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Direct Testimony of Geoff Marke
Case No. ER-2026-0143

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Case No.: ER-2026-0143

DIRECT TESTIMONY

OF

GEOFF MARKE

Submitted on Behalf of the Office of the Public Counsel

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

CASE NO. ER-2026-0143

** _____ **
Denotes Confidential Information that has been redacted.

July 14, 2026

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DIRECT TESTIMONY

OF

GEOFF MARKE

EVERGY METRO

CASE NO. ER-2026-0143

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. What are your qualifications and experience?

A. I have been in my present position with OPC since 2014 where I am responsible for economic analysis and policy research in electric, gas, water, and sewer utility operations.

Q. Have you testified previously before the Missouri Public Service Commission?

A. Yes. A listing of the Commission cases in which I have previously filed testimony and/or comments is attached in Schedule GM-1.

Q. Please summarize the acquisition application.

A. The purpose of my direct testimony is five-fold:

1. Provide context on emerging risks related to large load customers;
2. Put forward ratepayer modifications and reporting requirements related to the large load tariff;
3. Articulate my position regarding Construction Work in Progress ("CWIP") within the context of large load customers;
4. Recommendations for a future workshop where AI-related costs can be discussed; and
5. Recommendations related to income-eligible ratepayers.

II. RISK

Q. Is Artificial Intelligence ("AI") profitable yet?

A. No.

If it was, we wouldn't stop hearing about it.

Depending on who is considered part of the AI industry, this answer can vary considerably (e.g., Nvidia), but on the whole, no, AI as an industry is not profitable yet.

Parsing AI revenue and costs is incredibly difficult because the AI players obscure massive infrastructure investments, and a significant portion of AI industry "revenue" is simply internal big tech spending circulating within a closed-loop ecosystem. Furthermore, software costs have shifted from predictable subscriptions to unpredictable, usage-based fees, which obscures a direct figure, but the website "Is AI profitable yet" attempts to answer that question with publicly available information and reports from reputable sites. They estimate that approximately $1.5 trillion has been spent by the industry to date, with only $769 billion to show in profit. 67% of that profit can be attributed to one company—Nvidia at $516 billion.[1]

Q. Who are Nvidia's clients?

A. Nvidia's customer base is highly concentrated, with major tech giants and hyperscalers. Nvidia would have a lot of exposure if the market were to turn bearish on AI or if select clients fail to meet their obligations.

Q. How does the current stock market index compare to its inflation-adjusted earnings?

A. That ratio, known as the Shiller Price to Earnings Ratio (or Shiller PE Ratio), paints a troubling picture.[2] The current Shiller PE ratio for the S&P 500 is around 41.8. A ratio of 41.8 means that, on average over the last ten years, investors are willing to pay $41.80 for every $1 of profit

[1] Is AI profitable yet (2026) https://isaiprofitable.com/

[2] Usually, to find out if a company is cheap or expensive, people compare the current stock price to how much profit (earnings) the company made in the last year. But profits can go up and down because of things like recessions or sudden booms. Economist Robert Shiller made a special rule: instead of just looking at last year's profit, average out the profits over the last 10 years and adjust for inflation (how money loses value over time).

the stock market brings in. Historically, the long-term ratio is around 17. A ratio of 41.8 approaches some of the highest levels ever seen and is comparable to the tech bubble in the late 90s. When the ratio gets this high, it is typically taken as a warning to expect lower-than-average returns in the years ahead. Because prices are so high, there is very little room to grow.[3]

Q. Have any reputable institutions issued warnings around AI data center expenditures recently?

A. Yes. The Bank for International Settlements ("BIS") put out its annual report and said,

> In the near term, the ongoing AI investment boom raises questions about the sustainability of the current economic expansion. The five largest hyperscalers are set to spend over a trillion US dollars on AI-related capital expenditure from 2025 through 2026. These commitments are outpacing earnings and the free cash flow of these firms, leading some to issue debt to raise additional financing. . . .
>
> Disappointment in returns could trigger a sudden pullback in financing and turn the capex boom into a protracted investment bust, with potential knock-on effects on financial conditions…should hyperscalers slow or halt the aggressive pace of capex deployment, many borrowers across the supply chain could struggle to replace lost revenue and service their debt. . . .
>
> Historical episodes of investment booms offer instructive parallels. The canal mania of the 1830s, the British railway mania in the 1840s, the electrification exuberance of the late 1920s (roaring 20s) and the dotcom boom of the late 90s all shared one common trait: a genuine technological breakthrough that attracted capital in excess of what commercial returns could ultimately justify.
>
> These episodes ended with an eventual reversal in investment, inducing economy-wide recessions. The scale and pace of the current AI investment boom accompanied

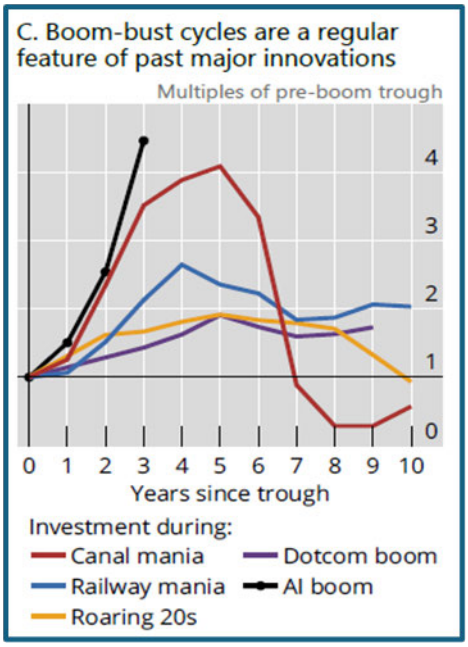
[3] For comparative purposes, when I filed surrebuttal testimony in the Ameren Missouri large load tariff docket, the Shiller PE ratio was 40.8. See Surrebuttal Testimony of Geoff Marke, Case No. ET-2025-0184 p. 32.

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by expectations of large productivity payoffs bear resemblance to these precedents, highlighting potential downside risks in the near term.[4]

Figure 1 provides an illustrative graphic of those boom-bust cycles identified by the BIS.

Figure 1: Bank for International Settlements boom-bust cycles

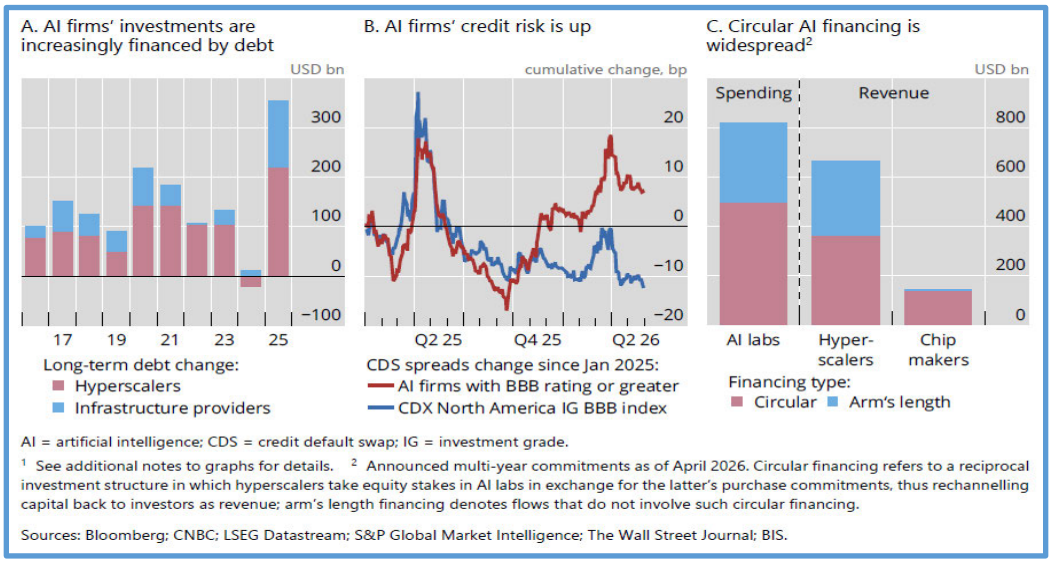


To be clear, the BIS's concern wasn't about revenues dropping—which would happen if hyperscalers slowed or halted their aggressive capex spending, but rather revenues tanking and borrowers within the AI supply chain unable to service their growing debt burdens. This risk is exemplified in Figure 2 taken from the same annual report.

[4] Bank of International Settlement (2026) Annual Report 2025/26. https://www.bis.org/about/areport/areport2026.pdf

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Figure 2: Corporate Credit is vulnerable to repricing on AI disappointments.



The Bank of International Settlements underscored the interdependent fragility of circular financing as follows:

> The opacity of AI-sector financing compounds these vulnerabilities. Hyperscalers, chip makers and AI labs are linked through a complex web of private arrangements. The most prominent is circular financing: chip makers and hyperscalers take equitystakes in AI labs or neocloud providers, who in turn commit to multi-year purchases of chips or computing power. Data centre construction is increasingly outsourced to third parties that lease facilities back to hyperscalers on long-dated contracts with embedded exit clauses. The terms of such deals are typically poorly disclosed, with risks of the same asset being pledged multiple times. Together, such arrangements account for a sizeable share of sector-wide financing and forward revenue.[5]

Q. Has Evergy identified new risks in its 10-K filings in 2026?

A. Yes. Listed first under Financial Risks is the following:

[5] *Ibid*. See also GM-2 for a full copy of the report.

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Evergy's business and capital investment plans depend, in part, on the viability of data centers and large load customers interconnecting with Evergy's utility subsidiaries.

> The Evergy Companies are experiencing current and projected load demands that exceed recent experience, creating a business need for new power generating resources and transmission facilities. Much of this demand is driven by interconnecting with and providing power to data centers and large load customers to serve an increasingly digital economy and to support artificial intelligence. The business and capital investment plans of the Evergy Companies are focused on meeting these current and projected needs. If these increased demands for electricity do not occur as projected or are not sustained as projected, for any reason, it could have a material adverse effect on the Evergy Companies' financial results.[6]

Evergy flagging data center viability as its primary financial risk is critical in this proceeding. The company's multi-billion dollar growth strategy is now tethered to highly concentrated, energy-intensive tech loads. Ultimately, this extreme reliance creates a delicate balance between massive financial upside and severe execution risk.

Q. Can you provide some color as to what risk factors are being reported by hyperscalers?

A. Many of the tech giants buy AI chips and memory, build massive data centers, and then reinvest their own cloud capacity into their AI subsidiaries. This creates a circular spending loop, which makes it difficult for investors to parse actual, sustainable consumer/enterprise revenue from internal capital cycles. One clear indication that things are not going well though, was noted by Bloomberg earlier this month when it reported that the largest builders of AI: Amazon, Alphabet, Microsoft, Meta, Nvidia, Apple and Oracle have collectively added $350 billion to their debt load over the last five years to fund data centers. While these

[6] Evergy, Inc. (2026) Form 10-K. https://investors.evergy.com/static-files/b9df1de0-d5f8-43d6-837a-2447936ab2b3 p. 28.

