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BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

Kansas City Power & Light Company

File No. EO-2019-0133

REBUTTAL TESTIMONY OF
PHILIP MOSENTHAL

ON BEHALF OF

NRDC

PUBLIC VERSION

January 28, 2019

Q. Please state your name and business address.

A. Philip H. Mosenthal, Optimal Energy, Inc., 10600 Route 116, Hinesburg, VT 05461.

Q. On whose behalf are you testifying?

A. I am testifying on behalf of Natural Resources Defense Council (NRDC). All work developing my testimony has been completed by me or under my direction.

Q. How are you employed?

A. I am the founding partner in Optimal Energy, Inc., ("Optimal Energy") a consultancy specializing in energy efficiency and utility planning. Optimal Energy advises numerous parties including utilities, non-utility program administrators, government, and environmental groups.

Q. Tell me about your qualifications and experience?

A. I have 30 years of experience in all aspects of energy efficiency, including facility energy management, policy development and research, integrated resource planning, cost-benefit analysis, and efficiency and renewable program design, implementation and evaluation. I have developed numerous utility efficiency plans, and designed and evaluated utility and non-utility residential, commercial and industrial energy efficiency programs throughout North America, Europe and China.

I have also completed or directed numerous studies of efficiency potential and economics in many locations, including China, Kansas, Maine, Massachusetts, Michigan, Minnesota, New England, New Jersey, New York, Quebec, Texas, and Vermont. These studies ranged from high level assessments to extremely detailed, bottom-up assessments evaluating thousands of measures among numerous market segments. Recent examples

of the latter are analyses of electric and natural gas efficiency and renewable potential along with the development of suggested programs for New York State, on behalf of the New York State Energy Research and Development Authority (NYSERDA).

I have served as a lead advisor for business energy services in Rhode Island and Massachusetts on behalf of the Energy Efficiency Resource Management Council and the Energy Efficiency Advisory Council, respectively, overseeing and advising on their nation-leading utility program administrators' plans, program designs, implementation and performance, in these leading states. I also was the lead developer of Vermont's "efficiency utility" (Efficiency Vermont) which is the nation's first and only regulated utility dedicated solely to capturing efficiency resources.

I have been actively engaged in the Illinois Stakeholder Advisory Group (SAG) since its inception, representing the People of Illinois on behalf of the Illinois Office of the Attorney General. I have also been involved in the past few years on issues in Missouri related to KCP&L's and Ameren's IRP and MEEIA filings, as well as a witness on behalf of NRDC, the Sierra Club and Renew Missouri in various Ameren and KCPL&L dockets.

Prior to co-founding Optimal Energy in 1996, I was the Chief Consultant for the Mid-Atlantic Region for XENERGY, INC. (now DNV-GL). I have a B.A. in Architecture and an M.S. in Energy Management and Policy, both from the University of Pennsylvania.

Q. Have you previously testified before this Commission?

A. Yes. I have submitted direct and rebuttal testimony in numerous Ameren UE and KCP&L-MO and GMO dockets related to IRP's and MEEIA Plans.

Q. Please summarize your Testimony.

A: My testimony addresses KCP&L's 2019-2022 Plan filing in the context of the MEEIA Statute. First, I give a brief description of the MEEIA Legislation and KCP&L's MEEIA III Plan. Next, I show that KCP&L is leaving significant cost-effective energy efficiency potential on the table by comparing the level of savings included in KCP&L's MEEIA filing with the results of KCP&L's potential study. Third, I demonstrate that the MEEIA Plan benefits all KCP&L customers, including non-participants. The Plan passes the total resource cost (TRC) test and has been shown to be a scenario resulting in the lower net present value of future revenue requirements for KCP&L than any scenario with less efficiency investment. Fourth, I show that energy efficiency provides substantial benefits regardless of whether a utility currently has excess capacity. I further show how all customers will indeed benefit from the MEEIA III Plan even if short term rates increase for non-participants. Fifth, I explain the need for additional programs and increased budgets to serve KCP&L's low-income customers. I recommend that KCP&L offers an Income-Eligible Single-Family program. I then praise the improved program design of the proposed Income-Eligible Multi-Family program, but also suggest how additional budget would help to realize the true potential of the new design elements. I conclude by recommending that the Commission approve KCP&L's MEEIA III plan, given the cost-effectiveness and significant benefits to all customers.

Introduction

Q: Describe the MEEIA Legislation

A: The MEEIA Legislation encourages the adoption in Missouri of energy efficiency investments that are cost-effective using the Total Resource Cost test (TRC).

