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Witness:	*J Luebbert*
Sponsoring Party:	*MoPSC Staff*
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Case Nos.:	*EO-2023-0369 and EO-2023-0370*
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MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

TARIFF/RATE DESIGN DEPARTMENT

DIRECT TESTIMONY

OF

J LUEBBERT

EVERGY METRO, INC.,
d/b/a Evergy Missouri Metro
CASE NO. EO-2023-0369

EVERGY MISSOURI WEST, INC.,
d/b/a Evergy Missouri West
CASE NO. EO-2023-0370

Jefferson City, Missouri
May 24, 2024

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Q. Please state your name and business address.

A. My name is J Luebbert. My business address is P.O. Box 360, Suite 700, Jefferson City, MO 65102.

Q. By whom are you employed and in what capacity?

A. I am the Tariff/Rate Design Department Manager for the Missouri Public Service Commission ("Commission").

Q. Please describe your educational background and work experience.

A. I graduated from the University of Missouri in Columbia, Missouri, with a Bachelor of Science in Biological Engineering, in May 2012. My work experience prior to becoming a member of the Missouri Public Service Commission Staff includes three years of regulatory work for the Missouri Department of Natural Resources. Prior to holding my current position, I was employed as Case Manager of the Commission Staff Division and as an Associate Engineer in the Energy Resources and Engineering Analysis Departments of the Industry Analysis Division of Commission Staff.

Throughout my positions with Staff, I have experience in various aspects of utility functions including, but not limited to, Missouri Energy Efficiency Investment Act ("MEEIA") programs, resource planning, general rate cases, risk-sharing mechanisms, Certificate for

Convenience and Necessity ("CCN") applications, and prudence reviews of electric investor-owned utilities ("IOU").

Q. Have you previously filed testimony before the Commission?

A. Yes, numerous times. Please refer to Schedule JL-d1, attached to this Direct Testimony, for a list of the cases in which I have assisted and filed testimony with the Commission.

EXECUTIVE SUMMARY

Q. How is Staff's direct testimony organized?

A. Mr. Fortson provides an overview of Staff's position and a listing of issues addressed by each Staff witness. Ms. Lange's testimony provides an overview of MEEIA and the MEEIA statute, and identifies areas where details complicate those basic premises. My testimony further explains those details that were flagged in Ms. Lange's testimony, as well as additional topics explained briefly below.[1]

Q. What is the purpose of your direct testimony?

A. My testimony will explain that reasonable avoided cost estimates must be the initial building blocks to design a portfolio of programs that comply with Commission rules and the MEEIA statute. Once reasonable avoided cost estimates are established, my testimony will describe how a MEEIA portfolio could be designed to comply with the MEEIA statutory requirements as described in more detail in the direct testimony of Staff witness Sarah L.K. Lange.

Q. Please provide a high-level overview of the remainder of your testimony.

[1] Mr. Brad J. Fortson also addresses Earnings Opportunities if a fourth MEEIA cycle is authorized and Ms. Sarah L.K. Lange also addresses avoided revenues if a fourth MEEIA cycle is authorized.

A. The concept behind MEEIA is that all customers pay certain amounts today with an expectation that all customers will avoid potential costs in the future. The basic premise of MEEIA is that all customers may benefit from avoided costs in the future in exchange for socializing energy efficiency costs and utility incentives today. If the avoided costs used to evaluate MEEIA programs are not reasonable estimates of the benefits realized by ratepayers through demand-side programs, the underlying premise falls apart.

Identification of the specific costs targeted for avoidance or deferral through energy and demand savings should be the starting point for any MEEIA portfolio. If future investment is not reduced, deferred, or avoided, then no foregone earnings opportunity will have been achieved through the demand-side portfolio implementation, i.e. shareholders will still have an opportunity to earn a return on future supply-side investment.

Through the operation of the Fuel Adjustment Clause (FAC), even if the avoided energy sales reduce (rather than increase) the FAC rates, those benefits are socialized across all customers. Analysis of whether a demand-side program is cost-beneficial must include consideration of the extent to which avoided costs (or facilitated capacity revenues) flow through the respective Evergy[2] FACs, which complicates the Commission's statutory directive to fairly apportion the costs and benefits of MEEIA among classes. These Southwest Power Pool (SPP) revenues are functionally similar to avoided costs in terms of MEEIA program design, but do not provide any avoided earnings opportunity.

Evergy intends to invest billions of dollars in new generation, transmission, and distribution assets over the next decade. It is bad public policy and against the spirit of the

[2] Evergy Metro, Inc., d/b/a Evergy Missouri Metro and Evergy Missouri West, Inc., d/b/a Evergy Missouri West will be collectively referred to as Evergy.

MEEIA statute to assume benefits associated with avoided generation, transmission, and distribution investments, and award Evergy millions of dollars in earnings opportunities for MEEIA programs while the Company is simultaneously seeking a return on investments in generation, transmission, and distribution plant that will not be reduced or avoided as a result of MEEIA Cycle 4. There is no way that the result of this double compensation could lead to just or reasonable rates and Staff recommends that the Commission prevent this exact scenario from happening.

If the objectives of MEEIA are not met by the programs included in a MEEIA application, the program should be rejected, redesigned, and reassessed.

AVOIDED COSTS

Q. Why are avoided costs important to MEEIA?

A. The concept behind MEEIA is that all customers pay certain amounts today with an expectation that all customers will avoid potential costs in the future. The basic premise of MEEIA is that all customers may benefit from avoided costs in the future in exchange for socializing energy efficiency costs and utility incentives today. The avoided costs assumptions used to support a MEEIA application must be reasonable estimates of the benefits realized by ratepayers through demand-side programs.

Q. What potential costs can be avoided in the future?

A. With targeted program implementation of demand-side resources, a supply-side resource may be avoided or deferred, distribution costs may be deferred, and transmission costs may be deferred.

Q. Are there costs that can be avoided now through a well-designed demand-side program?

A. Yes. The cost of acquiring energy at wholesale can be reduced through targeted programs. Additionally, it is possible that enabled revenues – as opposed to a literal avoided cost – can be created through well-designed demand-side programs, if Evergy has excess capacity for SPP resource adequacy requirements and establishes a sales agreement with a third party. Avoided variable costs (or enabled revenues) are possible for energy, capacity, and transmission expenses.[3]

Q. What is the starting point for developing programs to avoid costs in creating a MEEIA portfolio?[4]

A. Identification of the specific costs targeted for avoidance or deferral through energy and demand savings should be the starting point for any MEEIA portfolio. An iterative process is necessary. Discrete avoidable costs should be identified and quantified. That quantification of avoided costs then sets an initial budget for programs designed and targeted to avoid those costs. The initial avoided cost estimate should also act as a preliminary ceiling to overall portfolio cost. The overall portfolio should be further refined through program design to be the most cost-effective and beneficial for all customers, regardless of participation. Because this process is likely to result in changes in avoided costs due to investment timing and magnitude, the initial avoided cost estimate must be refined to account for the differences. However, on its face, it's clear that an initial budget should never be set higher than the avoided costs identified.

[3] As I will discuss below in the section "MEEIA and the FAC," the interaction of these two mechanisms must also be considered in quantifying avoided costs, and in determining the benefits of a given program to a particular class of customers.
[4] Throughout my testimony I will generally refer to a set of MEEIA programs as a portfolio. I will also generally refer to series of available energy efficiency measures implemented under a set of program specific tariff sheets as MEEIA programs. Energy efficiency measures are specific pieces of equipment that can be installed at a customer premise that may alter energy usage characteristics. Energy efficiency measures are a subset of an overarching program. Programs are a subset of an approved portfolio.

Q. Are there complications to this analysis?

A. Yes. As I will discuss below, timing, certainty, and fairness among customers in the allocation of costs and benefits all come into play.

Q. Are avoided costs for purposes of MEEIA defined by Commission rule?

A. Yes. 20 CSR 4240-20.092 (1)(C) provides:

> (C) Avoided costs or avoided utility costs 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 integrated resource plan and risk analysis used in its most recently adopted preferred resource plan to calculate its avoided costs; [**Emphasis added**.]

Generation facility avoidable costs

Q. Can the cost of a generation facility be avoided with a MEEIA portfolio?

A. Yes. If a utility needs generation capacity, but due to a demand-side program that generation facility can be avoided, then the revenue requirement that would have occurred can be avoided by customers.

Q. Are facility costs associated with generation capacity requirements the only type of avoided generation facility costs a demand-side program can target?

A. No. Another example of a generation facility that could be reduced, deferred, or avoided through a properly designed MEEIA portfolio are facilities that would be built for compliance with the Missouri Renewable Energy Standard.[5] It is possible that a utility plans to build additional renewable generation to comply with the rule because it reasonably projects to be short on Renewable Energy Credits, which it must have in an amount equal to 15% of all

[5] 20 CSR 4240-20.100.

energy sales. It is possible that a well-designed demand-side program would allow the utility to reduce, defer, or avoid the new renewable investment. However, Evergy has entered into Purchased Power Agreements ("PPAs") for wind farms that far exceed the Missouri Renewable Energy Standard requirement for years to come. Therefore, no such benefit currently exists for Evergy ratepayers.

Q. If implementing a specific demand-side portfolio will not impact the size or timing of a generation facility, what avoided generation costs are created by that demand-side portfolio?

A. None. To determine avoided costs associated with generation facilities, specific generation facility investments to consider for reduction, avoidance, or deferral should be identified.

Next, the timing of demand-side measures to enable that reduction, avoidance or deferral should be identified, including specific magnitude (i.e. number of MW) at specific times (both in terms of years, and time of year), should be identified. For example, if summer peak demand in the year 2030 causes the need for a new generation facility, a program to reduce wintertime usage at night in the years 2025 – 2027 will not affect the need for that facility.

If the programs in a MEEIA application are not expected to result in avoided generation facility costs through reduced, deferred or avoided investments, then the avoided costs for a generation facility are zero.

Distribution facility cost

Q. Can distribution facility costs be avoided with a MEEIA portfolio?

A. There are circumstances where a well-designed portfolio can avoid distribution costs. Avoiding distribution system costs requires a targeted, location specific, approach to demand reductions.

Q. Why must distribution avoided costs be the result of targeted, location specific programs?

A. There are variations in the timing of peak load on distribution system equipment, and there are variations in the current loading of distribution system equipment. Reducing current loading on the distribution system will not result in replacing existing infrastructure with cheaper infrastructure with less capacity-carrying ability.[6]

However, if a particular area on the distribution system is expected to be replaced due to meeting or exceeding loading limitations, targeted reductions in the loads of customers served by that equipment could result in life extension of the existing equipment. Those distribution costs could then be deferred or avoided.

Q. Would system-wide energy efficiency programs cause distribution facility cost avoidance?

A. It is unlikely, to the point of improbability, that system-wide energy efficiency would appreciably avoid distribution costs. Distribution costs are specific to the location and the associated system characteristics that the facilities are built. Many distribution system components are long lived and new assets are often initially oversized to accommodate future growth. Once the investment in a distribution system asset occurs and is included in rates, there are no distribution system costs savings obtainable through demand-side resources. Unless a

[6] Nor would it be cost-effective or prudent to do so in most situations.

demand reduction allows a specific asset's useful life to be extended, it is unlikely that demand-side programs substitute existing or new distribution system resources.

