KANSAS CITY POWER & LIGHT COMPANY

EO-2019-0132

KCP&L GREATER MISSOURI OPERATIONS COMPANY

EO-2019-0133

MEEIA Cycle 3 2019–2022 Filing

NOVEMBER 29, 2018

MEEIA CYCLES 1 AND 2

IMPACT

270,000+
Residents

6,000+
Businesses

50
Jobs Created Locally

ENERGY EFFICIENCY RESULTS TO DATE

769 million kWh
electricity saved since 2013

64,000+
homes powered with energy saved

122,549
equivalent number of cars taken off the road with reduced emissions

$2.58
benefits for each dollar spent

MEEIA CYCLE 3

11 energy efficiency programs

$234 million
in anticipated energy savings

$10 million
in income qualified programs

3-year proposal
continuing our commitment to energy efficiency and sustainability

Table of Contents

8.0 Appendices

List of Figures

Terminology

ADSM	automated demand-side management
AFUDC	allowance for funds used during construction
AMI	advanced metering infrastructure
ARP	Alternative Resource Plan
ASC	Accounting Standards Codification
BDR	Business Demand Response
BMS	building management systems
BYO	bring your own
C&I	commercial and industrial
CCB	customer care and billing
CRM	customer relationship management
CSS	customer self-service
DER	distributed energy resources
DERMS	Distributed Energy Resource Management System
DR	demand response
DRI	Demand Response Incentive
DSIM	demand-side investment mechanism
DSM	demand-side management
EE	energy efficiency
EEPIF	Energy Efficiency Project Intake Form
EM&V	evaluation, measurement and verification
EMS	energy management systems
EO	earnings opportunity
EPRI	Electric Power Research Institute
EV	electric vehicle
FASB	Financial Accounting Standards Board
FTE	full-time equivalent
HER	Home Energy Reports

IEMF	Income-Eligible Multi-Family
IRP	Integrated Resource Plan
ISO	Independent System Operator
LGS	Large General Service
LIHTC	Low-Income Housing Tax Credit
LPS	Large Power Supply
MAP	Maximum Achievable Potential
MBDR	market-based demand response
MEEAC	Missouri Energy Efficiency Advisory Collaborative
MEEIA	Missouri Energy Efficiency Investment Act
MGS	Medium General Service
MHDC	Missouri Housing Development Commission
MPSC (or Commission)	Missouri Public Service Commission
NPV	net present value
NPVRR	net present value of revenue requirement
NTG	net-to-gross
PAYS	Pay As You Save
PCT	participant cost test
RAP	Realistic Achievable Potential
RIM	ratepayer impact measure test
S&A	Stipulation and Agreement
SEM	Strategic Energy Management
SGS	Small General Service
SMB	small medium-sized businesses
SPP	Southwest Power Pool
TD	throughput disincentive
TRC	total resource cost test
TRM	Technical Resource Manual
UCT	utility cost test

1.0 Executive Summary

1.1 Introduction

Nationwide, utility demand-side management (energy efficiency and demand response) programs have made a significant impact over several decades. For Missouri electric utilities and customers, the passage of the Missouri Energy Efficiency Investment Act (MEEIA) in 2009 created an opportunity to work together to achieve sustainable results. Yet even with great progress over the past decade, great potential remains. Through the continuation and expansion of MEEIA efforts at Kansas City Power & Light (KCP&L) — encompassing both Kansas City Power & Light Company (KCP&L-MO) and KCP&L Greater Missouri Operations Company (KCP&L-GMO) jurisdictions — this report outlines plans to further tap into that potential with our MEEIA Cycle 3 portfolio of demand-side programs.

1.1.1 Overview of Program Benefits

KCP&L is proposing a robust portfolio of programs for the period April 1, 2019 through March 31, 2022 by investing $96.3 million to achieve 185.9 MW of capacity reduction and 343.7 GWh of first year energy savings. (Please note, the Income-Eligible Multi-Family [IEMF] program proposes to span over six years through March 2025.) We seek to maximize our customers' ability to use less energy and save more. Our initiatives will increase awareness of and interest in energy efficiency and demand response — and, ultimately, drive action.

This portfolio will generate an anticipated $234 million in net present value of energy savings for customers, at current rates. Customers will see more choices, including more engagement options and technology rebates. More than $10 million of income-qualified programs will expand options for all, including families with tight budgets. Another three-year proposed cycle supports our ongoing commitment to sustainability while allowing for future pivots in this dynamic energy landscape. This focus on demand-side management (DSM) in combination with a continued focus on renewables helps us meet nearly half of the energy needs for homes and businesses from emission-free sources. Providing customers options and choices to engage with their energy use and shape their load profile through MEEIA programs and those outside MEEIA (like Time of Use rates and low income weatherization) is an important partnership between the utility and customer that will provide benefits well into the future.

1.1.2 Consistency with MEEIA Objectives

As the first utility in Missouri to make a strong commitment to energy efficiency, we helped over 270,000 residents and 6,000 businesses save energy in our first two MEEIA cycles. We're proud to have implemented demand reduction and pricing programs since the 1990s, and our experience has helped us continue to deliver highly innovative and effective solutions for customers.

The proposed portfolio — presented here for both KCP&L-MO and KCP&L-GMO — is consistent with MEEIA and the rules of the Missouri Public Service Commission (MPSC or Commission). These rules support the state policy to value demand-side investments equal to traditional investments in supply and delivery infrastructure, allow recovery of all reasonable and prudent costs for delivery of cost-effective demand-side programs, and provide guiding principles for filing new programs and reporting.

1.1.3 The Value of DSM in Our Region

DSM is the right resource for our region. We follow a rigorous process required by Integrated Resource Plan (IRP) rules to evaluate possible scenarios and resources to meet our customers' demand. In those evaluations, DSM continually outperforms alternative plans in proving a benefit to customers by reducing the revenue requirement. In this filing, we'll explain the interplay between the MEEIA statue and IRP rules and how we find the right balance in the resource selection process. Also, considering to the recent IRP filing comments, we provide multiple new alternative resource plan scenarios with changing inputs to possible plant retirements and new load potential. These scenarios further demonstrate the value of DSM in individual jurisdictions and KCP&L as a whole. In summary, those scenarios are similar to previously filed IRP results for DSM in that:

- With or without plant retirements, DSM plan options still provide the lowest net present value of revenue requirement (NPVRR).
- With plant retirements, capacity requirements for KCP&L-MO are moved up from outside 2038 to 2033.
- In the combined company and KCP&L-MO standalone scenarios, MEEIA Cycle 3 provides a reduced NPVRR and benefits to all customers when compared to no future DSM.
- Continuing DSM investment for the 20-year horizon provides the lowest NPVRR in ALL scenarios.
- Combined company (KCP&L-MO and KCP&L-GMO together) evaluation increases the total benefit value of DSM as compared to KCP&L-MO standalone.

1.1.4 Benefits for All

These programs benefit all customers and the community. In addition to demonstrating a reduced revenue requirement in the IRP analysis, investing in demand-side management:

- Helps keep energy costs low for everyone, regardless of direct participation
- Contributes to a more sustainable energy future, ensuring reliable electricity for generations
- Spurs economic activity and jobs in our service territories
- Provides supplementary benefits for non-electric consumption, such as water and natural gas savings
- Generates positive economic impact for local trade allies and implementers

FIGURE 1.1: DEMAND-SIDE MANAGEMENT RESULTS TO DATE

769 million kWh	Electricity saved since 2013
64,074	Homes powered with energy saved
122,549	Cars (equivalent) taken off the road with reduced emissions
$2.58	Benefits for each dollar spent
50 jobs	Created locally, plus many other indirect jobs

FIGURE 1.2: MEEIA 3 PROPOSED DEMAND-SIDE MANAGEMENT EFFORTS (SUMMARY)

11 programs	Including two new and nine existing
3 years	Program length (six years for IEMF)
$32 million	Annual investment
$234 million	Anticipated savings for customers
$41.7 million	Rebates available for residential and business customers
$10 million	In low income programs

1.2 Programs Savings Targets and Cost-Effectiveness

The tables below compare the proposed portfolio for Cycle 3 with Commission-approved targets for Cycle 2 and actual results through September 30, 2018. As demonstrated, we continue to offer a robust, cost-effective program portfolio that delivers a strong level of energy and demand savings.

FIGURE 1.3: SUMMARY OF KCP&L-MO MEEIA CYCLE 2 AND PROPOSED CYCLE 3

	Cycle 2 Approved Plan (36 months)	Cycle 2 Actuals (30 months)***	Cycle 3 Proposed (36 months)****
Energy Savings (kWh)	198,097,872	207,345,131**	174,915,178
Demand Savings (kW)	66,328	69,580**	71,691
Program Costs	$50,436,844	$45,416,699	$43,861,974
Net Benefits*	$137,552,626	$96,873,740	$118,363,151
TRC Cost-Effectiveness*	1.68	1.59	1.81
Throughput Disincentive	$21,305,931	$15,384,757	$23,174,593
Earnings Opportunity @ 100% Target Achievement	$7,429,296	N/A	$7,909,523

*Cycle 2 Actuals through 3/31/18 from EM&V results

**PY1 & PY2 results net of EM&V, PY3 not final ***through 9/30/2018 ****includes IEMF for 72 months

FIGURE 1.4: SUMMARY OF KCP&L-GMO MEEIA CYCLE 2 AND PROPOSED CYCLE 3

	Cycle 2 Approved Plan (36 months)	Cycle 2 Actuals (30 months)***	Cycle 3 Proposed (36 months)****
Energy Savings (kWh)	184,549,652	179,301,781**	168,801,339
Demand Savings (kW)	105,855	89,186**	114,162
Program Costs	$52,640,449	$48,298,015	$52,428,710
Net Benefits*	$139,063,222	$87,509,005	$130,692,681
TRC Cost-Effectiveness*	1.81	1.46	1.90
Throughput Disincentive	$15,695,059	$13,348,966	$19,546,168
Earnings Opportunity @ 100% Target Achievement	$10,383,855	N/A	$10,055,885

*Cycle 2 Actuals through 3/31/18 from EM&V results

** PY1 & PY2 results net of EM&V, PY3 not final ***through 9/30/2018 ****includes IEMF for 72 months

1.2.1 Highlights of MEEIA 3 Plan – Achievements and Plan (Overall Savings/Budget Figures)

This section presents the portfolio budgets, cumulative net energy savings and cumulative net demand savings for proposed MEEIA Cycle 3. The portfolio program details are presented in Figure 1.5 and Figure 1.6.

FIGURE 1.5: KCP&L-MO CYCLE 3 PROGRAM DETAILS

	Cumulative 2019-2022			Cumulative 2022-2025			Total Cycle		
	MWh Savings	Peak MW Savings	Budget	MWh Savings	Peak MW Savings	Budget	MWh Savings	Peak MW Savings	Budget
Business Standard	53,977	8.52	$9,424,835	-	-	$-	53,977	8.52	$9,424,835
Business Custom	30,240	4.83	$4,674,346	-	-	$-	30,240	4.83	$4,674,346
Business Process Efficiency	19,455	0.18	$2,681,867	-	-	$-	19,455	0.18	$2,681,867
Business Demand Response	-	15.00	$2,859,375	-	-	$-	-	15.00	$2,859,375
Business Smart Thermostat	175	1.28	$594,828	-	-	$-	175	1.28	$594,828
Online Business Energy Audit	-	-	$76,891	-	-	$-	-	-	$76,891
Energy Saving Products	29,431	2.17	$3,739,841	-	-	$-	29,431	2.17	$3,739,841
Heating, Cooling & Weatherization	13,588	6.31	$3,636,080	-	-	$-	13,588	6.31	$3,636,080
Home Energy Report	9,579	1.20	$1,420,939	-	-	$-	9,579	1.20	$1,420,939
Residential Demand Response	3,967	29.77	$8,300,568	-	-	$-	3,967	29.77	$8,300,568
Online Home Energy Audit	-	-	$369,075	-	-	$-	-	-	$369,075
Income-Eligible Home Energy Report	2,928	0.37	$424,436	-	-	$-	2,928	0.37	$424,436
Income-Eligible Multi-Family	3,690	0.70	$2,420,633	2,845	0.59	$2,308,047	6,535	1.30	$4,728,679
Total Business	103,847	29.82	$20,312,141	-	-	$-	103,847	29.82	$20,312,141
Total Residential	63,182	40.52	$20,311,572	2,845	0.59	$2,308,047	66,028	41.12	$22,619,619
Research & Pilot	5,041	0.76	$930,214	-	-	$-	5,041	0.76	$930,214
Total Portfolio	172,070	71.10	$41,553,927	2,845	0.59	$2,308,047	174,915	71.69	$43,861,974

FIGURE 1.6: KCP&L-GMO CYCLE 3 PROGRAM DETAILS

	Cumulative 2019-2022			Cumulative 2022-2025			Total Cycle		
	MWh Savings	Peak MW Savings	Budget	MWh Savings	Peak MW Savings	Budget	MWh Savings	Peak MW Savings	Budget
Business Standard	46,646	7.51	$8,275,722	-	-	$-	46,646	7.51	$8,275,722
Business Custom	10,016	1.59	$1,580,293	-	-	$-	10,016	1.59	$1,580,293
Business Process Efficiency	20,471	0.23	$2,866,917	-	-	$-	20,471	0.23	$2,866,917
Business Demand Response	-	54.83	$9,942,946	-	-	$-	-	54.83	$9,942,946
Business Smart Thermostat	170	1.24	$639,297	-	-	$-	170	1.24	$639,297
Online Business Energy Audit	-	-	$76,891	-	-	$-	-	-	$76,891
Energy Saving Products	31,535	2.29	$3,989,147	-	-	$-	31,535	2.29	$3,989,147
Heating, Cooling & Weatherization	23,342	10.18	$6,360,416	-	-	$-	23,342	10.18	$6,360,416
Home Energy Report	20,355	2.55	$2,460,500	-	-	$-	20,355	2.55	$2,460,500
Residential Demand Response	4,172	31.60	$9,339,397	-	-	$-	4,172	31.60	$9,339,397
Online Home Energy Audit	-	-	$276,806	-	-	$-	-	-	$276,806
Income-Eligible Multi-Family	3,753	0.69	$2,761,842	2,897	0.58	$2,626,108	6,650	1.27	$5,387,950
Total Business	77,303	65.41	$23,382,066	-	-	$-	77,303	65.41	$23,382,066
Total Residential	83,158	47.32	$25,188,108	2,897	0.58	$2,626,108	86,055	47.90	$27,814,216
Research & Pilot	5,443	0.86	$1,232,428	-	-	$-	5,443	0.86	$1,232,428
Total Portfolio	165,904	113.58	$49,802,602	2,897	0.58	$2,626,108	168,801	114.16	$52,428,710

1.2.2 Overall Cost-Effectiveness

Figure 1.7 and Figure 1.8 present Cycle 3 program portfolio cost-effectiveness for each subcategory: residential, income-eligible and non-residential energy efficiency and demand response. MEEIA rules define the total resource cost (TRC) as the preferred cost-effectiveness test for the approval of DSM programs. Except for income-eligible programs, all other programs' TRC cost-effectiveness tests exceed 1.0. Each of these tests is further described in Section 2.

FIGURE 1.7: KCP&L-MO CYCLE 3 PORTFOLIO COST-EFFECTIVENESS SUMMARY

Program Type	TRC	UCT	RIM	SCT	PCT
Residential EE	2.10	3.33	0.48	2.68	5.68
Residential DR	2.20	3.66	2.29	2.57	0.88
Residential - Income-Eligible	0.70	0.72	0.31	0.81	8.89
Business EE	1.57	2.75	0.79	1.88	2.27
Business DR	4.21	1.94	1.90	4.35	7.18
Research & Pilot	1.42	0.80	0.46	1.47	N/A
Total Portfolio	**1.81**	**2.70**	**0.78**	**2.17**	**3.09**

FIGURE 1.8: KCP&L-GMO CYCLE 3 PORTFOLIO COST-EFFECTIVENESS SUMMARY

Program Type	TRC	UCT	RIM	SCT	PCT
Residential EE	2.09	3.25	0.54	2.66	4.99
Residential DR	2.13	3.38	2.33	2.48	0.80
Residential - Income-Eligible	0.59	0.60	0.30	0.69	7.11
Business EE	1.39	2.56	0.67	1.67	2.42
Business DR	5.47	1.86	1.85	5.53	24.09
Research & Pilot	1.16	0.65	0.38	1.20	N/A
Total Portfolio	**1.90**	**2.49**	**0.79**	**2.26**	**3.31**

1.3 Recovery Mechanism

Our proposed demand-side investment mechanism (DSIM) structure is similar to the Cycle 2 structure agreed upon by stakeholders and approved by the Commission. It includes timely recovery of three components — program costs, the throughput disincentive (TD) and an earnings opportunity (EO) — and proposes three enhancements:

1. Change the DSIM program cost, TD and billed kWh sales forecast from six months to a 12-month rolling forecast
2. Divide the non-residential rate by customer class
3. Change the EO matrix slightly and recovery to annual

These enhancements are discussed in more depth in Section 4.

Our analysis shows successful implementation of DSM programs could bring gross benefits from energy and capacity over anticipated program life on a net present value (NPV) basis of approximately $118.4 million for KCP&L-MO and $130.7 million for KCP&L-GMO. Benefits less program costs are $74 million and $78 million (net benefits) for KCP&L-MO and KCP&L-GMO, respectively. Based on this analysis, these benefits greatly exceed costs and support our preferred plan[1], demonstrate positive financial benefits to customers and support the spirit and intention of the MEEIA rules.

The financials comprised of the three recovery components are outlined below.

- Projected program costs for this plan period are:
  - $43.9 million for KCP&L-MO
  - $52.4 million for KCP&L-GMO
- The TD represents the financial disincentive imposed on the utility for each kWh saved because of successful implementation of energy efficiency and helps ensure we are kept whole and not financially harmed or dis-incentivized from promoting energy efficiency. The estimated value of TD for this plan period is:
  - $23.2 million for KCP&L-MO
  - $19.5 million for KCP&L-GMO
- The DSIM for Cycle 3 also provides us an opportunity to earn a financial incentive based on performance toward established savings goals. The allowance of this opportunity is necessary to value demand-side investments equally with supply-side investments, consistent with the MEEIA state policy.
  - For KCP&L-MO, we request an EO incentive of up to $11.3 million or $7.9 million if 100 percent of planned energy and demand targets are met.
  - For KCP&L-GMO, we request an EO incentive of up to $14.4 million or $10.1 million if 100 percent of planned energy and demand targets are met.
  - The delta between the two jurisdictions relates to the continued focus and increased value in KCP&L-GMO demand savings based on the supply capacity position in that jurisdiction as compared to KCP&L-MO.

1.4 New Attributes this Cycle

We're always working to build upon our previous efforts for our customers' benefit. We've implemented various demand reduction and pricing programs since the 1990s — and the adoption of the Comprehensive Energy Plan in 2005 represented an unprecedented commitment to demand-side management by a Missouri utility. In 2013, MEEIA Cycle 1 offered more than a dozen energy efficiency and demand response programs to residential and business customers. In 2016, Cycle 2 of the MEEIA portfolio continued and expanded upon these programs.

Best practices and knowledge earned over decades is a strong foundation for developing innovative, effective programs. We've made additional improvements based on customer feedback; evaluation, measurement and verification (EM&V) results; potential study reviews; secondary evaluations and research; baseline changes; program processes and stakeholder input.

In MEEIA Cycle 3, our proposed adjustments:

- Add new programs to offer more ways for customers to participate
- Improve current programs to offer more customer benefits for the same investment
- Provide more energy savings options for customers with the most need
- Make innovative, energy efficiency options available to a wider audience

[1] *Per Integrated Resource Plan under EO-2018-0268*

Additional high-level details on program improvements in MEEIA Cycle 3 are outlined below.

FIGURE 1.9: SELECT MEEIA 3 PROGRAM IMPROVEMENTS

Program	Improvement
Energy Saving Products	Expands the program to offer more appliance and technology options through new channels at retail and online outlets, while continuing to offer discounted LEDs
Heating, Cooling & Weatherization	Improves the customer experience with additional value-added during the program's audit portion, such as kits installed
Residential Demand Response	Builds on the successful program to introduce new features of customer control and the capability to pair other demand technology such as water heater controls
Income-Eligible Multi-Family	Introduces more robust opportunities for these customers with prescriptive measures and more guidance and support, making it easier for trade allies and building owners to move forward with comprehensive efficiency upgrades
Business Custom	Provides a better customer trade experience by introducing a more streamlined process for project opportunity identification and rebate amount determination
Business Process Efficiency	Packages our Strategic Energy Management program with building commissioning efforts to allow customers with varying capabilities to commit to improving the operating conditions in their building and facilities
Business Demand Response	Integrates additional methods of curtailment from manual to automatic in a new Distributed Energy Resource Management System (DERMS) tool, while exploring market-based opportunities to sell into the Independent System Operator (Southwest Power Pool)

1.5 Timeline and Considerations for Approval

MEEIA Cycle 2 programs are effective through March 31, 2019[2]. To provide customers with continuous demand-side management offerings, we propose MEEIA Cycle 3 run from April 2019 through March 2022, with the exception of the Income-Eligible Multi-Family program which we propose a longer six-year term, to run through March 2025. A seamless transition from one cycle to another offers many benefits. It avoids the program ramp-up and ramp-down that can strain vendor relationships. It reduces administrative burdens for both KCP&L and regulatory agencies. And, of course, it allows us to offer customers uninterrupted programs.