Specifically, it states that "The commission shall permit electric corporations to implement commission-approved demand-side programs proposed pursuant to this section with a goal of achieving all cost-effective demand-side savings." Further, the programs should "result in energy or demand savings that are beneficial to all customers in the customer class in which the programs are proposed, regardless of whether the programs are utilized by all customers." Finally, the legislation states that, in determining how to determine whether efficiency programs are beneficial to all customers, "the commission shall consider the total resource cost test a preferred cost-effectiveness test."[1]

Q. Describe the current KCP&L MEEIA Proposal

A: Over three years, KCP&L's MEEIA III Proposal will save 343.7 GWh of energy, and 185.9 MW of peak demand at a program budget of $96.3 million.[2] The savings goals presented in the MEEIA III Proposal are in line with the 2017 DSM Potential Study Realistic Achievable Potential (RAP) levels in KCP&L-GMO and slightly lower than RAP for KCP&L-MO. The proposal has a portfolio TRC benefit-cost ratio of 1.81 for KCP&L-MO and 1.90 for KCP&L-GMO.[3] This means that for every dollar invested in the efficiency programs (including all KCP&L-leveraged customer contributions), Missourians and the entire Missouri economy will enjoy roughly two dollars in benefits.

Q. What does the MEEIA legislation mean by "all cost-effective" demand side savings?

A. The MEEIA legislation explicitly states that the Total Resource Cost test (TRC) should be used as the primary test of whether efficiency resources are cost-effective.

[1] Missouri Revised Statues. Section 393.1075.4
[2] KCP&L MEEIA Cycle 3 2019-2022 Filing, pg 13.
[3] KCP&L MEEIA Cycle 3 2019-2022 Filing, pg 15.

Therefore, "all cost-effective" savings means all energy efficiency resources for which the TRC benefits are greater than the TRC costs (a benefit-cost ratio greater than 1.0).

Q. Does KCP&L's MEEIA III Plan strive for all cost-effective savings as required in the MEEIA legislation?

A. No. While I believe it falls short of pursuing all cost-effective efficiency and could be expanded, KCP&L's MEEIA III Plan is a significant step towards capturing all cost-effective energy efficiency as envisioned by the MEEIA legislation. With TRC ratios of 1.81 and 1.90 for KCP&L-MO and KCP&L-GMO respectively, the legislation's stated preferred test shows that the avoided marginal costs from running existing power plants would be almost twice as much as achieving the same results through the MEEIA III Plan efficiency programs.[4]

Q. How do you know that there are additional cost-effective savings?

A. Results of KCP&L's DSM Potential study,[5] which were used to inform the Company's 2018 IRP filing, suggests that there is additional energy savings potential in the Company's Missouri service territory. As previously mentioned, the savings goals presented in the MEEIA III Proposal are closely aligned with the savings levels in the RAP potential study scenario. However, results of the study suggest that the Maximum Achievable potential in the KCP&L-MO service territory is 24% higher than what is included in the MEEIA filing, and 43% higher for the KCP&L-GMO territory.[6] In fact, this study was very conservative in my opinion, and I believe even more is readily

[4] KCP&L MEEIA Cycle 3 2019-2022 Filing, pg 15.
[5] Applied Energy Group, "Kansas City Power & Light 2016 DSM Potential Study." April 17, 2017.
[6] Values reflect the MAP scenario increment savings for years 2019-2022 (as presented in Table 36 and Table 38 of KCP&L's IRP) compared to the proposed energy savings found in Figure 1.3 and Figure 1.4 of KCP&L's MEEIA Cycle 3 filing.

achievable. As discussed below, the leading jurisdictions are currently capturing more than twice as much savings as KCP&L's plan.

Q. Can you explain the difference between the RAP and MAP scenarios you reference?

A. Yes. In general, achievable potential is used for setting energy savings targets because it considers things like limitations in customer awareness and willingness to adopt efficiency measures that may act as barriers to achieving all possible technical or economic potential. The 2017 AEG study included two Achievable Potential scenarios: Maximum and Realistic. Maximum Achievable Potential (MAP) assumes the maximum expected participation and customer awareness level, while Realistic Achievable Potential (RAP) represents a constrained scenario which assumes a more moderate set of budgets and programs that corresponds to past levels of DSM activity at KCP&L.