Q. How should avoided distribution facility costs be determined for purposes of a MEEIA application?

A. First, areas of the distribution system projected to require upgrading should be identified. Then, potential programs to reduce, defer, or avoid the need for those upgrades should be considered. Except for targeted, location specific programs designed to address existing distribution constraints, there are no avoided distribution costs to consider for a fourth MEEIA cycle.

Transmission facility cost

Q. Can transmission facility costs be avoided with a MEEIA portfolio?

A. Yes, under the correct circumstances, and if a program has been carefully designed to do so. Similar to distribution facility costs, avoiding transmission investments requires a sustained, targeted approach with respect to time periods of reductions and location. This category of costs is unlikely to result in completely avoiding an investment, but costs can conceivably be deferred or reduced.

Avoided Costs are Portfolio Specific

Q. How can the Commission easily assign value to each avoided cost category for purposes of determining whether a proposed MEEIA portfolio provides benefits for all customers in a class, regardless of whether the programs are utilized by all customers?[7]

[7] 393.1075.4 RSMo.

A. Unfortunately, to have a reasonable analysis, it is not possible to create generic avoided costs levels to use across programs. For the statutory analysis, avoided cost estimates serve as a proxy for the expected benefits of demand-side programs. A given energy efficiency or demand response program will have differences in the timing of expected reductions within a given day, season, and year, but also the time period that reductions will persist. Consider two hypothetical alternative MEEIA portfolios:

Option 1 includes programs that <u>are not expected</u> to result in demand reductions targeting time periods of customer needs for increased infrastructure investment and the energy savings <u>do not persist</u> for a long period of time. The <u>demand reductions</u> regularly occur during time periods that <u>coincide with some of the lowest SPP purchased power costs</u>. Option 1 does not result in avoided investments, meaning that base rates are likely to increase for all ratepayers when the investments in supply-side resources are included. Participants may see some temporary bill reductions based on measure installation energy savings, but those savings will be short-lived and offset by future rate increases. Non-participants are likely to see cost increases as a result of the programs, with little, if any benefit.

Option 2 includes programs with <u>targeted demand reductions that persist</u> for many years and have the ability to reduce, defer, or <u>avoid additional infrastructure investment</u>. The <u>demand reductions</u> also regularly occur during time periods that <u>coincide with the highest SPP purchased power costs</u>. Option 2 is expected to result in the deferral of supply-side infrastructure investment. Participants will see some net bill reductions based on measure installation energy savings for a relatively longer period of time than Option 1. By deferring the investment, rates will be lower during the time of supply-side investment deferral, all else being equal. The lower rates are realized by all ratepayers, regardless of participation.

These two portfolios cannot not be evaluated for purposes of approval and cost-effectiveness utilizing the same avoided cost assumptions because the potential cost savings and the potential for avoided investment will not be the same.

As I will discuss below in the section "MEEIA and the FAC," the interaction of these two mechanisms must also be considered.

EARNINGS OPPORTUNITY (EO)

Q. What is the difference between avoided costs and avoided earnings opportunities?

A. At the simplest level, avoided costs are the revenue requirement of a supply-side resource that will not be built, and avoided earnings opportunities are the portion of avoided revenue requirement that shareholders would have received as their return on their investment.

Q. Is the difference between these concepts important to understanding MEEIA?

A. Yes. A subset of avoidable cost is the revenue requirement of avoidable investment. A portion of the revenue requirement of avoidable investment is the return on the investment that shareholders expect to receive. Attached as Schedule JL-d2, I provide an example walking through a supply side investment deferral. While somewhat lengthy, an understanding of the interplay of avoided costs and potential EO is foundational to understanding how ratepayers and shareholders are impacted by MEEIA.

Q. When and with what level of certainty do shareholders receive return on investments in supply side resources?

A. Shareholders have an opportunity to receive a return on investments in supply side resources after an investment in a supply side resource has been included in ratebase to continue over the useful life of that resource.

Q. What is an EO in a MEEIA cycle?

A. The intent of the EO as a component of a MEEIA mechanism should be to compensate shareholders for return not earned on investments not made. The EO should be designed to result in utility shareholders receiving compensation to approximate the present value of the EO on capacity-related investments that they would receive if the utility did not facilitate DSM[8] programs, all else being equal.

Q. How should the potential EO component of a MEEIA mechanism be quantified for particular MEEIA programs?

A. As I described above, it is necessary to first identify avoidable supply-side investments, and the timing of those investments. Once the avoided investments are identified and quantified for a specific MEEIA portfolio, the net present value of the shareholder's return on equity (and an allowance for income tax) is the risk-free EO.

Q. Are all avoidable costs for ratepayers accompanied by earnings opportunities for shareholders?

A. No. If future investment is not reduced, deferred, or avoided, then no foregone EO will have been achieved through the demand-side portfolio implementation. Variable avoided costs, including enabled capacity revenues, do not result in avoided earnings opportunities.

Q. The MEEIA statute requires that a MEEIA mechanism provide timely earnings opportunities associated with cost-effective measurable and verifiable efficiency savings.[9] Can a MEEIA cycle that does not include an EO mechanism comply with this statutory requirement?

[8] Demand-side management ("DSM").
[9] 393.1075.3. RSMo.

A. Yes. To the extent that a MEEIA cycle is not reducing, deferring, or avoiding future investment opportunities, then an EO is not appropriate. Even if a MEEIA cycle was initially assumed to reduce, defer, or avoid investment opportunities, and an EO mechanism was included in the initial program design, if those avoided investments cannot be reasonably established through measured and verified efficiency savings, then the award of an EO is inappropriate.

It is not reasonable for the Commission to order that ratepayers compensate Evergy shareholders for avoiding generation-related earnings opportunities if those investment opportunities are not actually being avoided.

Impact of Evergy's decision to accelerate the transformation of its generation portfolio on Avoidable Costs and Avoidable Earnings Opportunities.

Q. Evergy's currently adopted preferred resource plan includes adding gigawatts of renewable energy resources over the next decade. How does that impact the assumptions of avoided costs associated with MEEIA programs?

A. Renewable energy resources have very low avoidable costs. Renewable energy resources:

1. Are primarily capitalized costs that are set at the time of inclusion in rates;
2. Do not consume any fuel to operate; and
3. Have minimal, if any, operations and maintenance costs that are dependent on the level of generation or dispatch.

Once the capitalized costs are included in rates, there are minimal, if any, costs associated with the assets that can be avoided through MEEIA programs.

An example of the avoidable costs of low- or no-variable cost generation is provided in Schedule JL-d2.

Q. How does Evergy's management decisions related to supply-side resources effect avoided costs and avoided investments attributable to MEEIA programs?

A. Evergy intends to invest billions of dollars in new generation facilities over the next decade. It is nonsensical to assume benefits associated with avoided generation investments and award Evergy millions of dollars in earnings opportunities for MEEIA programs while the Company is simultaneously seeking a return on billions of dollars of investments in supply-side resources. If the supply-side investments are not being deferred or avoided, it is hard to imagine how the result of this double compensation could lead to just or reasonable rates.

Q. How does Evergy's management decisions related to transmission and distribution resources effect avoided costs and avoided investments attributable to MEEIA programs?

A. Since Evergy elected Plant-in-Service Accounting ("PISA") treatment, the Company has increased actual and planned capital expenditure on transmission and distribution facilities.[10]

It is bad public policy and against the spirit of the MEEIA statute to assume benefits associated with avoided transmission and distribution investments and award Evergy millions of dollars in earnings opportunities for MEEIA programs while the Company is simultaneously seeking a return on investments in transmission and distribution plant that will not be reduced or avoided as a result of MEEIA Cycle 4. There is no way that the result of this double compensation could lead to just or reasonable rates and Staff recommends that the Commission prevent this exact scenario from happening.

[10] An excerpt from Evergy's most recent 5-year capital investment plan is attached as Schedule JL-d3.

Q. Is the rate impact of investments in renewable supply-side resources and the transmission and distribution system included in the revenue requirement impact cap associated with PISA?

A. Yes.

Q. Is the rate impact of the costs associated with a MEEIA portfolio, including earnings opportunities, included in the revenue requirement impact cap associated with PISA?

A. No. The costs recovered through a utility's demand-side investment mechanism are not considered base rates.

ADDITIONAL FACTORS COMPLICATING MEEIA

Q. Ms. Lange mentions and briefly describes additional complications of designing MEEIA cycles, citing your testimony for additional context. Please provide a brief list of those complications that will be addressed in this section of your testimony.

A. This section of my testimony will address additional context, as referenced in Ms. Lange's testimony and necessary to understand MEEIA, and how to effectively implement the MEEIA statute.

Benefits to all customers in a class regardless of whether the programs are utilized by all customers.

Q. Does Evergy's IRP provide a transparent view of the impact of a given MEEIA portfolio application?

A. No. This is due to several factors.

First, Evergy does not typically include modeling of specific MEEIA cycles as discrete alternatives for comparisons. Most alternative resource plans assume a level of demand-side programs being implemented over a 20-year planning horizon. In essence, these scenarios assume that Evergy has Cycle 4 through Cycle 11, assuming 3-year cycles continue, approved at a given level of energy and demand savings. To the extent that a supply-side resource appears to be deferred by comparing alternative resource plans with and without demand-side resources, it is not reasonable to assume that the deferral is the result of implementing MEEIA Cycle 4.

A second factor is the energy and demand savings from MEEIA programs have finite lives which are highly dependent on numerous factors, including baseline energy usage, baseline energy efficiency standards, and actual installation of measures.

A third factor is that absent specifically identifying a supply-side resource that can be deferred via a specific MEEIA cycle, i.e. MEEIA Cycle 4, a MEEIA EO may cause Evergy shareholders to recover "foregone earnings opportunities" for the same plant across multiple cycles resulting in over recovery.

A fourth factor is that the IRP assumes a package of demand-side measures that will not coincide with the measures that are actually installed over time. Most MEEIA applications have included, and the utility has received, a great deal of flexibility how the approved budgets are spent on demand-side programs. All energy efficiency measures have distinct savings attributes and likewise the resulting benefits, or detriments, of implementation will vary as the actual measure installations vary.

Fifth, SPP treats Evergy Missouri West and Evergy Missouri Metro (both Kansas and Missouri) as a single entity for purposes of fulfilling resource adequacy requirements, further complicating the view of benefits for demand reductions.

Finally, Evergy does not allow the modeling software used in the IRP to select, size, or optimize demand-side programs being included within alternative resource plans. The alternative resource plans will select a "level" of demand-side management for the entirety of the planning horizon. There are not thresholds included for adding additional demand-side resources near times of greatest need, nor slowing demand-side management when the timing or size of supply-side resources are not effectively altered.

MEEIA and the FAC

Q. At a high level, how do Evergy's respective FACs operate?[11]

A. A simple example of the Base Factor calculation is provided below.

Fuel Cost	$ 1.50
Purchased Power Costs	$ 2.00
Purchased Power Revenue	$ (1.65)
Total/Net	$ 1.85
Energy Sales	100
FAC Base Factor:	$ 0.01850

In this example, when rates are set in a general rate case, Evergy incurred $1.50 of fuel expense to meet SPP's dispatch instructions, for which it received $1.65 in revenue. At the same time, Evergy's load required 100 kWh, and the cost of obtaining the energy at wholesale to serve its load was $2.00. These amounts net to $185, and dividing that net cost by the 100 kWh of load results in an FAC base factor of $0.0185 per kWh.