Per MEEIA Rules, the Commission has 120 days to rule on this proposed filing[3]. This timing fits within our intention to have tariffs effective on April 1, 2019, enabling the efficient transition to MEEIA Cycle 3. To support this shift, we propose a series of technical conferences to collaborate with stakeholders on portfolio program design, cost recovery mechanism and other key topics. A detailed proposed schedule is outlined in Section 6.

[2]With an allowance for "long-lead" projects per October 2017 Stipulation in EO-2015-0240 and EO-2015-0241 to be completed up to one year afterwards
[3]4 CSR 240-20. 094 4 (H)

1.5.1 Future Considerations

The changing energy technology landscape and competitive forces — as well as our EM&V results for Cycle 2 — could also have an impact on our ability to recover costs. Should any of these elements adversely impact the plan or the ability to recover its costs as approved, we reserve the right to discontinue programs and/or its plan. If that would occur, we will file a notice with the PSC and would honor all requests for the programs received within 30 days of the notice. We further address these actions within our proposed program tariffs.

1.5.2 Alignment of Rules/Statute/Stakeholders/Utility

With guidance from MEEIA, this filing demonstrates our commitment to DSM as a priority, understanding its importance to our customers, the community, stakeholders and our company. The proposed plan outlines an implementation plan that will:

- Meet MEEIA's intent by:
  - Promoting energy efficiency and demand response programs in such a way that all customers benefit whether participating or not
  - Treat DSM investments like supply-side investments with a proposal for a DSIM that addresses the three cost/financial components
- Comply with MEEIA rules for applying for and delivering DSM programs by:
  - Adhering to filing and submission requirements 4 CSR 240 20.092 -.094. (See Section 7 for all rule references in report)
- Work with stakeholders to:
  - Ensure all customers can participate and benefit from the programs
  - Ensure customers are not burdened by utility investments in DSM
  - Achieve high levels of DSM and strive to move Missouri into a comparable place regarding nationwide energy efficiency gains
  - Develop programs and target sectors based on best practices
  - Provide opportunities to invest in energy efficiency to make businesses more efficient
  - Allow for comprehensive opportunities to invest in energy efficiency while improving appropriate levels of spend
  - Have clear, achievable business plan of energy efficiency investments that are fair to customers and meet objectives of stakeholders
  - Provide demand-side energy solutions that customers value while providing revenue opportunities equal to supply-side investments

To allow us to accomplish all the above, we request 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

2.0 Plan Overview

2.1 Program History, Progress and Learnings

As shown in Figure 2.1, KCP&L has invested $294 million in demand-side management (DSM) programs in Missouri since 2005. KCP&L and its customers have realized considerable benefits from DSM programs. Not only do they provide for peak demand reduction to offset traditional generation, they also offer us the opportunity to help customers better understand how to manage their overall energy usage and lower their bills. All customers benefit in the long term through supply-side resource deferral and participating customers benefit in the near term through their involvement in programs.

2.1.1 The Evolution of DSM

DSM has continually evolved since our initial offerings. Not long ago, a programmable thermostat was limited in its communication and software capabilities. Now, smart thermostats increase our ability to engage with customers and help us understand demand reduction in real time — which could further our participation in the power market. Digital customer engagement is increasingly important, and new tools such as marketing automation platforms and customer relationship management (CRM) software enhances our ability to reach customers with the right products and better messaging. With these and other changes, our ability to further DSM and provide value to customers has increased.

2.1.2 Our History of DSM Programs

Our history of implementing DSM programs began with various demand reduction and pricing programs throughout the 1990s — and most notably increased with the adoption of the Comprehensive Energy Plan (CEP) in 2005. Stemming from the Stipulation and Agreement in Case No. EO-2005-0329 (0329 S&A), this plan gave us the opportunity to offer DSM programs.

We began partnering with customers, investing approximately $67.3 million into DSM programs in our KCP&L-MO service territory as a result of the CEP. That portfolio of programs represented our initial significant commitment to promote energy efficiency and demand response, ensuring all classes of customers had programs in which they could participate. This commitment to DSM by a Missouri utility was unprecedented at the time. We remained committed to these programs even after the five-year conclusion of the 0329 S&A.

The 2009 passage of MEEIA put regulations into place in 2011. KCP&L completed its MEEIA Cycle 1 on December 31, 2015 and will complete its MEEIA Cycle 2 on March 31, 2019. This report addresses Cycle 3, a proposed three-year plan through March 31, 2022. Figure 2.1 presents a summary of our investment for 2005 through September 30, 2018, which represents evaluated results through this period.

FIGURE 2.1: HISTORIC DSM PROGRAM SUMMARY (2005 – SEPTEMBER 30, 2018)

	Ex-Ante Annual Energy Savings (MWh)	Ex-Ante Peak Demand Savings (MW)	Portfolio Investment ($)
KCP&L-MO			
Pre-MEEIA	183,045	109.4	$67,343,349
MEEIA Cycle 1	188,993	54.3	$46,833,318
MEEIA Cycle 2*	207,345	69.6	$45,416,699
Total KCP&L-MO	**579,383**	**233.3**	**$159,593,366**
KCP&L-KS			
DSM	81,809	64.3	$36,269,658
Total KCP&L-KS	**81,809**	**64.3**	**$36,269,658**
KCP&L-GMO			
Pre-MEEIA	85,499	50.2	$26,276,088
MEEIA Cycle 1	214,411	68.3	$60,240,694
MEEIA Cycle 2*	179,302	89.2	$48,298,015
Total KCP&L-GMO	**479,212**	**207.7**	**$134,814,798**
Total	**1,140,404**	**505.3**	**$330,677,822**

*PY1 & PY2 results net of EM&V, PY3 not final.

2.2 Impact Benefits and Cost-Effectiveness

Our DSM program portfolio is MEEIA compliant because it offers benefits to all customers in a class regardless of whether the programs are utilized by all customers.

- The Integrated Resource Plan (IRP) selects the level of demand-side resources using minimization of net present value of revenue requirements (NPVRR) as the primary selection criteria.
- The portfolio and each individual program (excluding income-eligible programs) pass the total resource cost (TRC) test prescribed by MEEIA and IRP rules.
- The demand-side portfolio is evaluated on an equivalent basis compared to supply-side and renewable resources.
- The diversity of offerings gives all customers the opportunity and option to participate.
- Viewing programs through the lenses of cost-effectiveness metrics allows all customers to understand that our DSM investment is beneficial to them.
- The portfolio offers additional benefits including:
  - Reduced emissions from local power plants
  - Special programs targeted to income-eligible customers
  - Increased economic activity in the service territory
  - Direct and indirect jobs in the service territory

In this section, we address the cost-effectiveness and economic impacts that drive the overall benefit of our proposed portfolio.

2.2.1 Cost-Effectiveness

Designing cost-effective programs is essential to capturing the long-term resource potential. A program is cost-effective if the total value of all future benefits is greater than the investment costs. Four industry standard cost-effectiveness tests — the TRC, utility cost test (UCT), participant cost test (PCT) and ratepayer impact measure test (RIM) — gauge the economic merits of DSM measures, programs or portfolios. Each test uses unique perspectives and definitions to compare the benefits of the DSM activities to costs in terms of NPV of future cash flows.

MEEIA prescribes that "[t]he commission shall consider the total resource cost test a preferred cost-effectiveness test."[4] However, it notes the exception to this that "[p]rograms targeted to low-income customers or general education campaigns do not need to meet a cost-effectiveness test… ."[5]

The IRP rules also stipulate that the TRC test "…shall be used to evaluate the cost-effectiveness…[6] of energy efficiency programs — and require the calculation of the UCT test solely "…for purposes of comparison."[7] The IRP further evaluates and compares demand-side programs on an equivalent basis[8] to supply-side and renewable resources. It does this by using the minimization of the NPV of long-run utility costs as the primary selection criteria,[9] which serves the public interest and results in efficient and reasonable rates.[10] These cost-effectiveness metrics — in concert with the rigor of the IRP minimization of NPVRR — demonstrate how all customers save money in the long run by investing in energy efficiency as opposed to other supply-side resource choices necessary in the future to meet electricity demand.

Portfolio-level cost-effectiveness results are presented in Figure 1.7 and Figure 1.8. More detailed, program-level results are available in Appendix 8.2.

[4] *§393.1075. 4., RSMo 2014*
[5] *Id.*
[6] *4 CSR 240-22.050(5)(B)*
[7] *4 CSR 240-22.050(5)(C)*
[8] *4 CSR 240-22.050(2)(A)*
[9] *4 CSR 240-22.050(2)(B)*
[10] *4 CSR 240-22.050(2)*

2.2.2 Economic Impact

Overall economic activity and jobs in our service territories increase with the availability and promotion of DSM programs. According to the American Coalition on Energy Efficient Economy, every $1 million invested in energy efficiency supports approximately 20 direct and indirect jobs in the construction space.[11] Also, the reinvestment of energy savings year after year creates an incremental seven jobs per year over spending the money on utility bills.

Trade allies — including several hundred contractors in the residential, commercial and industrial (C&I) sectors — see a positive impact from our DSM portfolio with additional incentives for customers to use energy more efficiently. Our programs help spur demand for trade allies to promote existing and new technologies that benefit customers.

Steve Studer with Lee's Summit Heating and Cooling, a residential HVAC contractor, said, "The rebate program has been a terrific way to encourage customers to buy more efficient equipment. Many times, the rebate covers the additional cost for moving up in efficiency, so it has been beneficial to both the customerss and our company." A commercial firm, Managed Energy Systems, reports their workforce has increased by two to three full-time equivalent (FTE) employees as a function of participating in our business rebate programs. Their overall business has grown more than 500 percent since 2015.

According to the "Clean Jobs Midwest" report[12], nearly 16,000 people in the Kansas City area work in the clean energy industry. Clean energy jobs include employees in renewable energy, energy efficiency, advanced transportation, greenhouse gas emission management and accounting. The energy efficiency sector accounts for more than 70 percent of all clean energy jobs in Kansas City.

For our DSM programs, we select implementers that offer the strongest local presence. The jobs these programs create range from transactional and promotional to engineering and management. In the current MEEIA Cycle 2, we contract with implementers that employ FTEs in the Missouri area. Figure 2.2 represents the approximate number of FTEs hired directly to support our MEEIA programs locally.

FIGURE 2.2: MEEIA CYCLE 2 IMPLEMENTATION CONTRACTOR FTES IN MISSOURI

Program	Implementer	FTE (local)
Residential Energy Efficiency Programs	ICF International	14.5
Business Energy Efficiency Programs	CLEAResult	21
Demand Response Incentive	CLEAResult	3.5
Programmable Thermostat	Nest / CLEAResult	6.5
Total		**46.5**

We anticipate a similar impact in MEEIA Cycle 3, with actual FTE numbers determined through the implementation contractor Request for Proposal process in late 2018. Within KCP&L, we expect to have approximately 14 FTEs implement and deliver DSM programs in both Missouri service territories —KCP&L Missouri (KCP&L-MO) and KCP&L Greater Missouri Operations (KCP&L-GMO) — from 2019 to 2022. These positions are filled by highly skilled program managers, analysts, marketing and accounting personnel.

[11] *https://aceee.org/files/pdf/fact-sheet/ee-job-creation.pdf*
[12] *"Clean Jobs Midwest - Missouri, 2018, www.cleanjobsmidwest.com/state/missouri.*

In addition, while DSM programs target electricity savings, they also provide supplementary benefits for non-electric consumption — such as water and natural gas savings — as well as spillover effects on conservation that benefit neighboring jurisdictions. For example, when low-flow fixtures are installed to reduce the energy consumption of electric water heaters, 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.

2.3 Market Potential and DSM Targets

Demand-side management targets for participation, savings and spend are triangulated on three primary inputs:

1. **DSM Market Potential Study Realistic Achievable Potential (RAP)**
   We conducted a study with Applied Energy Group for the 2018 triennial IRP filing to determine and direct the potential of demand-side electric energy efficiency and demand response programs. We refined the analysis plan in collaboration with Missouri stakeholders, including establishing which components of demand-side management to address in the study. The full report is available in Appendix 8.5.
2. **IRP Preferred Resource Plan**
   In our recent triennial IRP[13], the RAP modified level of DSM was selected for inclusion. This preferred plan provides the most value for customers because it shows a sustainable plan to implement demand-side programs in the short- and long-term when compared to supply-side resources on an equivalent basis. The IRP analysis demonstrates the net revenue requirement with MEEIA Cycle 3 level of DSM is reduced over a plan without DSM programs. Section 5.1 and Appendix 8.11 provide additional detail on the results of these and other analyses.
3. **More than five years of experience with MEEIA DSM programs**
   With several EM&V processes completed, we've gleaned many additional insights into what make programs run well and how various attributes can drive participation. For example, we've continuously gained valuable knowledge about the market opportunity for residential heating and cooling equipment with customer sensitivities to price and contractor engagement driving participation levels. We understand the expected turnover of the HVAC stock in our territory due to age and efficiency levels and have incorporated these insights into expectations for participation.

In addition to these three key items, we gain insights from benchmarks with historical spend as well as nationwide utility targets and spends at the portfolio and program levels. The spend and savings levels for MEEIA Cycle 3 place it in good standing among our peer group of leading Midwestern DSM programs[14].

We propose a realistic and achievable level of DSM programs investment and savings targets for the 2019 to 2022 period. Our annual average planned DSM savings achieved as a percent of retail sales (0.81% and 0.89% for KCP&L-MO and KCP&L-GMO, respectively) and spend as a percentage of retail revenue (1.17% and 2.11% for KCP&L-MO and KCP&L-GMO, respectively) in MEEIA Cycle 3 will remain on the order of the same savings for generally less cost. Our planned savings and budgets represent a continuation in DSM investment levels and reflect a refinement of program choices in a decreasing avoided cost environment compared to previous cycles.

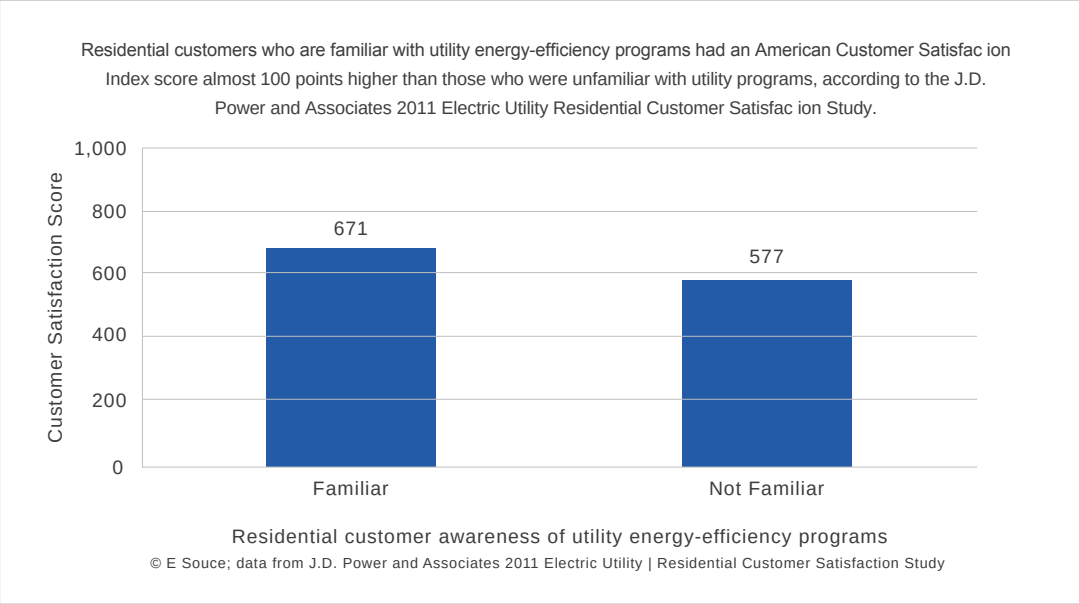
[13] KCP&L-MO Case No. EO-2018-0268
[14] Sources: ACEEE 2017 Utility Energy Efficiency Scorecard http://aceee.org/2017-utility-energy-efficiency-scorecard ; Savings and Spend from ESource DSM Insights database of public filings

2.4 Customer-Focused Portfolio Approach

To design DSM programs that resonate with customer needs and drive action, we begin by gaining insights into customer preferences and attitudes toward potential offers. We maintain a steady feedback loop with customers and, in preparing for MEEIA Cycle 3, engaged with various customer groups via panels and other efforts to derive insights on program design. The feedback received is summarized in Appendix 8.8 Customer Research.

The connection between energy efficiency and demand-side program offerings and positive customer ratings with their utility has been proven repeatedly.

FIGURE 2.3: E-SOURCE RESIDENTIAL CUSTOMER SATISFACTION STUDY



We're always working to build on that connection, improving the experience by studying the way customers want to be communicated, engaged and partnered with to provide positive outcomes. Over the course of our lengthy and strong history in deploying DSM programs, we've significantly evolved customer offers. Key to this is our ability to adjust to customer preferences and changing technology while driving efficiency and effectiveness. We've also gained knowledge about how best to engage customers in DSM and interact with collaborators who help make this enterprise successful.

Our proposed portfolio is balanced to enable the flexibility to deliver a program that meets the needs of a subset of a customer class (C&I data centers or residential customers who do most of their shopping online, for instance) with the need to manage administrative costs with a multitude of subprograms.

We strive to provide easy ways for all customer types to engage with our programs to save energy and money. Historically, we've seen that adoption of DSM programs can be fragmented, by one-off program offerings or technology type. To continually increase efficiency with spend, we must be more strategic in how we present and promote our offerings. As technology evolves and we become a more connected society, consumers require product journeys that are simple, align with their perceptions and integrates with where and how they want to interact with their energy provider.

The MEEIA Cycle 3 proposal offers customers easy points of entry that make sense for their energy choices, including:

- **Income-Eligible Multi-Family**
  - This customer segment will see improved access to focused resources, such as coordination with pivotal stakeholders like the Missouri Housing Development Corporation, one-stop-shop incorporation and a rebate guarantee process enhancement. More detail on these topics can be found in Section 3.3.
  - As in the previous cycle, this audience will benefit from no cost Level 1 energy audits, tailored energy reports and subsidized multi-family direct install, along with custom and more prescriptive measure offerings – paired when possible with Spire Inc. (Spire) to increase incentive to act.
- **Residential Programs**
  - Retail and online energy saving product offerings will drive efficient purchase decisions.
  - The Heating, Cooling & Weatherization program consists of two subprograms, designed to enhance customer in-home comfort and increase the operational efficiency of HVAC equipment, while decreasing energy use — paired when possible with Spire to increase incentive to act.
- **Business Programs**
  - Market segment focusing will deliver specific energy efficiency solutions relevant to a customer's business. Opportunity sectors include data centers, commercial buildings, manufacturing facilities and hospitals.
  - Business customers will benefit from end-use focus and robust prescriptive measures, including cooling technologies, compressed air, and lighting combined with controls.
  - A concierge approach to the Building Process Efficiency program incorporates the continuation of strategic energy management and the addition of different levels building retro-commissioning.
- **Demand Response (DR)**
  - The program will enhance channels for thermostat customer entry points, including DIY, direct install and bring your own.
  - More technology offers — such as alerts, controls, and reports — will increase customer engagement with their thermostats.
  - An evolving business DR approach offers the possibility of automation for customers who want a hands-off approach.
  - The program will allow for the potential of aggregation and bidding of C&I DR resources into the Southwest Power Pool day-ahead energy market.

We're also using more technology-enabled solutions to engage with customers — including recent internal technology system investments such as a customer care and billing system (CCB), customer relationship management (CRM) software, advanced metering infrastructure (AMI) and customer self-service (CSS).

Now, using CCB, contact center personnel can view customer enrollment/participation in programs to better understand how a customer is engaging. The recent pairing of the AMI deployment and the CSS project allows customers more access to interval energy usage online — awareness that is the first step in the journey to identify opportunities at their home or facilities. For instance, a customer's review of interval data usage could show a daily peak of demand on startup of the facility, suggesting a better result would be possible with controls or more efficient motors, which could drive them to find a solution within our energy efficiency portfolio.

