Exhibit No.: _______________
Issue(s): Challenges Before the Commission/ Demand Side Response Programs/Business Programs/ Residential Programs/Pilot Programs/Low-Income Programs/Urban Heat Island/Hard-to-Reach Education Programs/Throughput Disincentive/Earnings Opportunity/EM&V/Alternative Path Forward
Witness/Type of Exhibit: Marke/Rebuttal
Sponsoring Party: Public Counsel
Case No.: EO-2023-0369 & EO-2023-0370

REBUTTAL TESTIMONY

OF

GEOFF MARKE

Submitted on Behalf of the Office of the Public Counsel

EVERGY METRO, INC. D/B/A EVERGY MISSOURI METRO AND EVERGY MISSOURI WEST, INC. D/B/A EVERGY MISSOURI WEST

CASE NOS. EO-2023-0369 & EO-2023-0370

July 9, 2024

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EVERGY MISSOURI METRO AND

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CASE NOS. EO-2023-0369 & EO-2023-0370

I. INTRODUCTION

Q. Please state your name, title and business address.

A. Geoff Marke, PhD, Chief Economist, Office of the Public Counsel (OPC or Public Counsel), P.O. Box 2230, Jefferson City, Missouri 65102.

Q. Are you the same Dr. Marke that filed direct testimony in these cases?

A. I am.

Q. What is the purpose of your rebuttal testimony?

A. My purpose is three-fold with three different sets of recommendations. First, I will provide an overall summary of the various obstacles, challenges and changes that currently impact the likelihood that Evergy Missouri Metro ("Metro") and Evergy Missouri West's ("West" and collectively as "Evergy," "Evergy Missouri" or "the Company") MEEIA portfolio will accomplish what it claims it will accomplish. Within this section, I make the argument that the Commission should not approve Evergy's proposed application(s) full stop.

Second, I will be responding to the various programs and mechanisms within Evergy's application. Within this section, I provide recommended adjustments under the premise that the Commission will approve an application despite the reasons I articulated in section I. The recommendations in section II provide for a better program design and an application that is more aligned with the public interest.

In the third and final section, I discuss an alternative path forward that meets the statutory requirements set out by the MEEIA statute, § 393.1075 RSMo. This recommendation provides for a reasonable earnings opportunity for Evergy Missouri and outlines a path forward that can be applied to the rest of our investor-owned electric utilities. This recommendation is an attempt to evolve MEEIA to be more cost-effective and aligned with the goal of supporting only cost-effective measures for all customers regardless of participation.[1]

My silence in regard to any issue should not be construed as an endorsement of Evergy's position.

II. Challenges and Obstacles to MEEIA Cycle IV

Q. Can you please summarize the many challenges and obstacles that currently plague Evergy Missouri's MEEIA Cycle IV portfolio?

A. Yes. I will briefly restate both the challenges I raised in my direct testimony as well as those I encountered while reviewing both Staff's direct testimony and Evergy Missouri's application. The challenges I will focus on are as follows:

Challenge 1: Diminishing Returns (market adoption, codes, and standards)

Naturally occurring energy efficiency adoption has rapidly increased due to decades of marketing, increased federal appliance standards, and municipal building code requirements. See Figure 1 for a graphical representation of the diminishing returns in Evergy's "achievable" energy savings.

[1] § 393.1075.4 RSMo.

Figure 1: Diminishing Returns Associated with Evergy's Savings Targets[2]

[2] See GM-1: AEG (2022) DSM Potential Study Stakeholder Workshop 1. September 26, 2022. p. 10.

Challenge 2: Time-of-Use Pricing (*the* least cost resource)

Pricing electricity with automated meter infrastructure ("AMI") technology to more align with the true cost of service will produce energy and demand savings that dwarf any energy and demand savings achieved from a portfolio of MEEIA programs.

Challenge 3: Free Market Alternative(s) (aggregator of retail customers or "ARCs")

Free market alternatives exist for business demand response programs that do not require ratepayer subsidies. The failure to acknowledge this results in blatant market failure and wasted money.

Challenge 4: Operational Inefficiencies (overstated savings)

Ex post evaluations of energy efficiency programs do not account for operational failures or obstructions (e.g., changing out filters); thus overstating "deemed" energy savings.

Challenge 5: Rebound Effect (overstated savings)

Ex post evaluations of energy efficiency programs do not account for any "rebound effect" that occurs following the installation of energy efficiency measures; thus overstating the savings achieved and leading to higher bills for customers.

Challenge 6: Principle-Agent Problem(s) (overstated savings)

The principal-agent problem inherent with energy efficiency contractors leads to overstated energy and demand savings assumptions and thus higher bills for customers.

Challenge 7: Can Evergy claim any attribution? (overstated savings)

Federal funding from the Inflation Reduction Act in both direct rebates and tax breaks dwarf the amount available to ratepayers through MEEIA. This will necessarily reduce the Company's net-to-gross ratio and its ability for the MEEIA application to have any material impact.

Challenge 8: Risk-Reward Mismatch (ratepayers bear risk, company pockets reward)

Unlike traditional supply-side investment, shareholders put up zero capital yet stand to gain a 18.75% return on other people's money (ratepayers). Ratepayers, however, put up all of the capital and cannot reasonably be assured the financial savings actually materialize for all customers regardless of participation nor can the Company point to any tangible supply-side deferrals.

Challenge 9: Excessive Administrative Overhead (represents >43% of MEEIA) [3]

Non-profit and government alternatives for utility-sponsored demand-side management programs have overhead administrative costs capped at 20% or lower. This stands in stark contrast with the historical performance of Evergy Missouri's programs[4] and its proposed application.

Challenge 10: Undue Regulatory Complexity (easy to "game" compensation)

Evergy Missouri's proposed throughput disincentive mechanism is overly complicated and made inaccurate due to the introduction of time-of-use rates. Additionally, the Company's technical resource manual needs to be modified to account for challenges 4, 5, 6, and 7 stated above, as well as useful life assumptions.[5] Furthermore, the Company's proposed program-specific net-to-gross ("NTG")

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[3] The 43% of administrative overhead referenced here is understated. Evergy's application in these cases includes several education programs ($10,569,628) budgeted as 100% incentives with no administrative overhead. This is incorrect as there are no tangible incentives associated with most of the education programs. If those costs are correctly reallocated to administrative overhead then the all-in administrative overhead costs proposed by Evergy Missouri is closer to 62% of the overall budget.

[4] See rebuttal and surrebuttal testimony of Geoff Marke in Case No. EO-2020-0227.

[5] Wolfe, R. (2024) The Lifespan of Large Appliances is Shrinking. *The Wall Street Journal*. https://www.wsj.com/personal-finance/the-lifespan-of-large-appliances-is-shrinking-e5fb205b

factors are wildly inappropriate for the bulk of its proposed budget and do not reflect any reality, least of all the one that Evergy operates in today.[6]

Challenge 11: What is being deferred?

Evergy Missouri cannot identify any deferred investment directly tied to its MEEIA spend. Additionally, enabling statutory language (*i.e.* plant in service accounting ("PISA")) incentivizes Evergy Missouri to build which has played out in real time given the Company's PISA investments and at least its stated aspirational build-out of generation in its most recent integrated resource plan ("IRP").

Challenge 12: Missouri Division of Energy will function as a more cost-effective alternative.

If Evergy's MEEIA application is approved, both Evergy Missouri and the Missouri Division of Energy will be simultaneously rolling out subsidized energy efficiency programs (supported by ratepayer funding for Evergy Missouri and taxpayer funding for the Division of Energy). Both entities will effectively cut checks from other people's money to hire third-party contractors and evaluators to implement their programs. The difference is that Evergy Missouri demands: (1) an "opportunity" to earn a 18.75% return on investment made on using other people's money (i.e., ratepayers' capital) for targets they deem reasonable; (2) lost revenues associated with energy and demand savings we assume would not naturally occur; and (3) not be held to any managerial and/or fiscal discipline as it pertains to administrative

[6] Evergy's proposed NTG factors by program are as follows:

Program	NTG	Program	NTG
Whole Home Efficiency Program	0.80	Business Education	N/A
Home Energy Education Program	N/A	Res Demand Response	1.0
Income Eligible Programs	0.98	Bus Demand Response	1.0
Hard-to-Reach EE Education	N/A	DR Education	N/A
Whole Business	0.88	UHI Mitigation	1.0
Hard-to-Reach Business	0.83	Pilots	1.0

overhead (in contrast, the Missouri Division of Energy cannot allocate more than 20% of its federally subsidized energy efficiency budget to administrative overhead).

Q. Is this an exhaustive list of the challenges associated with Evergy Missouri's MEEIA Cycle IV Application?

A. No. More challenges are articulated at the program level in this rebuttal testimony. Additionally, Staff has raised issues in its direct testimony that I have not covered. I also recommend the Commission read OPC witness Lena Mantle's rebuttal testimony.

III. Demand Response

<u>Business DR Problem</u>: Market alternative(s) exists that does not require ratepayer subsidies.

<u>Residential DR Problem:</u> Full deployment of AMI make continued rebates for new thermostats redundant.

Q. What are Demand Response ("DR") programs?

A. Demand response programs come in two types. The business demand response program pays large commercial and industrial customers to curtail their power usage during select peak (or high energy usage) periods.

The residential demand response program utilizes "smart" thermostats to temporarily control and decrease residential customers' HVAC units during select peak (or high energy usage) periods.

Paying customers to curtail load during peak hours may result in overall savings to all customers in the form of lower fuel prices and, theoretically, deferred peaker power plant investments in the future.[7]

[7] Please see the Rebuttal Testimony of Ms. Lena Mantle, witness for the OPC, for a discussion of how Evergy's FACs complicate the analysis of whether benefits exist as a result of Evergy's MEEIA programs.

Q. What is Evergy Missouri proposing for Demand Response programs?

A. Evergy Missouri proposes a budget of $38 million over a four-year period for the business DR program, with a goal of obtaining 526 MW of savings. This will be accomplished through "called events" in which participants will be paid to curtail their load for a predetermined period. Notably, the Company will incur many of these savings from customers who have historically "opted-out" of paying for MEEIA. That is, commercial and industrial customers who do not pay a MEEIA subsidy due to their unique size.

