Exhibit No.:	
Issue(s):	*Summary of MEEIA, MEEIA Mechanisms*
Witness:	*Sarah L.K. Lange*
Sponsoring Party:	*MoPSC Staff*
Type of Exhibit:	*Surrebuttal Testimony*
Case No.:	*EO-2023-0136*
Date Testimony Prepared:	*May 30, 2024*

MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

TARIFF/RATE DESIGN DEPARTMENT

SURREBUTTAL TESTIMONY

OF

SARAH L.K. LANGE

UNION ELECTRIC COMPANY,
d/b/a Ameren Missouri

CASE NO. EO-2023-0136

Jefferson City, Missouri
May 2024

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EXECUTIVE SUMMARY

Q. Are you the same Sarah L.K. Lange, who prefiled Direct and Rebuttal Testimonies in this matter?

A. Yes.

Q. What is the purpose of this testimony?

A. Generally, my testimony addresses how the Missouri Energy Efficiency Investment Act (MEEIA) statute is an acknowledgement that utility management is legally obligated to further shareholder interests as opposed to balancing the interests of ratepayers and shareholders.

a. Related to program costs as an investment, Antonio M. Lozano page 6,
b. Related to Steven M. Wills' criticism of Staff's concerns with the current and utility-requested Net Throughput Disincentive Mechanism (NTD),
c. In response to Mr. Wills testimony on Staff witness Dr. Hari K. Poudel concerning the net margin rate definitions.

MEEIA STATUTE EXISTS TO ADDRESS UTILITY INCENTIVE TO ELEVATE SHAREHOLDER INTERESTS

Treatment of Program Costs

Q. At page 6 of his rebuttal testimony, Ameren Missouri's witness Lozano testifies:

> Staff's and OPC's position contradict the state of Missouri's policy on energy efficiency and demand response. The MEEIA statute declares,

> "[i]t shall be the policy of the state to value demand-side investments equal to traditional investments in supply and delivery infrastructure and allow recovery of all reasonable and prudent costs of delivering cost-effective demand-side programs." And, "[t]he 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.

Did your testimony provide a specific example of an option that would more equally value demand-side investments equally with traditional investments in supply and delivery infrastructure?

A. Yes. As discussed in my direct testimony at pages 19 – 21, the MEEIA statute provides authority for the Commission to capitalize program costs. Section 393.1075.5 authorizes capitalization of program costs, and accelerated depreciation of the investment in program costs.

Q. What would it mean to capitalize program costs?

A. If program costs were capitalized, it would mean that Ameren Missouri is actually investing in demand-side programs, as opposed to its historically-requested method of program cost recovery under which Ameren Missouri has not invested any money in demand-side programs. Under current and prior MEEIA cycles, ratepayers are billed through the Demand-Side Programs Investment Mechanism ("DSIM") for the program costs that are expected to be incurred in a given month. Ameren Missouri is fully compensated through the DSIM for any timing differences between when ratepayer money for program costs are collected, and when MEEIA participants receive those program costs as incentives (or when Ameren Missouri remits payments to MEEIA-related outside contractors).

Q. Could you illustrate current MEEIA practice?

A. Yes.

In this example, "Projected Program Costs,"[1] are $15.00, and the "Projected Energy"[2] is 600 kWh. This results in a per kWh rate of $0.025 for the program cost portion of the DSIM ($15.00 divided by 600 kWh).

	Expected Incentive Payments	Expected Administration and Other Program Costs	Total Expected Program Costs	Expected kWh to be Sold
Month 1	$ 1.00	$ 1.50	**$ 2.50**	100
Month 2	$ 1.00	$ 1.50	**$ 2.50**	100
Month 3	$ 1.00	$ 1.50	**$ 2.50**	100
Month 4	$ 1.00	$ 1.50	**$ 2.50**	100
Month 5	$ 1.00	$ 1.50	**$ 2.50**	100
Month 6	$ 1.00	$ 1.50	**$ 2.50**	100
			$ 15.00	600

Ameren Missouri does not invest those $15.00. Ameren Missouri's ratepayers provide those $15 to Ameren Missouri for Ameren Missouri to payout as incentives to ratepayers, to pay to administrators or other contractors, or to cover its own internal expenses as specified.

