Exhibit No.:	_______________
Issue(s):	The Spire Income Eligible Rate
Witness/Type of Exhibit:	Marke/Direct
Sponsoring Party:	Public Counsel
Case No.:	GR-2025-0107

DIRECT TESTIMONY

OF

GEOFF MARKE

Submitted on Behalf of the Office of the Public Counsel

SPIRE MISSOURI, INC.

FILE NO. GR-2025-0107

May 7, 2025

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DIRECT TESTIMONY

OF

GEOFF MARKE

SPIRE MISSOURI INC.,
d/b/a SPIRE MISSOURI EAST & SPIRE MISSOURI WEST

CASE NOS.: GR-2025-0107

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. What is the purpose of your direct testimony?

A. The purpose of my direct testimony is to provide some background on Spire's vulnerable residential customer population and to propose an income-eligible discount residential rate for qualifying Spire customers.

II. THE SPIRE INCOME ELIGIBLE RATE

Q. What does affordability mean within 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.

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
Reduced debt collection costs and disconnections	Administrative and marketing costs	Burdensome program implementation
Enhanced customer satisfaction for a competitive heating fuel		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 low-income 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. Has Spire conducted any research regarding its customers' likely energy burden?

A. Yes. As a result of a nonunanimous stipulation and agreement entered into by parties in Case No. GR-2021-0108 a third-party consultant, Empower Dataworks, conducted a 2022 Energy Burden Assessment for Spire's Missouri customers.[1]

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%.[2] For example, a household with $50,000 in income should spend no more than $3,000 on their energy bills. Importantly, energy burden estimates typically contain both electric and gas utility bills; however, Empower Dataworks controlled for natural gas alone in its study selecting 3% as a high natural gas burden and 5% as a very high natural gas burden.

Q. What does Missouri's energy burden look like?

A. Not good. Missouri ranked 13th in highest estimated average energy burden in the United States according to the U.S. Department of Energy's Low-Income Energy Affordability Data ("LEAD") Tool. The US DOE estimated that approximately 24% of households in Missouri have an unaffordable energy burden. Additionally:

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[1] See also GM-2.

[2] 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/

Each year, the average household (with unaffordable utility bills) in Missouri spends $1,021 more in utility bills than they can afford (above the 6% affordability standard)—compared to the national average of $921.06.[3]

Q. What insights did the Spire Empower Dataworks study reveal?

A. As stated earlier, the Empower study controlled only for natural gas affordability where 3% and 5% were selected as thresholds for "high" and "very high" energy burdens.