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companies still have comparatively large sums of cash reserves, operating cash flow alone cannot cover their expenses.[7]

> "I don't know that we know whether Amazon, Google, Microsoft and Meta are actually going to get a return on investment on this," said Jason Pompeii, a corporate debt analyst at Fitch Ratings. "It seems like a lot of demand hype that is very aspirational at this point."[8]

More troubling, S&P Global Ratings recently downgraded Oracle to the lowest possible investment-grade tier, leaving the company just one step above junk status.[9] According to S&P Global:

> Oracle's "growing AI infrastructure business is diluting its strong business risk profile," S&P analysts wrote. They added that they had previously "underestimated the scale of the investments required to expand the AI business and its impact on our overall view of Oracle's creditworthiness."[10]

Q. For illustrative purposes, what risks did Oracle articulate in its 10-K?

A. Oracle's 10-K includes a nineteen-page list of ways its AI investments could fail to pay off,

[7] Day, M. & I. King (2026) Big Tech Doubles Debt Load to $350 Billion in AI Spending Spree. *Bloomberg*. Reprinted in *Yahoo Finance*. https://finance.yahoo.com/technology/ai/articles/big-tech-doubles-debt-load-103000041.html
[8] *Ibid*.
[9] Goldfarb, S. (2026) Oracle Gets Credit Rating Downgrade. *The Wall Street Journal*. https://www.wsj.com/livecoverage/stock-market-today-dow-sp-500-nasdaq-07-09-2026/card/oracle-gets-credit-rating-downgrade-QkUs8plVb7BlZRnDwzi6
[10] *Ibid.*

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- overbuilding
- customer defaults
- excess leases
- stranded capacity
- credit risk
- power shortages
- GPU shortages
- site shortages
- permitting delays
- construction delays
- contractor failures
- zoning fights
- environmental rules
- water limits
- grid strain
- fixed-price contracts
- volatile power costs
- supplier delays
- shipping disruptions
- tariff shocks
- export controls
- geopolitical instability
- obsolete hardware
- service outages
- security flaws
- AI errors
- biased outputs
- copyright exposure
- privacy risks
- patchwork regulation
- compute restrictions
- cross-border limits
- weak adoption
- competitor advances
- legal liability
- reputational damage
- inability of customers to pay

Per Oracle:

> "We operate in rapidly changing economic and technological environments that present numerous risks, many of which are driven by factors that we cannot control or predict.[11]

And

> "In addition, some of our customers may be highly leveraged and subject to their own operating and regulatory risks and, even if our credit review and analysis mechanisms work properly, we may experience risks of non-payment and non-performance in our dealings with such parties.[12]

[11] Oracle (2026) Form 10-K. https://d18rn0p25nwr6d.cloudfront.net/CIK-0001341439/0723dfa7-be5f-4227-9da6-eff3cce376a8.pdf
[12] *Ibid*.

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The same week that the 10-K was released, Oracle sued the Wisconsin Public Service Commission over the Commission's imposition of strict collateral requirements dependent on favorable credit ratings.[13]

Former Kentucky Public Service Commission Chairman Kent Chandler was quoted on the topic by *DataCenter Knowledge* and stated:

> "Regulators are often more comfortable with cash-like assurances than corporate parent guarantees," Chandler told Data Center Knowledge. He said cash deposits and letters of credit are easier to recover than parent guarantees when utilities invest hundreds of millions – or even billions – of dollars to serve a single project.
>
> "In most instances, utilities are going to get rate recovery for their investments either way," Chandler said. "So it's not surprising to see regulators stepping in to look out for other captive customers."[14]

Oracle's case will be an interesting case study of how far regulators will go in requiring hyperscale customers to demonstrate financial strength before they allow regulated utilities to commit billions of dollars in new investment.

Following a peak market cap of $900 billion in September, Oracle has seen its stock fall by about 60% of its value in less than a year. [15]

Q. What should the Commission note from this?

A. Over-building things the world doesn't have use for, or is not ready for, typically ends badly. The Oracle case should be a huge red flag to proceed cautiously. Because Oracle's risks are the risks facing this entire industry, and by extension, they will be the risks that our utilities and captive customers will be exposed to as well if we invest capital in these customers.

[13] Kaeding, D. (2026) Oracle sues Wisconsin utility regulators over financial requirements for data centers. WPR. https://www.wpr.org/news/oracle-sues-wisconsin-utility-regulators-psc-financial-requirements-data-centers
[14] Snider, S. (2026) Oracle's Wisconsin Suit Tests How States Hedge AI Data Center Risks. DataCenter Knowledge. https://www.datacenterknowledge.com/regulations/oracle-lawsuit-tests-wisconsin-ai-data-center-credit-rules
[15] Novet, J. (2026) Oracle stock has worst week since 2001 dot-com bust as AI financing concerns escalate. CNBC. https://www.cnbc.com/2026/06/26/oracle-stock-ends-worst-week-since-2001-as-investors-dwell-on-finances.html

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Q. Putting aside Big Tech, are standard enterprises currently generating measurable financial returns on their AI spending?

A. It's not entirely clear. An often-cited 2025 MIT study titled *The GenAI Divide: State of AI in Business* suggests that 95% of AI deployments in the workplace have yielded no measurable business returns.[16] More recently, a study from the University of Pennsylvania's Wharton School of Business came to the opposite conclusion and found that 74% of businesses that measure ROI from their AI efforts were already seeing a positive return.[17]

Q. Why the discrepancy between the two studies?

A. They have different definitions of return on investment.

The MIT study examined whether or not AI pilots made it into production and delivered a profit. Restated, did results appear on the income statement? The report was based on a review of 300 publicly disclosed AI initiatives and structured interviews from 52 organizations and 153 senior leaders across four major industries.

In contrast, the Wharton study expanded its definition of "return on investment" by including individual productivity, employee retention, and operational efficiency. The Wharton study does not refute the MIT study, but it does suggest that the value produced from AI may be open for debate. Importantly, the Wharton study is self-reported and done in partnership with GBK Collective, a marketing strategy consulting company that advises on AI implementation. Readers can weigh that caveat accordingly.

Q. How has pricing changed for AI-related services?

A. AI platforms have been losing large amounts of money by heavily subsidizing the actual costs of its service. Those losses are no longer sustainable. Presently, the market is shifting away from artificially low, "all-you-can-use" subsidized AI pricing to limited free tiers,

[16] Challapally, A. et al., (2025) The GenAI Divide: State of AI in Business 2025. *MIT Nanda*. https://mlq.ai/media/quarterly_decks/v0.1_State_of_AI_in_Business_2025_Report.pdf
[17] Korst, J., S. Puntoni, & P. Tambe. (2025) Accountable Acceleration: GenAI Fast-Tracks into the Enterprise. University of Pennsylvania Wharton Business School. https://ai.wharton.upenn.edu/wp-content/uploads/2025/10/2025-Wharton-GBK-AI-Adoption-Report_Full-Report.pdf

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usage caps, metered billing, and outcome-based fees. From a seller's perspective, this makes sense given the up-front and ongoing capital-related expense related to AI. From a buyer's perspective, it means going from an "all-you-can-eat" flat fee to a rationing usage-based price structure with significant cost implications. Tech analyst Ed Zitron provides a useful analogy:

> Generative AI subscriptions are like if Uber charged users $20 a month for 100 rides of any distance under 100 miles, and if gas was $150 a gallon, and Uber paid for the gas because somebody insisted that oil would one day be cheap to meter.
>
> Uber would, eventually, decide to start charging users a monthly subscription to access riders, and bill them for the gas that they consumed. Suddenly users would go from paying $20 a month for 100 rides to paying $20 to access a driver and $26 for a 10 mile drive. Understandably, users would be a little upset.
>
> On an economic basis, a monthly subscription only makes sense with relatively static costs. A gym call sell memberships knowing roughly how much wear-and-tear equipment gets, how much classes cost to run, and how much things like electricity, staffing and water might cost over a given period of time.[18]

The most obvious example was seen when it was reported that an unnamed company was identified as having accidentally spent half a billion dollars in a single month on Claude AI after forgetting to set up usage limits for its employees.[19] This suggests a market correction is likely and is supported by public announcements already made by Amazon,[20] Tesla,[21]

[18] Zitron, E. (2026) AI's economics don't make sense. Where's Your Ed At? https://www.wheresyoured.at/ais-economics-dont-make-sense/

[19] Warwick, S. (2026) Mystery company accidentally blew $500 million on Claude AI in a single month — failed to put usage limit on licenses for employees. *Tom's Hardware*. https://www.tomshardware.com/tech-industry/artificial-intelligence/mystery-company-accidentally-blew-usd500-million-on-claude-in-a-single-month-failed-to-put-usage-limit-on-licenses-for-employees

[20] Hindy, J. (2026) Amazon is the latest tech giant to face the consequences of AI 'Tokenmaxxing' *CNET*. https://www.cnet.com/tech/services-and-software/amazon-ai-leaderboard-tokenmaxxing/

[21] Remy, H. Elon Musk and Tesla announce serious AI changes for workers. *The Street*. https://www.thestreet.com/technology/elon-musk-and-tesla-announce-serious-ai-changes-for-workers

Accenture,[22] Walmart,[23] Cisco,[24] Uber,[25] and Meta,[26] who have all introduced usage caps, discouraged wasteful use or pushed employees to cheaper models in a bid to keep AI spending under control. Notably, three of those companies cited above (Amazon, Tesla, and Meta) are either directly competing in the circular AI economy or are an affiliate to an entity competing in the circular AI economy.

Q. What other challenges are being introduced that complicate this change in pricing?

A. Cheaper foreign options.

In an ironic twist, AI companies have consistently argued that information on the internet should be deemed "fair use" and available for AI development and outputs. However, competitors are effectively using that same logic through a technique known as "distillation," where a compact, resource-efficient "student" model is trained to replicate the behavior and performance of larger, more complex "teacher" models. This is important because running and training AI models require massive investments. Model distillation allows developers to take that vast investment and condense it into "lightweight" models that can be deployed on edge devices (like phones and laptops). Per *Business Insider*:

> The fear is obvious. Why spend billions building the best AI models if someone else can recreate much of the intelligence for a fraction of the cost?
>
> That's a legitimate business concern. But here's the awkward part.

[22] Cox, J. (2026) The Tokenpocalypse Is Here: Companies Are Scrambling To Stop Spending So Much on AI. *404 Media*. https://www.404media.co/the-tokenpocalypse-is-here-companies-are-scrambling-to-stop-spending-so-much-on-ai/
[23] Reuter, D. (2026) Walmart says token limit on employee AI tool is about cutting down on duplicative vibe coding. *Business Insider*. https://www.businessinsider.com/walmart-ai-coding-tool-limit-duplicative-requests-2026-6
[24] John, J., R. Rosener-Uddin, & R. McMorrow (2026) 'We created a monster': companies rein in AI usage as costs strain budgets, *Financial Times*. https://www.ft.com/content/1d37cc08-e0aa-45a4-a45d-4ad282529314?syn-25a6b1a6=1
[25] Angelo, J. (2026) Uber burned through its entire 2026 AI budget in four months. Now its COO is questioning whether it's worth it. *Fortune*. https://fortune.com/2026/05/26/uber-coo-ai-spending-tokens-claude-code/
[26] Mann. J. (2026) Tokenminimizing: Meta Moves to Curb Employee AI Usage as AI Costs Reach Billions. *The Information.* https://www.theinformation.com/articles/tokenminimizing-meta-moves-curb-employee-ai-usage-ai-costs-reach-billions

> From 30,000 feet, distillation looks an awful lot like what AI companies have been doing to the rest of the internet. Scrape web content for free and without permission. Turn it into a product you sell. Argue it's fair use. Hope the lawyers sort out the details later.[27]

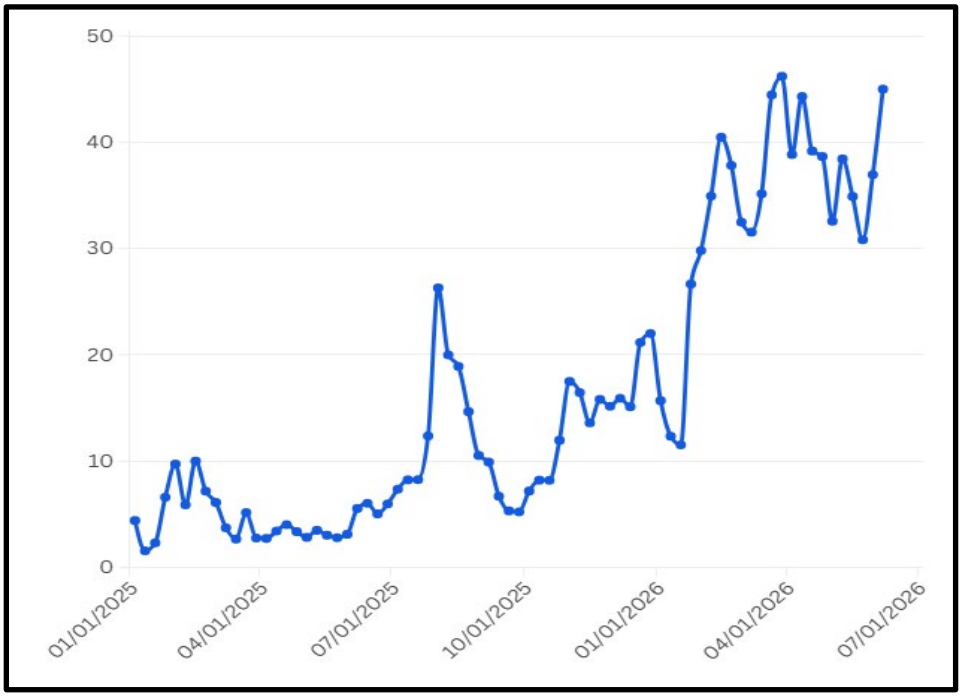
Anthropic, OpenAI and Google have all argued that competitors are harvesting their model's outputs at scale, effectively leading to a shortcut of billions of dollars of research for competitors and a massive risk to revenues for incumbent AI models.[28]

The combination of increased pricing and distillation from competitors is eroding the advantage US firms currently have over the AI market. A recent MIT Study revealed that Chinese open-source models have achieved approximately 90% of the closed-model performance on benchmarking metrics for PhD-level reasoning tasks at roughly 16% of the price.[29]

90% of the performance at 16% of the costs has proven to be an attractive option for many users. Since the start of the year, Chinese AI models have overtaken their US counterparts in token consumption, according to data from OpenRouter, an aggregation platform that allows users to access multiple AI models. No doubt this is being driven primarily by price, where open-source Chinese models are consistently cheaper than the leading offerings from Anthropic and OpenAI. The increase in Chinese AI models since 2025 can be seen in Figure 3 with nearly half of users opting for the cheaper Chinese versions.