Q. If program costs are higher than expected, or if fewer kWh are sold than were expected to be sold when the DSIM rate is calculated, isn't Ameren Missouri investing to the extent that there is a cash-flow or timing issue?

A. The DSIM makes Ameren Missouri whole for any cash-flow or timing differences, such that any "investment," is limited to a matter of months, for which Ameren

[1] Per Ameren Missouri proposed tariff, "PPC = Projected Program Costs is an amount equal to Program Costs projected by the Company to be incurred during the applicable EP."
[2] Per Ameren Missouri proposed tariff, "PE = Projected Energy, in kWh, forecasted to be delivered to the customers to which the Rider EEIC applies during the applicable EP."

Missouri is compensated through the DSIM at its short-term borrowing rate. Specifically, the proposed MEEIA tariff provides:

> PCR = Program Costs Reconciliation is equal to the cumulative difference, if any, between the PPC revenues billed resulting from the application of the NPC component of the EEIR and the actual Program Costs incurred through the end of the previous EP (which will reflect projections through the end of the previous EP due to timing of adjustments). Such amounts shall include monthly interest charged at the Company's monthly short-term borrowing rate. Any remaining PCR balance from MEEIA 2016-18 shall be rolled into the PCR calculation starting February 2022.

Q. Could you illustrate how this "PCR" component of the DSIM would work in this hypothetical example?

A. Yes. In this example the Total Actual Program Costs are a bit higher than was expected, at $2.70 per month instead of $2.50 per month.

	Total Expected Program Costs	Total Actual Program Costs	Difference between Totals	Cumulative Difference Between Totals	Carrying Costs on Difference Between Totals
Month 1	**$ 2.50**	**$ 2.70**	$ 0.20	*$ 0.20*	$ 0.01
Month 2	**$ 2.50**	**$ 2.70**	$ 0.20	*$ 0.40*	$ 0.02
Month 3	**$ 2.50**	**$ 2.70**	$ 0.20	*$ 0.60*	$ 0.03
Month 4	**$ 2.50**	**$ 2.70**	$ 0.20	*$ 0.80*	$ 0.04
Month 5	**$ 2.50**	**$ 2.70**	$ 0.20	*$ 1.00*	$ 0.05
Month 6	**$ 2.50**	**$ 2.70**	$ 0.20	*$ 1.20*	$ 0.06
	$ 15.00	$ 16.20	$ 1.20	*$ 1.20*	$ 0.21

This change from expectations resulted in a recovery shortfall of $0.20 per month. Assuming a short-term borrowing rate of 5% per year, this difference means that Ameren Missouri incurred $1.20 more in carrying costs than ratepayers provided in real time through the DSIM. Under the "PCR" however, the next DSIM charge would be increased to recover

not only that $1.20 shortfall, but also $0.21 in carrying costs to compensate Ameren Missouri for the time that the shortfall existed.

Q. Under this example, did Ameren Missouri make any "investment," in demand-side programs?

A. Generally, no. Arguably, Ameren Missouri invested an amount ranging from $0.20 to $1.20, for which it was compensated as soon as possible. This sort of timing difference is common in ratemaking and is accounted for in a general rate case by the ratebase treatment, positive or negative, of the utility's "cash working capital."

Q. Is it as likely that the "PCR" would reflect a transitory ratepayer advance of funds as it is likely that it would reflect a transitory utility investment?

A. Yes.[3]

Q. Could you provide an example of how ratemaking would look if a utility recovered its investment on a supply side resource the same way Ameren Missouri recovers MEEIA program costs?