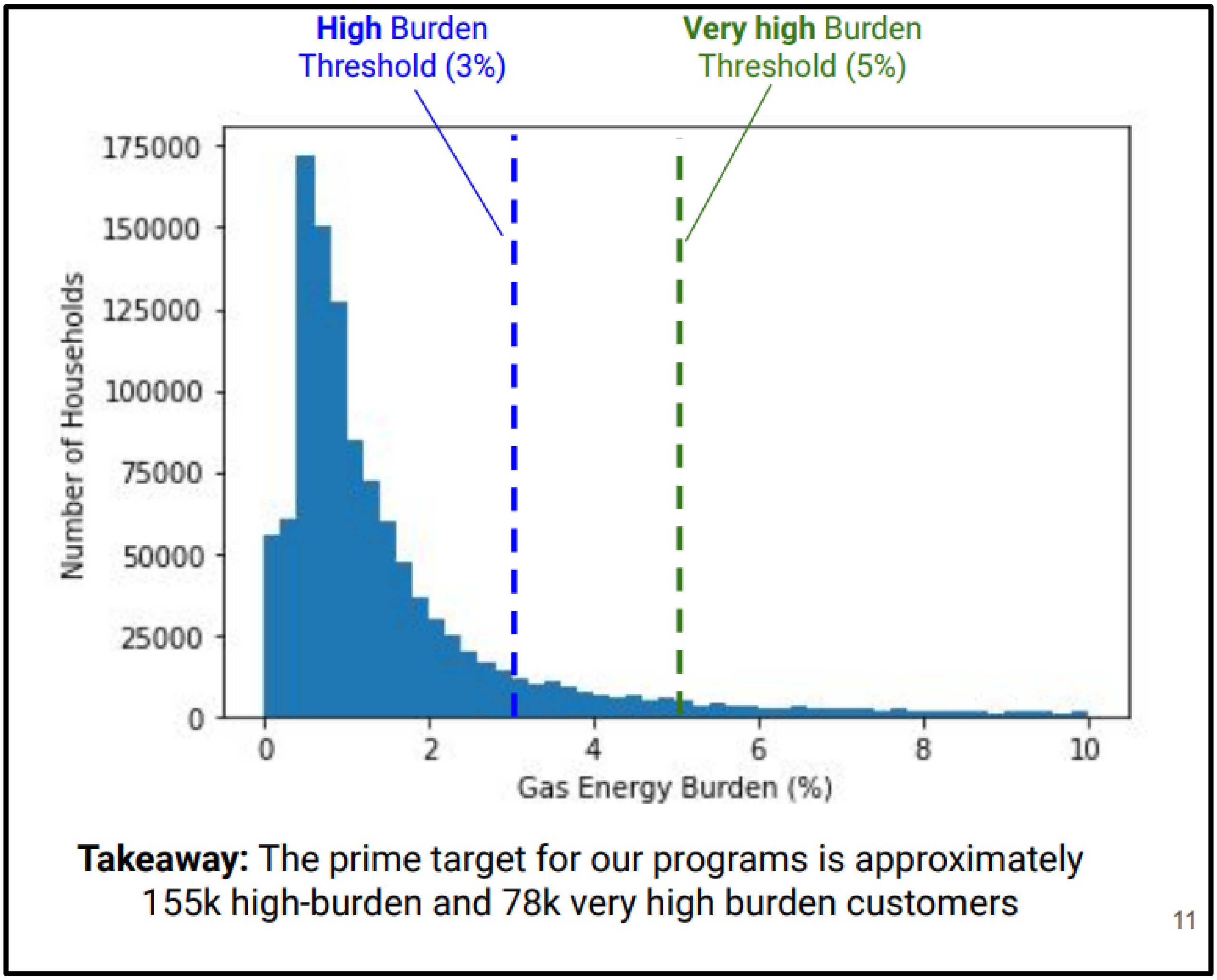
Table 2 provides a breakdown of Spire residential customers at 150% of the federal poverty line as well as households whose natural gas bill exceeds 3% (high energy burden) and 5% (very high energy burden) of their annual income and Figure 1 provides a graphical breakdown.

Table 2: Spire Energy Burden breakdown by percentage and number of customers

Spire 2021 Energy Burden Data	Residential Households	Households under 150% of Federal Poverty Line	Households with High Energy Burden	Households with Very High Energy Burden
Total number of residential customers	~ 1.1 to 1.2 M	190,000	155,000	78,000
% of customers	100%	16%	13%	6.5%

[3] The US DOE LEADS platform has been designated "403 Forbidden" on the US DOE website and can no longer be accessed; however, the University of Michigan's Energy Equity Project https://energyequityproject.org/ retained the information by state. I have included a copy of Missouri's profile in GM-3 for reference.

