016-2018 implementation cycle. |
| **Risk Management** | The program focuses on providing energy efficiency services to income-eligible residents to ensure reduced consumption. There is little risk associated with this product. |

**Measures & Incentives**

All measures are installed free of charge.

There are no monetary incentives.

**Estimated Participation**

**Estimated Incremental Participation**

| | 2016 | 2017 | 2018 |
|---|---|---|---|
| Multi-family Units | 90 | 185 | 185 |
| Common Areas | 18 | 37 | 37 |

**Projected Energy & Demand Savings Target**

A NTG ratio of 100% was applied to the energy and demand savings. The average savings per dwelling/building are planning estimates, actual savings will vary.

**Projected Net Savings per Unit**

| Measure | Unit | Net kWh Savings per Unit | Net kW Savings per Unit |
|---|---|---|---|
| Multi-family Units | per Dwelling | 472 | 0.043 |
| Common Areas | per Building | 2,515 | 0.151 |

**Projected Net Incremental Program Savings**

| Net MWh Savings | | | Net MW Savings | | |
|---|---|---|---|---|---|
| 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| 88 | 175 | 176 | 0.007 | 0.013 | 0.013 |

**Estimated Program Budget**

**Estimated Annual Budget **HC****

| | 2016 | 2017 | 2018 |
|---|---|---|---|
| Delivery | | | |
| Administration | | | |
| Education & Marketing | | | |
| Evaluation | | | |
| **Total** | | | |

**Cost-Effectiveness**

**Total Program Cycle Cost-Effectiveness**

| TRC | UCT | RIM | RIM Net Fuel | SCT | PCT |
|---|---|---|---|---|---|
| 0.43 | 0.43 | 0.30 | 0.32 | 0.44 | n/a |



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## Income-Eligible Weatherization

**Objective**

Deliver long-term energy savings and bill reductions to income-eligible customers.

**Target Market**

Income-eligible residential homeowners and renters that are below 200% of the Federal poverty level.

**Description**

The program includes 2 tiers:

**Tier 1. Kits.** Direct installation of low-cost measures for income-eligible homeowners and renters, at no cost to the participant. The measures installed include: faucet aerator, low-flow showerhead, advanced power strip, hot water pipe insulation, hot water heater tank wrap and CFL/LEDs.

**Tier 2. Weatherization.** Installation of ceiling, duct and/or wall insulation, at no cost to the participant. Customers work with local community action agency to participate.

**Implementation Strategy**

KCP&L-GMO will engage a third-party implementation contractor to:

- Engage customers and schedule appointments.
- Install measures.
- Track program performance.
- Periodically report progress towards program goals.

KCP&L-GMO will work with the implementation contractor to market the program to income-eligible customers utilizing bill inserts, direct mail, bill messaging, community events and community organizations.

**Risk Management**

The program focuses on providing energy efficiency services to income-eligible residents to ensure reduced consumption. There is little risk associated with this product.

**Measures & Incentives**

All measures are installed free of charge.

There are no monetary incentives.

**Estimated Participation**

**Estimated Incremental Customer Participation**

| 2016 | 2017 | 2018 |
|---|---|---|
| 130 | 130 | 130 |

**Projected Energy & Demand Savings Target**

A NTG ratio of 100% was applied to the energy and demand savings. The average savings per customer is a planning estimate, actual savings will vary.

**Projected Net Savings per Unit**

| Measure | Unit | Net kWh Savings per Unit | Net kW Savings per Unit |
|---|---|---|---|
| Kits | per Home | 820 | 0.0859 |
| Ceiling Insulation | per sq. ft. | 0.52 | 0.0003 |
| Duct Insulation | per Home | 210 | 0.1178 |
| Wall Insulation | per sq. ft. | 0.72 | 0.0004 |

**Projected Net Incremental Program Savings**

| Net MWh Savings | | | Net MW Savings | | |
|---|---|---|---|---|---|
| 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| 143 | 143 | 143 | 0.03 | 0.03 | 0.03 |

**Estimated Program Budget**

**Estimated Annual Budget **HC****

| | 2016 | 2017 | 2018 |
|---|---|---|---|
| Delivery | | | |
| Administration | | | |
| Education & Marketing | | | |
| Evaluation | | | |
| **Total** | | | |

**Cost-Effectiveness**

**Total Program Cycle Cost-Effectiveness**

| TRC | UCT | RIM | RIM Net Fuel | SCT | PCT |
|---|---|---|---|---|---|
| 0.37 | 0.37 | 0.27 | 0.28 | 0.38 | n/a |



HIGHLY CONFIDENTIAL

## Residential Programmable Thermostat

| | |
|---|---|
| **Objective** | Decrease peak demand usage to provide system and grid relief during particularly high-load, high-congestion peak hours. |
| **Target Market** | Individually metered residential customers. Target primarily single family homeowners, expanding into multi-family as the single family market opportunities begin to saturate. |
| **Description** | The Residential Programmable Thermostat Program reduces peak demand by controlling participant cooling equipment during periods of system peak demand and when there may be delivery constraints within certain load zones. This is done by way of a remotely communicating, programmable thermostat. During a program event, the program operations center sends a radio frequency signal to the thermostat to adjust its set-point by 2 to 4 degrees F such that the system will consume less energy and run less frequently throughout the 3 to 6 hour event duration. One method of participation will be for customers to receive the thermostat and professional installation (a $350 value) for free upon qualification and enrollment in the program. |
| **Implementation Strategy** | KCP&L-GMO will engage a third-party implementation contractor to:<br>• Hire/sub-contract local staff to install the programmable thermostats.<br>• Engage customers, schedule installation appointments and process customer incentives.<br>• Provide customer service support.<br>• Track program performance and event data.<br>• Periodically report progress towards program goals and opportunities for improvement.<br>Events will typically occur between June 1 and September 30, Monday to Friday. Event duration is typically 3 to 6 hours per day. Customers may opt-out twice a year by calling KCP&L-GMO a day in advance.<br>The program will be marketed through direct contact with consumers using bill inserts, newsletters, website, broadcast and print media, and direct mail. |
| **Risk Management** | The primary benefit of demand response programs is to mitigate the risks and costs associated with system peak loads. From a planning perspective, using demand response resources in the most valuable way would imply that system planners would include the peak impacts in the load forecast nominated to the RTO (regional transmission organization), thereby reducing the utility system peak, required capacity, and also the reserve requirements. This also implies that events would primarily be called when the day-ahead forecast projects a load in excess of that nominated peak, rather than using another event trigger mechanism, such as energy market prices above a certain threshold or weather above a certain temperature.<br>Having the thermostats available as a resource year-round is potentially of value to system operations in the event of plant maintenance or other grid events. Curtailment in participating homes with electric heat could provide additional risk management capabilities in the future.<br>Providing the opportunity for customers to opt-out or override a limited number of events provides choice and control to the customer, minimizing the risk of attrition and lost participants. |
| **Measures & Incentives** | Customers receive a free communicating, programmable thermostat with installation ($350 value) for joining the program. The customer receives a $25 incentive per year they participate in the program (beginning the second year). Incentives were set for planning purposes and may be modified to reflect market conditions. |
| **Estimated Participation** | **Estimated Incremental Customer Participation** |

| 2016 | 2017 | 2018 |
|---|---|---|
| 4,433 | 4,433 | 4,433 |

**Projected Energy & Demand Savings Target**

A NTG ratio of 100% was applied to the energy and demand savings.

**Projected Net Savings per Thermostat**

| Unit | Net kWh Savings per Unit | Net kW Savings per Unit |
|---|---|---|
| per Thermostat | 462 | 1.180 |

**Projected Net Incremental Program Savings**

| Net MWh Savings | | | Net MW Savings | | |
|---|---|---|---|---|---|
| 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| 2,048 | 2,048 | 2,048 | 5.23 | 5.23 | 5.23 |

**Estimated Program Budget**

**Estimated Annual Budget **HC****

| | 2016 | 2017 | 2018 |
|---|---|---|---|
| Incentives | | | |
| Delivery | | | |
| Administration | | | |
| Education & Marketing | | | |
| Evaluation | | | |
| **Total** | | | |

**Cost-Effectiveness**

**Total Program Cycle Cost-Effectiveness**

| TRC | UCT | RIM | RIM Net Fuel | SCT | PCT |
|---|---|---|---|---|---|
| 2.12 | 2.62 | 1.40 | 1.51 | 2.04 | 1.94 |



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# Business Programs

KCP&L-GMO's business DSM programs serve commercial and industrial customers, encouraging investment in energy management and energy efficient measures such as lighting, HVAC equipment and motors.

## Business Energy Efficiency Rebate - Standard

| | |
|---|---|
| **Objective** | Encourage purchase and installation of energy efficient equipment. |
| **Target Market** | All commercial and industrial customers as well as Trade Allies. |
| **Description** | The Business Energy Efficiency Rebate – Standard is designed to help commercial and industrial customers save energy through a broad range of energy efficiency options that address all major end uses and processes. The program will offer standard rebates as well as mid-stream incentives. The measures incentivized, including lighting, HVAC equipment and motors, are proven technologies that are readily available with known performance characteristics.<br>• Standard Rebates: participants select energy efficient equipment from a pre-qualified list. Rebates are issued to participants upon completion of the project and submission of the rebate application.<br>• Mid-Stream Incentives: Trade Allies receive incentives for increasing the sale of qualifying measures.<br>Measures that are incentivized mid-stream will not be offered as a standard rebate.<br>Standard participant rebates per program year are limited to the greater of $500,000 per customer or two-times the customer's projected annual Demand-Side Investment Mechanism (DSIM) charge. |
| **Implementation Strategy** | KCP&L-GMO will engage a third-party implementation contractor to:<br>• Process customer applications, verify eligibility and process customer rebates.<br>• Conduct QA/QC to verify equipment installation.<br>• Provide customer service support.<br>• Track program performance.<br>• Periodically report progress towards program goals and opportunities for improvement.<br>Key pillars of the marketing strategy will include Trade Allies and direct customer marketing, including direct mail, newspaper advertisements, email blasts, bill inserts and HVAC trade publications. Additional marketing tactics will include:<br>• Education. Train and educate Trade Allies on the programs and how to effectively sell the program to customers.<br>• Incentives. Provide incentives to Trade Allies that successfully increase the sale of qualifying measures to customers within the KCP&L-GMO-MO service territory.<br>• Trade Associations. Businesses rely on trade associations to represent industry's best interests in lobbying, growth, and identification of business opportunities. KCP&L-GMO will coordinate with specific associations to highlight suitable program offerings.<br>• Highlight successfully completed projects. KCP&L-GMO will select projects to display the process and benefits of the program. This type of marketing will spur the customer's competitors to improve building performance and increase business process efficiency. |
| **Risk Management** | The key barriers are return on investment, decision timing and customer internal funding and approval processes. Many customers have internal return on investment hurdles that are quite aggressive, sometimes as short as a one year payback. Another barrier is ensuring that enough vendors are properly educated to allow them to actively engage customers by explaining the myriad benefits of efficiency improvements.<br>Measure savings are expected to be updated annually. Potential changes to measure savings, costs, and other key assumptions could affect the measure's ability to pass cost-effectiveness tests. Therefore, the mix of measures that can be offered could change from year to year to |

reflect changes made to the original measure attributes.

Incentives will be modified as needed to respond to market prices, with a goal of the incentive being no higher than 50% of the incremental cost. Proper incentives can reduce free ridership while still encouraging customers to participate in the program.

**Measures & Incentives**

The measures and incentives were set for planning purposes and may be modified to reflect market conditions.

| Measure | Unit | Incentive per Unit |
|---|---|---|
| Air Sourced AC | per ton | $50 |
| Air Source HP <135 kBtuh | per ton | $60 |
| ECM Motors Walk-In Coolers & Freezers | per unit | $30 |
| ENERGY STAR Beverage Machine | per unit | $75 |
| Heat Pump Water Heater | per unit | $500 |
| Low Flow Faucet Aerator | per unit | $2.50 |
| Packed Terminal AC/HP | per ton | $5 |
| Pipe Wrap/Insulation | per unit | $15 |
| Programmable Thermostat | per ton | $2.00 |
| Pumps/Fan, VSD (HVAC only) | per HP | $220 |
| Reach In Refrigerator/Freezer | per unit | $100 |
| Strip Curtains | per unit | $125 |
| Directional LED Bulb (<15W) | per unit | $15 |
| Directional LED Bulb (≥15W) | per unit | $25 |
| High Bay Fluorescent Fixture (HP T8 >4ft) | per unit | $115 |
| High Bay Fluorescent Fixture (HP T8 ≤4ft) | per unit | $75 |
| High Bay Fluorescent Fixture w/ HE Electronic Ballast (T5 >4ft) | per unit | $75 |
| High Bay Fluorescent Fixture w/ HE Electronic Ballast (T5 ≤4ft) | per unit | $45 |
| LED Exit Sign | per unit | $12 |
| LED Flood Light | per unit | $15 |
| LED High & Low-Bay Fixture | per unit | $75 |
| LED Recessed Fixture (1ft x 4ft) | per unit | $15 |
| LED Recessed Fixture (2ft x 2ft) | per unit | $10 |
| LED Recessed Fixture (2ft x 4ft) | per unit | $20 |
| LED Refrigerator Case Light | per unit | $40 |
| Lighting Optimization - Remove 4ft Lamp from T8 System | per unit | $10 |
| Lighting Optimization - Remove 8ft Lamp from T8 System | per unit | $10 |
| Low Wattage T8 Lamp | per unit | $1.00 |
| Omnidirectional LED Bulb (<10W) | per unit | $10 |
| Omnidirectional LED Bulb (≥10W) | per unit | $15 |
| Photocell Occupancy Sensor | per unit | $35 |
| Screw In - CFLs | per unit | $1.00 |
| Screw In - LEDs | per unit | $10 |
| Wall-Mount Occupancy Sensor | per unit | $20 |

**Estimated Participation**

**Estimated Incremental Participation**

| Measure | 2016 | 2017 | 2018 |
|---|---|---|---|
| Air Sourced AC <65 kBtuh | 6 | 6 | 6 |
| Air Sourced AC 65<135 kBtuh | 20 | 20 | 20 |
| Air Sourced AC 135<240 kBtuh | 10 | 10 | 10 |
| Air Sourced AC >240 kBtuh | 3 | 3 | 3 |
| Air Source HP <65 kBtuh | 9 | 9 | 9 |
| Air Source HP 65<135 kBtuh | 7 | 7 | 7 |
| ECM Motors Walk-In Coolers & Freezers | 50 | 50 | 50 |
| ENERGY STAR Beverage Machine | 100 | 100 | 100 |
| Heat Pump Water Heater | 10 | 10 | 10 |
| Low Flow Faucet Aerator | 10 | 10 | 10 |
| Packed Terminal AC/HP | 19 | 19 | 19 |
| Pipe Wrap/Insulation | 130 | 130 | 130 |
| Programmable Thermostat | 38 | 38 | 38 |
| Pumps/Fan, VSD (HVAC only) | 50 | 50 | 50 |
| Reach In Refrigerator/Freezer | 130 | 130 | 130 |
| Strip Curtains | 125 | 125 | 125 |
| Directional LED Bulb (<15W) | 19 | 19 | 19 |
| Directional LED Bulb (≥15W) | 19 | 19 | 19 |
| High Bay Fluorescent Fixture (HP T8 >4ft) | 10 | 10 | 10 |
| High Bay Fluorescent Fixture (HP T8 ≤4ft) | 13 | 13 | 13 |
| High Bay Fluorescent Fixture w/ HE Electronic Ballast (T5 >4ft) | 50 | 50 | 50 |
| High Bay Fluorescent Fixture w/ HE Electronic Ballast (T5 ≤4ft) | 60 | 60 | 60 |
| LED Exit Sign | 50 | 50 | 50 |
| LED Flood Light (<15W) | 10 | 10 | 10 |
| LED Flood Light (≥15W) | 10 | 10 | 10 |
| LED High & Low-Bay Fixture | 60 | 60 | 60 |
| LED Recessed Fixture (1ft x 4ft) | 26 | 26 | 26 |
| LED Recessed Fixture (2ft x 2ft) | 26 | 26 | 26 |
| LED Recessed Fixture (2ft x 4ft) | 25 | 25 | 25 |
| LED Refrigerator Case Light | 50 | 50 | 50 |
| Lighting Optimization - Remove 4ft Lamp from T8 System | 58 | 58 | 58 |
| Lighting Optimization - Remove 8ft Lamp from T8 System | 58 | 58 | 58 |
| Low Wattage T8 Lamp | 100 | 100 | 100 |
| Omnidirectional LED Bulb (<10W) | 25 | 25 | 25 |
| Omnidirectional LED Bulb (≥10W) | 26 | 26 | 26 |
| Photocell Occupancy Sensor | 19 | 19 | 19 |
| Screw In - CFLs | 38 | 38 | 38 |
| Screw In - LEDs | 100 | 100 | 100 |
| Wall-Mount Occupancy Sensor | 48 | 48 | 48 |

**Projected Energy & Demand Savings Target**

A NTG ratio of 100% was applied to the energy and demand savings.

**Projected Net Savings per Measure**

| Measure | Unit | Net kWh Savings per Unit | Net kW Savings per Unit |
|---|---|---|---|
| Air Sourced AC <65 kBtuh | per ton | 82 | 0.066 |
| Air Sourced AC 65<135 kBtuh | per ton | 57 | 0.046 |
| Air Sourced AC 135<240 kBtuh | per ton | 81 | 0.065 |
| Air Sourced AC >240 kBtuh | per ton | 71 | 0.057 |
| Air Source HP <65 kBtuh | per ton | 158 | 0.194 |
| Air Source HP 65<135 kBtuh | per ton | 91 | 0.124 |
| ECM Motors Walk-In Coolers & Freezers | per unit | 401 | 0.042 |
| ENERGY STAR Beverage Machine | per unit | 1,752 | 0.116 |
| Heat Pump Water Heater | per unit | 1,993 | 0.298 |
| Low Flow Faucet Aerator | per unit | 131 | 0.196 |
| Packed Terminal AC/HP | per ton | 30 | 0.012 |
| Pipe Wrap/Insulation | per unit | 224 | 0.278 |
| Programmable Thermostat | per ton | 126 | - |
| Pumps/Fan, VSD (HVAC only) | per HP | 478 | 0.143 |
| Reach In Refrigerator/Freezer | per unit | 3,026 | 0.129 |
| Strip Curtains | per unit | 1,698 | 0.195 |
| Directional LED Bulb (<15W) | per unit | 144 | 0.029 |
| Directional LED Bulb (≥15W) | per unit | 231 | 0.047 |
| High Bay Fluorescent Fixture (HP T8 >4ft) | per unit | 1,084 | 0.220 |
| High Bay Fluorescent Fixture (HP T8 ≤4ft) | per unit | 649 | 0.132 |
| High Bay Fluorescent Fixture w/ HE Electronic Ballast (T5 >4ft) | per unit | 701 | 0.142 |
| High Bay Fluorescent Fixture w/ HE Electronic Ballast (T5 ≤4ft) | per unit | 405 | 0.082 |
| LED Exit Sign | per unit | 79 | 0.009 |
| LED Flood Light (<15W) | per unit | 211 | - |
| LED Flood Light (≥15W) | per unit | 236 | - |
| LED High & Low-Bay Fixture | per unit | 587 | 0.119 |
| LED Recessed Fixture (1ft x 4ft) | per unit | 117 | 0.024 |
| LED Recessed Fixture (2ft x 2ft) | per unit | 70 | 0.014 |
| LED Recessed Fixture (2ft x 4ft) | per unit | 150 | 0.030 |
| LED Refrigerator Case Light | per unit | 374 | 0.054 |
| Lighting Optimization - Remove 4ft Lamp from T8 System | per unit | 122 | 0.025 |
| Lighting Optimization - Remove 8ft Lamp from T8 System | per unit | 253 | 0.051 |
| Low Wattage T8 Lamp | per unit | 26 | 0.005 |
| Omnidirectional LED Bulb (<10W) | per unit | 84 | 0.017 |
| Omnidirectional LED Bulb (≥10W) | per unit | 130 | 0.026 |
| Photocell Occupancy Sensor | per unit | 693 | 0.141 |
| Screw In - CFLs | per unit | 205 | 0.006 |
| Screw In - LEDs | per unit | 218 | 0.006 |
| Wall-Mount Occupancy Sensor | per unit | 457 | 0.093 |

**Projected Net Incremental Program Savings**

| Net MWh Savings | | | Net MW Savings | | |
|---|---|---|---|---|---|
| 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| 12,876 | 12,905 | 12,930 | 2.13 | 2.13 | 2.13 |

**Estimated Program Budget**

**Estimated Annual Budget **HC****

| | 2016 | 2017 | 2018 |
|---|---|---|---|
| Incentives | | | |
| Delivery | | | |
| Administration | | | |
| Education & Marketing | | | |
| Evaluation | | | |
| **Total** | | | |

**Cost-Effectiveness**

**Total Program Cycle Cost-Effectiveness**

| TRC | UCT | RIM | RIM Net Fuel | SCT | PCT |
|---|---|---|---|---|---|
| 2.35 | 3.88 | 0.98 | 1.45 | 2.77 | 2.51 |



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## Business Energy Efficiency Rebate - Custom

| | |
|---|---|
| **Objective** | Encourage purchase and installation of energy efficient equipment by providing incentives to lower the cost of purchasing efficient equipment for commercial and industrial facilities. |
| **Target Market** | All commercial and industrial customers. |
| **Description** | The program is designed to help commercial and industrial customers save energy through a broad range of energy efficiency options that address all major end uses and processes. Equipment that does not qualify for a standard rebate will be eligible for a custom rebate.<br>Applications must be pre-approved by KCP&L-GMO before equipment is purchased and installed and must have a Total Resource Cost Test benefit-cost ratio of at least 1.0.<br>Incentives, up to 50% of the project cost, were included as:<br>• $0.10 per first-year-kWh saved for all incentives<br>Participant rebates per program year are limited to the greater of $500,000 per customer or two-times the customer's projected annual Demand-Side Investment Mechanism (DSIM) charge. Multiple rebate applications for different measures may be submitted. Rebates will be issued upon completion of the project.<br>As a new addition for the 2016-2018 implementation cycle, combined heat and power (CHP) projects will be considered in the Business Energy Efficiency Rebate – Custom Program. KCP&L-GMO and the implementation contractor will work with customers interested in CHP to determine project costs, cost-effectiveness, tax credits, and financing options. For the purposes of the analysis, the incentive payment for CHP projects is determined to be $300 per kW of installed electric generation capacity and the $500,000 cap criteria will be reviewed and determined on a case-by-case basis and based upon available program funding. |
| **Implementation Strategy** | KCP&L-GMO will engage a third-party implementation contractor to:<br>• Process customer applications, verify eligibility, review pre-approval applications, and process customer rebates.<br>• Conduct QA/QC to verify equipment installation. Randomly inspect 10% of projects and all projects over a threshold determined by KCP&L-GMO (e.g. $10,000).<br>• Provide customer service support.<br>• Track program performance.<br>• Periodically report progress towards program goals and opportunities for improvement.<br>Key pillars of the marketing strategy will include Trade Allies and direct customer marketing, including direct mail, newspaper advertisements, email blasts, bill inserts and HVAC trade publications. Additional marketing tactics will include:<br>• Education. Train and educate Trade Allies on the programs and how to effectively sell the program to customers.<br>• Trade Associations. Businesses rely on trade associations to represent industry's best interests in lobbying, growth, and identification of business opportunities. KCP&L-GMO will coordinate with specific associations to highlight suitable program offerings.<br>• Highlight successfully completed projects. KCP&L-GMO will select projects to display the process and benefits of the program. This type of marketing will spur the customer's competitors to improve building performance and increase business process efficiency. |
| **Risk Management** | The key barriers are return on investment, decision timing and customer internal funding and approval processes. Many customers have internal return on investment hurdles that are quite aggressive, sometimes as short as a one year payback. Another barrier is ensuring that enough vendors are properly educated to allow them to actively engage customers by explaining the myriad benefits of efficiency improvements. |

**Measures & Incentives**

Incentives were set for planning purposes and may be modified to reflect market conditions. Incentives, up to 50% of the project cost and up to a maximum cap of $500,000, are:

- $0.10 per kWh saved for all incentives

**Estimated Participation**

**Estimated Incremental Participating Businesses**

| 2016 | 2017 | 2018 |
|---|---|---|
| 1,575 | 1,629 | 1,653 |

**Projected Energy & Demand Savings Target**

A NTG ratio of 100% was applied to the energy and demand savings. The average savings per customer is a planning estimate, actual savings will vary.

**Projected Net Savings per Customer**

| Net kWh Savings per Customer | Net kW Savings per Customer |
|---|---|
| 6,193 | 1.597 |

**Projected Net Incremental Program Savings**

| Net MWh Savings | | | Net MW Savings | | |
|---|---|---|---|---|---|
| 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| 9,754 | 10,089 | 10,237 | 2.52 | 2.60 | 2.64 |

**Estimated Program Budget**

**Estimated Annual Budget **HC****

| | 2016 | 2017 | 2018 |
|---|---|---|---|
| Incentives | | | |
| Delivery | | | |
| Administration | | | |
| Education & Marketing | | | |
| Evaluation | | | |
| **Total** | | | |

**Cost-Effectiveness**

**Total Program Cycle Cost-Effectiveness**

| TRC | UCT | RIM | RIM Net Fuel | SCT | PCT |
|---|---|---|---|---|---|
| 1.30 | 2.52 | 0.95 | 1.31 | 1.39 | 1.35 |



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## Strategic Energy Management

| | |
|---|---|
| **Objective** | Provide energy education, technical assistance, and company-wide coaching to large commercial and industrial customers to drive behavioral change and transformation of company culture with respect to energy use and management. |
| **Target Market** | Customers with high energy use and operational sophistication. The best candidates are likely to have the following attributes:<br>• Large manufacturing companies or commercial facilities with >300 kW peak demand.<br>• Companies and institutional customers with multiple sites (i.e. operations/offices in another state or country).<br>• Customers with commitment to sustainability and environmental stewardship.<br>• Customers in regulated industries.<br>• Companies that have well established management systems like quality/safety or those using continuous improvement practices.<br>• Companies in a stable or rapid growth mode. |
| **Description** | The Strategic Energy Management (SEM) Program is a systematic approach to delivering persistent energy savings to organizations by integrating energy management into regular business practices. The program involves appointment of an energy liaison(s) and a team within participating organizations who regularly correspond with program representatives.<br>The program includes two program tracks that use different delivery mechanisms:<br>*One-on-One Consultative Strategic Energy Management (Consultative SEM)* provides the customer with access to an energy expert who works intensively with the customer to integrate energy management into the organization's business practices by helping the customer set up an energy management process and implement improvements. The participant receives frequent and personalized attention throughout the implementation period. Touch points and milestones are agreed upon between the two parties.<br>*Strategic Energy Management Cohort (SEM Cohort)* places companies into groups that work alongside each other for one year or longer, coming together in periodic workshops, approximately quarterly, and working on their own between the sessions. The group setting enhances participant action as they strive to perform in front of their peers. Structured groups are composed of 5 to 12 participants that are often located in the same geographical area, sharing best practices and learning together. The group is typically filled with participants from non-competing industries; however, if mutual agreement is established, competitors may participate in the same group.<br>A methodology is developed early in the engagement to forecast each participant's baseline energy consumption, from which savings goals are created and measured. To isolate energy savings attributable to SEM efforts, any savings from equipment measures installed under other programs in the portfolio can be netted out of these savings.<br>SEM has been shown to produce larger and longer lasting energy savings when compared to other energy management offerings. Few customers, however, have the internal resources to pursue and sustain these initiatives on their own, without the support of a utility program.<br>This is a new program for the 2016-2018 implementation cycle. |
| **Implementation Strategy** | The design relies on a Program Administrator and Energy Management Providers.<br>**Program Administrator:** KCP&L-GMO staff and a third-party implementation contractor to deliver the program and manage administrative functions, such as marketing, customer recruitment, and results tracking.<br>**Energy Management Providers:** firms and personnel with specific knowledge and expertise who work with customers to achieve savings. The Energy Management Provider must have a combination of the following:<br>• Experience in customer consulting and change management.<br>• Experience with continuous improvement methodologies. |

- Experience engaging customer personnel at all levels, particularly executives.
- Experience using and deploying management systems such as quality, environmental impact, and safety.
- Technical expertise for understanding production process and operations to identify energy savings opportunities.
- Established track record deploying utility-based SEM programs, driving energy savings along with customer change and customer satisfaction.

Program delivery will be integrated with other programs. Customers that have already completed or are currently participating in the Business Energy Efficiency Rebate Programs can achieve additional efficiency gains. If capital measures are identified during the course of participation in SEM, they can be submitted for incentives under the appropriate Business Energy Efficiency Rebate Program.

The Program Administrator recruits customers through one-on-one contacts. To achieve goals, the program will likely need to target two- to three-times the participation goal. The recruitment process will build an SEM pipeline, wherein potential participants can be monitored as their priorities and business situations change over time. One-on-one recruiting builds familiarity and trust, providing the basis for successful engagements.

*Recruit Customers.* Recruiting requires a two-prong approach at both the facility management level and executive level. KCP&L-GMO should leverage relationships with large customers and peer relationships that KCP&L-GMO executives have with customer executives.

*Screen Customers.* Potential participants will be screened on the size of their connected load and on factors including history of implementing energy efficiency projects, experience with other continuous improvement programs, general responsiveness of plant personnel, etc. Screening will take place through discussions with account managers and preliminary conversations with prospective participants.

*Gain Customer Commitment.* As part of the screening process, participating customers will commit to an on-site executive-level sponsor, dedicated program budget, access to key human resources, inclusion of an energy continuous improvement statement within existing corporate goals, and a training program for new and existing personnel.

An Energy Management Provider will be assigned to each participant and have primary responsibility for implementing the program and working with participant. The provider will have three roles:

*Project Manager.* Coordinate customer communication and meetings, develop reports.
*Organizational Facilitator(s).* Conduct initial Energy Management Assessment, provide ongoing customer coaching, maintain customer satisfaction, and provide input to energy maps and savings models. Identify and cultivate an energy champion or team leader.
*Savings Modeler.* Develop energy maps and savings models. Provide technical assistance to participating customers to understand current energy use, identify opportunities to reduce energy use, and to set energy-use reduction goals.

The key marketing message should be that KCP&L-GMO is supporting customers to more strategically manage energy and to invest in their future by building an organizational foundation for energy management, providing consultative resources and incentives. Marketing will rely heavily upon presentations and letters, supported by brochures, case studies and success stories. It is important for the marketing materials to:

Provide a basic understanding of the concept of SEM and the program.
Outline the compelling business case (benefits and costs) of participation.
Connect the SEM offering to the existing DSM portfolio.

**Risk Management**

The most challenging aspect of a SEM program is maintaining long-term customer commitment because it directly affects savings persistence. To ensure commitment, the customer must clearly understand the following:

- The level of staff time, management review, and other resources they are committing.
- The services, such as consulting and training, they will receive.

- The benefits, such as a more systematic and proactive approach to managing energy.

Successful efforts involve setting rigorous expectations through ongoing meetings with the participant, Energy Management Providers, Program Administrator and KCP&L-GMO staff.

*Participating Customer and Program Administrator.* To ensure the customer maintains momentum and arrives at an agreed upon success point, a Stage-gate approach is recommended. This includes clearly defined stages based on progress indicators, such as the existence of an energy goal, consistent meetings of an energy team, and the engagement of employees in energy awareness.

*Program Administrator, Energy Management Provider(s) and KCP&L-GMO.* A periodic review meeting on a quarterly basis brings together KCP&L-GMO staff, the Program Administrator, and the Energy Management Provider(s) to discuss each participant with respect to successes, challenges, and overall progress. If it is determined that a customer's progress is lagging, they will agree to next steps, including increased engagement scope and discussions with the customer to ensure that they understand program support may be withdrawn if they do not improve performance.

Working with customers' energy and production data is vital to the tracking of progress in this program. The data are frequently proprietary and competition-sensitive, so steps must be taken to establish a secure mechanism and procedure for sharing and storage of data.

**Measures & Incentives**

Behavioral and operational energy savings, as measured relative to the participant's personal baseline consumption, are paid incentives of $0.02 per first-year-kWh saved. These levels were set for planning purposes and may be modified to reflect market conditions.