A. Yes. If Ameren Missouri built a $2.4 billion solar farm during 2025, and billed each of its 2.4 million customers an extra $83.33 per month for each month of 2025 to pay its suppliers and contractors in real time as the plant was being built, at the end of 2025, Ameren Missouri would not have invested in a solar farm. It would have a solar farm, but it would not have investment.[4] This is how Ameren Missouri's MEEIA programs have

[3] While not addressed in this specific example, the PCR component of the DSIM also applies to the differences (and timing of differences) in energy sales versus the level and timing of "Projected Energy" that was used to calculate the DSIM.
[4] Subject to reconciliation of any differences in the payments to suppliers and contractors and recovery of the revenue from customers.

functioned to date – Ameren Missouri has had MEEIA programs, but Ameren Missouri has not invested in supply-side resources since it initially received authorization to offer MEEIA programs.

Q. Is that a problem?

A. No. The MEEIA statute offers utilities the option to facilitate supply-side programs without investing in supply-side programs. However, Mr. Lozano's testimony on page 6 of his rebuttal testimony is factually inaccurate. Staff's position does not contradict the MEEIA statute. In fact, Staff's testimony urges the Commission to return to the statutory language to recognize the policy drift that has occurred.

Q. Has Ameren Missouri requested that it ***not invest*** in demand-side measures throughout the duration of its MEEIA cycles?

A. Yes. The January 20, 2012 Ameren Missouri MEEIA Application in EO-2012-0142 states "Recovery of program costs and offset of the throughput disincentive at the same time energy efficiency investments are made."

Q. How many dollars has Ameren Missouri invested in demand-side programs since 2011?

A. Ameren Missouri has not invested a dollar in demand-side programs since 2011.

Q. Under the statute, could program cost recovery be handled different, such that Ameren Missouri could invest in supply-side programs?

A. Yes. Program costs could be capitalized, but, to date, they have not been treated that way under Ameren's MEEIA cycles. Section 393.1075.5 authorizes capitalization of program costs, and accelerated depreciation of the investment in program costs.

Q. Is it bad for ratepayers that program costs have been recovered in real time and have not been a utility investment?

A. In isolation, no; either real-time recovery through the DSIM or a recovery approach where program costs are capitalized and the utility has an opportunity to earn a return on the capitalized amount (and recover amortizations or depreciation expense for the return of the capitalized amount) are lawful and can be reasonable. However, there are two areas where this treatment has suboptimal outcomes: first, as a matter of perception, frequent Ameren Missouri's frequent references to its "supply-side investments," or its "investments in energy efficiency," are factually inaccurate and misleading to the Commission. Second, Ameren Missouri's decision, made in a prior investment environment, to forego an investment opportunity in supply-side resources results in Ameren Missouri's scramble to justify other "earnings opportunities," for hypothetical future investments in generation, transmission, and distribution facilities.

Q. Could you provide a side-by-side comparison of real time program cost recovery and capitalized program cost recovery?

A. Yes. Provided below is a simple example under which program costs are $100,000,000 a year for each of 3 years.

	Program Costs As Incurred	Amortization of Program Costs	Program Cost Ratebase	6%	Income Tax on Return	Real Time Program Cost Recovery	Ratebased and Amortized Program Cost Recovery
Year 1	$ 100,000,000	$ 10,000,000	$ 90,000,000	$ 5,400,000	$ 135,000	$ 100,000,000	$ 15,535,000
Year 2	$ 100,000,000	$ 20,000,000	$ 170,000,000	$ 10,200,000	$ 255,000	$ 100,000,000	$ 30,455,000
Year 3	$ 100,000,000	$ 30,000,000	$ 240,000,000	$ 14,400,000	$ 360,000	$ 100,000,000	$ 44,760,000
Year 4		$ 30,000,000	$ 210,000,000	$ 12,600,000	$ 315,000		$ 42,915,000
Year 5		$ 30,000,000	$ 180,000,000	$ 10,800,000	$ 270,000		$ 41,070,000
Year 6		$ 30,000,000	$ 150,000,000	$ 9,000,000	$ 225,000		$ 39,225,000
Year 7		$ 30,000,000	$ 120,000,000	$ 7,200,000	$ 180,000		$ 37,380,000
Year 8		$ 30,000,000	$ 90,000,000	$ 5,400,000	$ 135,000		$ 35,535,000
Year 9		$ 30,000,000	$ 60,000,000	$ 3,600,000	$ 90,000		$ 33,690,000
Year 10		$ 30,000,000	$ 30,000,000	$ 1,800,000	$ 45,000		$ 31,845,000
Year 11		$ 20,000,000	$ 10,000,000	$ 600,000	$ 15,000		$ 20,615,000
Year 12		$ 10,000,000	$ -	$ -	$ -		$ 10,000,000
	$ 300,000,000	$ 300,000,000		$ 81,000,000	$ 2,025,000	**$ 300,000,000**	**$ 383,025,000**