Q. Which scenario most closely meets the requirements of the MEEIA legislation?

A. The MAP scenario most closely represents the goal of achieving all cost-effective demand-side savings, as that is how it is defined. Although more aggressive than the savings presented in the RAP scenario, the MAP reflects what is estimated to be achievable in the KCP&L service territory and what the Company should strive for.[7] With properly designed programs, and sufficient spending on marketing and outreach, KCP&L should be able to achieve savings closer to the MAP scenario level than what they are currently proposing.

Q. Are the savings levels in the MAP scenario realistically achievable?

A. Yes. The MAP scenario for Missouri found a 19-year cumulative savings of 9.5%, for an annual average savings of just 0.5% of total sales (although due to some

[7] Putting aside that I believe true MAP is much higher than the estimate, as are the levels of savings currently being captured in many of the leading States.

measure lives of shorter than the study period, actual incremental savings are in the 0.8%-1.1% range). This is just a little over half of what was found in Ameren's 2016 potential study for its service territory and would only rank at the 29th state in terms of efficiency savings as a percent of load being *actually being captured, with some as high as three times this level.*[8] Clearly, these saving are realistic if more than half the states are achieving more. In fact, this is significantly lower than what is currently being achieved in Missouri – KCP&L MO itself, in the first year of MEEIA 2, achieved almost 50% higher savings than the MAP scenario in the IRP.

Q. Why else do you believe KCP&L should be able to achieve higher energy efficiency savings?

The high BCR ratios for many of the programs in KCP&L's portfolio indicate that the company could spend more money on those programs without threatening the cost-effectiveness of the portfolio. For example, the KCP&L-GMO Heating, Cooling and Weatherization program has a BCR of 2.29 and the Business Customer program has a BCR of 2.21. These results suggest that even if the costs were twice as high, they would remain cost-effective. By increasing spending on things like customer marketing and outreach, financial incentives, or contractor training, KCP&L could help to increase program participation and achieve savings levels closer to, and significantly exceeding the MAP scenario estimates.

[8] Massachusetts, Rhode Island, and Vermont are currently capturing approximately 2.5-3% per year in savings, and New York just adopted a statewide goal for utilities to capture 3% per year in savings (See: https://aceee.org/sites/default/files/publications/researchreports/u1808.pdf Note the ACEEE figures are lower than the percentage of savings being captured by the utilities offering efficiency programs because they reflect the entire state loads including many municipal and cooperative utilities with no programs.

Q. Does KCP&L's MEEIA III Plan meet the requirement in the MEEIA legislation that all customers benefit?

A: Yes. The MEEIA III Plan benefits all customers regardless of program participation in several ways. First, electricity costs would be lower for all customers (including non-participants) if all cost-effective energy efficiency were pursued. KCP&L's latest IRP shows that the preferred scenario results in a total revenue requirement of $106 million lower than the scenario that assumes no additional DSM beyond what is currently in progress as part of KCP&L's MEEIA Cycle II approved programs.[9] This confirms that all ratepayers together will be better off with proposed levels of efficiency, even given the current growth rates and even with any existing excess capacity. This is because efficiency is the least-cost resource and would displace more expensive alternatives whenever its benefit-cost ratio is greater than one.

Q. You mentioned that efficiency is beneficial even when a utility has excess capacity. Please explain.

A: Energy efficiency has many benefits that aren't related to the explicit avoidance of an imminently needed additional new supply side investment in capacity. Avoided energy benefits, for example, also include marginal costs related to generating additional electricity at existing facilities, or the opportunity cost of having to provide electricity or electric capacity to its own customers rather than selling it back to the Midcontinent ISO. Generating electricity incurs variable costs, such as fuel, operation and maintenance, that would not be incurred if that unit of electricity were not produced. Some types of plants have higher marginal costs than others – for example peaker plants only run a few hours per year because the marginal costs associated with generating electricity from these

[9] KCP&L 2018 Integrated Resource Plan. Volume 6.

plants are higher than the market cost of power for all but the hours with the highest load. This is despite the fact that significant fixed costs have been incurred in building the power plant and will continue to be incurred whether or not the plant actually generates any electricity. Efficiency, by displacing the need for the power plants with the highest marginal costs, thus saves ratepayers significant money even when not explicitly avoiding a new power plant.

Both MEEIA[10] and the Commission's IRP rules[11] call for evaluating efficiency on an equal basis with supply-side investments. This does not mean that efficiency can only be implemented if it reduces large near-term supply-side capital investments, but that the utility should procure electricity from demand-side efficiency measures if it can do so for less than the cost of procuring electricity from existing facilities. By reducing the need for electricity, KCP&L's MEEIA III portfolio will allow it to either reduce costs of procuring electricity from existing power plants or sell additional power back to MISO. In either case, total revenue requirements are lower with the MEEIA portfolio in place,, as is made clear in KCP&L's IRP.