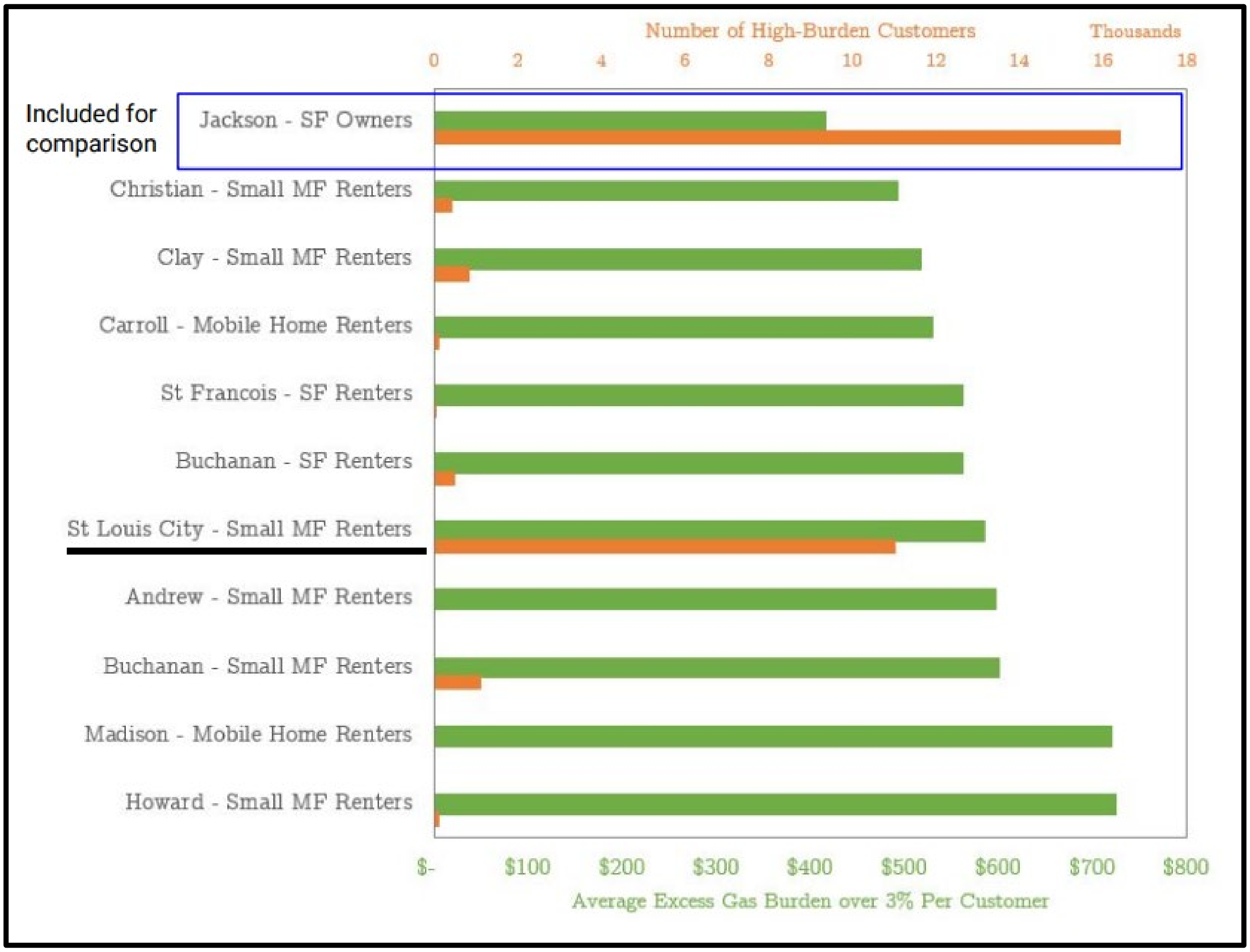
Figure 1: Breakdown of Spire Missouri customers' energy burden levels (2021)



Q. Did the Empower Study provide any insight into customer segments?

A. Yes. As would be expected, the bulk of the need is isolated in densely populated urban areas, mostly among single-family owners and renters. Rural areas of Spire's service territory have a higher concentration of energy burden but fewer overall high-burden customers compared to metropolitan customer segments. Multifamily renters in St. Louis City exhibited both a high number of energy burdened customers and an overall greater excess burden than other geographically examined subsets. Figure 2 provides a graphical breakdown of select areas and customer segments across Spire's footprint.

Figure 2: Highest Concentration of Energy Burden by Select Spire Customer Segment



Q. Why do renters, on the whole, have a greater energy burden?

A. The obvious answer is that renters, on a whole, have a much lower gross annual income than homeowners.[4] Renters also struggle with a "split incentive" problem when it comes to energy

[4] See also Mehta, S. (2025) 85+ Homeowners vs Renters Statistics: The Wealth Divide (2025). https://resimpli.com/blog/homeowners-vs-renters-statistics/#:~:text=The%20median%20household%20income%20for,affordable%20than%20buying%20a%20home.

efficiency upgrades and control over utility bills. The disconnect between landlords (who bear the costs of improvements) and tenants (who benefit from the lower energy bills) arises when landlords invest in energy-efficient upgrades, like insulation or new appliances, but the tenants are primarily responsible for paying the utility bills. This creates a situation where landlords have little financial incentive to invest in energy efficiency, while tenants enjoy the benefits of reduced energy consumption without sharing the upfront cost.