Separately, capital measures that are adopted due to participation in the Strategic Energy Management program, and which are eligible for incentives under other programs such as the Business Standard and Custom initiatives, are routed through them and receive the applicable incentives as if they were regular projects. These savings are netted out of the SEM savings and recorded under the Standard or Custom programs. In this way, SEM also becomes a lead generator for other programs and further drives portfolio success.

**Estimated Participation**

**Estimated Incremental Participating Businesses**

| 2016 | 2017 | 2018 |
|---|---|---|
| 24 | 24 | 24 |

**Projected Energy & Demand Savings Target**

A NTG ratio of 100% was applied to the energy and demand savings. The average savings per customer is a planning estimate, actual program savings will vary widely.

**Projected Net Savings per Customer**

| Net kWh Savings per Participating Business | Net kW Savings per Participating Business |
|---|---|
| 168,438 | 39.469 |

**Projected Net Incremental Program Savings**

| Net MWh Savings | | | Net MW Savings | | |
|---|---|---|---|---|---|
| 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| 4,043 | 4,043 | 4,043 | 0.95 | 0.95 | 0.95 |

**Estimated Program Budget**

**Estimated Annual Budget **HC****

| | 2016 | 2017 | 2018 |
|---|---|---|---|
| Incentives | | | |
| Delivery | | | |
| Administration | | | |
| Education & Marketing | | | |
| Evaluation | | | |
| **Total** | | | |

**Cost-Effectiveness**

**Total Program Cycle Cost-Effectiveness**

| TRC | UCT | RIM | RIM Net Fuel | SCT | PCT |
|---|---|---|---|---|---|
| 1.21 | 1.21 | 0.64 | 0.81 | 1.20 | 7.78 |



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## Block Bidding

| | |
|---|---|
| **Objective** | Encourage high-volume energy savings projects from customers and third-party suppliers working on behalf of customers at lower cost than traditional programs. This program provides an opportunity to organize and procure non-conventional projects that may not be eligible or appropriately incentivized to participate in other programs. |
| **Target Market** | Any commercial, industrial or municipal customer as well as third-party suppliers, such as energy service companies, trade allies and performance contractors. |
| **Description** | The Block Bidding Program seeks to purchase blocks of electric savings by issuing a Request For Proposal (RFP) to eligible customers and third-party suppliers. The RFP details the proposal requirements as well as the electric savings that must be achieved. Customers and/or third parties submit proposals to deliver the requested block of cost-effective electric savings. The electric savings may be achieved in a variety of ways; for example, one customer facility installing energy efficiency equipment or a bundle of projects across multiple sites and/or customers.<br>Bidder proposals are reviewed to:<br>• Verify customer eligibility.<br>• Ensure completeness and accuracy of proposed energy savings.<br>• Screen the proposed measures for cost-effectiveness. All projects must have a Total Resource Cost Test benefit-cost ratio of greater than 1.0.<br>Qualifying and cost-effective bidder proposals are ranked based upon the proposed cost per kWh saved ($/kWh). Program funds are awarded to bidders starting with the lowest $/kWh saved until the funding is depleted. KCP&L-GMO enters into contracts with the bidders that receive program funding. All projects must receive pre- and post-implementation inspections to verify the existing and upgraded equipment. The acquired savings may differ from the expected savings stated in the contract based upon actual performance and the post-implementation inspection.<br>This is a new program for the 2016-2018 implementation cycle. |
| **Implementation Strategy** | KCP&L-GMO staff will administer the Block Bidding Program with assistance from a third-party implementation contractor. Implementation contractor activities include:<br>• Assist with outreach and education to potential bidders.<br>• Review bidder proposals and recommend the bids to be funded.<br>• Perform pre- and post-implementation inspections.<br>• Provide customer service support.<br>• Track program performance.<br>• Periodically report progress towards program goals and opportunities for improvement.<br>Marketing will be targeted to third-party suppliers and customers. Tactics will include:<br>• Training sessions to educate third-party suppliers and customers on the program, proposal requirements and any associated paperwork requirements.<br>• Direct outreach via KCP&L-GMO key account representatives, news releases, announcements, telephone calls and email.<br>• Highlight successfully completed projects to display the benefits of the program.<br>• Third-party suppliers will promote the program directly to eligible customers. |

**Risk Management**

The most challenging aspect is engaging customers and the ability of customers to achieve the required blocks of savings. The implementation contractor and KCP&L-GMO staff must work closely to ensure potential bidders understand the program requirements and work to correct any issues or concerns that arise in bidder proposals. Customers must be made aware of the ability to bundle projects and/or work with a third-party supplier to achieve the required blocks of electric savings. The implementation contractor and KCP&L-GMO staff must work closely with the contracted bidders to ensure projects are being completed in a timely fashion and issues are addressed in a timely fashion.

**Measures & Incentives**

Incentives of $0.06 per first-year-kWh saved were assumed for planning purposes, but the actual incentive payments will be a result of the individual project bids received during the RFP process. Program management can choose the threshold cost below which they are willing to pay based on the condition of budgets and energy and peak demand savings goals at the time the bids are received.

**Estimated Participation**

**Estimated Incremental RFPs**

| 2016 | 2017 | 2018 |
|---|---|---|
| 2 | 2 | 3 |

**Projected Energy & Demand Savings Target**

A NTG ratio of 100% was applied to the energy and demand savings.

**Projected Net Savings per RFP**

| Net kWh Savings per RFP | Net kW Savings per RFP |
|---|---|
| 2,514,850 | 436 |

**Projected Net Incremental Program Savings**

| Net MWh Savings | | | Net MW Savings | | |
|---|---|---|---|---|---|
| 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| 5,030 | 5,030 | 7,545 | 0.87 | 0.87 | 1.31 |

**Estimated Program Budget**

**Estimated Annual Budget **HC****

| | 2016 | 2017 | 2018 |
|---|---|---|---|
| Incentives | | | |
| Delivery | | | |
| Administration | | | |
| Education & Marketing | | | |
| Evaluation | | | |
| **Total** | | | |

**Cost-Effectiveness**

**Total Program Cycle Cost-Effectiveness**

| TRC | UCT | RIM | RIM Net Fuel | SCT | PCT |
|---|---|---|---|---|---|
| 1.94 | 3.83 | 0.9 | 1.29 | 2.10 | 2.33 |



HIGHLY CONFIDENTIAL

## Online Business Energy Audit

| | |
|---|---|
| **Objectives** | Encourage energy education and conservation, as well as further engagement in the broader portfolio of DSM programs. |
| **Target Market** | Non-residential customers. |
| **Description** | The program provides customers access to a free online tool to analyze the energy efficiency of their businesses, educational materials regarding energy efficiency and conservation, and information on KCP&L-GMO DSM Programs.<br>The program goals include:<br>• Increase awareness of business and building energy consumption.<br>• Educate commercial customers about the benefits of energy efficiency and the opportunities to reduce energy consumption.<br>• Increase awareness of and participation in other KCP&L-GMO DSM programs. |
| **Implementation Strategy** | KCP&L-GMO will engage a third-party contractor to develop and maintain the online tool(s). |
| **Risk Management** | The Online Business Energy Audit Program is an educational program that informs customers of business energy consumption and methods to reduce energy usage. KCP&L-GMO will strategize ways to highlight the audit tool on the KCP&L-GMO website and increase customer engagement. |
| **Measures & Incentives** | There are no monetary incentives. |
| **Estimated Participation** | Program participation was not estimated for this program. |
| **Projected Energy & Demand Savings Target** | Program savings were not estimated for this program since it is deemed an educational program. |
| **Estimated Program Budget** | **Estimated Annual Budget **HC**** |

| | 2016 | 2017 | 2018 |
|---|---|---|---|
| Delivery | | | |
| Administration | | | |
| Education & Marketing | | | |
| Evaluation | | | |
| **Total** | | | |

| | |
|---|---|
| **Cost-Effectiveness** | n/a |



HIGHLY CONFIDENTIAL

## Small Business Direct Install

| | |
|---|---|
| **Objective** | Provide targeted, highly cost-effective measures to small business customers in a quickly deployable program delivery mechanism. |
| **Target Market** | Small business customers with an average electric demand of less than 100 kW per year. |
| **Description** | The program offers customers an energy assessment that includes information on potential energy savings and anticipated payback as well as incentives that cover up to 70% percent of the equipment and installation costs. Eligible measures include, but are not limited to, occupancy sensors, LED exit signs, and T5 lamps. The program works best if the assessment and any applicable equipment and measure installations can be completed on the same day.<br>KCP&L-GMO will select an implementation contractor that will provide the lighting audit and information on lighting incentives. Incentives will be assigned directly to the contractor, so that the value of utility incentives is reduced directly from the project cost. The program is part of a long-term strategy to raise awareness of energy savings opportunities among business customers and to help them take action using incentives offered by KCP&L-GMO.<br>This is a new program for the 2016-2018 implementation cycle. |
| **Implementation Strategy** | The implementation strategy will incorporate the following components:<br>• *Walk-Through Audits.* Trained auditors complete a walk-through examination of the business using standard audit software, identifying specific energy saving opportunities. The auditor will review the anticipated costs and savings of the measures, along with information on financial resources available to help defray costs. Customers will be provided with a report and check list of recommendations from the audit.<br>• *Direct Installation of Measures.* Upon customer approval of a job scope, the implementation contractor will install pertinent lighting measures identified during the audit on the same day as the audit, if possible.<br>• *Customer Education.* Customers will be educated on energy efficient equipment and KCP&L-GMO's full suite of DSM programs. Particular attention will be paid to the areas identified in the audit.<br>KCP&L-GMO will hire an implementation contractor to:<br>• Hire qualified, local individuals to conduct energy audits and install efficient lighting equipment. Provide training, ongoing as needed, to auditors.<br>• Ensure that auditors are familiar with all KCP&L-GMO DSM programs available to customers.<br>• Assist with program marketing and outreach.<br>• Provide customer service support.<br>• Track program performance, including audit requests, audit activities and customer actions.<br>• Periodically report progress towards program goals and opportunities for improvement.<br>The marketing and outreach strategies will include direct customer marketing such as bill inserts, newsletters, email, and on-bill messaging. The auditors will market the program directly to customers. KCP&L-GMO will highlight successfully completed projects to display the benefits of the program. |

**Risk Management**

Small business customers are typically a hard-to-reach market without the time available to become educated on energy efficient equipment and the money available to upgrade to efficient equipment.

One potential risk is a limited supply of qualified individuals with the skills to conduct audits and market energy efficiency improvements. A solution is the development of a local network of qualified professionals to provide audit and installation services and to promote the program to customers. The implementation contractor will:

- Offer technical training to auditors, including classroom and field sessions.
- Offer sales and business process training to help contractors succeed in selling and delivering energy efficiency services.

**Measures & Incentives**

Incentives were set for planning purposes and may be modified to reflect market conditions. Incentives cover up to 70% percent of the equipment and installation costs.

**Estimated Participation**

**Estimated Incremental Participating Businesses**

| 2016 | 2017 | 2018 |
|---|---|---|
| 87 | 175 | 175 |

**Projected Energy & Demand Savings Target**

A NTG ratio of 100% was applied to the energy and demand savings.

**Projected Net Savings per Customer**

| Net kWh Savings per Customer | | | Net kW Savings per Customer | | |
|---|---|---|---|---|---|
| 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| 8,107 | 8,172 | 8,197 | 1.35 | 1.36 | 1.36 |

**Projected Net Incremental Program Savings**

| Net MWh Savings | | | Net MW Savings | | |
|---|---|---|---|---|---|
| 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| 705 | 1,430 | 1,434 | 0.12 | 0.24 | 0.24 |

**Estimated Program Budget**

**Estimated Annual Budget **HC****

| | 2016 | 2017 | 2018 |
|---|---|---|---|
| Incentives | | | |
| Delivery | | | |
| Administration | | | |
| Education & Marketing | | | |
| Evaluation | | | |
| **Total** | | | |

**Cost-Effectiveness**

**Total Program Cycle Cost-Effectiveness**

| TRC | UCT | RIM | RIM Net Fuel | SCT | PCT |
|---|---|---|---|---|---|
| 1.33 | 1.30 | 0.66 | 0.84 | 1.60 | 3.82 |



HIGHLY CONFIDENTIAL

## Business Programmable Thermostat

| | |
|---|---|
| **Objective** | Decrease peak demand usage to provide system and grid relief during particularly high-load, high-congestion peak hours. |
| **Target Market** | Small business customers with qualifying, applicable equipment. The type of customer that has HVAC units that are controlled by a single thermostat. It would not be possible for the Business Programmable Thermostat program, for example, to meaningfully control the HVAC system in a large hospital with a building energy management system and multiple control points. |
| **Description** | The Business Programmable Thermostat Program reduces peak demand by controlling participant cooling equipment during periods of system peak demand and when there may be delivery constraints within certain load zones. This is done by way of a remotely communicating, programmable thermostat. During a program event, the program operations center sends a radio frequency signal to the thermostat to adjust its set-point by 2 to 4 degrees F such that the system will consume less energy and run less frequently throughout the 3 to 6 hour event duration. One method of participation will be for customers to receive the thermostat and professional installation (a $350 value) for free upon qualification and enrollment in the program. |
| **Implementation Strategy** | KCP&L-GMO will engage a third-party implementation contractor to:<br>• Hire/sub-contract local staff to install the programmable thermostats.<br>• Engage customers, schedule installation appointments and process customer incentives.<br>• Provide customer service support.<br>• Track program performance and event data.<br>• Periodically report progress towards program goals and opportunities for improvement.<br>Events will typically occur between June 1 and September 30, Monday to Friday. Event duration is typically 3 to 6 hours per day. Customers may opt-out twice a year by calling KCP&L-GMO a day in advance.<br>The program will be marketed through direct contact with consumers using bill inserts, newsletters, website, broadcast and print media, and direct mail. |
| **Risk Management** | The primary benefit of demand response programs is to mitigate the risks and costs associated with system peak loads. From a planning perspective, using demand response resources in the most valuable way would imply that system planners would include the peak impacts in the load forecast nominated to the RTO, thereby reducing the utility system peak, required capacity, and also the reserve requirements. This also implies that events would primarily be called when the day-ahead forecast projects a load in excess of that nominated peak, rather than using another event trigger mechanism, such as energy market prices above a certain threshold or weather above a certain temperature.<br>Having the thermostats available as a resource year-round is potentially of value to system operations in the event of plant maintenance or other grid events. Curtailment in participating homes with electric heat could provide additional risk management capabilities in the future.<br>Providing the opportunity for customers to opt-out or override a limited number of events provides choice and control to the customer, minimizing the risk of attrition and lost participants. |
| **Measures & Incentives** | Customers receive a free communicating, programmable thermostat with installation ($350 value) for joining the program. The customer receives a $25 incentive per year they participate in the program (beginning the second year). Incentives were set for planning purposes and may be modified to reflect market conditions. |

**Estimated Participation**

**Estimated Incremental Customer Participation**

| 2016 | 2017 | 2018 |
|---|---|---|
| 57 | 57 | 57 |

**Projected Energy & Demand Savings Target**

A NTG ratio of 100% was applied to the energy and demand savings

**Projected Net Savings per Customer**

| Net kWh Savings per Customer | Net kW Savings per Customer |
|---|---|
| 462 | 1.18 |

**Projected Net Incremental Program Savings**

| Net MWh Savings | | | Net MW Savings | | |
|---|---|---|---|---|---|
| 2016 | 2017 | 2018 | 2016 | 2017 | 2018 |
| 26 | 26 | 26 | 0.07 | 0.07 | 0.07 |

**Estimated Program Budget**

**Estimated Annual Budget **HC****

| Measure | 2016 | 2017 | 2018 |
|---|---|---|---|
| Incentives | | | |
| Delivery | | | |
| Administration | | | |
| Education & Marketing | | | |
| Evaluation | | | |
| **Total** | | | |

**Cost-Effectiveness**

**Total Program Cycle Cost-Effectiveness**

| TRC | UCT | RIM | RIM Net Fuel | SCT | PCT |
|---|---|---|---|---|---|
| 2.06 | 2.52 | 1.83 | 2.03 | 1.98 | 1.14 |



HIGHLY CONFIDENTIAL

## Demand Response Incentive

| | |
|---|---|
| **Objective** | Decrease peak demand usage to provide system and grid relief during particularly high-load, high-congestion peak hours. |
| **Target Market** | Large commercial and industrial customers with load curtailment capability of at least 25 kW. |
| **Description** | The Demand Response Incentive Program provides firm contractual arrangements with customers for periodic curtailments at times of system peak demand. Customers enter into a contract for a one-, three- or five-year term and receive a payment/bill credit based upon the curtailable load, the contract term and number of consecutive years under contract. Participants receive notification of an event at least 4 hours prior to the start time. |
| **Implementation Strategy** | Curtailment events may occur between June 1 through September 30, Monday through Friday between the hours of 12 pm and 10 pm (holidays are excluded). Event duration is typically 3 to 6 hours per day for a maximum of 15 events per year.<br>KCP&L-GMO key account executives will be vital to coordinating with the largest customers and gaining their participation and collaboration. The program will also be marketed through direct customer outreach as well as newsletters and direct mail. |
| **Risk Management** | The primary benefit of demand response programs is to mitigate the risks and costs associated with system peak loads. From a planning perspective, using demand response resources in the most valuable way would imply that system planners would include the peak impacts in the load forecast nominated to the RTO, thereby reducing the utility system peak, required capacity, and also the reserve requirements. This also implies that events would primarily be called when the day-ahead forecast projects a load in excess of that nominated peak, rather than using another event trigger mechanism, such as energy market prices above a certain threshold or weather above a certain temperature.<br>Providing the opportunity for customers to opt-out or override a limited number of events provides choice and control to the customer, minimizing the risk of attrition and lost participants. |
| **Measures & Incentives** | Customers receive a fixed, capacity-reserve payment in terms of $/kW, based on the number of curtailable kW, the contract term, and number of consecutive years under contract. The fixed payment is supplemented by a performance payment on a $/kWh basis, calculated from the customer's actual load curtailment relative to their baseline load, as calculated by program management. |
| **Estimated Participation** | **Estimated Incremental Customer Participation**<br>2016: 58; 2017: 116; 2018: 163 |
| **Projected Energy & Demand Savings Target** | A NTG ratio of 100% was applied to the demand savings. There are no energy savings associated with the program.<br>**Projected Net Savings per Customer**<br>Net kW Savings per Customer: 1.00<br>**Projected Net Incremental Program Savings**<br>Net MW Savings — 2016: 20.00; 2017: 40.00; 2018: 55.00 |

**Estimated Program Budget**

**Estimated Annual Budget **HC****

| | 2016 | 2017 | 2018 |
|---|---|---|---|
| Incentives | | | |
| Delivery | | | |
| Administration | | | |
| Education & Marketing | | | |
| Evaluation | | | |
| **Total** | | | |

**Cost-Effectiveness**

**Total Program Cycle Cost-Effectiveness**

| TRC | UCT | RIM | RIM Net Fuel | SCT | PCT |
|---|---|---|---|---|---|
| 17.54 | 1.99 | 1.99 | 1.99 | 16.25 | 60.00 |

APPENDIX | B

# Program Incentive Ranges

The table below presents three incentive options: low, mid and high. The mid incentive is the incentive planned for the 2016 – 2018 period for all budgeting and cost effectiveness purposes.

| Program | Measure | Unit | Low | Mid | High |
|---|---|---|---|---|---|
| Home Lighting Rebate | Screw In - CFLs | per unit | $0.70 | $1.35 | $1.70 |
| Home Lighting Rebate | Screw In - LEDs | per unit | $1.00 | $5.00 | $15 |
| Home Appliance Recycling Rebate | Freezer Recycle | per unit | $25 | $50 | $90 |
| Home Appliance Recycling Rebate | Refrigerator Recycle | per unit | $25 | $50 | $90 |
| Whole House Efficiency | Air Sealing | per sq. ft. | $0.04 | $0.08 | $0.12 |
| Whole House Efficiency | Increased Ceiling Insulation | per sq. ft. | $0.15 | $0.30 | $0.76 |
| Whole House Efficiency | Increased Wall Insulation | per sq. ft. | $0.30 | $0.65 | $1.15 |
| Whole House Efficiency | ENERGY STAR Windows | per sq. ft. | $0.13 | $0.25 | $0.68 |
| Whole House Efficiency | ENERGY STAR Windows w/ Air Sealing | per unit | $150 | $300 | $435 |
| Whole House Efficiency | Heat Pump Water Heater | per unit | $250 | $500 | $700 |
| Whole House Efficiency | Efficient ECM Fan | per unit | $75 | $150 | $350 |
| Whole House Efficiency | Heat Pump Ductless Mini Split | per unit | $150 | $300 | $800 |
| Whole House Efficiency | Air Conditioner SEER 15 | per unit | $60 | $125 | $342 |
| Whole House Efficiency | Air Conditioner SEER 15 w/ Tier 2 | per unit | $50 | $100 | $300 |
| Whole House Efficiency | Air Conditioner SEER 15, Early Retirement | per unit | $125 | $250 | $684 |
| Whole House Efficiency | Air Conditioner SEER 15, Early Retirement w/ Tier 2 | per unit | $75 | $150 | $410 |
| Whole House Efficiency | Air Conditioner SEER 16 | per unit | $100 | $200 | $500 |
| Whole House Efficiency | Air Conditioner SEER 16, Early Retirement | per unit | $200 | $400 | $1,100 |
| Whole House Efficiency | Heat Pump SEER 15 | per unit | $75 | $150 | $410 |
| Whole House Efficiency | Heat Pump SEER 15 w/ Tier 2 | per unit | $50 | $100 | $270 |
| Whole House Efficiency | Heat Pump SEER 15, Early Retirement | per unit | $150 | $300 | $800 |
| Whole House Efficiency | Heat Pump SEER 15, Early Retirement w/ Tier 2 | per unit | $75 | $150 | $410 |
| Whole House Efficiency | Heat Pump SEER 15, Replace Electric Resistance Heat | per unit | $400 | $800 | $2,000 |
| Whole House Efficiency | Heat Pump SEER 15, Replace Resistance Heat w/ Tier 2 | per unit | $100 | $200 | $500 |
| Whole House Efficiency | Heat Pump SEER 16 | per unit | $150 | $300 | $560 |
| Whole House Efficiency | Heat Pump SEER 16, Early Retirement | per unit | $300 | $600 | $1,600 |
| Whole House Efficiency | Heat Pump SEER 16, Replace Electric Resistance Heat | per unit | $500 | $1,000 | $2,000 |
| Whole House Efficiency | Heat Pump SEER 17 | per unit | $250 | $500 | $850 |
| BEER - Standard | Heat Pump Water Heater | per unit | $250 | $500 | $800 |
| BEER - Standard | Low Flow Faucet Aerator | per unit | $1.25 | $2.50 | $8.00 |
| BEER - Standard | Pipe Wrap/Insulation | per unit | $7.50 | $15 | $50 |
| BEER - Standard | VSD Pumps/Fan | per unit | $100 | $220 | $380 |
| BEER - Standard | ENERGY STAR Beverage Machine | per unit | $40 | $75 | $140 |
| BEER - Standard | High Efficiency Reach-In Refrigerator/Freezer | per unit | $50 | $100 | $260 |
| BEER - Standard | Strip Curtains | per unit | $60 | $125 | $300 |
| BEER - Standard | LED Refrigerator Case Light | per unit | $20 | $40 | $130 |
| BEER - Standard | ECM Motors Walk-In Coolers & Freezers | per unit | $15 | $30.00 | $50 |
| BEER - Standard | High Efficiency PTAC/PTHP | per ton | $2.50 | $5.00 | $12.00 |
| BEER - Standard | Programmable Thermostat Controls | per ton | $1.00 | $2.00 | $6.00 |

| Program | Measure | Unit | Low | Mid | High |
|---|---|---|---|---|---|
| BEER - Standard | Air Source Heat Pump <65 kBtuh | per ton | $30 | $60 | $120 |
| BEER - Standard | Air Source Heat Pump 65<135 kBtuh | per ton | $30 | $60 | $120 |
| BEER - Standard | Air Sourced Air Conditioner <65 kBtuh | per ton | $25 | $50 | $100 |
| BEER - Standard | Air Sourced Air Conditioner 65<135 kBtuh | per ton | $25 | $50 | $80 |
| BEER - Standard | Air Sourced Air Conditioner 135<240 kBtuh | per ton | $25 | $50 | $100 |
| BEER - Standard | Air Sourced Air Conditioner >240 kBtuh | per ton | $25 | $50 | $100 |
| BEER - Standard | Screw In - CFLs | per unit | $0.50 | $1.00 | $3.00 |
| BEER - Standard | Screw In - LEDs | per unit | $5 | $10 | $25 |
| BEER - Standard | Directional LED Bulb (<15W) | per unit | $7.50 | $15 | $40 |
| BEER - Standard | Directional LED Bulb (≥15W) | per unit | $12.50 | $25 | $50 |
| BEER - Standard | High Bay Fluorescent Fixture (HP T8 >4ft) | per unit | $60 | $115 | $225 |
| BEER - Standard | High Bay Fluorescent Fixture (HP T8 ≤4ft) | per unit | $40 | $75 | $200 |
| BEER - Standard | High Bay Fluorescent Fixture w/ HE Electronic Ballast (T5 >4ft) | per unit | $40 | $75 | $100 |
| BEER - Standard | High Bay Fluorescent Fixture w/ HE Electronic Ballast (T5 ≤4ft) | per unit | $20 | $45 | $100 |
| BEER - Standard | LED Exit Sign | per unit | $6.00 | $12 | $30 |
| BEER - Standard | LED Flood Light (<15W) | per unit | $7.50 | $15 | $35 |
| BEER - Standard | LED Flood Light (≥15W) | per unit | $7.50 | $15 | $45 |
| BEER - Standard | LED High & Low-Bay Fixture | per unit | $40 | $75 | $200 |
| BEER - Standard | LED Recessed Fixture (1ft x 4ft) | per unit | $7.50 | $15 | $36 |
| BEER - Standard | LED Recessed Fixture (2ft x 2ft) | per unit | $5.00 | $10 | $20 |
| BEER - Standard | LED Recessed Fixture (2ft x 4ft) | per unit | $10.00 | $20 | $60 |
| BEER - Standard | Lighting Optimization - Remove 4ft Lamp from T8 System | per unit | $5.00 | $10 | $12 |
| BEER - Standard | Lighting Optimization - Remove 8ft Lamp from T8 System | per unit | $5.00 | $10 | $16 |
| BEER - Standard | Low Wattage T8 Lamp | per unit | $0.50 | $1.00 | $2.00 |
| BEER - Standard | Omnidirectional LED Bulb (<10W) | per unit | $5.00 | $10.00 | $30 |
| BEER - Standard | Omnidirectional LED Bulb (≥10W) | per unit | $7.50 | $15 | $40 |
| BEER - Standard | Photocell Occupancy Sensor | per unit | $18 | $35 | $70 |
| BEER - Standard | Wall-Mount Occupancy Sensor | per unit | $10 | $20 | $40 |
| BEER - Custom | C&I Custom | per 1st year kWh saved | $0.06 | $0.10 | $0.40 |
| Strategic Energy Management | Strategic Energy Management | per 1st year kWh saved | $0.01 | $0.02 | $0.02 |
| Block Bidding | Block Bidding | per Bid | Incentive costs vary based on project proposals | | |
| Small Business Direct Install | Photocell Occupancy Sensor | per unit | $35 | $69 | $69 |
| Small Business Direct Install | LED Exit Sign | per unit | $16 | $32 | $35 |
| Small Business Direct Install | High Bay Fluorescent Fixture w/ HE Electronic Ballast (T5 >4ft) | per unit | $50 | $105 | $116 |
| Small Business Direct Install | Directional LED Bulb (≥15W) | per unit | $30 | $53 | $58 |
| Small Business Direct Install | LED Recessed Fixture (2ft x 4ft) | per unit | $30 | $58 | $64 |
| Small Business Direct Install | Lighting Optimization - Remove 4ft Lamp from T8 System | per unit | $7 | $13 | $14 |
| Small Business Direct Install | Screw In - LEDs | per unit | $10 | $26 | $29 |
| Demand Response Incentive | Curtailable Rate | per kW | $30 | $60 | $100 |

APPENDIX | C

# EM&V Plan and Timeline

The Company strives to provide useful, impactful and cost effective programs. Ongoing analysis of programs performance through Evaluation, Measurement & Verification (EM&V) is an important aspect to that end. Approximately but not more than five percent (5%) of the three-year MEEIA Programs' costs budget will be spent for EM&V. The Company will work with the stakeholder group to develop an evaluation plan to determine how best to allocate and utilize the EM&V budget. The plan will address three main areas, process evaluation, impact evaluation and cost effectiveness.

The following overall timeline and process described below will be used for EM&V reports:

EM&V reports will be completed for each year of the three-year MEEIA program cycle. One hundred and twenty days after the end of each program year, the EM&V contractor will circulate a draft EM&V report to all stakeholders participating in the stakeholder group and the Commission's independent EM&V Auditor ("Auditor"). This provision does not affect the requirement in the MEEIA rules for the EM&V contractors to provide copies of draft EM&V reports to stakeholders participating in the stakeholder group at the same time the draft reports are provided to the Company.

Sixty days after circulation of the draft EM&V report, the Auditor and each stakeholder group participant will provide any comments and recommendations for report changes to the EM&V contractor and to all other stakeholder group participants and the Auditor. The Signatories recognize there is a benefit to providing comments as early as possible, as providing comments and recommendations earlier to the EM&V contractor will allow for more time for the incorporation of comments and changes into subsequent drafts and the Final Report.

Prior to issuing the Final Draft EM&V Report, the EM&V contractor will host at least one meeting with the Auditor and the stakeholder group participants to discuss the comments and recommendations for report changes. The EM&V contractor will determine what comments and/or changes are incorporated into the Final Draft EM&V Report. Thirty days after the deadline for comments and recommendations for report changes, a Final Draft EM&V report will be provided to all stakeholder group participants and the EM&V Auditor by the EM&V contractor.

Any stakeholder group participant that still has concerns with the Final Draft EM&V Report will simultaneously provide the Company, all participating stakeholders, the EM&V Auditor, and the EM&V contractor any comments within twenty days from issuance of the Final Draft EM&V Report. The EM&V contractor will meet at least once (likely by phone) with the commenting stakeholder and any stakeholder group participants within ten days of receipt of comments to attempt to resolve the stakeholder concerns prior to issuance of the Final EM&V Report. Following any final meetings to discuss outstanding comments, the EM&V Contractor will issue a Final EM&V Report within fifteen days simultaneously to the Company, all stakeholder group participants and the EM&V Auditor.

Any stakeholder group participant which wants a change to the impact evaluation portion of the Final EM&V Report will have twenty one days from the issuance of the Final EM&V Report to file a request with the Commission to make such a change ("Change Request"). Any stakeholder group participant filing a Change Request will set forth all reasons and provide support for the requested change in its initial Change Request filing. Responses to a Change Request may be filed by any stakeholder group participant and are due twenty one days after the Change Request is filed. The response should set forth all reasons and provide support for opposing or agreeing with the Change Request. Within two business days after the deadline for filing a Change Request (if a Change Request is filed) the Signatories agree that the stakeholder group participants will hold a conference call/meeting to agree upon a proposed procedural schedule that results in any evidentiary hearing that is necessary to resolve the Change Request to be completed within sixty days of the filing of the Change Request, and which will recommend to the Commission that the Commission issue its Report and Order

resolving the Change Request within thirty days after the conclusion of such a hearing. The Signatories anticipate a hearing with live testimony may be required to resolve a Change Request, but if a hearing is not required, they agree to cooperate in good faith to obtain Commission resolution of a Change Request as soon as possible. The Signatories will be parties to a Change Request resolution proceeding without the necessity of applying to intervene. The procedural schedule for such a Change Request proceeding will provide that data request objections must be lodged within seven days and responses will be due within ten days (notifications that additional time is required to respond will also be due within seven days).

All signatories agree to accept the impact evaluation energy and demand savings (kWh and kW) estimates of the Final EM&V Report, as it may be modified by the Commission's resolution of issues in a non-appealable Order related to the impact evaluation portion of the Final EM&V Report, for purposes of calculating achievements towards targeted net energy and demand savings performance incentives.