Q. Are there demand (as compared to energy) benefits of energy efficiency when there is forecasted excess capacity?

A: The demand reduction associated with energy efficiency creates significant benefits even in situations of excess capacity for several reasons. First, as described above, power purchased during peak periods is often several times more expensive than power purchased during off-peak periods. This is because the power plants with the lowest marginal cost largely serve the base load, and as the load increases, more and

[10] Sec. 393.1075.3.
[11] 4 CSR 240-22.010(2)(A).

more expensive plants are brought on-line to meet the additional power need. In many jurisdictions, some plants are needed for only a few hours a year, with costs that are an order of magnitude higher than average electric costs. By reducing the system peak load, the MEEIA III Plan will allow KCP&L to avoid purchasing this highly expensive electricity, or allow it to sell this excess capacity into the MISO market when costs are particularly high, either way benefitting customers.

Second, lower peak demand can allow KCP&L to retire any existing and expensive plants earlier than they otherwise could. This can avoid possible future expensive plant retrofits and maintenance, and further benefit customers.

Third, reduction in peak demand can result in reduced Transmission and Distribution (T&D) costs. While these impacts are highly dependent on location, the need for T&D investments are a significant and growing cost in the U.S. – U.S. utilities invested $37.7 billion in their T&D systems in 2013, and T&D costs have been growing significantly faster than inflation since the early 2000s[12]. By reducing its system-wide peak, KCP&L's MEEIA III Plan will by its nature reduce the peak on substations and wires that might otherwise need capacity upgrades. Reduced loading on substations can also provide maintenance cost savings and reduce line losses, even when major capital investments are not necessary. KCP&L can even target energy efficiency and demand response initiative in certain areas to best maximize the T&D benefits.

[12] http://kms.energyefficiencycentre.org/sites/default/files/ie1502.pdf

Q. Do efficiency investments have additional benefits beyond the electric system benefits that aren't captured in KCP&L's cost-effectiveness estimates?

A. Yes. Energy efficiency investments have many significant additional benefits that are hard to quantify or are otherwise not included in the TRC cost-effectiveness analysis of the MEEIA Portfolio. These include, but are not limited to:

- Job Creation and other Economic Benefits
- Lower Market Prices for Electricity
- Reduced Risk and Price Volatility
- Health and Safety Benefits
- Ancillary Grid Benefits
- Improved Comfort and Productivity

For example, a 2018 Report on clean jobs in the Midwest found that Missouri has 40,166 full time jobs related to energy efficiency. This is an important and growing sector of Missouri's economy, representing 1.4% of the state's entire workforce.[13] These jobs are significantly driven by the MEEIA programs, and will continue to grow in importance if MEEIA is continued and expanded. These additional benefits are enjoyed by all customers regardless of program participation. Typically, a million dollars spent on efficiency will create many more jobs than a million dollars spent on supply-side resources.

Q: **What about customers who do not participate in MEEIA programs? Won't they be worse off due to short term rate increases from MEEIA?**

[13] https://www.cleanjobsmidwest.com/state/missouri

A: Virtually all efficiency programs will increase short term rates as a result of reducing electricity consumption. However they reduce customer's total bills, which is what they care most about. If the PSC were to consider an increase in short term rates by itself as a reason not to approve a MEEIA Plan it would essentially be using the Ratepayer Impact Measure Test (RIM) as the primary cost-effective metric. The RIM test differs from the TRC in that it does not consider the non-electric system benefits, but more importantly because it considers all "lost revenue" resulting from the energy savings as a cost. In this way, RIM basically indicates whether or not short-term rates will increase as a result of efficiency. The RIM test is generally negative (resulting in a small increase in rates) for efficiency programs because utility retail rates are almost always higher than the marginal avoided costs because there are fixed costs built into utility rates. As a result, not only does the utility need to recover its program costs, but the bill savings that customers enjoy result in reduced revenue collected by the utility, requiring a rate increase to make up for the unrecovered fixed costs. Most broad-based efficiency programs will fail the RIM test, and this metric is clearly rejected by the MEEIA legislation as a dispositive cost-effectiveness test because it explicitly states that the TRC should be used as the primary cost-effectiveness metric.[14]

Q. What sorts of activity will typically result in *lowering* rates?

A: Essentially wasting energy is an effective way to reduce rates because it will spread the system's fixed costs over greater sales. This is clearly contrary to State policy and the intent of MEEIA to encourage pursuit of all cost-effective efficiency.