As time goes on, Evergy keeps track of its actual fuel costs, its actual purchased power revenues, and its actual purchased power costs. When it is time for an FAC filing, the net of these amounts is compared to the "base energy cost" for the actual load during the same time period.

[11] It is important to note that Evergy Missouri West and Evergy Missouri Metro have separately tariffed FACs. While they are similar in nature and structure, the costs that flow through each are distinct or allocated separately. The examples below are generic so I will not delineate between the two FACs.

	Base Factor		Actuals
Fuel Cost	$ 1.50		$ 1.20
Purchased Power Costs	$ 2.00		$ 1.90
Purchased Power Revenue	$ (1.65)		$ (1.26)
Total/Net	$ 1.85		$ 1.84
Energy Sales	100		95
		Base Energy Cost:	$ 1.75750
		Difference from Actual and Base Energy Cost:	$ 0.08250
		New FAC Rate:	$ 0.00078

Under the FAC sharing calculation, 95% of the difference between the actual net energy cost and the base energy cost is then billed as the new FAC rate.[12]

Q. How is the FAC's operation relevant to MEEIA?

A. The FAC operation is relevant to MEEIA in several ways.

First, because of the FAC, while avoiding energy sales may nominally create avoided costs, the relative cost of the energy avoided determines whether any benefit or detriment accrues to Evergy's customer base.

Second, because of the FAC, even if avoiding an energy sale does create a benefit, that benefit may not be fairly apportioned among the customer classes.[13]

Third, because of the FAC, while a DSM program may enable capacity revenues, the enabled revenue may not be fairly apportioned among the customer classes or a portion of the revenues may be retained by Evergy shareholders.

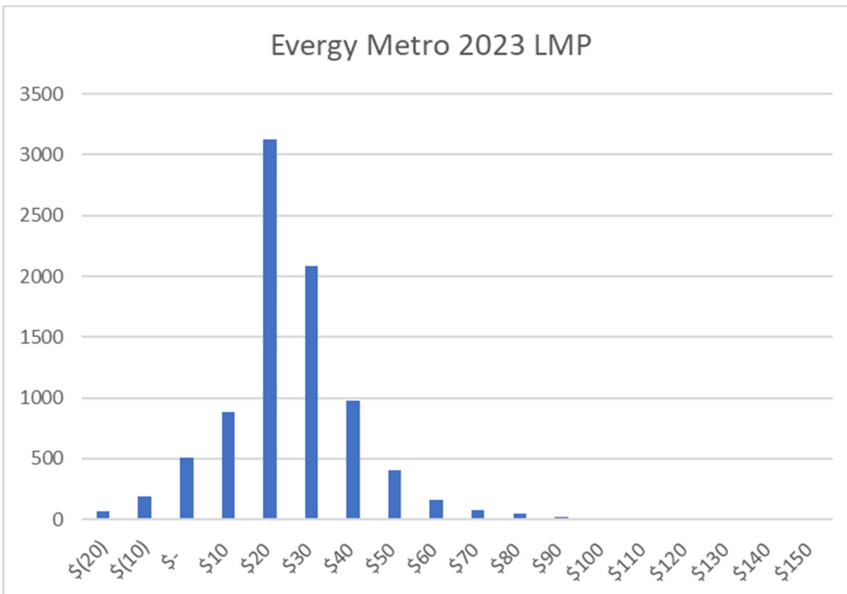
[12] The FAC rate would apply to customer usage on their bill. The FAC for Evergy Missouri Metro also applies a jurisdictional factor ("J Factor") that accounts for Missouri retail sales compared to total retail sales. This hypothetical example does not account for the jurisdictional factor that may further complicate the realization of ratepayer benefits, but the factor should not be ignored in evaluating the proposed programs.

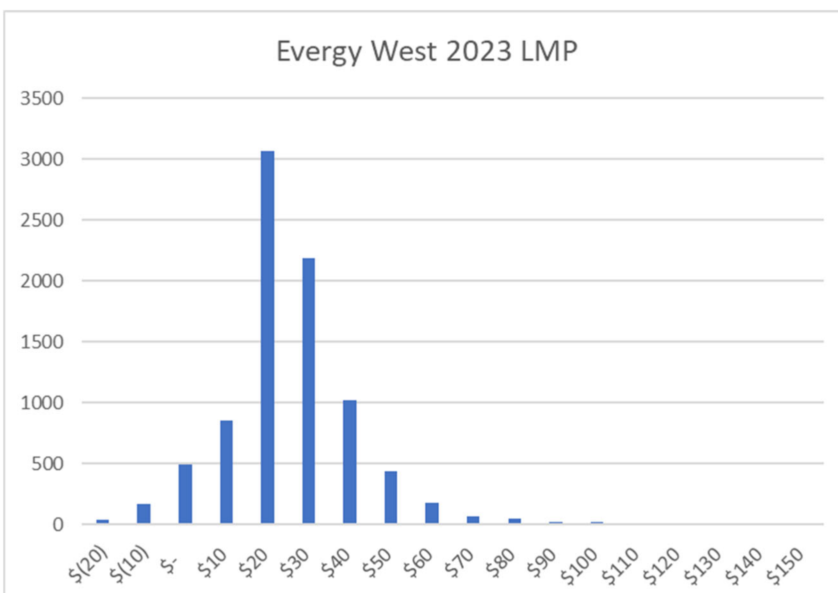
[13] Section 393.1075.5, "In setting rates the commission shall fairly apportion the costs and benefits of demand-side programs to each customer class except as provided for in subsection 6 of this section," and Section 393.1075.4, "Recovery for such programs shall not be permitted unless the programs are approved by the commission, result in energy or demand savings and 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."

Through operation of the FAC, unless the avoided energy sales are of above-average cost per kWh, the avoided energy sales will result in an increase in the FAC rates, which will offset the benefits received by all customers.

Q. Does the cost of energy at wholesale vary over time?

A. Yes. The graphs below illustrate the number of hours that the respective Evergy Day Ahead Location Marginal Pricing (DA-LMP) were at various dollar values during the year 2023.





Q. Can you provide a simple illustration of how the FAC operates with regard to avoiding a sale of a kWh at retail associated with a relatively high cost kWh?

A. Yes. For this simplified example assume exactly one kWh is avoided, and that kWh sale would have otherwise occurred in an hour when the cost of energy at wholesale is above the average cost of energy at wholesale.

Fuel Cost	$ 1.50		$ 1.50
Purchased Power Costs	$ 2.00	$ (0.03)	$ 1.97
Purchased Power Revenue	$ (1.65)		$ (1.65)
Total/Net	$ 1.85		$ 1.82
Energy Sales	100	(1)	99
		Base Energy Cost:	$ 1.83150
		Difference from Actual and Base Energy Cost:	$ (0.01150)
		New FAC Rate:	$ (0.00011)

In this example, the only thing that has changed from the initial base factor calculation is that one less kWh is required for Evergy's load, and that kWh that was avoided had a cost at wholesale that was higher than the average cost of a kWh. The benefit of that avoided kWh is passed to Evergy's customers through the new FAC rate, which is a reduction to customer bills.

Q. Can you now provide an example where the kWh avoided is a relatively low cost kWh?

A. Yes.

Fuel Cost	$ 1.50		$ 1.50
Purchased Power Costs	$ 2.00	$ (0.01)	$ 1.99
Purchased Power Revenue	$ (1.65)		$ (1.65)
Total/Net	$ 1.85		$ 1.84
Energy Sales	100	(1)	99
		Base Energy Cost:	$ 1.83150
		Difference from Actual and Base Energy Cost:	$ 0.00850
		New FAC Rate:	$ 0.00008

Here, avoiding a sale of a relatively inexpensive kWh causes the FAC to increase the bills of all of Evergy's customers.

Q. Is the Day Ahead energy market the only relevant consideration?

A. No. The Real Time market and transmission costs assessed through Evergy's load-ratio share are also relevant.

Q. Does avoiding a sale of a kWh at retail avoid a sale of a kWh at wholesale, and thus avoids the expense of the fuel for that generation?

A. It may, if an Evergy unit is the marginal generating unit, and if the unit has fuel costs that can be reduced or avoided by reducing its output.

Q. Is it Staff's position that because of the FAC no energy costs can ever be avoided for Evergy's retail customers?

A. No. It is Staff's position that the operation of the FAC cannot be ignored in attempting to quantify the avoided costs associated with a given MEEIA program. Consideration should be given to, at a minimum, (1) the relative value of wholesale energy purchases expected to be avoided by a given measure, and (2) as discussed in the following two sections, the classes that benefit from avoided costs, and the classes that pay for the creation of the avoided costs through demand-side programs.

Q. What consideration should be given to the relative value of wholesale energy purchases when designing programs?

A. A program expected to avoid purchase of high-cost kWh is much more likely to produce benefits for all customers in a class (regardless of if they participate in that program) than a program that is expected to avoid purchases of average or low-cost kWh. While Evergy's load shape does not correlate perfectly with the SPP LMP pricing, programs that reduce energy consumption at times when energy consumption is high are much more likely to produce net benefits than programs that reduce energy consumption around the clock or in primarily low-usage hours.

Q. With this premise in mind, are there potential low-cost, high-reward programs that could warrant evaluation?

A. Yes. Broadcast or text "peak alert" programs have been employed by cooperative and municipal utilities in Missouri for decades. Generally speaking, such programs notify customers of time periods with exceptionally high costs and request reduced energy usage during that time period.

Through the operation of the FAC, even if the avoided energy sales reduce (rather than increase) the FAC rates, those benefits are socialized across all customers.

Q. Section 393.1075.4 states "Recovery for such programs shall not be permitted unless the programs are approved by the commission, result in energy or demand savings and 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." Similarly, Section 393.1075.5 requires "In setting rates the commission shall fairly apportion the costs and benefits of demand-side programs to each customer class except as provided for in subsection 6 of this section." How does the operation of the FAC complicate analysis of whether a program is beneficial to all customers in the customer class in which the program is proposed?

A. Consider the FAC example discussed above, where exactly 1 kWh was avoided, and that kWh was a relatively high-cost kWh. For that program, the customer benefit calculation is provided below:

	$/kWh	kWh	$
Customer benefit	$ 0.00011	99	0.01082

If the cost to produce that 1 kWh of avoided energy sales was exactly 1 cent, the cost to benefit ratio would be as follows:

	Pre-program kWh	Program Costs	Post-program kWh	Customer Benefits	Benefits : Costs
All Customers	100	$ 0.01	99	$ 0.01082	1.081575

Because the ratio of benefits to costs is greater than one, the program is beneficial to all customers, regardless of whether the programs are utilized by all customers. However, the analysis required by statute is whether the program is beneficial to all customers in the customer class in which the programs are proposed, regardless of whether the programs are utilized by all customers. Therefore, the next step is to review the costs and benefits of the program on a class level.

	Pre-program kWh	Program Costs	Post-program kWh	Customer Benefits	Benefits : Costs within Class
Class A	10	$ 0.01	9	$ 0.00098	0.098325
Class B	90	$ -	90	$ 0.00983	#DIV/0!

Note that for Class A, which is responsible for the program costs, the customer benefits are lower than the program costs, and therefore the ratio of benefits to costs within the class is less than 1.