**Table E-1 Annual EM&V Timeline (2016 Program Year example)**

| # of Days | Projected Date | Description |
|---|---|---|
| | 12/31/2016 | Program Year Ends |
| | | |
| | 1/1/2017 | EM&V Analysis Starts |
| | | |
| 120 | 4/30/2017 | EM&V Draft Completed |
| | | |
| 60 | 6/29/2017 | Stakeholder comments due |
| | | |
| | TBD | Stakeholder meeting |
| | | |
| 30 | 7/29/2017 | Final Draft Report Due |
| | | |
| 20 | 8/18/2017 | Stakeholder comments to Final Draft Report are due to the Company, all participating stakeholders, EM&V Auditor and EM&V contractor |
| | | |
| 10 | 8/28/2017 | EM&V contactor initiated conference call with the stakeholder group and EM&V auditor regarding stakeholder comments |
| | | |
| 15 | 9/12/2017 | Final EM&V Report due |
| | | |
| 21 | 10/3/2017 | Grace period to file with Commission to request impact change |
| | | |
| 5 | 10/8/2017 | Conference call if needed |
| | | |

| | | |
|---|---|---|
| 21 | 10/24/2017 | Stakeholder group responses to impact change requests to Commission are due |
| | | |
| 60 | 12/2/2017 | Evidentiary hearings complete |
| | | |
| 30 | 1/1/2018 | Commission Order resolving change requests |
| | | |
| 365 | 1/1/2018 | EM&V Results Final |

**EM&V use in the Performance Incentive Calculation**

EM&V will be used for the calculation of Performance Incentive for the purposes of determining the Net (kWh and kW) savings attributed to the programs during the three year cycle. For more details on the detailed mechanics of the Performance Incentive calculation refer to Section 4G.

Each year the EM&V contractor will review the gross program impacts and provide recommendations regarding the adjustment of gross energy and demand savings. This review will help the Company improve the design and delivery of the energy efficiency programs. At the end of the three-year MEEIA cycle the EM&V contractor will determine the net energy and demand savings which the Company will use to calculate the performance incentive.

Also, for the purposes of calculating the Performance Incentive, net kWh and kW savings attributable the programs will also exclude any shift in baseline conditions not foreseen at the time of the approval of the programs. The EM&V contractor will also review market effects that have or are expected to take place as a result of the influence of the Company's programs during the program period and include those in the net kWh/kW savings calculations.

**Table E-2 Evaluation, Measurement & Verification Update Status of Inputs to Establish Performance Incentive**

| **Performance Incentive Inputs Status** | | | |
|---|---|---|---|
| Category | When is it updated? | Who updates? | Description |
| Net kWh/kW Savings | Gross evaluated savings calculated after each of 3 years.<br>Net to Gross savings calculated after the 3 year program cycle – excludes baseline shifts not known at time of approval | Initially developed by EM&V Contractor subject to feedback from parties in case and approval from commission | Energy and demand savings per measure.<br>Net to Gross = 1 – Free ridership + participant spillover + non-participant spillover + market effects |
| Deemed Measure Life | Not updated during 3 year program cycle, fixed at the values at the time of approval. | Not Applicable | Expected useful life of demand side savings measure |
| Avoided Costs | Not updated during 3 year program cycle, | Not Applicable | See Section 4 D |

| | | | |
|---|---|---|---|
| | fixed at the values at the time of approval. | | |
| Discount Rate | Not updated during 3 year program cycle, fixed at the values at the time of approval. | Not applicable | Discount rate used to calculate the real dollars |
| C&I Opt-out percentage | At end of each calendar year, used only at end of 3 year program cycle to adjust Performance Incentive targets. | Company | Calculated annually based on annual kWh of customer opted out and taken as a percentage of total annual C&I kWh sales |
| Performance Incentive Award | After the 3 year program cycle post EM&V | Company including data (Net kWh/kW savings) provided from EM&V contractor | See Section 4G above |

# Current List of DSM Measure Assumptions for KCP&L

Published 8/12/2015

**Valid for Program Implementation Dates: 1/1/2016 to**

Search using Drop-down Filters in Headers

Count: 115

| | | | | | G | H | I | J | K | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | *see column R* | = H / L | | = I * J | | |
| *Measure Description* | | | | | *Gross Measure Values* | | | | | | |
| **Program** | **Segment** | **End Use** | **Measure Name** | **Unit Definition** | **Incremental Measure Cost ($/Unit)** | **Electric Energy Savings (Annual kWh/unit)** | **Nameplate Demand Savings (kW/unit)** | **Peak Coincidence Factor** | **Coincident Peak Demand Savings (kW/unit)** | **Annual Operating Hours** | **Measure Life (Years)** |
| Home Lighting Rebate | All | Lighting | Screw In - CFLs | per lamp | $1.70 | 28.29 | 0.030 | 9.5% | 0.003 | 938 | 5 |
| Home Lighting Rebate | All | Lighting | Screw In - LEDs | per lamp | $15.00 | 30.95 | 0.033 | 9.5% | 0.003 | 938 | 20 |
| Home Appliance Recycling Rebate | All | Appliances | Dehumidifier Recycle | per unit | $49.00 | 139.00 | | | 0.035 | | 4 |
| Home Appliance Recycling Rebate | All | Appliances | Freezer - Recycle | per unit | $93.00 | 1,201.00 | | | 0.191 | | 8 |
| Home Appliance Recycling Rebate | All | Appliances | Refrigerator - Recycle | per unit | $93.00 | 1,190.00 | | | 0.190 | | 8 |
| Home Appliance Recycling Rebate | All | Appliances | Room A/C Recycle | per unit | $49.00 | 121.00 | | | 0.114 | | 4 |
| Whole House Efficiency | Single Family | Lighting | Screw In - CFLs | per lamp | $1.70 | 28.29 | 0.030 | 10% | 0.003 | 938 | 5 |
| Whole House Efficiency | Single Family | Lighting | Screw In - LEDs | per lamp | $15.00 | 30.95 | 0.033 | 10% | 0.003 | 938 | 20 |
| Whole House Efficiency | Single Family | Hot Water | Low Flow Faucet Aerator | per unit | $2.80 | 65.45 | | 2% | 0.010 | | 9 |
| Whole House Efficiency | Single Family | Hot Water | Pipe Insulated | per unit | $9.00 | 74.04 | 0.008 | | 0.008 | 8,760 | 15 |
| Whole House Efficiency | Single Family | Hot Water | Low Flow Showerhead | per unit | $15.00 | 272.95 | | 3% | 0.024 | | 10 |
| Whole House Efficiency | Single Family | Hot Water | Water Heater Tank Wrap | per unit | $18.00 | 131.30 | 0.015 | | 0.015 | 8,760 | 5 |
| Whole House Efficiency | Single Family | Electronics | Smart Power Strip | per unit | $15.00 | 73.73 | | 80% | 0.005 | | 5 |
| Whole House Efficiency | Single Family | HVAC - Shell | Air Sealing | per sq ft (floor area) | $0.12 | 0.23 | | | 0.000 | | 15 |
| Whole House Efficiency | Single Family | HVAC - Shell | Increased Ceiling Insulation | per sq ft (ceiling area) | $0.76 | 0.52 | | | 0.000 | | 25 |
| Whole House Efficiency | Single Family | HVAC - Shell | Increased Wall Insulation | per sq ft (wall area) | $1.32 | 0.72 | | | 0.000 | | 25 |
| Whole House Efficiency | Single Family | HVAC - Shell | ENERGY STAR Windows | per sq ft (window area) | $1.50 | 2.05 | | | 0.001 | | 25 |
| Whole House Efficiency | Single Family | Hot Water | Heat Pump Water Heater | per unit | $1,000.00 | 1,766.00 | 0.697 | 12% | 0.084 | 2,533 | 13 |
| Whole House Efficiency | Single Family | HVAC | Efficient ECM Fan | per unit | $353.76 | 608.10 | | 68% | 0.340 | | 10 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump Ductless Mini Split | per unit | $715.90 | 1,314.51 | | | 0.817 | | 18 |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 15 | per ton | $184.25 | 149.54 | | 68% | 0.089 | | 18 |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 15 - Early Retirement | per ton | $607.09 | 486.01 | | 68% | 0.234 | | *6* |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 15 - Early Retirement (future) | per ton | $422.84 | 149.54 | | 68% | 0.089 | | *12* |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 16 | per ton | $276.38 | 210.29 | | 68% | 0.089 | | 18 |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 16 - Early Retirement | per ton | $699.22 | 546.76 | | 68% | 0.234 | | *6* |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 16 - Early Retirement (future) | per ton | $422.84 | 210.29 | | 68% | 0.089 | | *12* |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 17 | per ton | $368.51 | 263.89 | | 68% | 0.114 | | 18 |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 17 - Early Retirement | per ton | $791.34 | 600.36 | | 68% | 0.259 | | *6* |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 17 - Early Retirement (future) | per ton | $422.84 | 263.89 | | 68% | 0.114 | | *12* |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 15 | per ton | $152.30 | 173.19 | | 72% | 0.054 | | 18 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 15 - Early Retirement | per ton | $796.86 | 2,220.07 | | 72% | 0.891 | | *6* |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 15 - Early Retirement (future) | per ton | $644.56 | 173.19 | | 72% | 0.054 | | *12* |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 15 - Replace Electric Resistance Heat | per ton | $796.86 | 4,719.56 | | 72% | 1.765 | | 6 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 16 | per ton | $304.61 | 233.94 | | 72% | 0.054 | | 18 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 16 - Early Retirement | per ton | $949.17 | 2,282.82 | | 72% | 0.891 | | *6* |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 16 - Early Retirement (future) | per ton | $644.56 | 233.94 | | 72% | 0.054 | | *12* |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 16 - Replace Electric Resistance Heat | per ton | $949.17 | 4,780.31 | | 72% | 1.765 | | 6 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 17 | per ton | $456.91 | 320.53 | | 72% | 0.093 | | 18 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 17 - Early Retirement | per ton | $1,101.47 | 2,369.40 | | 72% | 0.929 | | *6* |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 17 - Early Retirement (future) | per ton | $644.56 | 320.53 | | 72% | 0.093 | | *12* |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 17 - Replace Electric Resistance Heat | per ton | $1,101.47 | 4,866.89 | | 72% | 1.804 | | *12* |

# Current List of DSM Measure Assumptions for KCP&L

Published 8/12/2015

**Valid for Program Implementation Dates: 1/1/2016 to**

Search using Drop-down Filters in Headers

Count: 115

Blue font indicates default plan values that can be adjusted for unique installations.

| | N | O | P | Q |
|---|---|---|---|---|
| *Measure Description* | | | | |

| Program | Segment | End Use | Measure Name | Measure Definition | Measure Efficiency Value | Baseline Definition | Baseline Efficiency Value |
|---|---|---|---|---|---|---|---|
| Home Lighting Rebate | All | Lighting | Screw In - CFLs | CFL (watts) | 14 | EISA tier 1 compliant Halogen (watts) | 43 |
| Home Lighting Rebate | All | Lighting | Screw In - LEDs | LED (watts) | 11.3 | EISA tier 1 compliant Halogen (watts) | 43 |
| Home Appliance Recycling Rebate | All | Appliances | Dehumidifier Recycle | Unit removed | | Unit operational | |
| Home Appliance Recycling Rebate | All | Appliances | Freezer - Recycle | Unit removed | | Unit operational | |
| Home Appliance Recycling Rebate | All | Appliances | Refrigerator - Recycle | Unit removed | | Unit operational | |
| Home Appliance Recycling Rebate | All | Appliances | Room A/C Recycle | Unit removed | | Unit operational | |
| Whole House Efficiency | Single Family | Lighting | Screw In - CFLs | CFL (watts) | 14 | EISA tier 1 compliant Halogen (watts) | 43 |
| Whole House Efficiency | Single Family | Lighting | Screw In - LEDs | LED (watts) | 11.3 | EISA tier 1 compliant Halogen (watts) | 43 |
| Whole House Efficiency | Single Family | Hot Water | Low Flow Faucet Aerator | Low Flow (GPM) | 0.94 | Standard (GPM) | 1.39 |
| Whole House Efficiency | Single Family | Hot Water | Pipe Insulated | 5 linear feet of insulation | | none | |
| Whole House Efficiency | Single Family | Hot Water | Low Flow Showerhead | Low Flow (GPM) | 2.5 | Standard (GPM) | 4 |
| Whole House Efficiency | Single Family | Hot Water | Water Heater Tank Wrap | Water Heater Blanket/Tank Wrap | | No Blanket | |
| Whole House Efficiency | Single Family | Electronics | Smart Power Strip | Smart strip | | Standard outlet strip | |
| Whole House Efficiency | Single Family | HVAC - Shell | Air Sealing | Efficient ACH | 3.00 | Baseline ACH | 6.00 |
| Whole House Efficiency | Single Family | HVAC - Shell | Increased Ceiling Insulation | Final R-value | 38 | Previous R-value | 5 |
| Whole House Efficiency | Single Family | HVAC - Shell | Increased Wall Insulation | Final R-value | 5 | Previous R-value | 2 |
| Whole House Efficiency | Single Family | HVAC - Shell | ENERGY STAR Windows | Efficient U-factor | 0.30 | Baseline U-factor | 0.90 |
| Whole House Efficiency | Single Family | Hot Water | Heat Pump Water Heater | Efficient EF | 2.00 | Baseline EF | 0.95 |
| Whole House Efficiency | Single Family | HVAC | Efficient ECM Fan | ECM Fan | | Std Fan | |
| Whole House Efficiency | Single Family | HVAC | Heat Pump Ductless Mini Split | HP Ductless Mini Split | | Electric heat & Room A/C | |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 15 | SEER | 15 | SEER | 13 |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 15 - Early Retirement | SEER | 15 | SEER | 10 |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 15 - Early Retirement (future) | SEER | 15 | SEER | 13 |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 16 | SEER | 16 | SEER | 13 |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 16 - Early Retirement | SEER | 16 | SEER | 10 |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 16 - Early Retirement (future) | SEER | 16 | SEER | 13 |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 17 | SEER | 17 | SEER | 13 |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 17 - Early Retirement | SEER | 17 | SEER | 10 |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 17 - Early Retirement (future) | SEER | 17 | SEER | 13 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 15 | SEER | 15 | SEER | 14 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 15 - Early Retirement | SEER | 15 | SEER | 9.12 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 15 - Early Retirement (future) | SEER | 15 | SEER | 14 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 15 - Replace Electric Resistance Heat | SEER | 15 | SEER | 10 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 16 | SEER | 16 | SEER | 14 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 16 - Early Retirement | SEER | 16 | SEER | 9.12 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 16 - Early Retirement (future) | SEER | 16 | SEER | 14 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 16 - Replace Electric Resistance Heat | SEER | 16 | SEER | 10 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 17 | SEER | 17 | SEER | 14 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 17 - Early Retirement | SEER | 17 | SEER | 9.12 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 17 - Early Retirement (future) | SEER | 17 | SEER | 14 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 17 - Replace Electric Resistance Heat | SEER | 17 | SEER | 10 |

## Current List of DSM Measure Assumptions for KCP&L

Published 8/12/2015

**Valid for Program Implementation Dates: 1/1/2016 to**

Search using Drop-down Filters in Headers

Count: 115

| R | S | T | U | V |
|---|---|---|---|---|

| *Measure Description* | | | | *Algorithms* | *Program Information* | | | |
|---|---|---|---|---|---|---|---|---|
| **Program** | **Segment** | **End Use** | **Measure Name** | **Electric Energy Savings Algorithm** | **Incentive Amount ($)** | **Incentive Definition** | **Net to Gross Ratio (NTG)** | **Net Electric Energy Savings (Annual kWh/unit)** |
| Home Lighting Rebate | All | Lighting | Screw In - CFLs | =(Q8-O8)/1000*L8*AA8 | $1.35 | per unit | 100% | 28.29 |
| Home Lighting Rebate | All | Lighting | Screw In - LEDs | =(Q9-O9)/1000*L9*AA9 | $5.00 | per unit | 100% | 30.95 |
| Home Appliance Recycling Rebate | All | Appliances | Dehumidifier Recycle | deemed | $0.00 | n/a | 100% | 139.00 |
| Home Appliance Recycling Rebate | All | Appliances | Freezer - Recycle | deemed | $50.00 | per unit | 100% | 1201.00 |
| Home Appliance Recycling Rebate | All | Appliances | Refrigerator - Recycle | deemed | $50.00 | per unit | 100% | 1190.00 |
| Home Appliance Recycling Rebate | All | Appliances | Room A/C Recycle | deemed | $0.00 | n/a | 100% | 121.00 |
| Whole House Efficiency | Single Family | Lighting | Screw In - CFLs | =(Q14-O14)/1000*L14*AA14 | | Free to customer | 100% | 28.29 |
| Whole House Efficiency | Single Family | Lighting | Screw In - LEDs | =(Q15-O15)/1000*L15*AA15 | | Free to customer | 100% | 30.95 |
| Whole House Efficiency | Single Family | Hot Water | Low Flow Faucet Aerator | =(Q16-O16)*AA16*(AC16*365.25)*AE16 | | Free to customer | 100% | 65.45 |
| Whole House Efficiency | Single Family | Hot Water | Pipe Insulated | deemed | | Free to customer | 100% | 74.04 |
| Whole House Efficiency | Single Family | Hot Water | Low Flow Showerhead | =(Q18-O18)*AA18*(AC18*365.25)*AE18 | | Free to customer | 100% | 272.95 |
| Whole House Efficiency | Single Family | Hot Water | Water Heater Tank Wrap | deemed | | Free to customer | 100% | 131.30 |
| Whole House Efficiency | Single Family | Electronics | Smart Power Strip | deemed | | Free to customer | 100% | 73.73 |
| Whole House Efficiency | Single Family | HVAC - Shell | Air Sealing | =(Q21-O21)*(Y21*AA21 + Z21*AC21) | | Tiered, see Program Information | 100% | 0.23 |
| Whole House Efficiency | Single Family | HVAC - Shell | Increased Ceiling Insulation | =(1/Q22-1/O22)*(Y22*AA22 + Z22*AC22) | | Tiered, see Program Information | 100% | 0.52 |
| Whole House Efficiency | Single Family | HVAC - Shell | Increased Wall Insulation | =(1/Q23-1/O23)*(Y23*AA23 + Z23*AC23) | | Tiered, see Program Information | 100% | 0.72 |
| Whole House Efficiency | Single Family | HVAC - Shell | ENERGY STAR Windows | =(Q24-O24)*(Y24*AA24 + Z24*AC24) | | Tiered, see Program Information | 100% | 2.05 |
| Whole House Efficiency | Single Family | Hot Water | Heat Pump Water Heater | =((1/Q25-1/O25)*AC25*AA25*365.25) | | Tiered, see Program Information | 100% | 1766.00 |
| Whole House Efficiency | Single Family | HVAC | Efficient ECM Fan | deemed | | Tiered, see Program Information | 100% | 608.10 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump Ductless Mini Split | deemed | | Tiered, see Program Information | 100% | 1314.51 |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 15 | =(1/Q28-1/O28)*Y28*AA28/AC28 | | Tiered, see Program Information | 100% | 149.54 |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 15 - Early Retirement | =(1/Q29-1/O29)*Y29*AA29/AC29 | | Tiered, see Program Information | 100% | 486.01 |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 15 - Early Retirement (future) | =(1/Q30-1/O30)*Y30*AA30/AC30 | | Tiered, see Program Information | 100% | 149.54 |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 16 | =(1/Q31-1/O31)*Y31*AA31/AC31 | | Tiered, see Program Information | 100% | 210.29 |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 16 - Early Retirement | =(1/Q32-1/O32)*Y32*AA32/AC32 | | Tiered, see Program Information | 100% | 546.76 |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 16 - Early Retirement (future) | =(1/Q33-1/O33)*Y33*AA33/AC33 | | Tiered, see Program Information | 100% | 210.29 |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 17 | =(1/Q34-1/O34)*Y34*AA34/AC34 | | Tiered, see Program Information | 100% | 263.89 |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 17 - Early Retirement | =(1/Q35-1/O35)*Y35*AA35/AC35 | | Tiered, see Program Information | 100% | 600.36 |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 17 - Early Retirement (future) | =(1/Q36-1/O36)*Y36*AA36/AC36 | | Tiered, see Program Information | 100% | 263.89 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 15 | =((1/Q37-1/O37)*Y37 + AE37*Z37)*AA37/AC37 | | Tiered, see Program Information | 100% | 173.19 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 15 - Early Retirement | =((1/Q38-1/O38)*Y38 + AE38*Z38)*AA38/AC38 | | Tiered, see Program Information | 100% | 2220.07 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 15 - Early Retirement (future) | =((1/Q39-1/O39)*Y39 + AE39*Z39)*AA39/AC39 | | Tiered, see Program Information | 100% | 173.19 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 15 - Replace Electric Resistance Heat | =((1/Q40-1/O40)*Y40 + AE40*Z40)*AA40/AC40 | | Tiered, see Program Information | 100% | 4719.56 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 16 | =((1/Q41-1/O41)*Y41 + AE41*Z41)*AA41/AC41 | | Tiered, see Program Information | 100% | 233.94 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 16 - Early Retirement | =((1/Q42-1/O42)*Y42 + AE42*Z42)*AA42/AC42 | | Tiered, see Program Information | 100% | 2282.82 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 16 - Early Retirement (future) | =((1/Q43-1/O43)*Y43 + AE43*Z43)*AA43/AC43 | | Tiered, see Program Information | 100% | 233.94 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 16 - Replace Electric Resistance Heat | =((1/Q44-1/O44)*Y44 + AE44*Z44)*AA44/AC44 | | Tiered, see Program Information | 100% | 4780.31 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 17 | =((1/Q45-1/O45)*Y45 + AE45*Z45)*AA45/AC45 | | Tiered, see Program Information | 100% | 320.53 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 17 - Early Retirement | =((1/Q46-1/O46)*Y46 + AE46*Z46)*AA46/AC46 | | Tiered, see Program Information | 100% | 2369.40 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 17 - Early Retirement (future) | =((1/Q47-1/O47)*Y47 + AE47*Z47)*AA47/AC47 | | Tiered, see Program Information | 100% | 320.53 |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 17 - Replace Electric Resistance Heat | =((1/Q48-1/O48)*Y48 + AE48*Z48)*AA48/AC48 | | Tiered, see Program Information | 100% | 4866.89 |

# Current List of DSM Measure Assumptions for KCP&L

Published 8/12/2015

**Valid for Program Implementation Dates: 1/1/2016 to**

Search using Drop-down Filters in Headers

Count: 115

Link to CDI Link to HDD

| | | | | | | W | X | Y | Z | AA | AB | AC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Measure Description* | | | | | | *Supporting Information* | | | | | | |
| **Program** | **Segment** | **End Use** | **Measure Name** | **Data Source** | **Date of Data Revision** | **Cooling Degree Days (CDD)** | **Heating Degree Days (HDD)** | **Quantity1** | **Quantity1 Description** | **Quantity2** | | |
| Home Lighting Rebate | All | Lighting | Screw In - CFLs | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.04 | Waste Heat Factor | | | |
| Home Lighting Rebate | All | Lighting | Screw In - LEDs | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.04 | Waste Heat Factor | | | |
| Home Appliance Recycling Rebate | All | Appliances | Dehumidifier Recycle | Navigant 2013 GMO EM&V Report | 7/29/2015 | | | | | | | |
| Home Appliance Recycling Rebate | All | Appliances | Freezer - Recycle | Navigant 2013 GMO EM&V Report | 7/29/2015 | | | | | | | |
| Home Appliance Recycling Rebate | All | Appliances | Refrigerator - Recycle | Navigant 2013 GMO EM&V Report | 7/29/2015 | | | | | | | |
| Home Appliance Recycling Rebate | All | Appliances | Room A/C Recycle | Navigant 2013 GMO EM&V Report | 7/29/2015 | | | | | | | |
| Whole House Efficiency | Single Family | Lighting | Screw In - CFLs | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.04 | Waste Heat Factor | | | |
| Whole House Efficiency | Single Family | Lighting | Screw In - LEDs | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.04 | Waste Heat Factor | | | |
| Whole House Efficiency | Single Family | Hot Water | Low Flow Faucet Aerator | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 0.0919 | kWh per gallon hot water | 3 | | |
| Whole House Efficiency | Single Family | Hot Water | Pipe Insulated | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | | | | | |
| Whole House Efficiency | Single Family | Hot Water | Low Flow Showerhead | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 0.0919 | kWh per gallon hot water | 3.75 | | |
| Whole House Efficiency | Single Family | Hot Water | Water Heater Tank Wrap | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | | | | | |
| Whole House Efficiency | Single Family | Electronics | Smart Power Strip | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | | | | | |
| Whole House Efficiency | Single Family | HVAC - Shell | Air Sealing | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 0.00001 | Cooling Coefficient | 0.00001 | | |
| Whole House Efficiency | Single Family | HVAC - Shell | Increased Ceiling Insulation | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 0.00046 | Cooling Coefficient | 0.00046 | | |
| Whole House Efficiency | Single Family | HVAC - Shell | Increased Wall Insulation | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 0.00037 | Cooling Coefficient | 0.00037 | | |
| Whole House Efficiency | Single Family | HVAC - Shell | ENERGY STAR Windows | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 0.00052 | Cooling Coefficient | 0.00052 | | |
| Whole House Efficiency | Single Family | Hot Water | Heat Pump Water Heater | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 50 | gallons used per day | 0.175 | | |
| Whole House Efficiency | Single Family | HVAC | Efficient ECM Fan | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | | | | | |
| Whole House Efficiency | Single Family | HVAC | Heat Pump Ductless Mini Split | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | | | | | |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 15 | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,091 | | |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 15 - Early Retirement | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,091 | | |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 15 - Early Retirement (future) | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,091 | | |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 16 | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,091 | | |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 16 - Early Retirement | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,091 | | |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 16 - Early Retirement (future) | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,091 | | |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 17 | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,091 | | |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 17 - Early Retirement | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,091 | | |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 17 - Early Retirement (future) | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,091 | | |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 15 | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,091 | | |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 15 - Early Retirement | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,091 | | |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 15 - Early Retirement (future) | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,091 | | |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 15 - Replace Electric Resistance Heat | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,091 | | |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 16 | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,091 | | |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 16 - Early Retirement | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,091 | | |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 16 - Early Retirement (future) | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,091 | | |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 16 - Replace Electric Resistance Heat | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,091 | | |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 17 | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,091 | | |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 17 - Early Retirement | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,091 | | |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 17 - Early Retirement (future) | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,091 | | |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 17 - Replace Electric Resistance Heat | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,091 | | |

# Current List of DSM Measure Assumptions for KCP&L

Published 8/12/2015

**Valid for Program Implementation Dates: 1/1/2016 to**

Search using Drop-down Filters in Headers AD AE AF

Count: 115

*Measure Description*

| Program | Segment | End Use | Measure Name | Quantity2 Description | Quantity3 | Quantity3 Description |
|---|---|---|---|---|---|---|
| Home Lighting Rebate | All | Lighting | Screw In - CFLs | | | |
| Home Lighting Rebate | All | Lighting | Screw In - LEDs | | | |
| Home Appliance Recycling Rebate | All | Appliances | Dehumidifier Recycle | | | |
| Home Appliance Recycling Rebate | All | Appliances | Freezer - Recycle | | | |
| Home Appliance Recycling Rebate | All | Appliances | Refrigerator - Recycle | | | |
| Home Appliance Recycling Rebate | All | Appliances | Room A/C Recycle | | | |
| Whole House Efficiency | Single Family | Lighting | Screw In - CFLs | | | |
| Whole House Efficiency | Single Family | Lighting | Screw In - LEDs | | | |
| Whole House Efficiency | Single Family | Hot Water | Low Flow Faucet Aerator | Minutes per person per day | 1.44 | Persons per household |
| Whole House Efficiency | Single Family | Hot Water | Pipe Insulated | | | |
| Whole House Efficiency | Single Family | Hot Water | Low Flow Showerhead | Minutes per person per day | 1.44 | Persons per household |
| Whole House Efficiency | Single Family | Hot Water | Water Heater Tank Wrap | | | |
| Whole House Efficiency | Single Family | Electronics | Smart Power Strip | | | |
| Whole House Efficiency | Single Family | HVAC - Shell | Air Sealing | Heating Coefficient | | |
| Whole House Efficiency | Single Family | HVAC - Shell | Increased Ceiling Insulation | Heating Coefficient | | |
| Whole House Efficiency | Single Family | HVAC - Shell | Increased Wall Insulation | Heating Coefficient | | |
| Whole House Efficiency | Single Family | HVAC - Shell | ENERGY STAR Windows | Heating Coefficient | | |
| Whole House Efficiency | Single Family | Hot Water | Heat Pump Water Heater | Water Heating Coefficient | | |
| Whole House Efficiency | Single Family | HVAC | Efficient ECM Fan | | | |
| Whole House Efficiency | Single Family | HVAC | Heat Pump Ductless Mini Split | | | |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 15 | Coefficient | | |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 15 - Early Retirement | Coefficient | | |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 15 - Early Retirement (future) | Coefficient | | |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 16 | Coefficient | | |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 16 - Early Retirement | Coefficient | | |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 16 - Early Retirement (future) | Coefficient | | |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 17 | Coefficient | | |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 17 - Early Retirement | Coefficient | | |
| Whole House Efficiency | Single Family | HVAC | Air Conditioner SEER 17 - Early Retirement (future) | Coefficient | | |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 15 | Coefficient | 0.001796471 | HSPF improvement factor |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 15 - Early Retirement | Coefficient | 0.027586522 | HSPF improvement factor |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 15 - Early Retirement (future) | Coefficient | 0.001796471 | HSPF improvement factor |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 15 - Replace Electric Resistance Heat | Coefficient | 0.073296351 | HSPF improvement factor |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 16 | Coefficient | 0.001796471 | HSPF improvement factor |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 16 - Early Retirement | Coefficient | 0.027621132 | HSPF improvement factor |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 16 - Early Retirement (future) | Coefficient | 0.001796471 | HSPF improvement factor |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 16 - Replace Electric Resistance Heat | Coefficient | 0.073296351 | HSPF improvement factor |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 17 | Coefficient | 0.002367442 | HSPF improvement factor |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 17 - Early Retirement | Coefficient | 0.028192044 | HSPF improvement factor |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 17 - Early Retirement (future) | Coefficient | 0.002367442 | HSPF improvement factor |
| Whole House Efficiency | Single Family | HVAC | Heat Pump SEER 17 - Replace Electric Resistance Heat | Coefficient | 0.073867331 | HSPF improvement factor |