[27] Barr, A. (2026) AI giants learn what everyone else on the modern internet already knows. *Business Insider*. https://www.businessinsider.com/ai-giants-learn-hard-truth-modern-internet-anthropic-openai-google-2026-7
[28] Metz, C. (2026) American A.I. Companies Say Chinese Copycats Are Quickly Catching Up. *NY Times*. https://www.nytimes.com/2026/07/06/technology/ai-distillation-china.html
[29] Nicol-Schwrz, K. (2026) Chinese AI models are gaining ground with U.S. companies as OpenAI, Anthropic costs surge. *CNBC*. https://www.cnbc.com/2026/07/07/chinese-ai-models-costs-us-openai-anthropic.html

Figure 3: Percentage of Chinese AI model usage by U.S. companies[30]



For an anecdotal example, in June, the AI startup Lindy moved from utilizing Anthropic's Claude models to DeepSeek, a Chinese AI company.

> "We did it, and you could see that cost curve go down, like, crash to the ground," CEO Flo Crivello told CNBC. He said the decision will save Lindy millions of dollars within months.[31]

According to Yacine Jernite, the Head of Machine Learning at Hugging Face:

> "There is a real risk that users get stuck having to choose between performant but expensive US proprietary models whose price and accessibility can quickly fluctuate, or using Chinese models as the only feasible alternative whenever they want to control costs or own their AI stack."[32]

[30] *Ibid*.
[31] *Ibid*.
[32] *Ibid*.

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Previous technological advances could rely on product or business "moats" that protected a company's market share and profitability. The most celebrated examples include Google Search, Facebook, and Windows. All three enjoyed:

Network Effects: when a product becomes more valuable as more people use it;

Switching Costs: where switching products becomes too expensive or time-consuming

Brand Reputation: a measure of customer loyalty often supported by legally protected intellectual property.

Economies of Scale: Cost savings from scale that can crowd out competition.

AI models struggle to maintain any of these traditional moats. Restated, a customer switching from ChatGPT to Claude to DeepSeek experiences very little friction or differentiation in terms of performance but an increasingly massive delta in costs.

Q. Why should the Commission be concerned about this?

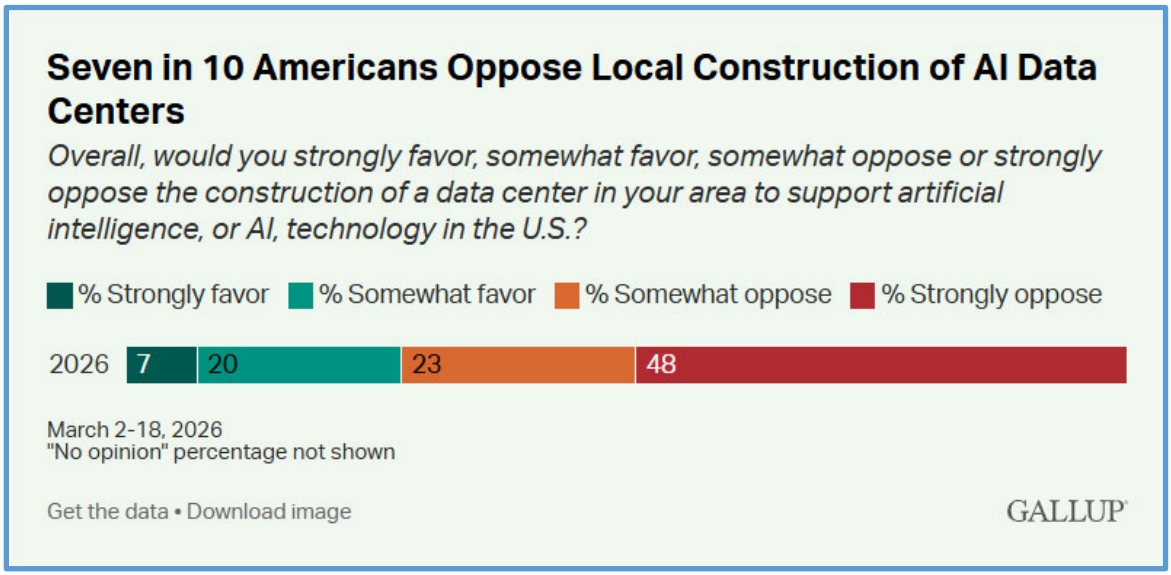
A. It calls into question the long-term viability of the resource and capital-intensive investments in data centers and, by extension, the risk of future stranded costs, further underscoring the risk-reward challenges I have been articulating for the past year.

Q. What about the public perception of data centers and AI?

A. It has not been good and appears to be getting worse. According to a Gallup poll, seven in ten Americans oppose constructing data centers for AI in their local area. Including nearly half (48%) who are strongly opposed, and only 7% who strongly support it. In fact, more Americans oppose (71%) a data center in their area than a nuclear power plant (53%). These numbers are reprinted in Figure 4.

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Figure 4: Gallup Poll on local construction of data centers



Gallup articulates the implications of its surveys as follows:

> For AI usage to expand in the U.S., data centers that can handle the necessary computing power will have to be built. Such centers have already been built in some areas, usually funded by the large technology companies seeking to offer AI services. But most Americans appear to be adopting a "not in my backyard" attitude to building additional data centers, and that attitude is especially intense, given that nearly half strongly oppose that construction.
>
> Overcoming this opposition stands as a major hurdle in the expansion of AI computing. The intensity of opposition means that proposed data centers are likely to spur grassroots activism from local residents as well as legal challenges. It also indicates that AI infrastructure could become an important campaign issue in local and state elections this year, and politicians who favor data centers in their area are likely taking a politically risky stance.[33]

[33] Jones, J.M. (2026) Americans oppose AI data centers in their area. *Gallup*. https://news.gallup.com/poll/709772/americans-oppose-data-centers-area.aspx

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The pushback is already being realized across the United States. For example, Carbon Direct identified 46 data center sites that were blocked, withdrawn or stalled indefinitely between January 2024 and May 2026. These projects represented $170B in planned investments.[34]

Q. How have the net-zero carbon emission pledges been going in relation to the AI data center buildout?

A. Poorly. Although there is certainly more solar production coming online than what would occur absent this build cycle, the level of pollution being produced to power AI Data Centers is concerning.

For example, less than a year ago, Amazon had pledged to reach net-zero emissions by 2040;[35] however, the company's newly released environmental report disclosed that its total electricity use jumped by 34% and resulted in a 16% increase in emissions. Emissions from "indirect sources" (e.g., manufacturing supply chains) were up 10% compared to a year ago and up 21% from 2019.[36]

Microsoft saw its emissions rise by 25% in 2025. A figure that does not include the 20-year, 2.67 GW power purchase agreement with Chevron to power its data center in West Texas. [37] [38]

Google saw its emissions rise by 18% in 2025 and is up 81% from its 2019 baseline.[39]

[34] Gutierrez, G. (2026) Community Opposition to AI Data Centers: Lessons Larned. https://www.carbon-direct.com/research-and-reports/community-opposition-to-ai-data-centers-lessons-learned
[35] Jessen. J. (2025) Amazon & The Climate Pledge: Catalysing Net Zero by 2040. *Sustainability Magazine*. https://sustainabilitymag.com/news/amazon-the-climate-pledge-catalysing-net-zero-by-2040
[36] Amazon (2025) Amazon Sustainability Report. https://sustainability.aboutamazon.com/2025-report
[37] Mancini, R. (2026) Microsoft carbon emissions rose 25 percent in 2025 as AI data centers grow. *The Hill.* https://thehill.com/policy/technology/5966327-microsoft-emissions-jump-ai-data/
[38] Chevron. (2026) Chevron signs 20-year power agreement with Microsoft for West Texas data center. https://www.chevron.com/newsroom/2026/q2/chevron-signs-20-year-power-agreement-with-microsoft-for-west-texas-data-center
[39] Johnson, L. (2026) Google's emissions continue to climb due to AI buildout. *ESGDive*. https://www.esgdive.com/news/googles-emissions-continue-to-climb-due-to-ai-buildout/824373/

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Cornell researchers found that the current rate of AI growth represents an additional 24 to 44 million metric tons of carbon emissions by 2030. This is the equivalent of adding five to ten million cars to the US roadways.[40]

Q. Would you like to point to any additional risks that you have become aware of since you last filed testimony on this topic back in November of 2025?

A. Sure. There are many, but I will focus on one in particular. Both physical and cyber security concerns have grown since I last filed testimony. Data centers represent critical national infrastructure that underpins much of the economic and government activity we experience today. Data centers vulnerability to geopolitical conflicts became evident on March 1, 2026 when Iranian drone strikes hit two Amazon data centers in the United Arab Emirate and impacted infrastructure near a third facility in Bahrain. The extended downtime was estimated to cost Amazon $150 million as standard insurance policies largely failed to cover losses due to wartime activity.[41] Importantly, the facilities themselves were not breached. The attacks targeted what the facilities depend on—power. The AWS incident marks an inflection point because it makes the risk tangible. For years, disruption was framed as a cyber problem or a facility problem. However, the most exposed points are not inside the data center, but in the infrastructure around it – power, connectivity, and supply chains. Those systems are harder to secure and often outside operator control.[42] According to Jason Vogt and Nina A. Kollars from the Modern War Institute at West Point:

> For adversaries looking to impose costs, signal resolve, or disrupt military operations, data centers make attractive targets. They are large, fixed sites that are costly to build. They are also dependent on local power, water, and data transmission

[40] Nutt, D. C. Chronicle (2025) 'Roadmap' shows the environmental impact of AI data center boom. *Cornell Chronicle*. https://news.cornell.edu/stories/2025/11/roadmap-shows-environmental-impact-ai-data-center-boom

[41] Caplan-Fisher, E. (2026) Amazon loses $150M after drones hit its data centers — and insurance won't cover their losses. What it means for you. *MoneyWis*e qtd. In *Yahoo! Finance*. https://finance.yahoo.com/sectors/technology/articles/amazon-loses-150m-drones-hit-200500763.html

[42] Snider. S. (2026) Data Centers Under Fire: Industry Faces Systemic Security Risks. DataCenter Knowledge. https://www.datacenterknowledge.com/physical-security/data-centers-under-fire-a-growing-critical-infrastructure-risk

> infrastructure, which can also be targeted. Attacking them not only harms the data center operator, but all the organizations that rely upon it for data storage, networking, or AI integration. This has the potential to compound effects, as multiple entities experience degradation or loss from a single action.[43]

Additionally, according to a report by *Wired*, U.S. law enforcement is flagging a rise in "anti-tech extremism" linked to growing hostility toward AI. This trend highlights an escalating domestic threat as federal agencies monitor the surge in anti-AI sentiment. That piece documents examples across the 80 fusion centers throughout the United States that function as a go-between for federal intelligence agencies and state and local law enforcement. *Wired* noted that:

> A Western Pennsylvania fusion center, for example, claimed that "adversarial actors, including state-sponsored entities, criminal groups, and extremists, such as homegrown violent extremists or environmental extremists, may target US data centers" and that "these actors could also exploit the strategic importance of data centers to the US economy, using them for activities like cryptocurrency mining or leveraging third-party entities, such as front companies, to gain access to US data and infrastructure."[44]

Q. In light of these challenges, what should the Commission consider in assessing who should bear the risk of the massive capital investments that are being caused by a handful of customers?