Q. What does "#DIV/0!" mean for the ratio of benefits to costs for Class B?

A. This display indicates that a number is divided by zero, which is mathematically impossible. For Class B, there are $0 in program costs, yet there are benefits.

Q. This example considers only avoided energy costs; will this same result occur if avoided energy costs are considered?

A. It depends. Avoided capacity costs will be discussed in the following section. At a high level, the FAC distorts the allocation of potential benefits to customer classes in a manner that is not consistent with the recovery of the cost of demand-side programs. To the extent that a significant source of benefits are derived from avoided energy costs, the interaction of the FAC with the assumed benefits must be considered. This is particularly important for the statutory requirement under that Section 393.1075.5 that "In setting rates the commission shall fairly apportion the costs and benefits of demand-side programs to each customer class except as provided for in subsection 6 of this section."

Q. What are some of the limitations that exist for achieving costs savings through reduced SPP energy purchases to serve retail load?

A. First, a reduction in the purchased power cost through SPP may not be efficient in all hours of the year. Cost savings can only be obtained if the average cost of the MEEIA programs' energy reductions is less than the locational marginal price of energy for a specific kWh saved. There will undoubtedly be hours within each year that it is cheaper to purchase additional energy through SPP than it is to save energy via MEEIA programs. Next, the time periods that can achieve the greatest cost savings must be analyzed and targeted in order to maximize cost reductions. These time periods are subject to change from time to time and the magnitude of the cost reductions is variable over time. Finally, because of the interaction of the FAC, the flow of benefits to the customer classes must be analyzed when evaluating whether a program is cost-beneficial to all customers in a customer class, regardless of participation. This is especially true when some of the reductions in purchased power costs will be achieved in a manner that may not be cost effective (i.e. it costs more to reduce energy consumption than the reduction in purchased power costs that are achieved).

Reductions in capacity can create the potential for new capacity revenues through sales to third-parties, but those revenues are generally socialized through all customers through the FAC.

Q. Section 393.1075.5 requires "In setting rates the commission shall fairly apportion the costs and benefits of demand-side programs to each customer class except as provided for in subsection 6 of this section." To the extent that the benefits of demand-side programs include the potential for capacity sales revenues, how would those benefits flow to the customer classes?

A. First, ratepayers would only realize a benefit of capacity sales if an agreement was signed with another entity. Next, the magnitude of such a benefit would depend on the capacity needs of other entities, the availability of excess capacity by other entities, and the agreed upon contract of any capacity sale. Finally, the length of time covered by the contract would dictate the flow of any realized benefits. If the sale of excess capacity was a short-term agreement (less than one year), benefits of a capacity sale would flow to the customer classes on the basis of loss-adjusted class energy via the FAC.[14,15] However, if the length of time covered by the contract were greater than one year, then ratepayers would not realize any benefit prior to the effective date of rates following a general rate case by the respective Evergy companies. Evergy shareholders would retain that benefit prior to the effective date of rates following the subsequent general rate case.

[14] Evergy Missouri Metro's FAC tariff at sheet 50.32 under Definitions of Costs and Revenues states in part, "Eligible costs do not include the purchased power demand costs associated with purchased power contracts in excess of one year. Likewise, revenues do not include demand or capacity receipts associated with power contracts in excess of one year."

[15] The Evergy Missouri Metro FAC "J Factor" may further complicate the flow of benefits from capacity sales caused by Evergy Missouri Metro MEEIA programs to Missouri ratepayers. See Footnote 14 for a description of the "J Factor."

Q. Does reduced energy usage always result in reduced production from existing supply-side resources, and subsequently reduced emissions from those assets?

A. No. A reduction of a Missouri IOU's load does not necessarily result in a reduction in generation from that IOU's generation facilities.[16]

Q. What are some of the limitations that exist for increased revenues capacity sales contracts with a third party?

A. First, the sale of capacity is uncertain and may be limited to periods of time (i.e. seasons of the year or specific years). If demand reductions allow for additional sales of capacity, there must be a price taker at a given price. Next, additional revenues are only beneficial if the average cost of the MEEIA programs' demand reductions is less than the agreed upon price of capacity.

Q. Does this mean that demand-side programs can never be cost-beneficial within a customer class to the extent that Evergy's classes do not consume energy uniformly?

A. No. It means that analysis of whether a demand-side program is cost-beneficial must include consideration of the extent to which avoided costs (or facilitated capacity revenues) flow through the Evergy FAC. It may also mean that apportionment of program costs among customer classes may need to recognize how the FAC will work to apportion benefits among the customer classes. Finally, the analysis of benefits must consider the possibility of Evergy shareholders retaining the benefits of excess capacity sales for a period of time between program implementation and the effective date of rates in subsequent general rate cases.

[16] In fact, unless the IOUs generating unit is the marginal unit in a specific time period for setting marginal energy cost component when the load is reduced, the utility is unlikely to see any reduction in generation dispatch instructions from the Regional Transmission Organization (RTO).

Aligning utility financial incentives with helping customers use energy more efficiently.

Q. Are there additional aspects that must be considered when reviewing an application for a MEEIA portfolio?

A. Yes. I will address several topics that provide needed additional context for understanding MEEIA.

Reliability of TRM[17]

Q. How is the reliability of a TRM related to an application for approval of a MEEIA portfolio?

A. A TRM includes energy and demand savings estimates for energy efficiency measures. Energy and demand savings vary by measure and those savings will likely change over time. Different energy efficiency measures that fall within the same category, e.g., appliances, can have very different energy usage profiles, baseline energy consumption estimates, and measure lives. Each of these components can, and likely will, change over time. The reliability of energy and demand savings from a TRM is crucial to accurately estimating the expected energy and demand savings of a MEEIA portfolio.

Estimation of margin rates by measure

Q. How does estimation of margin rates relate to an application for approval of a MEEIA portfolio?

A. To the extent that a marginal rate calculation is included in a throughput disincentive mechanism, it is important that the calculations of net marginal revenues are accurate. As discussed more thoroughly in the testimony of Staff witnesses Justin Tevie and

[17] Technical Reference Manual (TRM).

Hari K. Poudel, PhD, the introduction of time of use rates further complicates the existing calculation methods. More granularity and specificity are likely necessary to avoid future over or under recovery if net marginal rates continue as part of a throughput disincentive mechanism.

Differences in expected versus actual measure installations

Q. When past MEEIA cycles have been approved, have the actual installations of energy efficiency measures matched those used to support a given application?

A. No. Past MEEIA cycles have included flexibility of the utility to spend approved budgets. Utilities often request approval of a TRM and incentive ranges that include measures that are not included within the workpapers that support a given application. The measures that have actually been installed differ from those used to support the application.

EM&V[18]

Q. As discussed by Mr. Fortson, in developing prior MEEIA cycles, the benefits used as a part of the cost-effectiveness calculation are the energy and demand savings multiplied by the deemed avoided costs. EM&V, as conducted to date, determines the product of a reviewed level of savings and multiplies that level of savings by the deemed avoided costs, but does not evaluate, measure, or verify costs actually avoided. Must this be the case?

A. No. A relatively simple improvement to EM&V would be to multiply the savings by the DA-LMPs[19,20] as existed in real time while the measures were in place. Identifying enabled capacity sales revenue would also be more meaningful than current

[18] Evaluation, Measurement & Verification (EM&V).
[19] Day-ahead Locational Marginal Prices.
[20] Locational Marginal Price (LMP) is the market-clearing price for energy at a given Price Node equivalent to the marginal cost of serving demand at the Price Node, while meeting SPP Operating Reserve requirements. It is calculated using a Security Constrained Economic Dispatch (SCED) and is the price to provide the least-cost incremental unit of energy at a specific location, while also considering congestion and losses. https://www.spp.org/markets-operations/

practices. The disbursement of these avoided costs through the FAC, as well as potential shareholder retention, would have to be considered. This would provide a more meaningful opportunity for the Commission to review whether or not the statutory requirement that a MEEIA portfolio is beneficial to all customers in the customer class in which the programs are proposed regardless of whether the programs are utilized by all customers has been satisfied.

Cost recovery mechanism must align utility actions with customer benefits

Q. Why is the design of the MEEIA cost recovery an important consideration for approval of MEEIA application?

A. My testimony has described the variable nature of many of the assumptions that are included to support a given MEEIA application, as well as the interaction of the FAC on the allocation of some of the benefits. It is imperative that any approved cost recovery mechanism appropriately align utility actions associated with MEEIA programs with the realization of ratepayer benefits. As I discussed earlier in the section titled "Earnings Opportunity", shareholder earnings must be tied to an expected deferral or avoidance of infrastructure investments. Ms. Lange describes Staff's proposed solution to the problems that exist with the current throughput disincentive mechanism.

DESIGNING A MEEIA COMPLIANT PORTFOLIO

Q. What steps should be taken to design a MEEIA compliant portfolio?

A. The design of a reasonable MEEIA portfolio must begin with an achievable outcome that is aligned with statutory and Commission rule requirements.

Identify Avoided Costs and Foregone Earnings Opportunity

Q. Where would you start in designing a MEEIA compliant portfolio?

A. As discussed in the section of my testimony titled "Avoided Costs", the first step to designing a compliant MEEIA portfolio is the identification of investments that can be reduced, deferred, or avoided in order to benefit all ratepayers, including non-participants. A crucial step in this identification is the specific nature of the investment, the timing of investment, and identification of the determinant of the required investment. Reduction, deferral, or avoidance of these investments are the ultimate end-goals of the MEEIA process. A simplified example of this identification process follows:

1. A utility's capacity expansion modeling establishes that construction of a 300MW simple cycle natural gas plant is appropriate in the year 2027 due to a capacity shortfall occurring during the summer peak hours.
2. The utility identifies that a peak demand reduction of 50 MW in 2027, 100 MW in 2028, and 150 MW in 2029 would allow the plant to be deferred until 2030, and that this deferral would reduce net present value of revenue requirement by $1 million, of which $400,000 is associated with Return on Equity.
3. The utility considers what kinds of programs may produce the identified peak demand reductions, among program options that would cost ratepayers less than $600,000.
4. The utility performs its capacity expansion modeling again, with the program modeled, to determine whether the capacity expansion model delays the plant investment more, less, or the same as assumed in Step 1.
5. The utility considers the impact of the FAC and the potential of shareholder retained benefits on the costs and benefits of the program to ratepayers over the life of the program, and weighs it against the changes in NPVRR[21] associated with the delayed plant investment.[22]
6. The utility now has a reasonable estimate of the avoidable costs and the avoidable earnings opportunity of the MEEIA program identified.

[21] Net Present Value of Revenue Requirement (NPVRR).
[22] The variable avoided costs identified should reflect the time variant nature of the costs.

Selection and Review of Programs and Measures

Q. At a class and program or measure level, using the avoided costs identified above, the utility analyzes whether or not the program is beneficial to all customers in the customer class in which the programs are proposed, regardless of whether the programs are utilized by all customers.[23] What would be done next?

A. Next the utility would explore the ability to achieve energy and demand savings through demand-side programs as follows:

Once reasonable estimates of avoidable costs and avoidable earnings opportunities are identified, the structure of the portfolio of programs, benefits, and costs can then be derived to maximize the potential ratepayer benefits.