Q. Do any jurisdictions use the RIM test as a primary cost-effectiveness screen?

A: No. No other states use such a metric.

[14] Sec. 393.1075.4, RSMo.

Q. Are lost revenues a true new "cost" to customers?

A: No. The revenue that is "lost" reflects fixed costs that are already spent, are PSC approved, and are embedded in KCP&L's current rates. KCP&L's payments from its throughput incentive are simply a reallocation of these already incurred costs to compensate for the efficiency improvement that results in lower electricity consumption. They do not impact overall cost-effectiveness of efficiency for Missouri's economy.

Q. How may some of the rate impacts for non-participants be mitigated?

A: The best way to reduce the impacts of efficiency for non-participants is simply to ensure that the program offerings are broad enough that everyone can easily participate. The proposed MEEIA portfolio takes significant steps in this direction – by minimizing the number of non-participants, the plan further reduces KCP&L's total revenue requirements while minimizing short-term negative impacts to KCP&L customers who do not participate. Through things like its upstream products program, the vast majority of KCP&L customers will participate in some way and typically not even be aware they are participating, even if just to buy a few discounted lightbulbs, which by itself will likely offset their rate impacts and still provide them with a lower overall bill.

Q. How else does energy efficiency benefit KCP&L's customers?

A: The benefits of efficiency are aptly demonstrated by a recent article in the Kansas City Star. This article discusses a recent surge of customer complaints due to higher bills from the particularly hot weather this summer (there were over 50 days with weather over 90 degrees - more than double the number in 2017). Robust MEEIA programs can help provide customers with some degree of control over their electric bills, and mitigate risk

of unexpected outside events rendering their electricity unaffordable.[15] Quite simply, customers care most about the magnitude of their bills, not their rates. Finally, because the efficiency resource KCP&L has proposed to capture is cheaper than supply alternatives, in the long run overall customer bills and rates go down as a result of the MEEIA III Plan, as KCP&L avoids future larger capital expenses in supply they would otherwise have to make.

Q. Does Kansas City Power and Light's MEEIA III proposed portfolio match the need and the opportunity for energy savings within low-income housing in the Company's service territory?

A. No. It is noteworthy that there are major improvements on the low-income multi-family side, but the Company has no stand-alone program to serve its low-income single-family customers. I am thrilled to see the enhancements in the Company's program design for serving its low-income multi-family customers compared to its Cycle II portfolio. The program has a detailed design which encompasses best practices, including improved eligibility guidelines, going deeper into each building and the units, and partnerships with housing agencies to help reach low-income multifamily customers where they are. But the goals lag far behind where they should be, in order to meet the intent of the newly designed program. Therefore, the Company is leaving energy savings potential on the table for both low-income single-family and multi-family housing and is failing to fully serve its low-income customers.

Q. **What specific low-income programs does the Company propose in its MEEIA III portfolio?**

[15] https://www.kansascity.com/opinion/readers-opinion/guest-commentary/article217671510.html

A. The Company is proposing a small income-eligible component of its Home Energy Reports program. The Company is also proposing an Income-Eligible Multi-Family program. The Income-Eligible Multi-Family Program has drastically improved in terms of its detailed program design compared to Cycle II, but it needs additional budget to realize the true energy savings potential intended by the new design. It will also need a different ramp up of the budget, which I'll explain in further detail later in my testimony. Finally, there is a mention of exploring programs that would serve low-income single-family customers in the research and pilots section of the Company's portfolio. The Company specifically states that it is evaluating opportunities for additional income eligible programs including "energy efficiency for single-family, low- to -mid-income customers."[16] But there is no stand-alone income-eligible single-family program being offered, despite the portfolio's clear new emphasis on serving low-income customers, and the fact that traditional income eligible single-family programs are well developed and proven. The Company states in the introduction to its portfolio that it has included "more than $10 million of income qualified programs [which] will expand options for all, including families with tight budgets."[17] The proposed portfolio also highlights that it has "special programs targeted to income-eligible customers."[18] But the portfolio does not lay out a plan to reach low-income single-family customers, nor are the budgets proposed sufficient to reach low-income multi-family customers in the deep, holistic way the Company has outlined in its improved design. The Company has a residential program now titled "heating, cooling, and weatherization" which is intended to at least partially

[16] KCP&L MEEIA Cycle 3 2019-2022 Filing, p. 44
[17] KCP&L MEEIA Cycle 3 2019-2022 Filing, p. 13
[18] KCP&L MEEIA Cycle 3 2019-2022 Filing, p. 24

serve single-family homes, but there is no specific call-out of low-income single-family customers.