Evergy Missouri proposes a budget of $26 million over a four-year period for the residential DR program, with a goal of obtaining 94.5 MW of savings. The program intends to rely on historically rebated thermostats, new rebated thermostats, and potential other devices as appropriate (e.g., water heaters and EV chargers). Notably, the Company plans to spend an additional $800K on demand response education over the next four years.

Q. Are there other variables at play with demand response that need to be addressed?

A. Yes. After a lengthy prohibition on the participation of third-party aggregators of retail choice ("ARCs") in demand response in Missouri, the Commission voted to partially affirmatively lift the ban on ARC participation in Missouri, effective January 1st of 2024. This MEEIA docket represents the first opportunity in which a free-market alternative should supersede a proposed MEEIA program (business demand response) that has historically been controlled by a natural monopoly.

Q. What do you see as the role of utility regulation when a free-market option is available?

A. In describing my job to elected officials or the public at large I often begin by stating that I am paid to be skeptical. For example, much of my MEEIA testimony expounds on my skepticism of this application being in the best interest of all ratepayers. Less often am I tasked with emphasizing why the Missouri Public Service Commission, the Office of the Public Counsel, and all the attendant activities associated with our jobs are necessary.

Economic regulation of natural utility monopolies is necessary because of the inherent market imperfections that result from their existence. Economic regulation serves as a proxy for the free market and is necessary when there is no or very limited competition. Absent regulatory oversight, utilities would exploit their monopolistic position and the public at large would be worse off.

But natural monopolies' positions are not necessarily an inevitable, absolute outcome that cannot be modified or even absolved under emerging technological and market conditions.

In fact, history is full of examples of former natural monopolies that have either fell victim to creative destruction or were deregulated. As a result, consumer welfare has been infinitely better off (e.g., airline industry, telecom, railroads, large trucking, etc.).

To quote the father of deregulation, economist Alfred Kahn:

> "Whenever competition is feasible it is, for all its imperfections, superior to regulation as a means of serving the public interest."

Simply put, ARCs provide options that allow for customer choice. This competitive environment results in increased consumer welfare that comes with the attendant discipline necessary for a firm to survive in a competitive market.

Basic economic theory demonstrates that when firms have to compete for customers, it leads to lower prices, higher quality goods and services, greater variety, and more innovation. The Missouri Public Service Commission has historically recognized this fact, so much so that competition is cited in the Commission's motto, as shown in Figure 2.

Figure 2: Snippet of Missouri Public Service Commission's "Mission Statement" [8]

Mission Statement

We will:

- ensure that Missourians receive safe and reliable utility services at just, reasonable and affordable rates;
- support economic development through either traditional rate of return regulation or competition, as required by law;
- establish standards so that competition will maintain or improve the quality of services provided to Missourians;
- provide the public the information they need to make educated utility choices;
- provide an efficient regulatory process that is responsive to all parties, and perform our duties ethically and professionally.

Q. How would competition in demand response benefit the Missouri public?

A. Competitive ARC's operate in most U.S. states today at no direct cost to ratepayers. Voltus, CPower, or some other ARC do not require ratepayer funds to operate. In this MEEIA proposal though, Evergy Missouri requests that the Commission allow it to continue to fill that free market role through direct subsidies from captive ratepayers.

Q. Given the current market make-up in SPP, can you guarantee that Voltus, CPower, or some other entity would step up and fill the void that would exist if Evergy Missouri no longer provided demand response programs?

A. I can't. No ARC opted to intervene in these Evergy MEEIA dockets. I'm concerned that they elected not to intervene here because they were denied intervention in the current Ameren MEEIA docket.

Q. What was the Commission's Staff's position on demand response programs in direct testimony?

A. Staff witness Jordan Hull filed testimony on the topic but did not take a formal position. He did acknowledge that some business demand response customers may elect to work with a private aggregator as opposed to Evergy Missouri.

[8] Missouri Public Service Commission (2024) About the PSC. https://psc.mo.gov/General/About_The_PSC

Q. Do you agree with Mr. Hull?

A. Not in total. I disagree that Evergy Missouri may lose customers to competing ARCs.

Put bluntly, if the Commission supports a ratepayer-subsidized business demand response program there is no incentive for ARCs to participate in Missouri. It's extremely tough to make money against a subsidized competitor—and frankly not worth it when other neighboring states allow for even playing fields.

SPP will be required to implement FERC Order 2222[9] in the near future, which will necessarily allow for more market alternative options. I struggle to see how Evergy Missouri's ratepayer-subsidized demand response program can operate under the FERC Order 2222 format. I also struggle to see why having ratepayers subsidize this business demand response program is in their best interest when free market alternatives exist.

Q. You have spoken at length on the business demand response side, do you have any opinion as it pertains to the residential demand response program?

A. I do. I believe the residential demand response program has been successful but that the investment is largely redundant now that ratepayers have invested over one billion dollars in AMI hardware, the attendant software, and an Evergy-specific private 4G network. The

[9] Issued in 2020 by the Federal Energy Regulatory Commission (FERC), Order 2222 aims to improve how distributed energy resources (DERs) participate in the electricity market. DERs include, but are not limited to: rooftop solar panels, battery storage systems, and demand response aggregators.

FERC Order 2222 works by:

- Opening wholesale markets to DER aggregations: Traditionally, wholesale electricity markets only allowed participation from large power plants. Order 2222 lets aggregators, which pool power from many DERs, compete in these markets alongside traditional sources.
- Removing barriers for DER participation: By setting standards for areas like minimum size and location requirements, the order makes it easier for DERs to contribute to the grid.

Overall, Order 2222 is supposed to:

- Increase competition: More players in the market could drive down electricity costs for consumers.
- Boost grid flexibility and resilience: DERs can provide power during peak times or emergencies, making the grid more stable.
- Encourage innovation: Easier participation in the market could incentivize further development in DER technologies.

residential demand response program pays customers to allow Evergy Missouri to take control of their appliances and lower their electric usage during peak hours. However, customers are already paying the cost and the attendant profit for AMI meters, which allow for time-of-use rates, where customers can participate in rate plans that allow them to save money by adjusting their energy usage to curb peak demand.

We now have two nearly identical investments that accomplish the same thing. Why pay for both? And why reward the utility for what effectively amounts to double-dipping? At a minimum the evaluation, measurement, and verification ("EM&V") associated with determining attribution associated with this program will likely be very contentious, if the Commission agrees to support the residential DR program.

Q. What are your specific recommendations?

A. Business Demand Response: I can't definitively state today what Voltus, CPower, or any other ARC would do given the current SPP market if Evergy Missouri's demand response program was not approved. As such, I reluctantly support the Evergy Missouri Business Demand Response program as it is the most cost-effective program in the proposed portfolio. Stated differently, if the choice is between no demand response or subsidized demand response, I will choose the latter. The real tragedy here is the lost (or at least delayed) opportunity to encourage competition and as a result the public interest is worse off.

Residential Demand Response: My primary recommendation for the residential demand response program is to cease it and focus on pricing electricity more accurately to reflect cost causation. My secondary recommendation is to continue supporting the existing investments (already rebated thermostats) and encourage a "bring your own thermostat" approach into the program for interested customers. *But*, I do **not** recommend continuing to rebate thermostats because we already have redundant investment in place—namely AMI meters. In this manner, my secondary recommendation serves as a complement to the very large but underutilized AMI investment.

IV. Business Programs

Business Programs Problems: Programs' designs negate progress made during extensions.
Contractor quality control issues are a concern.
Tax rebates and KC Building Performance Standards negate attribution.

Q. What is Evergy Missouri proposing in regards to its business programs?

A. Evergy Missouri is proposing three business programs at a cost of approximately $75 million over a four-year period.

Q. Can you briefly describe those programs?

A. I will attempt to. Table 1 attempts to break down each program with a brief description, the budgeted amount, and targeted demand and energy savings associated with each program.

Table 1: Breakdown of Evergy Missouri's Proposed Business Programs and sub-programs

Program	Budget	Energy Goal	Demand Goal	Focus
Whole Business	$56 M	248,552 MWh	54.7 MW	Lighting, HVAC, Insulation, thermostats[10]
Hard-to-Reach	$13 M	43,183 MWh	6.3 MW	Focus on business social service sector
Business Education	$6 M	N/A	N/A	Building Operator Certification, Building Codes, Benchmarking

[10] Per the Company's description "Incentives will be modified as needed to respond to market prices, with the goal of the incentive being approximately 50% of the incremental cost." See Appendix 8.1 page 21 of 38 (emphasis added).

Q. Are these programs consistent with previous applications?

A. In part. One unique aspect is the increased emphasis on education by Evergy throughout its portfolio.

Q. Above and beyond your objections to the filed portfolio, what specific concerns do you have regarding the suite of Business Programs?

A. I have several.

For instance, the current draft does not cap the amount of incentives that can be allocated for lighting. The previous one-year extensions to Evergy's MEEIA Cycle III went to great lengths to minimize free ridership with the absence of a full EM&V. One of those critical components was a cap on lighting expenditures for Evergy Missouri to reach its target. For example, in the current one-year extension at least 40% of the business programs expenditures need to be devoted to non-lighting measures or the Company will incur a financial penalty.

Q. Why has lighting been limited in the extensions?

A. For two primary reasons, first, the federal Energy Independence and Security Act ("EISA") lighting standards have increased the efficiency of lighting to such an extent as to inundate the market with efficient lighting. In short, rebates are not necessary to move the market because the market has been mandated to move.

The second reason is to encourage building shell and heating/cooling measures that represent larger energy and demand savings.

Moving forward, to the extent that any subsidized business programs are approved, the Commission would be well served by continuing the negotiated trend set out during the previous one-year extensions. Absent a cap on business lighting expenditures Evergy's Business Programs will likely be entirely driven by lighting sales because they are considered "low hanging" energy efficiency measures.

Q. Won't EM&V solve for that concern?

A. The issue of lighting has historically been heavily litigated and will certainly be again if the Commission is silent on this issue in this case. The original MEEIA 1 cycle was driven entirely on CFL lighting—an inferior lightbulb that became technologically obsolete within a couple of years of its release and left a hazardous legacy to one's health (it contains mercury) if not properly disposed of. Evergy Missouri claimed windfall profits from CFL lighting measures that are now effectively banned in the United States.[11] To the extent that the Commission approves any business demand-side management programs, I implore the Commission to limit any lighting measure expenditures to 25% of the business budget in year 1; 20% in year 2; 10% in year 3; and, finally, none in year 4. Any subsequent MEEIA filings should omit business lighting in its entirety.