Through this process, the utility can identify programs that do not achieve the end goal of summer peak hour demand reductions as cost effectively as others. The selection of programs should be designed in a manner that maximizes ratepayer benefits, minimizes free-ridership, and ensures that the measures that are incentivized cause summer peak demand savings within the utility service territory. Any program measures that may induce load building should be eliminated or restricted to avoid this adverse outcome.

Finalizing the Portfolio

Q. After eliminating measures and programs that are not ideal fits to achieve the end goal, the utility can develop a portfolio that it expects will defer the investment of a resource until 2030. What would the utility then do?

A. The utility would then:

[23] 393.1075.4.

1. Identify the finalized expected costs for implementing the demand-side programs, including all associated costs such as incentive costs, administrative costs, implementer costs, labor costs, and the costs to measure and verify the demand reductions.
2. Determine the expected demand reductions and cost recovery of each program by rate class and ensure that the demand savings estimates are reasonable, accurate, measurable, verifiable, and obtainable prior to the otherwise required investment.
3. Determine whether the programs will be beneficial to all customers in the customer class in which the programs are proposed, regardless of whether the programs are utilized by all customers. This analysis should recognize the allocation of potential benefits and the expected cost recovery of the programs, including operation of the FAC. If the programs will not meet this requirement, the programs should be redesigned and reassessed.
4. Fully develop plans for each program, including key performance indicators and alternatives if savings estimates and expected cost avoidance are not being achieved. The development of any earnings opportunity should be tied to achieving investment reduction, deferral, or avoidance.
5. Fully develop plans for measurement and verification of demand savings for each program.
6. Develop tariffs that will be submitted along with an application for approval of the programs and cost recovery.
7. Develop an application that:
    a. Fully describes each program;
    b. Provides a comprehensive view of the development of the programs;
    c. Identifies and quantifies the specific benefits that the portfolio is expected to provide ratepayers, including those ratepayers that do not participate;
    d. Fully supports all assumptions for the estimation of all energy and demand savings including page specific citations;
    e. Includes all source material utilized to support assumptions;

f. Includes all workpapers used to support the application and program development;

g. Includes a guide to the cross-references between workbooks used in support of the application;

h. Fully describes how the demand savings will be measured and verified to achieve the end goal of supply-side investment deferral;

i. Complies with all Commission rules with minimal waivers or variances;

j. Complies with all statutory requirements.

Tariff Development

Q. What level of detail is needed for the tariff that authorize special rate recovery through a Commission-approved MEEIA portfolio?

A. The tariff related to a MEEIA portfolio includes three general sections: Demand-side investment mechanism (DSIM) tariff sheets, program tariff sheets, and portfolio level tariff sheets.

The DSIM tariff sheets should clearly define the treatment, calculation, recovery mechanism, and billing of all applicable charges for the three possible program components, as applicable.[24]

The program tariff sheets should clearly explain the funding, purpose, availability, descriptions, incentive amounts, and implementation details necessary to provide transparency and certainty to ratepayers, the utility, third party administrators, other stakeholders, and the Commission.

The portfolio level tariff sheets should include the required definitions, opt-out provisions, and other terms established in the order authorizing the portfolio that are necessary to provide transparency and certainty to ratepayers, the utility, third-party administrators, other

[24] Program costs, avoided revenue, and earnings opportunity.

stakeholders, and the Commission. Definitions and use of terminology across programs should be clear and consistent to avoid unnecessary confusion.

Q. How will inclusion of specific information for programs within the tariff aid the Commission in future prudence reviews of the programs?

A. Including detailed requirements within the tariff provides a clear and legally binding framework for reviewing compliance with the approved portfolio. If information is included within the tariff, the review for imprudent actions and expenditures within the context of a prudence review can be more efficiently administered and leaves less room for interpretation of appropriateness after the fact.

Q. Please provide some recent examples of the improved efficiency that would result from more detail being included within the tariff.

A. The first example is an issue of how budgets are spent once a MEEIA portfolio is approved. Staff and the Office of the Public Counsel have recognized that in some instances a larger percentage of the budgeted spend has occurred for administration of certain MEEIA programs than the actual incentives provided to program participants. The current Commission rules that govern MEEIA do not explicitly state the percentage of costs that should be utilized for program administration versus program incentive levels. However, this is an aspect of a given MEEIA application that the Commission should consider in deciding whether to approve the application or order modification. MEEIA applications to date have not included detailed information about how a program will be administered, how costs will be minimized, nor how benefits will be achieved and maximized. Requiring more detail in the tariff sheets will mean that the Commission, Staff, and other stakeholders have that information with the application and proposed tariff sheets at the start, making the overall process more efficient going forward.

Staff recommends that if any MEEIA programs are approved, that the Company be ordered to file tariff sheets for each approved program that includes at least the following information:

1. Description of the purpose of the program including the desired outcome of implementation,
2. Descriptions of availability for each program,
3. Clear definitions of terms of the program,
4. Program level budget, by year, broken down by cost categories, such as incentive amounts, administration, labor, measurement and verification,
5. Energy efficiency measures that are available through each program,
6. Incentive amount for each measure available through each program,
7. Description of the recovery of program administration, purpose, availability, descriptions, incentive amounts, applicable rates, restrictions, etc.,
8. Explanation of the evaluation of each program including, but not limited to, how achieved savings will be measures or verified and the determination of goals achieved through program implementation.

CONCLUSION

Q. Please briefly summarize your testimony.

A. Identification of specific costs that can be avoided or deferred through energy and demand savings should be the starting point for any MEEIA portfolio. More specifically, investments that can be avoided or deferred are the starting point for determining an earnings opportunity for utility shareholders in return for facilitating ratepayer-funded demand side programs. Analysis of whether a demand-side program is cost-beneficial must include consideration of the extent to which avoided costs (or facilitated capacity revenues) flow through the respective Evergy FACs or retained by Evergy shareholders, which complicates the Commission's statutory directive to fairly apportion the costs and benefits of MEEIA among classes.

It is bad public policy and against the spirit of the MEEIA statute to assume benefits associated with avoided generation, transmission, and distribution investments and award Evergy millions of dollars in earnings opportunities for MEEIA programs while the Company is simultaneously seeking a return on investments in generation, transmission, and distribution plant that will not be reduced or avoided as a result of MEEIA Cycle 4. There is no way that the result of this double compensation could lead to just or reasonable rates and Staff recommends that the Commission prevent this exact scenario from happening.

If the objectives of MEEIA are not met by the programs included in a MEEIA application, the program should be rejected, redesigned, and reassessed. If any program is approved, Staff recommends detailed compliance tariff sheets be ordered by the Commission as discussed in the section "Tariff Development" of my testimony.

Q. Does this conclude your direct testimony?

A. Yes it does.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's Notice of Intent to File an Application for Authority to Establish a Demand-Side Programs Investment Mechanism	)	Case No. EO-2023-0369
n the Matter of Evergy Missouri West, Inc. d/b/a Evergy Missouri West's Notice of Intent to File an Application for Authority to Establish a Demand-Side Programs Investment Mechanism	)	Case No. EO-2023-0370

AFFIDAVIT OF J LUEBBERT

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW J LUEBBERT and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Direct Testimony of J Luebbert*; and that the same is true and correct according to his best knowledge and belief.

Further the Affiant sayeth not.

J LUEBBERT

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 21st day of May 2024.

D. SUZIE MANKIN
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: April 04, 2025
Commission Number: 12412070

D Suzie Mankin
Notary Public

Case Participation of
J Luebbert

Case Number	Company	Issues
EO-2015-0055	Ameren Missouri	Evaluation, Measurement, and Verification
EO-2016-0223	Empire District Electric Company	Integrated Resource Planning Requirements
EO-2016-0228	Ameren Missouri	Utilization of Generation Capacity, Plant Outages, and Demand Response Program
ER-2016-0179	Ameren Missouri	Heat Rate Testing
ER-2016-0285	Kansas City Power & Light Company	Heat Rate Testing
EO-2017-0065	Empire District Electric Company	Utilization of Generation Capacity and Station Outages
EO-2017-0231	Kansas City Power & Light Company	Utilization of Generation Capacity, Heat Rates, and Plant Outages
EO-2017-0232	KCP&L Greater Missouri Operations Company	Utilization of Generation Capacity, Heat Rates, and Plant Outages
EO-2018-0038	Ameren Missouri	Integrated Resource Planning Requirements
EO-2018-0067	Ameren Missouri	Utilization of Generation Capacity, Heat Rates, and Plant Outages
EO-2018-0211	Ameren Missouri	Avoided Costs and Demand Response Programs
EA-2019-0010	Empire District Electric Company	Market Protection Provision
GO-2019-0115	Spire East	Policy
GO-2019-0116	Spire West	Policy
EO-2019-0132	Kansas City Power & Light Company	Avoided Cost, SPP resource adequacy requirements, and Demand Response Programs
ER-2019-0335	Ameren Missouri	Unregulated Competition Waivers and Class Cost Of Service
ER-2019-0374	Empire District Electric Company	SPP resource adequacy
EO-2020-0227	Evergy Missouri Metro	Demand Response programs
EO-2020-0228	Evergy Missouri West	Demand Response programs
EO-2020-0262	Evergy Missouri Metro	Demand Response programs
EO-2020-0263	Evergy Missouri West	Demand Response programs
EO-2020-0280	Evergy Missouri Metro	Integrated Resource Planning Requirements

Case Number	Company	Issues
EO-2020-0281	Evergy Missouri West	Integrated Resource Planning Requirements
EO-2021-0021	Ameren Missouri	Integrated Resource Planning Requirements
EO-2021-0032	Evergy	Renewable Generation and Retirements
GR-2021-0108	Spire Missouri	Metering and Combined Heat and Power
ET-2021-0151	Evergy	Capacity costs
ER-2021-0240	Ameren Missouri	Market Prices, Construction Audit, Smart Energy Plan, AMI
ER-2021-0312	Empire District Electric Company	Construction Audit, Market Price Protection, PISA Reporting
EO-2022-0193	Empire District Electric Company	Retirement of Asbury
ER-2022-0129	Evergy Missouri Metro	MEEIA annualization
ER-2022-0130	Evergy Missouri West	MEEIA annualization, Schedule SIL revenue and incremental costs
EF-2022-0155	Evergy Missouri West	Customer event balancing
EC-2022-0315	Evergy Missouri West	Compliance with Stipulation and Agreement, Commission Order, and Schedule SIL
GR-2022-0179	Spire Missouri	Compressed Natural Gas
EA-2022-0244	Ameren Missouri	Huck Finn Solar CCN
EA-2022-0245	Ameren Missouri	Boomtown Solar CCN
EA-2022-0328	Evergy Missouri West	Persimmon Creek CCN
ER-2022-0337	Ameren Missouri	Billing determinant adjustments
EA-2023-0286	Ameren Missouri	Solar CCNs
EO-2024-0002	Evergy Missouri West Evergy Missouri Metro	Data retention
EO-2023-0136	Ameren Missouri	MEEIA program design, avoided costs