A. Nearly 4,000 years ago, King Hammurabi of Babylon established one of the world's oldest written legal codes, which held builders strictly accountable for structural damage and shoddy workmanship. Under the Code of Hammurabi, if a builder's careless construction

[43] V. Jason & N.A. Kollars (2026) Data Center Warfare: Defending the Key Terrain of AI Infrastructure. Modern War Institute at West Point. https://mwi.westpoint.edu/data-center-warfare-defending-the-key-terrain-of-ai-infrastructure/

[44] Boguslaw, D. (2026) US Law Enforcement Warns of 'Anti-Tech Extremism' as AI Hatred Grows. *Wired*. https://www.wired.com/story/us-law-enforcement-warns-of-anti-tech-extremism/

caused a home to collapse, the penalties were absolute. If the house collapsed and killed the homeowner, the builder was put to death.

One can reasonably imagine that the quality of houses much improved after this law.

The Code of Hammurabi is one of the earliest examples of what risk author Nassim Nicholas Taleb calls 'skin in the game.' The idea is that if you are the one giving the advice, making the decision, or selling the risk, then you, too, have to share the consequences if, or when, that goes wrong.

For Taleb, this is more than about fairness. It's about trust. Trust we have in our systems, in our institutions, and in each other—because someone who has skin in the game cannot bluff. They cannot manipulate, because they will suffer alongside you if things go wrong.

Trust is something that is apparently in short supply according to a May article in *UtilityDive* highlighting a poll conducted by PowerLines that found broad distrust of elected officials and limited understanding of utilities' business models. 76% of respondents wanted stronger utility oversight, and only 29% said they trusted their state governments to protect their interests in dealings with utilities, down from 38% from the previous year.

As it stands, I do not believe that the data centers have enough skin in the game. The risk is disproportionately being borne by Evergy Missouri's existing ratepayers. The Commission is in the best position to now adjust the tariff, ensure both proper 'skin in the game,' and provide the appropriate oversight to protect the public and earn that trust back. My recommendations to the LLPS tariff directionally place the Commission in that direction and will be discussed next.

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III. LARGE LOAD POWER TARIFF

Q. Do you believe that Evergy Metro has an obligation to provide service to those who desire to locate in its service territory?

A. I do. The "duty to serve" compels public utilities to provide non-discriminatory service to all customers in their monopoly territory. According to economist Severin Borenstin:

> This duty may at first seem like a fair burden in exchange for being a monopolist that supplies an essential service while being assured of a regulated rate of return on their investment. But the doctrine has always been problematic economically, because "non-discriminatory" has been used to argue that customers who actually impose different costs on the system – whether due to different locations, demand profiles, or predictability of future needs – should be charged similar rates. Hyperscalers have highlighted this problem, because a single facility can dwarf all other demand growth that a utility faces, and cancellation of such a facility can completely change a utility's demand outlook.[45]

I share this sentiment and my recommendations attempt to mitigate these and earlier aforementioned concerns.

Q. What are your concerns with the current iteration of the Evergy Metro Large Load Tariff?

A. They are effectively the same concerns I had when I filed my last rounds of testimony on the topic, but they include:

- The term length of the contract does not cover the normal depreciation length for the investments needed to serve these unique loads;
- The path-dependent risk of locking into a resource-specific planned generation investment at a time when costs to procure and secure investments are at all-time

[45] Borenstin. S. (2024) Is there a "Duty to Serve" Hyperscale Loads? Energy Institute Blog. Energy Institute at Haas. https://energyathaas.wordpress.com/2024/12/02/is-there-a-duty-to-serve-hyperscale-loads/

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highs and highly dependent on market and geopolitical conditions increases the probability that customers will overpay for future services.

- The ratepayer protections only apply to customers who effectively exit the service territory, not to customers who cease to exist due to insolvency.
- The level of opacity and uncertainty surrounding the risk-profile of what specific customers are seeking this service, the details around their operations, and the subsequent impact this lack of transparency has for long-term planning.
- The inability, to date, of data centers supporting artificial intelligence ("AI") to record enough revenues to cover historical and planned expenses is an obvious risk that stranded assets are a plausible outcome.
- The precarious position of the US/global economy in light of the outsized influence of a handful of tech companies whose market valuation does not reflect the reality of its performance.

Q. What is a PUE?

A. The Power Usage Effectiveness (PUE) score is a metric that measures the energy efficiency of a data center or large energy-intensive facility and helps recognize any opportunity to improve energy usage over time. It's calculated by dividing the total energy used by the facility by the energy used by the IT equipment (servers, storage, networking, etc.). A lower PUE indicates better energy efficiency, meaning a larger proportion of the facility's energy is used directly by the IT equipment.[46]

Q. Why is it necessary to include this in the in-take process for applicable customers?

A. The obvious reason is that there is not enough energy to meet the expected demand on the grid today. To quote MISO CEO John Bear: "[T]he number of gigawatts coming online is

[46] Fleitas, A.G. (2023) What is Data Center PUE? Defining Power Usage Effectiveness. DataCenter Knowledge. https://www.datacenterknowledge.com/sustainability/what-is-data-center-pue-defining-power-usage-effectiveness

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insufficient for what we're seeing coming." He added, "We've got a lot of work to do to slow down the retirements and speed up the additions coming onto the system."[47]

Second, that demand is largely being driven by the emergence of AI and the vast amount of power that is required to serve it. In the early aughts there was a similar concern that energy demands to support the proliferation of the internet would not be sustainable. To quote a *Forbes* piece from 1999:

> SOUTHERN CALIFORNIA EDISON, meet Amazon.com. Somewhere in America, a lump of coal is burned every time a book is ordered on-line.
>
> The current fuel-economy rating: about 1 pound of coal to create, package, store and move 2 megabytes of data. The digital age, it turns out, is very energy-intensive. The Internet may someday save us bricks, mortar and catalog paper, but it is burning up an awful lot of fossil fuel in the process. . . .
>
> The infoelectric convergence is already having a visible impact on overall demand. At least 100 million nodes on the Internet, drawing from hundreds to thousands of kilowatt-hours per year, add up to 290 billion kWh of demand. That's about 8% of total U.S. demand. Add in the electric power used to build and operate stand-alone (unnetworked) chips and computers, and the total jumps to about 13%. It's now reasonable to project that half of the electric grid will be powering the digital-Internet economy within the next decade.[48]

What happened next instead was server farms and computing got exponentially more efficient through miniaturization and increased transistor density.[49] The industry got a lot more efficient and the electric grid and accompanying investments reverted back to a largely flat growth line.

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[47] Count on coal (2024) MISO Warns it's Going to be Woefully Short of Power. https://www.countoncoal.org/2024/07/miso-warns-its-going-to-be-woefully-short-of-power/

[48] Huber, P & M. Mills (1999) Dig more coal—the PCs are coming. *Forbes*. https://rmi.org/wp-content/uploads/2017/05/RMI_Document_Repository_Public-Reprts_E99-18_MMABLInternet.pdf

[49] See Moore's Law https://en.wikipedia.org/wiki/Moore%27s_law and Dennard Scaling: https://en.wikipedia.org/wiki/Dennard_scaling

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Much of the same rhetoric heard during the early stages of the internet are now being repeated with the discussion regarding AI. And like the early aughts, efficiency gains are being found. In early 2025, US news was awash with the implications of China's open-source AI platform, DeepSeek, and its energy consumption and cost relative to US firms:

> Compared to the exorbitant costs of AI development in the U.S., DeepSeek's efficiency is staggering. The company reports that training its v3 model—the predecessor of the latest R1—cost just $5.576 million. By contrast, Meta's AI training costs for 2024 are projected at $65 billion, while Microsoft's investment is expected to reach $80 billion.
>
> Since training costs are directly linked to energy consumption, this efficiency has profound implications. According to DeepSeek's own research papers—pending third-party validation—their servers consume 50% to 75% less energy than Nvidia's latest GPU units. This reduction is especially crucial for data centers, which require vast amounts of electricity to power AI models.[50]

This is important to note because the lead time to build a data center is much quicker than the lead time to build out the generation, transmission and distribution system used to support it. Benchmarking Power Usage Effectiveness (PUE) isn't going to induce a Moore's Law-like[51] outcome that changes an industry, but it will place a heightened emphasis on reducing costs, enhancing sustainability, supporting the *necessary* electric service build-out, and allow regulators, customers and the utility the ability to make more informed planning decisions moving forward.

[50] Editorial Team (2025) How energy-efficient is DeepSeek, China's AI disruptor? Rinnovabaili https://www.rinnovabili.net/business/markets/deepseeks-energy-consumption-ais-75-power-cut/

[51] Moore's law is the observation that the number of transistors on a computer chip doubles about every two years. This exponential growth has historically led to computers becoming smaller, faster, and cheaper over time. For an analogy: Think of a kitchen table. When computers were first invented, the entire table could only hold one bowl. As technology improved, engineers found ways to make the bowls smaller and smaller. Moore's law is like predicting that every couple of years, you could fit twice as many bowls on that same kitchen table.

Q. What do you anticipate would be included in the pre-construction study and post-construction reporting?

A. The pre-construction study would be a comprehensive report conducted before construction begins to predict and optimize a data center customer's energy consumption and efficiency. It essentially aims to estimate the Power Usage Effectiveness the data center will achieve once operational and identify strategies to maintain or minimize it moving forward. Including this element in the in-take process should reduce operational costs and help ensure energy is not being needlessly wasted.

Given the scale of expected demand coming online and the potential for shortfalls within the SPP market, it is imperative that future load is benchmarked for performance and energy waste is minimized. Placing an emphasis on this metric at the front-end of the construction process and adopting best practices in the design phase should enable prospective data center customers to significantly influence and improve the long-term PUE and overall sustainability of their facilities and provide greater assurance of future continuity of operations.

A pre-construction study would specifically investigate (at a minimum) the cooling systems, power distribution, hardware efficiency, airflow management, and explore the option of employing modular design for expansion (to minimize oversizing facilities at the outset) or explain why such a design is not necessary.

Additionally, the pre-construction study should explore how demand response capability can be incorporated into the customer's operations. Public sentiment and continuity of operations will depend in large part on minimizing peak demand moving forward. Although I am not recommending it in this docket, I struggle to see how cost of service will be at all affordable if that is not a mandatory feature in the very near future.

Best practices in a competitive environment suggest that maximizing operational efficiencies should not be controversial—I am merely looking for assurance that this will be done and benchmarked moving forward in the face of demand outstripping available

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supply. I further recommend that these metrics be reported to Evergy Metro on a quarterly basis and that Evergy Metro consolidate this information across its LLPS customers in an annual public report to the Commission.

Water Usage Effectiveness

Q. What is a WUE?

A. The Water Usage Effectiveness (WUE) score is a metric that measures the water efficiency of a data center or large energy-intensive facility and helps recognize any opportunity to improve this over time. It's calculated by dividing the total annual water consumed by the data center (in liters) by the energy used by its IT equipment (in kilowatt-hours) over the same period. A lower WUE indicates more efficient water usage, with the ideal theoretical WUE being zero, signifying no water use.