In this example, as program costs are incurred, they are both incorporated into Ameren Missouri's rate base, and amortized into expense (accelerated depreciation treatment would have essentially the same net results). Essentially, Ameren Missouri in each MEEIA cycle has the option to either request real time recovery of demand-side program costs, as it has done since 2011, or to actually invest in demand-side programs. Under the first option, ratepayers will pay the program costs in real time each year, and Ameren Missouri has no opportunity to earn a return because Ameren Missouri has no investment. Under the second option, ratepayers will pay for the program over the selected amortization period (in this example, 10 years from expenditure, 12 years total for a 3 year MEEIA cycle). Ultimately, ratepayers would pay more under the second option, similar to paying off a credit card in full the month a charge is made, versus using the line of credit over time. However, if Ameren Missouri's desire is to make investments in demand-side programs consistent with investment in supply-side programs, this second approach gives it that opportunity.

Q. Is investment in demand-side programs as described above possible to be addressed through a DSIM, or would rate case treatment be required?

A. It is my understanding that the Commission could lawfully order either under the existing MEEIA statutory authority.

Q. Is capitalization better for ratepayers or worse for ratepayers?

A. The question is, is capitalization better for ratepayers than what? If a MEEIA mechanism includes an unreasonable Earnings Opportunity, as Ameren Missouri has requested here, than capitalization of program costs can present a middle ground alternative.[5] Ratepayers

[5] See testimony of Staff witnesses Brad J. Fortson and J Luebbert for additional information on Staff's position regarding the unreasonableness of Ameren Missouri's Earnings Opportunity.

should not be saddled with an unreasonable Earnings Opportunity payout, but if the Commission is concerned that Ameren Missouri will take its figurative ball and go home if a MEEIA cycle does not include an Earnings Opportunity, then capitalization of demand-side resources allows a utility to ***actually earn a return*** on actual dollars invested.

Q. Can capitalization of the costs of demand-side resources also address some of the intergeneration equity concerns inherent in MEEIA?

A. Yes.

Staff concerns with NTD as discussed by Mr. Wills

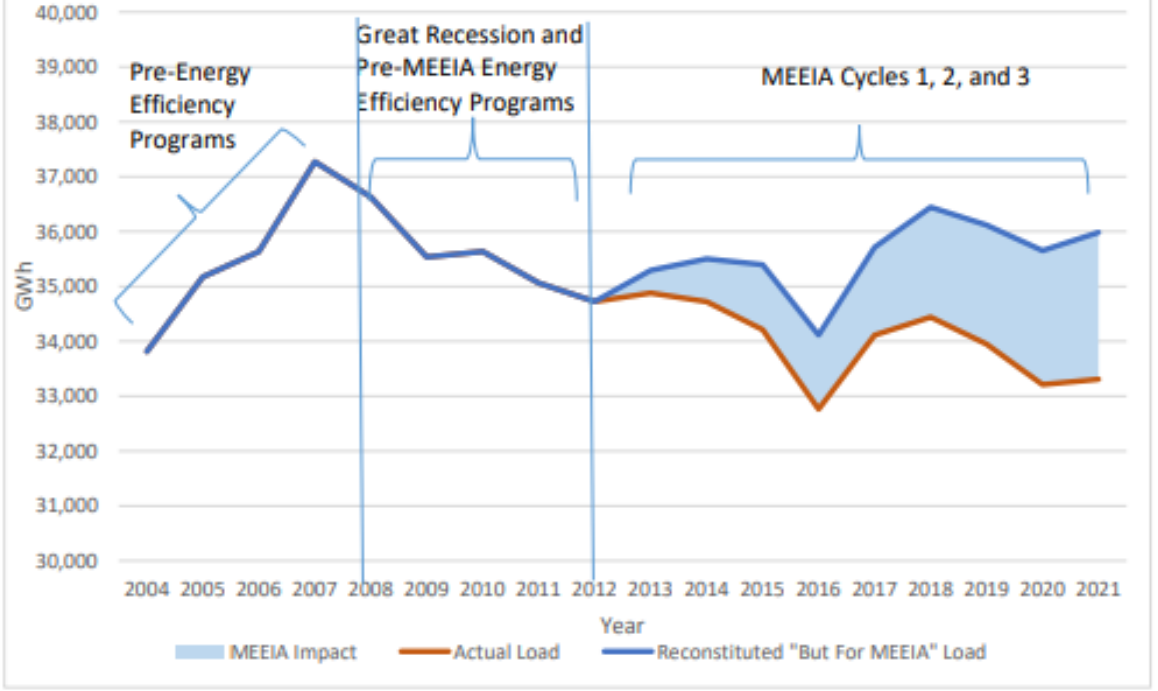
Q. At pages 47 – 48 Mr. Wills testifies as follows:

> Q. Why do you say that decoupling would result in negative financial impacts on the Company?
>
> A. Figure 1 early in my testimony is a perfect illustration of why this is the case. Recall that in my discussion of Figure 1 I described the load growth trends that have existed since the Company began its MEEIA programs, and contrasted those with the "reconstituted" loads that illustrate what load growth would have been "but for" MEEIA. In that section, I identified that in the "MEEIA era" beginning in 2013, the Company's energy sales have declined at a CAGR of 0.4% per year over the time period reflected in Figure 1, but would have increased at 0.4% per year during the same time period without the impact of the programs. The TD mechanism has provided the Company with incremental revenues to restore its earnings to the level they would have been in a world with 0.4% per year growth. If the Company had been under decoupling during that time, its revenues (and earnings) would have been based on a world with zero growth. Decoupling would have taken away any impact of negative load growth that would have arisen from implementation of MEEIA programs (about half of the impact of MEEIA over that timeframe), but it would have failed to restore the benefit of growth that would have existed without MEEIA (the other half of the impact of MEEIA during those years). In this way, decoupling still leaves a financial disincentive for the utility to pursue MEEIA programs.

Can you clarify this statement from Mr. Wills' testimony that are pertinent to his criticism of Staff's proposed MEEIA mechanism?

A. Yes. Below is a copy of Figure 1 from page 10 of Mr. Wills' rebuttal testimony:

Figure 1 – 2004 – 2021 Annual Energy Consumption with and without MEEIA Programs



First, Mr. Wills' Figure 1 illustrates load, and load and revenues are not synonymous. A 1% change in annual energy would not correspond to a 1% change in revenue. Second, Mr. Wills' Figure 1 depicts normalized load, not actual load, and parties can and do often disagree on accurate normalized levels. Third, Mr. Wills' Figure 1 depicts total utility load, and Staff's proposed NTD replacement would apply only to the Residential and Small General Service (SGS) classes.

Q. Does the current NTD create the "win-win" outcome that Mr. Wills states is the goal of MEEIA?

A. No. The current NTD will become unworkably complex if modified to address time-based rates, but the current NTD must be modified to address time-based rates. The current NTD fails to account for the variations in wholesale energy costs and market capacity costs that occur in real time. The current NTD preserves the utility incentives to maximize throughput, creates a new incentive to minimize actual reductions to throughput while maximizing deemed reductions to throughput, and to be indifferent as to the realization of the avoided wholesale energy and capacity costs that were used to justify a MEEIA cycle.

Q. Does the foregoing testimony imply negative motivation on the part of utility management?

A. Not at all. It is utility management's fiduciary obligation to shareholders to maximize shareholder value. This incentive to maximize shareholder value is the genesis of MEEIA. The existing NTD, knowing what Staff knows now, is simply another tool for utility management to maximize shareholder value, as opposed to a tool to align ratepayer and utility incentives.