Hypothetical explanation of foregone earnings opportunity

Q. Could you walk through an illustration of the theory behind MEEIA[1]?

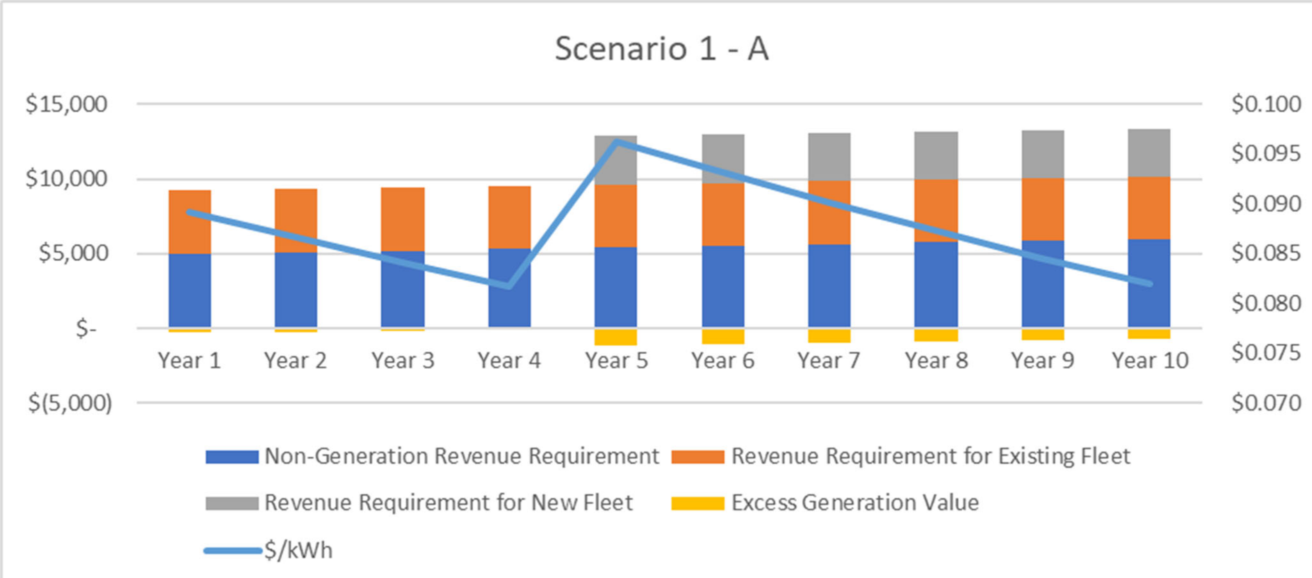
A. Yes. In the first scenario of this simplified example, we will assume that our example utility anticipates a need to install a new power plant in planning year 5. The table below illustrates the existing revenue requirement, including detailed line items for the existing generation revenue requirement, and detailed line items for the revenue requirement associated with the additional generation to be added in planning year 5:

Scenario 1 - A	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Generation Capability	120,000	120,000	120,000	120,000	200,000	200,000	200,000	200,000	200,000	200,000
Annual Load	100,000	105,000	110,250	115,763	121,551	127,628	134,010	140,710	147,746	155,133
Generation-related Ratebase	$ 1,000	$ 967	$ 933	$ 900	$ 867	$ 833	$ 800	$ 767	$ 733	$ 700
Generation-related Depreciation	$ 33	$ 33	$ 33	$ 33	$ 33	$ 33	$ 33	$ 33	$ 33	$ 33
Generation-related Return on Equity	$ 50	$ 48	$ 47	$ 45	$ 43	$ 42	$ 40	$ 38	$ 37	$ 35
Generation-related Cost of Debt	$ 25	$ 24	$ 23	$ 23	$ 22	$ 21	$ 20	$ 19	$ 18	$ 18
Generation-related Income Tax	$ 10	$ 10	$ 9	$ 9	$ 9	$ 8	$ 8	$ 8	$ 7	$ 7
Fuel Costs	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400
Generation-Related O&M	$ 1,700	$ 1,700	$ 1,700	$ 1,700	$ 1,700	$ 1,700	$ 1,700	$ 1,700	$ 1,700	$ 1,700
Additional Generation-related Ratebase					$ 3,000	$ 2,900	$ 2,800	$ 2,700	$ 2,600	$ 2,500
Additional Generation-related Depreciation					$ 100	$ 100	$ 100	$ 100	$ 100	$ 100
Additional Generation-related Return on Equity					$ 150	$ 145	$ 140	$ 135	$ 130	$ 125
Additional Generation-related Cost of Debt					$ 75	$ 73	$ 70	$ 68	$ 65	$ 63
Additional Generation-related Income Tax					$ 30	$ 29	$ 28	$ 27	$ 26	$ 25
Additional Fuel Costs					$ 1,600	$ 1,600	$ 1,600	$ 1,600	$ 1,600	$ 1,600
Additional Generation-Related O&M					$ 1,300	$ 1,300	$ 1,300	$ 1,300	$ 1,300	$ 1,300
Excess Generation Value	$ (300)	$ (225)	$ (146)	$ (64)	$ (1,177)	$ (1,086)	$ (990)	$ (889)	$ (784)	$ (673)
Non-Generation Revenue Requirement	$ 5,000	$ 5,100	$ 5,202	$ 5,306	$ 5,412	$ 5,520	$ 5,631	$ 5,743	$ 5,858	$ 5,975
Total Revenue Requirement	$ 8,918	$ 9,091	$ 9,268	$ 9,452	$ 11,697	$ 11,885	$ 12,080	$ 12,282	$ 12,491	$ 12,708
$/kWh	$ 0.0892	$ 0.0866	$ 0.0841	$ 0.0817	$ 0.0962	$ 0.0931	$ 0.0901	$ 0.0873	$ 0.0845	$ 0.0819

The summary of this revenue requirement calculation is provided below, as a table and an illustration:

Scenario 1 - A	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Non-Generation Revenue Requirement	$ 5,000	$ 5,100	$ 5,202	$ 5,306	$ 5,412	$ 5,520	$ 5,631	$ 5,743	$ 5,858	$ 5,975
Revenue Requirement for Existing Fleet	$ 4,218	$ 4,216	$ 4,213	$ 4,210	$ 4,207	$ 4,204	$ 4,201	$ 4,199	$ 4,196	$ 4,193
Revenue Requirement for New Fleet	$ -	$ -	$ -	$ -	$ 3,255	$ 3,247	$ 3,238	$ 3,230	$ 3,221	$ 3,213
Excess Generation Value	$ (300)	$ (225)	$ (146)	$ (64)	$ (1,177)	$ (1,086)	$ (990)	$ (889)	$ (784)	$ (673)
Total Revenue Requirment	$ 8,918	$ 9,091	$ 9,268	$ 9,452	$ 11,697	$ 11,885	$ 12,080	$ 12,282	$ 12,491	$ 12,708
$/kWh	$ 0.089	$ 0.087	$ 0.084	$ 0.082	$ 0.096	$ 0.093	$ 0.090	$ 0.087	$ 0.085	$ 0.082

[1] Missouri Energy Efficiency Investment Act (MEEIA).



Q. What is the takeaway from Scenario 1 – A?

A. Scenario 1 – A demonstrates that adding the example power plant in Year 5 increases overall revenue requirement and average $/kWh.

Q. What will you illustrate in Scenario 2 – A?

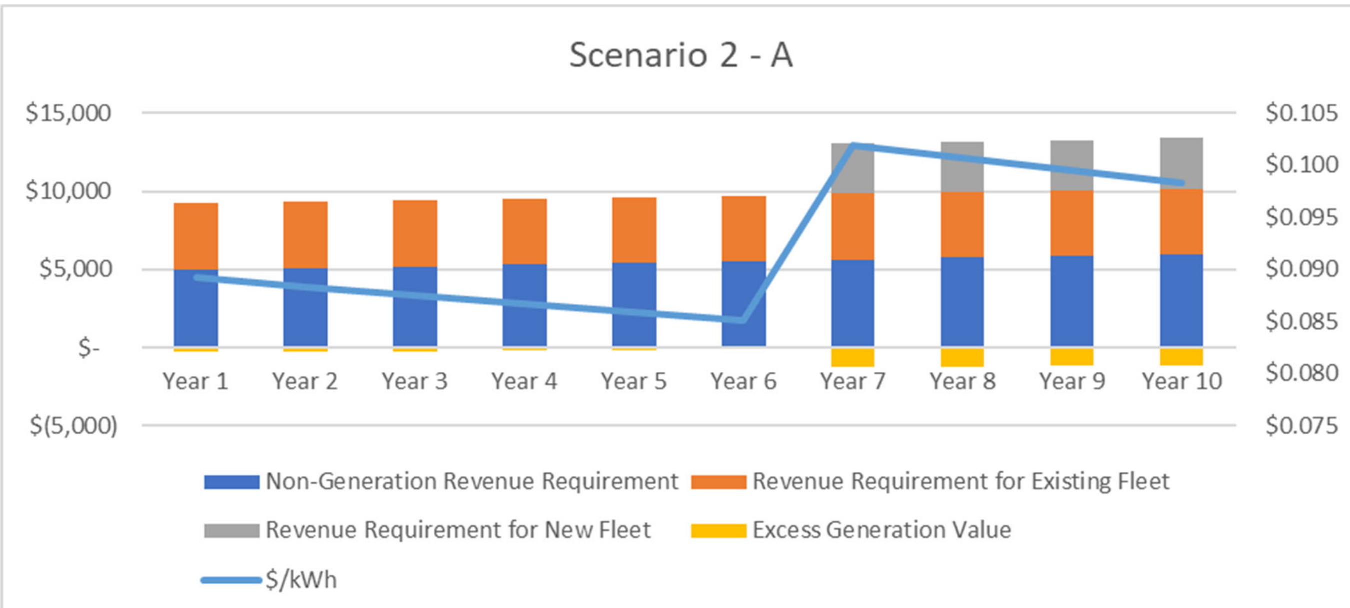
A. Scenario 2 – A will illustrate a two-year plant deferral. In Scenario 2 - A, the annual load growth is half of the load growth assumed in Scenario 1 – A.[2] As a result, the need for the plant is pushed back to Planning Year 7. The detailed revenue requirement is set out below:

Scenario 2 - A	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Generation Capability	120,000	120,000	120,000	120,000	120,000	120,000	200,000	200,000	200,000	200,000
Annual Load	100,000	102,500	105,063	107,689	110,381	113,141	115,969	118,869	121,840	124,886
Generation-related Ratebase	$ 1,000	$ 967	$ 933	$ 900	$ 867	$ 833	$ 800	$ 767	$ 733	$ 700
Generation-related Depreciation	$ 33	$ 33	$ 33	$ 33	$ 33	$ 33	$ 33	$ 33	$ 33	$ 33
Generation-related Return on Equity	$ 50	$ 48	$ 47	$ 45	$ 43	$ 42	$ 40	$ 38	$ 37	$ 35
Generation-related Cost of Debt	$ 25	$ 24	$ 23	$ 23	$ 22	$ 21	$ 20	$ 19	$ 18	$ 18
Generation-related Income Tax	$ 10	$ 10	$ 9	$ 9	$ 9	$ 8	$ 8	$ 8	$ 7	$ 7
Fuel Costs	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400	$ 2,400
Generation-Related O&M	$ 1,700	$ 1,700	$ 1,700	$ 1,700	$ 1,700	$ 1,700	$ 1,700	$ 1,700	$ 1,700	$ 1,700
Additional Generation-related Ratebase							$ 3,000	$ 2,900	$ 2,800	$ 2,700
Additional Generation-related Depreciation							$ 100	$ 100	$ 100	$ 100
Additional Generation-related Return on Equity							$ 150	$ 145	$ 140	$ 135
Additional Generation-related Cost of Debt							$ 75	$ 73	$ 70	$ 68
Additional Generation-related Income Tax							$ 30	$ 29	$ 28	$ 27
Additional Fuel Costs							$ 1,600	$ 1,600	$ 1,600	$ 1,600
Additional Generation-Related O&M							$ 1,300	$ 1,300	$ 1,300	$ 1,300
Excess Generation Value	$ (300)	$ (263)	$ (224)	$ (185)	$ (144)	$ (103)	$ (1,260)	$ (1,217)	$ (1,172)	$ (1,127)
Non-Generation Revenue Requirement	$ 5,000	$ 5,100	$ 5,202	$ 5,306	$ 5,412	$ 5,520	$ 5,631	$ 5,743	$ 5,858	$ 5,975
Total Revenue Requirement	$ 8,918	$ 9,053	$ 9,191	$ 9,331	$ 9,475	$ 9,622	$ 11,827	$ 11,971	$ 12,120	$ 12,271
$/kWh	$ 0.0892	$ 0.0883	$ 0.0875	$ 0.0866	$ 0.0858	$ 0.0850	$ 0.1020	$ 0.1007	$ 0.0995	$ 0.0983

[2] The same overall load shape is assumed, such that the relationship between capacity requirements and annual load is consistent across scenarios.