3.0 Program Portfolio Details

Providing innovative, accessible and effective solutions to help our customers use less energy and save more is a key objective for KCP&L. The primary objectives that shaped our design for the proposed demand-side management (DSM) portfolio in MEEIA Cycle 3 underscore that commitment:

- Create programs that benefit all by satisfying the total resource cost (TRC) test cost-effectiveness criterion by maintaining a benefit-to-cost ratio greater than 1. 0 at the portfolio level, except for income-qualified initiatives that MEEIA rules permit to bypass this criterion.
- Maintain linkage to the IRP by providing low-cost capacity reductions that require less capital outlay than traditional supply side resources to provide grid relief at peak system times. Selected DSM programs and measures focus primarily on peak demand impacts rather than annual energy impacts, while considering each territory's unique needs.
- Increase customer satisfaction by delivering DSM programs that provide a positive experience and highlight our brand.
- Offer DSM program offerings appropriate for the unique service territories — considering climate, culture and market conditions — while also providing consistency for all customers.
- Address internal and external stakeholder interests.

Stakeholder input is vital to our strategy. To help build this portfolio, we've consulted with a wide range of customer groups, partners and other associates, including:

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

This section outlines energy efficiency and demand response programs for both residential and business customers —and offers a brief look at potential new, innovative programs. We also discuss our marketing approach to provide insight into how we plan to build awareness, educate and engage customers with DSM offerings.

3.1 Energy Efficiency

Energy efficiency is a cornerstone of our clean energy strategy. We help customers manage their energy consumption through a balanced and diversified portfolio of cost-effective energy efficiency programs — promoted through multiple distribution channels to customers from a broad range of socio-economic and geographic backgrounds within our service territory. Our DSM proposal offers a strong, diverse portfolio of new and existing energy efficiency programs that provides savings opportunities for all customer classes.

PLAN HIGHLIGHTS

- **We've improved the top performing programs from our previous cycles to simplify processes, identify deeper energy savings and improve the overall customer experience.** The plan is grounded in preceding years' most successful approaches — and we've built upon them with improvements that reflect market shifts and integrate emerging technologies. The plan includes new products and pilot programs, and the expansion of customer-preferred products.
- **We're focused on the most cost-effective energy efficiency programs to maximize savings and benefits, while keeping energy prices affordable.** This balanced plan allows us to meet challenging goals and manage bill impacts at a time when costs are rising and energy saving impacts are shrinking in certain technologies. We recognize our responsibility to be vigilant stewards of ratepayer funds and ensure programs are both cost competitive and highly effective.
- **We're supporting a wide range of energy efficiency choices to meet different customer needs and interests.** The plan outlines a broad, comprehensive portfolio of energy efficiency offerings to provide residential, business and six qualified customers with opportunities to save energy.

From rebate programs, energy saving items directly installed, energy audits and new construction assistance, our award-winning programs provide solutions that customers value. Our robust EM&V process ensures accountability, provides all key stakeholders with verified energy savings and allows us to track ongoing effectiveness. The DSM plan illustrates our ability to manage customer bill impacts responsibly, demonstrate environmental leadership and an ongoing commitment to providing a wide variety of choices to meet the diverse needs of our Missouri customers.

3.1.1 Residential Programs

A. DESCRIPTION

Our strong portfolio of residential programs incentivizes customers to incorporate energy efficiency into their homes and increases access to information about how to lower energy costs. Behavioral options enhance the energy efficiency offerings, while three unique educational and training programs promote awareness using multiple channels. The portfolio provides customized solutions that resonate with individuals and customer segments to drive holistic energy savings. The table below defines core residential programs (Programs), their applicable program offers (Sub-Program(s)), the method at which the program/sub-program(s) are delivered (Channel) and a high-level overview (Description).

FIGURE 3.1: RESIDENTIAL ENERGY EFFICIENCY PROGRAMS

Programs	Sub-Program(s)	Channel	Description
Energy Saving Products		Retail/Online	Provides point of purchase discounts on select retail and/or online products, including but not limited to: high efficiency lighting products, smart thermostats, smart power strips, appliances and other products.
Heating, Cooling & Weatherization	HVAC	Trade Ally/Customer	Provides incentives for improving the operational efficiency of HVAC systems with duct improvements or tune-ups; also pays rebates for the installation of new, high efficiency systems.
	Audits & Weatherization	Trade Ally/Customer	Provides energy savings items (installed at no cost to the customer) and rebates for improving the efficiency of the home envelope through insulation and air sealing upgrades. An energy audit from an authorized Energy Auditor is required within the parameters of this program.
Income-Eligible Multi-Family	No Cost Assistance	3rd Party Installer	Provides energy savings measures (kits installed at no cost to the customer) and educational leave-behinds to raise awareness of the benefits of high efficiency products. Includes a Level 1 energy audit and HVAC clean and checks as appropriate.
	Rebates	Property Owner/ Management	Provides either a set dollar amount rebate for the installation of high efficiency products and equipment from a list of qualifying measures. Can extend to prescriptive and/or custom rebate options.
Home Energy Reports		Behavioral	Provides a comparison of a customer's energy usage to that of similar homes, along with personalized energy savings tips to encourage behavioral changes that result in reduced usage.
Online Home Energy Audit		Online	Online tool that allows customers to view their usage in comparison to similar homes and engage with disaggregation to find out "what uses most" as well as how to take small actions to improve their efficiency.

FIGURE 3.2: RESIDENTIAL EDUCATION, MARKETING AND TRAINING ACTIVITIES

Activity	Description
Home Energy Value Awareness	Reaches out to stakeholders including realtors and contractors to increase their comfort level in explaining the value of energy efficiency to homeowners.
Workplace Employee Education	Educates residential customers at their workplace on home energy usage and strategies for reducing consumption, while promoting long-term energy savings opportunities.

B. MARKET ANALYSIS

Our residential programs build on the success of proven, traditional energy efficiency concepts and programs — which we continue to grow strategically based on lessons learned in delivering highly impactful and effective solutions into the marketplace. At its core, our suite of offerings provides education, awareness, and financial incentives to offset the cost of energy efficient products and energy saving solutions. We'll continue to leverage relationships and strategies to deliver cost-effective options, such as programs that:

- Advance energy efficient product customer adoption.
- Promote high impact energy saving technologies, such as heating and cooling equipment, through a network of authorized and trained professionals (trade allies).
- Deliver and/or install products as an entry to educating customers on energy efficiency.
- Co-deliver, partner and collaborate to reach customers in the most cost-effective way, including but not limited to coordination of energy saving products/equipment with gas utilities and other stakeholders with similar interests.

C. APPLICATION PROCESS

We will reduce barriers to entry by developing additional online tools and streamlined processes. Application intake processes vary by program; please see individual program summaries following this overview for more information.

D. MARKET OBJECTIVES AND STRATEGIES

The primary drivers for realization of the residential portfolio's planned achievements are a combination of our strategic program managers, implementer(s), trade allies, customer call center, outreach representatives and marketing teams. We plan to provide trade ally outreach, newsletters, customer events, direct mail, email communications and awareness advertising tactics to reach customers.

We employ an integrated approach to marketing communications, where varied tactics work in concert and reinforce key messages over time. Our energy efficiency communication strategy seeks to overcome several challenges:

- Lack of top-of-mind prominence in customers' minds
- Focus on purchase price (or "first costs") rather than lifetime costs and benefits
- Lack of awareness about energy efficient equipment options when purchasing needs arise

We follow the Awareness, Interest, Desire and Action process for encouraging participation in DSM programs.

1. Create ***awareness*** of electricity and/or natural gas impacts on bottom-line profits and quantify potential cost savings and available rebates.
2. Promote ***interest*** in DSM programs by providing more information about the offerings, including payback examples and case studies, through a variety of customer touchpoints.
3. Instill the ***desire*** for participation by quantifying the impacts of a bundle of potential energy savings technologies and processes, tailored to each targeted market segment.
4. Move the customer toward ***action*** by offering a variety of program options with varying degrees of financial commitment and/or long-term involvement.

We also market programs differently to the various customer segments and sub-populations, identified by key shared characteristics. After analyzing and identifying the motivation of each target audience, we tailor key messages to meet the customers' specific needs. More information for the Income-Eligible Multi-Family program is below in section 3.3.

E. PROGRAM-SPECIFIC POLICIES

We've adopted several general policies across all programs in the residential portfolio, though individual programs may have additional, unique policies as noted in each of the following program summaries. While general policies provide guidelines, they may be altered under specific circumstances and/or for specific periods of time when warranted for promotional events or other purposes.

Program-level policies include:

- Proof of installation: All programs require documentation of installation, such as proof-of-purchase (invoices) and/or a site verification.
- Payback requirements: For custom conservation programs, payback requirements vary by program. Project payback must be less than the project lifetime, which varies by program and technology.

F. REBATES AND INCENTIVES

Residential rebates are offered to promote high-efficiency energy solutions. Rebates and incentives vary by program and can be offered to customers, vendors, trade allies, distributors or manufacturers. If program performance lags and budget allows, bonus rebates may be offered to boost participation.

3.1.2 Business Programs

A. DESCRIPTION

Our business efficiency portfolio provides customers with increased awareness and understanding of how they use energy. We're moving forward with expanded and streamlined offerings that strengthen the focus on energy education and deliver solutions that align with our customers' business needs while driving long-term energy savings. We plan to continue our Business Standard and Business Custom programs. We'll also offer a Business Process Efficiency Program, including Retro-Commissioning, Strategic Energy Management, Express Tune-Up and a Monitoring Based Commissioning option.

We'll further address marketplace barriers with:

- A concierge-customer driven approach
- Benchmarking and energy usage to identify savings opportunities
- Targeted vertical segments
- Initiatives to connect businesses with design professionals, engineers and trade allies
- Simplified application intake portals and market facing calculators
- Energy efficiency project finance options for customers
- An improved overall customer experience and program process journey
- Grass roots energy market development

New marketing strategies will align customer segments with bundled measures and technologies for specific industries. This longer-view, strategic customer-centric approach delivers a more streamlined approach for customers to connect our energy solutions with their business solutions. The table below defines core business programs (Programs), their applicable program offers (Sub-Program(s)), the method at which the program/sub-program(s) are delivered (Channel) and a high-level overview (Description).

FIGURE 3.3: BUSINESS ENERGY EFFICIENCY PROGRAMS

Programs	Sub-Program(s)	Channel	Description
Standard Incentive	Cooling	Trade Ally/Customer	Provides incentives to purchase energy efficient cooling measures with pre-set savings values and a fixed incentive amount.
	Lighting	Trade Ally/Customer	Provides incentives to purchase energy efficient lighting measures — including network and lighting optimization controls — with pre-set savings values and a fixed incentive amount.
	Small Business	Trade Ally/Customer	Provides small business customers with low cost energy efficient measures through program providers who assess, install and complete paperwork.
Custom Incentive	Cooling	Trade Ally/Customer	Provides incentive for qualifying complex or unique projects that do not fall in the Standard Cooling program, with rebates determined on a $/kW or kWh basis.
	Lighting	Trade Ally/Customer	Provides incentive for qualifying complex or unique projects — including network and lighting optimization controls — that do not fall in the Standard Lighting program, with rebates determined on a $/kW or kWh basis.
	New Construction	Architect/MEP Engineer/Developer	Provides incentive for early design assistance and qualifying complex or unique new construction projects, with rebates determined on a $/kW or kWh basis for incremental energy savings above code.
Process Efficiency	Retro-Commissioning	Trade Ally/Customer	With special focus on complex control systems, provides options and incentives for improved operations and maintenance practices regarding building systems and processes. This includes Monitoring Based Commissioning initiatives.
	Tune-Up	Trade Ally/Customer	Provides streamlined process and incentives for retro-commissioning of basic operating systems to reach peak operating efficiency.
	Strategic Energy Management	Customer	Provides energy education, technical assistance and companywide coaching for large commercial and industrial (C&I) customers to drive behavioral change and transform company culture with respect to energy use and management.
Online Business Energy Audit		Online	Online tool that allows customers to view their usage in comparison to similar businesses and engage with disaggregation to find out "what uses most" as well as how to take small actions to improve their efficiency.

FIGURE 3.4: BUSINESS EDUCATION AND TRAINING ACTIVITIES

Activity	Description
Building Operator Certification	Offers building operator certification to customers participating in MEEIA Cycle 3 to raise awareness on building operation and maintenance best practices, in coordination with the Midwest Energy Efficiency Alliance and the Missouri Department of Economic Development.
Building Codes Training	Provides building codes training to business customers, market actors and contractors participating in MEEIA Cycle 3 to raise awareness on building codes and standards.

B. TARGETS AND PARTICIPANTS

Our Business Energy Efficiency portfolio provides standard, custom, operational and maintenance programs for both small mid-sized businesses and large commercial/industrial customers. Potential targets include past participants, new customers and customers with energy savings opportunities at their facilities, based on a propensity model scoring and segmentation analysis.

C. APPLICATION PROCESS

We will reduce barriers to entry by developing additional online tools and streamlining processes. Application intake processes vary by program; please see individual program summaries for more information.

D. MARKET OBJECTIVES AND STRATEGIES

Market analysis shows the commercial segment has the highest potential for energy and demand savings within the indoor lighting, advanced controls, cooling, ventilation and refrigeration end-uses. Pumps, drives, compressed air, fans, cooling and advanced controls show the greatest end-use potential in the industrial segment.

We conducted research to identify which segments, customer class and service jurisdictions have participated in our DSM programs. Customer detail from rebate applications — including customer name, vendor and equipment type — is added to the database. Monitoring this information helps us determine several metrics, including DSM participation status, market segment, and equipment type. By analyzing specific end-use data, we can continually evolve the business program to further meet the needs of the market.

Trade allies, end-use equipment vendors and energy services companies work collectively with key account and marketing teams to drive participation in the business portfolio. While coordination with the largest business customers typically requires personalized communications and site visits, we also drive connections with mass market business customers through newsletters, customer events, direct mail, email communications and awareness advertising.

Our energy efficiency outreach strategy seeks to overcome several challenges:

- Lack of top-of-mind prominence for customers who are often busy managing core elements of their business
- Focus on purchase price (or "first costs") rather than lifecycle costs
- Disinclination to replace equipment prior to failure
- Lack of awareness about energy efficient equipment options and available financing when purchasing decisions are made

The next generation of vertically-integrated energy efficiency programs will develop a deeper understanding of key industries — and deliver greater value by tailoring offerings to higher priority investment areas and overall energy and environmental strategy within specific market verticals. This approach will leverage market intelligence within targeted business communities to design

enhancements to the Standard and Custom Business Programs. New technologies, incentive structures and approaches to customer education will help spur greater investment in energy efficiency.

To deliver program services, we'll identify and train organizations within our service territory that offer industry specific expertise and trusted relationships with targeted customers. Modified administrative processes and systems will accommodate greater customization and diversity in program offerings. By taking a longer-term, strategic approach and creating true partnerships with customers and their service providers, we'll realize more sustainable improvements in the market for energy efficient products and increased economic development value resulting from its programs.

E. PROGRAM-SPECIFIC POLICIES

We've adopted several general policies across all programs in the business portfolio, though individual programs may have additional, unique policies as noted in each of the following program summaries. While general policies provide guidelines, they may be altered under specific circumstances and/or for specific periods of time when warranted for promotional events or other purposes.

Program-level policies include:

- Proof of installation: All programs require documentation of installation, such as proof-of-purchase (invoices) or a site verification.
- Installation date: Rebates are provided for qualifying equipment installed within a 12-month period.
- Payback requirements: Rebates may be paid on projects with payback of at least 1. 5 years. Project payback must be less than the project lifetime, which varies by program and technology.
- Studies: Funding cannot exceed 75 percent of the study cost and studies must be completed within three months.
- Study-driven savings: Customers will not receive a rebate if they implement measures with less than a one-year payback, but we'll still claim the study-driven savings. We believe our financial and technical help in identifying and/or analyzing energy efficiency measures provides enough influence on the customer's decision to implement those measures.

F. REBATES AND INCENTIVES

Business rebates are offered for custom, standard and small business programs to promote high efficiency technology implementation. Rebates are offered for operational and maintenance savings derived through participation in the Business Process Efficiency program. Rebates and incentives vary by program and can be offered to customers, vendors, distributors and manufacturers. If implementation lags and budget allows, bonus rebates may be offered to customers and/or trade partners to boost participation.

Indirect offerings, such as business energy assessments, trainings and education support, are offered in conjunction with program offerings.

3.2 Long-Lead Program Continuity

3.2.1 Description

Transition time between MEEIA Cycles provides customers, contractors, trade allies and market actors with continuity and a seamless customer experience between cycles for projects with lead times greater than 90 days. These programs are typically within the Business Custom, Process Efficiency and Income-Eligible Multi-Family (IEMF) Programs.

We will provide a written commitment letter of incentives for eligible long-lead projects — those with estimated completion dates not longer than one year following current cycle completion — up to the approved threshold cap within the existing MEEIA Cycle budget. The Business payments will be offered on terms of $/kWh and $/kW. Payments will be made upon completion and any projects that fail to complete within this specified timeframe will be ineligible.

FIGURE 3.5: LONG-LEAD CONTINUITY PROCESS

Step	Deliverable	Deadline
Project Application	The customer must apply to the project administrator.	No later than five months prior to completion of the current program cycle.
Executed Commitment Agreement	The customer must submit a signed efficiency commitment offer letter.	No later than the last date of the current program cycle.
Certification of Completion	The customer must submit certification of completion and all required paperwork to the program administrator.	No later than 12 months after the last day of the current program cycle.
Payment	We will issue a rebate check upon review of the final project.	Issued no later than two months following the certification of completion of final customer documents.

3.2.2 Targets and Participants

Target participants include large new construction, expansion or retrofit projects with construction timelines of 12 to 24 months for Business projects and up to 36 months for IEMF projects. These programs offer customers a path forward for projects that start within a current cycle but transition beyond the approved MEEIA cycle period.

3.2.3 Rebates and Incentives

Rebates for long-lead projects are offered for qualifying custom, process efficiency or income-eligible multi-family offerings. Rebates and incentives vary by program and can be offered to customers, vendors, trade allies, distributors and manufacturers. If implementation lags and budget allows, bonus rebates may be offered to boost participation.

3.3 Demand Response (DR)

We are aligned with the Commission toward the goal of reducing capacity to minimize the need for new generating assets in the future — and we see significant value in managing our customers' peak demand in pursuit of that goal. The demand response (DR) programs we are proposing for MEEIA Cycle 3 are very similar to MEEIA Cycle 2 programs, with a few distinctions.

- Residential Demand Response and Business Smart Thermastot will continue to include incredibly successful thermostat programs, though the customer offer will evolve to drive the most cost-effective savings. We will also explore additional demand reduction through alternate sources such as water heaters.
- Business Demand Response will continue to be the largest share of load reduction. We'll shift primarily to growth in our footprint and explore adjusting customer offers to drive the highest level of customer participation.
- We will use a Distributed Energy Resource Management System (DERMS) to bring together multiple resources in our jurisdiction and provide a holistic view of system demand reduction capabilities. Our investment in the DERMS in MEEIA Cycle 2 will be a tremendous asset in MEEIA Cycle 3, bringing a new level of sophistication and operational efficiency to DR programs.
- Market based participation in Southwest Power Pool's day ahead energy market will be tied into the participation offering for Business Demand Response participants.

The table below defines core demand response programs (Programs), their applicable program offers (Sub-Program(s)), the method at which the program/sub-program(s) are delivered (Channel) and a high-level overview (Description).

FIGURE 3.6: DEMAND RESPONSE PROGRAMS

Programs	Sub-Program(s)	Channel	Description
Residential Demand Response	Thermostat	Direct Install, Do-it-Yourself (DIY), Bring Your Own (BYO)	Provides a learning Wi-Fi enabled thermostat as part of a direct load control program where devices receive signals to help manage peak demand while maintaining comfort.
	Water Heater	Direct Install	Offers customers the opportunity to bundle water heater controls with thermostat to enhance savings opportunities.
Business Demand Response	Traditional Demand Response, Automated Demand-side Management	Direct to Customer, Through Approved Aggregator	Calls on business customers to respond to signals to reduce load during peak summer days through manual methods such as phone and email or through automation tied into building management systems.
	Market Based Demand Response	Direct to Customer, Through Approved Aggregator	Facilitates customer participation in Southwest Power Pool day ahead energy market on non-curtailment days to enhance financial opportunities for the customer.
Business Smart Thermostat	Thermostat	Direct Install	Provides a learning Wi-Fi enabled thermostat as part of a direct load control program where devices receive signals to help manage peak demand while maintaining comfort.

3.3.1 Residential Demand Response

The participation and evaluated savings results from the programmable thermostat program in MEEIA Cycle 2 has proven the residential customer is hungry for smart thermostats and reducing summer demand. In MEEIA Cycle 3, we'll build on that success — demonstrated by multiple industry awards[15] — to refine customer offers and participation opportunities. One example is an increased focus on the Bring Your Own (BYO) thermostat channel to harvest the potential for smart thermostats already in the market, bringing additional demand reduction to the grid with an individual financial benefit for the customer.