WUE and PUE scores are interrelated insofar as there are inherent trade-offs in cooling choices that will likely raise one score and lower the other (*e.g.*, if water or air is used to cool data center load). The concern here is the trade-off between more energy or more water usage—especially freshwater usage. By tracking and benchmarking this information over time, Evergy Metro and various stakeholders will be better able to make informed planning decisions across the service territory in regard to valuing finite natural resources and assuring the surrounding areas are sustainable.

Q. Why is it necessary to include this in the in-take process for applicable customers?

A. According to the University of California, Riverside, each 100-word AI prompt is estimated to use roughly one bottle of water (or 519 milliliters).[52] Furthermore, according to the Environmental and Energy Study Institute:

[52] Verman, P & S. Tan. (2024) A bottle of water per email: the hidden environmental costs of using AI chatbots. *The Washington Post*. https://www.washingtonpost.com/technology/2024/09/18/energy-ai-use-electricity-water-data-centers/

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> Large data centers can consume up to 5 million gallons per day, equivalent to the water use of a town populated by 10,000 to 50,000 people.[53]

Missouri is generally considered a water-rich state thanks to the vast amount of surface and groundwater resources due in part to consistent rainfall and two major river systems. Water resources are also considered vital to the state's economy and future. This fact has been underscored by the recent passage of SB 82 that makes it unlawful for any person to export water resources outside of the state unless the person holds a water exportation permit issued by the Missouri Department of Natural Resources.[54]

Q. Why is it necessary to include this in the in-take process for applicable customers?

A. AI data centers create significant water strain due to high-heat cooling requirements for chips. Tech companies often underreport environmental impact by failing to account for indirect water usage in power generation, which can be 12 times higher than direct usage.[55] While Meta is a notable exception in reporting usage, mandatory standards for total consumption are lacking. Future mitigation efforts are focused on developing advanced, lower-water cooling techniques.

Given the realized and projected water appetite of large data centers I believe it is best to be proactive in addressing this challenge rather than being reactive. Benchmarking that information is a relatively low-cost means of monitoring and assessing future planned investment and I would argue also helps minimize the possibility of future stranded assets.

[53] Yanez-Barnuevo, M. (2025) Data Centers and Water Consumption. EESI. https://www.eesi.org/articles/view/data-centers-and-water-consumption
[54] Missouri Senate (2025) Truly Agreed to and Finally Passed. Summary SB 82. https://www.senate.mo.gov/25info/BTS_Web/Summary.aspx?SessionType=R&SummaryID=12468851&BillID=193
[55] Mims, C. (2026) AI Data Centers Use Far More Water Than Most Tech Giants Report. *The Wall Street Journal*. https://www.wsj.com/tech/ai/ai-data-centers-water-use-901e2902

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Q. Can closed-loop water systems in data centers alleviate water resource concerns?

A. It can at the local level for direct usage, but it will place a greater reliance on indirect usage from power plants. It is also important to note that closed-loop water systems in data centers recently caused quite an outcry in Cheyenne, Wyoming.

A contractor (Goat Systems LLC) working on Meta's 800,000 square foot data center flushed water from a closed-loop pipe-cleaning system into the city's sanitary sewer. This discharge introduced the potentially fatal bacteria *Cupriavidus gilardii*. Luckily the bacteria did not enter the public drinking water. As a result, the Cheyenne Board of Public Utilities revoked the contractor's discharge privileges and enacted a permanent ban on receiving industrial wastewater from data center fill-and-flush and closed-loop cooling. [56]

Q. What do you anticipate would be included in the pre-construction study and post-construction reporting?

A. As a finite resource, water's value will only grow with the increasing reliance of energy-intensive customers needing it for cooling. To ensure long-term sustainability and responsible resource management, a pre-construction water usage study is crucial. This study would determine pre-construction water availability, analyze historical and projected weather patterns, assess the continued rise in demand from data center customers, and identify potential shortfalls. Furthermore, considerations for on-site water treatment and sustainable management practices are vital, aligning with site selection, cooling system (including closed-loop cooling systems), and facility design considerations outlined in the Power Usage Effectiveness study.

The pre-construction should include feedback from the Missouri Department of Natural Resources and relevant local water authorities (*e.g.*, water utility) for input on current and future adequacy levels under a range of assumptions.

[56] Tolman, A. (2026) Cheyenne BOPU traces rare bacteria discharge to Meta data center contractor. *Wyoming Tribune Eagle*. https://www.wyomingnews.com/news/local_news/cheyenne-bopu-traces-rare-bacteria-discharge-to-meta-data-center-contractor/article_1c538467-06ec-427d-9a6f-33797cd3c6ce.html

Finally, I am recommending the inclusion of pre-construction study and future post-construction WUE benchmarking scores to emphasize the importance of operational efficiencies in the face of limited supply. As such, the studies should set clear WUE targets for participants, potentially with varying levels based on the region's water stress and the size of the facility. I recommend that these metrics be reported to Evergy Metro on an annual basis and that Evergy Metro consolidate this information across its data center customers in an annual public report to the Commission as well as include this information in the Company's Integrated Resource Plan.

Total Harmonic Distortion

Q. What is harmonic distortion?

A. Harmonic distortion is the presence of unwanted frequency components in a power system. These unwanted components are integer multiples of the fundamental frequency (usually 50 or 60 Hz) and can significantly impact the performance and reliability of the distribution system.[57] Total Harmonic Distortion ("THD") is the measurement of this phenomenon.

Q. Why is this a concern?

A. Poor harmonic distortion of the distribution system is strongly correlated in areas with significant data center buildout. Analysis from Whisker Labs and DC Byte Data concluded that more than three-quarters of highly distorted power readings across the country are within 50 miles of significant data center activity. *Bloomberg News* states:

> Bad harmonics can force home electronics to run hot, or even cause the motors in refrigerators and air conditioners to rattle. It's an issue that can add up to billions of dollars in total damage . . . the worse power quality gets, the more the risk increases. Sudden surges or sags in electrical supplies can lead to sparks and even home fires. Left unaddressed, one problem can morph into another.

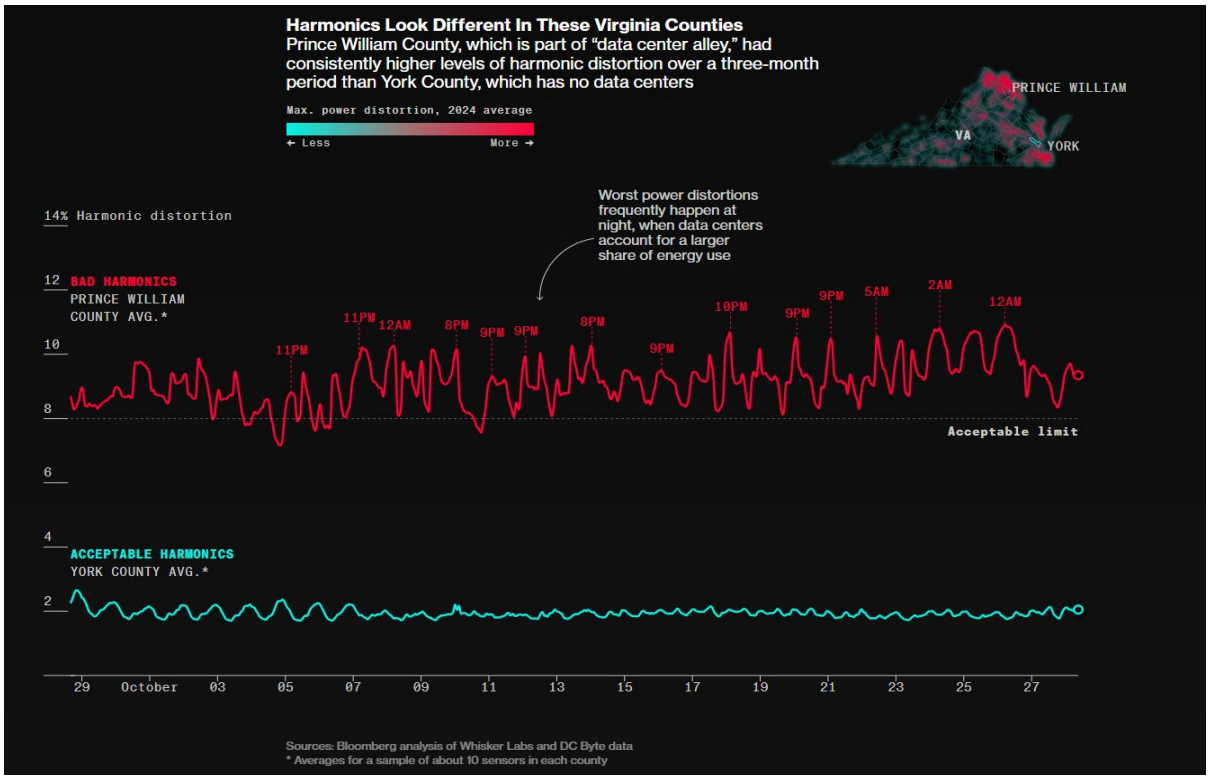
[57] MPS (2025) Harmonic Distortion in Power Systems. https://www.monolithicpower.com/en/learning/mpscholar/power-electronics/power-quality-and-harmonics/harmonic-distortion-in-power-systems?srsltid=AfmBOoozaTybr5iHA898qIjdtYMKn9WOfLouBOPLHS1uY5Wr_wRQkOyG

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> That means the bad harmonics today can be a sign of potential disaster down the road. . . . The grid has never faced the kinds of strain that comes with data centers. These city-sized users can pop up very quickly, within a year or two, which is much faster than grid planning usually happens. Even during population booms, the rise in power demand paled in comparison to the expected installation in the coming years of hundreds, perhaps thousands, of these facilities to power AI.[58]

Figure 7 provides a visual representation of acceptable and bad harmonic levels comparing York County, Virginia against Prince William County, Virginia (home of "data center alley")

Figure 7: Illustrative example of harmonic levels[59]



[58] Nicolettie, L. et al. (2024) AI needs so much power, it's making yours worse. *Bloomberg News*. https://www.bloomberg.com/graphics/2024-ai-power-home-appliances/
[59] *Ibid*.

The inclusion of LLPS customers being placed on Evergy Metro's system should not come at the expense of power quality of the surrounding area.

Q. What do you anticipate would be included in the pre-construction analysis and post-construction reporting?

A. First, a baseline measurement would need to be conducted on the existing distribution system at the proposed site to identify any existing issues and also to serve as a reference moving forward. This would include identifying any existing harmonic sources such as nearby industrial facilities or legacy infrastructure with nonlinear loads. The customer would then work with Evergy Metro to study and simulate what the impact of future large load would be on the distribution system.

The results of this analysis should help inform right-sizing equipment and load patterns to minimize harmonic distortions moving forward. The hope here is that by proactively measuring and controlling for this issue we can maximize the reliability and efficiency not only of the large load customers but ensure that customers within the surrounding areas are not materially harmed.

I am also recommending the inclusion of pre-construction study and future post-construction harmonics benchmarking scores to minimize future reliability and power quality issues. Additionally, I believe such proactive efforts on the part of the utility and LLPS customers will improve local community "buy-in" for future projects. I recommend that these metrics be reported to Evergy Metro on an annual basis and that Evergy Metro consolidate this information across its hyperscale customers in an annual public report to the Commission.

Finally, data center customers should shoulder any costs associated with installing and maintaining CAPEX necessary to prevent their operations from degrading power quality or injecting harmful harmonics into the local grid.

Q. Who is responsible for paying for these studies and how can you confirm the independence of the researchers?

A. The costs should be borne by prospective hyperscale customers. Furthermore, for cost savings and consistency across utilities I recommend a joint request for proposal be issued for each of the three studies in conjunction with Liberty Utilities, Evergy Missouri West and Metro, the PSC Staff, and OPC.

Q. If the pre-construction studies reveal serious deficiencies, what are the remedies?

A. Evergy Metro should demonstrate that they are taking specific actions to remedy any deficiencies found in the pre-construction results before a contract can be entered into.