Let me stress that this is a very generous outcome for Evergy Missouri as a strong case can be made that lighting should be omitted in its entirety from this portfolio. Ratepayers should not be subsidizing measures that would naturally occur. Otherwise we are just heavily subsidizing lighting contractors.

Q. Are the concerns you raised in your direct testimony about the principal-agent problem with contractors, the generous tax incentives for energy efficiency upgrades, and select city and county building code standards applicable to Evergy Missouri's suite of business programs?

A. Yes. Although not as pronounced, the principal-agent problem surrounding contractors applies to commercial and industrial buildings, just as it does to residential homes.

Federal tax breaks available to businesses also far exceed the rebates Evergy Missouri is making available to commercial and industrial customers, calling into question proper

[11] The phasing out of fluorescent bulbs is linked to the RoHS initiative. RoHS stands for "Restriction of the use of Hazardous Substances", and it aims to limit the amount of hazardous chemicals in electronics — mercury is one of them. Until now, there was an exemption for CFL and other fluorescent lamps. Compact fluorescent lamps ("CFLs") as well as T5 and T8 tube (commercial CFL lighting) production halted in the United States on February 1, 2024. The Biden Administration has proposed to ban the sale of any CFL's by 2028. https://natlawreview.com/article/biden-administration-sets-2028-date-unplug-sale-most-cfls-under-energy-efficiency

attribution. Finally, as stated in my direct testimony, the City of Kansas City has the power to levy financial fines on buildings of a certain size that do not meet strong energy efficiency levels or meet energy benchmarking standards. All three of these factors should have an impact on the attribution that Evergy Missouri can claim and will likely result in a contentious EM&V process.

Q. Do you have any additional concerns?

A. It is unclear to me what ratepayers are getting out of the proposed $6 million in business education and why the estimated budget is allocated entirely to incentives when no measures are being provided. As such, I reserve the right to amend my testimony based on discovery that I will issue before surrebuttal.

Q. Please restate your recommendations for the Commission on Evergy's Business Programs if they elect to approve some manner of MEEIA business programs.

A. My primary recommendation is to cap the expenditures on lighting at 25% in year 1, 20% in year 2, 10% in year 3, and no lighting measures in year 4. The market has moved. We would be better served by attempting to control for heating and cooling measures that will have more of a pronounced impact on minimizing fuel costs from likely volatile market prices.

Further recommendations center around net-to-gross ratios, which I will discuss in the EM&V section of my testimony. Whether the EM&V process is prospective or retrospective—it will almost certainly be contentious. In a sense, it already is with Evergy's proposed NTGs so out-of-line with the reality of the world it operates in. I have also articulated my concerns about redundancy, attribution, and opportunity costs in this testimony and in my direct testimony. Given these concerns (and others) I believe it is appropriate to hit the pause button as it pertains to business programs until a more cost-effective statewide program can be introduced in the future. Finally, at present, I find no compelling argument for ratepayers to allocate $6M for business education without further detail.

V. Residential Programs

Residential Program Problems:

Single Family New Construction should be removed
Multi-family New Construction should be removed
Appliance Recycling should be removed
Education Programs should be removed
PAYS should be included and updated w/ FASTPASS & Stacking Option
Increased Marketing on Filter Removal & Real Estate

Q. What is Evergy Missouri proposing in regards to its residential programs?

A. Evergy Missouri is proposing one large program with many possible subsets totaling $37 million over a four-year period. I interpret the application as allowing Evergy to have the fungible ability to allocate funds across the subsets as no specific sub-category of budgets were proposed.

Q. Can you briefly describe those programs?

A. I will attempt to. Table 2 attempts to break down each program with a brief description, the budgeted amount, and targeted demand and energy savings.

Table 2: Breakdown of Evergy Missouri's Proposed Residential

<table>
<tr><th>Program</th><th>Budget</th><th>Energy Goal</th><th>Demand Goal</th><th>Focus</th></tr>
<tr><td>Whole Home Program(s)

1. Home Products
2. Appliance Recycling
3. Home Comfort
4. Single Family New Construction
5. Multi-Family New Construction</td><td>$37M</td><td>66,382 MWh</td><td>27.9 MW</td><td>Varies considerably and budget is fungible across subsets

1. Point of sale and online
2. Freezers and refrigerators
3. Insulation/HVAC
4. New home build
5. New multi-family build</td></tr>
<tr><td>Home Energy Education</td><td>$2.5M</td><td>N/A</td><td>N/A</td><td>Codes/Standards
Market Influencer
Education</td></tr>
</table>

Q. What is your position regarding the Whole Home Program(s)?

A. The Whole Home Program appears to be a catch-all for at least five separate programs. With the caveat that I maintain that the Commission reject Evergy's application in its entirety, if the Commission does elect to approve something, I would recommend that the single family and multi-family new construction, and the appliance recycling sub-programs be removed due to their historically high free-ridership levels (e.g., new construction) and historically poor cost-effective ratios (e.g., appliance recycling).

Energy Star (or Energy Star-like) new construction builds, whether single or multi-family is undertaken almost entirely by niche developers who would build to high standard levels regardless of rebates. The finite funding available could be better utilized in programs that can be linked to positive attribution associated with Evergy's rebates.

Appliance recycling has proven to be largely cost ineffective in my decade of experience with these programs. The act of picking up and transporting old refrigerators to recycling locations far away (often many states away), has historically proven to be a poor program. Evergy's customers would be better served by either reallocating the funding attributed to this program to other programs or by cutting the funding entirely.

Q. Did the Evergy application include a cost-benefit ratio for the subset programs?

A. No. The Company's cost-benefit ratio was put forward with all residential programs as one.

Q. Is that problematic?

A. Yes. Presenting the ratios in this manner has the effect of promoting measures/programs that would otherwise not be cost-effective. Of course, this is predicated on the assumption that the cost-effective calculations are correct to begin with, which I have argued and continue to argue is not correct.

Q. What is your position regarding the residential education program?

A. It should be removed and the money allocated to it should be reallocated towards the Company's existing PAYS program which Evergy is no longer recommending continue (more on this later in testimony). The idea that some products are more efficient than others is no longer a new and novel idea to the public at large. There is also an abundant amount of information available to the public on this issue. There are also no energy or demand savings associated with this program. To the extent the Commission approves any residential program the funds associated with this residential education program should be redirected either to another residential program (I recommend PAYS) or should be removed from the budget entirely.

Q. To the extent the Commission approves an education element for residential customers, what would you recommend?

A. I would focus on the real estate market and new home buyers. I strongly believe the most likely opportunity (outside of failure of said appliance) that someone will consider a large capital energy efficiency investment is when they are considering buying a new home. Evergy Missouri would do well to target home inspectors and make energy audits as common as checking for radon in the State. I have been saying this for years but have failed to see any movement on this untapped potential.

Q Are there any other educational activities that are worth emphasizing?

A. Yes. Stressing to customers that they need to change their air filters. The U.S. Department of Energy estimates that dirty filters raise an air conditioner's energy consumption by 5% to 15%.[12] I should note that to date, EM&V has not taken that adjustment into account which means, again, that MEEIA estimated savings are likely overstated. I do believe this education can be done via bill inserts and other traditional outreach mediums and does not require the amount of money that is currently allocated for the education program.

Q. Do you have any concerns around the Home Comfort sub-program listed?

A. I have grave concerns surrounding the principal-agent challenge articulated in my direct testimony as it pertains to this program.

To the extent the Commission approves the Home Comfort sub-program, I strongly recommend that Evergy Missouri tie the program to its existing PAYS program along with the modifications I recommend to PAYS. This would allow customers to "stack" PAYS's on-tariff financing options with any rebate they receive from the heating and cooling program. Strategic and purposeful layering of a properly designed PAYS tariff option alongside the rebate offering will enable greater efficiency gain opportunities for customers, who may otherwise not be able to afford a more efficient option. Simply put, better

[12] US Department of Energy (2024) Maintaining Your Air Conditioner. https://www.energy.gov/energysaver/maintaining-your-air-conditioner

coordination between programs should minimize free ridership and ensure greater savings for customers. Especially in the case of stacking PAYS and the Home Comfort program, the customer protections in place with PAYS also ensure that a heating and cooling unit is right-sized and the whole home is audited to ensure building shell measures are installed, where applicable. Absent that, customers could have a new EnergyStar HVAC unit functioning at less than efficient levels due to improperly sealed air ducts and/or poor insulation. The complexity involved in ensuring energy and demand savings actually materialize for such large capital investments necessitates a holistic approach to heating and cooling that is absent in the standalone heating and cooling program today. As a result, I am confident that energy and demand savings have been overstated in the past. Consequently, this has resulted in ratepayers overpaying for MEEIA. I will address PAYS and its omission more later in my testimony.

VI. Income Eligible Programs (both low and moderate)

Single-Family Low Income Eligible Problem:

No concerns

Multi-Family Low Income Eligible Problem:

Concerns surrounding administrative costs and consumer protections.

Single-Family Moderate Income On-Bill Financing Problem:

Represents an inferior program offering to the state-wide agreed to PAYS program.

New Construction, Home Products and Energy Efficiency Kits:

Should be rejected due to lack of detail, and free-ridership concerns

Q. Why are you calling low income programs "income eligible" programs?

A. Because it is less stigmatizing and more accurate. Many more customers are eligible for these programs than people realize. For example, the average Missouri state employee salary in 2024 according to ZipRecuriter is $49,886.[13] If that employee was the sole breadwinner in a family of three they would be eligible for the low-income weatherization assistance program because they make under 200% of the federal poverty line ($51,640). Calling a program low-income is open to interpretation (is low income 100% of the federal poverty level? 50%? 150%? 200%?) and the various program parameters administered by the State can attest to that. Framing these programs as income-eligible should minimize the stigma and hopefully allow these programs to be fully utilized.

Q. What are income eligible programs in the context of Evergy's proposed MEEIA?

A. The current manifestation is the most inclusive and includes social service and various non-profit entities beyond single and multi-family dwellings.