Residential thermostat demand reduction algorithms are also evolving. The traditional model from five to 10 years ago of cycling the compressor every 15 minutes during an event has given way to more sophisticated, analytics and physics-based DR approach models[16]. These models use pre-cooling and ride-through sensors to help manage customer comfort with efficient demand reduction on a per home basis. For example, we've utilized the Nest Rush Hour Rewards algorithm for demand reduction in MEEIA Cycle 2 with remarkable success, as evidenced by customer feedback and overall program satisfaction.

As the connected home space develops, we'll continue to evaluate other control technologies that help manage peak demand. The addition of water heater direct load control to our Technical Resource Manual is an example of this expansion. The water heater has long been known as a source of variable loads that could easily shift with minimal customer impact. As more companies have developed solutions to provide control and access to water heater usage, we've integrated these advances into our resources. These connected devices can most likely be used in concert with thermostat activities to help reduce demand during peak times.

3.3.2 Business Demand Response

The Demand Response Incentive (DRI) program saw significant growth in MEEIA Cycle 2 — specifically in the KCP&L Greater Missouri Operations (KCP&L-GMO) service territory — from around 20 MW to more than 55 MW of contracted capacity.

It's important to note that while our 2018 program is fairly robust — engaging 140-plus unique customers encompassing more than 340 service points across the KCP&L-MO and KCP&L-GMO territories — all contracts expire at Cycle 2 end and will require re-evaluation and re-engagement for participation in MEEIA Cycle 3. This will require significant effort from relevant team members to work through the large volume of participants, while concurrently recruiting and enrolling new customers for participation by the June 1, 2019 curtailment season start date.

Evaluation, measurement and verification (EM&V) challenges identified in MEEIA Cycle 2 include customer understanding of the connection between customer baselines and actual usage, along with lack of full cooperation in curtailment events. In MEEIA Cycle 3, we'll work to overcome these issues by incorporating additional features to help improve baselines and promote performance during events.

- Updated baseline methodologies will use a more sophisticated model of forecasting the potential load on the day of a curtailment event in absence of the program. This forecasted baseline load can then be compared against a participant's actual load during an event. Improved visibility and access to customer data supports the updated methodologies.
- We'll evaluate how communicating participation and event payments to the customer helps encourage better performance during events. We'll also evaluate the other side of the equation: how the penalty for non-compliance impacts performance. To reach optimum efficiency for our incentive structure, we'll consult with national subject matter experts on best practices and solicit customer insights and motivations regarding prioritization of program attributes.

[15] *2016 Peak Load Management Alliance (PLMA) – Thought Leadership Award; SEPA/DistribuTECH – Demand Response Project of the Year 2018*

[16] *Smart Thermostats: The Killer DER, Tendril Networks, Melanson, 2017*

During Cycle 2, we incorporated new tariff language to allow for automated demand-side management (ADSM), welcoming an additional customer segment into the program. This offering will continue in Cycle 3. This customer profile prefers a hands-off approach to performing during events, without the need for manual intervention by facility staff. They have integrated ties to automated building systems, building management systems or energy management systems at their sites and — because they are often in the retail space — are sensitive to customer impact. The key attribute for this audience is peak reduction algorithms that allow for a light touch to DR.

We'll explore automation for larger commercial and industrial (C&I) customers with the capability to use controls technology. As discussed below in Section 3. 2. 4, we've also developed a provision for optional market-based demand response participation for qualified Business Demand Response customers, allowing participation in the Southwest Power Pool (SPP) energy market on days when a curtailment event isn't scheduled.

3.3.3 Distributed Energy Resource Management System (DERMS) Impact in MEEIA Cycle 3

As a way to continue centralizing management of existing, new and future DR programs, we are implementing a DERMS. This system will manage the portfolio of existing and future DR and we anticipate continuing to explore and develop the deeper, broader company value of a DERMS.

A key technology platform with significant potential impact on our growing DR program portfolio, the DERMS will help meet the increasing importance of DR in the DSM component of our Integrated Resource Plan (IRP). It allows us to more effectively manage our legacy thermostat programs, grow current DR programs and implement new MEEIA Cycle 3 programs that appeal to a wider variety of residential and business customers.

To further enhance the growth and effectiveness of our DSM portfolio of DR programs and through future development, the DERMS is expected to:

- Support an increasing variety of DR programs, including expanded measures (water heaters, smart appliances, etc.), program participation models (direct install, DIY and BYO) and self-enrollment. It also enhances management of program un-enrollment and re-enrollment, as well as participation payments resulting from customer changes (move in/outs etc.).
- Record operating and response characteristics of DR resources and provide forecasting capabilities to predict near-term and long-term performance capabilities.
- Include a customer portal that provides relevant program, event and settlement information, as well as offering self-service functionality for customers to manage participation in DR events.
- Provide comprehensive capabilities to group and aggregate DR resources into dispatchable resources for use in response prediction, event planning, event dispatch and reporting. Event dispatch capabilities support grid capacity relief on a system wide or localized basis.
- Offer capabilities to enhance commercial customer participation in C&I DR events, including calculation of daily baseline usage, near real-time visualization of event participation, and event notifications through direct ADSM integration with building management systems.
- Support future dynamic pricing rate programs, price incentivized and bid based (offer/accept) load curtailment programs, and energy service bidding programs. The system supports wholesale market integration and can be used to manage a retail customer's DR resource participation in the wholesale market (like the "Indiana model" market-based program).

3.3.4 DR Aggregation and Southwest Power Pool Market Participation

In the most recent rate cases and exploration dockets, the Commission asked us to explore ideas to engage our demand response and other distributed resources with the real time Independent System Operator (ISO) markets. The Southwest Power Pool (SPP) — the regional ISO in which KCP&L-MO and KCP&L-GMO are members — currently allows for bidding energy, but not capacity, into the market. The results of the ongoing discussion on DER, aggregation of load and the Indiana model has been considered deeply on how to best move forward. The outcome of the recent rate case was to file a tariff to allow for implementation of a market-based demand response type product, which would allow for bidding into the day ahead energy market of SPP. Participating in MEEIA Business Demand Response is a pre-requisite for participating in the market-based tariff. More information on the product's integration with our existing Business Demand Response programs is available in our program description and associated tariff.

3.4 Income-Eligible Multi-Family Program

3.4.1 Overview

Our Income-Eligible Multi-Family program promotes awareness and education to multi-family property managers and owners about their buildings' energy usage, including how to use no-cost direct install measures to achieve immediate energy savings. The program also motivates managers and owners to realize deeper energy savings by investing in prescriptive and/or custom measures for common areas, in-unit and whole-building systems.

Owners and managers can establish program qualification in the following ways:

- Participation in an affordable housing program - Documented participation in a federal, state or local affordable housing program, including Low-Income Housing Tax Credit (LIHTC), HUD, USDA, State HFA and local tax abatement for low-income properties.
- Location in a low-income census tract - Location in a census tract we identify as low-income, using HUD's annually published "Qualified Census Tracts" as a starting point.
- Rent roll documentation - Where at least 50 percent of units have rents affordable to households at or below 80 percent of area median income, as published annually by HUD.
- Tenant income information* - Documented tenant income information demonstrating at least 50 percent of units are rented to households meeting one of these criteria: at or below 200 percent of the Federal poverty level or at or below 80 percent of area median income.
- Participation in the Weatherization Assistance Program - Documented information demonstrating the property is on the waiting list for, currently participating in, or has in the last five years participated in the Weatherization Assistance Program.

*As the most administratively burdensome of these eligibility pathways, this option will only be used if the other approaches are not applicable.

DESCRIPTION

In addition to helping this customer segment achieve deep utility savings, the program provides whole building energy analysis, recommendations for improvements with technical and process assistance, and incentives to motivate action regarding upgrades. Offerings — applicable to both in-unit and common areas — are integrated into an overarching energy efficiency strategy that is presented to property management and ownership.

Our support can extend to direct install and prescriptive and/or custom rebate options.

- Direct install may include but is not limited to: faucet aerators, low-flow showerheads, HVAC clean and checks, advanced power strips, hot water pipe insulation and LEDs.
- Other measures may include but are not limited to: in-unit refrigerators, LED exit signs, smart thermostats, tracking/adjustment of hot water heater set temps, shower start valves and refrigerator coil cleaning.
- Rebates for prescriptive and/or custom measures may include but are not limited to: lighting measures, controls, insulation and air sealing, HVAC systems, HVAC tune-ups and appliances (including common area laundry equipment).

3.4.2 Implementation Strategy

To execute the program, we identify and establish relationships with multi-family building owners of income eligible facilities. We use direct outreach and marketing to inform high usage/targeted eligible property owners and managers of the many benefits of energy efficiency at their properties. Collaboration and partnership with Spire and the Missouri Housing Development Commission (MHDC) increases opportunities, and we continually evaluate other potential synergies.

We'll partner with MHDC to create a process flow document, ensuring efficient communication during pivotal milestones for properties undergoing refinancing. For MHDC, LIHTC and other large-scale retrofit projects, we'll create a Rebate Commitment Note to help property management lock-in rebate funding. As noted in the 3.2 Long-Lead Program Continuity section, this program will allow for transition time between MEEIA Cycles to provide continuity and a seamless customer experience for projects with lead times greater than 90 days.

In complement to these offers, we've realized great synergies through partnership and co-delivery with Spire. Our successful collaboration will continue and expand as we seek more opportunities to reduce program costs and provide mutual customers with comprehensive energy efficiency solutions.

3.4.3 Program Strategy

We'll offer no-cost Level 1 energy assessments to eligible properties and provide a report to property management with the following information:

- Recommended upgrade measures
- Estimated energy savings
- Estimated cost savings
- Estimated cost for equipment and installations
- Simple payback analysis

There will be exceptions for this Level 1 assessment offer for those that have completed a recent, similar energy report assessment.

- Deeper audits, ASHRAE Level 2, to those interested
- Scope of work, including securing qualified program partners to perform energy efficiency upgrades as applicable
- Overview of applicable incentives and/or rebates
- Assistance with retrofit scheduling and completion as applicable
- Verification of quality installation
- Historical (12 months) energy usage and technical assistance to begin benchmarking buildings using Energy Star Portfolio Manager (or similar) for eligible participants
- Exploration of best practices financing options

A seamless 'one-stop-shop' approach will provide owners, managers and operators of multi-family low-income properties integrated support before, throughout and after the retrofit process. We'll provide a single point of contact to ease communication and offer to assist with applications for financing and technical support. We'll also provide incentives to help overcome the upfront expense of upgrading and incorporate an Energy Efficiency Project Intake Form (EEPIF) to lower barriers around the program entry. Our Connect Center will serve as 'shop' location for support and outreach, increasing awareness of energy efficiency habits and measures while encouraging market transformation.

The driving force behind this initiative is to promote, establish and integrate energy efficiency in all aspects of a project before design development completes. Below is a potential draft outline of the process:

1. ***Complete project intake form (EEPIF)***, capturing basic information such contact, location, building code jurisdiction and brief project description.
2. ***Review and schedule*** meeting time and location.
3. ***Identify key team members***, including property design decision-makers, affordability consultants, architects, developers, owner or owner reps, utility representatives and MHDC as deemed appropriate.
4. ***Develop an agenda*** based on a template we'll provide that addresses major energy components, including site characteristics, envelope, lighting, plug loads, HVAC, interactive effects, IAQ and other elements. The agenda will also provide an overview of rebates and incentives.
5. ***Conduct meeting.***
6. ***Provide deliverables.***

3.4.4 Rebates & Incentives

Rebates and incentives are provided in the form of direct install kits and rebates for prescriptive and custom projects. We'll increase incentive/rebate levels and encourage property owners and managers to achieve maximum savings by offering additional assistance in overcoming financial barriers to more robust energy efficiency upgrades. The program's foodbank portion is being removed, resulting in more significant incentives to encourage action from owners. This adjustment — and the additional process increases — will allow for deeper and more complex project retrofits.

This customer segment also benefits from Energy Analyzer, a robust online tool that enables customers to track energy consumption and understand how their energy is being used; while offering tips for DIY and behavioral improvements. We also provide resources in situations where bill payment assistance is needed.

3.5 Innovative Programs

Technology and innovation drives evolution of DSM programs. Mindful of this inevitability, we've included a budget allowance for the research and pilot programs that help utilities understand what customers seek in energy efficiency and demand response programs. The entirety of MEEIA Cycle 2 was focused on research activities, primarily due to a few barriers with the categorization and process for "pilot" programs. To improve the process, we're proposing a methodology that eases the ability to communicate the intent, process and results of these pilot initiatives. This proposal is detailed further in Section 5.

3.5.1 Proposed and Potential Residential Research and Pilot Offerings

As the industry evolves — and technology and standards along with it — utilities nationwide must focus on innovation, both in offering new programs and improving current programs to drive better results. We are continually working to improve our performance on energy efficiency initiatives, maximizing our ability to help customers use less energy and save more through MEEIA. These efforts provide considerable benefits, allowing customers to manage energy costs, providing customer choice, improving the environment and supporting our communities.

Our current research and pilot program offerings fall into one of three status levels:

1. Proposed to pilot or study upon approval in 2019
    a. Electric vehicle charging research
    b. Circuit rider building codes program
2. Evaluated ideas that may be ready to deploy but are not yet proposed
    a. On-bill financing and Pay As You Save (PAYS)
    b. HVAC diagnostic services
    c. Energy equity research
    d. Tree-based energy savings
3. Burgeoning ideas that require more evaluation
    a. Listed directly below

We'll continue to evaluate opportunities for innovative program design that both meets the needs of the residential customer and provides sufficient energy and demand savings. We're incubating and evaluation several ideas — some of which are detailed below — that are not yet ready for presentation of full plans and tariffs. The potential offerings span a wide and evolving range of options, though we may also propose additional options during the MEEIA Cycle 3.

1. Research
    a. Energy equity research to explore the relationship between program participation, geographic location, income levels, ethnicity, education and others
2. Income Qualified/Eligible
    a. Energy efficiency for trailers and mobile homes
    b. Energy efficiency for single-family, low- to -mid-income customers
    c. Energy efficiency for low-income assisting businesses such as shelters

3. Market Rate Residential
    a. Single-Family
        i. Tree energy efficiency is a high-priority collaboration with the City of Kansas City and Bridging the Gap
        ii. Remote assisted DIY home assessments and direct installs
        iii. Connected homes and smart home solutions, including HVAC fault detection devices, energy efficient lighting controls, demand response lighting controls and battery energy storage
        iv. Midstream offerings including HVAC, heat pumps, hot water heaters, windows and insulation
        v. Community geothermal heat pumps
    b. Multi-Family
        i. Kits and HVAC tune-ups
    c. Elementary Schools
        i. Kits and curriculum for children, offered through elementary schools

ELECTRIC VEHICLE CHARGING

Our investment in electric vehicle (EV) charging infrastructure — we've installed more than 1,000 stations in our service area since 2015 — has helped transform our region into an EV hotspot. Starting in the fourth quarter of 2016 and continuing throughout 2017, Kansas City topped the nation in electric vehicle growth according to IHS Automotive and the Electric Power Research Institute (EPRI).

This dramatic growth — and national awards from Chartwell, E-Source and others — have solidified our position as a thought leader in EV charging infrastructure. Building on this success, we're exploring ways to integrate EV efforts in our MEEIA programs going forward.

- To incentivize efficient charging solutions at home, we're researching options for an EV home charger program. Charging with a 240-volt Level 2 (L2) home charger is faster and more efficient than a 110-volt Level 1 (L1) outlet. We're monitoring ongoing research from EPRI, Idaho National Labs and Vermont Energy Investment Corporation for guidance on best practices for DSM programs.
- To better understand demand response capabilities with home and public chargers, possibilities exist to explore the potential for maximizing technology platforms, such as DERMS.

CIRCUIT RIDER – BUILDING CODES EDUCATION PROGRAM

An estimated 75 percent of buildings in the United States will be new or renovated by 2035. Outreach and education about energy codes ensures structures are built to the proper standards for efficient energy usage. The State of Missouri is part of a recent study outlining the impact of building efficiency through codes education and compliance. The Building Codes Education program supports the development and implementation of residential and commercial building codes by providing local municipalities, builders and stakeholders with technical assistance for code adoption and compliance.

Elements of the codes program include:

- Training seminars on the latest codes adopted by county.
- Education and technical assistance on utility rebates and incentives to help offset high efficiency upgrades above code.
- Savings impact assessments for projects designed above energy codes.

RESIDENTIAL ENERGY EFFICIENCY FINANCING

As suggested by the Commission in previous rate case filings, we've explored energy efficiency financing in advance of this filing. We've previously responded to various Integrated Resource Plan (IRP) special contemporary issues on the topic and included it in an exploratory exercise in MEEIA Cycle 2 as a collaborative process with stakeholders. We're also a part of a MEEAC group focused on financing in the Missouri market.

As a new exercise, we explored an option to include a PAYS financing model as part of a general inventory of the financing landscape in Kansas City and surrounding areas. This model was previously explored by Empire/Liberty and Ameren. While we surveyed our specific customers to explore preferences and financing options specific to our geography, the conclusions are largely the same as other regional studies:

- Residential measures are most likely to succeed when electric heat is present.
- Barriers include financial and regulatory hurdles.
- It's unclear how much market potential uplift an additional financing product in the market would see beyond what is available today.

Based on our reading of the report and knowledge of the need, we will hold the PAYS and other on-bill financing opportunities as an option for research and pilot funds during the MEEIA Cycle 3, but not propose implementing at the beginning of the cycle. The full report is available in Appendix 8.9.

3.6 Marketing

3.6.1 Integrated Marketing Communications Approach

We continue to demonstrate how integrated marketing communications delivers the highest levels of awareness building and program participation. Because customers need several exposures to a message before acting, the surround sound approach of delivering multiple carefully orchestrated messages in multiple channels over sustained periods of time works.

FIGURE 3.7: SURROUND SOUND MARKETING TACTICS

This approach is optimized around the marketing funnel, which outlines the path customers take from awareness to education to conversion and, finally, to continued engagement. We guide customers through this process by matching marketing campaign elements to customers' informational needs at various points within the funnel. Customers receive further support through the engagement portion when we cross-promote other MEEIA programs in which they haven't yet participated.

FIGURE 3.8: MARKETING FUNNEL

While developing campaigns, we consider seasonality and coordination with other customer touch points, such as starting electric service or a billing inquiry. When efforts focus on timely and relevant opportunities to connect with customers already primed by seasonality or natural interaction, the likelihood they will participate in programs increases. Campaigns provide the greatest return on investment when all elements are strategically planned, offer relevance to specific audiences and work in concert with each other.

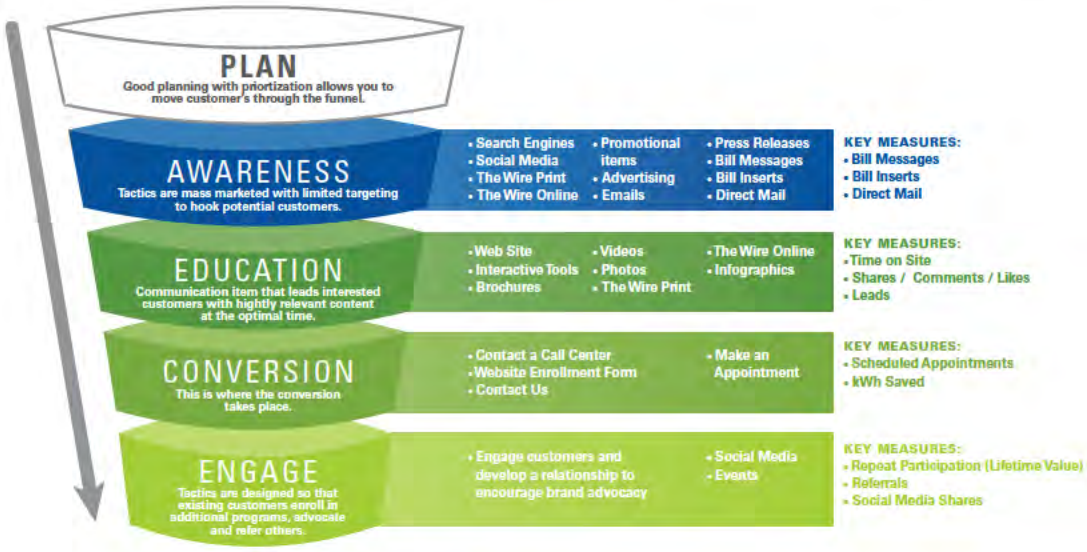


FIGURE 3.9: MARKETING PATH TOWARD CUSTOMER ENGAGEMENT

3.6.2 Targeted Marketing Communications

We include 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 group of customers whose needs match our offering
2. Messaging that helps customers understand how they benefit from the offering
3. Distribution at relevant times for the customer and integration with other marketing

DETERMINING TARGET GROUP OF CUSTOMERS

While all eligible customers may participate in programs (and are reached via mass marketing tactics), some customers are more likely to participate. Our capability to leverage internal data sources and new platforms — such as customer relationship management (CRM) and marketing automation system — to develop customer profiles is steadily increasing. For example, modeling on current participants, attribute appends, Nielsen and Acxiom segmentation, usage patterns and digital body language can be stitched together, revealing a set of customers who will likely participate if contacted through targeted marketing communications.