Q. If the post-construction data reveals serious deficiencies, what are the remedies?

A. Hopefully, by addressing these concerns on the front-end we will not realize major deficiencies post-construction. Additionally, the mere fact that these issues are being continually monitored suggests that regulators and the community at large should not be overly surprised. However, if post-construction data reveals that these customers are responsible for inducing poor power quality on its neighbors, then hyperscalers should be responsible for the costs necessary to remediate it.

Q. Do you believe these conditions will inhibit customers from selecting Missouri to locate?

A. No. My sense is that there was an element of competition perhaps when the Company filed its direct testimony, but since then commissions across the country and various state assemblies, including Missouri, have become more cognizant of the liability inherent in bringing on speculative large load customers and are now much more sensitive to adopting hold harmless safeguards for its ratepayers/citizens. Each of the three studies are effectively canaries in the coal mine. They are providing pre- and post-data to confirm that hyperscale customers are not unduly placing direct or second-order harm on the state of Missouri and its citizens. They are necessary actions given the unique circumstances and finite resources we have available today. To the extent possible, my recommendations are attempting to

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future-proof what appears to me are obvious issues that could inhibit future cost recovery, performance, and long-term sustainability.

Q. Do you anticipate making all of these reports public?

A. That would be my recommendation.

Q. What should be the MW threshold for receiving service under the LLPS tariff?

A. I recommend decreasing the threshold to 25 MW and I recommend that this tariff only apply to data centers given their unique present circumstances.

Q. What do you believe should be the contract term length?

A. I recommend expanding the terms of service to 20 years. This recommendation is consistent with what the Kentucky Public Service Commission approved in Kentucky Power's large load tariff.[60] Most new build generation have a deprecation schedule of thirty years or greater. Locking in LLPS customers into a shorter term than the life of the assets being built or procured to serve them can result in cost shifting to other customers should the data center load depart.

Q. At what percentage should the minimum demand charge be set at?

A. I recommend the tariff be amended to cover 90% of the contracted capacity.

Q. Are you recommending a performance offset to that minimum demand charge?

A. I am. I recommend a 10% offset to the minimum demand charge (effectively lowering the threshold to 80%) if a hyperscaler can demonstrate a significant financial contribution to the local service area in at least one of three potential areas: job creation, demand-side management contributions for low-income domiciles, or reduced urban heat impacts (if applicable).

[60] Case No. 2024-00305. Order. Kentucky Public Service Commission. https://psc.ky.gov/pscscf/2024%20Cases/2024-00305/20250318_PSC_ORDER.pdf

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Q. What would be an example of a significant contribution?

A. Financial support towards the City of Kansas City's and Evergy Metro's urban heat island mitigation would be an example of an activity that could potentially address all three areas that were identified. The terms of this offering can be general enough to allow for creative and impactful offset offerings from participants, but should be the equivalent of 2% of their monthly bill.

Q. Do you have any further recommendations on this topic?

A. I also support OPC witness Angela Schaben's arguments to bifurcate the FAC charges between LLPS and other customers.

IV. CONSTRUCTION WORK IN PROGRESS

Q. What is Construction Work in Progress ("CWIP")?

A. CWIP lets utilities charge ratepayers for the cost of financing new power plants during construction, before they are completed and provide electricity. Formerly, utilities only charged customers for the costs of plants that were "used and useful" (i.e., actually in service and producing electricity).

Q. What are the benefits to shareholders?

A. Early returns, reduced risk, and potentially improved credit.

Q. What are the risks to shareholders?

A. Claw backs for imprudent cost overruns and public relations challenges imposed by pushing large upfront costs onto captive customers.

Q. What are the benefits to ratepayers?

A. CWIP can minimize rate shock and potentially improve financing costs, lowering the overall costs of the investment.

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Q. What are the risks to ratepayers?

A. CWIP turns customers into involuntary investors, forcing users to pay for projects they will not directly benefit from while still under construction. If projected energy demand does not materialize or drops off, ratepayers may be exposed to stranded assets and/or massively expensive, underutilized infrastructure.

Q. What is the history behind CWIP in Missouri?

A. In 1976, Missouri voters passed a citizen-initiated statewide referendum with a 63% margin to ban CWIP charges. The measure was a direct response to rising inflation and the soaring construction costs associated with nuclear power plants.

As a result, eight years later, ratepayers were effectively shielded from utility mismanagement and cost overruns associated with the Callaway nuclear plant. Per the Missouri Public Service Commission's Annual Report from 1984-1985:

> On March 29, 1985, the Missouri Public Service Commission issued its decision in the Union Electric rate increase request case involving the company's Callaway nuclear power plant facility. The Commission excluded approximately $384 million from Union Electric's rate base due to mismanagement and cost overruns at the Callaway nuclear power plant facility.
>
> The Commission found that Union Electric had justified a rate increase of approximately $455 million, or 45 percent for Callaway related costs. . . . Disallowing approximately $384 million from Union Electric Company's rate base due to mismanagement and cost overruns at the Callaway nuclear power plant, the Commission determined those Callaway-related expenditures should not be recovered from ratepayers "…since they represent inefficient, imprudent, unreasonable or unexplained costs".[61]

[61] See GM-3 p. 27-28.

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The inflation-adjusted equivalent of the Callaway cost disallowance comes to roughly $1.24 billion today.

Q. Has the law changed regarding CWIP?

A. Yes. Language in SB 4 (2025) now permits electric utilities to charge customers for the costs of building new natural gas power plants while the project is still under construction, before it is used and useful.

Q. Have any consumer protections been included in CWIP statutory change?

A. Yes. CWIP is limited to new natural gas units, bound by the estimated cost and construction timeline of the project, and includes refund provisions (with interest) if the project incurs imprudent costs, is not finished, or is not finished in a reasonable timeframe.

Q. Are there any other statutory protections in place for customers as a result of SB 4?

A. Yes. § 393.130(7), RSMo states:

> Each electrical corporation providing electric service to more than two hundred fifty thousand customers shall develop and submit to the commission schedules to include in the electrical corporation's service tariff applicable to customers who are reasonably projected to have above an annual peak demand of one hundred megawatts or more. **The schedules should reasonably ensure such customers' rates will reflect the customers' representative share of the costs incurred to serve the customers and prevent other customer classes' rates from reflecting any unjust or unreasonable costs arising from service to such customers.** Each electrical corporation providing electric service to two hundred fifty thousand or fewer customers as of January 1, 2025, shall develop and submit to the commission such schedules applicable to customers who are reasonably projected to have above an annual peak demand of fifty megawatts or more. The commission may order electrical corporations to submit similar tariffs to reasonably ensure that the rates of customers who are reasonably projected to have annual peak demands below the

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above-referenced levels will reflect the customers' representative share of the costs incurred to serve the customers and prevent other customer classes' rates from reflecting any unjust or unreasonable costs arising from service to such customers. (emphasis added)

Q. Have there been similar assertions put forward around cost allocation associated with data centers?

A. Yes, there have been many, including from:

President Donald Trump:[62]

In March 2026, the White House secured a formal Ratepayer Protection Pledge signed by executives from major tech companies, including Amazon, Google, Meta, Microsoft, OpenAI, Oracle, and xAI. The ratepayer pledge includes the following proclamation:

[62] President Trump introduced the pledge as follows:

> Today, we follow through on an announcement I made in my State of the Union address last week as America's largest tech companies officially signed the ratepayer protection pledge. It's a big deal. I'm going to have a tremendous impact on electricity costs. We're bringing down all of the costs . . . Under this new agreement, Big Tech companies are committing to fully cover the costs of increased electricity production required for AI data centers and that would be prices for American communities will not go up, but in many cases will actually come down very substantially because you know the data centers and you people are so big, you're the – the biggest in the world.
>
> But they've developed a little bit of a bad public – they have – they need some PR help because people think that if a data center goes in there, electricity prices are going to go up. And that's not happening. It's not going to happen. And for the areas where it did happen, it won't happen anymore because they never had this alternative.
>
> It's actually going to mean the prices come down, you're going to see how badly they want, some, some centers were rejected by communities for that. And now I think it's going to be just the opposite. This means that the tech companies and the data centers will be able to get the electricity they need all without driving up electricity costs for consumers.
>
> This is a historic win for countless American families and will also make our electricity grid stronger and more resilient than ever before. So that's part of it. It's going to be strengthened up and they're going to be getting a lot of excess electricity from the data centers where they build their own plants.

TRANSCRIPT: President Trump Delivers Remarks at an Energy Ratepayer Protection Roundtable. 3.4.26 https://www.democrats.senate.gov/newsroom/trump-transcripts/transcript-president-trump-delivers-remarks-at-an-energy-ratepayer-protection-roundtable-342

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> [A]s data centers expand their footprint and electricity demand associated with AI increases, **American households must be protected against increasing energy costs. The hyperscalers and AI companies that increase electricity demand must pay for the full cost of the energy and infrastructure needed to build and operate data centers, and must not pass this cost on to the American people**. Instead, the data center boom should be leveraged to address affordability and benefit all American households and businesses.
>
> Today, pursuant to the Ratepayer Protection Pledge, leading United States hyperscalers and AI companies guarantee that data centers' energy needs will not increase household electricity costs for American citizens. Instead, **these companies will build, bring, or buy the new generation resources and electricity needed to satisfy their energy demands, and pay for all new power delivery infrastructure upgrades to service their data centers.** They will voluntarily negotiate new, separate rate structures with their utilities and relevant State governments, and pay those rates, and for their infrastructure, whether they use the electricity or not. They will also invest in local communities and coordinate with grid operators to contribute to a more reliable grid. These measures will ensure that Americans are protected from higher energy prices, benefit from grid upgrades and increased grid resilience, and benefit from this technological boom while the United States continues its global leadership in innovation and advanced technology.[63] (emphasis added)

Missouri Governor Mike Kehoe:

The Governor's official webpage includes the following language around data centers in Missouri:

[63] The White House (2026) Ratepayer Protection Pledge Proclamation.https://www.whitehouse.gov/presidential-actions/2026/03/ratepayer-protection-pledge-proclamation/

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> Missourians elected Governor Kehoe to both protect our state's resources and promote Missouri as a premier destination for transformational investment. Data centers strengthen Missouri's economy, create high-paying jobs, and position our state for long-term growth.
>
> Governor Kehoe and his team continue to work with state partners and private industry to ensure that the energy affordability and water availability concerns that accompany these announcements are addressed before moving forward with them.
>
> Additionally, **Missouri already has important consumer protection laws that prevent any companies from passing the costs onto the communities of these new centers through Senate Bill 4, which Governor Kehoe signed into law in 2025**.
>
> Investments like these will create ripple effects across our economy and help secure opportunities for future generations of Missourians.[64] (emphasis added)

Executive Order 26-02 also includes the following language:

> Ratepayer Protection: The Director shall coordinate the review of current state regulations and utility practices to **ensure that the construction and operation of data centers and other large power users do not result in higher energy rates for residential and small business Missourians, in accordance with the principle that large users should cover their full cost of electricity and infrastructure service and, when appropriate, contribute to the further development of sustainable, dispatchable power generation**.[65]

[64] Office of Governor Mike Kehoe (2026) Data Centers in Missouri. https://governor.mo.gov/official-statements/data-centers-missouri

[65] Kehoe, M. (2026) Executive Order 26-02. Missouri Secretary of State. (https://www.sos.mo.gov/library/reference/orders/2026/eo2

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The Federal Energy Regulatory Commission ("FERC"):

On June 18, 2026, FERC issued a "show cause" order under Section 206 of the Federal Power Act to each of the six regional grid operators under its jurisdiction.[66] According to FERC:

> The orders respect the region-specific market rules that are already in place, anticipate differences in responses due to regional variability, and propose five categories of further reforms that grid operators should address:
>
> 1. Developing efficient transmission service application and study processes, including consideration of alternative transmission technologies
> 2. **Preventing cost shifting and requiring transparency into transmission costs**
> 3. Accommodating co-location arrangements and behind the meter generation
> 4. Providing new transmission services for flexible large loads
> 5. Developing a process to study generating facilities serving electrically proximate large loads and large co-located loads
>
> Importantly, nothing in today's orders intrudes either on the authority of states to select, site, and permit generating resources or on the authority of state public utility commissions to set the rates, terms and conditions of retail sales of electricity. **The orders also make clear that the Commission acts today to guard against cost shifting among transmission customers but leaves to the states the responsibility to ensure that there is no cost shifting among retail customers**.[67]

[66] A "show cause" order from FERC is a regulatory mandate requiring an entity (the grid operator(s)) to justify its current practices or propose reforms to avoid penalties.
[67] FERC (2026) FERC Launches Aggressive Targeted Action to Speed Large Load Integration. https://www.ferc.gov/news-events/news/ferc-launches-aggressive-targeted-action-speed-large-load-integration

Q. Has anyone suggested otherwise?

A. Ameren Missouri has suggested that new generation investment be socialized.

Comments made by Ameren Missouri and quoted in a February 19th news article on STLPR suggest that Ameren Missouri has every intention to socialize both costs and risk for future generation investment onto existing ratepayers. The article titled: "Ameren says Armory data center wouldn't raise electric bills in St. Louis" states:

> Alderwoman Anne Schweitzer asked Ameren officials to clarify what costs are absorbed by all Ameren consumers. Owners of large-load facilities must pay all costs associated with connecting to Ameren's power grid, said James O'Mara, Ameren Missouri's manager of economic development. But when pressed, O'Mara clarified that all Ameren customers, including residential customers, pay for expanding the grid through building new power plants through rate increases, and that may be needed to accommodate large-load customers.[68]

Evergy, for its part, has taken the position that no CWIP costs be proposed to be assigned to Schedule LLPS in this rate proceeding.[69] Which may or may not be indicative of Evergy's official position on this issue. I will address Evergy's arguments in rebuttal testimony.