Low income eligible programs do not need to be cost effective per the MEEIA statute.[14] This results in a bit of a mixed blessing for this cohort. On the one hand, it guarantees (or at least historically has guaranteed) that there is at least some amount of money being allocated to customers that are largely priced out of deeper energy efficiency opportunities. However, this has historically been a very small percentage of an overall budget due in part to the fact that Evergy Missouri does not readily gain deep energy and demand savings from supporting these income-eligible programs like it would likely find in programs targeted toward more affluent and/or larger energy intensive customers. As such, low income eligible programs within a MEEIA portfolio attempt to solve for the problem of inclusivity, but often this comes at the expense of a larger budget overall and fewer energy and demand savings.

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[13] ZipRecruiter (2024) Government Employee Salary in Missouri https://www.ziprecruiter.com/Salaries/Government-Employee-Salary--in-Missouri#:~:text=While%20ZipRecruiter%20is%20seeing%20salaries,making%20%2487%2C958%20annually%20in%20Missouri.

[14] § 393.1075.4 RSMo.

Evergy has created a new income eligible program titled "moderate" income single family. This program is designed to replace the aforementioned PAYS program with on-bill financing for households between the 201% to 300% federal poverty level.

Q. What is Evergy Missouri proposing in regards to its income eligible programs?

A. Evergy Missouri is proposing one large program with many aforementioned subsets totaling $27 million over a four-year period. I interpret the application as allowing Evergy to have the fungible ability to allocate funds across the subsets as no specific sub-category of budgets were proposed.

Q. Can you briefly describe those programs?

A. I will attempt to. Table 3 attempts to breaks down each program with a brief description, the budgeted amount, and targeted demand and energy savings.

<u>Table 3: Breakdown of Evergy Missouri's Proposed Income-Eligible</u>

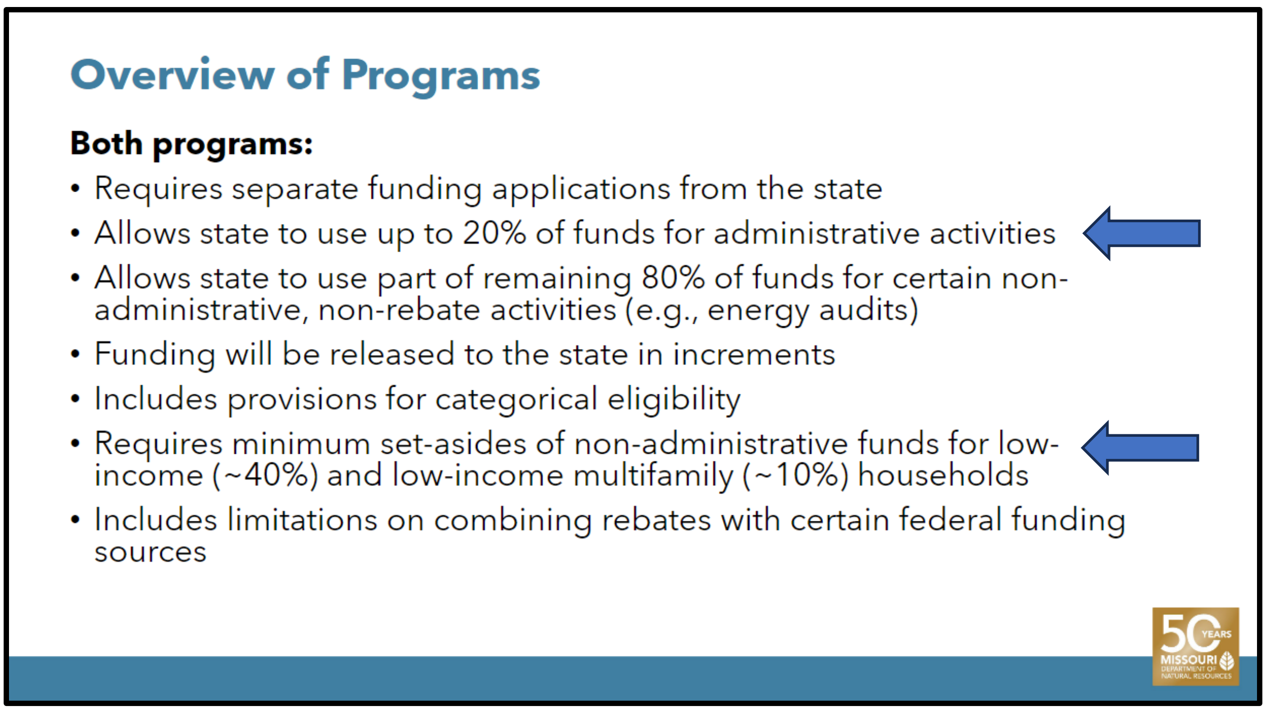
Program	Budget	Energy Goal	Demand Goal	Focus
Income Eligible Program(s) 1. Single-Family 2. Multi-Family 3. Moderate Single Family 4. Kits & Assessments 5. Home Products 6. New Single-Family 7. New Multi-Family	$27M	37,998 MWh	6.8 MW	Budget is fungible across subsets 1. 200% FPL or <80% AMI 2. 200% FPL or <80% AMI 3. 201% to 300% FPL 4. Free direct install measures 5. Free products online 6. Low-Income builders 7. Low-Income builders

Q. Before we speak to the individually proposed programs are there any variables at play with income-eligible MEEIA programs that need to be addressed?

A. Yes. Chief among them is the large amount of federal funding being allocated to the State of Missouri for the low-income weatherization assistance program ("LIWAP") and additional funding earmarked for low- and moderate-income households through the Inflation Reduction Act ("IRA"). This large infusion of capital, which puts no additional burden on ratepayer's bills, is accomplishing the very same objective as Evergy Missouri's income-eligible MEEIA programs.

Importantly, the $150 million in IRA funding that has been allocated to the State of Missouri comes with several important parameters. First, a minimum of 40% of the funding must be set aside to go to low and/or moderate-income households and **administrative overhead is capped at 20%**. That means $120 million of the $150 million must be spent on actual energy efficiency measures. This can be seen in Figure 3 which was taken from the Missouri Division of Energy's Inflation Reduction Act Home Energy Rebates Public Meeting held on April 16, 2024.

Figure 3: Missouri IRA Funding Parameters (emphasis added)[15]



[15] Hyman, M. (2024) Inflation Reduction Act Home Energy Rebates Public Meeting. Missouri Division of Energy. https://dnr.mo.gov/document/2024-04-16-presentation-ira-home-energy-rebates-public-meetingpdf

If the State of Missouri (and every other state that accepts federal funding) has to conform to these parameters, I find no compelling reason why Evergy Missouri can't conform to them as well.

Q. Do you have any concerns surrounding Evergy's proposed low income single family program?

A. I do not. Assuming administrative overhead is tempered.

Q. Are there any specific concerns surrounding the multi-family income-eligible program?

A. Yes. There is a concern that income-eligible renters could be displaced (and/or priced-out) of their rental units as a result of the retrofits. At least that is the federal government's concern. I direct the Commission to the IRA funding parameters surrounding consumer protections for income eligible multi-family domiciles. The Home Energy Rebates (Inflation Reduction Act Sections 50121 & 50122): Required Elements of a Consumer Protection Plan spells out specific consumer protections as it pertains to renters and landlords. They are as follows:

> **Additional Requirements for Owners of Low-Income Rental Housing**
>
> Certain elements of the Consumer Protection Plan will require different processes for renter occupied low-income dwelling units compared with owner-occupied single-family homes and non-low-income rental buildings. States must distinguish in their plans which additional requirements will apply to owners of low-income rental housing.
>
> States must describe how they will comply with the following requirements for dwelling units occupied by low-income renters for at least two (2) years following the receipt of a rebate:

- The owner agrees to rent the dwelling unit to a low-income tenant. This is a minimum requirement and affordability requirements should be commensurate with total rebate amount awarded.
- The owner agrees not to evict a tenant to obtain higher rent tenants based upon the improvements.
- The owner agrees not to increase the rent of any tenant of the building as a result of the energy improvements with the exception of increases to recover actual increases in property taxes and/or specified operating expenses and maintenance costs.
- The owner agrees that if the property is sold within two years of receipt of the rebates, the aforementioned conditions apply to the new owner and must be part of the purchase agreement.
- In the event the owner does not comply, the owner must refund the rebate.
- A specific and verifiable mechanism (e.g., addendum to the lease) is in place for providing tenants with written notice of their rights and their building owner's obligations.
- Enforcement and penalties are clear and sufficient to act as a deterrent for owner violations and provide for damages and attorney's fees recoverable by tenants.[16]

Q. Why are those protections in place?

A. To ensure that the investments made by the federal government for low-income renters continue to apply to low-income renters. Restated, a landlord could receive federal subsidies to retrofit their low-income building and then repurpose it for higher income tenants.

Q. Will those protections slow the deployment of energy efficiency upgrades in income-eligible multi-family buildings?

A. They likely will. They will also be difficult to enforce.

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[16] U.S. Department of Energy. (2024) Home Energy Rebates (Inflation Reduction Act Sections 50121 & 50122): Required Elements of a Consumer Protection Plan. State & Community Energy Programs. file:///C:/Users/markeg/Desktop/cpp-required-elements_040524.pdf

Q. Do you support the same protections for Evergy Missouri's income-eligible multi-family program?

A. I do; however, I am open to feedback and adjustments to recognize the inherent trade-offs in attaching additional strings to subsidies and the necessary checks-and-balances to ensure after-the-fact income-eligible renters are not displaced. I realize this is easier said than done, and plan to engage the DOE between now and when I file surrebuttal testimony to determine how exactly they intend to enforce these consumer protections.

Q. Has Evergy proposed low-income new build single and multi-family construction in the past?

A. No.

Q. Do you support Evergy's proposed low-income new build single and multi-family construction subprogram proposal?

A. No. The application is largely void of details on this subset of programs other than the Company's plans on not tying subsidies to a Home Energy Rating System ("HERS"). Which raises the question whether any standard would be put in place. Not tying these programs to a HERS standard, negates the ability to hold these new constructions to the energy efficiency standards the program presumably wants to achieve. I believe this program would be too easy to exploit by contractors and not accomplish the goals it aspires to achieve.

Q. Evergy is proposing to replace PAYS with their own on-bill financing option (i.e. Single Family Moderate Income Financing Program). Do you agree with this proposal?

A. No. If approved, this would be a serious set-back for progress made to date with PAYS and would put other utilities in jeopardy regarding program continuity and shared cost savings from economies of scale.