MESSAGE DEVELOPMENT

Once a target group of customers is defined, it's vital to develop messages they will pay attention to. Over the past six years, we've learned how residential and business customers understand, receive and use our programs. In preparation for MEEIA Cycle 3, we'll use primary and secondary research to dig deeper and more fully analyze how proposed and continuing programs are perceived and used, and further explore customers' decision-making process and the benefits they find most motivating. These insights support the continued creation of tailored messaging that educates customers and causes them to enroll in programs.

Overarching key messages for our residential programs may include:

- Energy efficiency reduces monthly energy bills due to lower operating costs.
- We help lower energy bills by offering rebates and incentives for installing highly efficient equipment.
- Energy efficiency helps reduce environmental impacts.

Overarching key messages for our business programs may include:

- Energy savings contribute directly to increased profits.
- Partnering with the property manager (when applicable) to employ energy savings can lower energy costs, improve ambiance and increase property value.
- Because energy costs are a sizable portion of an operating budget, investing in energy efficiency is a smart decision with major impact.
- Rebates help reduce upfront costs, shorten payback periods, and provide ongoing savings.
- Energy-efficient equipment and systems increase reliability while decreasing maintenance costs.
- Saving energy helps reduce environment impacts and meet sustainability goals.

PROGRAM-SPECIFIC AND SOLUTIONS-BASED MARKETING TACTICS

Marketing tactics center on program-specific promotions, solutions-based marketing and a wide range of communications vehicles. Program-specific marketing ties back to the overriding message, offering concrete ways to do more. These examples show customers and trade partners the direct impact of their efforts, providing examples of energy savings, paybacks, lifetime savings and other personal rewards. Solutions-based marketing focuses on program combinations that offer solutions for a specific customer segment (such as schools) or address common customer concerns (such as weather, costs and environmental) rather than marketing a single program.

DISTRIBUTION AND INTEGRATED MARKETING

Direct, targeted marketing is most successful when customers are already exposed to messaging through mass marketing awareness tactics as part of a larger integrated strategy. The targeted message must also reach them at a time when they are already primed by either seasonality or a need MEEIA programs can fulfill.

For instance, we run email campaigns that are automatically triggered when customers take certain actions. When customers start service and opt to receive email communications, they receive a series of welcome emails with helpful tips and information, including well-crafted messages about MEEIA programs. These emails generate higher-than-average open and click-through rates, indicating this content is helpful to them.

Triggered campaigns can also encourage customers to complete the program participation process. For example, an air conditioner checkup is the first of several steps in the process for the Air Conditioning Upgrade Rebate. When customers complete that step, they should receive an email reminding them of the benefits of replacing their unit and recapping the next steps in the process.

PROGRAM NAMES

We rely on a surround sound "branded house" marketing strategy to build awareness of energy efficiency opportunities while leveraging the brand. Program names are comprised of straightforward key words that describe literally what customers receive or experience when they participate. This approach provides cost efficiency by eliminating the need to educate customers about what a disparate variety of "named" programs mean.

When the program names are preceded by the brand name, our brand's credibility transfers to individual programs, increasing the customer's trust in the offering. This naming construct also ties diverse programming into one cohesive portfolio. During our upcoming rebranding as a result of our recent merger, we'll have the opportunity to spotlight our MEEIA programs to a wide audience.

3.6.3 Marketing Collaborators

Outreach, marketing and communications are critical mechanisms 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 overall DSM brand.

3.6.4 Filing and Stakeholder Communication

We will provide our customers with information about MEEIA Cycle 3 over the next several months, including a customer notification in the January billing statement.

FIGURE 3.10: CONTINUED ENERGY EFFICIENCY PROGRAMS AND COST-RECOVERY MECHANISM

Update on KCP&L's Energy-Saving Programs

Energy efficiency helps keep electricity affordable for everyone.

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

We launched customer programs in 2013 under the Missouri Energy Efficiency Investment Act (MEEIA), and offered over a dozen energy-efficiency and demand response programs to our residential and business customers.

Participation

270,000+ residents

6,000+ businesses

For each dollar spent a **$2.58 return in benefits**

50 local jobs created and many other indirect jobs

Programs saved enough energy to power **64,000 homes**

We want to continue offering a portfolio of energy-efficiency programs, helping us move toward a more sustainable energy future in a way that manages costs for customers.

Energy efficiency comes at a minimal cost with a substantial benefit.

Energy efficiency helps keep electricity more affordable for everyone, and helps defer the costs of constructing new power plants and generation units. Also, when you make energy-efficient improvements to your home or business, you continue to benefit by saving energy each year.

Recently, we filed a request with the Missouri Public Service Commission to continue some programs and introduce new ones in 2019. 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 we and the customer may both benefit from program savings.

Under our proposal, a residential customer using 1,000 kWh of electricity would pay under $4.50 per month in 2019 for the DSIM rate. For business customers, the proposal asks for DSIM rates to now be broken out by individual customer class. To view projected DSIM rates by class, visit ***kcpl.com/rates***.

KCP&L MO Residential Rate - Winter Bill

Account Number:	**1234 5678 90**
Billing Date:	**sample average month**
Amount Billed:	**$135.38**
Customer charge	**$12.62**
Energy Charge 600 kWh @ $0.12231	**$73.39**
Energy Charge 400 kWh @ $0.07396	**$29.58**
DSIM Charge 1,000 kWh @ $0.00356	**$3.56**
FAC Charge 1,000 kWh @ $0.0049500	**$4.95**
Franchise Fee	**$8.19**
Total charge for this service	**$132.29**

This bill includes a DSIM charge effective April 2019 allowing recovery of costs and incentives for investments in demand-side programs.

This Sample Bill is for illustrative purposes only.
You can view your current rate information at ***www.kcpl.com/rates.***

KCP&L's request with the Commission has been filed as Case No. EO-2019-0132 (KCP&L-MO) and EO-2019-0133 (GMO), 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 Missouri Public Service Commission for inquiries by calling (800) 392-4211, or by email at pscinfo@psc.mo.gov.

Visit KCPL.com for current program information.

The above communication plan is intended to meet MEEIA rule requirement 4 CSR 240-20.094(2)(B)1. – 2.

4.0 Recovery Mechanism

4.1 Overall Explanation of Mechanism

MEEIA establishes a state policy allowing for recovery of all reasonable and prudent costs of delivering cost-effective demand-side programs. In support of that goal, MEEIA requires the Commission to:

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

We value the results of the collaborative efforts of the Commission, Commission staff and other stakeholders in developing and improving the effectiveness of the demand-side investment mechanism (DSIM) Rider in Cycle 1 and Cycle 2. We believe these efforts have resulted in recovery mechanisms which have met MEEIA policy goals. Therefore, we propose continuing the DSIM recovery mechanism with the following components.

4.1.1 Direct Program Costs Recovery Component

This component includes recovery of the direct costs associated with program administration (including evaluation), implementation and rebates to program participants — all of which are necessary to reap the benefits demand-side management (DSM) can provide. Timely recovery is also required for the impact of reduced sales on the utility.

4.1.2 Throughput Disincentive (TD) Recovery Component

Recovery of the impact of reduced sales on utility financial performance is not intended to provide KCP&L with additional earnings, but rather to keep it whole, consistent with its existing regulatory framework and as required by MEEIA. Without proper alignment of financial incentives, energy efficiency (EE) causes negative effects to financial performance as both earnings and cash flow suffer. Providing recovery, dollar-for-dollar, for fixed costs normally recovered in volumetric rates reverses the negative financial effects — known as the throughput disincentive (TD) — associated with EE.

For TD recovery to be recognized beginning in the month of savings, the recovery amount must be objectively determinable at that time. To meet this requirement, we propose to continue using a TD model to calculate the effect of deemed kWh savings resulting from EE measures installed on kWh sales and revenues. To balance this interest in recognizing and recovering the TD in the period when revenues are impacted against MEEIA's requirement that demand-side programs are subject to independent evaluation, we propose adjustments be included in the earnings opportunity (EO) for the effect of the difference in evaluated kWh savings compared to deemed savings used in calculating the TD.

4.1.3 Earnings Opportunity (EO) Component

The effect on shareholder value compared to supply-side alternatives recognizes the opportunity cost to the utility of substituting DSM 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 EO moves demand-side resources beyond a break-even proposition and allows fair comparison with supply-side alternatives, allowing the utility to value the two options equally.

The proposed recovery mechanism includes the same cost components as the current mechanism:

- The timely, contemporaneous recovery of program costs
- The timely, contemporaneous recovery of a TD reflective of the lost margin revenues resulting from deemed kWh savings from EE measures installed; (the TD component is adjusted annually based on final EM&V savings in the EO calculation)
- The timely recovery of an EO based on verified kWh energy and kW demand savings following the evaluation, measurement and verification (EM&V) process described in Section 8.4.

We also propose to continue using a semi-annual DSIM Rider that projects program costs, TD and includes EO after finalization of the EM&V with reconciliation of actual program costs, TD and DSIM revenues billed in the prior recover period. Section 4.2 describes proposed changes in MEEIA Cycle 3 regarding the DSIM rider, while Sections 4.3 through 4.5 document the current structure of the mechanism's three components. Monthly interest on any over- or under- recoveries of program costs and TD will be credited to customers' or our benefit based on our short-term borrowing rate.

4.2 Proposed Changes to Improve the Mechanism

Consistent with the results of past cycles, we propose a recovery mechanism that follows the overall structure and approach of the current mechanism with certain modifications to:

- Mitigate certain volatility experienced in the prior cycles
- Continually improve the apportionment of costs to customer classes
- Reflect the effects of our proposed three-year Cycle 3

4.2.1 Divide Non-Residential Rate by Customer Class

The use of an overall non-residential DSIM rate for all commercial and industrial customers may have resulted in the unintended consequence of shifting the costs and benefits of MEEIA between customers of various classes: Small General Service, Medium General Service, Large General Service and Large Power Supply.

Several factors contribute to this shift:

- The level of participation in each customer class may not be proportionate to the billed kWh sales upon which the DSIM Rider is applied.
- Net margin rates by customer class utilized in the TD calculation of lost margin revenues vary considerably between classes based on general rate design factors.
- The level of customers opting out of the DSIM charge varies significantly. We believe this is a factor in why certain large power customers opt out or may consider opting out in the future.

We believe applying the DSIM Rider rates for non-residential customers separately by customer classes will help improve the apportionment of costs between customer classes and mitigate the determination of certain large customers to opt out. When customers with opt-out eligibility understand their costs are primarily[17] associated with their participation only, then it will feel fair and customers will be more inclined towards continuing participation.

We propose a transition from the current mechanism with a single non-residential class to the separate customer class approach by allocating any under- or over-recovered non-residential program costs or TD as of the effective date of Cycle 3 to the separate classes by the cumulative participation in Cycle 2 by customers of each class. Cycle 2 program costs, TD and EO that remain unrecovered at the time of transition to Cycle 3 will be allocated to the non-residential customer classes in the manner discussed in Section 4.3 below.

4.2.2 Change to a 12-Month Rolling Forecast

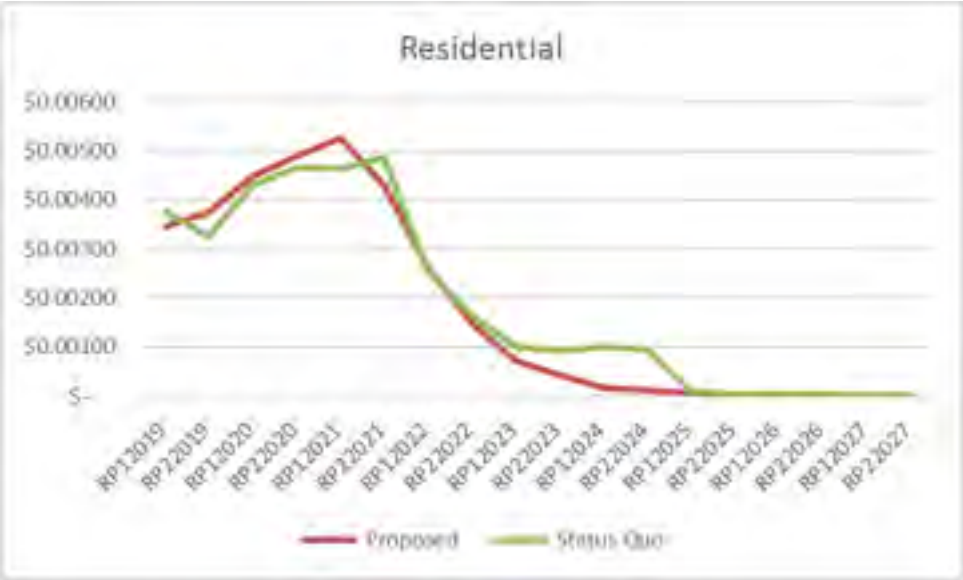
For the DSIM program cost, TD and billed kWh sales forecast, the use of six-month forecast periods (January to June and July to December) has resulted in a certain amount of volatility in the DSIM Rider rates in the semi-annual recovery periods. Heavy summer peak kWh sales result in a significant variation in the billed kWh sales denominator used in the DSIM rate computation in each recovery period. Also, program participation can vary substantially between the six-month forecast periods. We believe a 12-month rolling forecast will help to mitigate the variability in DSIM rates, while still retaining the ability to adjust DSIM Rider rates in a timely manner.

4.2.3 Change the EO and Recovery to Annual

In Cycle 1 and Cycle 2, the EO was not included in the DSIM Rider until after the final EM&V report was issued at the end of the cycle — then was spread over 18 to 24 months of recovery. This resulted in a substantial overlap of costs included in the DSIM Rider from succeeding cycles. Consistent with the determination by stakeholders during Cycle 2 to make the annual EM&V net kWh and kW savings results final for all purposes, and in consideration of our proposed three-year MEEIA Cycle 3, we propose the annual EO be recovered following the issuance of the final annual EM&V report. The annual EO would thus be included in the DSIM Rider for recovery over the 12 months (two DSIM recovery periods) following the report issuance. This change is consistent with the MEEIA policy of timely recovery, mitigates the overlapping of costs with succeeding cycle costs and smooths the impact on customer DSIM rates.

[17] *Except for the component of income qualified programs that all customers bear.*

FIGURE 4.1: POSITIVE CUSTOMER IMPACT OF CHANGE TO ANNUAL RECOVERY OF EO AND 12-MONTH FORECAST PERIODS



4.3 Program Costs

The plan includes 11 MEEIA programs delivered over approximately 36 months beginning April 1, 2019 and ending March 31, 2022. Planned budgets for these projects are:

- $43,861,974 for KCP&L-MO
- $52,428,710 for KCP&L-GMO

As applied currently in MEEIA Cycle 2 and consistent with the MEEIA rules, actual program costs will include the incremental cost of planning, developing, implementing, monitoring and evaluating demand-side programs. All costs incurred by or on behalf of the collaborative process — including but not limited to costs for incremental consultants, employees and administrative expenses — are included in the program costs. General administrative costs are included based on the estimated budget for each program. Indirect costs associated with DSM programs — including but not limited to costs of a market potential study and advertising — are included in the program costs.

Continuing with the methodology of MEEIA Cycle 2, programs are designated as Residential or Non-Residential and costs associated with each will be recovered by Residential or Non-Residential customers, respectively. Program costs associated with Non-Residential programs will be allocated to customer classes based on kWh from participation by customers from each respective class as determined by the rate code associated with the customers' account. Program costs associated with income-eligible programs will be allocated 50/50 between Residential and Non-Residential customers. The Non-Residential share of income-eligible program costs and costs of the Online Business Energy Audit program will be allocated based on the proportion of billed kWh sales from each customer class, net of opt-out.

Program costs associated with Business Demand Response will be allocated to all rate classes based on the proportion of billed kWh sales from each of those classes. This allocation methodology addresses the inequity of opt-out customers' eligibility to participate in demand response and supports the concept that all customers benefit from the system demand reduction provided by participants in demand response.

4.4 Throughput Disincentive

We plan to continue use of the methodology for determining the TD agreed to in MEEIA Cycle 2. In summary, annual kWh savings resulting from MEEIA programs that are realized between general rate cases are tracked by Residential and Non-Residential customer classes. Annual savings are spread to calendar months using load shape percentages for each program and multiplied by a net margin rate for each customer class based on the non-energy rates in effect for each month. In Cycle 2, current recovery of these computed lost margin revenues was reduced based on a net-to-gross (NTG) factor of 0.85 for the entire portfolio. In MEEIA Cycle 3, we're proposing program-specific NTG factors.

FIGURE 4.2: INITIAL NET-TO-GROSS (NTG) FACTORS BY PROGRAM

Program	NTG
Business Standard	0.96
Business Standard - Small Business Targeted	0.87
Business Custom	0.92
Business Process Efficiency	0.90
Business Demand Response	1.00
Business Smart Thermostat	1.00
Energy Saving Products	0.84
Heating, Cooling & Weatherization	0.82
Home Energy Report	1.00
Income-Elig ble Home Energy Report	1.00
Income-Elig ble Multi-Family	1.00
Residential Demand Response	1.00
Research & Pilot	1.00

The plan includes estimated TD of approximately $23.2 million for KCP&L-MO and $19.5 million for KCP&L-GMO. These estimates assume a 48-month gap between the effective date of rate cases currently being considered in each jurisdiction and succeeding cases in each jurisdiction. If the actual gap is shorter, the estimated TD would be lower.

4.4.1 Throughput Disincentive (TD) Calculation

TD will be computed monthly in the following manner:

- kWh savings are reflected in the TD by multiplying the estimated kWh savings times the incremental rate for the respective class.
- If a rate case occurs during the program period, the cumulative kWh and kW savings are included in the test period to reflect actual energy and demand savings in the weather-normalized/customer-annualized unit sales and sales revenues used in setting the case's revenue requirements.
- This establishes a rebased level to restart kWh and kW savings for the TD to be included through the remainder of the program period.
- We will use billing determinants from the last rate cases to establish incremental rates.

Estimated kWh savings by month by program will be determined as follows:

1. The number of standard measures installed each month — for programs with standard measures in the Technical Resource Manual (TRM) attached as Appendix 8.3 — is multiplied by the defined annual kWh savings per measure. This determines the savings for measures installed by month aggregated by program to which such measures belong. Annual kWh savings for custom measures installed are calculated and reported monthly by the program implementers and aggregated by program and by customer class.
2. Total kWh savings for the current month aggregated by program in 1 above are multiplied by 50 percent to reflect an assumed mid-month installation.
3. Each month, total kWh savings by program are accumulated from the beginning of the cycle through the preceding month.
4. The sum of items 2 and 3 above is multiplied by the monthly load shape percentage for the applicable month by program, in a spreadsheet to be provided as a workpaper, to determine monthly kWh savings.
5. Monthly kWh savings resulting from the Home Energy Report programs are reported monthly by the implementer.
6. The sum of the monthly kWh savings determined in 4 and 5 above will be multiplied by the incremental rate by customer class to determine monthly TD.

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 Accounting Standards Codification (ASC) 980-605-25 "Alternative Revenue Programs." ASC 980-605-25 sets three conditions for revenues resulting from alternative revenue programs such as the DSIM.

- The program must be established by order of the regulatory commission allowing for automatic adjustment of future rates.
- The amount of revenue for the period must be objectively determinable and probable of recovery.
- Revenues must be collected within 24 months of the period in which they are recognized. If the TD is subjected to subsequent recalculation, we could not recognize the revenue in the periods that sales were reduced, resulting in temporary reductions in earnings which would adversely impact our market value and cause a misalignment of utility financial incentives to promote energy efficiency.

4.4.2 Rate Case Annualization

For the general rate case annualization adjustments, we propose continuing the agreed-upon methodology used in MEEIA Cycle 2. Upon filing a general rate case, the cumulative, annualized, normalized kWh and kW savings are included in the unit sales and sales revenues used in setting rates as of an appropriate time where actual results are known prior to the true-up period, to reflect energy and demand savings in the billing determinants and sales revenues used in setting the revenue requirements and tariffed rates in the case. Upon the adjustment for kWh and kW savings in a rate case, the collection of TD is re-based.