Q. **Did Kansas City Power & Light offer a program for low-income single-family customers in previous MEEIA Cycles?**

A. Yes, the Company offered a program with direct install kits and some weatherization measure incentives specifically for low-income single-family customers in MEEIA Cycle I and part of MEEIA Cycle II.[19] But that program has not been proposed as any part of the Company's MEEIA Cycle III portfolio.

Q. What are the energy efficiency needs of low-income households in the state of Missouri, and the city of Kansas City, MO?

A. Over 43% of renters in Missouri live in unaffordable housing, meaning they spend more than 30% of their income on rent and utilities.[20] Low-income single-family and multifamily households face a higher energy burden than non-low-income households. A 2016 report by Energy Efficiency for All and the American Council for an Energy Efficient Economy found that low-income households in the Kansas City metropolitan area had a median energy burden of 8.49%, compared to just 4.48% for the median household in the Kansas City metropolitan area.[21] The report also found that energy efficiency is a primary solution for relieving excess energy burden. "We find [energy efficiency programs] are an underutilized strategy that could complement bill

[19] In MEEIA Cycle II the Company only offered a low-income single-family program in 2016, only on the GMO side.
[20] U.S. Census Table GCT2515. 2012-2016 American Community Survey 5-Year Estimates.
[21] Drehobl, A. and Ross, L., Lifting the High Energy Burden in America's Largest Cities: How Energy Efficiency Can Improve Low Income and Underserved Communities, Energy Efficiency for All and ACEEE, April 2016. http://www.energyefficiencyforall.org/sites/default/files/Lifting%20the%20High%20Energy%20Burden_0.pdf. p. 46

assistance and weatherization programs to reduce high energy burdens in low-income communities."[22] Additionally, 12.7% of Americans currently live at or below the federal poverty level.[23] In Missouri the poverty rate is even higher at 14%, and 19.2% of children.[24] For a statewide population 14% of 5,911,099 means 826,358 Missourians living at or below the federal poverty level. Missourians to End Poverty has identified five key factors that impact poverty—economic and family security, education, food and nutrition, health, and housing and energy.[25] "High household energy expenditures and below-average family incomes strain the budget of Missouri's lower- and middle-income families." Missouri low-income households need energy efficiency, so they can receive lower energy bills and reduce one of the many burdensome factors contributing to low-income Missouri families in poverty.

Q. Given the need for low-income families in Kansas City and the state of Missouri to reduce their energy burdens, what ways could Kansas City Power & Light improve its treatment of low-income single-family customers in its Cycle III portfolio?

A. The Company should offer a stand-alone Income-Eligible Single-Family program focused on serving low-income single-family homeowners and renters in its MEEIA Cycle III portfolio, with the purpose of delivering long-term energy savings and bill reductions. At a minimum, the Company should bring back what was previously offered to its low-income single-family customers. Additionally, the Company should offer a one-stop shop approach of serving low-income single-family customers as the Company plans to do for its Income Eligible Multi-Family Program. While the Company does

[22] Ibid p.7
[23] http://www.communityaction.org/2018-poverty-report/
[24] Ibid
[25] Ibid

contribute to the low-income Weatherization Assistance Program (LIWAP) outside of MEEIA, that is only serving a small number of the low-income customers in need. KCPL should treat income-eligible single-family and multi-family customers directly and comprehensively under its MEEIA programs. The Income-Eligible Single-Family program should provide energy assessments and install a comprehensive package of whole house energy saving measures at no cost to customers. More specifically, the program should include direct installation of all appropriate and cost-effective measures at no-cost to the participant. These should include: low-flow faucet aerators, low-flow showerheads, advanced power strips, hot water pipe insulation and LEDs, HVAC tune-ups, blower-door-guided air and duct sealing, and ceiling, duct, and/or wall insulation, at no cost to the participant. Finally, the Company should offer rebates for prescriptive and/or custom capital intensive measures at no or low-cost to participants. These measures may include but are not limited to: early retirement of inefficient HVAC systems and appliances.