Q. Is this the proper forum to address CWIP related expenses?

A. I believe so. My understanding is that Evergy Metro needs Commission approval in its Certificate of Convenience and Necessity ("CCN") docket for Mullin Creek #2 (Case No. EA-2026-0154) and then, the Commission can approve CWIP in a following rate proceeding.

The challenge in this situation is that this rate case is set to conclude before the CCN case.[70]

[68] Grawitch, K. (2026) Ameren says Armory data center wouldn't raise electric bills in St. Louis. STLPR. https://www.stlpr.org/health-science-environment/2026-02-19/ameren-armory-data-center-electric-bills-st-louis

[69] See GM-4. Response to MECG 3.3.

[70] The last day for reply briefs in this rate case is November 18, 2026. The last day for reply briefs in the CCN case is November 24, 2026.

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Q. What is your position regarding CWIP as it pertains to future generation buildout?

A. Data centers have already raised the cost of service for electric utilities through socialized transmission costs, volatile wholesale markets, and increased costs for generation, transmission, and distribution investments driven by unprecedented demand. Not directly assigning and collecting costs from data centers for generation they alone need and want will raise electric bills in Kansas City and for the rest of Evergy Missouri service territory. I do not believe Missouri lawmakers intended for ratepayers to foot the bill, nor bear the associated risks of data centers when they drafted the ratepayer protections found in § 393.130(7), RSMo.

I oppose approving CWIP unless customers taking service under the LLPS tariff explicitly agree that they will bear all associated costs. Making existing captive Missouri ratepayers foot the bill for an overpriced, unneeded (but for the data centers) natural gas plant contradicts state utility law, the President's stated intent, and the hyperscale customers' own pledges. To the extent the Commission approves CWIP, I recommend the Commission order Evergy Metro to allocate all CWIP-related costs to the LLPS tariff customers as the appropriate cost-causers.

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V. AI-RELATED EXPENDITURES

Q. Is Evergy incorporating AI into its services?

A. OPC posed the following questions to Evergy through discovery:

Question: OPC DR-1126

What AI services are Evergy currently utilizing. Please provide the following:

- Name of AI software
- Contract terms
- Monthly expenditures
- Each employee name, title, and area of work who is utilizing AI
    - Allocated dollar amount per employee
    - A narrative description of the specific project in which paid AI is being utilized.

Evergy responded with the following:

**_____
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_____ **[71]

Q. What is your reaction?

A. I believe this is an appropriate response at this stage of the AI build-out. My concern centers on where we go from here. The risk associated with AI usage, including wide fluctuations in costs, security concerns, and performance all raise serious concerns around the prudence of such investments. For example, OpenAI, the creator of ChatGPT, has publicly acknowledged that large language models will always produce hallucinations due to fundamental mathematical constraints that cannot be solved through better engineering. Per the OpenAI study:

> Like students facing hard exam questions, large language models sometimes guess when uncertain, producing plausible yet incorrect statements instead of admitting uncertainty. Such "hallucinations" persist even in state-of-the-art systems and undermine trust. We argue that language models hallucinate because the training and evaluation procedures reward guessing over acknowledging uncertainty, and we analyze the statistical causes of hallucinations in the modern training pipeline. Hallucinations need not be mysterious—they originate simply as errors in binary classification. If incorrect statements cannot be distinguished from facts, then hallucinations in pretrained language models will arise through natural statistical pressures.[72]

Evergy, for its part, specifically identified AI deployment as a potential financial risk to its business operations and customer interactions in its 10-K filing as follows:

[71] See GM-5.
[72] Kalai, A.T. et al., (2025) Why Language Models Hallucinate. https://arxiv.org/pdf/2509.04664

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Artificial intelligence (AI) is an emerging area of technology that has the potential to impact various aspects of the Evergy Companies' business operations and customer interactions.

Generative AI technologies are still in their early stages of development and deployment. Ineffective or inadequate AI development or deployment practices by Evergy, its subsidiaries or third-party vendors could result in unintended consequences. While the Evergy Companies seek contractual protections with its third-party vendors regarding the use of AI technology, the Evergy Companies may not have full awareness of, or control or visibility over the quality, performance, security or compliance of the products and services that incorporate AI-related technology used by such vendors. AI algorithms that the Evergy Companies or its third-party vendors use may be flawed or may be based on datasets that are biased or insufficient. These limitations or failures, or inaccurate results generated as a result of the Evergy Companies' employees', contractors' or vendors' use or misuse of generative AI technologies could lead to operational interruptions or otherwise adversely affect the Evergy Companies' business, reputation or financial results. Developing, testing and deploying resource-intensive AI systems may require additional investment and increase the Evergy Companies' costs. In addition, the rapidly evolving nature of AI technologies may cause new laws and regulations to be enacted which could dramatically affect business practices, including the costs to comply with such new laws and regulations. The future development of AI technologies and the nature of any related new laws and regulations, and their costs and consequences, cannot be reasonably predicted at this time.[73]

[73] Evergy, Inc. (2026) Form 10-K. https://investors.evergy.com/static-files/b9df1de0-d5f8-43d6-837a-2447936ab2b3 p. 28.

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Q. What recommendations do you have in light of this response?

A. There are a variety of questions about AI usage and investment that are worth having in the proper forum. Questions around the appropriateness of seeking cost recovery for AI platform usage? At what appropriate costs? To what ends? Under which platforms? Exactly how should regulators treat these costs? I recommend that the Commission open up a docket to solicit feedback from the utilities regarding their intentions and plans over how they plan, if at all, on incorporating AI into their services. Given the widely different pricing schemes, security concerns, and lack of measurable ROI to date for the vast majority of companies, I have concerns around allocating finite capital to in-house AI investment without a clear reason why or clear measurable targets. I also realize that this is a dynamic landscape and that sentiment may not always be true.

As such, I believe it is incumbent on stakeholders to have an open and honest dialogue around AI-related expenses in the hope that it will curb future litigation and cost-recovery concerns. The Commission is in the best position to enable that reality. Absent a specific regulatory docket, I recommend that Evergy Metro provide bi-annual updates to Staff and OPC over its AI-execution practices, policies, and planned investment.

VI. INCOME-ELIGIBLE PROGRAMS/RATES

Q. How would you define affordability in the context of utility bills?

A. "Affordability" refers to a state of affairs in which, after paying their energy utility bills, customers have enough money left to pay for other goods and services essential to their livelihood (e.g., housing, telephone service, insurance, transportation, clothing, food, and medical care). Affordability is often closely tied to "fairness"; namely, it is unfair to charge customers more for utility service than they can afford. Unfairness, in this sense, would result in customers falling so far behind on their utility bills that over time they accumulate an unpaid account that they cannot possibly pay. The inevitable outcome is service disconnection for those customers and severe obstacles in service restoration.

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Q. Is there a business case for utility energy bill assistance programs?

A. Most definitely. A utility's core mission should be to maintain infrastructure to supply safe, reliable, and affordable service to its customers. Energy assistance programs support the core mission of affordability by minimizing late payments, bad debt, and disconnections. A breakdown of the perceived benefits, costs, and risks of utility bill assistance programs can be seen in Table 1.

Table 1: Benefits, Costs and Risks in Utility Bill Assistance

Benefits	Costs	Risks
Improved on-time payment rates	Direct Assistance Costs	Free Ridership or Fraud
Reduced debt collection costs and disconnections	Administrative Overhead	Burdensome Program Implementation
Enhanced customer satisfaction		Insufficient impact on bill affordability
Positive Externalities (e.g., better quality of life and community-wide benefits)		

Utility bill assistance programs constitute a targeted investment that enables income eligible customers to make more consistent payments for utility service by reducing the customer's energy burden. A reduced energy burden should result in a decrease in arrearage write-offs, collection costs, and disconnections.

Q. Are all bill assistance programs the same?

A. No. Bill assistance programs can be designed in a variety of ways; however, they typically fall into one of two categories. The first are "back-end" programs designed for customers who have already accumulated unsustainable bad debt. An example of a program like this would be Ameren Missouri's Keeping Current program—designed to eliminate bad debt through continued timely payments. The second type of bill assistance program are "front-

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end" programs designed to prevent bad debt accumulation from happening. These programs are best executed through a straight bill credit (e.g., LIHEAP) or through a rate design with an embedded discount in the pricing. Historically, in Missouri, all utility/ratepayer-funded bill-assistance programs have been designed under the "back-end" category.

Historically, Missouri regulators have approved programs designed around existing bad debt due to concerns surrounding the legality of discriminatory rates. However, with the passage of SB 4, the Commission now has the power to approve low-income rates. RSMo §393.1680 states:

> Notwithstanding any other provision of law to the contrary, the commission may approve a special alternative residential customer rate or bill discount from a utility company, as defined in section 393.550, based in part on household utility burden. The rate or bill discount approved shall incorporate commission-authorized rate or bill discount from the appropriate base residential rate. For purposes of this subsection, "utility burden" means the percentage of income paid by a customer to a utility company for the cost of electricity, natural gas, or water service. Any eligibility verification needed to implement the new alternative rate shall be done by an independent third party or parties selected by a process established by the commission that includes input from the utility company and the office of the public counsel.

Q. Has the Missouri Public Service Commission recently placed a targeted emphasis on affordability?

A. Yes. Case No. OW-2026-0085 was established to provide a review of and consideration of utility assistance programs and income-eligible residential rate design.

Q. Have you been active in that proceeding?

A. Yes. I presented and moderated in the two workshops held to date.

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Q. What did you present on?