The simplified revenue requirements summation, as a table and as an illustration, is provided below:

Scenario 2 - A	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Non-Generation Revenue Requirement	$ 5,000	$ 5,100	$ 5,202	$ 5,306	$ 5,412	$ 5,520	$ 5,631	$ 5,743	$ 5,858	$ 5,975
Revenue Requirement for Existing Fleet	$ 4,218	$ 4,216	$ 4,213	$ 4,210	$ 4,207	$ 4,204	$ 4,201	$ 4,199	$ 4,196	$ 4,193
Revenue Requirement for New Fleet	$ -	$ -	$ -	$ -	$ -	$ -	$ 3,255	$ 3,247	$ 3,238	$ 3,230
Excess Generation Value	$ (300)	$ (263)	$ (224)	$ (185)	$ (144)	$ (103)	$ (1,260)	$ (1,217)	$ (1,172)	$ (1,127)
Total Revenue Requirment	$ 8,918	$ 9,053	$ 9,191	$ 9,331	$ 9,475	$ 9,622	$ 11,827	$ 11,971	$ 12,120	$ 12,271
$/kWh	$ 0.089	$ 0.088	$ 0.087	$ 0.087	$ 0.086	$ 0.085	$ 0.102	$ 0.101	$ 0.099	$ 0.098



Q. What are the revenue requirement differences between Scenarios 1-A and 2-A?

A. The differences on an annually and present-valued basis are provided below:

		1	2	3	4	5	6	7	8	9	10
Scenario 1	Total Revenue Requirement	$ 8,918	$ 9,091	$ 9,268	$ 9,452	$ 11,697	$ 11,885	$ 12,080	$ 12,282	$ 12,491	$ 12,708
Scenario 2	Total Revenue Requirement	$ 8,918	$ 9,053	$ 9,191	$ 9,331	$ 9,475	$ 9,622	$ 11,827	$ 11,971	$ 12,120	$ 12,271
		$ -	$ 38	$ 78	$ 121	$ 2,223	$ 2,264	$ 254	$ 311	$ 372	$ 437
$ **3,933**	NPVRR Difference		$ 32	$ 63	$ 91	$ 1,548	$ 1,467	$ 153	$ 174	$ 194	$ 212

Q. It appears that the differences between Scenarios 1 and 2 save ratepayers money, is this accurate?

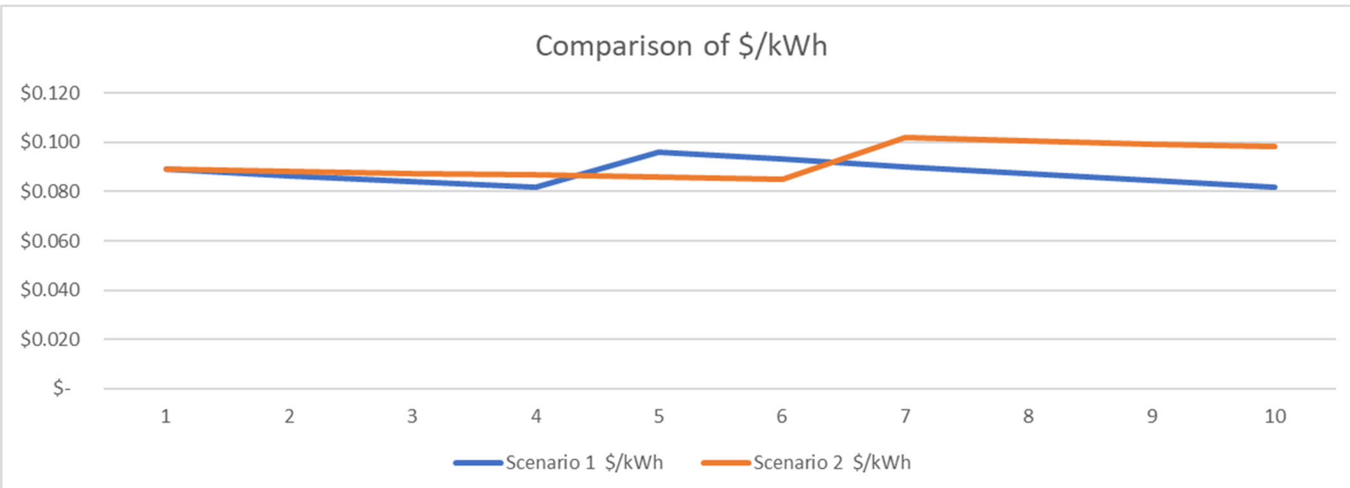
A. Generally, yes. However, as an initial matter, note that I did not include the full life revenue requirement of the generation addition, as it is assumed to be in service for 30 years. As such, Scenario 1 – A includes 6/30 years of the plant's revenue requirement, while Scenario 2 – A includes only 4/30 years.

Q. All else being equal, if a generation addition can be avoided or delayed, will it save ratepayers money?

A. Yes, and this is the fundamental concept of MEEIA.

Q. Is all of the difference between the two scenarios savings to ratepayers?

A. No. This is best illustrated by looking at the differences in the average $/kWh over time.



During the early years, Scenario 2 costs ratepayers more per kWh for the kWh consumed, because there are fewer kWh added each year over which to spread non-energy revenue requirement. Additional complications include the existence of the fuel adjustment clause and of the SPP integrated energy market as discussed in the subsection of my testimony titled "MEEIA and the FAC[3]". Additionally, rate case timing and various regulatory treatments such as PISA, [4] the RESRAM[5], and various renewable programs such as community solar and voluntary green programs complicate perfect calculations, much less simplified examples.

[3] Fuel Adjustment Clause (FAC).

[4] Plant in service accounting (PISA).

[5] Renewable Energy Standard Rate Adjustment Mechanism (RESRAM).

Q. This example is far from simple, can you further simplify it?

A. Unfortunately, no. MEEIA is an incredibly complex concept and relies on a series of mechanisms and assumptions to place utility shareholders in a position in the near term comparable to the position utility shareholders would be in in the long term, if the shareholders had not facilitated DSM[6] programs with ratepayer funds.

Q. In this example, what earnings opportunity are shareholders foregoing by facilitating DSM programs with ratepayer funds?

A. In this example, the earnings opportunity shareholders are foregoing by facilitating DSM programs with ratepayer funds is the difference between Scenario 1 – A and 2 – A during years 5 – 10, for specific revenue requirement lines.

Q. Which revenue requirement lines illustrate the foregone earnings opportunity for years 5 – 10?

A. For shareholders, only the "Additional Generation-related Return on Equity" would be considered in calculation of a foregone earnings opportunity in years 5 – 10.

		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10
Scenario 1	Additional Generation-related Return on Equity	$ -	$ -	$ -	$ -	$ 150.00	$ 145.00	$ 140.00	$ 135.00	$ 130.00	$ 125.00
Scenario 2	Additional Generation-related Return on Equity	$ -	$ -	$ -	$ -	$ -	$ -	$ 150.00	$ 145.00	$ 140.00	$ 135.00
	Difference	$ -	$ -	$ -	$ -	$ 150	$ 145	$ (10)	$ (10)	$ (10)	$ (10)

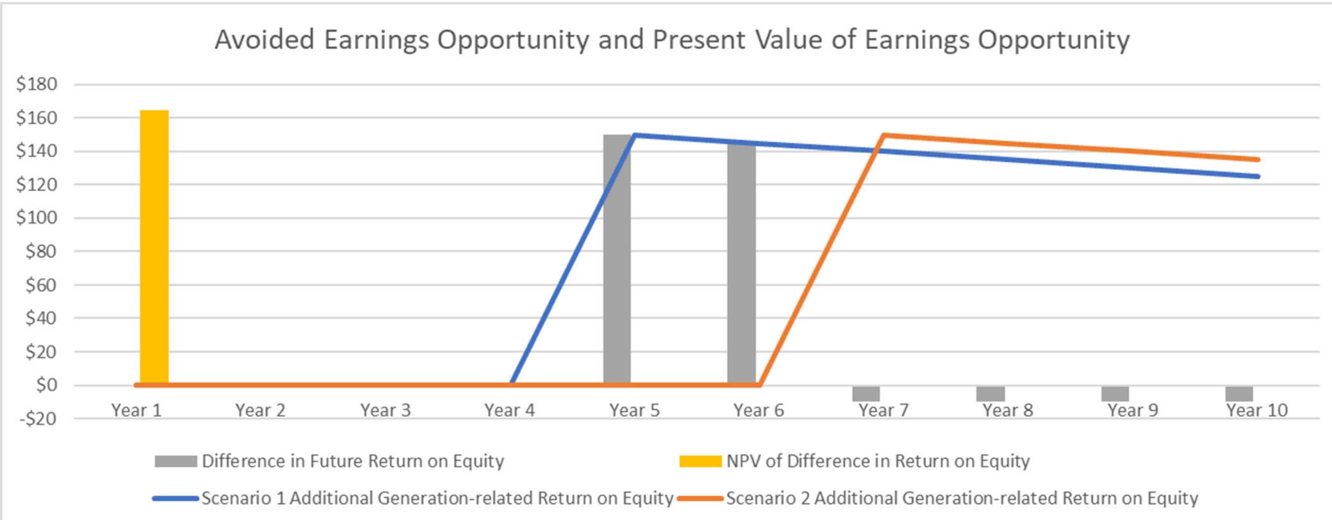
Q. Are there additional costs that would be payable by ratepayers, but not retained by shareholders associated with a foregone earnings opportunity in years 5 – 10?

A. Yes. Shareholders would not retain the "Additional Generation-related Income Tax," but ratepayers would pay revenue requirement for that expense.

Q. Can you illustrate the equivalent difference in future earnings opportunity and a compensation for that earnings opportunity if it occurred in Year 1?

[6] Demand-Side Management ("DSM").

A. Yes. The compensation for earnings opportunity is typically designed to occur in years 4 – 5; given the simplicity of this example, I will illustrate the equivalent values in Year 1.