Test period weather-normalized kWh usage for each customer class by billing month is adjusted by:

- Adding back the impact of monthly kWh energy savings by customer class incurred during the test period from all active MEEIA programs (Cycle 2 and Cycle 3), excluding programs with a one-year measure life. This is determined using the methodology described in the DSIM Rider, except calendar month load shape percentages by program and by month are converted to reflect billing month load shape percentages by program by computing a weighted average of the current and succeeding month percentages.

Adjusted test period sales from above will be annualized for customers and adjusted further by:

- Subtracting the impact of cumulative annual kWh energy savings from the first month of the test period through the true-up date by customer class from all active MEEIA programs (Cycle 2 and Cycle 3), excluding programs with a one-year measure life. This is determined using the methodology described in the DSIM Rider, except calendar month load shape percentages by program and by month are converted to reflect billing month load shape percentages by program by computing a weighted average of the current and succeeding month percentages.

Test period kW demand for each customer class will be adjusted by:

- Adding back the monthly kW demand savings by customer class incurred during the test period from all active MEEIA programs (Cycle 2 and Cycle 3), excluding programs with a one-year measure life. This is determined using the methodology described for kWh savings in the DSIM Rider — then subtracting the cumulative annual kW demand savings from the first month of the test period through the true-up date by customer class from all active MEEIA programs (Cycle 2 and Cycle 3), excluding programs with a one-year measure life.

TD will continue to be calculated and recovered until a rate case is filed after the end of MEEIA Cycle 3 with a test period ending at or after the end of Cycle 3.

4.5 Earnings Opportunity (EO)

We propose that — consistent with Cycle 2 — the earnings opportunity (EO) be determined for each program year using an EO matrix (Appendix 8.7) and the same $ per MWh and $ per MW values used in Cycle 2. The only modifications to this matrix are to compute the EO amounts annually, rather than the entire cycle, for the Income-Eligible Multi-Family (IEMF) and the Home Energy Reports (HER) programs, as well as an annual $ per MW award rate for the Business Demand Response (BDR) program. We propose having the opportunity for additional EO amounts under the updated IEMF program framework, as noted below, to increase this programs annual Cap to 130%. These changes help drive focus for these programs that have a one-year measure life (BDR, HER) or have increased in scale (IEMF) and are necessary to calculate the EO on an annual basis.

We suggest values for the buckets of energy efficiency (EE) MWh, EE MW and thermostat MW remain at the same levels as agreed upon in MEEIA Cycle 2 to align with the Commission's prior directive to have primary focus on demand (kW) savings. These established EO values remain valid in Cycle 3 because they:

- Benchmark EO as a percentage of net benefits
- Link to integrated resource planning (IRP) minimization of revenue requirement
- Align with deferral and retirement of generation assets as demonstrated in the IRP
- Additional calculations and discussion around the valuation methodologies for earnings opportunity in the bullets above are found in Appendix 8.11.

We will perform a full EM&V, including an ex post gross adjustment and NTG determination for EO with no NTG floor and no NTG cap. For purposes of the EO, the evaluated kWh and kW savings measurements are determined through the annual EM&V including NTG with no floor or cap on the NTG factor, based on actual measures installed in that year annualized.

FIGURE 4.3: EO MATRIX

Program	KCP&L–MO Cycle 3 Rates	KCP&L–GMO Cycle 3 Rates	Cumulative Annual Cap %
EE $/MWh	$8.31	$12.97	130%
EE $/MW	$114,741.01	$122,507.02	150%
BDR $/MWh per PY	$10,000.00	$10,000.00	150%
Thermostat $/MW	$91,941.81	$92,799.91	150%
HER $/PY	$115,000.00	$175,000.00	100%
IE-HER $/PY	$10,000.00	N/A	100%
IEMF $/PY	$66,666.66	$66,666.66	130%

The annual EO will be applied on a cumulative basis, such that excess savings over the cap in any given program year can be applied to any other program year's' that did not meet the program required threshold. If there is a shortage, the program can add any excess in subsequent program years. This is especially important during the first couple program years, as it may take time to ramp up certain programs.

The EO will be adjusted as follows:

- TD Ex Post Gross Adjustment– Annually for each program year, the ex-post gross measures for each program determined through the annual EM&V will be used to recalculate the TD as described above for each of the annual evaluation periods. The difference between the recalculated TD using ex-post gross measures and the TD using the deemed numbers, whether an increase or a decrease, will be adjusted in the EO by applying carrying costs at the AFUDC rate compounded semi-annually.
- TD NTG Adjustment– Annually for each program year, if the EM&V NTG for each program is greater or less than the initial factor for such program, the difference between TD the initial NTG and the TD calculated using the EM&V NTG, subject to a NTG cap of 1.00 and a floor of 0.80, will be recovered through the EO, including carrying costs at the AFUDC rate compounded semi-annually.

- We propose that the adjusted EO cannot go below zero. The EO target at 100 percent is $7,909,523 for KCP&L-MO and $10,055,885 for KCP&L-GMO. The EO (before adjustments reflecting TD EM&V including NTG) cannot go above $11,337,723 for KCP&L-MO and $14,373,509 for KCP&L-GMO.

4.5.1 Income-Eligible Multi-Family EO Performance Metrics

The annual performance metric will consist of two elements and has an annual cap of 130 percent performance compared to the annual target.

1. Average Percent Energy Savings Per Project
2. Spend of at least 85 percent of Budget

DEFINITION OF METRICS

1. The Average Percent Energy Savings Per Project performance element will be calculated using a pre-project property energy benchmarking tool to identify each project's energy usage and the TRM's deemed energy savings values. Each Program Year, the total number of projects will be divided by the total number of kWh's saved for a project average.
2. The Spend of at least 85 percent of Budget performance element will create a threshold criterion that ensures at least 85 percent of the Commission-approved annual budget (administrative cost, plus customer incentive cost) for the program year is spent. The actual spend will be reported directly out of the Company's accounting system and included in the EM&V report. The Company will also provide a list of 'lock-in projects' and their locked-in date for inclusion for the program year spend.

PROGRAM YEAR DETAILS FOR PERFORMANCE EVALUATION

Each Program year the Spend of the spending of at least 85 percent of Budget performance element will be in place, which may include 'locked-in projects' allocated budget.

- PY1 –No requirement for PY1 Average Percent Energy Savings Per Project; to allow for program evaluation and adjustments
- PY2 – Average Project kWh Savings of 4% - 10%
- PY3 – Average Project kWh Savings of 6% - 12%
- PY4 – Average Project kWh Savings of 8% - 14%
- PY5 – Average Project kWh Savings of 10% - 16%
- PY6 – Average Project kWh Savings of 12% - 18%

ADDITIONAL PROGRAM YEAR EO

Each additional percentage saved within the applicable program year range, above the minimum, will receive a bonus of 5 percent, up to a cap of 130 percent.

4.6 Customer DSIM Rate Impact Modeling

We anticipate MEEIA Cycle 3 will result in cumulative net benefits to all customers over the lifetime of the program impacts with a net present value of $62.2 million for KCP&L-MO and $64.0 million for KCP&L-GMO. These benefits — included avoided energy and avoided capacity costs — are discussed in more detail in Section 2. The table below compares avoided costs to program costs, participant costs and EO — demonstrating benefits significantly exceed total costs for each customer class.

FIGURE 4.4: PV OF NET BENEFITS – KCP&L-MO

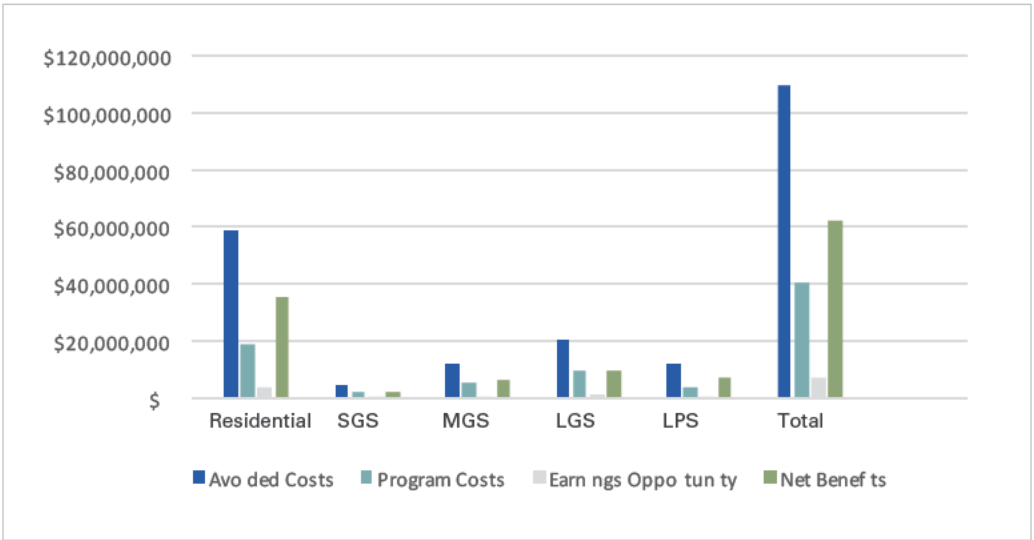
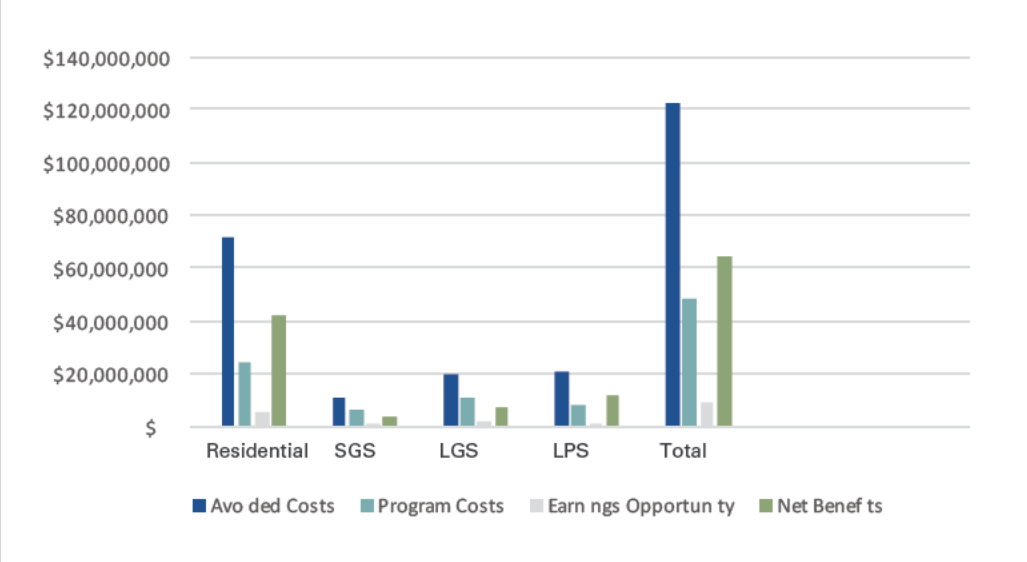


FIGURE 4.5: PV OF NET BENEFITS – KCP&L-GMO



The figure above does not include the throughput disincentive or the throughput disincentive recovery. As a practical matter, the throughput disincentive is a subset of "lost revenues." The TRC and UCT do not include lost revenues because they are not incremental costs to demand-side resources and are a transfer payment between customers.

The figures below show projected DSIM rates associated with MEEIA Cycle 3 for each customer class. Program costs are borne by customers up front, consistent with MEEIA's requirement for timely cost recovery, but benefits continue to accrue for long beyond the end of the program implementation. The benefits surpass the costs in total magnitude in 2026, and continue to grow for the useful lives of the installed measures. The TD component of the DSIM rates reflect lost revenues from reduced usage resulting from MEEIA Cycle 3 programs and are effectively offset in customer bills because of this reduced usage.

FIGURE 4.6: DSIM RATES KCP&L-MO

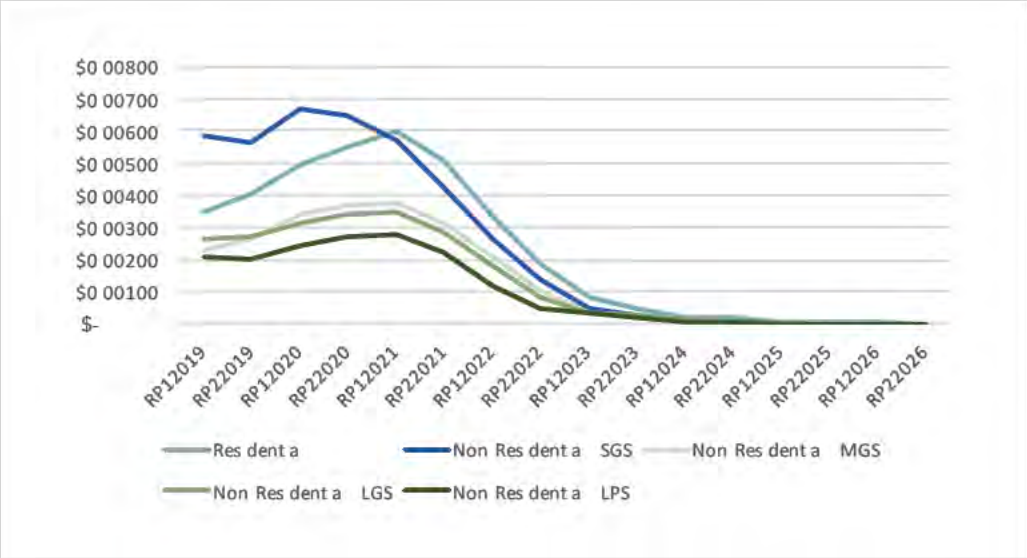
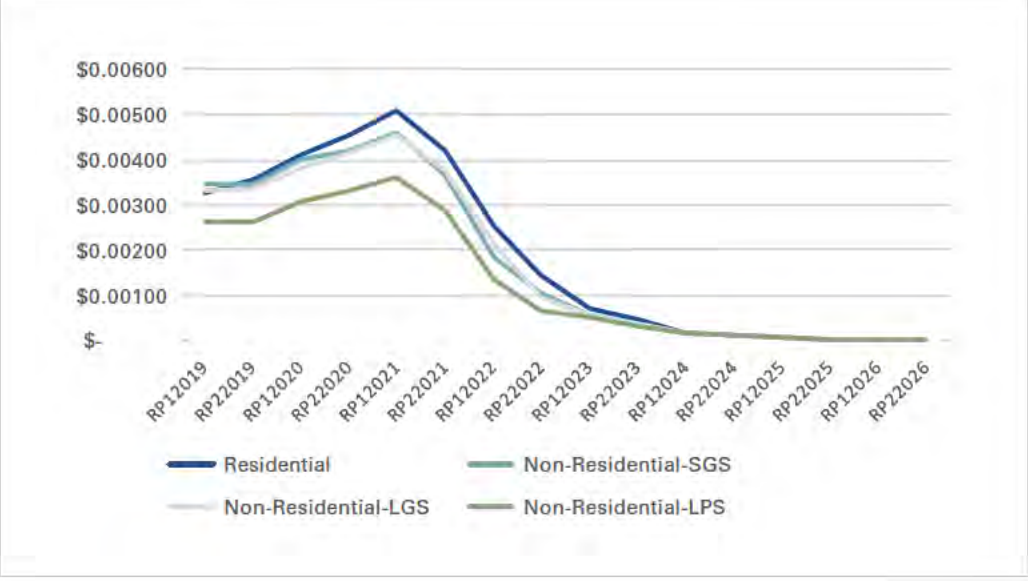


FIGURE 4.7: DSIM RATES KCP&L-GMO



The figures below show projected bill impacts related to the projected DSIM rates above for each customer class.

FIGURE 4.8: DSIM BILL IMPACTS KCP&L-MO

	2019		2020		2021		2022		2023		2024		2025		2026	
	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec
Average Monthly DSIM Charge																
Residential	$2.78	$3.23	$3.95	$4.40	$4.81	$4.05	$2.69	$1.51	$0.65	$0.40	$0.17	$0.14	$0.08	$0.05	$0.05	$0.02
Non-Residential - SGS	$7.47	$7.20	$8.50	$8.29	$7.24	$5.43	$3.40	$1.77	$0.62	$0.38	$0.15	$0.13	$0.08	$0.04	$0.04	$0.03
Non-Residential - MGS	$39.64	$44.96	$58.17	$62.97	$64.52	$54.05	$35.52	$17.33	$6.18	$4.12	$1.89	$1.54	$0.86	$0.34	$0.34	$0.17
Non-Residential - LGS	$387.21	$394.54	$463.48	$504.54	$506.01	$422.41	$268.41	$117.34	$54.27	$35.20	$16.13	$13.20	$5.87	$2.93	$2.93	$1.47
Non-Residential - LPS	$5,319.37	$5,168.11	$6,151.31	$6,781.57	$7,008.46	$5,647.11	$2,974.82	$1,210.09	$907.57	$579.84	$252.10	$201.68	$75.63	$25.21	$25.21	$25.21

FIGURE 4.9: DSIM BILL IMPACTS KCP&L-GMO

	2019		2020		2021		2022		2023		2024		2025		2026	
	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec	Jan-Jun	Jul-Dec
Average Monthly DSIM Charge																
Residential	$2.90	$3.13	$3 61	$4.00	$4.50	$3.70	$2 25	$1.27	$0.63	$0 39	$0.14	$0.11	$0.06	$0.03	$0.03	$0.02
Non-Residential - SGS	$12.77	$12.84	$14 88	$15.51	$17.10	$13.47	$6.74	$3.85	$2.00	$1 30	$0 56	$0.48	$0.22	$0.11	$0.11	$0.07
Non-Residential - LGS	$178.12	$179.72	$202 65	$221.32	$241.58	$201 05	$114.12	$51.73	$28.80	$18.13	$8 00	$6.40	$2.67	$1.07	$1.07	$0.53
Non-Residential - LPS	$1,690.25	$1,690.25	$1,952.75	$2,138.42	$2,304.89	$1,837 51	$857 93	$409.76	$326.53	$204 88	$89 63	$70.43	$32.01	$6.40	$6.40	$6.40

Again, while these figures show increased bills while the program costs and EO are recovered during the program period, the benefit of reduced usage resulting from the implementation of energy savings measures continues for years based on the lives of the measures installed. This is demonstrated by the figure below, which reflects estimated reductions in kWh usage over the installed measure lives by customer class from baseline kWh sales.

FIGURE 4.10: KWH SAVINGS FROM BASELINE KWH SALES KCP&L-MO

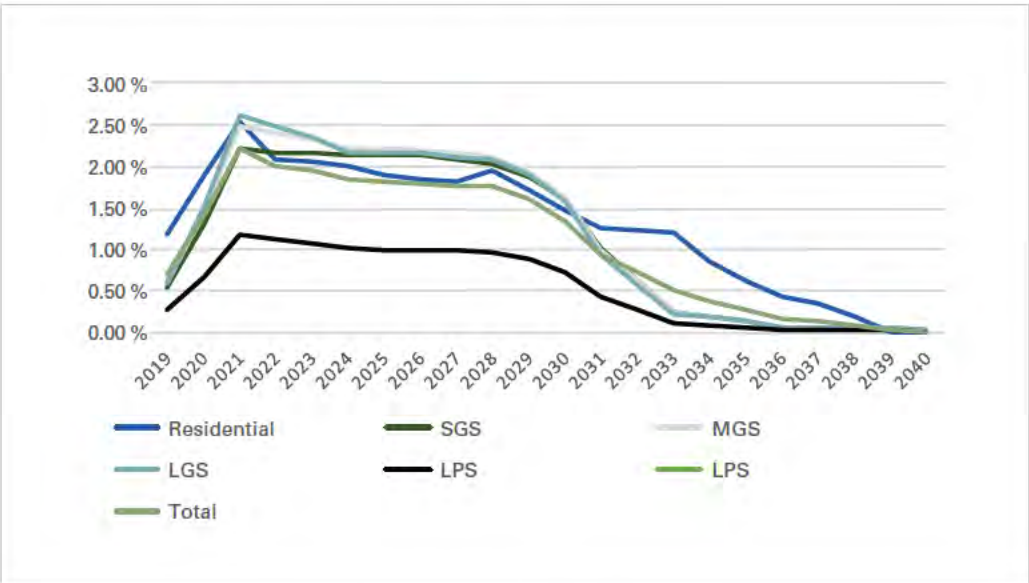
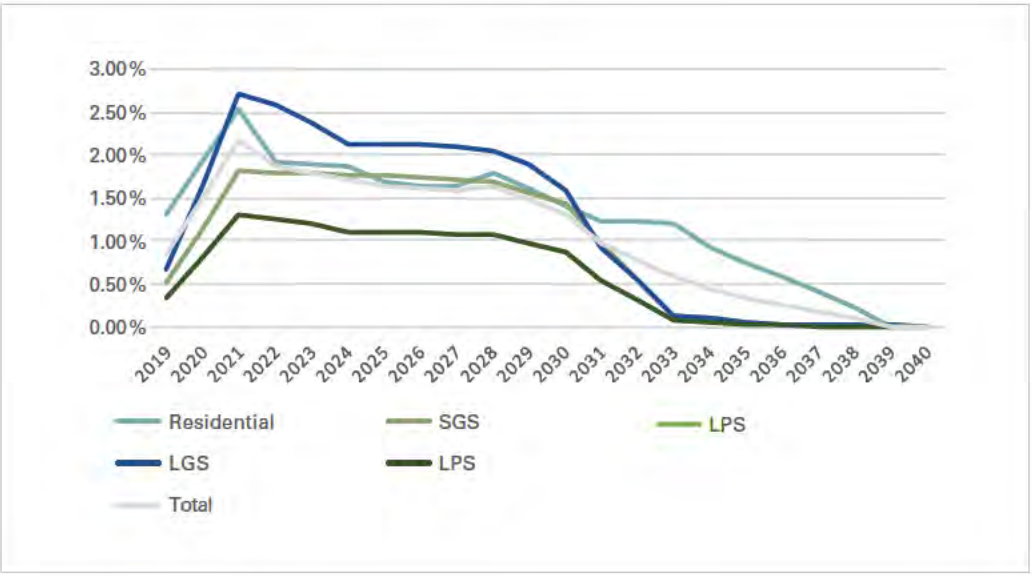


FIGURE 4.11: KWH SAVINGS FROM BASELINE KWH SALES KCP&L-GMO



DSIM ACCOUNTING PRACTICES

We follow Generally Accepted Accounting Principles (GAAP) for financial accounting. GAAP encompasses the conventions, rules and procedures necessary to define accepted accounting practices at a particular time. We also maintain our books and records in accordance with the Federal Energy Regulatory Commission's Uniform System of Accounts.