Q. What additional details would you recommend for a Kansas City Power & Light Income-Eligible Single-Family Program?

A. The Company should partner with local community action agencies, community-based organizations, and non-profit organizations to help with program delivery - including marketing of the program, signing-up customers, and implementation of the program. There are many benefits that come from partnering with a trusted community voice. For example, working directly with community action agencies will allow the Company to better tie the income-eligible energy efficiency programs to bill assistance programs, so low-income customers can receive both bill assistance and energy

efficiency help in a coordinated way to reduce their overall energy burdens. In addition, this approach may provide economies by enabling KCP&L to leverage the existing infrastructure for serving these households. In addition, this melding of funding sources can potentially allow KCP&L to focus its funding on energy efficiency measures while other funding sources can address any health and safety needs in the home.

Q. What would you recommend in terms of length and size of an Income-Eligible Single-Family Program?

A. The Income Eligible Single-Family Program should be offered for six years, to align with the timeline of the Company's Income Eligible Multifamily program. It is also noteworthy that Ameren Missouri will also be offering all of its income-eligible programs for six years.[26] I recommend KCP&L adopt proportional budgets consistent with Ameren's plans. Explicitly, dividing Ameren Missouri's Single Family Low-Income total six year budget by its total portfolio six year budget, and multiplying the result by the proposed combined GMO and KCP&L-MO six year budget would result in a combined total six year budget of $9.8 million for GMO and KCP&L-MO.[27]

Q. Are Kansas City Power and Light's Multifamily Low-Income annual program budgets and savings goals appropriately distributed over the six-year plan period?

A. The Company's budgets and savings for the Income-Eligible Multi-Family (IEMF) program are difficult to compare with MEEIA Cycle II because those figures included the food bank channel which is now proposed to be eliminated, and accounted

[26] Ameren MEEIA III EO-2018-0211 - order approving stipulation p.2
[27] Ibid. p.28,105.

for a large share of the savings.[28] I encourage the increased emphasis the plan places on developing comprehensive projects in the low-income multifamily segment rather than the food bank initiative. However, I have some concerns about the trajectory of both the budgets and savings targets over the six-year planning period. Table 1 shows the combined KCP&L-MO and GMO proposed budgets and savings for each of the 6 years.

[**Table 1: 2019-2024 MEEIA Plan Residential Income-Eligible Multi-Family Program

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_____**] Even acknowledging that the elimination of LED distribution at food banks will reduce achievable savings, it is noted that actual 2017 savings achievement is 388% higher than the targets proposed for 2019. Even without the food bank distribution channel, efficient lighting installed through direct-install efforts should still capture a large share of these savings.

[28] Note that while the Food Bank savings were included by KCP&L under IEMF for MEEIA Cycle 2, it is unknown how many of the participants were in fact income eligible multifamily customers.

More importantly, KCP&L should be installing much more comprehensive measures in these buildings.

The most likely explanation for the drop in the proposed savings and budgets in year 2022 is the reduction in lighting measure savings due to the impacts of the 2007 Energy Independence and Security Act (EISA)[29]. The EISA "backstop" that takes effect in January 2020 (with a likely lag in inventory up to several years) will essentially require that efficient lighting be used in all general service lamp applications. Therefore, the program will need to expand to a broader, deeper set of measures to meet savings targets and address market needs.

It is clear that, in spite of the stated intent, the program has not found traction beyond relatively simple, low-cost measures. As evidence, [** _____ _____ **] It appears all major measures are considered custom. Clearly, significant opportunity remains to expand program offerings to capture lighting potential and pursue more comprehensive projects. Developing a program that successfully captures comprehensive energy efficiency in the low-income multifamily segment will require significant time to build relationships with building owners and suggests a deliberate, sustained ramp up in both savings and budget targets to meet the program's full potential is appropriate.

[29] H.R. 6 — 110th Congress: Energy Independence and Security Act of 2007. <https://www.congress.gov/bill/110th-congress/house-bill/6/text>

Our understanding is that the Company has had more success developing a pipeline of properties in Program Year 2018, providing a foundation for further program development in Cycle III.

The proposed $/kWh saved values for 2019-2024 range from [**_____**] for KCP&L-MO and GMO combined. While these costs implicitly suggest a gradual shift to more comprehensive improvements and phasing out of lighting measures, hitting such low-cost targets in the initial years would likely require business-as-usual, direct-install heavy implementation of primarily low-cost measures. I am concerned that the budgets are not high enough to support a truly comprehensive program. Recognizing that KCP&L has struggled to ensure greater adoption of the custom measures, I generally support a gradual improvement over time, starting with KCP&L's current year one plan, but then with a much more significant ramp up over the six years.