# Current List of DSM Measure Assumptions for KCP&L

Published 8/12/2015

**Valid for Program Implementation Dates: 1/1/2016 to**

Search using Drop-down Filters in Headers

Count: 115

| | | | | | G | H | I | J | K | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | *see column R* | = H / L | | = I * J | | |
| *Measure Description* | | | | | *Gross Measure Values* | | | | | | |
| **Program** | **Segment** | **End Use** | **Measure Name** | **Unit Definition** | **Incremental Measure Cost ($/Unit)** | **Electric Energy Savings (Annual kWh/unit)** | **Nameplate Demand Savings (kW/unit)** | **Peak Coincidence Factor** | **Coincident Peak Demand Savings (kW/unit)** | **Annual Operating Hours** | **Measure Life (Years)** |
| Income-Eligible Weatherization | Single Family | Lighting | Screw In - CFLs | per lamp | $1.70 | 28.29 | 0.030 | 10% | 0.003 | 938 | 5 |
| Income-Eligible Weatherization | Single Family | Lighting | Screw In - LEDs | per lamp | $15.00 | 30.95 | 0.033 | 10% | 0.003 | 938 | 20 |
| Income-Eligible Weatherization | Single Family | Hot Water | Low Flow Faucet Aerator | per unit | $2.80 | 65.45 | | 2% | 0.010 | | 9 |
| Income-Eligible Weatherization | Single Family | Hot Water | Pipe Insulated | per unit | $9.00 | 74.04 | 0.008 | | 0.008 | 8,760 | 15 |
| Income-Eligible Weatherization | Single Family | Hot Water | Low Flow Showerhead | per unit | $15.00 | 272.95 | | 3% | 0.024 | | 10 |
| Income-Eligible Weatherization | Single Family | Hot Water | Water Heater Tank Wrap | per unit | $18.00 | 131.30 | 0.015 | | 0.015 | 8,760 | 5 |
| Income-Eligible Weatherization | Single Family | Electronics | Smart Power Strip | per unit | $15.00 | 73.73 | | 80% | 0.005 | | 5 |
| Income-Eligible Weatherization | Single Family | HVAC - Shell | Increased Ceiling Insulation | per sq ft (ceiling area) | $0.76 | 0.52 | | | 0.000 | | 25 |
| Income-Eligible Weatherization | Single Family | HVAC - Shell | Increased Duct Insulation | per home | $720.00 | 210.49 | | | 0.118 | | 20 |
| Income-Eligible Weatherization | Single Family | HVAC - Shell | Increased Wall Insulation | per sq ft (wall area) | $1.32 | 0.72 | | | 0.000 | | 25 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Screw In - CFLs | per lamp | $1.70 | 28.29 | 0.030 | 10% | 0.003 | 938 | 5 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Screw In - LEDs | per lamp | $15.00 | 30.95 | 0.033 | 10% | 0.003 | 938 | 20 |
| Income-Eligible Multi-Family | Multi-Family | Hot Water | Low Flow Faucet Aerator | per unit | $2.80 | 42.29 | | 1% | 0.005 | | 9 |
| Income-Eligible Multi-Family | Multi-Family | Hot Water | Pipe Insulated | per unit | $2.80 | 74.04 | 0.008 | | 0.008 | 8,760 | 15 |
| Income-Eligible Multi-Family | Multi-Family | Hot Water | Low Flow Showerhead | per unit | $15.00 | 235.99 | | 3% | 0.017 | | 10 |
| Income-Eligible Multi-Family | Multi-Family | Hot Water | Water Heater Tank Wrap | per unit | $18.00 | 131.30 | 0.015 | | 0.015 | 8,760 | 5 |
| Income-Eligible Multi-Family | Multi-Family | Electronics | Smart Power Strip | per unit | $15.00 | 73.73 | | 80% | 0.005 | | 5 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | LED Exit Sign | per unit | $30.00 | 78.84 | 0.009 | 100% | 0.009 | 8,760 | 16 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | High Bay Fluorescent Fixture w/ HE Electronic Ballast ( | per fixture | $100.00 | 701.01 | 0.216 | 66% | 0.142 | 3,088 | 15 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Low Wattage T8 Lamp | per lamp | $2.00 | 26.12 | 0.008 | 66% | 0.005 | 3,088 | 10 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | LED Flood Light (<15W) | per lamp | $35.00 | 210.83 | 0.043 | 0% | 0.000 | 4,903 | 10 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Screw In - CFLs | per lamp | $3.33 | 204.64 | 0.063 | 10% | 0.006 | 3,088 | 5 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Screw In - LEDs | per lamp | $25.08 | 217.70 | 0.067 | 10% | 0.006 | 3,088 | 25 |
| Residential Programmable Thermos | All | HVAC | Advanced Programmable Communicating Thermostat | per unit | $350.00 | 462.00 | | | 0.809 | | 10 |
| Business Programmable Thermosta | All | HVAC | Advanced Programmable Communicating Thermostat | per unit | $350.00 | 462.00 | | | 0.809 | | 10 |

## Current List of DSM Measure Assumptions for KCP&L

Published 8/12/2015

**Valid for Program Implementation Dates: 1/1/2016 to**

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Blue font indicates default plan values that can be adjusted for unique installations.

| | | | | N | O | P | Q |
|---|---|---|---|---|---|---|---|
| *Measure Description* | | | | | | | |
| **Program** | **Segment** | **End Use** | **Measure Name** | **Measure Definition** | **Measure Efficiency Value** | **Baseline Definition** | **Baseline Efficiency Value** |
| Income-Eligible Weatherization | Single Family | Lighting | Screw In - CFLs | CFL (watts) | 14 | EISA tier 1 compliant Halogen (watts) | 43 |
| Income-Eligible Weatherization | Single Family | Lighting | Screw In - LEDs | LED (watts) | 11.3 | EISA tier 1 compliant Halogen (watts) | 43 |
| Income-Eligible Weatherization | Single Family | Hot Water | Low Flow Faucet Aerator | Low Flow (GPM) | 0.94 | Standard (GPM) | 1.39 |
| Income-Eligible Weatherization | Single Family | Hot Water | Pipe Insulated | 5 linear feet of insulation | | none | |
| Income-Eligible Weatherization | Single Family | Hot Water | Low Flow Showerhead | Low Flow (GPM) | 2.5 | Standard (GPM) | 4 |
| Income-Eligible Weatherization | Single Family | Hot Water | Water Heater Tank Wrap | Water Heater Blanket/Tank Wrap | | No Blanket | |
| Income-Eligible Weatherization | Single Family | Electronics | Smart Power Strip | Smart strip | | Standard outlet strip | |
| Income-Eligible Weatherization | Single Family | HVAC - Shell | Increased Ceiling Insulation | Final R-value | 38 | Previous R-value | 5 |
| Income-Eligible Weatherization | Single Family | HVAC - Shell | Increased Duct Insulation | CFM50 | 4500 | CFM50 | 4800 |
| Income-Eligible Weatherization | Single Family | HVAC - Shell | Increased Wall Insulation | Final R-value | 5 | Previous R-value | 2 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Screw In - CFLs | CFL (watts) | 14 | EISA tier 1 compliant Halogen (watts) | 43 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Screw In - LEDs | LED (watts) | 11.3 | EISA tier 1 compliant Halogen (watts) | 43 |
| Income-Eligible Multi-Family | Multi-Family | Hot Water | Low Flow Faucet Aerator | Low Flow (GPM) | 0.94 | Standard (GPM) | 1.39 |
| Income-Eligible Multi-Family | Multi-Family | Hot Water | Pipe Insulated | 5 linear feet of insulation | | none | |
| Income-Eligible Multi-Family | Multi-Family | Hot Water | Low Flow Showerhead | Low Flow (GPM) | 2.5 | Standard (GPM) | 4 |
| Income-Eligible Multi-Family | Multi-Family | Hot Water | Water Heater Tank Wrap | Water Heater Blanket/Tank Wrap | | No Blanket | |
| Income-Eligible Multi-Family | Multi-Family | Electronics | Smart Power Strip | Smart strip | | Standard outlet strip | |
| Income-Eligible Multi-Family | Multi-Family | Lighting | LED Exit Sign | LED (watts) | 2.0 | Fluorescent (watts) | 11.0 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | High Bay Fluorescent Fixture w/ HE Electronic Ballast ( | High Bay - T5 >4 lamp | 295.0 | Metal Halide (watts) | 456.0 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Low Wattage T8 Lamp | Low Wattage T8 (watts) | 22 | Standard T8 (watts) | 28 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | LED Flood Light (<15W) | LED (watts) | 8.7 | Metal Halide (watts) | 51.7 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Screw In - CFLs | CFL (watts) | 25 | EISA tier 1 compliant Halogen (watts) | 72 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Screw In - LEDs | LED (watts) | 22.0 | EISA tier 1 compliant Halogen (watts) | 72 |
| Residential Programmable Thermos | All | HVAC | Advanced Programmable Communicating Thermostat | PCT | | No PCT | |
| Business Programmable Thermosta | All | HVAC | Advanced Programmable Communicating Thermostat | PCT | | No PCT | |

## Current List of DSM Measure Assumptions for KCP&L

Published 8/12/2015

**Valid for Program Implementation Dates: 1/1/2016 to**

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| *Measure Description* | | | | *Algorithms* | *Program Information* | | | |
|---|---|---|---|---|---|---|---|---|
| **Program** | **Segment** | **End Use** | **Measure Name** | **Electric Energy Savings Algorithm** | **Incentive Amount ($)** | **Incentive Definition** | **Net to Gross Ratio (NTG)** | **Net Electric Energy Savings (Annual kWh/unit)** |
| Income-Eligible Weatherization | Single Family | Lighting | Screw In - CFLs | =(Q49-O49)/1000*L49*AA49 | | 100% covered by program | 100% | 28.29 |
| Income-Eligible Weatherization | Single Family | Lighting | Screw In - LEDs | =(Q50-O50)/1000*L50*AA50 | | 100% covered by program | 100% | 30.95 |
| Income-Eligible Weatherization | Single Family | Hot Water | Low Flow Faucet Aerator | =(Q51-O51)*AA51*(AC51*365.25)*AE51 | | 100% covered by program | 100% | 65.45 |
| Income-Eligible Weatherization | Single Family | Hot Water | Pipe Insulated | deemed | | 100% covered by program | 100% | 74.04 |
| Income-Eligible Weatherization | Single Family | Hot Water | Low Flow Showerhead | =(Q53-O53)*AA53*(AC53*365.25)*AE53 | | 100% covered by program | 100% | 272.95 |
| Income-Eligible Weatherization | Single Family | Hot Water | Water Heater Tank Wrap | deemed | | 100% covered by program | 100% | 131.30 |
| Income-Eligible Weatherization | Single Family | Electronics | Smart Power Strip | deemed | | 100% covered by program | 100% | 73.73 |
| Income-Eligible Weatherization | Single Family | HVAC - Shell | Increased Ceiling Insulation | =(1/Q56-1/O56)*(Y56*AA56 + Z56*AC56) | | 100% covered by program | 100% | 0.52 |
| Income-Eligible Weatherization | Single Family | HVAC - Shell | Increased Duct Insulation | =(Q57-O57)*(Y57*AA57 + Z57*AC57) | | 100% covered by program | 100% | 210.49 |
| Income-Eligible Weatherization | Single Family | HVAC - Shell | Increased Wall Insulation | =(1/Q58-1/O58)*(Y58*AA58 + Z58*AC58) | | 100% covered by program | 100% | 0.72 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Screw In - CFLs | =(Q59-O59)/1000*L59*AA59 | | 100% covered by program | 100% | 28.29 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Screw In - LEDs | =(Q60-O60)/1000*L60*AA60 | | 100% covered by program | 100% | 30.95 |
| Income-Eligible Multi-Family | Multi-Family | Hot Water | Low Flow Faucet Aerator | =(Q61-O61)*AA61*(AC61*365.25)*AE61 | | 100% covered by program | 100% | 42.29 |
| Income-Eligible Multi-Family | Multi-Family | Hot Water | Pipe Insulated | deemed | | 100% covered by program | 100% | 74.04 |
| Income-Eligible Multi-Family | Multi-Family | Hot Water | Low Flow Showerhead | =(Q63-O63)*AA63*(AC63*365.25)*AE63 | | 100% covered by program | 100% | 235.99 |
| Income-Eligible Multi-Family | Multi-Family | Hot Water | Water Heater Tank Wrap | deemed | | 100% covered by program | 100% | 131.30 |
| Income-Eligible Multi-Family | Multi-Family | Electronics | Smart Power Strip | deemed | | 100% covered by program | 100% | 73.73 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | LED Exit Sign | =(Q66-O66)/1000*L66*AA66 | | 100% covered by program | 100% | 78.84 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | High Bay Fluorescent Fixture w/ HE Electronic Ballast ( | =(Q67-O67)/1000*L67*AA67 | | 100% covered by program | 100% | 701.01 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Low Wattage T8 Lamp | =(Q68-O68)/1000*L68*AA68 | | 100% covered by program | 100% | 26.12 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | LED Flood Light (<15W) | =(Q69-O69)/1000*L69*AA69 | | 100% covered by program | 100% | 210.83 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Screw In - CFLs | =(Q70-O70)/1000*L70*AA70 | | 100% covered by program | 100% | 204.64 |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Screw In - LEDs | =(Q71-O71)/1000*L71*AA71 | | 100% covered by program | 100% | 217.70 |
| Residential Programmable Thermos | All | HVAC | Advanced Programmable Communicating Thermostat | deemed | | 100% covered by program, $25/yr after 1st yr | 100% | 462.00 |
| Business Programmable Thermosta | All | HVAC | Advanced Programmable Communicating Thermostat | deemed | | 100% covered by program, $25/yr after 1st yr | 100% | 462.00 |

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Published 8/12/2015

**Valid for Program Implementation Dates: 1/1/2016 to**

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Link to CDD Link to HDD

| | | | | | | W | X | Y | Z | AA | AB | AC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| *Measure Description* | | | | | | *Supporting Information* | | | | | | |
| **Program** | **Segment** | **End Use** | **Measure Name** | **Data Source** | **Date of Data Revision** | **Cooling Degree Days (CDD)** | **Heating Degree Days (HDD)** | **Quantity1** | **Quantity1 Description** | **Quantity2** | | |
| Income-Eligible Weatherization | Single Family | Lighting | Screw In - CFLs | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.04 | Waste Heat Factor | | | |
| Income-Eligible Weatherization | Single Family | Lighting | Screw In - LEDs | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.04 | Waste Heat Factor | | | |
| Income-Eligible Weatherization | Single Family | Hot Water | Low Flow Faucet Aerator | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 0.0919 | kWh per gallon hot water | 3 | | |
| Income-Eligible Weatherization | Single Family | Hot Water | Pipe Insulated | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | | | | | |
| Income-Eligible Weatherization | Single Family | Hot Water | Low Flow Showerhead | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 0.0919 | kWh per gallon hot water | 3.75 | | |
| Income-Eligible Weatherization | Single Family | Hot Water | Water Heater Tank Wrap | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | | | | | |
| Income-Eligible Weatherization | Single Family | Electronics | Smart Power Strip | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | | | | | |
| Income-Eligible Weatherization | Single Family | HVAC - Shell | Increased Ceiling Insulation | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 0.00046 | Cooling Coefficient | 0.00046 | | |
| Income-Eligible Weatherization | Single Family | HVAC - Shell | Increased Duct Insulation | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 0.00011 | Cooling Coefficient | 0.00011 | | |
| Income-Eligible Weatherization | Single Family | HVAC - Shell | Increased Wall Insulation | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 0.00037 | Cooling Coefficient | 0.00037 | | |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Screw In - CFLs | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.04 | Waste Heat Factor | | | |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Screw In - LEDs | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.04 | Waste Heat Factor | | | |
| Income-Eligible Multi-Family | Multi-Family | Hot Water | Low Flow Faucet Aerator | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 0.0919 | kWh per gallon hot water | 2.24 | | |
| Income-Eligible Multi-Family | Multi-Family | Hot Water | Pipe Insulated | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | | | | | |
| Income-Eligible Multi-Family | Multi-Family | Hot Water | Low Flow Showerhead | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 0.0919 | kWh per gallon hot water | 3.75 | | |
| Income-Eligible Multi-Family | Multi-Family | Hot Water | Water Heater Tank Wrap | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | | | | | |
| Income-Eligible Multi-Family | Multi-Family | Electronics | Smart Power Strip | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | | | | | |
| Income-Eligible Multi-Family | Multi-Family | Lighting | LED Exit Sign | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.00 | Waste Heat Factor | 1.00 | | |
| Income-Eligible Multi-Family | Multi-Family | Lighting | High Bay Fluorescent Fixture w/ HE Electronic Ballast ( | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 | | |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Low Wattage T8 Lamp | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 | | |
| Income-Eligible Multi-Family | Multi-Family | Lighting | LED Flood Light (<15W) | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.00 | Waste Heat Factor | 1.00 | | |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Screw In - CFLs | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 | | |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Screw In - LEDs | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 | | |
| Residential Programmable Thermos | All | HVAC | Advanced Programmable Communicating Thermostat | Meta Analysis of PCT programs in midwest | 7/29/2015 | | | 55 | gallons used per day | 0.180 | | |
| Business Programmable Thermosta | All | HVAC | Advanced Programmable Communicating Thermostat | Meta Analysis of PCT programs in midwest | 7/29/2015 | | | 0.0919 | kWh per gallon hot water | 8.67 | | |

## Current List of DSM Measure Assumptions for KCP&L

Published 8/12/2015

**Valid for Program Implementation Dates: 1/1/2016 to**

Search using Drop-down Filters in Headers AD AE AF

Count: 115

*Measure Description*

| Program | Segment | End Use | Measure Name | Quantity2 Description | Quantity3 | Quantity3 Description |
|---|---|---|---|---|---|---|
| Income-Eligible Weatherization | Single Family | Lighting | Screw In - CFLs | | | |
| Income-Eligible Weatherization | Single Family | Lighting | Screw In - LEDs | | | |
| Income-Eligible Weatherization | Single Family | Hot Water | Low Flow Faucet Aerator | Minutes per person per day | 1.44 | Persons per household |
| Income-Eligible Weatherization | Single Family | Hot Water | Pipe Insulated | | | |
| Income-Eligible Weatherization | Single Family | Hot Water | Low Flow Showerhead | Minutes per person per day | 1.44 | Persons per household |
| Income-Eligible Weatherization | Single Family | Hot Water | Water Heater Tank Wrap | | | |
| Income-Eligible Weatherization | Single Family | Electronics | Smart Power Strip | | | |
| Income-Eligible Weatherization | Single Family | HVAC - Shell | Increased Ceiling Insulation | Heating Coefficient | | |
| Income-Eligible Weatherization | Single Family | HVAC - Shell | Increased Duct Insulation | Heating Coefficient | | |
| Income-Eligible Weatherization | Single Family | HVAC - Shell | Increased Wall Insulation | Heating Coefficient | | |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Screw In - CFLs | | | |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Screw In - LEDs | | | |
| Income-Eligible Multi-Family | Multi-Family | Hot Water | Low Flow Faucet Aerator | Minutes per person per day | 1.25 | Persons per household |
| Income-Eligible Multi-Family | Multi-Family | Hot Water | Pipe Insulated | | | |
| Income-Eligible Multi-Family | Multi-Family | Hot Water | Low Flow Showerhead | Minutes per person per day | 1.25 | Persons per household |
| Income-Eligible Multi-Family | Multi-Family | Hot Water | Water Heater Tank Wrap | | | |
| Income-Eligible Multi-Family | Multi-Family | Electronics | Smart Power Strip | | | |
| Income-Eligible Multi-Family | Multi-Family | Lighting | LED Exit Sign | Waste Heat Factor | | |
| Income-Eligible Multi-Family | Multi-Family | Lighting | High Bay Fluorescent Fixture w/ HE Electronic Ballast ( | Waste Heat Factor | | |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Low Wattage T8 Lamp | Waste Heat Factor | | |
| Income-Eligible Multi-Family | Multi-Family | Lighting | LED Flood Light (<15W) | Waste Heat Factor | | |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Screw In - CFLs | Waste Heat Factor | | |
| Income-Eligible Multi-Family | Multi-Family | Lighting | Screw In - LEDs | Waste Heat Factor | | |
| Residential Programmable Thermos | All | HVAC | Advanced Programmable Communicating Thermostat | Water Heating Coefficient | | |
| Business Programmable Thermosta | All | HVAC | Advanced Programmable Communicating Thermostat | gallons per day | | |

# Current List of DSM Measure Assumptions for KCP&L

Published 8/12/2015

**Valid for Program Implementation Dates: 1/1/2016 to**

Search using Drop-down Filters in Headers

Count: 115

| | | | | | G | H | I | J | K | L | M |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | *see column R* | = H / L | | = I * J | | |
| *Measure Description* | | | | | *Gross Measure Values* | | | | | | |
| **Program** | **Segment** | **End Use** | **Measure Name** | **Unit Definition** | **Incremental Measure Cost ($/Unit)** | **Electric Energy Savings (Annual kWh/unit)** | **Nameplate Demand Savings (kW/unit)** | **Peak Coincidence Factor** | **Coincident Peak Demand Savings (kW/unit)** | **Annual Operating Hours** | **Measure Life (Years)** |
| Business Standard | All | Hot Water | Heat Pump Water Heater | per unit | $1,000.00 | 1,993.08 | | 12% | 0.298 | 2,533 | 10 |
| Business Standard | All | Hot Water | Low Flow Faucet Aerator | per unit | $8.35 | 131.03 | | 1% | 0.196 | | 9 |
| Business Standard | All | Hot Water | Pipe Wrap/Insulation | per unit | $47.17 | 224.00 | 0.026 | | 0.278 | 8,760 | 6 |
| Business Standard | All | Hot Water | Pre-Rinse Spray Valves | per unit | $100.00 | 2,670.70 | | | 0.000 | | 5 |
| Business Standard | All | Pools | High Efficiency Pool Pump | per unit | $273.32 | 1,301.25 | | 100% | 0.149 | | 10 |
| Business Standard | All | Pools | Pool Pump VSD | per unit | $579.00 | 2,461.45 | | 100% | 0.281 | | 10 |
| Business Standard | All | Pumps/Fans | VSD Pumps/Fan | per unit | $304.97 | 478.17 | 0.217 | 66% | 0.143 | 2,203 | 15 |
| Business Standard | All | Refrigeration | ENERGY STAR Beverage Machine | per unit | $140.00 | 1,752.00 | | | 0.116 | 8,760 | 14 |
| Business Standard | All | Refrigeration | High Efficiency Reach-In Refrigerator/Freezer | per unit | $262.85 | 3,025.87 | | | 0.129 | | 12 |
| Business Standard | All | Refrigeration | Strip Curtains | per unit | $286.16 | 1,698.00 | | 100% | 0.195 | | 6 |
| Business Standard | All | Refrigeration | LED Refrigerator Case Light | per unit | $133.00 | 373.54 | 0.060 | 90% | 0.054 | 6,205 | 10 |
| Business Standard | All | Refrigeration | ECM Motors Walk-In Coolers & Freezers | per unit | $50.00 | 401.00 | | 100% | 0.042 | | 15 |
| Business Standard | All | HVAC | High Efficiency PTAC/PTHP | per ton | $12.26 | 30.07 | | 91% | 0.012 | | 15 |
| Business Standard | All | HVAC | Programmable Thermostat Controls | per ton | $5.90 | 126.05 | | | 0.000 | | 8 |
| Business Standard | All | HVAC | Air Source Heat Pump <65 kBtuh | per ton | $120.00 | 157.69 | | 91% | 0.194 | 816 | 15 |
| Business Standard | All | HVAC | Air Source Heat Pump 65<135 kBtuh | per ton | $100.00 | 91.33 | 0.112 | 91% | 0.124 | 816 | 15 |
| Business Standard | All | HVAC | Air Sourced Air Conditioner <65 kBtuh | per ton | $120.00 | 81.56 | 0.082 | 91% | 0.066 | 1,000 | 15 |
| Business Standard | All | HVAC | Air Sourced Air Conditioner 65<135 kBtuh | per ton | $100.00 | 56.64 | 0.057 | 81% | 0.046 | 1,000 | 15 |
| Business Standard | All | HVAC | Air Sourced Air Conditioner 135<240 kBtuh | per ton | $100.00 | 80.74 | 0.081 | 81% | 0.065 | 1,000 | 15 |
| Business Standard | All | HVAC | Air Sourced Air Conditioner >240 kBtuh | per ton | $100.00 | 70.69 | 0.071 | 81% | 0.057 | 1,000 | 15 |
| Business Standard | All | Lighting | Screw In - CFLs | per lamp | $3.33 | 204.64 | 0.063 | 10% | 0.006 | 3,088 | 5 |
| Business Standard | All | Lighting | Screw In - LEDs | per lamp | $25.08 | 217.70 | 0.067 | 10% | 0.006 | 3,088 | 25 |
| Business Standard | All | Lighting | Directional LED Bulb (<15W) | per lamp | $40.00 | 143.68 | 0.044 | 66% | 0.029 | 3,088 | 11 |
| Business Standard | All | Lighting | Directional LED Bulb (≥15W) | per lamp | $50.00 | 230.77 | 0.071 | 66% | 0.047 | 3,088 | 11 |
| Business Standard | All | Lighting | High Bay Fluorescent Fixture (HP T8 >4 lamps) | per fixture | $200.00 | 1,084.17 | 0.334 | 66% | 0.220 | 3,088 | 15 |
| Business Standard | All | Lighting | High Bay Fluorescent Fixture (HP T8 ≤4 lamps) | per fixture | $225.00 | 648.76 | 0.200 | 66% | 0.132 | 3,088 | 15 |
| Business Standard | All | Lighting | High Bay Fluorescent Fixture w/ HE Electronic Ballast ( | per fixture | $100.00 | 701.01 | 0.216 | 66% | 0.142 | 3,088 | 15 |
| Business Standard | All | Lighting | High Bay Fluorescent Fixture w/ HE Electronic Ballast ( | per fixture | $100.00 | 404.93 | 0.125 | 66% | 0.082 | 3,088 | 15 |
| Business Standard | All | Lighting | LED Exit Sign | per lamp | $30.00 | 78.84 | 0.009 | 100% | 0.009 | 8,760 | 16 |
| Business Standard | All | Lighting | LED Flood Light (<15W) | per lamp | $35.00 | 210.83 | 0.043 | 0% | 0.000 | 4,903 | 10 |
| Business Standard | All | Lighting | LED Flood Light (≥15W) | per lamp | $45.00 | 236.32 | 0.048 | 0% | 0.000 | 4,903 | 10 |
| Business Standard | All | Lighting | LED High & Low-Bay Fixture | per fixture | $200.00 | 586.93 | 0.181 | 66% | 0.119 | 3,088 | 11 |
| Business Standard | All | Lighting | LED Recessed Fixture (1 ft x 4 ft) | per fixture | $36.17 | 116.69 | 0.036 | 66% | 0.024 | 3,088 | 11 |
| Business Standard | All | Lighting | LED Recessed Fixture (2 ft x 2 ft) | per fixture | $22.55 | 70.10 | 0.022 | 66% | 0.014 | 3,088 | 11 |
| Business Standard | All | Lighting | LED Recessed Fixture (2 ft x 4 ft) | per fixture | $55.50 | 149.78 | 0.046 | 66% | 0.030 | 3,088 | 11 |
| Business Standard | All | Lighting | Lighting Optimization - Remove 4ft Lamp from T8 Syste | per lamp | $12.00 | 121.91 | 0.038 | 66% | 0.025 | 3,088 | 11 |
| Business Standard | All | Lighting | Lighting Optimization - Remove 8ft Lamp from T8 Syste | per lamp | $16.00 | 252.54 | 0.078 | 66% | 0.051 | 3,088 | 11 |
| Business Standard | All | Lighting | Low Wattage T8 Lamp | per lamp | $2.00 | 26.12 | 0.008 | 66% | 0.005 | 3,088 | 10 |
| Business Standard | All | Lighting | Omnidirectional LED Bulb (<10W) | per lamp | $28.75 | 84.47 | 0.026 | 66% | 0.017 | 3,088 | 8 |
| Business Standard | All | Lighting | Omnidirectional LED Bulb (≥10W) | per lamp | $38.75 | 130.19 | 0.040 | 66% | 0.026 | 3,088 | 8 |
| Business Standard | All | Lighting | Photocell Occupancy Sensor | per sensor | $66.00 | 692.63 | 0.213 | 66% | 0.141 | 3,088 | 8 |
| Business Standard | All | Lighting | Wall-Mount Occupancy Sensor | per sensor | $42.00 | 457.18 | 0.141 | 66% | 0.093 | 3,088 | 8 |
| Small Business Direct Install | Small C&I | Lighting | Photocell Occupancy Sensor | per sensor | $66.00 | 692.63 | 0.213 | 66% | 0.141 | 3,088 | 8 |
| Small Business Direct Install | Small C&I | Lighting | LED Exit Sign | per lamp | $30.00 | 78.84 | 0.009 | 100% | 0.009 | 8,760 | 16 |
| Small Business Direct Install | Small C&I | Lighting | High Bay Fluorescent Fixture w/ HE Electronic Ballast ( | per fixture | $100.00 | 701.01 | 0.216 | 66% | 0.142 | 3,088 | 15 |
| Small Business Direct Install | Small C&I | Lighting | Directional LED Bulb (≥15W) | per lamp | $50.00 | 230.77 | 0.071 | 66% | 0.047 | 3,088 | 11 |
| Small Business Direct Install | Small C&I | Lighting | LED Recessed Fixture (2 ft x 2 ft) | per fixture | $22.55 | 70.10 | 0.022 | 66% | 0.014 | 3,088 | 11 |
| Small Business Direct Install | Small C&I | Lighting | Lighting Optimization - Remove 4ft Lamp from T8 Syste | per lamp | $12.00 | 121.91 | 0.038 | 66% | 0.025 | 3,088 | 11 |
| Small Business Direct Install | Small C&I | Lighting | Screw In - LEDs | per lamp | $25.08 | 217.70 | 0.067 | 10% | 0.006 | 3,088 | 25 |

# Current List of DSM Measure Assumptions for KCP&L

Published 8/12/2015

**Valid for Program Implementation Dates: 1/1/2016 to**

Search using Drop-down Filters in Headers

Count: 115

Blue font indicates default plan values that can be adjusted for unique installations.