Wills' criticism of Dr. Poudel

Q. At page 56 Mr. Wills testifies as follows:

> Q. Staff witness Poudel states, regarding the Company's calculation of net margin rates for use in the TD mechanism, that "[t]he net marginal rate is the difference between the wholesale cost of the energy for a given kWh sold at retail and the marginal retail rate for that kWh of energy. Due to the operation of Ameren Missouri's FAC, it may be more appropriate to calculate the net marginal rate as the difference between the FAC base factor and the value of the marginal retail rate for that kWh." Please respond.
>
> A. The first sentence in the quote above from Mr. Poudel is factually wrong. The Company already calculates the net margin rates exactly as Mr. Poudel recommends in the second sentence, as it has ever since the form of the net margin rate analysis used in all Ameren Missouri MEEIA

applications since MEEIA cycle 2 was developed in 2014. As stated in the Company's original plan filing in this case:

> Once the marginal revenue reductions have been calculated associated with each kWh of savings, the marginal rate is reduced by a factor derived from the Company's FAC. Due to the mechanics of the FAC, the portion of the foregone marginal revenue from each kWh of load reduction that was designed to cover net energy costs is subject to a reconciliation that allows the Company to recover 95% of the foregone net energy-related amount of revenue. As such, the marginal rate calculated above is adjusted to just reflect the portion of that revenue that contributes to the fixed (non-energy-related) cost recovery of the Company.

Is Mr. Wills' criticism accurate?

A. No. In fact, the net marginal rate **is** the difference between the wholesale cost of the energy for a given kWh sold at retail and the marginal retail rate for that kWh of energy. However, under the existing NTD mechanism it *may* be reasonable to isolate the revenue impact of deemed avoided marginal sales to the net difference between the marginal retail rate for a kWh of energy and the Fuel Adjustment Clause (FAC) base. The circumstances of prior MEEIA filings have been such that Staff has agreed with use of the FAC base for calculation of the net margin rates in prior MEEIA cycles.

Q. Is the "may" included in Dr. Poudel's response related to concerns with the reasonableness of continuing the current NTD mechanism?

A. Yes. The utility has a recognized obligation to its shareholders to maximize shareholder benefit. The current NTD calculation assumes that all customers in a class take service under the same (or essentially the same) rate plan, and that the time of energy consumption is irrelevant to the revenue recovery experienced by the utility. In the interaction of the current NTD with the FAC, Ameren Missouri receives the same compensation for avoiding a kWh of energy sold at retail for $0.05 and acquired for a wholesale cost of $1.25 as

it does for avoiding a kWh of energy sold at retail for $0.15 and acquired for a wholesale cost of $0.05. This NTD operation is simply not reasonable to the extent that these mismatches may occur if Ameren Missouri were to implement its MEEIA programs in a manner to avoid the greatest amount of wholesale energy cost while avoiding the least amount of retail revenues (or at least not avoiding more revenues than energy costs); and this NTD operation is wholly unreasonable where Ameren Missouri has the ability to implement its MEEIA programs to maximize its retail and NTD revenues and is essentially ambivalent to the level of wholesale energy costs.

CONCLUSION

Q. Does this conclude your surrebuttal testimony?

A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Union Electric Company d/b/a Ameren Missouri's 4th Filing to Implement Regulatory Changes in Furtherance of Energy Efficiency as Allowed by MEEIA	))))	Case No. EO-2023-0136

AFFIDAVIT OF SARAH L.K. LANGE

STATE OF MISSOURI)
) ss.
COUNTY OF COLE)

COMES NOW SARAH L.K. LANGE and on her oath declares that she is of sound mind and lawful age; that she contributed to the foregoing *Surrebuttal Testimony of Sarah L.K. Lange*; and that the same is true and correct according to her best knowledge and belief.

Further the Affiant sayeth not.

Sarah L.K. Lange
SARAH L.K. LANGE

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 29th day of May 2024.

Dianna L. Vaught
Notary Public

DIANNA L. VAUGHT
Notary Public - Notary Seal
State of Missouri
Commissioned for Cole County
My Commission Expires: July 18, 2027
Commission Number: 15207377