Q. What is problematic with Evergy's single-family moderate income financing program?

A. It is a considerably inferior option to Evergy's existing PAYS program. Evergy's proposed program eliminates hard-fought consumer protections tying PAYS performance to actual realized bill savings. There is very little detail about this program in Evergy's application and the little detail that is provided gives me great concern.

Q. Can you speak to some of PAYS' challenges to date?

A. I can. PAYS has admittedly struggled since its inception due to a variety of factors including but not limited to:

- The program was launching during the COVID outbreak;
- The increased cost of supplies within the greater KC metropolitan area; and
- Customer interest exceeding the amount of auditors available, resulting in prolonged delays.

However, the program has shown improvements and modifications have been made based on lessons learned and Evergy Missouri's persistence. Still, more can and must be done. Simply put, if demand-side management is going to work in Missouri now that lighting standards have phased out, PAYS is the path forward. If not, I struggle to see how MEEIA programs (on the residential side) can be justified.

Above and beyond the stacking of heating and cooling rebates with the PAYS tariffed option at the point of sale, I recommend the program be modified to include a FastTrack HVAC PAYS option, which is described in detail in Schedule GM-R-1.

Q. What is the FastTrack HVAC PAYS option?

A. The overwhelming majority of HVAC systems are replaced when those units fail. Although there should be many factors that go into selecting the right replacement, most customers find themselves in a stressful situation where a replacement unit needs to be installed immediately. Getting multiple quotes or shopping around is not a luxury available for most customers, especially if they have to stay at a friend or relative's home or a nearby hotel because they cannot stay in their homes due to not have cooling at a time when the temperature has reached one hundred degrees.

Speaking from experience, this very same circumstance happened to my family and me this summer. I had to make suboptimal financial decisions because the health of my family was at stake.

The FastTrack concept is designed to help customers in that very situation—the point of failure moment—by easing the financial impact and ensuring energy efficient options are prioritized for long-lasting energy and demand savings. I encourage stakeholders and the Commission to review Schedule GM-R-1, which is a document drafted by EEtility, the Missouri State PAYS implementor, who I challenged with finding a solution to the "replace on failure" option that plagues our heating and cooling programs.

Q. Are there other adjustments that can be made to PAYS?

A. Sure. Targeting energy intensive users would be a start. Bulk buying of HVAC units would also be a big cost savings option. Considerable economies of scale in purchasing power could be obtained across utilities.

Q. What if the utility doesn't rebate all of the HVACs it buys in bulk?

A. They could simply sell them to the various Missouri Community Action Agencies who are charged with weatherizing homes across the state and are currently paying marked-up retail costs for units today. There are some practical concerns to address (e.g., storage), but nothing that appears insurmountable at first blush.

Q. Would any entity be harmed if the utility sells the HVACs it bought in bulk to various Community Action Agencies as you suggest?

A. Presumably the vendor/brand that was not selected. However all vendors/brands would have an opportunity to offer the best deal.

Q. How would such a program achieve economies of scale and bring the overall costs of the HVAC measures down?

A. Ideally, it would be through a joint agreement with all of the utilities. Strength in numbers produces the economies of scale realized through bulk buying. Not an easy task, but not impossible either.

Q. What is your recommendation for the income-eligible programs?

A. I have several.

All things being equal, unless Evergy Missouri agrees to cap administrative overhead for its low-income-eligible programs below 20% of the allocated budget, I cannot support them. The Commissioners should not support an income-eligible program where the majority of the expenditures are not going to income-eligible customers. The fact that current programs are so out-of-sync with federal parameters set in the IRA for similar programs underscores that these programs have historically been an inefficient use of ratepayer funds.

To the extent the Commission approves an income-eligible multi-family program, I also recommend that it have certain consumer protections in place that minimize the displacement of low-income renters. On that provision, I am open to feedback and will work to provide suggestions in surrebuttal if necessary for consideration.

I also suggest the Commission reject funding for the energy efficiency kits, home products, and new (single and multi-) family construction programs. All of these programs fall victim to one or more of the following problems: excess free-ridership, redundancy with federal funding, and are goodwill programs whose savings do not come close to justifying the costs.

I also recommend that Evergy's moderate income on-bill financing option be rejected in favor of the far superior PAYS offering. Moreover, I have made several suggestions regarding modification of the PAYS program (e.g., FastTrack option, bulk buying, targeting energy intense users) that I believe would support a more robust program moving forward.

Finally, I am opposed to the Commission allowing Evergy to treat funding for income eligible programs as a fungible option at the Company's discretion. Otherwise, I fear a whole lot of money is going to be spent on expensive energy efficiency kits that no one utilizes.

VII. Pilot Programs

Pilot Program Problems: No concerns

Q. What is Evergy Missouri proposing in regards to pilot programs?

A. Evergy Missouri is requesting $1.6 million in funding over four-years for potential pilot program funding. The application provides five potential pilot programs for consideration, but none of the programs have been confirmed.[17] In effect, Evergy Missouri is proposing to adopt a process similar to previous MEEIA iterations where stakeholders convene and select specific pilot programs for consideration.

To the extent that a MEEIA portfolio is approved, I am not opposed to the pilot program process that Evergy Missouri has articulated.

Q. Do you have any recommendations regarding the pilot programs?

A. I continue to maintain that Evergy Missouri should move forward with an abridged demand-side management offering until market parameters and program design changes occur. To the extent that the Commission approves Evergy Missouri's MEEIA application as proposed, or select parts of it, I take no issue with what Evergy Missouri has drafted for its

[17] Those programs include the following:
1.) 3D Printed Homes
2.) Swimming Pools as Heat Sinks for AC/HP
3.) Smart Panels
4.) Real Time Energy Management System ("RTEM") for Commercial and Industrial Customers
5.) Hard-to-Reach Business On-Bill Financing

pilot program format and will likely have additional suggestions as to the specific programs moving forward.

VIII. Urban Heat Island

UHI Problems: Small concern around funding amount

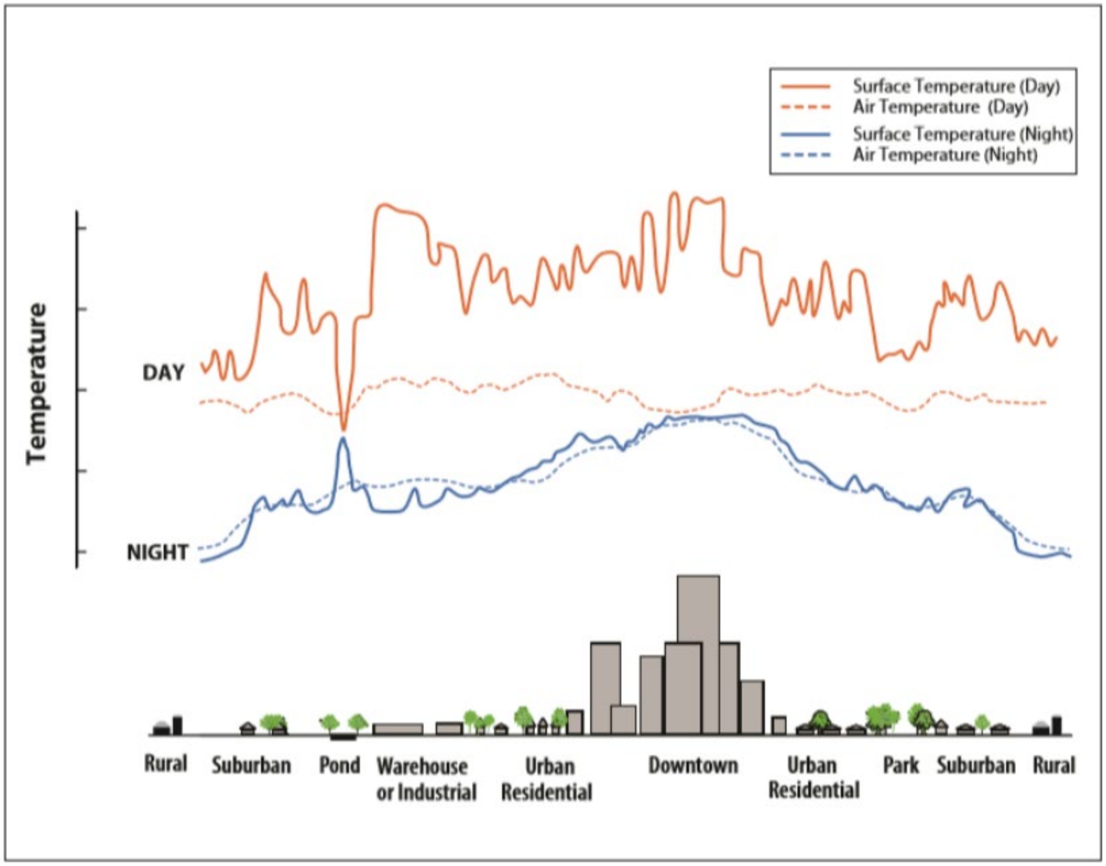
Q. What are urban heat islands?

A. Many urban and suburban areas experience elevated temperatures compared to their outlying rural surroundings; this difference in temperature is what constitutes an urban heat island.

On a hot, sunny summer day, the sun can heat dry, exposed urban surfaces, like roofs and pavement, to temperatures 50 to 90°F (27 to 50°C) hotter than the air,[18] while shaded or moist surfaces—often in more rural surroundings—remain close to air temperatures. Surface urban heat islands are typically present day and night, but tend to be strongest during the day when the sun is shining. Think about a parking lot in the hot sun—most of us know that if we're walking barefoot, we should stick to the white lines and avoid the black pavement. Now scale that up across a city. The darker the surface, the less vegetation there is, and the more developed the area (e.g., conventional black roofs, sidewalks, roads and parking lots) will result in higher surface and consequently increases the air temperature. Surface temperatures have an indirect, but significant, influence on air temperatures. For example, parks and vegetated areas, which typically have cooler surface temperatures, contribute to cooler air temperatures. Dense, built-up areas, on the other hand, typically lead to warmer air temperatures. Because air mixes within the atmosphere, though, the relationship between surface and air temperatures is not constant, and air temperatures typically vary less than surface temperatures across an area as seen in Figure 4.

[18] Berdahl P. and S. Brez. (1997) Preliminary survey of the solar reflectance of cool roofing materials. *Energy and Buildings* 25:149-158.