As points of comparison, Massachusetts program administrators spent, on average, $1.14 and $1.27 per first year kWh saved in their Low-Income Multifamily Retrofit programs for 2016 and 2017, respectively.[30] In addition, Ameren Illinois's budget for the Residential Income-Eligible Program for 2018-2021 is $1.66/kWh saved.[31] While this reflects spending for both single family and multifamily buildings, it is comparable to combined spending in Massachusetts—$1.48/kWh saved in 2017.[32]

To develop an illustrative program spending scenario that may more realistically represent what the Company may expect to spend to achieve comprehensive energy

[30] http://masssavedata.com/Public/home
[31] Ameren Illinois Company Electric and Gas Energy Efficiency and Demand Response Plan 2018 – 2021. Prepared for: Illinois Commerce Commission Docket No. 17-0311. June 30, 2017. Appendix H, pp.4-6.
[32] http://masssavedata.com/Public/home

efficiency in the low-income multifamily segment, I adopt KCP&L's first year budget as a reasonable starting point given its past experience, and then the $/kWh saved increases linearly from the Company's proposed $0.64/kWh (KCP&L-MO and GMO combined) in year 1 to a maximum of $1.00 in years 4 through 6 to reflect a gradual shift from a direct-install-based to a more comprehensive, custom program design. The illustrative combined KCP&L-MO and GMO six-year budget was established based on a total six year budget that represents 17% of the total proposed portfolio budget—a spending ratio recommended for Ameren Missouri which they did not oppose for MEEIA Cycle III.[33] The recommended increased budgets and savings are presented below:

Table 2: 2019-2024 Illustrative Modified Income-Eligible Multi-Family Program Budgets and Savings Targets (KCP&L-MO and GMO combined).

	2019	**2020**	**2021**	**2022**	**2023**	**2024**	**Total**
Estimated Annual Budget ($ million)	1.8	2.1	2.4	2.8	3.3	3.9	**16.2**
MWh Target/Savings	2,745	2,705	2,733	2,814	3,293	3,852	**18,752**
$/kWh Saved	*0.64*	*0.76*	*0.88*	*1.00*	*1.00*	*1.00*	***0.89***

Q. In what additional ways could Kansas City Power & Light generally improve its treatment of low-income multifamily customers?

A. I am generally supportive of the arguments made by National Housing Trust and Westside Housing, and the details they lay out on how Kansas City Power & Light can increase the budget and refine the improved program design of its Income Eligible Multi-

[33] Rebuttal Testimony of Matthew Socks On Behalf of Natural Resources Defense Council. August 30, 2018. Case No.:EO-2018-0211, p.7.

Family Program. Their recommendations to the program will allow the Company to better serve the needs of the low-income multifamily housing in its territory in a deep, comprehensive way.

Conclusion

Q. Please Summarize and conclude your testimony

A. MEEIA legislation states that the Commission shall provide timely cost recovery, ensure that utility financial incentives are aligned with efficiency, and provide earnings opportunities associated with cost-effective and verifiable efficiency savings. Further, the legislation instructs that "The commission shall consider the total resource cost test a preferred cost-effectiveness test."[34] KCP&L's MEEIA III Plan as proposed passes the Total Resource Cost Test, has a significantly lower utility revenue requirement as shown in the IRP than not pursuing it, and will thus provide a net benefit to all customers, regardless of some potential short-term increase in rates for the very few non-participants who may exist. Moreover, the total benefits are almost certainly understated due to risk, price, health, economic and other impacts. Further, real and significant benefits accrue from efficiency even when it may not defer a specific planned supply side investment. KCP&L's IRP analysis and the fact that the portfolio passes the TRC prove that the ratepayers as a whole are better off with efficiency and will enjoy reduced present value revenue requirement (total bills) and align with the mandate created by the MEEIA legislation. KCP&L's proposed programs can provide significant savings to all customers, continue to create jobs and other economic benefits in the service territory, and align perfectly with the type of programs envisioned in the MEEIA legislation. There

[34] Missouri Revised Statues, Section 393.1075.4.

are improvements needed on KCP&L's income-eligible programs in order to reach low-income customers in a deep, meaningful way. For these reasons, I recommend that the Commission approve the Plan, along with the addition of an Income-Eligible Single-Family Program and additional budget for the Income-Eligible Multi-Family Program. Not approving the Plan, and offering benefits to all customers, would be inconsistent with the MEEIA statute and represent a U-turn to the policy followed by the Commission and supported by Staff over the last six years.

Q. Does this conclude your testimony?

A. Yes.