As in previous cycles, we'll use 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.

We've established an accounting distribution coding system for the proper classification of program costs for MEEIA-related DSM programs, including:

- The prescribed accounts mandated by FERC in the Code of Federal Regulations for the classification of assets, liabilities, revenues and expenses
- A department code for specific operational areas, identifying the group responsible for the cost
- The operating unit, identifying the jurisdiction associated with the cost
- The project code, identifying the MEEIA program associated with the cost
- Additional codes to further specify the type of work or specific purpose for the cost
- A resource code, identifying types of costs used to complete projects, or what was used to get the work done (for example, labor vs. non-labor items)

The combination of codes above allows for the proper classification and clear delineation of costs. These codes will be expanded as needed to accommodate the programs included in this filing.

We will use 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 will be compared with the actual amount of program costs incurred and TD 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 182.5 Other Regulatory Assets, as appropriate.

Monthly interest calculated for the monthly cumulative balances of over- and under-collection of balances for program costs, TD and any earned EO 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 182.5 Other Regulatory Assets as appropriate.

IMPACT ON FINANCIALS/CREDIT RATINGS

The below tables present the projected impacts of the proposed programs costs and lost margins and DSIM recoveries of program costs, TD and EOs, over 2019 to 2026 on projected earnings. This analysis assumes 100 percent achievement of kWh and kW savings, program cost budgets and EOs.

FIGURE 4.12: MEEIA CYCLE 3 PLAN IMPACTS ON KCP&L-MO EARNINGS **CONFIDENTIAL**

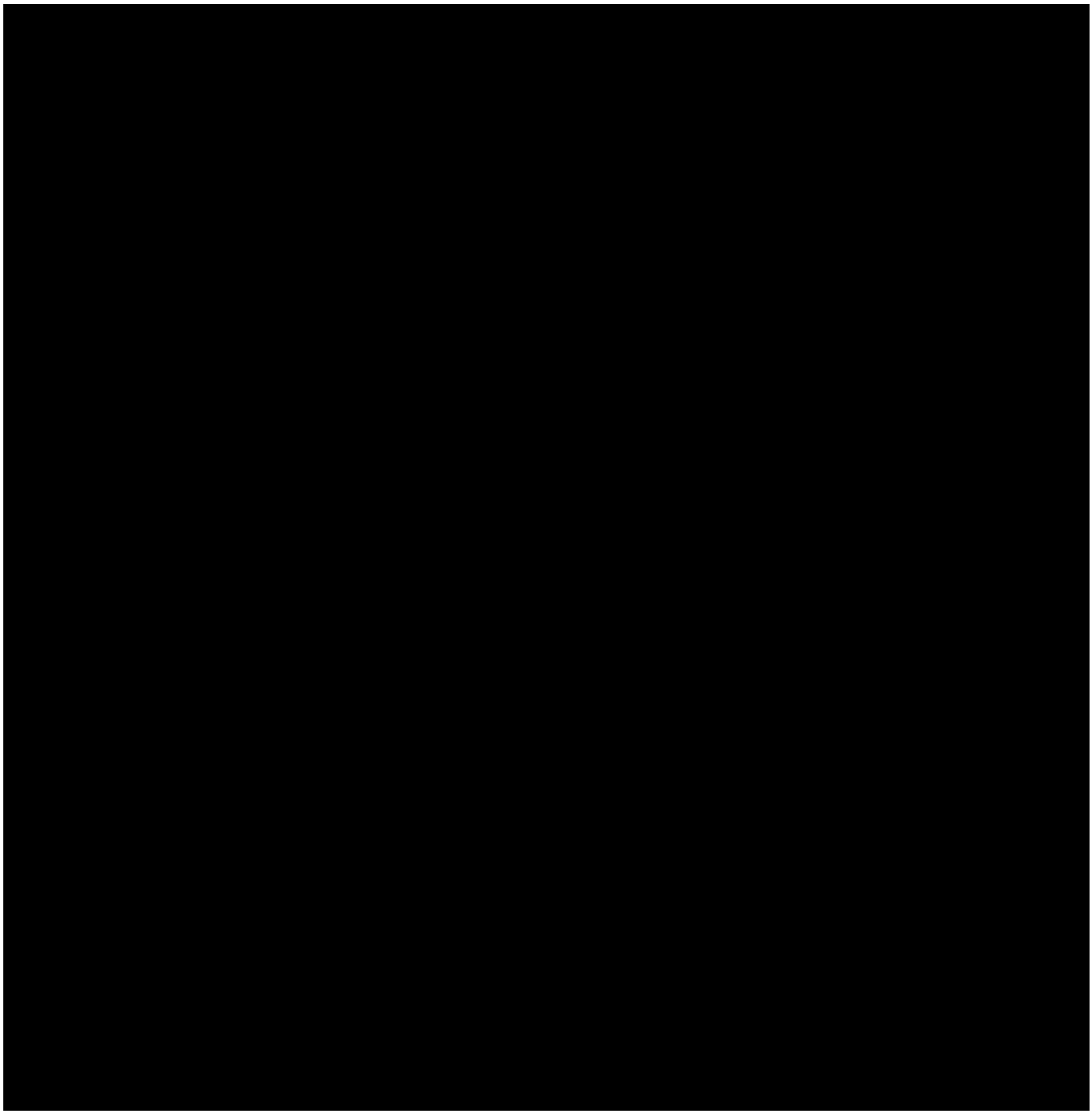
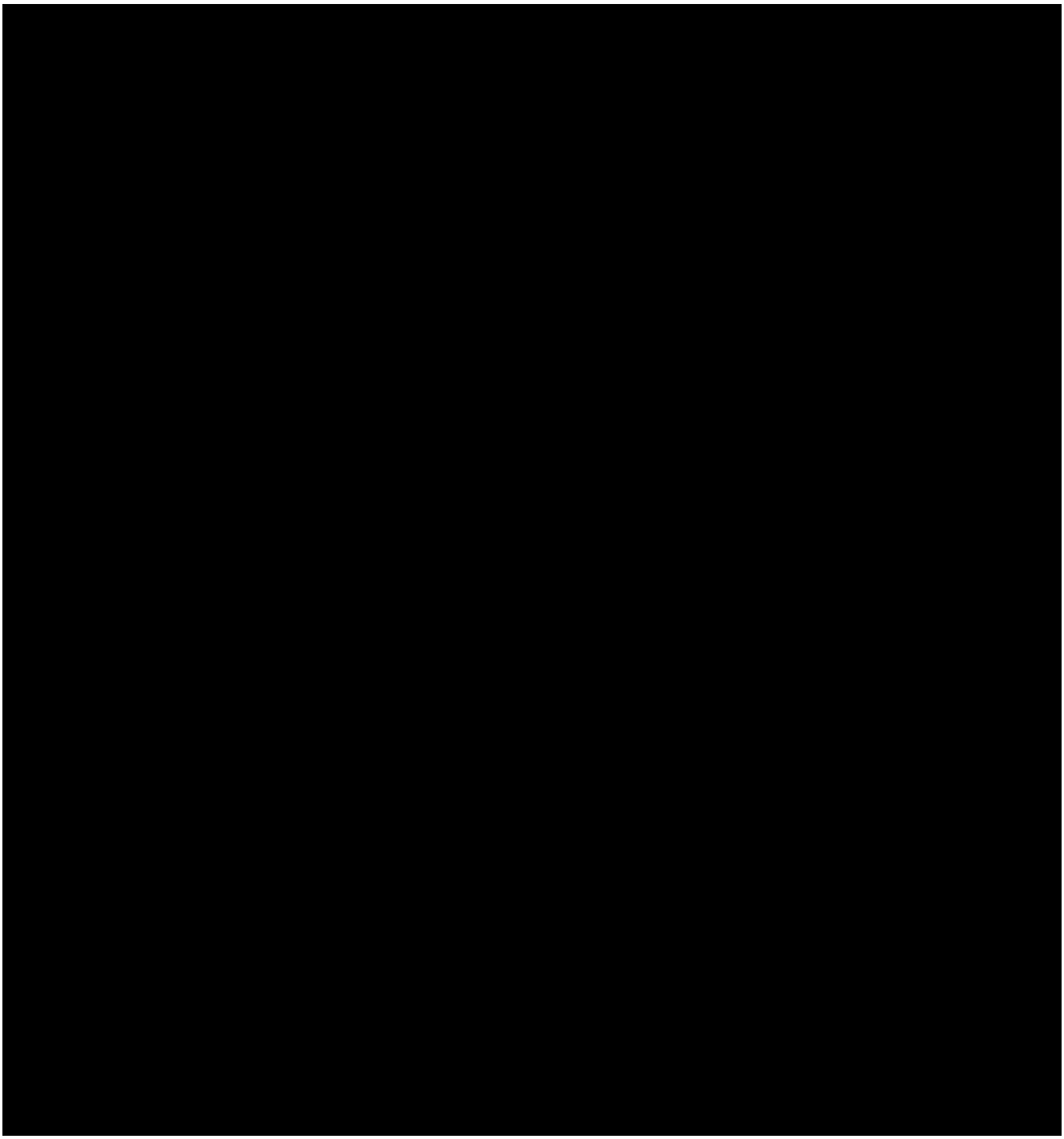


FIGURE 4.13: MEEIA CYCLE 3 PLAN IMPACTS ON KCP&L-GMO EARNINGS **CONFIDENTIAL**



The below tables reflect the projected impacts of the MEEIA Cycle 3 Plan, including EO at target, on certain KCP&L-MO and KCP&L-GMO key credit metrics: Debt/EBITDA and Funds from Operations (FFO)/Debt. Our current forecast covers the years 2019 to 2022. The 2022 baseline metrics are used for 2023 in the following analysis solely to show the impact of the MEEIA Cycle 3 Plan.

FIGURE 4.14: MEEIA CYCLE 3 PLAN IMPACT ON KCP&L-MO KEY CREDIT METRICS **CONFIDENTIAL**

FIGURE 4.15: MEEIA CYCLE 3 PLAN IMPACT ON KCP&L-GMO KEY CREDIT METRICS **CONFIDENTIAL**

The results of these analyses demonstrate the overall impacts of the MEEIA Cycle 3 with DSIM are small but generally positive and supportive of credit quality. The analyses above support the conclusion that the DSIM as proposed aligns with our incentives.

5.0 Sustaining Success

KCP&L views demand-side management (DSM) programs as a resource in a changing energy landscape and an opportunity to provide long term value in the region. Customers in our KCP&L-MO and KCP&L-GMO service territories are increasingly familiar with our offerings and support in the energy efficiency space.

This section outlines why DSM as a resource makes sense — and defines how to sustain success with engagement from regulatory stakeholders and customers, including:

- Updated Integrated Resource Plan (IRP) scenarios for the combined company
- A focus on long-lived measures to drive energy and demand savings over longer periods
- Program flexibility to deliver customer offers in changing markets
- Ongoing stakeholder communication and engagement
- Evaluation, measurement and verification (EM&V) planning to improve feedback and insights
- Managing opt-out levels by engaging business customers through a customer-centric approach

5.1 Missouri DSM Policy and KCP&L Resource Selection Process

POLICY BACKGROUND

In Missouri, the MEEIA statute[18] and the IRP process are built to expand resource options and facilitate a robust analysis for the utility and regulators to adhere to when evaluating resource investment decisions. However, MEEIA and the IRP process have inherent conflicting primary objective functions, presenting a quandary concerning how to achieve the intentions of both. While the goal of MEEIA is to achieve "all cost-effective demand-side savings," the IRP rules require using minimization of NPVRR as the primary selection criteria. Said another way, solving for one doesn't necessarily satisfy the other. By investing in all cost-effective demand-side savings, revenue requirements for customers may fluctuate. Conversely, optimizing (i.e. minimizing) revenue requirements may cause demand-side investment levels to fluctuate.

We strive to find the right balance for both the IRP requirement while achieving MEEIA's goals. As discussed below and as a first step toward dynamically optimizing the DSM portfolio, we've performed an additional iteration of the IRP analysis with the evaluation of 11 additional ARPs for both the joint company and KCP&L-MO standalone.

The two principle concepts to consider from the MEEIA statute are that it is "...the policy of the state to value demand-side investments equal to traditional investments in supply and delivery infrastructure..."[19] and that the Commission shall permit utilities to "implement commission approved demand side programs… with a goal of achieving all cost-effective demand-side savings."[20] The MEEIA statute also provides that Commission shall consider the TRC test a preferred cost effectiveness test.[21] However, it does not stipulate that the TRC test is the sole test, but a preferred metric in evaluating the outcomes of other analyses, including UCT, PCT, SCT and minimization of net present value of revenue requirements (NPVRR).

The policy objective in the IRP rules defines the criteria by which to analyze demand-side and supply-side resources on an equivalent basis. This objective is to use "minimization of the present worth of long-run utility costs as the primary selection criterion" (i.e. minimization of NPVRR). The IRP rule regarding the analysis of differing resources is not contingent on having a need for capacity, but having costs and characteristics of each option to model.

In evaluating the resource options, it's important to understand that it's not necessary to avoid an investment in a supply-side resource to avoid a cost associated with meeting the total demand for capacity and energy.

[18] *393.1075 (RS MO)*
[19] *393.1075.3*
[20] *393.1075.4*
[21] *Id.*

Merits of TRC Test (MEEIA)	Merits of NPVRR Function (IRP Rules)
• Best economic test for DSM measures • Gives less consideration to the absolute cost of programs and to cross-subsidization between utility customers • Uses a combination of avoided energy and capacity costs as the benefits for calculating cost-effectiveness	• Best at minimizing the total cost to all customers • Does not consider the cost of the DSM measure to the customer • Does not use the avoided capacity cost but rather is a calculation of the actual cost to customers of the resource alternatives • Avoided capacity cost is only used in the DSM screening and does not consider or relate to the actual costs of the resource

KCP&L DSM AND IRP PROCESS DESCRIPTION

Given the policy context of the MEEIA and the IRP process, it's important to understand how each objective is accomplished. Keeping policy standards at the forefront, we undertake a consistent process to evaluate demand-side resources in our IRP, both in annual updates and triennial filing. While it is an iterative process, we first complete a potential study. The potential study is a rigorous process set by the Commission and stakeholders and, with the external consultant, we request stakeholder input in the development of its scope of work. During the DSM potential study process, a screen of measure level cost-effectiveness is used to evaluate the potential for participation in our jurisdictions.

The avoided costs used as benefits in the cost-effectiveness screening calculation are the levelized cost to build a new generation asset in terms of capacity ($/kW-year) and the expected market price for energy ($/kWh) in the Southwest Power Pool (SPP). With a transparent market for energy prices in SPP, the use of the forward market price makes sense. However, the SPP does not have a capacity market. Therefore, we utilize the levelized cost of capacity (specifically for a combustion turbine) for avoided capacity costs to best represent the MEEIA policy directive and IRP rules to value demand-side and supply-side investments equally. After applying this cost-effectiveness screen using the avoided costs, the DSM potential study determines realistic achievable potential (RAP) and maximum achievable potential (MAP) values for all DSM measures and associated programs.

Once the potential study determines RAP and MAP levels, we use these as an input to the IRP process and models to drive toward a preferred plan.

It's important to reiterate the avoided cost for capacity is not directly relied upon during the IRP modeling, as these costs were strictly utilized within the potential study process to determine the RAP and MAP levels of potential.

The potential study levels are then introduced as a replacement for supply-side resources. For example, a CT with a cost of $50 million, a capacity of 80 MW and expected capacity factor of 15 percent is compared against a DSM portfolio with a cost of $96 million that is designed to accomplish 185 MW capacity reduction and 365 GWH energy reduction. The life of the CT and DSM measures within the portfolio are also considered in the analysis, giving the resources an equal footing to compete to provide minimization of the NPVRR. During this process, if additional Alternative Resource Plans (ARPs) are deemed necessary to analyze, these additional ARPs can be developed using any screening criteria deemed appropriate by the utility per 4 CSR 240-22.060(3)(A)8.

We ultimately select a preferred resource plan in accordance with the IRP rules by weighing the merits of the alternative resource plans with the probability weighted risk of many uncertain factors. The selection process is not a myopic view on a single metric, but a holistic look at all factors and balancing those towards an optimal solution. In the case of the 2018 IRP, our preferred plan selected values for DSM investment commensurate with 2017 DSM Potential Study RAP levels in KCP&L-GMO and modified (slightly decreased) levels of RAP for KCP&L-MO.

NEW INTEGRATED RESOURCE PLAN SCENARIOS

In response to comments and concerns in the recent KCP&L-MO and KCP&L-GMO 2018 IRP filing (EO-2018-0268 and EO-2018-0269 respectively), we created and evaluated additional scenarios that reflect this exact DSM MEEIA 3 plan and updated factors related to possible plant retirements, new load additions and CO2 restrictions. Revenue requirement impacts were estimated for 22 new ARPs that include potential additional generating plant retirements and/or potential new retail load additions, 11 ARPs for a joint KCP&L-MO/KCP&L-GMO system and 11 ARPs for KCP&L-MO on a standalone basis. For plant retirements, we introduce scenarios where LaCygne 1 and 2 and Jeffrey Energy Center 1, 2 and 3 are retired at various points in the 20-year planning horizon. For new load, we evaluated the impact that potential large-scale customers (full scale data center or large energy intensive industrial) may have on our capacity balance.

We evaluated each scenario at both the combined company view (KCP&L-MO and KCP&L-GMO) and a standalone view of KCP&L-MO only. Joint company planning is valuable because it aligns with how we interact with the SPP market. It's also consistent with the stipulation and agreement in the recent rate cases where we agreed to perform a rate consolidation study. KCP&L-MO was evaluated solely due to the specific issues raised in that jurisdiction in the recent IRP filing. Additionally, three years of MEEIA Cycle 3 implementation were isolated as an option for continuation of DSM for the entire 20-year horizon versus no DSM in the 20-year horizon.

The results of this additional scenario analysis contribute a few key messages to help regulators and stakeholders evaluate the merits of our MEEIA Cycle 3 plan:

- With or without plant retirements, DSM plan options still provide the lowest NPVRR.
- With plant retirements, capacity requirements for KCP&L-MO are moved up from 2038 to 2033.
- In the combined company and KCP&L-MO standalone scenarios, MEEIA Cycle 3 provides a reduced NPVRR and benefits to all customers when compared to no DSM.
- Continuing DSM investment for the 20-year horizon provides the lowest NPVRR in ALL scenarios.
- Combined company evaluation increases the total benefit value of DSM as compared to KCP&L-MO standalone.

As shown in the tables below, the results consistently show the benefits of continuing DSM programs at KCP&L-MO and KCP&L-GMO. The following tables summarize the 20-year change in the NPVRR from DSM programs. The MEEIA Cycle 3 Benefits table shows the impact from implementing just the Cycle 3 programs while the RAP- Benefits table provides the results from Cycle 3 and continuing similar programs for the remainder of the 20-year evaluation period at approximately 75 percent of the RAP level. (Results are provided for both the joint KCP&L-MO/KCP&L-GMO ARPs and the KCP&L-MO standalone ARPs.)