Figure 4: Variations of surface and atmospheric temperatures



Q. Does the city of Kansas City's urban profile produce an urban heat island?

A. Yes. Kansas City has one of the worst heat islands in the United States and is forecasted to produce more pronounced results into the future if left alone.[19]

Q. Could you provide some basis for the Urban Heat Island problem in regards to Kansas City?

A. Yes. In late 2014, the Kansas City region was named a Climate Action Champion by the White House and the Department of Energy. Area partners, including 119 local governments in the bi-state (Missouri and Kansas) area over 4,423 square miles committed

[19] The Weather Channel's "climate disruption index" projects Kansas City to be the fifth most impacted city in the future with only New York, Las Vegas, Minneapolis and New Orleans exceeding it.
http://stories.weather.com/disruptionindex

to developing a regional climate resilience strategy that would assess climate change trends for the Kansas City region, identify potential risks and vulnerabilities, and include alternative mitigation, adaptation and resilience options. A Climate Resilience Workshop series was created that was designed to help decision makers and community partners more intentionally link cross-cutting strategies across multiple sectors, including air quality, ecosystem management, energy, hazard mitigation and emergency planning, environmental justice, land use, public health, transportation and water. Championed and coordinated by the Mid-American Regional Council ("MARC") two separate independent research studies were conducted on the urban heat island phenomenon for the Kansas City area. The first study was conducted by a third-party research firm, Leidos, and completed in September of 2015. Titled, "Energy Savings of Heat-Island Reduction Strategies for the Kansas City Area," the study focused solely on the city of Kansas City. A second study was undertaken by Lawrence Berkeley National Laboratory for the greater Kansas City Region (both Missouri and Kansas). I have included the Leidos study in GM-2 and the Berkeley PowerPoint in GM-3. The Berkeley Study is expected to be released publicly this fall. Additional work on this topic that was conducted independently from MARC includes research from the University of Missouri, Kansas City ("UMKC") graduate student Kyle Reed and Climatologist Dr. Sun Fengpeng.[20]

Q. How is this issue relevant to MEEIA?

A. Mitigating Kansas City's UHI should be strongly correlated with reduced energy usage. Simply put, the hotter an area is the more likely the residents in that area will be running their HVACs at full force.

An analogous situation could be made with a home energy audit. In a full home energy audit, a blow-door test is involved that identifies leakage and areas within a home that are wasting energy. This is important because it identifies the specific areas that need action for

[20] I have included a copy of Kyle Reed and Dr. Sun Fengpeng's findings in a presentation given to KCPL and other stakeholders in GM-4. GM-5 contains the presentation given by the Executive Director of the Global Cool Cities Alliance, Kurt Shickman also given on June 25, 2019 at KCPL's headquarters.

the entire home to benefit. Similarly, the studies and work around the UHI in Kansas City to date were effectively one super larger audit, but instead of a home it was over the entire city.

As a result of that work, certain areas of the greater Kansas City area have been identified and are now targeted for collective mitigation action by public, private, and non-profit entities. Ratepayer funding to date, has effectively functioned as seed money to both substantiate the problem and as a means to capture federal funding to help address the problem. [21]

Q. Did you raise this issue in Evergy's last MEEIA application?

A. I did. I also advocated for the issue in the subsequent extensions where parties agreed to funding for UHI mitigation planning through 2027.

Q. Can you provide a list of stakeholders currently involved in this project?

A. Yes. The following are active participants in the Independence Ave. UHI Reduction Project:

- City of Kansas City Missouri
- Evergy Missouri
- Mid America Regional Council ("MARC")
- Missouri Office of Public Council
- University of Kansas
- University of Missouri, Kansas City
- ICF
- Bridging the Gap
- Missouri Department of Natural Resources,
- Midwest Energy Efficiency Alliance
- Applied Energy Group, Climate and Energy
- Metropolitan Energy Center,
- Johnson County, City of Overland Park
- Unified Government,
- Hoxie Collective
- BikeWalk KC

[21] See GM-6. for my PowerPoint presentation at the 2021 Advancing Renewables in the Midwest Conference on this topic.

- USGS

Additionally, the following represent participants in the Johnson County Heat Mapping Campaign

- City of Olathe,
- Unified Government of Wyandotte County,
- CAPA Strategies,
- Groundwork Northeast Revitalization Group,
- Johnson County Museum,
- K-State Research and Extension,
- National Oceanic and Atmospheric Administration
- National Weather Service,
- Clean Air Now KC,
- University of Kansas,
- Armourdale Neighborhood Association,
- Heart to Heart,
- Johnson County,
- City of Overland Park,
- City of Mission

Finally, here is list of neighborhood associations and non-governmental entities that are also contributing input:

- Indian Mound North,
- Indian Mound South,
- Scarritt Point,
- Pendleton Heights,
- Independence Plaza – Lykins, Sheffield, Paseo West Parkview,
- Independence Plaza - Forgotten Homes.
- Independence Ave. Community Improvement District,
- NE Kansas City Chamber of Commerce,
- Jerusalem Farm,
- Independence Boulevard Community Church,
- Kansas City Public Library,
- Bridging the Gap.

Q. Can you provide a list of current and potential funding?

A. Yes. There has been roughly $15M in funding awarded for mitigation strategies and UHI mapping to date. Specifically:

- MEEIA via the Missouri PSC – roughly $3M (to date) awarded to Evergy for the Independence Ave.
- Urban USDA Urban and Community Forestry Grant - $12M awarded to the Kansas City; and
- NOAA Urban Heat Island Mapping Campaign JOCO/Unified Government – roughly $20k to support continued work on heat island analysis.

Additionally, the collaborative has applied for the following federal grants:

- EPA Carbon Pollution Reduction Grant - $198.5M application submitted by MARC on April 1st. Heat mitigation through green infrastructure is earmarked within the application.
- EPA Environmental and Climate Justice Community Change Grant – application to be submitted by the city to address residential energy efficiency (funding amount unknown).
- EPA Thriving Community Regranting Program – application to be submitted by MARC. Up to $5M possibly available to the overall region.

Q. Can you speak to any specific actions undertaken on Independence Ave. UHI Reduction Project to date?

A. Yes, above and beyond what was discussed earlier, the Mid-American Regional Council ("MARC") has entered into agreements with the University of Kansas ("KU") and University of Missouri Kansas City ("UMKC") to examine pre and post implementation impact of mitigation measures. Contractual agreements are also in place with the Hoxie Collective, a community outreach consultant team who has facilitated community meetings with neighborhood associations and general outreach. The new contracts extend those partnerships through December 2027. Additionally, Evergy's Green Team has been tasked with tree planting.

The Midwest Energy Efficiency Alliance Staff has also worked with stakeholders on mitigation and community outreach strategies based on best practices which has included regularly scheduled neighborhood association and community meetings. In 2024, planned activities include the following:

<u>Energy Saving Trees</u> – site identification and species selection for energy saving trees. Evergy's green team is providing support for maintenance and technical assistance to avoid conflicts with utilities.

<u>Energy Savings Kits for Residents</u> – provide residents within the study corridor with an energy assessment and free direct install of energy efficient items.

<u>Energy Assessments for businesses</u> – Similar to savings kids for residents, the Green Team will provide assessments for businesses and support identifying opportunities to increase energy savings at businesses.

Q. What is Evergy Missouri proposing in these applications as it pertains to the UHI?

A. It is not entirely clear to me.

What Evergy is proposing in this case is an effectively what has already been approved. Albeit with some slight modification in terms of budgeted dollars from that extension. Table 4 provides that breakdown.

Table 4: Stipulated UHI budget compared to Company proposed UHI budget

Case Number	2024	2025	2026	2027	2028
EO-2019-0132 (approved)	$216,000	$990,330	$857,580	$717,080	N/A
EO-2023-0369/70 (proposed)		$500,580	$990,330	$857,580	$717,080

It appears as though they would like to continue providing seed funding, continue being engaged as a relevant stakeholder, and possibly leveraging their experience with DSM programs where applicable as further funding comes in.

Q. Do you object to this approach?

A. I do. All things being equal, I would prefer to adhere to the agreement that has already been approved.

Moreover, a rejection of Evergy's filed MEEIA application does not cease funding for UHI related activities as parties are still bound by the stipulated one-year extension. With that in mind, and I would prefer to adhere to the agreement that has already been approved and continue to recommend that the Commission reject this application in its entirety.

Q. What was your goal behind the initial seed and continued low levels of funding?

A. The goal was and continues to be the need to secure large amounts of federal funding to have a material impact on the various initiatives. I am cautiously optimistic that we will accomplish that.

Q. Is there an opportunity for further support through MEEIA?

A. Absolutely. I believe this initiative has the ability to have a material impact on energy and demand savings which justifies ratepayer funding, but I believe the benefits extend far beyond energy and demand savings which should align with Evergy's public role (above and beyond MEEIA). At this point, it may be a bit premature to opine on what role that will be until further announcements are made regarding federal funding.

Q. What would you recommend to the Commission if they approve a MEEIA with modifications as it pertains to the UHI?

A. I would recommend a $1M in annual funding with an opportunity to provide requests for further funding/initiatives to the stakeholders in this case as appropriate within the cycle itself. This could be accomplished by holding annual check-ups where further funding could be redirected from poor performing programs or increased if warranted.

IX. Hard-to-Reach Energy Education Programs

Q. What is Evergy's "Hard-to-Reach Energy Education Program"?

A. It is the Company's four-year $1.23M marketing campaign specifically designed to educate customers about the merits of energy efficiency through three primary channels:

1.) KC-LILAC (Kansas City—Low Income Leadership Assistance Collaborative)
2.) Market Influencer Training & Outreach
3.) Customer Education (focus on low-income demographic)

Q. Do you have any comments on this initiative?

A. I support the KC-LILAC collaborative and believe that the initiative has the ability to make a meaningful impact at the grassroots level within the community. My experience in working in that collaborative has been extremely positive and I believe it should exist regardless of MEEIA funding.

I have no strong feelings on the other two elements but would strongly recommend that any marketing/education be void of mass giveaways as I believe such actions are largely an imprudent use of ratepayer funding.

X. Throughput Disincentive Mechanism

Throughput Disincentive (“TD”) Mechanism Problem:

Overstates benefits and over collects revenues.