| | | | | N | O | P | Q |
|---|---|---|---|---|---|---|---|
| *Measure Description* | | | | | | | |
| **Program** | **Segment** | **End Use** | **Measure Name** | **Measure Definition** | **Measure Efficiency Value** | **Baseline Definition** | **Baseline Efficiency Value** |
| Business Standard | All | Hot Water | Heat Pump Water Heater | Efficient EF | 2.00 | Baseline EF | 0.95 |
| Business Standard | All | Hot Water | Low Flow Faucet Aerator | Low Flow (GPM) | 0.94 | Standard (GPM) | 1.39 |
| Business Standard | All | Hot Water | Pipe Wrap/Insulation | 5 linear feet of insulation | | none | |
| Business Standard | All | Hot Water | Pre-Rinse Spray Valves | Low Flow (GPM) | 1.06 | Standard (GPM) | 1.9 |
| Business Standard | All | Pools | High Efficiency Pool Pump | High Efficiency | | Standard Pool Pump | |
| Business Standard | All | Pools | Pool Pump VSD | VSD | | Standard Pool Pump | |
| Business Standard | All | Pumps/Fans | VSD Pumps/Fan | VSD Pump/Fan | | Standard Pump/Fan | |
| Business Standard | All | Refrigeration | ENERGY STAR Beverage Machine | Efficient Operating Watts | 200 | Watts Base | 400 |
| Business Standard | All | Refrigeration | High Efficiency Reach-In Refrigerator/Freezer | High Efficiency kWh/day | 2.76 | Standard kWh/day | 3.54 |
| Business Standard | All | Refrigeration | Strip Curtains | Strip Curtain | | none | |
| Business Standard | All | Refrigeration | LED Refrigerator Case Light | LED Display Lighting (watts) | 38 | Base Refrigeration - Standard (watts) | 81 |
| Business Standard | All | Refrigeration | ECM Motors Walk-In Coolers & Freezers | ECM Motor | | Standard Motor | |
| Business Standard | All | HVAC | High Efficiency PTAC/PTHP | EER | 12 | EER | 10.2 |
| Business Standard | All | HVAC | Programmable Thermostat Controls | Programmable Tstat | | No Tstat | |
| Business Standard | All | HVAC | Air Source Heat Pump <65 kBtuh | SEER | 14 | SEER | 13 |
| Business Standard | All | HVAC | Air Source Heat Pump 65<135 kBtuh | SEER | 14 | SEER | 13 |
| Business Standard | All | HVAC | Air Sourced Air Conditioner <65 kBtuh | EER | 14 | EER | 13 |
| Business Standard | All | HVAC | Air Sourced Air Conditioner 65<135 kBtuh | EER | 11.7 | EER | 11.2 |
| Business Standard | All | HVAC | Air Sourced Air Conditioner 135<240 kBtuh | EER | 11.7 | EER | 11 |
| Business Standard | All | HVAC | Air Sourced Air Conditioner >240 kBtuh | EER | 10.5 | EER | 10 |
| Business Standard | All | Lighting | Screw In - CFLs | CFL (watts) | 25 | EISA tier 1 compliant Halogen (watts) | 72 |
| Business Standard | All | Lighting | Screw In - LEDs | LED (watts) | 22.0 | EISA tier 1 compliant Halogen (watts) | 72 |
| Business Standard | All | Lighting | Directional LED Bulb (<15W) | LED (watts) | 12.0 | Incandescent (watts) | 45.0 |
| Business Standard | All | Lighting | Directional LED Bulb (≥15W) | LED (watts) | 22.0 | Incandescent (watts) | 75.0 |
| Business Standard | All | Lighting | High Bay Fluorescent Fixture (HP T8 >4 lamps) | High Bay T8 (>4 lamps, wattage) | 206.0 | Metal Halide (watts) | 455.0 |
| Business Standard | All | Lighting | High Bay Fluorescent Fixture (HP T8 ≤4 lamps) | High Bay T8 (≤4 lamps, wattage) | 146.0 | Metal Halide (watts) | 295.0 |
| Business Standard | All | Lighting | High Bay Fluorescent Fixture w/ HE Electronic Ballast (T | High Bay T5 (>4 lamps, wattage) | 295.0 | Metal Halide (watts) | 456.0 |
| Business Standard | All | Lighting | High Bay Fluorescent Fixture w/ HE Electronic Ballast (T | High Bay T5 (≤4 lamps, wattage) | 117.0 | Metal Halide (watts) | 210.0 |
| Business Standard | All | Lighting | LED Exit Sign | LED (watts) | 2.0 | Fluorescent (watts) | 11.0 |
| Business Standard | All | Lighting | LED Flood Light (<15W) | LED (watts) | 8.7 | Metal Halide (watts) | 51.7 |
| Business Standard | All | Lighting | LED Flood Light (≥15W) | LED (watts) | 16.20 | Metal Halide (watts) | 64.40 |
| Business Standard | All | Lighting | LED High & Low-Bay Fixture | LED High/Low Bay (watts) | 160 | Pulse Start Metal Halide (watts) | 295 |
| Business Standard | All | Lighting | LED Recessed Fixture (1 ft x 4 ft) | Linear style LED (watts) | 32 | Standard T8 (watts) | 59 |
| Business Standard | All | Lighting | LED Recessed Fixture (2 ft x 2 ft) | Linear style LED (watts) | 45 | T8 U-tube (watts) | 61 |
| Business Standard | All | Lighting | LED Recessed Fixture (2 ft x 4 ft) | Linear style LED (watts) | 54 | Standard T8 (watts) | 88 |
| Business Standard | All | Lighting | Lighting Optimization - Remove 4ft Lamp from T8 Syste | Remove T8 | 0 | T8 4 ft (watts) | 28 |
| Business Standard | All | Lighting | Lighting Optimization - Remove 8ft Lamp from T8 Syste | Remove T8 | 0 | T8 8 ft (watts) | 58 |
| Business Standard | All | Lighting | Low Wattage T8 Lamp | Low Wattage T8 (watts) | 22 | Standard T8 (watts) | 28 |
| Business Standard | All | Lighting | Omnidirectional LED Bulb (<10W) | LED (watts) | 10 | EISA tier 1 compliant Halogen (watts) | 29 |
| Business Standard | All | Lighting | Omnidirectional LED Bulb (≥10W) | LED (watts) | 23 | EISA tier 1 compliant Halogen (watts) | 53 |
| Business Standard | All | Lighting | Photocell Occupancy Sensor | Photocell Occupancy Sensor | 587 | No Control | |
| Business Standard | All | Lighting | Wall-Mount Occupancy Sensor | Wall-Mount Occupancy Sensor | 350 | No Control | |
| Small Business Direct Install | Small C&I | Lighting | Photocell Occupancy Sensor | Photocell Occupancy Sensor | 587 | No Control | |
| Small Business Direct Install | Small C&I | Lighting | LED Exit Sign | LED (watts) | 2.0 | Fluorescent (watts) | 11.0 |
| Small Business Direct Install | Small C&I | Lighting | High Bay Fluorescent Fixture w/ HE Electronic Ballast (T | High Bay T5 (>4 lamps, wattage) | 295.0 | Metal Halide (watts) | 456.0 |
| Small Business Direct Install | Small C&I | Lighting | Directional LED Bulb (≥15W) | LED (watts) | 22.0 | Incandescent (watts) | 75.0 |
| Small Business Direct Install | Small C&I | Lighting | LED Recessed Fixture (2 ft x 2 ft) | Linear style LED (watts) | 45 | T8 U-tube (watts) | 61 |
| Small Business Direct Install | Small C&I | Lighting | Lighting Optimization - Remove 4ft Lamp from T8 Syste | Remove T8 | 0 | T8 4 ft (watts) | 28 |
| Small Business Direct Install | Small C&I | Lighting | Screw In - LEDs | LED (watts) | 22.0 | EISA tier 1 compliant Halogen (watts) | 72 |

## Current List of DSM Measure Assumptions for KCP&L

Published 8/12/2015

**Valid for Program Implementation Dates: 1/1/2016 to**

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Count: 115

| *Measure Description* | | | | *Algorithms* | *Program Information* | | | |
|---|---|---|---|---|---|---|---|---|
| **Program** | **Segment** | **End Use** | **Measure Name** | **Electric Energy Savings Algorithm** | **Incentive Amount ($)** | **Incentive Definition** | **Net to Gross Ratio (NTG)** | **Net Electric Energy Savings (Annual kWh/unit)** |
| Business Standard | All | Hot Water | Heat Pump Water Heater | =((1/Q74-1/O74)*AC74*AA74*365.25) | $500.00 | per unit | 100% | 1993.08 |
| Business Standard | All | Hot Water | Low Flow Faucet Aerator | =(Q75-O75)*AA75*(AC75*365.25) | $2.50 | per unit | 100% | 131.03 |
| Business Standard | All | Hot Water | Pipe Wrap/Insulation | deemed | $15.00 | per unit | 100% | 224.00 |
| Business Standard | All | Hot Water | Pre-Rinse Spray Valves | =(Q77-O77)*AA77*(AC77*365.25) | $40.00 | per unit | 100% | 2670.70 |
| Business Standard | All | Pools | High Efficiency Pool Pump | deemed | $100.00 | per unit | 100% | 1301.25 |
| Business Standard | All | Pools | Pool Pump VSD | deemed | $200.00 | per unit | 100% | 2461.45 |
| Business Standard | All | Pumps/Fans | VSD Pumps/Fan | =L80*AA80*AC80 | $157.14 | per unit | 100% | 478.17 |
| Business Standard | All | Refrigeration | ENERGY STAR Beverage Machine | =(Q81-O81)/1000*L81 | $75.00 | per unit | 100% | 1752.00 |
| Business Standard | All | Refrigeration | High Efficiency Reach-In Refrigerator/Freezer | =(Q82-O82)*365.25*AA82 | $100.00 | per unit | 100% | 3025.87 |
| Business Standard | All | Refrigeration | Strip Curtains | deemed | $125.00 | per unit | 100% | 1698.00 |
| Business Standard | All | Refrigeration | LED Refrigerator Case Light | =(Q84-O84)/1000*L84*(1+AA84) | $40.00 | per unit | 100% | 373.54 |
| Business Standard | All | Refrigeration | ECM Motors Walk-In Coolers & Freezers | deemed | $30.00 | per unit | 100% | 401.00 |
| Business Standard | All | HVAC | High Efficiency PTAC/PTHP | =((1/Q86-1/O86)*Y86 + AE86*Z86)*AA86/AC86 | $5.00 | per unit | 100% | 30.07 |
| Business Standard | All | HVAC | Programmable Thermostat Controls | deemed | $2.00 | per unit | 100% | 126.05 |
| Business Standard | All | HVAC | Air Source Heat Pump <65 kBtuh | =((1/Q88-1/O88)*Y88 + AE88*Z88)*AA88/AC88 | $60.00 | per unit | 100% | 157.69 |
| Business Standard | All | HVAC | Air Source Heat Pump 65<135 kBtuh | =((1/Q89-1/O89)*Y89 + AE89*Z89)*AA89/AC89 | $60.00 | per unit | 100% | 91.33 |
| Business Standard | All | HVAC | Air Sourced Air Conditioner <65 kBtuh | =(1/Q90-1/O90)*Y90*AA90/AC90 | $50.00 | per unit | 100% | 81.56 |
| Business Standard | All | HVAC | Air Sourced Air Conditioner 65<135 kBtuh | =(1/Q91-1/O91)*Y91*AA91/AC91 | $50.00 | per unit | 100% | 56.64 |
| Business Standard | All | HVAC | Air Sourced Air Conditioner 135<240 kBtuh | =(1/Q92-1/O92)*Y92*AA92/AC92 | $50.00 | per unit | 100% | 80.74 |
| Business Standard | All | HVAC | Air Sourced Air Conditioner >240 kBtuh | =(1/Q93-1/O93)*Y93*AA93/AC93 | $50.00 | per unit | 100% | 70.69 |
| Business Standard | All | Lighting | Screw In - CFLs | =(Q94-O94)/1000*L94*AA94 | $1.00 | per unit | 100% | 204.64 |
| Business Standard | All | Lighting | Screw In - LEDs | =(Q95-O95)/1000*L95*AA95 | $10.00 | per unit | 100% | 217.70 |
| Business Standard | All | Lighting | Directional LED Bulb (<15W) | =(Q96-O96)/1000*L96*AA96 | $15.00 | per unit | 100% | 143.68 |
| Business Standard | All | Lighting | Directional LED Bulb (≥15W) | =(Q97-O97)/1000*L97*AA97 | $25.00 | per unit | 100% | 230.77 |
| Business Standard | All | Lighting | High Bay Fluorescent Fixture (HP T8 >4 lamps) | =(Q98-O98)/1000*L98*AA98 | $115.00 | per unit | 100% | 1084.17 |
| Business Standard | All | Lighting | High Bay Fluorescent Fixture (HP T8 ≤4 lamps) | =(Q99-O99)/1000*L99*AA99 | $75.00 | per unit | 100% | 648.76 |
| Business Standard | All | Lighting | High Bay Fluorescent Fixture w/ HE Electronic Ballast (T | =(Q100-O100)/1000*L100*AA100 | $75.00 | per unit | 100% | 701.01 |
| Business Standard | All | Lighting | High Bay Fluorescent Fixture w/ HE Electronic Ballast (T | =(Q101-O101)/1000*L101*AA101 | $45.00 | per unit | 100% | 404.93 |
| Business Standard | All | Lighting | LED Exit Sign | =(Q102-O102)/1000*L102*AA102 | $12.00 | per unit | 100% | 78.84 |
| Business Standard | All | Lighting | LED Flood Light (<15W) | =(Q103-O103)/1000*L103*AA103 | $15.00 | per unit | 100% | 210.83 |
| Business Standard | All | Lighting | LED Flood Light (≥15W) | =(Q104-O104)/1000*L104*AA104 | $15.00 | per unit | 100% | 236.32 |
| Business Standard | All | Lighting | LED High & Low-Bay Fixture | =(Q105-O105)/1000*L105*AA105 | $75.00 | per unit | 100% | 586.93 |
| Business Standard | All | Lighting | LED Recessed Fixture (1 ft x 4 ft) | =(Q106-O106)/1000*L106*AA106 | $15.00 | per unit | 100% | 116.69 |
| Business Standard | All | Lighting | LED Recessed Fixture (2 ft x 2 ft) | =(Q107-O107)/1000*L107*AA107 | $10.00 | per unit | 100% | 70.10 |
| Business Standard | All | Lighting | LED Recessed Fixture (2 ft x 4 ft) | =(Q108-O108)/1000*L108*AA108 | $20.00 | per unit | 100% | 149.78 |
| Business Standard | All | Lighting | Lighting Optimization - Remove 4ft Lamp from T8 Syste | =(Q109-O109)/1000*L109*AA109 | $10.00 | per unit | 100% | 121.91 |
| Business Standard | All | Lighting | Lighting Optimization - Remove 8ft Lamp from T8 Syste | =(Q110-O110)/1000*L110*AA110 | $10.00 | per unit | 100% | 252.54 |
| Business Standard | All | Lighting | Low Wattage T8 Lamp | =(Q111-O111)/1000*L111*AA111 | $1.00 | per unit | 100% | 26.12 |
| Business Standard | All | Lighting | Omnidirectional LED Bulb (<10W) | =(Q112-O112)/1000*L112*AA112 | $10.00 | per unit | 100% | 84.47 |
| Business Standard | All | Lighting | Omnidirectional LED Bulb (≥10W) | =(Q113-O113)/1000*L113*AA113 | $15.00 | per unit | 100% | 130.19 |
| Business Standard | All | Lighting | Photocell Occupancy Sensor | =O114/1000*AE114*L114*AA114 | $35.00 | per unit | 100% | 692.63 |
| Business Standard | All | Lighting | Wall-Mount Occupancy Sensor | =O115/1000*AE115*L115*AA115 | $20.00 | per unit | 100% | 457.18 |
| Small Business Direct Install | Small C&I | Lighting | Photocell Occupancy Sensor | =O116/1000*AE116*L116*AA116 | $69.00 | per unit | 100% | 692.63 |
| Small Business Direct Install | Small C&I | Lighting | LED Exit Sign | =(Q117-O117)/1000*L117*AA117 | $32.00 | per unit | 100% | 78.84 |
| Small Business Direct Install | Small C&I | Lighting | High Bay Fluorescent Fixture w/ HE Electronic Ballast (T | =(Q118-O118)/1000*L118*AA118 | $105.00 | per unit | 100% | 701.01 |
| Small Business Direct Install | Small C&I | Lighting | Directional LED Bulb (≥15W) | =(Q119-O119)/1000*L119*AA119 | $53.00 | per unit | 100% | 230.77 |
| Small Business Direct Install | Small C&I | Lighting | LED Recessed Fixture (2 ft x 2 ft) | =(Q120-O120)/1000*L120*AA120 | $58.00 | per unit | 100% | 70.10 |
| Small Business Direct Install | Small C&I | Lighting | Lighting Optimization - Remove 4ft Lamp from T8 Syste | =(Q121-O121)/1000*L121*AA121 | $13.00 | per unit | 100% | 121.91 |
| Small Business Direct Install | Small C&I | Lighting | Screw In - LEDs | =(Q122-O122)/1000*L122*AA122 | $26.00 | per unit | 100% | 217.70 |

# Current List of DSM Measure Assumptions for KCP&L

Published 8/12/2015

**Valid for Program Implementation Dates: 1/1/2016 to**

Search using Drop-down Filters in Headers

Count: 115

Link to CDI Link to HDD

| W | X | Y | Z | AA | AB | AC |
|---|---|---|---|---|---|---|

| *Measure Description* | | | | *Supporting Information* | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| **Program** | **Segment** | **End Use** | **Measure Name** | **Data Source** | **Date of Data Revision** | **Cooling Degree Days (CDD)** | **Heating Degree Days (HDD)** | **Quantity1** | **Quantity1 Description** | **Quantity2** |
| Business Standard | All | Hot Water | Heat Pump Water Heater | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 55 | gallons used per day | 0.180 |
| Business Standard | All | Hot Water | Low Flow Faucet Aerator | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 0.0919 | kWh per gallon hot water | 8.67 |
| Business Standard | All | Hot Water | Pipe Wrap/Insulation | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | | | |
| Business Standard | All | Hot Water | Pre-Rinse Spray Valves | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 0.0919 | kWh per gallon hot water | 94.72 |
| Business Standard | All | Pools | High Efficiency Pool Pump | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | | | |
| Business Standard | All | Pools | Pool Pump VSD | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | | | |
| Business Standard | All | Pumps/Fans | VSD Pumps/Fan | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 2.36 | kW Connected | 9.20% |
| Business Standard | All | Refrigeration | ENERGY STAR Beverage Machine | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | | | |
| Business Standard | All | Refrigeration | High Efficiency Reach-In Refrigerator/Freezer | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 10.62 | Refrigerated Volume (cu ft) | |
| Business Standard | All | Refrigeration | Strip Curtains | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 60.5 | sqft | |
| Business Standard | All | Refrigeration | LED Refrigerator Case Light | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 40% | Savings Factor | |
| Business Standard | All | Refrigeration | ECM Motors Walk-In Coolers & Freezers | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | | | |
| Business Standard | All | HVAC | High Efficiency PTAC/PTHP | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 11,536 |
| Business Standard | All | HVAC | Programmable Thermostat Controls | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | | | |
| Business Standard | All | HVAC | Air Source Heat Pump <65 kBtuh | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 2,194 |
| Business Standard | All | HVAC | Air Source Heat Pump 65<135 kBtuh | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 2,194 |
| Business Standard | All | HVAC | Air Sourced Air Conditioner <65 kBtuh | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,071 |
| Business Standard | All | HVAC | Air Sourced Air Conditioner 65<135 kBtuh | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,071 |
| Business Standard | All | HVAC | Air Sourced Air Conditioner 135<240 kBtuh | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,071 |
| Business Standard | All | HVAC | Air Sourced Air Conditioner >240 kBtuh | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | 1325 | 5249 | 12,000 | Btu/hr | 1,071 |
| Business Standard | All | Lighting | Screw In - CFLs | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Business Standard | All | Lighting | Screw In - LEDs | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Business Standard | All | Lighting | Directional LED Bulb (<15W) | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Business Standard | All | Lighting | Directional LED Bulb (≥15W) | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Business Standard | All | Lighting | High Bay Fluorescent Fixture (HP T8 >4 lamps) | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Business Standard | All | Lighting | High Bay Fluorescent Fixture (HP T8 ≤4 lamps) | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Business Standard | All | Lighting | High Bay Fluorescent Fixture w/ HE Electronic Ballast ( | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Business Standard | All | Lighting | High Bay Fluorescent Fixture w/ HE Electronic Ballast ( | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Business Standard | All | Lighting | LED Exit Sign | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.00 | Waste Heat Factor | 1.00 |
| Business Standard | All | Lighting | LED Flood Light (<15W) | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.00 | Waste Heat Factor | 1.00 |
| Business Standard | All | Lighting | LED Flood Light (≥15W) | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.00 | Waste Heat Factor | 1.00 |
| Business Standard | All | Lighting | LED High & Low-Bay Fixture | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Business Standard | All | Lighting | LED Recessed Fixture (1 ft x 4 ft) | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Business Standard | All | Lighting | LED Recessed Fixture (2 ft x 2 ft) | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Business Standard | All | Lighting | LED Recessed Fixture (2 ft x 4 ft) | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Business Standard | All | Lighting | Lighting Optimization - Remove 4ft Lamp from T8 Syste | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Business Standard | All | Lighting | Lighting Optimization - Remove 8ft Lamp from T8 Syste | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Business Standard | All | Lighting | Low Wattage T8 Lamp | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Business Standard | All | Lighting | Omnidirectional LED Bulb (<10W) | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Business Standard | All | Lighting | Omnidirectional LED Bulb (≥10W) | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Business Standard | All | Lighting | Photocell Occupancy Sensor | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Business Standard | All | Lighting | Wall-Mount Occupancy Sensor | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Small Business Direct Install | Small C&I | Lighting | Photocell Occupancy Sensor | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Small Business Direct Install | Small C&I | Lighting | LED Exit Sign | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.00 | Waste Heat Factor | 1.00 |
| Small Business Direct Install | Small C&I | Lighting | High Bay Fluorescent Fixture w/ HE Electronic Ballast ( | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Small Business Direct Install | Small C&I | Lighting | Directional LED Bulb (≥15W) | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Small Business Direct Install | Small C&I | Lighting | LED Recessed Fixture (2 ft x 2 ft) | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Small Business Direct Install | Small C&I | Lighting | Lighting Optimization - Remove 4ft Lamp from T8 Syste | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |
| Small Business Direct Install | Small C&I | Lighting | Screw In - LEDs | AEG KCP&L Program Plan 2016-2018 | 7/29/2015 | | | 1.41 | Waste Heat Factor | 1.34 |

# Current List of DSM Measure Assumptions for KCP&L

Published 8/12/2015

**Valid for Program Implementation Dates: 1/1/2016 to**

Search using Drop-down Filters in Headers AD AE AF

Count: 115

*Measure Description*

| Program | Segment | End Use | Measure Name | Quantity2 Description | Quantity3 | Quantity3 Description |
|---|---|---|---|---|---|---|
| Business Standard | All | Hot Water | Heat Pump Water Heater | Water Heating Coefficient | | |
| Business Standard | All | Hot Water | Low Flow Faucet Aerator | gallons per day | | |
| Business Standard | All | Hot Water | Pipe Wrap/Insulation | | | |
| Business Standard | All | Hot Water | Pre-Rinse Spray Valves | gallons per day | | |
| Business Standard | All | Pools | High Efficiency Pool Pump | | | |
| Business Standard | All | Pools | Pool Pump VSD | | | |
| Business Standard | All | Pumps/Fans | VSD Pumps/Fan | Energy Savings Factor | | |
| Business Standard | All | Refrigeration | ENERGY STAR Beverage Machine | | | |
| Business Standard | All | Refrigeration | High Efficiency Reach-In Refrigerator/Freezer | | | |
| Business Standard | All | Refrigeration | Strip Curtains | | | |
| Business Standard | All | Refrigeration | LED Refrigerator Case Light | | | |
| Business Standard | All | Refrigeration | ECM Motors Walk-In Coolers & Freezers | | | |
| Business Standard | All | HVAC | High Efficiency PTAC/PTHP | Coefficient | 0.001794835 | HSPF improvement factor |
| Business Standard | All | HVAC | Programmable Thermostat Controls | | | |
| Business Standard | All | HVAC | Air Source Heat Pump <65 kBtuh | Coefficient | 0.00410683 | HSPF improvement factor |
| Business Standard | All | HVAC | Air Source Heat Pump 65<135 kBtuh | Coefficient | 0.001794835 | HSPF improvement factor |
| Business Standard | All | HVAC | Air Sourced Air Conditioner <65 kBtuh | Coefficient | | |
| Business Standard | All | HVAC | Air Sourced Air Conditioner 65<135 kBtuh | Coefficient | | |
| Business Standard | All | HVAC | Air Sourced Air Conditioner 135<240 kBtuh | Coefficient | | |
| Business Standard | All | HVAC | Air Sourced Air Conditioner >240 kBtuh | Coefficient | | |
| Business Standard | All | Lighting | Screw In - CFLs | Waste Heat Factor | | |
| Business Standard | All | Lighting | Screw In - LEDs | Waste Heat Factor | | |
| Business Standard | All | Lighting | Directional LED Bulb (<15W) | Waste Heat Factor | | |
| Business Standard | All | Lighting | Directional LED Bulb (≥15W) | Waste Heat Factor | | |
| Business Standard | All | Lighting | High Bay Fluorescent Fixture (HP T8 >4 lamps) | Waste Heat Factor | | |
| Business Standard | All | Lighting | High Bay Fluorescent Fixture (HP T8 ≤4 lamps) | Waste Heat Factor | | |
| Business Standard | All | Lighting | High Bay Fluorescent Fixture w/ HE Electronic Ballast (T | Waste Heat Factor | | |
| Business Standard | All | Lighting | High Bay Fluorescent Fixture w/ HE Electronic Ballast (T | Waste Heat Factor | | |
| Business Standard | All | Lighting | LED Exit Sign | Waste Heat Factor | | |
| Business Standard | All | Lighting | LED Flood Light (<15W) | Waste Heat Factor | | |
| Business Standard | All | Lighting | LED Flood Light (≥15W) | Waste Heat Factor | | |
| Business Standard | All | Lighting | LED High & Low-Bay Fixture | Waste Heat Factor | | |
| Business Standard | All | Lighting | LED Recessed Fixture (1 ft x 4 ft) | Waste Heat Factor | | |
| Business Standard | All | Lighting | LED Recessed Fixture (2 ft x 2 ft) | Waste Heat Factor | | |
| Business Standard | All | Lighting | LED Recessed Fixture (2 ft x 4 ft) | Waste Heat Factor | | |
| Business Standard | All | Lighting | Lighting Optimization - Remove 4ft Lamp from T8 Syste | Waste Heat Factor | | |
| Business Standard | All | Lighting | Lighting Optimization - Remove 8ft Lamp from T8 Syste | Waste Heat Factor | | |
| Business Standard | All | Lighting | Low Wattage T8 Lamp | Waste Heat Factor | | |
| Business Standard | All | Lighting | Omnidirectional LED Bulb (<10W) | Waste Heat Factor | | |
| Business Standard | All | Lighting | Omnidirectional LED Bulb (≥10W) | Waste Heat Factor | | |
| Business Standard | All | Lighting | Photocell Occupancy Sensor | Waste Heat Factor | 27% | ESF |
| Business Standard | All | Lighting | Wall-Mount Occupancy Sensor | Waste Heat Factor | 30% | ESF |
| Small Business Direct Install | Small C&I | Lighting | Photocell Occupancy Sensor | Waste Heat Factor | 27% | ESF |
| Small Business Direct Install | Small C&I | Lighting | LED Exit Sign | Waste Heat Factor | | |
| Small Business Direct Install | Small C&I | Lighting | High Bay Fluorescent Fixture w/ HE Electronic Ballast (T | Waste Heat Factor | | |
| Small Business Direct Install | Small C&I | Lighting | Directional LED Bulb (≥15W) | Waste Heat Factor | | |
| Small Business Direct Install | Small C&I | Lighting | LED Recessed Fixture (2 ft x 2 ft) | Waste Heat Factor | | |
| Small Business Direct Install | Small C&I | Lighting | Lighting Optimization - Remove 4ft Lamp from T8 Syste | Waste Heat Factor | | |
| Small Business Direct Install | Small C&I | Lighting | Screw In - LEDs | Waste Heat Factor | | |

APPENDIX | **E**

# Tariffs

Rule: 20.094 - (3) D Tariffs

## A. Programs

The Company is requesting approval of eight residential and eight business DSM programs. The program tariff sheets follow.

## B. DSIM

**DSIM Tariff**

GMO is proposing to continue recovering program costs, the TD and the Performance Incentive costs in a DSIM tracker. If during the review process of this filing parties agree to convert the GMO MEEIA tracker recovery mechanism to a rider, the Company would be prepared to do so and is including an exemplar DSIM Rider tariff.

LETTER OF TRANSMITTAL

KCP&L Greater Missouri Operations Company
August 28, 2015

To the Public Service Commission, State of Missouri, Jefferson City:

Accompanying schedules issued by KCP&L Greater Missouri Operations Company are sent to you for filing in compliance with the requirements of the Public Service Commission Law.

P.S.C. MO. No. 1 Fourteenth Revised Sheet No. R-3
P.S.C. MO. No. 1 First Revised Sheet No. R-3.01
P.S.C. MO. No. 1 First Revised Sheet No. R-63.22 through R-63.26
P.S.C. MO. No. 1 Fourth Revised Sheet No. R-68
P.S.C. MO. No. 1 Original Sheet Nos. R-73 through R-109

Effective January 1, 2016

Tim Rush, Director – Regulatory Affairs

**KCP&L Greater Missouri Operations Company** For All Territory Served as L&P and MPS
**KANSAS CITY, MO 64106**

RULES AND REGULATIONS
ELECTRIC

**KCP&L Greater Missouri Operations Company** For All Territory Served as L&P and MPS
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RULES AND REGULATIONS
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RULES AND REGULATIONS
ELECTRIC

10.12 MPower Rider (FROZEN)

PURPOSE

This voluntary rider (MPOWER Rider or Rider) is designed to reduce customer load during peak periods to help defer future generation capacity additions and provide for improvements in energy supply. MPower is considered a curtailable rate schedule.

This Program is offered in accordance with Section 393.1075, RSMo. Supp. 2009 (the Missouri Energy Efficiency Investment Act).

AVAILABILITY

This Rider is available to any Customer currently receiving or requesting electric service under any generally available non-residential rate schedule. The Customer must have a load curtailment capability of at least 25 kW during the Curtailment Season and within designated Curtailment Hours, and must agree to establish Firm Power Levels as set forth herein. Availability is further subject to the economic and technical feasibility of the installation of required Company equipment. The Company reserves the right to limit the total Curtailable Load determined under this Rider. Customer participation is limited to fund availability and the Company reserves the right to modify or terminate this Program at any time, subject to Commission approval.

Unless otherwise provided for in the tariff sheets governing a particular program, customers may participate in multiple programs, but may receive only one incentive per measure.

Pursuant to Section 393.1075 (14) RSMo, any customer who has received a state tax credit under Section 135.350 through 135.362, RSMo, or under Sections 253.545 through 253.561, RSMo. shall not be eligible for participation in this program due to the monetary incentives offered to the customer. As provided for in the Commission's rules, customer shall attest to non-receipt of any such tax credit during the application process and acknowledge that the penalty for a customer who provides false documentation is a class A misdemeanor.

Pursuant to Missouri Rule 4 CSR 240-20.094(6)(A): Any customer meeting one (1) or more of the following criteria shall be eligible to opt-out of participation in utility-offered demand side programs:

1. The customer has one (1) or more accounts within the service territory of the electric utility that has a demand of the individual accounts of five thousand (5,000) kW or more in the previous twelve (12) months;
2. The customer operates an interstate pipeline pumping station, regardless of size; or
3. The customer has accounts within the service territory of the electric utility that have, in aggregate across its accounts, a coincident demand of two thousand five hundred (2,500) kW or more in the previous twelve (12) months, and the customer has a comprehensive demand-side or energy efficiency program and can demonstrate an achievement of savings at least equal to those expected from utility-provided programs.
    A. For utilities with automated meter reading and/or advanced metering infrastructure capability, the measure of demand is the customer coincident highest billing demand of the individual accounts during the twelve (12) months preceding the opt-out notification.

A customer electing to opt-out under requirements 1 and 2 above must provide written notice to the electric utility no earlier than September 1 and not later than October 30 to be effective for the following calendar year. Customers electing to opt-out under requirement 3 above must provide notice to the utility and the manager of the energy resource analysis section of the commission during the stated timeframe. Customers electing to opt-out shall still be allowed to participate in interruptible or curtailable rate schedules or tariffs offered by the electric utility.

This Program is not available after December 31, 2015.

**KCP&L Greater Missouri Operations Company** For All Territory Served as L&P and MPS
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RULES AND REGULATIONS
ELECTRIC

MPower Rider (FROZEN)

(continued)

AGGREGATION OF A CUSTOMER'S MULTIPLE ACCOUNTS

For the purposes of this Rider only and at the Company's option, a Customer with multiple accounts may request that some or all of its accounts be aggregated with respect to Estimated Peak Demands, Curtailable Loads and Firm Power Levels, so long as each account in the aggregation is able to provide a Curtailable Load of at least 25 kW.

The aggregated account will be treated as a single account for purposes of calculating the Program Participation Payments, Curtailment Occurrence Payments and Penalties.

TERM OF CONTRACT

Contracts under this Rider shall be for a one-year, three-year or five-year term. Thereafter, Customers may enter into a new contract for a term of one-year, three, or five years subject to the terms and conditions of this Rider as may be modified from time to time. Written notice by either the Customer or Company to terminate a contract must be given at least thirty (30) days prior to commencement of the Curtailment Season.

CURTAILMENT SEASON

The Curtailment Season shall be June 1 through September 30. The Curtailment Season will exclude Independence Day and Labor Day, or the days celebrated as such.

CURTAILMENT HOURS

Curtailment will occur during the hours of 12:00 noon through 10:00 pm, Monday through Friday during the Curtailment Season. The Curtailment Hours associated with a Curtailment Event will be established at the time of the Curtailment Notification.

CURTAILMENT NOTIFICATION

Customers will receive curtailment notification a minimum of four (4) hours prior to the start time of a Curtailment Event.

CURTAILMENT LIMITS

The Customer contract shall specify the Maximum Number of Curtailment Events for which the Customer agrees to curtail load during each Curtailment Season. The Maximum Number of Curtailment Events shall be at least one (1) but shall not exceed ten (10) separate occurrences per Curtailment Season. Each Curtailment Event shall be no less than two and no more than eight consecutive hours and no more than one occurrence will be required per day. The Company may call a Curtailment Event no more than three consecutive days per calendar week. The cumulative hours of Curtailment Hours per Customer shall not exceed eighty (80) hours in any Curtailment Season.

ESTIMATED PEAK DEMANDS

The Estimated Peak Demand is the average of the Customer's Monthly Maximum Demand for Monday through Friday between 12:00 noon and 10:00 pm for June 1 through September 30 from the previous year.

The Company may use such other data or methodology as may be appropriate to establish the Estimated Peak Demand.

**KCP&L Greater Missouri Operations Company** For All Territory Served as L&P and MPS
**KANSAS CITY, MO 64106**

RULES AND REGULATIONS
ELECTRIC

MPower Rider (FROZEN)

(continued)

ESTIMATED PEAK DEMAND MODIFICATIONS

The Company may review and, if necessary, adjust the Customer's Estimated Peak Demand based on evidence that the Customer's actual peak demand has changed, or will change, significantly from the Estimated Peak Demand currently being used to calculate the Customer's Curtailable Load. If a change in the Customer's Estimated Peak Demand results in a change in its Curtailable Load, the Customer shall lose and/or repay its curtailment compensation proportional to the number of days curtailment was not available and the change in the Curtailable Load.