Q. What does this hypothetical illustration show?

A. This illustrates that if shareholders facilitate ratepayer funded DSM programs today, shareholders will forgo an earnings opportunity around $200 as a return on investment in years 5 and 6.[7] However, to compensate shareholders today for foregone future earnings, a payment of about $164 today would put shareholders in the same position they would have been in if the shareholders had not facilitated ratepayer-funded DSM.

Q. Is the NPV[8] amount in year 1 taxable as income?

A. Yes. It is my understanding that the NPV compensation for future earnings opportunity is taxable as income, just as the actual earnings on actual rate base in year 5 and beyond would be taxable as income.

[7] As discussed above, this is a simplified example. If this illustration were expanded out to 40 years, shareholders would earn more return on equity in Scenario 2 than in Scenario 1 in years 35 and 36. However, when this difference is discounted to the net present value, the differences in years 5 and 6 are worth more than the offsetting differences in years 35 and 36.

[8] Net Present Value (NPV).

Q. If shareholders are provided with a payment of $164 plus an allowance for income tax today, are they in the same or better position than they would be if shareholders had an investment opportunity to earn a return worth about $200 in years 5 and 6, plus an allowance for income tax?

A. Frankly, shareholders are in a better position under this approach, in that the recovery of $164 is guaranteed and is subject to true-up down to the penny. However, if shareholders actually support investment in years 5 and 6, the shareholders will only have an opportunity to recover the awarded return on equity through rates, which is a risk for which the awarded ROE (Return on Equity) compensates. The $200 includes compensation for the shareholders of the risk of non-recovery, although recovery of the $164 is certain. In any case, shareholders are in at least the same position as if they had not facilitated ratepayer funding of DSM programs.

Q. If ratepayers provide shareholders with a payment of $164 plus an allowance for income tax today,[9] are they in the same or better position than they would be if they provided a return on equity of about $200 in years 5 and 6, plus an allowance for income tax?

A. With regard to only the return aspect, and setting aside intergenerational equity considerations, ratepayers are in the same position whether the lesser amount is paid today, or the greater amount in a few years. The intergenerational equity concerns grow the more distant a deferred investment is in time.

Q. Are there other aspects in this example where ratepayers are better off due to providing funds for the utility to facilitate DSM?

A. Yes. The ratepayers are able to avoid (or defer) revenue requirement associated with the additional depreciation, the additional cost of debt, and additional generation-related Operations & Maintenance Expenses ("O&M"). Setting aside complexities of the FAC and the SPP Integrated

[9] $197 with an allowance for income tax.

Markets, for purposes of this example, additional fuel costs and net margins are also avoided or deferred. These calculations are illustrated below:

		1	2	3	4	5	6	7	8	9	10
Scenario 1	Total Revenue Requirement	$ 8,918	$ 9,091	$ 9,268	$ 9,452	$ 11,697	$ 11,885	$ 12,080	$ 12,282	$ 12,491	$ 12,708
Scenario 2	Total Revenue Requirement	$ 8,918	$ 9,053	$ 9,191	$ 9,331	$ 9,475	$ 9,622	$ 11,827	$ 11,971	$ 12,120	$ 12,271
		$ -	$ 38	$ 78	$ 121	$ 2,223	$ 2,264	$ 254	$ 311	$ 372	$ 437
$ 3,618	NPVRR Difference		$ 32	$ 60	$ 86	$ 1,443	$ 1,348	$ 139	$ 156	$ 171	$ 184
Scenario 1	$/kWh	$ 0.089	$ 0.087	$ 0.084	$ 0.082	$ 0.096	$ 0.093	$ 0.090	$ 0.087	$ 0.085	$ 0.082
Scenario 2	$/kWh	$ 0.089	$ 0.088	$ 0.087	$ 0.087	$ 0.086	$ 0.085	$ 0.102	$ 0.101	$ 0.099	$ 0.098
Scenario 1	Avoidable	$ -	$ -	$ -	$ -	$ 2,078	$ 2,161	$ 2,248	$ 2,340	$ 2,437	$ 2,539
Scenario 2	Avoidable	$ (300)	$ (263)	$ (224)	$ (185)	$ (144)	$ (103)	$ 1,995	$ 2,030	$ 2,066	$ 2,103
		$ 300	$ 263	$ 224	$ 185	$ 2,223	$ 2,264	$ 254	$ 311	$ 372	$ 437
$ 3,965	NPVRR Difference		$ 221	$ 173	$ 131	$ 1,443	$ 1,348	$ 139	$ 156	$ 171	$ 184
Scenario 1	Transfer to EO	$ -	$ -	$ -	$ -	$ 180	$ 174	$ 168	$ 162	$ 156	$ 150
Scenario 2	Transfer to EO	$ -	$ -	$ -	$ -	$ -	$ -	$ 180	$ 174	$ 168	$ 162
		$ -	$ -	$ -	$ -	$ 180	$ 174	$ (12)	$ (12)	$ (12)	$ (12)
$ 197	NPVRR Difference		$ -	$ -	$ -	$ 117	$ 104	$ (7)	$ (6)	$ (6)	$ (5)
		NPV	**Actuals**								
	Total Avoidable	$ 3,965	$ 6,095								
	Transfer to EO	$ 197	$ 306								
	Difference	$ 3,768	$ 5,789								

Q. What is the point of all of this?

A. The underlying premise of MEEIA is that, based on the assumptions and quantities in these examples, ratepayers are better off providing shareholders with $164 plus an allowance for income tax today to avoid around $5,789 in revenue requirement in the future, to compensate shareholders for facilitating ratepayer-funded DSM programs, so long as the total cost of facilitating those DSM programs is less than $3,768. This premise does not hold when investments in generation assets are not deferred or avoided.

Problem with creating budget for program costs if there's no avoided O&M like with renewables

Q. In the "Scenario 1 – A and Scenario 2 – A examples above, did the deferred generation facility have fuel and variable operating costs?

A. Yes.

Q. If a plant to be deferred does not have fuel costs or variable operating costs, or those costs are very low, - such as solar or wind facilities – does this effect the maximum amount for ratepayers to break even in facilitating DSM programs?

A. Yes. Under identical assumptions to Scenarios A, but with fuel costs removed and variable operating costs drastically lowered, the $3,768 figure from the first set of examples is reduced to $830, as shown below.

		1	2	3	4	5	6	7	8	9	10
Scenario 1	Total Revenue Requirement	$ 8,918	$ 9,091	$ 9,268	$ 9,452	$ 9,337	$ 9,525	$ 9,720	$ 9,922	$ 10,131	$ 10,348
Scenario 2	Total Revenue Requirement	$ 8,918	$ 9,053	$ 9,191	$ 9,331	$ 9,475	$ 9,622	$ 9,467	$ 9,611	$ 9,760	$ 9,911
		$ -	$ 38	$ 78	$ 121	$ (137)	$ (96)	$ 254	$ 311	$ 372	$ 437
$ 680	NPVRR Difference		$ 32	$ 60	$ 86	$ (89)	$ (57)	$ 139	$ 156	$ 171	$ 184
Scenario 1	$/kWh	$ 0.089	$ 0.087	$ 0.084	$ 0.082	$ 0.077	$ 0.075	$ 0.073	$ 0.071	$ 0.069	$ 0.067
Scenario 2	$/kWh	$ 0.089	$ 0.088	$ 0.087	$ 0.087	$ 0.086	$ 0.085	$ 0.082	$ 0.081	$ 0.080	$ 0.079
Scenario 1	Avoidable	$ -	$ -	$ -	$ -	$ (282)	$ (199)	$ (112)	$ (20)	$ 77	$ 179
Scenario 2	Avoidable	$ (300)	$ (263)	$ (224)	$ (185)	$ (144)	$ (103)	$ (365)	$ (330)	$ (294)	$ (257)
		$ 300	$ 263	$ 224	$ 185	$ (137)	$ (96)	$ 254	$ 311	$ 372	$ 437
$ 1,027	NPVRR Difference		$ 221	$ 173	$ 131	$ (89)	$ (57)	$ 139	$ 156	$ 171	$ 184
Scenario 1	Transfer to EO	$ -	$ -	$ -	$ -	$ 180	$ 174	$ 168	$ 162	$ 156	$ 150
Scenario 2	Transfer to EO	$ -	$ -	$ -	$ -	$ -	$ -	$ 180	$ 174	$ 168	$ 162
		$ -	$ -	$ -	$ -	$ 180	$ 174	$ (12)	$ (12)	$ (12)	$ (12)
$ 197	NPVRR Difference		$ -	$ -	$ -	$ 117	$ 104	$ (7)	$ (6)	$ (6)	$ (5)
		NPV	**Actuals**								
	Total Avoidable	$ 1,027	$ 1,375								
	Transfer to EO	$ 197	$ 306								
	Difference	$ 830	$ 1,069								

If the plant being deferred through MEEIA programs is a renewable facility, it will be more difficult for ratepayers to benefit from the deferred investment by paying for the MEEIA programs today.

Evergy Missouri West PUBLIC

Capital Investment Plan Update

Schedule 1 - Current Five-Year Plan and Comparisons to Prior Five-Year Plan by Category **February 28, 2024**

Line	In millions (may not foot due to rounding) Category	Actual 2023	Projected 2024	Projected 2025	Projected 2026	Projected 2027	Projected 2028	Projected 2023-2027	Projected 2024-2028
1	**Current Plan**								
2	01.New Renewables/New Generation	$ (6)	$ 99	$ 105	$ 282	$ 217	$ 363	$ 697	$ 1,067
3	02.Generating Facilities: Other	39	20	34	23	35	25	151	136
4	03.Transmission Facilities	122	107	85	110	144	141	569	588
5	04.Distribution Facilities	206	209	206	215	219	206	1,056	1,056
6	05.Information Technology	33	37	20	20	31	31	140	139
7	06.General Facilities	8	4	10	4	9	7	34	32
8	**Total**	**$ 402**	**$ 476**	**$ 460**	**$ 654**	**$ 654**	**$ 774**	**$ 2,647**	**$ 3,018**
9									
10	**Prior Plan**								
11	01.New Renewables/New Generation	$ 261	$ -	$ -	$ 101	$ 75		$ 436	
12	02.Generating Facilities: Other	29	25	21	29	35		140	
13	03.Transmission Facilities	93	133	137	145	150		659	
14	04.Distribution Facilities	140	127	154	147	141		709	
15	05.Information Technology	34	33	22	23	26		139	
16	06.General Facilities	8	6	8	7	5		34	
17	**Total**	**$ 565**	**$ 324**	**$ 343**	**$ 452**	**$ 433**		**$ 2,116**	
18									
19	**Current Versus Prior Plan**								
20	01.New Renewables/New Generation	$ (267)	$ 99	$ 105	$ 181	$ 142		$ 261	
21	02.Generating Facilities: Other	10	(5)	13	(6)	(0)		11	
22	03.Transmission Facilities	29	(26)	(53)	(35)	(6)		(90)	
23	04.Distribution Facilities	66	82	52	68	79		346	
24	05.Information Technology	(1)	4	(3)	(3)	4		2	
25	06.General Facilities	0	(2)	2	(3)	3		0	
26	**Total**	**$ (163)**	**$ 152**	**$ 117**	**$ 203**	**$ 221**		**$ 530**	