Q. What is throughput disincentive?

A. Utilities have an incentive to increase sales as a means of increasing revenue and profit. Energy efficiency is designed to minimize energy usage. Hence, all things being equal, there is a “disincentive” for the utilities to promote energy efficiency because it impacts their bottom line. To incentivize utilities to promote energy efficiency measures, utilities are allowed to collect an amount to compensate them for the energy they did not sell due to the implementation of their MEEIA programs. The Commission's MEEIA rule defines throughput disincentive as "the electric utility’s lost margin revenues that result from decreased retail sales volumes due to its demand-side programs." 20 CSR 4240-20.092(1)(TT).

Q. What is the throughput disincentive mechanism?

A. The MEEIA statute explicitly allows for the recovery of the throughput disincentive (aka “lost revenues”) to make utilities “neutral” on the issue of energy efficiency.[22] As such, MEEIA allows for periodic true-ups based on engineered savings estimates (that are also periodically updated) in the Company’s Technical Resource Manual (“TRM”). After the amount of lost revenues is determined they are then collected from ratepayers as part of the MEEIA surcharge. Determining what exactly was “lost” has been a subject of much debate and complexity (e.g., measure usage patterns, end-use categories, rate class allocations and rate class margin rate, timing of rate cases, and other interactions) over the history of MEEIA, and, as a result the mechanism has been adjusted over time.

[22] § 393.1075.3(2) RSMo.

Q. What is the Company proposing in this case in regards to its throughput disincentive mechanism?

A. Effectively the same mechanism that was in place during the period of 2019-2021 with self-imposed net-to-gross ("NTG") ratios that are considerably higher than what was agreed to in the Company's most recent MEEIA one-year extension.

Q. What is a NTG ratio?

A. The NTG applies both to the throughput disincentive ("TD") and to the earnings opportunity ("EO"). It is my understanding that the Company has proposed a prospective NTG for measures as it relates to the TD and a retrospective NTG for the EO. The historical use of the NTG ratio is as follows:

NTG Ratio = 1.0 – Free Ridership + Spillover

Stated differently, if a program has a NTG ratio of .50 that would mean that Evergy was responsible for 50% of measures adopted by participants. The other 50% would be considered free riders and would have adopted the measure/action regardless of the Evergy specific rebate.

Spillover, functions as an "adder" to the NTG ratio and is premised on the idea that the rebate that Evergy gave for a measure made the customer "aware" of the potential for energy efficiency savings in other measures *and* said customer took tangible actions to reduce energy consumption as a result of that. An example would be a customer buying an EnergyStar HVAC because of Evergy's rebate and then purchasing a non-rebated energy efficient measure like an Energy Star Window.

The mental gymnastics involved in this ratio assumes that if Evergy didn't have an approved MEEIA then the customer would have bought an inefficient HVAC and would never have even considered buying the Energy Star windows.

Q. Do you believe spillover is a reasonable input into the NTG calculation?

A. Not really. In the example I gave above the utility is getting extra credit in the form of larger NTG ratio for actions that are not cost effective to begin with (e.g., the Energy Star Window is not a measure that is rebated in Evergy's MEEIA portfolio because it is not cost effective). At face value, this makes little sense to me, and that presupposes that I believe Evergy's rebates for individual items induce further energy efficient actions—which I find considerably debatable.

Q. What are Evergy's proposed NTG ratios as it pertains to its throughput disincentive mechanism?

A. The Company recommends the following breakdown as seen in Table 5.

Table 5: Evergy's proposed NTG ratio as it applies prospectively to the throughput disincentive

Program	NTG	Program	NTG
Whole Home Efficiency Program	0.80	Business Education	N/A
Home Energy Education Program	N/A	Res Demand Response	1.0
Income Eligible Programs	0.98	Bus Demand Response	1.0
Hard-to-Reach EE Education	N/A	DR Education	N/A
Whole Business	0.88	UHI Mitigation	1.0
Hard-to-Reach Business	0.83	Pilots	1.0

Q. What is Evergy's current agreed-to NTG ratios?

A. Per the unanimous stipulation and agreement entered into in Case No. EO-2019-0132 for PY 2024:

> **Throughput Disincentive.** The Signatories agree that for the purposes of Throughput Disincentive calculations only, for PY5 will utilize a 50% net-to-gross factor for all residential (including income-eligible) and business heating, ventilating and air conditioning ("HVAC")[23] measures in consideration of potential deployment of federal rebates and tax credits. An 80% net-to-gross factor will be utilized for all

[23] Air Source Heat Pump ("ASHP"), Central Air Conditioner ("CAC'), Ground Source Heat Pump ("GSHP"), Air Conditioner ("AC") Mini-split, Room AC, Air Sealing, Insulation

other measures. There will be no net-to-gross true-up. The throughput disincentive for the PY5 will utilize ex ante gross savings with no true-up.[24]

Q. What rationale has Evergy given for the increased NTG ratios?

A. They haven't given any.

Q. Why would they change it?

A. To make more money.

Q. Is there any compelling reason to believe the NTG ratios would increase in the past year?

A. I cannot think of any.

Q. What is Staff's concern regarding the throughput disincentive mechanism as raised in its direct testimony?

A. It is difficult to know where even to begin. In short, Staff opposes the mechanism and stresses that the complexity of the mechanism has increased four-fold due to the introduction of time-of-use rates and other confounding variables. I would direct the Commission to the direct testimony of Sarah L.K. Lange and Hari K. Poudel, PhD for more detail on Staff's position on this issue.

Q. Do you agree with Staff's proposed throughput disincentive mechanism?

A. Not presently. I recognize and agree with the issues Staff raised, and to be clear, I am not in favor of Evergy Missouri's proposed throughput disincentive methodology. However, I am not convinced which of the two proposals is the lesser evil for ratepayers at the moment. As such, I will update my position in surrebuttal after I have reviewed the Company's (and others if applicable) response to Ms. Lange's proposal.

[24] Case No. EO-2019-0132 Unanimous Stipulation and Agreement P.5 item #8

Q. Are there any other issues the Commission should take notice of as it pertains to the TD?

A. First, the Commission should be cognizant that this issue amounts to many millions of dollars representing "lost revenue" that the Company is claiming it needs to recover because they induced market changes. For the many reasons articulated in this and previous testimony, the Commission would be well served to have a healthy degree of skepticism about this claim.

Second, Evergy's proposed NTG ratios are only one element of the TD. The other element is the ex ante savings (or the "perfect world" engineered assumed savings) that apply to each measure. Stated differently, each measure has a certain amount of assumed savings tied to it based on the assumed useful operating life of the measure. These savings represent an "ideal" engineering scenario which hardly reflects real life. The collective categorization of those "ideal" savings are included in the Company's Technical Resource Manual ("TRM").

I firmly believe the TRM is overstated in its saving assumptions due to the many issues I articulated in my direct and rebuttal testimony on operational inefficiencies, the rebound effect, and principal-agent challenges. For all of those reasons (and more) I recommend the Commission reject Evergy's filed application. To ignore these operational realities would be to give undue credit and money to Evergy shareholders at the expense of captive ratepayers.

XI. Evaluation, Measurement, and Verification ("EM&V")

<u>EM&V Problem</u>:

> *Estimating counterfactuals is a "challenging" exercise made more complicated by all the issues plaguing this application.*

Q. What is EM&V?

A. Per the U.S. Department of Energy:

> Evaluation, Measurement and Verification (EM&V) is the collection of methods and processes used to assess the performance of energy efficiency activities so that

planned results can be achieved with greater certainty and future activities can be more effective.

Objective of EM&V

The main objective of an EM&V process is to assess the performance of an energy efficiency program or project and to measure the energy or demand savings and verify if the program is generating the expected level of savings. EM&V data can inform recommendations for improvements in program performance. Having a clear understanding and description of how the program is expected to deliver results is critical to an effective EM&V process. The distinct components of EM&V provide the framework to ensure a successful program implementation . . . . The EM&V process is analogous to the evaluation of business or employee performance. For example, did the company meet its profit or growth objective? What can be done to improve performance? In the energy efficiency market, the EM&V process answers the question of whether the investments in energy efficiency achieved the objectives expected or required.

Q. How much money is Evergy Missouri suggesting to allocate for EM&V?

A. Evergy Missouri states that it has set the budget for EM&V at no more than 5% of the program costs ($ 213 million), or $ 10.7 million in total, if fully approved.

Q. How was EM&V handled during the one-year extensions?

A. Parties agreed to have limited EM&V. EM&V was performed but it had very little financial repercussions. This was because the earnings opportunity was based on program spend amounts and not on energy and demand savings achieved.

Q. Why would OPC agree to something like that?

A. The one-year extension portfolios were designed in such a manner as to effectively “trim the fat” from MEEIA programs. That is removing programs that were more aspirational in nature (e.g., educational activities, kits, etc.) and measures in which the market had already moved (e.g., lighting). The parties also placed parameters to incentivize the utility to move toward deep energy and demand savings.

Q. What is Evergy Missouri's request for EM&V in this case?

A. Evergy Missouri is effectively requesting the same functions (impact and process) implemented prior to the extensions but from a prospective perspective as opposed to a retrospective review.

Q. What is your position on EM&V moving forward?

A. It is difficult to take a position on what exactly EM&V should be given all of the challenges with this application. If the Commission moves forward any form of an approved MEEIA, I am making the following EM&V recommendations:

1.) It should be conducted on a retrospective basis;
2.) All baseline shifts to energy efficiency measures should be applied immediately upon federal adoption;[25]
3.) To minimize costs, only one EM&V contractor should be utilized, and the management of that contract should fall on the Missouri Public Service Commission Staff to ensure the creditability of the results;
4.) A random controlled trial evaluation/audit of randomly selected participants should occur to determine the impact of the principal-agent problem. The results of these evaluations/audits should be generalized across the program and applied to the NTG ratio and TRM saving assumptions;
5.) Incentive payments to free riders should be calculated in the TRC as an incentive payment;[26]

[25] For example, if the baseline conditions for an HVAC change in PY2, then upon adoption of that change the Company would adjust the gross and net kWh and kW savings accordingly. Thus the Company would get credit for larger savings in PY1 but would be tempered to reflect real-world conditions in PY2 and each subsequent year thereafter. This is the opposite of what the Company is proposing.

[26] This is based on modifications adopted by the California Public Service Commission's cost effective test in 2007. (importantly, all ratepayer-funded programs in the United States utilize the California Cost-Effective Tests, including

6.) The technical resource manual should be adjusted both for operational inefficiencies and shorter useful life of measures; and

7.) AMI data should be utilized to determine appropriate rebound effect impact.