FIGURE 5.1: MEEIA CYCLE 3 BENEFITS ($ MILLION, 20-YEAR NPVRR)
KCP&L-MO/KCP&L-GMO JOINT PLANS

Plant Retirements	Additional Retail Load	Without CO_2 Limits	With CO_2 Limits
None	None	$2	$6
LaCygne 1,2 Jeffrey 1,2,3	None	$23	$28
LaCygne 1,2 Jeffrey 1,2,3	375 MW	$29	$35

FIGURE 5.2: RAP- BENEFITS ($ MILLION, 20-YEAR NPVRR)
KCP&L-MO/KCP&L-GMO JOINT PLANS

Plant Retirements	Additional Retail Load	Without CO_2 Limits	With CO_2 Limits
None	None	$88	$106
LaCygne 1,2 Jeffrey 1,2,3	None	$167	$188
None	375 MW	$179	$200
LaCygne 1,2 Jeffrey 1,2,3	375 MW	$192	$213

FIGURE 5.3: MEEIA CYCLE 3 BENEFITS ($ MILLION, 20-YEAR NPVRR)
KCP&L-MO STANDALONE

Plant Retirements	Additional Retail Load	Without CO_2 Limits	With CO_2 Limits
None	None	$4	$7
LaCygne 1 & 2	None	$4	$7
LaCygne 1 & 2	375 MW	$4	$6

FIGURE 5.4: RAP- BENEFITS ($ MILLION, 20-YEAR NPVRR)
KCP&L-MO STANDALONE

Plant Retirements	Additional Retail Load	Without CO_2 Limits	With CO_2 Limits
None	None	$30	$43
LaCygne 1 & 2	None	$62	$74
None	375 MW	$46	$57
LaCygne 1 & 2	375 MW	$84	$96

In summary, the policies discussed pose inherent challenges in determining how to balance priorities. By shedding light on our high-level process taken to evaluate DSM, we hope to inform the regulatory stakeholders of the rigorous and thoughtful application of the parameters in presenting this proposal. We believe this plan meets regulatory requirements, balances priorities and drives towards the best outcomes for customers. We're open to working with stakeholders to dynamically optimize the DSM potential study and IRP process to balance our customers' needs and the State of Missouri's priorities.

We're also interested in collaborating with stakeholders to develop a DSM Potential Study that helps create realistic scenarios for meeting the resource needs as described in the IRP. We propose the following timing for future engagement:

- Early 2019 - Stakeholder engagement in DSM Potential Study scope
- Mid 2020 - DSM Potential Study finished
- April 2021 - Filing of KCP&L-MO and KCP&L-GMO triennial IRP
- July 1, 2021 - Filing of KCP&L-MO and KCP&L-GMO notice around intention to invest in DSM
- Fall 2021 - Filing of MEEIA Cycle 4 aligned with IRP results
- April 1, 2022 - Ruling on amended plan from the Commission

5.2 Focusing on Long-Lived Measures

We recognize the Commission's strong interest in utilizing DSM to reduce the overall system electric demand at peak periods. Finding DSM solutions that can also sustain that peak demand reduction over a longer period is a cost-effective way to help meet that end. Our MEEIA Cycle 3 plan takes a robust approach on driving demand savings from measures with lives greater than 10 years, with more than 97 percent of projected savings meeting that standard (see Figure 5.5). The measures with long lives that have the most impact on the demand reduction are HVAC, industrial processes and other custom type measures. With the alignment of the earnings opportunity (EO) buckets to focus on these measures, we're working to drive results that are beneficial to all customers over the long run.

FIGURE 5.5: KCP&L-MO & KCP&L-GMO - DEMAND IMPACT OF LONG LIFE MEASURES

Program	% of Demand from Measures with 10 year+ Life					
	KCP&L-MO			KCP&L-GMO		
	PY1	PY2	PY3	PY1	PY2	PY3
Energy Saving Products	100%	100%	99%	99%	99%	99%
Heating, Cooling & Weatherization	96%	96%	96%	96%	96%	96%
Residential Demand Response	99%	98%	96%	97%	97%	96%
Business Smart Thermostat	100%	100%	100%	100%	100%	100%
Business Process Efficiency	100%	100%	100%	100%	100%	100%
Business Custom	100%	100%	100%	100%	100%	100%
Business Standard	88%	87%	88%	90%	91%	91%

5.3 Flexibility in Programs During Cycle

While the MEEIA Cycle 3 programs are three years long, with the exception of IEMF, they still benefit from a measure of flexibility to adapt to market changes. We propose the following avenues to provide the best flexibility for future success:

- Continuing the 11-step change process outlined in the program in Appendix 8.1.
- Continuing the MEEIA rules associated with modifying or discontinuing a program
  - MEEIA 4 CSR 240-20.094 (5) & (6) shall apply if modifications are required during any period over the life of the program.
- Proposing a new and streamlined approval process for implementing pilot programs
  - The process reflects a hybrid between the MEEIA rule for pilot programs and the 11-step process, with the 11 steps plus an approval from the Commission for a tariff sheet.
  - We'll screen, research, evaluate and prioritize ideas for potential inclusion in the Research and Pilot program.
  - Pilot programs will be evaluated on a variety of parameters, including: energy savings potential, cost of savings, customer interest, market dynamics, development feasibility, ability to be brought to market and longevity of the offering.
  - We'll report on analysis and next steps for concepts at quarterly DSM Advisory Group meetings.
  - Upon selection of a concept, we'll develop parameters for a pilot program and create a program description outlining the offering, objective, target segment(s) and need that the offering serves along with anticipated budget, goal(s) and participants.
  - We'll offer to hold a meeting with interested stakeholders to discuss any new pilots that at least 30 days prior to deployment.
  - Pilot programs serving 500 participants or less, or that have a program budget of $500,000 or less, are eligible for this process.

5.4 Ongoing Stakeholder Engagement

To keep communication open during the MEEIA cycle, we propose a simplified reporting process to keep stakeholders informed of progress and structure meetings around clear objectives.

- The stakeholder group will provide program guidance and meet three times a year.
  - During the program year wrap-up, they'll review the annual report detailing results from the previous year, including actual savings achieved, dollars spent and cost benefits.
  - During the mid-program year status meeting, they'll review year-to-date results and any mid-year adjustments to the operating and marketing plans. They'll also develop any new technologies and programs to consider for the next operating year plan.
  - During the next program year operating plan meeting, they'll review proposed operating plan adjustments for the coming year including technology changes, incentive changes, target marketing, administrative adjustments and program adjustments.
- An Annual Report will provide the commission with information about achievements, energy and demand savings, actual programs costs and evaluation reports.

The introduction of the Missouri Energy Efficiency Advisory Collaborative (MEEAC) in the 2017 round of MEEIA rules updates will also enhance the ongoing communication among stakeholders around the needs of interested parties and changes in the marketplace. To date, we've participated in multiple working groups to facilitate discussions on EM&V, low income programs and DSM financing tools.

5.5 EM&V Plan

An important component of a successful DSM program portfolio is the continual review of the process, procedures, satisfaction and effectiveness of the efforts and investments. We propose investing five percent of the total budget to EM&V activities, totaling nearly $4.8 million for the combined jurisdictions over three years. We'll follow very similar protocols as previous cycles, with a few enhancements:

- Streamlining the EM&V draft periods to help control costs for reviews
  - » Consolidate review periods from three to two
  - » Compress the time schedule from period end date to first draft from 120 to 30 days
- Clarifying the finalization process to final net savings for every program year for EO calculation
  - » Results from EM&V will be final every year including net to gross and realization rate for each program
- Delivering more real-time results to increase awareness of progress
  - » Fast feedback surveys to give quicker customer insight
  - » Quicker impact evaluations based on automated meter interface interval usage data

Appendix 8.4 offers additional details of the proposed EM&V plan and timing.

5.6 Opt-Out Mitigation

Opt-out mitigation is a vital factor in ensuring DSIM rate stability, portfolio goal attainment and overall customer satisfaction with MEEIA programs. It's imperative to develop a strong value proposition for large single site industrial and multi-site large commercial customers that links energy solutions with business solutions through a seamless, transparent and cost-effective customer experience.

The op-out percentages as of 2017 are 18.3 percent for KCP&L-MO and 26.6 percent for KCP&L-GMO, for customers that meet eligibility criteria for opting out. Most opt-outs fall under the 4 CSR 240.094(7)(A)1. provision — industrial single site customers with an annual load of 5 MW or greater. Based on annual kWh consumption, these customers represent the largest potential individual contributors to MEEIA. However, these customers also carry the largest financial burden as DSIM rates are charged based on monthly kWh consumption. Providing this customer segment with a more aligned rate mechanism — reflecting participation within their rate class and an incentive mechanism that balances costs and benefits — is integral in ensuring they receive near-term and long-term benefits from MEEIA.

We've been proactive in using large customer surveying and other outreach efforts to better understand participation barriers and potential solutions. Common barriers identified include DSIM costs, rebate levels, ease of program use, and supporting technical and financial resources. We've worked to better engage customers through prior programs such as Strategic Energy Management. We've also introduced incentive and delivery modifications in parallel with a more proactive costs management strategy to lower DSIM costs. While we've seen continued interest from large customers wanting to opt-out evidenced by an uptick in requests in the 2018 opt-out period, we expect to keep working with these customers to find the best solution to help drive efficiency savings in their buildings and facilities.

6.0 Collaborative Process to Approval

KCP&L acknowledges the amount of detailed work that accompanies the approval process. With that in mind, we propose a series of technical conferences and a procedural schedule to help drive towards approval and implementation on April 1, 2019, with goal of ensuring DSM continuity.

6.1 Technical Conference Schedule

We conducted pre-technical conferences with stakeholders on May 24, 2018 in person and September 6, 2018 via webinar to provide an overview of our filing. Building on this high-level background — and ongoing discussions after filing — should provide a positive path forward to approval. We propose an overview meeting and four technical conferences over an array of topics of likely interest to stakeholders in the approval process. While we are flexible on topics, number of discussions and exact dates, we are prepared for regular discussions via conference call, webinar and/or in person to facilitate the approval process and overall understanding of our filing. As we've filed the combination of KCP&L-MO and KCP&L-GMO together, we propose combined discussions in these technical conferences.

FIGURE 6.1: PROPOSED TECHNICAL CONFERENCE SCHEDULE

Program	
12/10/2018	MEEIA 3 Plan Overview meeting
	Overview - Exec Summary of Filing • Portfolio Targets • DSIM Changes proposed for this cycle Program Details - Residential Programs • Income-Eligible Programs
12/18/2018	Technical Conference #1
	Marketing Strategy Program Details - Business Programs • Demand Response – (including thermostat) Overall Transition Plan - Business Programs
1/7/2019	Technical Conference #2
	TRM Details - Sources • Net to Gross Assumptions • Baselines and Deemed Savings Avoided Cost Assumptions
1/14/2019	Technical Conference #3
	Recovery Mechanism • Throughput Disincentive Lost Margin Recovery • Earnings Opportunity
1/21/2019	Settlement Conference
	Additional Topics as needed

6.2 Stakeholder Access to Information

We will provide work papers associated with the proposed MEEIA 3 filing in supplementary attachments to provide additional detail. Per MEEIA rules, these are native files with links intact.

Appendices include:

- 8.1 Program Tariff Sheets
- 8.2 Detailed Program Descriptions
- 8.3 Technical Resource Manual
- 8.4 Detailed EM&V Plan
- 8.5 2017 DSM Potential Study conducted by Applied Energy Group (AEG)
- 8.6 Measure Incentive Ranges
- 8.7 Earnings Opportunity Matrix
- 8.8 Customer Research
- 8.9 Financing Research
- 8.10 DSIM Tariff Sheets
- 8.11 Additional Integrated Resource Plan Results
- 8.12 Witness Details

Work papers will include:

- 2016 KCP&L-MO and KCP&L-GMO Final Evaluation, Measurement & Verification Report
- DSMore Batch Tool and Template File
- Portfolio Analysis Tool Spreadsheets

6.3 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. It's not intended as a windfall profit to the utility, but a stabilizing factor to allow for growth in DSM applications that will benefit all stakeholders.

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 earnings opportunity 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 our stock price and an increase in the cost of equity capital.

In addition, 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 KCP&L, 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 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

The Policy Goal of MEEIA is as follows:

- To encourage more efficient energy use and cost-effective demand-side programs with a goal of achieving all cost-effective
  demand-side savings;
- To 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:
  - » Provide timely cost recovery for utilities;
  - » 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
  - » Provide timely earnings opportunities associated with cost-effective, measurable and verifiable efficiency savings.

Our requested DSIM includes a request of recovery of estimated program costs, a portion of TD and any earned earnings opportunity based on EM&V results. The recovery of TD proposed will help mitigate the negative financial impacts currently present for utility investment in demand response (DR) and energy efficiency (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 we are kept whole and not financially harmed or dis-incentivized from promoting EE.

However, absent a DSIM that addresses and mitigates the financial TD that exists, we 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, we will not be able to currently recognize the TD revenues — resulting in a negative impact on our 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 determine in the period in which it is calculated.

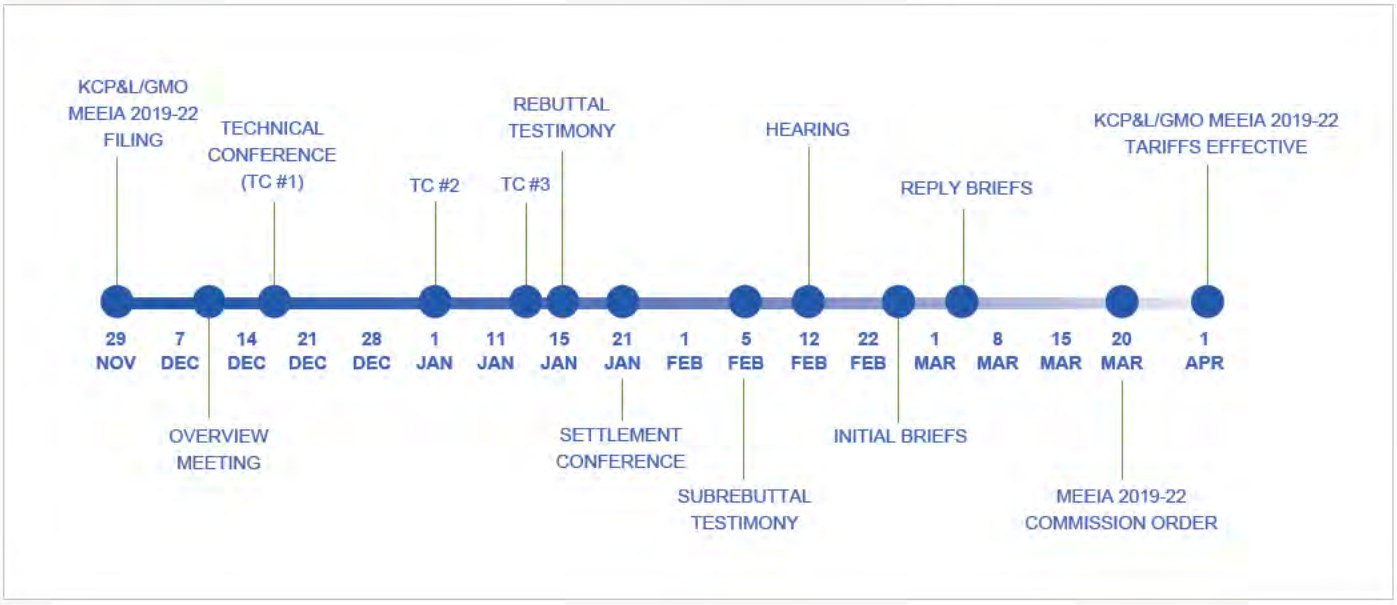
In this filing, we have demonstrated these programs meet the cost-effectiveness test and have been shown to be less costly to customers than the alternative of no programs, and unmitigated peak demand and energy usage. The untapped potential for our demand-side programs exists because it's never easy 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.

6.4 Achievable Time Schedule

We propose an achievable timeline to allow for continuation of programs, maintaining customer momentum and allowing for ongoing synchronization of programs between our Missouri jurisdictions. The timeline is somewhat compressed from the MEEIA rule of 120 days from filing to Commission order. As mentioned above though, KCP&L has been meeting with stakeholders to preview the MEEIA plan multiple times over the last 3-6 months to gain feedback including specific additional discussions and work in the last month to address the IRP-MEEIA interaction.

FIGURE 6.2: PROPOSED TIMELINE

Date	Activity
11/29/2018	Filing
12/10/2018	Overview Meeting
12/18/2018	Technical Conference #1
1/7/2019	Technical Conference #2
1/14/2019	Technical Conference #3
1/15/2019	Rebuttal Testimony
1/21/2019	Settlement Conference
2/5/2019	Surrebuttal Testimony
2/12–14/2019	Hearing
2/25/2019	Initial Briefs
3/4/2019	Reply Briefs
3/20/2019	MEEIA 2019-22 Commission Order
4/1/2019	KCP&L-MO and KCP&L-GMO MEEIA 2019-22 Tariffs Effective



7.0 MEEIA Rules Requirements

7.1 MEEIA Rules Filing Requirements

FIGURE 7.1: MEEIA RULES FILING REQUIREMENTS

Rule #			Report Section	Expert Witness
4 CSR 240-20.093				
2	A	Application to establish, continue or modify a DSIM		
	A 1-2	Notice provided to customers describing proposed DSIM and example customer bill	Section 3	File
	A 3-10	Complete description of proposed DSIM	Section 4	Foltz
8	A	EM&V budget shall not exceed 5%	Appendix 8.4	File
9	A, B	Demand-Side Program Annual Report		Nelson
10	A	Submission of surveillance report		Foltz
14		Variances	Section 7.2	Rush
4 CSR 240-20.094				
2	A	Progress towards goal of all cost-effective demand-side savings	Section 2.3	Nelson
3	A, B	Utility Market Potential Studies	Appendix 8.5	Nelson
4		Applications for Approval of Electric Utility Demand-Side Programs or Portfolio		
	A	Hold DSMAG Meetings for input	Section 5	File
	B	Description of process to determine Technical, Economic, Market Potential for 20-year horizon	Appendix 8.5	Nelson
	C	Cost-effectiveness for each DSM program and total for all programs	Appendix 8.2 --------- Appendix 8.11	Nelson --------- Nelson/Crawford
	D 1-17	Program write-ups and program plans	Appendix 8.2	File
	E	Demonstration and explanation of how DSM programs are expected to achieve all cost-effective DSM savings	Section 2.2.1 Appendix 8.5	File/Nelson
	F	Identify DSM Programs supported by other utilities (electric or gas)	Section 2.4 Appendix 8.2	File
	G	Designation of Program Pilots - include questions that pilot is expected to address, proposed geography, duration, etc.	Section 3	File
	H	Existing DSM program with tariff sheets in effect prior to the effective date of this rule shall be included in the initial application for approval of demand-side programs if the utility intends for unrecovered and/or new costs related to the existing de-mand-side program be included in the DSIM (Rule effective 10-29-17)	Section 8.1 Section 8.10	Rush
	L	Tariff Sheets associated with DSM filing	Section 8.1 Section 8.10	Rush
11		Variances	Section 7.2	Rush

7.2 MEEIA Rules Variance Requests

THROUGHPUT DISINCENTIVE (TD)-RELATED VARIANCES

1. Variances related to the 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: 20.092(1)(HH);20.092(1)(M); 20.092(1)(R); 20.093(2)(I) 20.093(2)(I)3; 20.092(1)(N)
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)(C)
3. Variances related to "revenue requirement" where the TD is excluded from the cost recovery revenue requirement: 20.092(1)(Q); 20.092(1)(UU); 20.092(1)(P); 20.092(1)(R); 0.093(2)(J); 20.092(1)(F)

While the above request for variance appears lengthy, the primary reason is the MEEIA statute's lack of inclusion or consideration of the TD, a mechanism historically recognized by MEEIA rules promulgated by the Commission and MEEIA stakeholders 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.

Therefore, good cause exists for TD recovery 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 (Section 393.1075 RSMo 2014). Furthermore, reliance on EM&V for retrospective recovery for purposes of calculating the TD heightens recovery risk and does not value demand-side and supply-side resources equally.

OTHER VARIANCES

4. Variances related to allowing flexibility in setting the incentives and changing measures within a program: 14.030

Good cause exists for this variance request due to the substantial marketing and promotion required to gain "at-will" participation in DSM 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, we seek a variance from the Commission's promotional practices rules.

5. Variance for 4 CSR 240-20.092(1)(C)

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 IRP and risk analysis in its most recently adopted preferred resource plan to calculate avoided costs.

While we have always interpreted this rule to mean 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 as it adds another layer of uncertainty that further discourages our company from its ability to support the state policy to value demand-side sources and supply resources equivalently. The Company may request other variances after the conclusion of the technical and settlement conferences.