FIRM POWER LEVELS

During the months of June through September, the Customer's Firm Power Level, which is the maximum demand level to be drawn during a Curtailment Event, shall be set at least 25 kW less than the Customer's Estimated Peak Demand.

The Company may use a Test Curtailment to establish the Firm Power Levels for the Customer.

FIRM POWER LEVEL MODIFICATIONS

After the Curtailment Season, and upon ninety (90) days written notice by the Customer, the Firm Power Level may be modified to reflect significant change in Customer load, subject to verification and approval by the Company. At any time the Company may adjust the Customer's Firm Power Level downward based on evidence that the Customer's actual demand has dropped, or will drop, significantly from the Estimated Peak Demand. Any adjusted Firm Power Level shall continue to provide for a Curtailable Load of at least 25 kW. Future customer compensation will be adjusted accordingly for any change in Firm Power Level.

Additionally, for any change in Firm Power Level that decreases Curtailable Load for the Customer shall result in re-evaluation of all curtailment compensation to the Customer including any payment or credits made in advance of the Curtailment Season. The Customer shall repay the Company prior payments/credits made in excess of the curtailment compensation due based on the decreased level of Curtailable Load.

CURTAILABLE LOAD

Curtailable Load shall be that portion of a Customer's Estimated Peak Demand that the Customer is willing and able to commit for curtailment, and that the Company agrees to accept for curtailment. The Curtailable Load shall be the same amount for each month of the contract. Under no circumstances shall the Curtailable Load be less than 25 kW. Curtailable Load is calculated as the difference between the Estimated Peak Demand as determined above, and the Firm Power Level.

**KCP&L Greater Missouri Operations Company** For All Territory Served as L&P and MPS
**KANSAS CITY, MO 64106**

RULES AND REGULATIONS
ELECTRIC

MPower Rider (FROZEN)

(continued)

CUSTOMER COMPENSATION

Customer compensation shall be defined within each Customer contract and will be based on contract term, Maximum Number of Curtailment Events and the number of actual Curtailment Events per Curtailment Season. Timing of all payments/credits shall be specified in the curtailment contract with each Customer. Payments shall be paid to the Customer in the form of a check or bill credit as specified in the contract. The credits shall be applied before any applicable taxes. All other billing, operational, and related provisions of other applicable rate schedules shall remain in effect.

Compensation will include:

PROGRAM PARTICIPATION PAYMENT: For each Curtailment Season, Customer shall receive a payment/credit based upon the contract term, the number of consecutive years under contract, and the Maximum Number of Curtailment Events. The Program Participation Payment for a Curtailment Season is equal to the per kilowatt of Curtailable Load rate as defined in the table below multiplied by the Maximum Number of Curtailment Events stated in the Customer's contract.

| Contract Term | # of Consecutive Years Under Contract | $/kW of Curtailable Load |
|---|---|---|
| One year | 1 | $2.50 |
| One year | 2 | $2.50 |
| One year | 3 | $3.25 |
| One year | 4 | $3.25 |
| One year | 5 or more | $4.50 |
| Three years | 1 to 3 | $3.25 |
| Three years | 4 | $3.25 |
| Three years | 5 or more | $4.50 |
| Five years | Any | $4.50 |

The Program Participation Payment will be divided by the number of months in the Curtailment Season and applied as bill credits equally for each month of the Curtailment Season.

INTIAL PAYMENT: Upon agreement with the Company, a Customer may receive a one-time payment to purchase specific equipment necessary to participate in the MPOWER Rider. The amount of any Initial Payment will be deducted from the net present value (NPV) of the Program Participation Payments expected under the contract as calculated by the Company. The Initial Payment amount, when subtracted from the NPV of the expected Program Participation Payments, may not result in an annual Program Participation Payment of less than $2.50 per kilowatt of Curtailable Load per Curtailment Event.

CURTAILMENT EVENT PAYMENT: The Customer will also receive $0.35 per kW of Curtailable Load for each Curtailment Hour during which the Customer's metered demand is less than or equal to the Customer's Firm Power Level.

NEED FOR CURTAILMENT

Curtailments can be requested for operational or economic reasons. Operational curtailments may occur when physical operating parameters approach becoming a constraint on the generation, transmission, or distribution systems, or to maintain the Company's capacity margin requirement. Economic curtailment may occur when the marginal cost to produce or procure energy, or the opportunity to sell the energy in the wholesale market, is greater than the Customer's retail price.

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MPower Rider (FROZEN)

(continued)

PENALTIES

Failure of the Customer to effect load reduction to its Firm Power Level or lower in response to any Company request for curtailment shall result in the following reduction or refund of Program Participation Payments and Curtailment Occurrence Payments for each such failure as follows:

Reduction of Curtailment Occurrence Payment: Customer will forfeit Curtailment Event Payment for every Curtailment Hour during which it fails to effect load reduction to its Firm Power Level or lower.

Reduction of Program Participation Payment: Customer will receive reduced future Program Participation Payments or a bill debit, in an amount equal to 150% of the Program Participation Payment divided by the Maximum Number of Curtailment Events, the result of which is multiplied by the percentage by which the Customer underperformed during a Curtailment Event.

Any Customer who fails to reduce load to its Firm Power Level on three or more days within any Curtailment Season may be ineligible for this Rider for a period of two years from the date of the third failure.

CURTAILMENT CANCELLATION

The Company reserves the right to cancel a scheduled Curtailment Event prior to the start time of such Curtailment Event. However, if cancellation occurs with less than two hours of the notification period remaining prior to commencement of a Curtailment Event, the canceled Curtailment Event shall be counted as a separate occurrence with a zero-hour duration.

TEST CURTAILMENT

The Company reserves the right to request a Test Curtailment once each year and/or within three months after a Customer's failure to effect load reduction to its Firm Power Level or lower upon any Company request for curtailment. Test Curtailments do not count toward the Maximum Number of Curtailment Events. Customers will not be compensated for Test Curtailments.

VOLUNTARY LOAD REDUCTION

Customers served on this Rider also will be served on the Voluntary Load Reduction Rider, subject to the paragraph entitled "Special Provisions for MPOWER Customers." A separate Contract for service on the Voluntary Load Reduction Rider is not required for customers served on the MPOWER Rider.

ADDITIONAL VOLUNTARY EVENTS

At any time while the Customer's contract is in effect, the Company may request a Customer to participate, on a voluntary basis, in additional Curtailment Events. Customers who are asked and who participate in these additional voluntary curtailments will receive Curtailment Event Payments as outlined previously in this Rider, but will not receive additional Program Participation Payments. This provision applies to all Customers whose contracts are still in force, whether or not they have participated in a number of Curtailment Events equal to their chosen Maximum Number of Curtailment Events.

At its sole discretion, the Company will decide to apply the terms of Voluntary Load Reduction or Additional Voluntary Events for a given Curtailment Event.

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Service will be furnished under and this schedule shall be subject to Company Rules and Regulations.

The above rate or minimum bill does not include franchise, occupational or sales taxes. The Company "Tax and License Rider," "Demand Side Investment Mechanism Rider," and "Fuel Adjustment Clause" are applicable to all service and charges under this schedule.

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13. RESERVED FOR FUTURE USE

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## 15.01 BUSINESS DEMAND-SIDE MANAGEMENT

**PURPOSE:**

The Business Demand-Side Management (DSM) Programs (Programs), which consist of eight programs, are designed to encourage business customers to proactively use energy in such a way as to reduce consumption of electricity or to shift consumption from times of peak demand to times of non-peak demand.

These Programs are offered in accordance with Section 393.1075, RSMo. Supp. 2009 (the Missouri Energy Efficiency Investment Act or MEEIA) and the Commission's rules to administer MEEIA.

**AVAILABILITY:**

Except as otherwise provided in the terms governing a particular program, these Programs are available to any of KCP&L Greater Missouri Operations Company's customers served under GS, SGS, LGS or LPS rate schedules. The Programs are not available to customers electing to opt-out of DSM program funding under 4 CSR 240-20.094(6), and monetary incentives that otherwise would be payable under a program are not available to those that have received a state tax credit under sections 135.350 through 135.362, RSMo, or under sections 253.545 through 253.561, RSMo. As provided for in the Commission's rules, customers shall attest to non-receipt of any such tax credit and acknowledge that the penalty for a customer who provides false documentation is a class A misdemeanor.

A customer may elect not to participate (opt-out) in an electric utility's DSM programs under 4 CSR 240-20.094(6) if they:

- Have at least one account with a demand of 5,000 kW in the previous 12 months with that electric utility, or;
- Operate an interstate pipeline pumping station, or;
- Have multiple accounts with aggregate coincident demand of 2,500 kW in the previous 12 months with that utility and have a comprehensive demand-side or energy efficiency program with achieved savings at least equal to those expected from the utility-provided programs.

A customer electing to opt-out must provide written notice to the electric utility no earlier than September 1 and not later than October 30 to be effective for the following calendar year but shall still be allowed to participate in interruptible or curtailable rate schedules or tariffs offered by the electric utility.

Unless otherwise provided for in the tariff sheets or schedules governing a particular program, customers may participate in multiple programs, but may receive only one Incentive per Measure.

The Company reserves the right to discontinue one or all of these Programs. The Company will file a notice with the PSC in Case No. EO-2015-0241 indicating that it is discontinuing one or all of the Programs. The Company will honor all requests for the Programs received within 30 days of the notice.

**15.01 BUSINESS DEMAND-SIDE MANAGEMENT (continued)**

**DEFINITIONS:**

Unless otherwise defined, terms used in tariff sheets or schedules in Section 15 have the following meanings:

Applicant – A customer who has submitted a program application or has had a program application submitted on their behalf by an agent or trade ally.

Demand-Side Program Investment Mechanism (DSIM) – A mechanism approved by the Commission in KCP&L Greater Missouri Operations Company's filing for demand-side programs approval in Case No. EO-2015-0241.

Energy Efficiency - Measures that reduce the amount of electricity required to achieve a given end use.

Incentive – Any consideration provided by Company directly or through the Program Administrator, including in the form of cash, bill credit, payment to third party, or public education programs, which encourages the adoption of Measures.

Measure – An end-use measure, energy efficiency measure, and energy management measure as defined in 4 CSR 240-22.020(18), (20), and (21).

Participant – End-use customer and/or manufacturer, installer, or retailer providing qualifying products or services to end-use customers.

Program Administrator – The entity selected by Company to provide program design, promotion, administration, implementation, and delivery of services.

Program Partner – A retailer, distributor or other service provider that Company or the Program Administrator has approved to provide specific program services through execution of a Company approved service agreement.

Program Period – The period from January 1, 2016 through December 31, 2018, unless sooner terminated under the TERM provision of this tariff. Programs may have slightly earlier termination dates for certain activities, as noted on the Company website – www.kcpl.com.

Project – One or more Measures proposed by an Applicant in a single application.

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## 15.01 BUSINESS DEMAND-SIDE MANAGEMENT (continued)

Total Resource Cost (TRC) Test – A test of the cost-effectiveness of demand-side programs that compares the avoided utility costs to the sum of all incremental costs of end-use measures that are implemented due to the program (including both Company and Participant contributions), plus utility costs to administer, deliver and evaluate each demand-side program.

**TERM**:

These tariff sheets and the tariff sheets reflecting each specific Business DSM program shall be effective from January 1, 2016 through December 31, 2018, unless another termination date is approved by the Commission.

If the Programs are terminated prior to the end of the Program Period, only Incentives for qualifying Measures that have been installed prior to the Programs' termination will be provided to the customer.

**DESCRIPTION**:

The reduction in energy consumption or shift in peak demand will be accomplished through the following Programs:

- Business Energy Efficiency Rebates - Custom
- Business Energy Efficiency Rebates - Standard
- Business Programmable Thermostat
- Strategic Energy Management
- Block Bidding
- Small Business Direct Install
- Demand Response Incentive

In addition, KCP&L customers also have access to the Online Business Energy Audit

Program details regarding the interaction between Company or Program Administrators and Participants, such as Incentives paid directly to Participants, available Measures, availability of the Program, eligibility, and application and completion requirements may be adjusted through the change process as presented below. Those details, additional details on each Program, and other details such as process flows, application instructions, and application forms will be provided by the Company website, www.kcpl.com.

**CHANGE PROCESS**:

The change process is applicable to changes in program detail regarding the interaction between Company or Program Administrators and Participants, and excludes changes to the ranges of Incentive amounts for each Measure.

1) Identify need for program detail change regarding the interaction between Company or Program Administrators and Participants;
2) Discuss proposed change with Program Administrator;
3) Discuss proposed change with Evaluator;
4) Analyze impact on program and portfolio (cost-effectiveness, goal achievement, etc.);
5) Inform the Staff, Office of the Public Counsel and the Department of Economic Development, Division of Energy, of the proposed change, the time within which it needs to be implemented, provide them the analysis that was done and consider recommendations from them that are received within the implementation timeline (the implementation timeline shall be no less than five business days from the

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**15.01 BUSINESS DEMAND-SIDE MANAGEMENT**

**(continued)**

time that the Staff, Office of the Public Counsel and the Department of Economic Development, Division of Energy, are informed and provided the above-referenced analysis);

6) Take timely received recommendations into account and incorporate them where Company believes it is appropriate to do so;
7) Notify and train customer contact personnel (Customer Service Representatives, Energy Consultants, Business Center) of the changes;
8) Make changes to forms and promotional materials;
9) Update program website;
10) File updated web pages and, if appropriate, updated list of Measures and Incentives amounts in Case No. EO-2015-0241; and
11) Inform Customer, trade allies, etc.

KCP&L Greater Missouri Operations Company will also continue to discuss and provide information on ongoing Program and Portfolio progress at quarterly regulatory advisory group update meetings.

**PROGRAMS' ANNUAL ENERGY AND DEMAND SAVINGS TARGETS:**

Note that targeted energy and demand savings may be shifted between Programs depending on market response, changes in technology, or similar factors. These targets are based on savings at customer meters (excluding transmission and distribution line losses).

| | ***Incremental Annual kWh Savings Targets at Customer Side of Meter*** | | | ***Cumulative Annual Total by Program*** |
|---|---|---|---|---|
| | **2016** | **2017** | **2018** | |
| **Strategic Energy Management** | **4,042,503** | **4,042,503** | **4,042,503** | **12,127,509** |
| **Business Energy Efficiency Rebates-Custom** | **9,754,147** | **10,088,575** | **10,237,210** | **30,079,932** |
| **Business Energy Efficiency Rebates-Standard** | **12,876,153** | **12,904,896** | **12,929,712** | **38,710,761** |
| **Block Bidding** | **5,029,699** | **5,029,699** | **7,544,549** | **17,603,947** |
| **Small Business Direct Install** | **705,332** | **1,430,185** | **1,434,447** | **3,569,964** |
| **Business Programmable Thermostat** | **26,334** | **26,334** | **26,334** | **79,002** |
| **TOTAL** | **32,434,168** | **33,522,192** | **36,214,755** | **102,171,115** |

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**15.01 BUSINESS DEMAND-SIDE MANAGEMENT (continued)**

| | ***Incremental Annual kW Demand Savings Targets at Customer Side of Meter*** | | | ***Cumulative Annual Total by Program*** |
|---|---|---|---|---|
| | **2016** | **2017** | **2018** | |
| **Strategic Energy Management** | **947** | **947** | **947** | **2,841** |
| **Business Energy Efficiency Rebates-Custom** | **2,516** | **2,602** | **2,640** | **7,758** |
| **Business Energy Efficiency Rebates-Standard** | **2,128** | **2,128** | **2,128** | **6,384** |
| **Block Bidding** | **872** | **872** | **1,308** | **3,052** |
| **Small Business Direct Install** | **118** | **237** | **237** | **592** |
| **Business Programmable Thermostat** | **67** | **67** | **67** | **201** |
| **Demand Response Incentive** | **20,000** | **40,000** | **55,000** | **115,000** |
| **TOTAL** | **26,648** | **46,853** | **62,327** | **135,828** |

**PROGRAM COSTS AND INCENTIVES:**

Costs of and Incentives for the Business DSM Programs reflected herein shall be identified in a charge titled "DSIM Charge" appearing as a separate line item on customers' bills and applied to customers' bills as a per kilowatt-hour charge as specified in the GS, SGS, LGS or LPS rate schedules. All customers taking service under said rate schedules shall pay the charge regardless of whether a particular customer utilizes a demand-side program available hereunder, unless they have opted-out as provided for previously.

**PROGRAM DESCRIPTIONS:**

The following pages contain other descriptions and terms for the Programs being offered under this tariff.

**CHANGES IN MEASURES OR INCENTIVES:**

KCP&L Greater Missouri Operations Company may offer the Measures contained in Company's filing approved in Case No. EO-2015-0241. The offering of Measures not contained within the aforesaid filing must be approved by the Commission pursuant to 4 CSR 240-20.094(4). Measures being offered and Incentives available to customers will be listed on Company's website, www.kcpl.com. The Measures and Incentives being offered are subject to change. Customers must consult www.kcpl.com for the list of currently available Measures. Should a Measure or Incentive offering shown on Company's website differ from the corresponding Measure or Incentive offering shown in the currently effective notice filed in Case No. EO-2015-0241, the stated Measure or Incentive offering as shown in the currently effective notice shall govern.

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## 15.02 ONLINE BUSINESS ENERGY AUDIT

**PURPOSE:**

This program provides business customers access, through www.kcpl.com, to analyze the energy efficiency of their businesses, educational materials regarding energy efficiency and conservation, and information on KCP&L's other demand-side management programs.

**PROGRAM PROVISIONS:**

This energy efficiency program is considered educational. Additional details are available at the Company website, www.kcpl.com.

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## 15.03 BUSINESS ENERGY EFFICIENCY REBATES – CUSTOM

**PURPOSE:**

The Business Energy Efficiency Rebates - Custom program is designed to encourage more effective utilization of electric energy through Energy Efficiency improvement opportunities which are available at the time of new equipment purchases, facility modernization, and industrial process improvement. This program provides rebates for Energy Efficiency measures that are not specifically covered under the Business Energy Efficiency Rebates – Standard program. A "Custom Incentive" is a direct payment or bill credit to a Participant for installation of Measures that are part of projects that have been pre-approved by the Program Administrator.

**AVAILABILITY:**

This program is available during the Program Period, and is available to all customers in the classes identified in the Business Demand-Side Management section that also meet Custom Rebate Program Provisions below.

**PROGRAM PROVISIONS:**

This program provides a rebate for installing qualifying high efficiency equipment or systems, or replacing or retrofitting HVAC systems, motors, lighting, pumps or other qualifying equipment or systems with higher energy efficiency equipment or systems. Both new construction projects and retrofit projects are eligible to apply. To become a Participant in the program customers must request a rebate for a project by submitting an application through the Company website (www.kcpl.com) or on paper. Projects must be pre-approved by the Program Administrator before the project start date to be eligible for a rebate. Customer applications will be evaluated and the rebates will be distributed on a first-come basis according to the date of the customer's application.

Rebate applications for different energy saving measures at the same facility may be submitted. An entity with multiple facilities may participate for each facility by submitting an application for each facility. The maximum amount of each rebate will be calculated as a flat rate in cents per kWh saved, up to the customer annual maximum. The cents per kWh saved rate range can be found at www.kcpl.com. The total amount of program (Business Energy Efficiency Rebate – Custom and Standard) rebates that a Participant can receive during a program year is limited to the greater of $500,000 per customer or up to two-times the customer's projected annual Demand-Side Investment Mechanism (DSIM) charge. The rebate for the measure will be issued upon completion of the project's final application process.

After KCP&L Greater Missouri Operations Company reviews projects approved and/or paid during the first six months of a program year, Company may approve applications for additional rebates if the customer has reached its maximum and if Program funds are available.

By applying for the Custom Rebate Program, the customer agrees that the project may be subject to random on-site inspections by the Program Administrator.

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## 15.04 BUSINESS ENERGY EFFICIENCY REBATES - STANDARD

**PURPOSE:**

The Business Energy Efficiency Rebates - Standard program is designed to encourage installation of energy efficient measures in existing facilities. The primary objectives of this program are to provide pre-set incentives to facility owners and operators for the installation of high efficiency equipment and controls and to provide a marketing mechanism for electrical contractors, mechanical contractors, and their distributors to promote energy efficient equipment to end users.

**AVAILABILITY:**

This program is available during the Program Period, and is available to all customers in the classes identified in the Business Demand-Side management section that also meet Standard Rebate Program Provisions below.

**PROGRAM PROVISIONS:**

Company will hire a Program Administrator to implement this program. The Program Administrator will provide the necessary services to effectively implement the program and to strive to attain the energy and demand savings targets. Standard Measures and Incentives will be provided to qualifying participants that provide completed Standard Rebate Applications as indicated below:

- Participant must complete a Standard Rebate Application form, or purchase from pre-qualified equipment distributors, available at www.kcpl.com;
- Participant must provide proof of equipment purchase and installation;
- Measures must be purchased and installed after the effective date of this tariff;
- Measures which receive an Incentive under the Custom Rebate Program are not eligible for this Standard Rebate Program; and
- Standard Measures can be installed as a retrofit in an existing facility.

By applying for the Standard Rebate Program, the Participant agrees that the project may be subject to random on-site inspections by the Program Administrator.

The total amount of program (Business Energy Efficiency Rebate – Custom and Standard) rebates that a Participant can receive during a program year (2016 through 2018) is limited to the greater of $500,000 per customer or up to two-times the customer's projected annual Demand-Side Investment Mechanism (DSIM) charge. The rebate for the measure will be issued upon completion of the project.

**ELIGIBLE MEASURES AND INCENTIVES:**

Standard Incentives filed in Case No. EO-2015-0240 are eligible for program benefits and Incentives and may be offered during the Program Period. These include, but are not limited to, the following equipment types:

- Lighting and Controls
- Motors, Pumps and Variable Frequency Drives
- HVAC (Heating, Ventilation and Air-Conditioning)
- Business Computing
- Food Service and Refrigeration

Eligible Incentives directly paid to program Participant and Measures can be found at www.kcpl.com.

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## 15.05 BLOCK BIDDING

**PURPOSE:**

The Block Bidding program is designed to encourage high-volume energy savings projects from customers and third-party suppliers working on behalf of customers at a lower cost than traditional programs.

**AVAILABILITY:**

This program is available during the Program Period, and is available to all customers in the classes identified in the Business Demand-Side Management section that also meet Block Bidding Program Provisions below.

**PROGRAM PROVISIONS:**

KCP&L Greater Missouri Operations Company will hire a Program Administrator to implement this program. The Program Administrator will provide the necessary services to effectively implement the program and to strive to attain the energy and demand savings targets.

This program seeks to purchase blocks of electric savings by issuing a Request for Proposal (RFP) to eligible customers and third-party suppliers. The RFP details the proposal requirements, as well as the electric savings that must be achieved. Customers and/or third parties submit proposals to deliver the requested block of cost-effective electric energy and/or demand savings.

Bidder proposals are reviewed to (1) verify customer eligibility; (2) ensure completeness and accuracy of proposed energy savings; and (3) screen the proposed measures for cost-effectiveness.

Qualifying bidder proposals are ranked based upon the proposed cost per kWh saved ($/kWh). Program funds are awarded to bidders who meet the above three point criteria and meet Company objectives including lowest $/kWh saved until funding is depleted. Company enters into contracts with bidders that receive program funding. All projects must receive pre- and post-implementation inspections to verify the existing and upgraded equipment.

Further program details can be found at www.kcpl.com.

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## 15.06 STRATEGIC ENERGY MANAGEMENT

### PURPOSE:

The Strategic Energy Management program is designed to provide energy education, technical assistance and company-wide coaching to business customers to encourage behavioral change and transformation with respect to energy use and management. The program provides customers consultative resources and incentives.

### AVAILABILITY:

This program is available during the Program Period, and is available to all customers in the classes identified in the Business Demand-Side Management section that also meeting Strategic Energy Management Program Provisions below.

### PROGRAM PROVISIONS:

Company will hire a Program Administrator and Energy Management Provider to implement this program. The Program Administrator will provide the necessary services to effectively implement the program and to strive to attain the energy and demand savings targets. The Energy Management Provider will serve as project manager, organizational facilitator and savings modeler.

The program includes two programs options:

1. One-on-One Consultative Strategy Energy Management providing the customer with access to an energy expert who works intensively with the customer to integrate energy management into the organization.

2. Strategic Energy Management Cohort which places companies into groups that work together for one year or longer and share best practices.

### ELIGIBLE MEASURES AND INCENTIVES:

Measures filed in Case No. EO-2015-0241 are eligible for program benefits and Incentives and may be offered during the Program Period. Eligible Incentives directly paid to customers and Measures can be found at www.kcpl.com.

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**15.07 SMALL BUSINESS DIRECT INSTALL**

**PURPOSE:**

The Small Business Direct Install program is designed to provide targeted, cost-effective measures to small business customers in a quickly deployable program delivery mechanism.

**AVAILABILITY:**

This program is available to small and medium business customers with an average electric demand of less than or equal to 100 kW per year.

**PROGRAM PROVISIONS:**

KCP&L Greater Missouri Operations Company will hire a Program Administrator to implement this program. The Program Administrator will provide the necessary services to effectively implement the program and to strive to attain the energy and demand savings targets.

This program offers customers an energy assessment which includes potential energy savings and anticipated payback, as well as incentives that cover a portion of equipment and installation costs.

**ELIGIBLE MEASURES AND INCENTIVES:**

Measures filed in Case No. EO-2015-0241 are eligible for program benefits and Incentives and may be offered during the Program Period. These include, but are not limited to, the following:

- Occupancy sensors
- LED exit signs
- Fluorescent lamps

Eligible Incentives directly paid to customers and Measures can be found at www.kcpl.com.

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## 15.08 BUSINESS PROGRAMMABLE THERMOSTAT

**PURPOSE:**

The voluntary Business Programmable Thermostat Program is intended to help reduce system peak load and thus defer the need for additional capacity. The program accomplishes this by cycling the Participants' air conditioning unit(s) temporarily in a KCP&L Greater Missouri Operations Company coordinated effort to limit overall system peak load.

**AVAILABILITY:**

The program is available for the Program Period to any customer currently receiving service under any small general service or medium general service rate schedule. Customers must also have adequate paging and/or radio coverage or constantly connected, Wi-Fi enabled internet service and have a working, central air conditioning system of suitable size and technology to be controlled by the programmable thermostat. Commercial property owner's permission may be required for a tenant to participate.

**CONTROLS AND INCENTIVES:**

Participants will receive a free programmable thermostat that can be controlled via radio or Wi-Fi signals sent to the unit by Company or its assignees. If Participant has a Wi-Fi enabled, programmable thermostat designated as compatible with Company and/or its assignee's communication network, the Participant may elect to enroll their thermostat into the Program. During a curtailment event, Company or its assignee will send a radio or Wi-Fi signal to the thermostat that will cycle the Participant's air conditioner. Participants may also receive additional monetary incentives to participate in the Program, pursuant to the Program's parameters as outlined on the Company website and/or Program enrollment portal. Participants may use the programmable thermostat throughout the year to improve heating and cooling efficiency.

**CYCLING METHODS:**

Company may elect to cycle Participants' air conditioner units either by raising the thermostat setting two to four degrees during the curtailment event which is typically three to six hours, or by directly cycling the compressor unit.

**NOTIFICATION:**

Company will notify Participants of a curtailment event via a website and/or on the thermostat or via push notification on their smart phone. The notification can occur prior to or at the start of a curtailment event.

**CURTAILMENT SEASON:**

The Curtailment Season will extend from June 1 to September 30.

## 15.08 BUSINESS PROGRAMMABLE THERMOSTAT

**(continued)**

**CURTAILMENT LIMITS:**

KCP&L Greater Missouri Operations Company may call a curtailment event any weekday, Monday through Friday, excluding Independence Day and Labor Day, or any day officially designated as such. A curtailment event occurs whenever the thermostat is being controlled by Company or its assignees. Company may call a maximum of one curtailment event per day per Participant lasting no longer than four (4) hours per Participant. Company is not required to curtail all Participants simultaneously and may stagger curtailment events across participating Participants.

**CURTAILMENT OPT OUT PROVISION:**

A Participant may opt out of any air conditioning cycling curtailment event during the Curtailment Season by notifying Company at any time prior to or during a curtailment event. Participant may opt out of an ongoing event via their smart phone or by the thermostat itself. Notification must be communicated to Company by using Company's website (www.kcpl.com) or by calling Company at the telephone number provided with the air conditioner cycling agreement.

**NEED FOR CURTAILMENT:**

Curtailments may be requested for operational or economic reasons. Operational curtailments may occur when any physical operating parameter(s) approaches a constraint on the generation, transmission or distribution systems or to maintain Company's capacity margin requirement. Economic reasons may include any occasion when the marginal cost to produce or procure energy or the price to sell the energy in the wholesale market is greater than a customer's retail price.

**CONTRACT TERM:**

Initial contracts will be for a period of three years, terminable thereafter on 90 days written notice. At the end of the initial term, if the thermostat was provided free of charge to the Participant, then the thermostat becomes the Participant's property. The customer will remain subject to curtailment unless they make a request with Company or its assignees to be removed from the program. However, so long as the agreement to participate in the Program is in force, Company will provide maintenance and repair to the programmable thermostat as may be required due to normal use. If the Participant has the Company provided thermostat and leaves the program prior to the end of the initial contract, Company will have 60 days thereafter to remove the thermostat and/or other control equipment; otherwise, it becomes the Participant's property. Company will also have a separate Customer Program Participation Agreement outlining Customer and Company responsibilities, and additional information concerning data privacy and Program termination for customers who participate in any studies that will analyze and evaluate customers' behavior and usage of thermostat, and associated software.

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## 15.09 DEMAND RESPONSE INCENTIVE

**PURPOSE:**

This voluntary program is designed to reduce customer load during peak periods to help defer future generation capacity additions and provide for improvements in energy supply.

**AVAILABILITY:**

This program is available during the Program Period, and is available to all customers in the classes identified in the Business Demand-Side Management section that also meet Demand Response Incentive provisions. The Customer must have a load curtailment capability of at least 25 kW during the Curtailment Season and within designated Curtailment Hours, and must agree to establish Firm Power Levels as set forth herein. Availability is further subject to the economic and technical feasibility of the installation of required Company equipment. The Company reserves the right to limit the total Curtailable Load determined under this program.

A customer may enroll directly with KCP&L or with a KCP&L-approved Aggregator. A KCP&L-approved Aggregator is an entity, appointed by a customer to act on behalf of said Customer with respect to all aspects of the Program, including but not limited to: a) the receipt of notices from KCP&L under this Program; and b) the receipt of incentive payments from KCP&L.

**AGGREGATION OF A CUSTOMER'S MULTIPLE ACCOUNTS:**

For the purposes of this program only and at the Company's option, a Customer with multiple accounts may request that some or all of its accounts be aggregated with respect to Estimated Peak Demands, Curtailable Loads and Firm Power Levels, so long as each account in the aggregation is able to provide a Curtailable Load of at least 25 kW. The aggregated account will be treated as a single account for purposes of calculating the Program Participation Payments, Curtailment Occurrence Payments and Penalties.

**TERM OF CONTRACT:**

Contracts under this program shall be effective as of the date of contract execution and will expire on 12/31/2018. Thereafter, Customers may enter into a new contract subject to the terms and conditions of this program as may be modified from time to time. Written notice by either the Customer or Company to terminate a contract must be given at least thirty (30) days prior to commencement of the Curtailment Season.

**CURTAILMENT SEASON:**

The Curtailment Season shall be determined based upon the method of curtailment, with Customers contracting directly with KCP&L participating in a curtailment season period of June 1 through September 30. The Curtailment Season directly contracted Customers will exclude Independence Day and Labor Day, or the days celebrated as such. Customers contracted with and participating in a KCP&L-approved Aggregator's portfolio shall experience a mutually agreed upon curtailment season pursuant to the terms of the KCP&L-approved Aggregator's contract with the Customer, which may extend the Curtailment Season from January 1 through December 31.

KCP&L is not required to curtail all Participants simultaneously and may stagger curtailment events across participating Participants.