XII. Earnings Opportunity

Earnings Opportunity ("EO") Problem:

Windfall profits

Q. How much profit is the Company proposing to be rewarded if they meet their self-imposed targets?

A. Evergy Missouri suggests $39,982,690 over four years as an earnings opportunity. This amounts to a 18.75% return on a $213 million investment in which shareholders put up ZERO capital.

As to throughput disincentive earnings, if you conservatively assume the throughput disincentive earnings from Cycle II and III as a rough proxy for this Cycle IV, then add another $57 million to the $39,982,690. If the throughput disincentive earnings are added to Evergy Missouri's proposed earnings opportunity, the return for Evergy Missouri now approaches 45% of the $213 million investment. Again, this is with Evergy's shareholders putting up ZERO capital.

Q. Is it a concern that Evergy selects the energy and demand savings targets it is then rewarded for achieving?

A. Yes. This is a huge concern. There is of course a perverse incentive for the utility to set as low of a target as possible with the highest possible return. This application accomplishes that feat. What is more telling to me, is how little testimony has been written on that topic to date. In a regulatory world where MEEIA made sense stakeholders would be placing their

Missouri). It has recently come to my attention that Missouri has not applied this modification to its EM&V review to date. Thus, Missouri is overstating the benefits of its MEEIA programs.

resources on the energy and demand savings targets and trying to extract the most benefit for customers. That's not the case here because there are so many changes to the market, competing subsidies, operational and verification challenges and overall convoluted problems in recovery mechanisms that there is very little reason to argue for larger targets if stakeholders have little confidence in how MEEIA operates to begin with.

Q. Evergy claims that its earnings opportunity is reasonable and in line with other utilities. What is your response?

A. In 2025 the Missouri Division of Energy ("DE") will roll-out an energy efficiency rebate program across the State of Missouri. Its funding totals approximately $150 million. Importantly, no more than 20% of that funding can be used on administrative overhead (e.g., marketing, third-party contractors, consumer safeguards, EM&V, etc.). Now this money is not DE's. It comes from taxpayers. Taxpayers, however, will not pay any throughput disincentive (or "lost revenues") and will not be forced to reward DE with a 18.75% profit for its work (i.e., managing contracts of third-party implementers), but the programs will have to be cost-effective and adhere to consumer protections.

Evergy Missouri's MEEIA program, on the other hand, if approved as drafted, will spend $213 million. There are no caps on administrative overhead, and based on historical precedent, some programs will allocate more funding to administrative overhead than actual measures. Importantly, the $213 million is not capital that Evergy Missouri had to acquire from investors. It comes entirely from ratepayers through the MEEIA surcharge. There are no repercussions to Evergy Missouri if it fails to meet the targets it set. Evergy Missouri will also receive approximately $57M in throughput disincentive assuming this cycle would operate in line with previous ones.

Notably, when analyzing whether its programs are cost-effective Evergy Missouri does not include costs from an assumed earnings opportunity or throughput disincentive, even though those are costs that are recovered through the MEEIA surcharge. Table 5 provides an illustrative breakdown of these differences.

Table 5: Tale of Two Energy Efficiency Programs

	Missouri Division of Energy IRA	**Evergy Missouri MEEIA Cycle 4**
Total Budget	$150 M	$213 M
Earnings Opportunity	None	$39,982,690 M[27]
Throughput Disincentive	None	Yes Estimated at greater than $57M based on Cycle 2 & 3 payout
Cap on Administrative Overhead?	Yes, 20%	No
Does the cost-effective ratio include the costs associated with an earnings opportunity and throughput disincentive?	There is no EO or TD cost	No

Q. Table 5 poses the question "Does the cost-effective ratio include the costs associated with an earnings opportunity and throughput disincentive?" Can you expound on that?

A. Yes. Evergy Missouri's application is full of examples of various California demand-side management tests that break down both costs and assumed benefits. These ratios are misleading because they omit two large cost categories—the earnings opportunity and the throughput disincentive.

[27] Does not include added carrying costs which would need to be added to this total.

Q. What is the impact of that omission?

A. The results of these tests overstate the benefits that actually occur. Evergy Missouri is asking the Commission to collect a profit (earnings opportunity) and lost revenues (throughput disincentive) from customers. By definition those are costs included in the overall surcharge recovery. It only seems appropriate to include *all costs* when determining whether or not a MEEIA program is cost-effective.

Q. What is your recommendation for an earnings opportunity for Evergy Missouri?

A. I don't think Evergy Missouri's portfolio makes sense for the reasons articulated in my direct testimony and this testimony. Later in this testimony I articulate a reasonable path forward which will include an earnings opportunity component. As an alternative option, to the extent the Commission approves any of this filed package I recommend they set the earnings opportunity on a percentage of Evergy Missouri's overall budget, calculated using half of its authorized return on equity at the time, assuming their self-imposed goals have been met.

It should be noted that this is an extremely generous concession considering that Evergy Missouri is not putting up their own capital and is effectively functioning in the exact same manner as the Division of Energy will be—managing third-party contractors. There is no downside to the utility for moving forward with a MEEIA plan regardless of its formation—only an upside.

XII. Alternative Path Forward

<u>Alternative Path Forward includes approving the following for a two-year abridged cycle:</u>

- Core programs
- Standard, Non-Lighting, Business Program;
- No EM&V, TD mechanism remains as is, EO mirrors 50% of approved ROE percentage relative to expended budget and called events (similar to one-year extensions); and
- Work towards a 3rd-party state-wide administered program across utilities for increased efficiencies for future MEEIA programs.

Q. Can you articulate your position on Evergy Missouri's filed MEEIA Cycle IV application?

A. Given the challenges outlined in my direct testimony and above in this rebuttal testimony, those in the testimony of OPC witness Mantle, and those identified by the MO PSC Staff the proposed Evergy MEEIA Cycle IV portfolio makes little sense and is clearly not in the public interest.

We can do better than this MEEIA portfolio which largely amounts to a convoluted wealth transfer to shareholders, contractors, evaluators, and Evergy Missouri management. The successive one-year extensions negotiated by the PSC Staff, OPC, and Evergy Missouri were admirable attempts at "making things better." This application erases that progress. It doesn't regress things back to the gamesmanship that took total advantage of ratepayers in Cycle I but it is a regression nonetheless.

We owe the Missouri citizens a better and more economically efficient outcome than this, especially given the current manifestation of high interest rates, a looming recession, political uncertainty, and the seemingly endless rate and surcharge increases with no end in sight. We are also dangerously close to entering into willful ignorance if we fail to recognize all of the available more certain, efficient, and more cost-effective alternatives that exist before us today including utilizing the existing investments we have made (time-of-use rates); the certainty that Evergy Missouri must make plant investments (renewables and fossil fuels); free market alternatives (demand response); the taxpayer-funded subsidies (tax breaks and IRA rebates); and the naturally occurring energy efficiency adoption as a result of market and federal codes and standard changes that are occurring concurrently during the proposed period.

My position is not to approve the application as drafted.

If the Commission elects to dismiss the more cost-effective alternatives and approve some modified version of what Evergy Missouri requests, I have also made recommendations throughout this testimony. Finally, I offer up an entirely different two-year alternative option for the Commission's consideration. I believe this alternative achieves the intent of the MEEIA statute, § 393.1075 RSMo.

Q. What does your alternative plan consist of?

A. My recommendation for a two-year MEEIA-light portfolio are broken down in Table 6.

Table 6: Two-year $60M Alternative MEEIA-Light Portfolio

Program	Annual Budget	Rationale/Description	Earnings Opportunity
Income-Eligible Single, Multi-family & KC-LILAC	$5 M	The underserved and overlooked demographic	Half of currently approved ROE % basis based on spend
Modified Residential PAYS	$5 M	The only residential program that provides a closed-loop opportunity to verify the most efficient savings	Half of currently approved ROE % basis based on spend
Business Demand Response	$9 M	The most cost-effective program	Based on number and size of events called
Residential Demand Response	$5 M	The second most cost-effective program assuming no further rebated investment	Based on number and size of events called
Business Standard, Non-Lighting	$5 M	A straightforward obligatory business program that only rebates building shell and heating/cooling measures	Half of currently approved ROE % basis based on spend
Urban Heat Island	$1 M	Help secure long-term funding	Half of currently approved ROE % of basis based on spend

Q. What other details do you believe are pertinent to this proposal?

A. I recommend that administrative overhead not exceed 20% for all programs minus PAYS, which I would cap at 35% given the complexity and long-term design. My default option is to leave the throughput mechanism as it is presently, but I reserve the right to amend that in surrebuttal based on parties' rebuttal testimony. I also recommend that no EM&V be conducted, and that Evergy Missouri agree to work with stakeholders over the next two years to formulate a state-wide MEEIA program similar to the State of Massachusetts or Wisconsin with the goal of aligning all of our investor-owned utilities and potentially even the co-operatives and municipals to the extent they want to participate.

Q. Can you briefly describe why a statewide MEEIA program is in the long-term best interest of Evergy Missouri and the rest of the State?

A. The easiest answer is efficiency gains from economies of scale in purchase power, marketing, and reduced duplicative services. There are much easier ways to accomplish the promotion of demand-side management than what is currently employed. The MEEIA statute and individual utility-sponsored programs may have made sense in 2009, but they do not today. I have a lot to say on this topic, but that is largely beyond the purview of the immediate topic at hand.

Q. Does this conclude your testimony?

A. Yes.

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
In 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 GEOFF MARKE

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Geoff Marke, of lawful age and being first duly sworn, deposes and states:

1. My name is Geoff Marke. I am a Chief Economist for the Office of the Public Counsel.

2. Attached hereto and made a part hereof for all purposes is my rebuttal testimony.

3. I hereby swear and affirm that my statements contained in the attached testimony are true and correct to the best of my knowledge and belief.

Geoff Marke
Chief Economist

Subscribed and sworn to me this 8th day of July 2024.

TIFFANY HILDEBRAND
NOTARY PUBLIC - NOTARY SEAL
STATE OF MISSOURI
MY COMMISSION EXPIRES AUGUST 8, 2027
COLE COUNTY
COMMISSION #15637121

Tiffany Hildebrand
Notary Public

My Commission expires August 8, 2027.