A. I presented a PowerPoint titled "It's Harder Than You Think: Keeping the Essential Services on for Missouri's Ratepayers." In that presentation, I emphasized that income-eligible programs can best be viewed in one of three categories. These categories and representative Evergy Metro programs/rates include:

1.) Crisis Intervention

- Critical Medical Needs Program (ratepayer/shareholder-funded)
- ECIP (federally funded)

2.) Sustainability

- Economic Relief (ratepayer/shareholder-funded)
- Rehousing (ratepayer/shareholder-funded)
- Weatherization (ratepayer-funded[74])

3.) Affordability

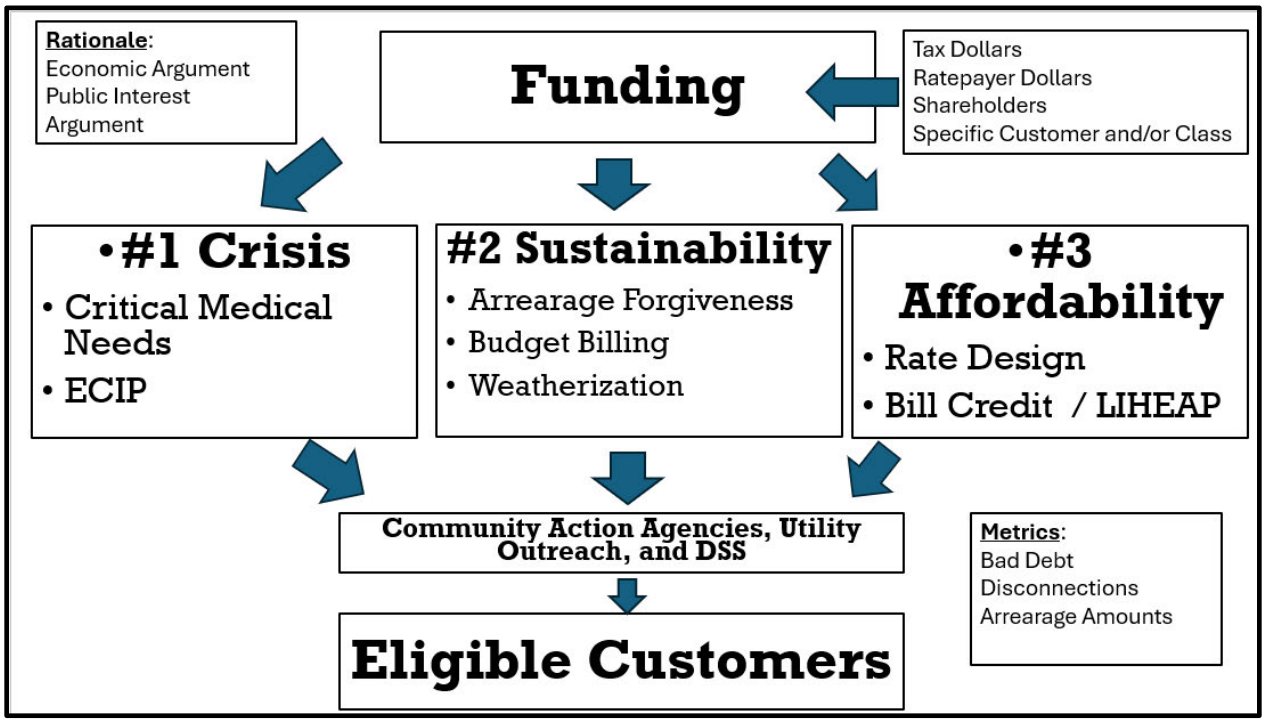
- LIHEAP (federally funded)
- Income Eligible Rate Design (forthcoming)

A flow chart showing how those programs interact, taken from that presentation, is reprinted here in Table 2 below.

[74] Historically, income-eligible weatherization programs have been funded 50/50 across utilities. Evergy Metro and West represented the exception to this largely because those two utilities committed to allocating shareholder funds for weatherization in EM-2018-0012. Those funds became exhausted this year.

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Table 2: Overview of Income-Eligible Programs



Q. What do you believe are the biggest challenges facing these programs?

A. The programs are underfunded and have not scaled up anywhere near the rate that electric rates have risen. In addition to the funding challenges, income-eligible programs are subject to fragmented administrative oversight, application challenges, and widespread unawareness. Consider for a moment that approximately only 16-20% of households eligible for LIHEAP actually receive assistance today.[75] Given heightened inflationary trends and budgetary cutbacks on traditional safety net programs, income-strapped households will likely be worse off moving forward.

[75] Edison Electric Institute (2026) LIHEAP Funding: Who Benefits from LIHEAP https://www.eei.org/en/issues-and-policy/liheap

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Q. Has Evergy Metro conducted any research regarding its customers' likely energy burden?

A. My understanding is that the Company has worked with stakeholders in the past. Namely, Renew Missouri to provide input for Renew Missouri's Energy Burden web tool. However, a review of that website suggest that the information has not been updated in at least a few years.[76]

Q. What is an energy burden?

A. Energy burden refers to the percentage of a household's income spent on energy bills. A high energy burden means a significant portion of a household's income is being used for energy, potentially impacting their ability to afford other essential needs like housing, food, medicine, and transportation. A household with a high energy burden spends more than 6% of its income on energy bills, and those with a severe burden spend more than 10%.[77] For example, a household with $50,000 in income should spend no more than $3,000 on their energy bills. This is important because an energy burden threshold highlights severe financial and health inequities. When households—particularly low-income families—are forced to spend excessive portions of their income just to keep the lights on and the home at a safe temperature, they are forced to make impossible trade-offs between utility bills, food, rent, and healthcare. High energy burdens extract costs that extend far beyond monthly utility bills, creating cascading effects that undermine health, economic stability, and social mobility.

When families can't afford adequate heating or cooling, they face increased risks of temperature-related illness or death. Multiple studies have established the links between energy insecurity and adverse outcomes in mental health, respiratory health, thermal stress,

[76] https://app.power-d.city/dashboard/missouri

[77] These thresholds are based on Fisher, Sheehan and Colton's Home Energy Affordability Gap Analysis. This burden takes into account the total cost of shelter and the proportion of total shelter cost devoted specifically to energy. For more information, see http://www.homeenergyaffordabilitygap.com/

sleep quality, and child health.[78] Children in energy-insecure households face greater odds of hospitalization and developmental concerns.

Q. In light of the change to Missouri law, what are you proposing the Commission order?

A. My understanding is that the Missouri Public Service Commission Staff is planning on offering an income-eligible rate design in this docket that will likely utilize a tiered volumetric approach. If, for whatever reason, this design does not materialize in Staff's direct, I am making a placeholder recommendation for an income-eligible rate design that waives the customer charge for residential customers whose incomes are at or below 150% of the federal poverty line (or 60% of the State's Median Income depending on which metric the Missouri Department of Social Services adopts). This is the same threshold that is utilized for LIHEAP eligibility and is the same design already approved for Spire customers in Missouri. This recommendation is meant to merely represent a starting point for discussions with interested stakeholders and will likely be modified in future testimony.

Q. Do you have any concerns around introducing an income-eligible rate design?

A. Without additional action, I believe the enrollment rate of this rate design will be well below its potential due to challenges associated with the income verification process. Today, this process is entirely dependent on public or non-profit entities to administer, as utilities do not want to be charged with the liability and coordination of sensitive material. Recently enacted federal work requirements for benefits may very well hinder enrollment.[79]

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[78] Siegl, E.L., et al. (2024) Energy Insecurity Indicators Associated with Increased Odds of Respiratory, Mental Health, and Cardiovascular Conditions. *Health Affairs*. Vol. 43. No. 2. https://www.healthaffairs.org/doi/10.1377/hlthaff.2023.01052

[79] According to the Center on Budget and Policy Priorities, Missouri has seen a 7.31% drop-in participation rates in the Supplemental Nutrition Assistance Program ("SNAP") since the enactment of the July 2025 "One Big Beautiful Bill Act" through March of 2026. This has resulted in a reduced enrollment of 48,436 participants.

See also, Rosenbaum, D. et. al., (2026) SNAP Tracker: People are losing food assistance as the republican megabill is implemented. Center on Budget and Policy Priorities. https://www.cbpp.org/research/food-assistance/snap-tracker-people-are-losing-food-assistance-as-the-republican-megabill

Hardy, K. (2026) SNAP work requirements don't boost jobs, but drop participation, research finds. *Stateline*. https://stateline.org/2026/04/10/snap-work-requirements-dont-boost-jobs-but-drop-participation-research-finds/

Ultimately, what needs to occur is a larger dialogue with the Missouri Department of Social Services around a potential memorandum of understanding aligning categorical eligibility of the income-eligible rate with existing state-administered benefits programs that require income verification.

Q. Could you provide some more context?

A. The following DSS programs operate with an income eligibility threshold at or below 150% of the federal poverty level:

- MO HealthNet for Expansion Adults
- MO HealthNet for the Aged and Disabled
- MO HealthNet for the Blind
- State Children's Healthcare Insurance Program
- MO HealthNet for Kids ages 1-18
- Qualified Medicare Beneficiary
- Specified Low Income Medicare Beneficiary
- SNAP
- LIHEAP

If DSS can work with our utilities to align its existing application process with an option for eligible participants to have their eligibility forwarded to Evergy Metro (and other utilities) we will see adoption rates at more robust levels then we otherwise would.

Q. Can you provide a hypothetical example of what you mean?

A. Sure. Consider the following scenario:

A citizen attempts to sign up for relief through the MO HealthNet for the Blind program. There may be many requirements that need to be met to receive relief, but presumably, at least two of them are: 1.) you make less than 150% FPL; and 2.) you are blind (however that is defined).

Let's say the citizen isn't fully blind (by program standards levels) but does make less than 150% FPL. Well, they couldn't get relief for MO HealthNet for the Blind, but because they took the trouble to verify their income and they make less than 150% FPL (regardless of family size or make-up), they *are* eligible for a low-income utility rate.

The challenge here is to align DSS's intake of *all* of its social service safety net programs that require income verification with a notification asking customers if they would like to have their information forwarded to their relevant utility so that they could receive a discount on their electric/gas/water/sewer bill.

Restated, any time income verification is undertaken and confirmed, we should want to give customers the option to have their affirmative eligibility forwarded to a utility for the discount. An example of the text a customer would see may be as follows:

> *Based on the information you provided, you are not eligible to receive support for the MO HealthNet for the Blind. However, based on your information you are eligible to receive a discount on your utility bill. Would you like to have your information forwarded to Ameren/Evergy/Spire, etc… for a reduced utility bill?*

Assuming the person says "yes," DSS would then notify the relevant utility that they are both eligible and want to receive the low-income rate.

Q. Is this something the Commission can order?

A. I do not believe so.

Q. Then how do you anticipate this being realized?

A. A larger discussion needs to occur with the DSS, the utilities, and other stakeholders around the feasibility of introducing this alignment. To a certain extent, this process has already begun within the context of the aforementioned workshops.

Q. Should the Commission reconsider an income-eligible rate design until this is settled?

A. No. Approval of an income-eligible rate design is not dependent on DSS's categorical income eligibility option I discussed above. I am merely pointing out that the Commission

and stakeholders should temper expectations over enrollment numbers of this rate design if a categorical eligibility option is not able to be implemented in conjunction with DSS's existing suite of benefits programs.

Q. What are your income-eligible recommendations in total?

A. I recommend the following changes:

1. Maintain current funding levels for Evergy Metro's Rehousing Program;
    a. Increased emphasis on elderly and single-parent households.
    b. Tariff should be drafted to allow funding to be fungible with other programs if spending stalls.
2. Maintain current funding levels for Evergy Metro's Economic Relief Program;
    a. Tariff should be drafted to allow funding to be fungible with other programs if spending stalls.
3. Increase funding level to $2 million (50/50 sharing) for the Critical Medical Needs Program;
    a. Tariff should be drafted to allow funding to be fungible with other programs if spending stalls.
4. Allocate $2 million (50/50 sharing) for income-eligible weatherization;
    a. Tariff should be drafted to allow for funding to be directed to health and safety remediation to allow for the weatherization of homes that would be otherwise "passed over" due to health and safety concerns. With particular emphasis on roofs and replacement of knob-and-tube wiring.
    b. Tariff should be drafted to allow for Community Action Agency flexibility in terms of retaining salaried employees and outreach.
    c. Tariff should allow for carryover to emphasize spending of federal funds first.
5. Allocate no more than $150K for a 3rd party analysis of energy burden analysis throughout the Evergy Metro and West service territory;
6. Introduce an income-eligible rate design for customers at 150% FPL or lower that waives the residential customer charge (subject to modifications in future testimony).
7. Waive late fees for households that are eligible for this rate class;

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8. Affirmation from Evergy Metro that they support the categorical eligibility option outlined above and will seek coordination with DSS as appropriate.

Q. Does this conclude your testimony?

A. Yes.

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BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Evergy Metro, Inc. d/b/a Evergy Missouri Metro's Request for Authority to Implement a General Rate Increase for Electric Service	))))	Case No. ER-2026-0143

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 direct 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 13th day of July 2026.

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.