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## 15.09 DEMAND RESPONSE INCENTIVE

**(continued)**

**CURTAILMENT LIMITS:**

The Customer contract shall specify the Maximum Number of Curtailment Events for which the Customer agrees to curtail load during each Curtailment Season. For customers contracting directly with KCP&L Greater Missouri Operations Company, the Maximum Number of Curtailment Events shall be at least one (1) but shall not exceed ten (10) separate occurrences per Curtailment Season. Each Curtailment Event shall be no more than eight consecutive hours and no more than one occurrence will be required per day. The Company may call a Curtailment Event no more than three consecutive days per calendar week. The cumulative hours of Curtailment Hours per Customer shall not exceed eighty (80) hours in any Curtailment Season.

For Customers contracted through a Company-approved Aggregator, the Maximum Number of Curtailment Events, Duration of Curtailment Events and Frequency of Curtailment Events shall be defined within the Customer's contract and mutually agreed upon by Company, the Customer and the Aggregator.

**ESTIMATED PEAK DEMANDS:**

The Estimated Peak Demand is the average of the Customer's Monthly Maximum Demand for Monday through Friday between 12:00 noon and 8:00 pm for June 1 through September 30 from the previous year.

The Company may use such other data or methodology as may be appropriate to establish the Estimated Peak Demand.

**ESTIMATED PEAK DEMAND MODIFICATIONS:**

The Company may review and, if necessary, adjust the Customer's Estimated Peak Demand based on evidence that the Customer's actual peak demand has changed, or will change, significantly from the Estimated Peak Demand currently being used to calculate the Customer's Curtailable Load. If a change in the Customer's Estimated Peak Demand results in a change in its Curtailable Load, the Customer shall lose and/or repay its curtailment compensation proportional to the number of days curtailment was not available and the change in the Curtailable Load.

**FIRM POWER LEVELS:**

The Customer's Firm Power Level, which is the maximum demand level to be drawn during a Curtailment Event, shall be set at least 25 kW less than the Customer's Estimated Peak Demand.

The Company may use a Test Curtailment to establish the Firm Power Levels for the Customer.

**FIRM POWER LEVEL MODIFICATIONS:**

The Firm Power Level may be modified to reflect significant change in Customer load, subject to verification and approval by the Company. At any time the Company may adjust the Customer's Firm Power Level downward based on evidence that the Customer's actual demand has dropped, or will drop, significantly from the Estimated Peak Demand. Any adjusted Firm Power Level shall continue to provide for a Curtailable Load of at least 25 kW. Future customer compensation will be adjusted accordingly for any change in Firm Power Level.

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**15.09 DEMAND RESPONSE INCENTIVE**

**(continued)**

**FIRM POWER LEVEL MODIFICATIONS: (continued)**

Additionally, for any change in Firm Power Level that decreases Curtailable Load for the Customer shall result in re-evaluation of all curtailment compensation to the Customer including any payment or credits made in advance of the Curtailment Season. The Customer shall repay the Company prior payments/credits made in excess of the curtailment compensation due based on the decreased level of Curtailable Load.

**CURTAILABLE LOAD:**

Curtailable Load shall be that portion of a Customer's Estimated Peak Demand that the Customer is willing and able to commit for curtailment, and that the Company agrees to accept for curtailment. The Curtailable Load shall be the same amount for each month of the contract. Under no circumstances shall the Curtailable Load be less than 25 kW. Curtailable Load is calculated as the difference between the Estimated Peak Demand as determined above, and the Firm Power Level.

**CUSTOMER COMPENSATION:**

Customer compensation shall be defined within each Customer contract and will be based on contract term, Maximum Number of Curtailment Events and the number of actual Curtailment Events per Curtailment Season. Timing of all payments/credits shall be specified in the curtailment contract with each Customer. Payments shall be paid to the Customer by Company in the form of a check or bill credit as specified in the contract or by a Company-approved Aggregator as defined within the Customer's contract. The credits shall be applied before any applicable taxes. All other billing, operational, and related provisions of other applicable rate schedules shall remain in effect.
Compensation will include:

**PROGRAM PARTICIPATION PAYMENT:**

For each Curtailment Season, Customer shall receive a payment/credit based upon the incentive structure outlined within the contract term. The Program Participation Payment for a Curtailment Season is equal to the per kilowatt of Curtailable Load rate as defined in the Customer's contract.

The Program Participation Payment will be divided by the number of months in the Curtailment Season and applied as bill credits equally for each month of the Curtailment Season.

Curtailment Occurrence Payment: The Customer will also receive $0.35 per kW of Curtailable Load for each Curtailment Hour during which the Customer's metered demand is less than or equal to his Firm Power Level.

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## 15.09 DEMAND RESPONSE INCENTIVE

**(continued)**

**NEED FOR CURTAILMENT:**

Curtailments can be requested for operational or economic reasons. Operational curtailments may occur when physical operating parameters approach becoming a constraint on the generation, transmission, or distribution systems, or to maintain the Company's capacity margin requirement. Economic curtailment may occur when the marginal cost to produce or procure energy, or the opportunity to sell the energy in the wholesale market, is greater than the Customer's retail price.

**ENERGY PURCHASE OPTION:**

At the Company's option and the Customer's request, during a Curtailment Event called for economic reasons, the Customer may purchase energy above its Firm Power Level from the Company at a price per kilowatt-hour determined at the beginning of a Curtailment Event. A Curtailment Event Payment will not be paid to Customers for Curtailment Events where this option is used. Customer will not have the option to purchase energy during a Curtailment Event called for operational reasons.

**PENALTIES:**

Failure of the Customer to effect load reduction to its Firm Power Level or lower in response to any Company request for curtailment shall result in the following reduction or refund of Program Participation Payments and Curtailment Occurrence Payments for each such failure as follows:

Reduction of Program Participation Payment: Customer will receive reduced future Program Participation Payments or a bill debit, in an amount equal to 150% of the Program Participation Payment divided by the Maximum Number of Curtailment Events, the result of which is multiplied by the percentage by which the Customer underperformed during a Curtailment Event.

Any Customer who fails to reduce load to its Firm Power Level on three or more days within any Curtailment Season may be ineligible for this program for a period of two years from the date of the third failure.

**CURTAILMENT CANCELLATION:**

The Company reserves the right to cancel a scheduled Curtailment Event prior to the start time of such Curtailment Event. However, if cancellation occurs with less than two hours of the notification period remaining prior to commencement of a Curtailment Event, the canceled Curtailment Event shall be counted as a separate occurrence with a zero-hour duration.

**TEST CURTAILMENT:**

The Company reserves the right to request a Test Curtailment once each year and/or within three months after a Customer's failure to effect load reduction to its Firm Power Level or lower upon any Company request for curtailment. Test Curtailments do not count toward the Maximum Number of Curtailment Events. Customers will not be compensated for Test Curtailments.

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**15.09 DEMAND RESPONSE INCENTIVE**

**(continued)**

**VOLUNTARY LOAD REDUCTION:**

Customers served in this Program also will be served on the Voluntary Load Reduction Rider (Schedule VLR), subject to the paragraph entitled "Special Provisions for Customers Served on Schedule MP." A separate Contract for service on Schedule VLR is not required for customers served under this Program.

**ADDITIONAL VOLUNTARY EVENTS**

At any time while the Customer's contract is in effect, the Company may request a Customer to participate, on a voluntary basis, in additional Curtailment Events. Customers who are asked and who participate in these additional voluntary curtailments will receive Curtailment Event Payments as outlined previously in this tariff, but will not receive additional Program Participation Payments. This provision applies to all Customers whose contracts are still in force, whether or not they have participated in a number of Curtailment Events equal to their chosen Maximum Number of Curtailment Events.

At its sole discretion, the Company will decide to apply the terms of Voluntary Load Reduction or Additional Voluntary Events for a given Curtailment Event.

**CURTAILMENT EXCESS OF CUSTOMER LOAD:**

Upon Company's request and approval, the Customer may generate energy in excess of its load and deliver the excess energy to the Company. When excess energy is delivered to the Company during Company requested curtailments under this Program, and with Company approval, such excess energy will be treated as negative energy consumption and will be measured to reduce the Customer's metered energy use for the month.

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**15.10 RESERVED FOR FUTURE USE**

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**15.11 RESERVED FOR FUTURE USE**

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**15.12 RESERVED FOR FUTURE USE**

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**15.13 RESERVED FOR FUTURE USE**

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**15.14 RESERVED FOR FUTURE USE**

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## 15.15 RESIDENTIAL DEMAND-SIDE MANAGEMENT

**PURPOSE:**

The Residential Demand-Side Management (DSM) Programs (Programs), which consist of eight programs, are designed to encourage residential customers to proactively use energy in such a way as to reduce consumption of electricity or to shift consumption from times of peak demand to times of non-peak demand.

These Programs are offered in accordance with Section 393.1075, RSMo. Supp. 2009 (the Missouri Energy Efficiency Investment Act or MEEIA) and the Commission's rules to administer MEEIA.

**AVAILABILITY:**

Except as otherwise provided in the terms governing a particular program, these Programs are available to residential customers in KCP&L Greater Missouri Operations Company's service area being served under any residential rate schedule.

Monetary incentives are not payable to customers that have received a state tax credit under sections 135.350 through 135.362, RSMo, or under sections 253.545 through 253.561, RSMo. As provided for in the Commission's rules, customers shall attest to non-receipt of any such tax credit and acknowledge that the penalty for a customer who provides false documentation is a class A misdemeanor.

Unless otherwise provided for in the tariff sheets or schedules governing a particular program, customers may participate in multiple programs, but may receive only one Incentive per Measure.

The Company reserves the right to discontinue one or all of these Programs. The Company will file a notice with the PSC in Case No. EO-2015-0241 indicating that it is discontinuing one or all of the Programs. The Company will honor all requests for the Programs received within 30 days of the notice.

**DEFINITIONS:**

Unless otherwise defined, terms used in tariff sheets or schedules in Section 23 have the following meanings:

Applicant – A customer who has submitted a program application or has had a program application submitted on their behalf.

Demand-Side Program Investment Mechanism (DSIM) – A mechanism approved by the Commission in Company's filing for demand-side program approval in Case No. EO-2015-0241.

Energy Efficiency - Measures that reduce the amount of electricity required to achieve a given end use.

Incentive – Any consideration provided by KCP&L directly or through the Program Administrator and Program Partners, including buydowns, markdowns, rebates, bill credits, payment to third parties, direct installations, giveaways and education, which encourages the adoption of Measures.

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**(continued)**

Measure – An end-use measure, energy efficiency measure, and energy management measure as defined in 4 CSR 240-22.020(18), (20), and (21).

Participant – End-use customer and/or manufacturer, installer, or retailer providing qualifying products or services to end-use customers.

Program Administrator – The entity selected by Company to provide program design, promotion, administration, implementation, and delivery of services.

Program Partner – A retailer, distributor or other service provider that Company or the Program Administrator has approved to provide specific program services through execution of a Company approved service agreement.

Program Period – The period from January 1, 2016 through December 31, 2018, unless sooner terminated under the TERM provision of this tariff. Programs may have slightly earlier deadlines for certain activities, as noted on the Company website – www.kcpl.com.

Total Resource Cost (TRC) Test – A test of the cost-effectiveness of demand-side programs that compares the avoided utility costs to the sum of all incremental costs of end-use measures that are implemented due to the program (including both Company and Participant contributions), plus utility costs to administer, deliver and evaluate each demand-side program.

**TERM:**

These tariff sheets and the tariff sheets reflecting each specific residential DSM program shall be effective from January 1, 2016 through December 31, 2018, unless another termination date is approved by the Commission.

If the Programs are terminated prior to the end of the Program Period, only Incentives for qualifying Measures that have been installed prior to the Programs' termination will be provided to the customer.

**DESCRIPTION:**

The reduction in energy consumption or shift in peak demand will be accomplished through the following Programs:

- Home Appliance Recycling Rebate
- Whole House Efficiency
- Home Energy Report
- Income-Eligible Multi-Family
- Home Lighting Rebate
- Income-Eligible Weatherization
- Residential Programmable Thermostat

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## 15.15 RESIDENTIAL DEMAND-SIDE MANAGEMENT

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In addition, KCP&L Greater Missouri Operations Company residential customers have access to the Online Home Energy Audit.

Program details regarding the interaction between Company or Program Administrators and Participants, such as Incentives paid directly to Participants, available Measures, availability of the program, eligibility, and application and completion requirements may be adjusted through the change process as presented below. Those details, additional details on each program, and other details such as process flows, application instructions, and application forms will be provided on the Company website, www.kcpl.com.

**CHANGE PROCESS:**

The change process is applicable to changes in program detail regarding the interaction between Company or Program Administrators and Participants in the Programs, and excludes changes to the ranges of Incentive amounts for each Measure.

1) Identify need for program detail change regarding the interaction between Company or Program Administrators and Participants in the Programs;
2) Discuss proposed change with Program Administrator;
3) Discuss proposed change with Evaluator;
4) Analyze impact on program and portfolio (cost-effectiveness, goal achievement, etc.);
5) Inform the Staff, Office of the Public Counsel and the Department of Economic Development, Division of Energy, of the proposed change, the time within which it needs to be implemented, provide them the analysis that was done and consider recommendations from them that are received within the implementation timeline (the implementation timeline shall be no less than five business days from the time that the Staff, Office of the Public Counsel and the Department of Economic Development, Division of Energy, are informed and provided the above-referenced analysis);
6) Take timely received recommendations into account and incorporate them where Company believes it is appropriate to do so;
7) Notify and train customer contact personnel (Customer Service Representatives, Energy Consultants, Business Center) of the changes;
8) Make changes to forms and promotional materials;
9) Update program website;
10) File updated web pages and, if appropriate updated list of Measures and Incentive amounts in Case No. EO-2015-0241; and
11) Inform Customers, trade allies, Program Partners, etc.

Company will also continue to discuss and provide information on ongoing program and portfolio progress at quarterly regulatory advisory group update meetings.

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## 15.15 RESIDENTIAL DEMAND-SIDE MANAGEMENT

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**PROGRAMS' ANNUAL ENERGY AND DEMAND SAVINGS TARGETS:**

Note that targeted energy and demand savings may be shifted between programs depending on market response, changes in technology, or similar factors. These targets are based on savings at customer meters (excluding transmission and distribution line losses).

| | ***Expected Annual kWh Savings Targets at Customer Side of Meter*** | | | ***Sum of Annual by Program*** |
|---|---|---|---|---|
| | **2016** | **2017** | **2018** | |
| **Home Appliance Recycling Rebate** | **2,488,660** | **2,717,383** | **2,899,467** | **8,105,510** |
| **Whole House Efficiency** | **1,620,892** | **3,393,630** | **3,393,630** | **8,408,152** |
| **Home Energy Report** | **18,964,436** | **20,975,197** | **21,070,772** | **61,010,405** |
| **Home Lighting Rebate** | **15,254,120** | **15,481,034** | **14,913,992** | **45,649,146** |
| **Income-Eligible Multi-Family** | **87,793** | **175,440** | **175,676** | **438,909** |
| **Income Eligible Weatherization** | **143,458** | **143,458** | **143,458** | **430,374** |
| **Residential Programmable Thermostat** | **2,048,046** | **2,048,046** | **2,048,046** | **6,144,138** |
| **TOTAL** | **40,607,405** | **44,934,188** | **44,645,041** | **130,186,634** |

| | ***Expected Annual kW Demand Savings Targets at Customer Side of Meter*** | | | ***Sum of Annual by Program*** |
|---|---|---|---|---|
| | **2016** | **2017** | **2018** | |
| **Home Appliance Recycling Rebate** | **415** | **453** | **484** | **1,352** |
| **Whole House Efficiency** | **518** | **1,093** | **1,093** | **2,704** |
| **Home Energy Report** | **3,530** | **4,215** | **4,215** | **11,960** |
| **Home Lighting Rebate** | **1,573** | **1,594** | **1,531** | **4,698** |
| **Income-Eligible Multi-Family** | **32** | **64** | **64** | **160** |
| **Income Eligible Weatherization** | **53** | **53** | **53** | **159** |
| **Residential Programmable Thermostat** | **5,230** | **5,230** | **5,230** | **15,690** |
| **TOTAL** | **11,351** | **12,702** | **12,670** | **36,723** |

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## 15.15 RESIDENTIAL DEMAND-SIDE MANAGEMENT

**(continued)**

### PROGRAM COSTS AND INCENTIVES

Costs of and incentives for the Residential DSM Programs reflected herein shall be reflected in a charge titled "DSIM Charge" appearing as a separate line item on customers' bills and applied to customers' bills as a per kilowatt-hour charge as specified in the residential rate schedules. All customers taking service under said rate schedule shall pay the charge regardless of whether a particular customer utilizes a demand-side program available hereunder.

### PROGRAM DESCRIPTIONS:

The following pages contain other descriptions and terms for the Programs being offered under this tariff.

### CHANGES IN MEASURES OR INCENTIVES:

Company may offer the Measures contained in KCP&L Greater Missouri Operations Company's filing approved in Case No. EO-2015-0241. The offering of Measures not contained within the aforesaid filing must be approved by the Commission pursuant to 4 CSR 240-20.094(4). Measures being offered and Incentives available to customers will be listed on Company's website, www.kcpl.com. The Measures and Incentives being offered are subject to change. Customers must consult www.kcpl.com for the list of currently available Measures. Should a Measure or Incentive offering shown on Company's website differ from the corresponding Measure or Incentive offering shown in the currently effective notice filed in Case No. EO-2015-0241, the stated Measure or Incentive offering as shown in the currently effective notice shall govern.

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## 15.16 HOME APPLIANCE RECYCLING REBATE

**PURPOSE:**

This voluntary program is designed to incentivize residential customers to remove inefficient refrigerators and freezers from the electric system and dispose of them in an environmentally safe and responsible manner.

**AVAILABILITY:**

The Home Appliance Recycling Rebate is available during the Program Period. All KCP&L Greater Missouri Operations Company customers receiving service under any residential rate schedule are eligible for this program.

**PROGRAM PROVISIONS:**

Company will hire a Program Administrator to implement this program. The Program Administrator will provide the necessary services to effectively implement the program and strive to attain the energy and demand savings targets. The following process will be followed to serve Participants in the program:

- Participants may schedule the appliance pickup at the Company website, www.kcpl.com.
- At the Participant's address, the Program Partner verifies the unit is eligible and removes it from the home.
- The unit is taken to the Program Partner facility and all materials are recovered for recycling or disposed of in accordance with the Environmental Protection Agency's approved practices.
- Incentives are sent to Participants following the pick-up of the qualified unit.

**ELIGIBLE MEASURES AND INCENTIVES:**

Recycling-related Measures filed in Case No. EO-2015-0241 are eligible for program benefits and Incentives and may be offered for promotion during the Program Period. Appliances shall be in working order at the time of turn in and a 2001 model or older. Refrigerators or freezers must be empty, defrosted and at least 10 cubic feet. Program details and Incentives paid directly to customers or Program Partners may be found at www.kcpl.com.

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## 15.17 WHOLE HOUSE EFFICIENCY

**PURPOSE:**

The Whole House Efficiency program is designed to encourage residential Customers to implement whole-house improvements to homes by promoting home energy audits, comprehensive retrofit services and high efficiency mechanical equipment.

**AVAILABILITY:**

This program is available during the Program Period, and is available to any Customer receiving service under any generally available residential rate schedule offered by the Company. Residential customers that rent a residence must receive the written approval of the homeowner/landlord to participate in the program.

**PROGRAM PROVISIONS:**

KCP&L Greater Missouri Operations Company will hire a Program Administrator to implement this program. The Program Administrator will provide the necessary services to effectively implement the program and to strive to attain the energy and demand savings targets.

The program consists of three tiers:

**Tier 1: Home Energy Audit**. Customer receives an in-home energy audit and direct installation of low-cost measures. The audit will identify potential efficiency improvements.

**Tier 2: Weatherization Measures**. Customers that have completed Tier 1 are eligible to receive incentives for the purchase and installation of air sealing, insulation and ENERGY STAR® windows.

**Tier 3: HVAC Equipment**. Customers are eligible to receive incentives for qualifying HVAC equipment installed by a participating contractor. Customers are not required to participate in Tier 1 or 2 to participate in Tier 3.

**ELIGIBLE MEASURES AND INCENTIVES:**

Measures filed in Case No. EO-2015-0241 are eligible for program benefits and Incentives and may be offered during the Program Period. Eligible Incentives directly paid to customers and Measures can be found at www.kcpl.com.

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## 15.18 HOME ENERGY REPORT PROGRAM

**PURPOSE:**

The Home Energy Report program provides residential customers with an energy report that provides a comparison of the household energy usage information with similar type customers or "neighbors." The intention of the energy report is to provide information that will influence customers' behavior in such a way that they lower their energy usage. This is a behavioral modification program.

**AVAILABILITY:**

The program is directed to customers currently receiving service under any residential rate schedule. KCP&L Greater Missouri Operations Company will select 132,000 customers for participation during the Program Period. The program will operate as an opt-out only program, meaning Company will select customers for participation in the program and will allow opt-out if desired. A customer choosing to opt-out of the program should contact Company to have their premise removed from the reporting group.

**PROGRAM PROVISIONS:**

Company will hire a Program Administrator to implement this program. The Program Administrator will deliver a turn-key program with responsibility for all aspects of customer selection, report generation, energy savings quantification, customer communications and reporting.

Additional program provisions may be found at www.kcpl.com.

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## 15.19 HOME LIGHTING REBATE

**PURPOSE:**

This voluntary program is designed to promote energy efficient lighting. The program incentivizes the purchase of efficient lighting by providing customers incentives on qualifying Compact Fluorescent Lamps (CFLs) and Light Emitting Diode (LED) technology. The program also distributes free CFLs to the income-eligible community through food banks and other not-for-profit organizations.

**AVAILABILITY:**

The Home Lighting Rebate is available during the Program Period and residential customers may participate in the program by acquiring qualifying products from participating retailers. Customers receive an instant incentive at the point-of-purchase. Additionally, Company may offer lighting measures through an online store with the proper protocols to verify the Participant is a KCP&L Greater Missouri Operations Company customer and will utilize best practices for number of purchases per transaction.

**PROGRAM PROVISIONS:**

Company will hire a Program Administrator to implement this program. The Program Administrator will provide the necessary services to effectively implement the program and strive to attain the energy and demand savings targets.

A Program Administrator may be responsible for items such as incentive processing, rebate processing, communication with the customer to resolve application issues and status reporting associated with the program, as directed by Company.

The program uses a two-pronged approach:

1. Increasing supply of qualifying products through partnerships with retailers, manufacturers and distributors; and
2. Creating demand through consumer awareness and understanding of the lighting technology and the benefits of energy efficiency.

Program promotions will be made available at participating retailers within Company's electric service territory. Participating Program Partners will be listed on the Company website, www.kcpl.com, with store name and location listed as well as any in-store promotions being offered.

**ELIGIBLE MEASURES AND INCENTIVES:**

Home Lighting Rebate Measures filed in Case No. EO-2015-0241 are eligible for program benefits and Incentives and may be offered for promotion during the Program Period. Eligible lighting products and Incentives paid directly to customers or Program Partners may be found at www.kcpl.com.

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## 15.20 INCOME-ELIGIBLE MULTI-FAMILY

### PURPOSE:

The objective of this program is to deliver long-term energy savings and bill reductions to income-eligible customers in multi-family housing. This will be achieved through directly installed energy savings measures.

### AVAILABILITY:

The Income-Eligible Multi-Family program is available for the Program Period to any customer receiving service under any residential rate schedule, with income qualified dwelling units of multi-family properties (three or more units), with income levels below 200% of federal poverty guidelines who receive electric service from KCP&L Greater Missouri Operations Company.

### PROGRAM PROVISIONS:

Company will hire a Program Administrator to implement this program. The Program Administrator will provide the necessary services to effectively implement the program, including but not limited to direct installation of low-cost measures for income-eligible homeowners and renters in multi-family housing, as well as installation of lighting measures in multi-family common areas at no cost to the customer in the multi-family housing.

Additional program provisions may be found at www.kcpl.com.

### ELIGIBLE MEASURES AND INCENTIVES:

Income-Eligible Measures filed in File No. EO-2015-0241 are eligible for program benefits and incentives and may be offered for promotion during the Program Period. Eligible Measures and Incentives directly paid to customers may be found at www.kcpl.com.

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## 15.21 INCOME-ELIGIBLE WEATHERIZATION

**PURPOSE:**

This voluntary program is intended to assist residential customers in reducing their energy usage by weatherizing the homes of qualified customers.

**AVAILABILITY:**

This program is available for the Program Period to any customer currently receiving service under any residential rate schedule for a minimum of one year prior to completion of an application for weatherization assistance and who also meets the additional customer eligibility requirements defined in the agreement between KCP&L Greater Missouri Operations Company and the Social Service Agency.

**PROGRAM PROVISIONS:**

The program will be administered by Missouri-based Social Service Agencies that are directly involved in qualifying and assisting customers under this program.

Program funds cannot be used for administrative costs except those incurred by the Social Service Agency that is directly related to qualifying and assisting customers under this program. The amount of reimburseable administrative costs per program year shall not exceed 13% of the total program funds that are utilized by the Social Service Agency within a program year, as defined in the agreement between Company and the Social Service Agency.

The total amount of grants offered to a qualifying customer will be defined in the agreement between Company and the Social Service Agency using established criteria for Income-Eligible Weatherization. The average expenditure per customer in each program year shall not exceed the Adjusted Average Expenditure Limit for weatherization determined by the U.S. Department of Energy (DOE) that is applicable for the month that the weatherization is completed.

**CUSTOMER ELIGIBILITY:**

The Social Service Agency will determine an Applicant's eligibility for Income-Eligible Weatherization using the following criteria: the customer's household earnings meet the low income guidelines for weatherization specified by the DOE for the number of persons in the residence, the residence must have energy consumption greater than 3,000 kWh per year, the customer has received electric service from Company for a minimum of one year to completion of an application and other eligibility requirements defined in the agreement between Company and the Social Service Agency.

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## 15.22 RESIDENTIAL PROGRAMMABLE THERMOSTAT

**PURPOSE:**

The voluntary Programmable Thermostat Program is intended to help reduce system peak load and thus defer the need for additional capacity. The program accomplishes this by cycling the Participants' air conditioning unit(s) or heat pump(s) temporarily in a KCP&L Greater Missouri Operations Company coordinated effort to limit overall system peak load.

**AVAILABILITY:**

The program is available for the Program Period to any customer currently receiving service under any residential rate schedule. Customers must also have adequate paging and/or radio coverage or constantly connected, Wi-Fi enabled internet service and have a working, central air conditioning system of suitable size and technology to be controlled by the programmable thermostat. Residential property owner's (owner occupant or landlord for a rental property) permission is required to participate.

**CONTROLS AND INCENTIVES:**

Participants will receive a free programmable thermostat that can be controlled via radio or Wi-Fi signals sent to the unit by Company or its assignees. If customers have a Wi-Fi enabled programmable thermostat designated as compatible with Company and/or its assignee's communication network, the customer may elect to enroll their thermostat into the Program. During a curtailment event, Company or its assignee will send a radio or Wi-Fi signal to the thermostat that will cycle the Participant's air conditioning unit. Participants may also receive additional monetary incentives to participate in the program, pursuant to the Program's parameters as shown on the Company website and/or Program enrollment portal. Participants may use the programmable thermostat throughout the year to improve heating and cooling efficiency.

**CYCLING METHODS:**

Company may elect to cycle Participants' air conditioning units either by raising the thermostat setting two to four degrees during the curtailment event which is typically three to six hours, or by directly cycling the compressor unit.

**NOTIFICATION:**

Company will notify Participants of a curtailment event via a website and/or on the thermostat or via push notification to their smart phone. The notification can occur prior to or at the start of a curtailment event.

**CURTAILMENT SEASON:**

The Curtailment Season will extend from June 1 to September 30.

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## 15.22 RESIDENTIAL PROGRAMMABLE THERMOSTAT

**(continued)**

**CURTAILMENT LIMITS:**

KCP&L Greater Missouri Operations Company may call a curtailment event any weekday, Monday through Friday, excluding Independence Day and Labor Day, or any day officially designated as such. A curtailment event occurs whenever the thermostat is being controlled by Company or its assignees. Company may call a maximum of one curtailment event per day per Participant, lasting no longer than six (6) hours per Participant. Company is not required to curtail all Participants simultaneously and may stagger curtailment events across participating Participants.

**CURTAILMENT OPT OUT PROVISION:**

A Participant may opt out of any air conditioning cycling curtailment event during the Curtailment Season by notifying Company at any time prior to or during a curtailment event and requesting to be opted out. Participant may opt out of an ongoing event via their smart phone or the thermostat itself. Notification must be communicated to Company by using Company's website (www.kcpl.com) or by calling Company at the telephone number provided with the air conditioner cycling agreement.

**NEED FOR CURTAILMENT:**

Curtailments may be requested for operational or economic reasons. Operational curtailments may occur when any physical operating parameter(s) approaches a constraint on the generation, transmission or distribution systems or to maintain Company's capacity margin requirement. Economic reasons may include any occasion when the marginal cost to produce or procure energy or the price to sell the energy in the wholesale market is greater than a customer's retail price.

**CONTRACT TERM:**

Initial contracts will be for a period of three years, terminable thereafter on 90 days written notice. At the end of the initial term, if the thermostat was provided free of charge to the Participant, the thermostat becomes the Participant's property. The customer will remain subject to curtailment unless they make a request with the Company or its assignees to be removed from the program. However, so long as the agreement to participate in the Program is in force, Company will provide maintenance and repair to the programmable thermostat as may be required due to normal use. If the Participant has the Company provided thermostat and leaves the program prior to the end of the initial contract, Company will have 60 days thereafter to remove the thermostat and/or other control equipment; otherwise, it becomes the Participant's property.

Company will also have a separate Customer Program Participation Agreement outlining Customer and Company responsibilities, and additional information concerning data privacy and Program termination for customers who participate in any studies that will analyze and evaluate customers' behavior and usage of thermostat, and associated software.

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## 15.23 ONLINE HOME ENERGY AUDIT

**PURPOSE:**

This program provides residential customers access, through www.kcpl.com, to analyze the energy efficiency of their homes, educational materials regarding energy efficiency and conservation, and information on KCP&L Greater Missouri Operations Company's other demand-side management programs.

**PROGRAM PROVISIONS:**

This energy efficiency program is considered educational. Additional details are available at the Company website, www.kcpl.com.

DEMAND SIDE INVESTMENT MECHANISM RIDER
Schedule DSIM

APPLICABILITY:

This rider is applicable to all non-lighting kilowatt-hours (kWh) of energy supplied to customers under the Company's retail rate schedules, excluding kWh of energy supplied to "opt-out" customers.

Charges passed through this DSIM Rider reflect the charges approved to be collected from the implementation of the Missouri Energy Efficiency Investment Act (MEEIA) Cycle 2 Plan & any remaining charges from the MEEIA Cycle 1 Plan DSIM. Those charges include:

1) Program Costs, TD Share, and Performance Incentive Award (if any) for the MEEIA Cycle 2, including Program Costs and TD Share for any projects completed in 2016-2018 that were started under the MEEIA 2013-2015 Plan and any earned Performance Incentive earned (and ordered) attributable to MEEIA Cycle 1.

2) Reconciliations, with interest, to true-up for differences between the revenues billed under this DSIM Rider and total actual monthly amounts for:

i) Program Costs incurred in Cycle 2 and/or remaining unrecovered amounts for MEEIA Cycle 1.

ii) TD Share incurred in Cycle 2, and/or remaining unrecovered amounts for MEEIA Cycle 1.

iii) Amortization of any Performance Incentive Award ordered by the Missouri Public Service Commission (Commission)

3) Any Ordered Adjustments. Charges under this DSIM Rider shall continue after the anticipated December 31, 2018 end of MEEIA Cycle 2 Plan until such time as the charges described in items i), ii) and iii) in the immediately preceding sentence have been billed.

Charges arising from the MEEIA Cycle 2 Plan that are the subject of this DSIM Rider shall be reflected in one "DSIM Charge" on customers' bills in combination with any charges arising from a rider that is applicable to post-MEEIA Cycle 2 Plan demand-side management programs approved under the MEEIA. This may also include any unrecovered amounts for Program Costs, TD-NSB Share from MEEIA Cycle 1 and any Performance Incentive, etc. earned/remaining from MEEIA Cycle 1 that is expected to begin payout in January 2017. The Cycle 1 Performance Incentive Award methodology can be found in the October 29, 2012 Non-Unanimous Stipulation & Agreement found in EO-2012-0009.

DEFINITIONS:

As used in this DSIM Rider, the following definitions shall apply:

"Company's TD Share" means 24.04% for Residential and 14.40% for Non-Residential of the total gross shared benefits multiplied by the Time-Value Adjustment Factor.

"Effective Period" (EP) means the six (6) months beginning with the billing month of February 2016 and ending with the billing month of June, and each six month period there-after.

DEMAND SIDE INVESTMENT MECHANISM RIDER
Schedule DSIM (Continued)

"Evaluation Measurement & Verification (EM&V) means the performance of studies and activities intended to evaluate the process of the utility's program delivery and oversight and to estimate and/or verify the estimated actual energy and demand savings, utility lost revenue, cost effectiveness, and other effects from demand-side programs.

"Incentive" means any consideration provided by the Company, including buy downs, markdowns, rebates, bill credits, payments to third parties, direct installation, giveaways, and education, which encourages the adoption of program measures. "MEEIA Cycle 2 Plan" consists of the 18 demand-side programs and the DSIM described in the MEEIA Cycle 2 Filing made on August 28, 2015.

"MEEIA Cycle 1 Plan" consists of the 12 demand-side programs and the DSIM (including Program Costs, TD-NSB Share, Performance Incentive, etc.) described in the MEEIA Cycle 1 Filing & corresponding tariffs, which became effective January 26, 2013 through December 31, 2015 and approved in the stipulation and agreement under Docket No EO-2012-0009)

"MEEIA Cycle 2 Plan" consists of the 17 demand-side programs and the DSIM described in the MEEIA Cycle 2 Filing, which became effective January 1, 2016 through December 31, 2018 and approved under Docket No EO-2015-0241.

"kWh/kW Targets" over the MEEIA Cycle 2 Plan:

| | **Targeted Annual Energy Savings (kWh)** | **Targeted Annual Demand Savings (kW)** |
|---|---|---|
| 2016 (Jan. – Dec. ) | 73,041,572 | 37,999 |
| 2017 (Jan. – Dec.) | 78,456,381 | 59,556 |
| 2018 (Jan. – Dec.) | 80,859,795 | 74,998 |
| The Sum of the Annual Targets in 2016 through 2018 | 232,357,748 | 172,553 |

"Program Costs" means program expenditures, including such items as program design; administration; delivery; end-use measures and incentive payments; advertising expense; evaluation, measurement, and verification; market potential studies; and work on a statewide technical resource manual.

DEMAND SIDE INVESTMENT MECHANISM RIDER
Schedule DSIM (Continued)

"Cycle 2 Performance Incentive Award" means the earned incentive as a result of actual performance against planned targets as determined through EM&V.

| Percent of KWh (50%)/Kw (50%) Target** | Performance Incentive Award ($MM) |
|---|---|
| ≤ 60 | $0.00 |
| 70 | $7.00 |
| 80 | $8.00 |
| 90 | $9.00 |
| 100 | $10.00 |
| 110 | $11.00 |
| 120 | $12.00 |
| ≥ 130 | $13.00 |

Note: The percentage of target and the performance incentive are interpolated linearly between award levels.

*Includes income taxes (i.e. results in revenue requirement without adding income taxes). EM&V would reflect no change in avoided costs used in original MEEIA filing made on August 1, 2015 and approved by the Commission.

**Weighting of Energy & Demand Targets are based on the ratio of Energy and Demand Gross Benefits.

"Throughput Disincentive Benefits" means the lifetime avoided costs, used in the August 28, 2015 MEEIA filing and approved by the commission, discounted to the applicable program year,(i.e., avoided energy, capacity, transmission and distribution, and probable environmental compliance costs) for the MEEIA Cycle 2 Plan using the deemed values as described on page 69 of the MEEIA Cycle 2 Report. Present values are determined using the Time-Value Adjustment Factor

"Time-Value Adjustment Factor" means the factor used each month to convert amounts to present value. The factor is [1.065841 ^ (Calendar Year (i.e. applicable program year) – 2016 or 2017 or 2018)].

**DETERMINATION OF DSIM RATES:**

The DSIM during each applicable EP is a dollar per kWh rate for each rate schedule calculated as follows: DSIM = [NPC + NTD + NPI + NOA]/PE

DEMAND SIDE INVESTMENT MECHANISM RIDER
Schedule DSIM (Continued)

Where:

NPC = Net Program Costs for the applicable EP as defined below,

NPC = PPC + PCR

PPC = Projected Program Costs is an amount equal to Program Costs projected by the Company to be incurred during the applicable EP, including any Program Costs incurred for projects completed in 2016-2018 that were started under/during the MEEIA Cycle I Plan.

PCR = Program Costs Reconciliation is equal to the cumulative difference, if any, between the PPC revenues billed resulting from the application of the DSIM through the end of the previous EP and the actual Program Costs incurred through the end of the previous EP (which will reflect projections through the end of the previous EP due to timing of adjustments). Such amounts shall include monthly interest on cumulative over- or under-balances at the Company's monthly Short- Term Borrowing Rate.

NTD = Net Throughput Disincentive for the applicable EP as defined below,

NTD = PTD + TDR

PTD = Projected Throughput Disincentive is the Company's TD Share projected by the Company to be incurred during the applicable EP, including any Program Costs incurred for projects completed in 2016-2018 that were started under/during the MEEIA Cycle 1 Plan.

TDR = Throughput Disincentive Reconciliation is equal to the cumulative difference, if any, between the PTD revenues billed during the previous EP resulting from the application of the DSIM and the Company's TD Share through the end of the previous EP calculated pursuant to the MEEIA Cycle II application, (which will reflect projections through the end of the previous EP due to timing of adjustments). Such amounts shall include monthly interest on cumulative over- or under- balances at the Company's monthly Short-Term Borrowing Rate.

NPI = Net Performance Incentive for the applicable EP as defined below,

NPI = PI + PIR

PI = Performance Incentive is equal to the Performance Incentive Award monthly amortization multiplied by the number of billing months in the applicable EP.

The monthly amortization shall be determined by dividing the Performance Incentive Award by the number of billing months from the billing month of the first DSIM after the determination of the Performance Incentive Award and 24 calendar months following that first billing month.

DEMAND SIDE INVESTMENT MECHANISM RIDER
Schedule DSIM (Continued)

PIR = Performance Incentive Reconciliation is equal to the cumulative difference, if any, between the PI revenues billed during the previous EP resulting from the application of the DSIM and the monthly amortization of the Performance Incentive Award through the end of the previous EP (which will reflect projections through the end of the previous EP due to timing of adjustments). Such amounts shall include monthly interest on cumulative over- or under- balances at the Company's monthly Short-Term Borrowing Rate.

NOA = Net Ordered Adjustment for the applicable EP as defined below,

$$NOA = OA + OAR$$

OA = Ordered Adjustment is the amount of any adjustment to the DSIM ordered by the Commission as a result of prudence reviews and/or corrections under this DSIM Rider. Such amounts shall include monthly interest at the Company's monthly Short-Term Borrowing Rate.

OAR = Ordered Adjustment Reconciliation is equal to the cumulative difference, if any, between the OA revenues billed during the previous EP resulting from the application of the DSIM and the actual OA ordered by the Commission through the end of the previous EP (which will reflect projections through the end of the previous EP due to timing of adjustments). Such amounts shall include monthly interest on cumulative over- or under-balances at the Company's monthly Short- Term Borrowing Rate.

PE = Projected Energy, in kWh, forecasted to be delivered to the customers to which the DSIM Rider applies during the applicable EP.

The DSIM components and total DSIM applicable to the individual rate schedules shall be rounded to the nearest $0.00001.

Allocation of costs for each rate schedule for the MEEIA Cycle 1 Plan will be made in accordance with the Stipulation. Subsequent MEEIA Cycle Plans will be allocated as outlined in those original filings, unless otherwise settled via Stipulation.

This DSIM Rider shall not be applicable to customers that have satisfied the opt-out provisions contained in Section 393. Section 393.1075.7, RSMo.1075.7, RSMo.

**FILING:**

After the initial DSIM Rider rate adjustment filing, the Company shall make a DSIM Rider rate adjustment filing to take effect each August and February under the Term of this MEEIA Rider. DISM Rider rate adjustment filings shall be made at least sixty (60) days prior to their effective dates.

**PRUDENCE REVIEWS:**

A prudence review shall be conducted no less frequently than at twenty-four (24) month intervals in accordance with 4 CSR 240-20.093(10). Any costs, which are determined by the Commission to have been imprudently incurred or incurred in violation of the terms of this DSIM Rider, shall be returned to customers through an adjustment in the next DSIM Rider rate adjustment filing and reflected in factor OA above.

DEMAND SIDE INVESTMENT MECHANISM RIDER
Schedule DSIM (Continued)

**Discontinuing the DSIM:**

The Company reserves the right to discontinue DSM Programs that drive the costs included in this DSIM Rider. The Company will file a notice with the PSC indicating that it is discontinuing the Programs. The Company will honor all requests for the Programs received within 30 days of the notice. As a result of these Program changes, the Company may file to discontinue this DSIM. Similar to Program Discontinuance, the Company would file a notice with the PSC indicating that it is discontinuing the DSIM Rider. This notice would include a full reconciliation and methodology for final calculation to recover all incurred and earned Program Costs, TD, and Performance Incentive.

**DEMAND SIDE INVESTMENT MECHANISM CHARGE:**

Applicable to determination of DSIM Charge for the billing months of January 2016 through December 2018:

DSIM Components and Total DSIM

| Rate Schedule | NPC/PE ($/kWh) | NTD/PE ($/kWh) | NPI/PE ($/kWh) | NOA/PE ($/kWh) | Total DSIM ($/kWh) |
|---|---|---|---|---|---|
| Residential Service | $0.00122 | $0.00090 | $0.00000 | $0.00000 | $0.00212 |
| Non- Residential Service | $0.00370 | $0.00048 | $0.00000 | $0.00000 | $0.00418 |

**OPT-OUT PROVISIONS (Non-Residential Customers):**

Pursuant to Missouri Rule 4 CSR 240-20.094(6)(A): Any customer meeting one (1) or more of the following criteria shall be eligible to opt-out of participation in utility-offered demand side programs:

1. The customer has one (1) or more accounts within the service territory of the electric utility that has a demand of the individual accounts of five thousand (5,000) kW or more in the previous twelve (12) months;
2. The customer operates an interstate pipeline pumping station, regardless of size; or
3. The customer has accounts within the service territory of the electric utility that have, in aggregate across its accounts, a coincident demand of two thousand five hundred (2,500) kW or more in the previous twelve (12) months, and the customer has a comprehensive demand side or energy efficiency program and can demonstrate an achievement of savings at least equal to those expected from utility-provided programs.
    A. For utilities with automated meter reading and or advanced metering infrastructure capability, the measure of demand is the customer coincident highest billing demand of the individual accounts during the twelve (12) months preceding the opt-out notification.

A customer electing to opt-out under requirements 1 and 2 above must provide written notice to the electric utility no earlier than September 1 and not later than October 30 to be effective for the following calendar year. Customers electing to opt-out under requirement 3 above must provide notice to the utility and the manager of the energy resource analysis section of the commission during the stated timeframe. Customers electing to opt-out shall still be allowed to participate in interruptible or curtailable rate schedules or tariffs offered by the electric utility.

Customers who have satisfied the opt-out provisions of 4 CSR 240-20.094(6) to opt-out of both the DSIM Charge and the Non-MEEIA rate will not be charged the DSIM Charge and receive an offset of the Non- MEEIA rate amount on the same bill, based on their actual usage. The current Non-MEEIA rate is found in Section 8.09 of the Rules and Regulations, Sheet 1.28.

APPENDIX | F

# Witness Details

### Mark Foltz, Senior Project Director

Mark Foltz received a Bachelor of Science in Business Administration with a major in accounting and a Masters of Arts in Accountancy from the University of Missouri-Columbia. Mark is a Certified Public Accountant. He was employed with Arthur Andersen & Company in Kansas City, Missouri, from 1981 through 1987 with assignments primarily in the regulated industries practice. Mark was employed with Mark VII, Inc., a publicly-held long-haul, truckload carrier and logistics company headquartered in St. Joseph, Missouri from 1987 through 1995 leaving as Assistant Vice President of Finance. He was employed as Vice President of Finance and Corporate Secretary with TransFinancial Holdings, Inc., a publicly-held company headquartered in Lenexa, Kansas with ownership of a regional, less-than-truckload carrier and insurance premium finance company from 1995 through 2000. In 2000, Mark joined Aquila, Inc. as Manager of External Reporting and Corporate Accounting and progressed to the role of Vice President and Controller at the time of the merger with Great Plains Energy Incorporated in July 2008. Subsequent to the merger, Mark served as an Assistant Controller for KCP&L through August 2009 and is currently a Senior Project Director with responsibility for the accounting, reporting and analysis of the Company's demand-side management programs. Mark is a member of the American Institute of Certified Public Accountants and holds the designation as a Certified Global Management Accountant. He has substantial experience in accounting, external reporting, employee benefit plan accounting and administration, and income tax compliance.

### Tim Nelson, Manager, Market Intelligence, Energy Solutions

Tim Nelson graduated from Iowa State University with a Bachelor of Science in Mechanical Engineering. Tim completed his Master of Science in Finance from the University of Missouri – Kansas City. Tim began his career in 1994 as an Applications Engineer at the Donald Corporation. In late 1994, Tim joined St. Joseph Light & Power as a Production Engineer at the Lake Road Power Plant. In 2001, St. Joseph Light & Power Company was acquired by Aquila, Inc. (formerly UtiliCorp United Inc.). At Aquila, Tim transitioned to Senior Electric Systems Analyst where he was responsible for developing and running production cost fuel and purchase power models, and for preparing the fuel and purchase power budgets. Subsequent to the merger with Great Plains Energy Incorporated in 2008, Tim held various positions, moving to his current position in 2015.

In his current role, Tim oversees the reporting of the energy and demand savings for the demand-side management programs, including the calculation of Net Shared Benefits and TD-NSB. Tim supervises the Evaluation, Measurement, and Verification (EM&V) process, the conduction of DSM potential studies, and the maintenance of the Technical Resource Manual (TRM). Tim is also responsible for the development and preparation of the Demand-Side Resource Analysis section of the Integrated Resource Plan filing. Finally, Tim manages the preparation of the energy and demand DSM forecast as used for load forecasting and corporate budgeting.

### Tim Rush, Director, Regulatory Affairs

Tim Rush received a Master of Business Administration degree from Northwest Missouri State University in Maryville, Missouri. Tim did undergraduate study at both the University of Kansas in Lawrence and the University of Missouri in Columbia. Tim received a Bachelor of Science degree in Business Administration with a concentration in Accounting from the University of Missouri in Columbia.

Tim was hired by KCP&L in 2001 as the Director, Regulatory Affairs. Prior to Tim's employment with KCP&L, he was employed by St. Joseph Light & Power Company ("Light & Power") for over 24 years. At Light & Power, Tim was Manager of Customer Operations from 1996 to 2001, where he had responsibility for the regulatory area, as well as marketing, energy consultants and customer services areas. Customer services included the call center and collections areas. Prior to that, Tim held various positions in the Rates and Market Research Department from 1977 until 1996. He was the manager of that department for 15 years.

Tim's general responsibilities include overseeing the preparation of the rate case, class cost of service and rate design of both KCP&L and KCP&L Greater Missouri Operations Company. He is also responsible for overseeing the regulatory reporting and general activities as they relate to the Missouri Public Service Commission ("MPSC" or "Commission").

### Kim Winslow, Director, Energy Solutions

Kim Winslow graduated from Missouri University of Science and Technology with a Bachelor of Science degree in Mechanical Engineering and from Rockhurst University with a Master of Business Administration. Kim began her career at Black & Veatch in 1990 as an equipment engineer in its Gas, Oil and Chemicals Division. Within a year, she transferred to Black & Veatch's Management Consulting Division. As a project manager and consultant she worked on various projects for electric, gas, water and wastewater municipal and investor-owned utilities.

In December 2007, Kim began her employment with KCP&L as a Senior Energy Consultant and held various positions until assuming the position of Director of Energy Solutions in 2013. Kim is a Professional Engineer in the State of Missouri and a Certified Energy Management professional.

Kim's responsibilities include providing leadership and direction to the Customer Solutions, Regulated Products and Services, Economic Development, Business Center and Market Intelligence teams. Her responsibilities include initiating and bringing to market new regulated products, as well as improvements and innovations to existing affordability, energy efficiency and demand response products and services, and improving the overall customer experience for KCP&L Greater Missouri Operations Company's business customers.

APPENDIX | G

**MEEIA Variances**

***TD related Variances-***

1) Variances related to the TD incentive to be implemented and based on prospective analysis rather than achieved performance verified by EM&V, the proposed utilization of a TRM for purposes of calculating TD:

3.163(1)(A); 3.163(1)(F)5; 20.093(1)(C); 20.093(1)(M)5; 20.093(1)(EE); 20.093(2)(H); 20.093(2)(H)3; 20.094(1)(C); 20.094(1)(J)5; 20.094(1)(Z).

2) Variances related allowing adjustments to DSIM rates for the TD DSIM utility incentive revenue requirement as well as the DSIM cost recovery:

20.093(4); 20.093(4)(B).

3) Variances related to allow the TD incentive to be based on gross shared benefits rather than annual net shared benefits, energy savings targets, and demand savings targets and annual shared benefits to be based on life time benefits:

3.163(1)(A); 3.163(1)(J); 20.093(1)(A); 20.093(1)(B); 20.093(1)(C); 20.093(1)(Q); 20.093(2)(H); 20.094(1)(A); 20.094(1)(B); 20.094(1)(C); 20.094(1)(M); 20.094(1)(Z).

4) Variances related to "revenue requirement" where the TD is excluded from the cost recovery revenue requirement:

20.093(1)(O); 20.093(1)(N); 20.093(1)(P); 20.093(1)(Q); 20.093(2)(I); 20.163 (1) (I); 20.094(1)(L); 20.163(1)(H); 20.163(1)(J)

While on the surface the above request for variance appears lengthy, the primary reason is the MEEIA rules lack of inclusion or consideration of the TD, a mechanism historically recognized by MEEIA stakeholders and agreed to in prior MEEIA filing via Stipulation & Agreements. The TD is not viewed as an "incentive" or return for the investment in Energy Efficiency and Demand Response. Instead, the TD represents a real financial loss experienced by the company or a "disincentive" to promote DSM, since every kWh reduced in sales results in financial harm to the company or reduction in sales revenue by the company. Therefore, good cause exists for these TD related requests primarily to ensure alignment of the Utility's financial incentives with helping customers use energy more efficiently and in a manner that sustains or enhances utility customers' incentives to use energy more efficiently as outlined in the MEEIA Statute 376. Furthermore, reliance of EM&V or retrospective recovery, for purposes of calculating the TD heightens recovery risk and does not value demand-side and supply-side resources equally.

***Other***

5) Variances related to combining non-residential customers into one class:

20.093(2)(C); 20.093(2)(K)

Currently, a DSIM rate exists for all rate classes divided out specifically between residential and non-residential customers. Given this existing system framework, the company plans to continue this methodology. However, out of an abundance of caution, we are requesting this variance for clarity.

6) Variances related to allowing flexibility in setting the incentives and changing measures within a program:

14.030.

Good cause exists for this request due to the fact that implementation of DSM programs requires substantial marketing and promotion to gain "at-will" participation in programs. Chapter 14 rules were not promulgated in a manner supportive of MEEIA implementation. The DSIM filing establishes the parameters of marketing DSM products and services. Therefore, the Commission's approval of the plan and general MEEIA oversight, including required prudence review, are the most appropriate means for the regulation of MEEIA-related utility marketing and promotion. Accordingly, the Company seeks a variance from the Commission's promotional practices rules.

7) Variances related to duration of DSIM of not more than 4 years.

20.093 (5) (A)

Good cause exists for this request since the EM&V schedule will likely extend beyond the 4 year time limit, based primarily on the nature of the process, stakeholder review, comments, dispute resolution built into the EM&V schedule, etc., which could arise.

8) Variances related to allow the annual report to be filed 90 days rather than 60 days, of the end of the calendar year:

20.093(8).

Good cause exists for this related to the lack of completed available information available to meet the 60 day requirement.

9) Variance for 4 CSR 240-20.093(1)(F) and 164 1 A :

> Avoided cost or avoided utility cost means the cost savings obtained by substituting demand-side programs for existing and new supply-side resources. Avoided costs include avoided utility costs resulting from demand-side programs' energy savings and demand savings associated with generation, transmission, and distribution facilities including avoided probable environmental compliance costs. **The utility shall use the same methodology used in its most recently adopted preferred resource plan to calculate its avoided costs;**

While the Company has always interpreted this rule to mean that the methodology for calculating avoided costs and therefore Shared Benefits would be consistent with the most recently filed IRP at the time of the MEEIA filing, out of an abundance of caution, this variance is being requested. Good cause exists for the request since it adds another layer of uncertainty that further discourages the Utility from its ability to support the state policy to value demand side sources and supply resources equivalently.

Currently, a DSIM rate exists for all rate classes divided out specifically between residential and non-residential customers. Given this existing system framework, the company plans to continue this methodology. However, out of an abundance of caution, we are requesting this variance for clarity.

6) Variances related to allowing flexibility in setting the incentives and changing measures within a program:

14.030.

Good cause exists for this request due to the fact that implementation of DSM programs requires substantial marketing and promotion to gain "at-will" participation in programs. Chapter 14 rules were not promulgated in a manner supportive of MEEIA implementation. The DSIM filing establishes the parameters of marketing DSM products and services. Therefore, the Commission's approval of the plan and general MEEIA oversight, including required prudence review, are the most appropriate means for the regulation of MEEIA-related utility marketing and promotion. Accordingly, the Company seeks a variance from the Commission's promotional practices rules.

7) Variances related to duration of DSIM of not more than 4 years.

20.093 (5) (A)

Good cause exists for this request since the EM&V schedule will likely extend beyond the 4 year time limit, based primarily on the nature of the process, stakeholder review, comments, dispute resolution built into the EM&V schedule, etc., which could arise.

8) Variances related to allow the annual report to be filed 90 days rather than 60 days, of the end of the calendar year:

20.093(8).

Good cause exists for this related to the lack of completed available information available to meet the 60 day requirement.

9) Variance for 4 CSR 240-20.093(1)(F) and 164 1 A :

> Avoided cost or avoided utility cost means the cost savings obtained by substituting demand-side programs for existing and new supply-side resources. Avoided costs include avoided utility costs resulting from demand-side programs' energy savings and demand savings associated with generation, transmission, and distribution facilities including avoided probable environmental compliance costs. **The utility shall use the same methodology used in its most recently adopted preferred resource plan to calculate its avoided costs;**

While the Company has always interpreted this rule to mean that the methodology for calculating avoided costs and therefore Shared Benefits would be consistent with the most recently filed IRP at the time of the MEEIA filing, out of an abundance of caution, this variance is being requested. Good cause exists for the request since it adds another layer of uncertainty that further discourages the Utility from its ability to support the state policy to value demand side sources and supply resources equivalently.

# APPENDIX H

# THIS DOCUMENT CONTAINS HIGHLY CONFIDENTIAL INFORMATION NOT AVAILABLE TO THE PUBLIC

**Energy/Demand Performance Incentive Plan Calculation Example-** ***For Illustrative purposes only***
**GMO MEEIA Filing EO-2015-0241**
50/50 Weighting Example
Period Covered 2016-2018

**EXAMPLE 1-Detailed Calculation**

| | Savings Targets*** | Savings Results from EM&V ** | Ratio - Results to Target | Weighting | Incentive Threshold |
|---|---|---|---|---|---|
| | Kwh | Kwh | | | |
| Annual Energy 50 % weighted | 232,357,748 | 215,000,000 | 0.93 | 50% | 0.46 |
| | Kw | Kw | | | |
| Annual Demand* 50 % weighted | 172,553 | 150,000 | 0.87 | 50% | 0.43 |
| Overall Performance | | | | | 0.90 |

***Note-Demand Savings include the sum of all expected demand savings associated with both EE and DR programs for program years 2016-2018.***
****Savings results reflect actual savings achieved with adjustments made for actual NTG factors realized.***
*****No adjustments for opt outs were made to savings targets. Savings targets would be adjusted down to reflect actual customers opting out for 2016-2018.***

Actual energy savings from EM&V of 215,000,000 KWh

Actual demand savings from EM&V of 150,000 KW

Weighted performance incentive award of 90 percent of KWh/KW target

Results in 90% of $10.0 million award or $9 million earned Performance Incentive.

**EXAMPLE 2**

| | Savings Targets | Savings Results from EM&V ** | Ratio - Results to Target | Weighting | Incentive Threshold |
|---|---|---|---|---|---|
| | Kwh | Kwh | | | |
| Annual Energy 50 % weighted | 232,357,748 | 125,000,000 | 0.54 | 50% | 0.27 |
| | Kw | Kw | | | |
| Annual Demand* 50 % weighted | 172,553 | 45,000 | 0.26 | 50% | 0.13 |
| Overall Performance | | | | | 0.40 |

***Note-Demand Savings include the sum of all expected demand savings associated with both EE and DR programs for program years 2016-2018.***
****Savings results reflect actual savings achieved with adjustments made for actual NTG factors realized.***
*****No adjustments for opt outs were made to savings targets. Savings targets would be adjusted down to reflect actual customers opting out for 2016-2018.***

Actual energy savings from EM&V of 125,000,000 KWh

Actual demand savings from EM&V of 45,000 KW

Weighted performance incentive award 40 percent of KWh/KW target

Results in 0 earned Performance Incentive.

| Percent of KWh (50%)/Kw (50%) Target** | Performance Incentive Award ($MM) |
|---|---|
| ≤ 60 | $0.00 |
| 70 | $7.00 |
| 80 | $8.00 |
| 90 | $9.00 |
| 100 | $10.00 |
| 110 | $11.00 |
| 120 | $12.00 |
| ≥ 130 | $13.00 |

***Note: The percentage of target and the performance incentive are interpolated linearly between award levels.***
****Based on percentage split of Gross Shared Benefits***

**OPT OUT EXAMPLE:**

The following represents the GMO MEEIA non res savings targets and kWh savings adjusted for approved opt outs during the Cycle II (2016-2018) plan period.

***NOTE: This example is intended for illustrative purposes only.***

**GMO MEEIA Cycle II Savings Targets:**

Figures reflect planned energy/demand savings targets for C&I programs only.

| | | |
|---|---|---|
| 2016-2018 | 102,171,114 | Total Non Res kWh |
| 2016-2018 | 135,830 | Total Non Res kW |

| | |
|---|---|
| Total Opt Outs (kWh) over the portion of the plan period for which they opted out received for 2016 through 2018**: | 2,094,282,126 |
| 2016 through 2018 Non Res Kilowatt Hour Sales*: | 13,971,194,967 |
| Opt out customers as a percent of Non Res base sales for the plan period: | **14.99%** |

**GMO Adjusted GMO MEEIA Non Res Savings Targets**

| | Non Res Savings Goals (A) | Annual Opt-out Non Res Adjustment Factor (B) | Final Non Res Savings Goals Adjusted for Opt-Outs C= (A)*(1-B) | |
|---|---|---|---|---|
| 2016-2018 | 102,171,114 | 14.99% | 86,855,664 | kWh |
| 2016-2018 | 135,830 | 14.99% | 115,469 | kW |

***This illustrative number is an estimate only. However, actual 2016-2018 will be used to adjust savings targets, once they are known.***

****Illustrative example only. Opt outs are unknown at this time. Actual approved opt out customers for the plan period will be used to determine percentage of target adjustment, once they are known and finalized.***

**Appendix K**

**Rate Calculation - GMO -MEEIA**
**Rate beginning Jan 1, 2016**

| | | | Est Program Costs thru 6/31/2016 | Est TD thru 6/31/2016 | Calculated Rate: |
|---|---|---|---|---|---|
| **Residential** | | | | | |
| | Programs | | 3,376,976 | 2,010,648 | |
| | Plus 50% of all Income Eligible Programs | | 112,226 | $6,373 | |
| | Plus 50% of Research Pilot | | 82,500 | $0 | |
| | Total | | 3,571,702 | 2,017,021 | |
| | Est Cycle 1 Under-recovered/(Over-recovered) Costs (Progr Costs & TD)* | | (1,434,347) | (442,066) | |
| | ***Grand Total Est. Costs:*** | | ***2,137,355*** | ***1,574,955*** | |
| ***Est. Retail Sales*** | | ***1,754,615,749*** | ***0.00122*** | ***0.00090*** | ***0.00212*** |
| **Non-Residential** | | | | | |
| | Programs | | 4,293,937 | 1,208,199 | |
| | Plus 50% of all Income Eligible Programs | | 112,226 | $6,373 | |
| | Plus 50% of Research Pilot | | 82,500 | $0 | |
| | Total | | 4,488,662 | 1,214,572 | |
| | Est Cycle 1 Under-recovered/(Over-recovered) Costs (Progr Costs & TD)* | | 2,550,274 | (300,842) | |
| | ***Grand Total Est. Costs:*** | | ***7,038,936*** | ***913,729*** | |
| **Retail Sales** | | 2,237,856,846 | | | |
| **Less Est. Opt-Out** | | 335,454,741 | | | |
| **Adjusted Retail Sales** | | ***1,902,402,105*** | ***0.00370*** | ***0.00048*** | ***0.00418*** |

**Estimated Opt-Outs** ***14.99%***

DATA SOURCE: SB MEEIA 2016 GMO 13B05
*Per GMO S&A, final true-up would be recovered over 24 months.

**Appendix K**

**2016 KWH FORECAST**

2016 MWH-REV

**MPS**

**BILLED BASIS**

| CLASSIFICATION | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RESIDENTIAL | 302,841,764 | 266,880,233 | 232,360,301 | 191,086,854 | 170,433,153 | 202,290,956 | 295,999,332 | 312,948,668 | 269,835,522 | 175,068,097 | 181,186,655 | 245,098,934 | 2,846,030,469 |
| COMMERCIAL | 206,808,072 | 198,736,442 | 191,847,144 | 187,487,047 | 192,319,785 | 212,083,264 | 236,498,455 | 239,335,297 | 230,707,160 | 197,828,824 | 190,066,456 | 197,519,735 | 2,481,237,681 |
| INDUSTRIAL | 63,018,651 | 62,953,477 | 61,349,094 | 62,167,094 | 63,716,686 | 66,443,718 | 69,745,497 | 73,523,281 | 68,837,222 | 64,621,871 | 63,343,391 | 62,799,852 | 782,519,834 |
| SUBTOTAL | 572,668,487 | 528,570,152 | 485,556,539 | 440,740,995 | 426,469,624 | 480,817,938 | 602,243,284 | 625,807,246 | 569,379,904 | 437,518,792 | 434,596,502 | 505,418,521 | 6,109,787,984 |

**2016 KWH FORECAST**

**SJLP**

**BILLED BASIS**

| CLASSIFICATION | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| RESIDENTIAL | 94,072,221 | 80,530,096 | 68,091,086 | 52,889,980 | 44,189,869 | 48,949,236 | 69,935,892 | 72,460,852 | 63,055,527 | 44,317,797 | 50,369,671 | 75,473,034 | 764,335,261 |
| COMMERCIAL | 66,115,485 | 62,531,099 | 59,396,256 | 56,536,818 | 56,264,376 | 60,208,483 | 66,177,088 | 66,820,045 | 64,093,360 | 56,968,814 | 57,004,012 | 61,410,564 | 733,526,400 |
| INDUSTRIAL | 51,279,610 | 49,908,808 | 50,202,067 | 50,946,573 | 51,916,562 | 53,620,235 | 55,440,697 | 55,347,772 | 54,656,721 | 51,850,834 | 51,632,109 | 51,369,742 | 628,171,730 |
| SUBTOTAL | 211,467,316 | 192,970,003 | 177,689,409 | 160,373,371 | 152,370,807 | 162,777,954 | 191,553,677 | 194,628,669 | 181,805,608 | 153,137,445 | 159,005,792 | 188,253,340 | 2,126,033,391 |
| **GRAND TOTAL:** | **784,135,803** | **721,540,155** | **663,245,948** | **601,114,366** | **578,840,431** | **643,595,892** | | | | | | | |

***Source:*** ***Market Assessment Group***
***Date:*** ***Jul-15***