Q. Did Empower estimate how much annual funding would be needed to minimize a Spire customer's energy burden to manageable levels (e.g., below 3% and 5% of overall income)?

A. Yes. Empower estimated that it would take an additional $30M annually targeted at customers with an energy burden above 5% and an additional $55M annually targeted at customers with an energy burden above 3% to make its service affordable for all of its customers. That breakdown can be seen in Table 3.

Table 3: Number of Spire Customers and Additional Funding Needed to Provide Affordable Bills

	Estimated # of Customers eligible	Total Annual Assistance Needed to Lower Burden	Average Monthly discount
High Gas Energy Customers	155,000	~$55,000,000	$32.05
Very High Energy Burden Customers	78,000	~$30,000,000	$29.57

Q. Are there any caveats the Commission should be aware of in accessing the Empower Dataworks study?

A. Yes. I believe the Empower Dataworks study provides a good data point for assessing the affordability challenges Spire's customers wrestle with. However, it is important to note that:

- The study is four-years old and does not capture the $78 million rate increase from Case No. GR-2022-0179, the multiple purchased gas adjustments ("PGA"), nor the $236 million rate increase request in this case;
- 2021 data includes the latter stages of the COVID pandemic;
- Estimated annual assistance suggested by the study assumes full LIHEAP funding remains in place, which is no longer guaranteed;[5]
- The study does not include subsequent price increases from inflation or the various rate increases for electric and water/wastewater service over the past four years; and
- Approximately only 16-20% of households eligible for LIHEAP actually receive assistance today.[6] This suggests that annual costs related to this program need to be tempered by participation levels that will not likely encompass all (or even a quarter) of customers who would be eligible (at least in the initial years of roll-out).

Taken together, the annual assistance amount needed to induce affordable natural gas bills across most of its customers is almost certainly understated in Table 3.

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[5] The Trump administration proposed budget includes eliminating LIHEAP (~$4B annually) in its entirety. Budgetary notes state:

> This Administration is committed to lowering energy costs for American families by unleashing energy production. The Low Income Home Energy Assistance Program (LIHEAP) is unnecessary because States have policies preventing utility disconnection for low-income households, effectively making LIHEAP a pass-through benefitting utilities in the Northeast. Further, LIHEAP rewards States like New York and California, two of the top recipients for LIHEAP funding, which have implemented anti-consumer policies that drive up home energy prices. The Government Accountability Office (GAO) has raised significant program integrity concerns related to fraud and abuse in LIHEAP. In 2010, GAO investigators audited seven States and found names of 11,000 dead people and hundreds of prisoners used as applicants for funds. More than 1,000 Federal employees whose Federal salary exceeded maximum income threshold received benefits and, in several cases, people living in million-dollar houses received benefits. The Budget proposes to end this program and to instead support low-income individuals through energy dominance, lower prices, and an America First economic platform.
>
> See also: https://www.whitehouse.gov/wp-content/uploads/2025/05/Fiscal-Year-2026-Discretionary-Budget-Request.pdf

[6] Edison Electric Institute (2025) LIHEAP Funding: Who Benefits from LIHEAP https://www.eei.org/en/issues-and-policy/liheap#:~:text=In%202021%2C%20more%20than%2034,to%20pay%20their%20energy%20bills.

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. A program designed around eliminating bad debt based on continued timely payments. The second type of bill assistance program are "front-end" program designed to prevent bad debt accumulation from happening. These programs are best executed through a straight bill credit (e.g., LIHEAP) or 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. This can be seen in Spire's existing bill assistance programs as seen in Table 4.

Table 4 Spire Missouri's current bill assistance programs

Program Name	Annual Amount	Who funds?	Description
Payment Partner Program	$3,300,000	50/50 ratepayer & shareholder	Fixed monthly assistance towards arrearage repayment
Critical Medical Needs Program	$500,000	50/50 ratepayer & shareholder	Medical needs verified by a certified medical professional - eligible customers will be enrolled in budget billing or PPP Stops disconnection for 30 days Any unspent funds in a year shall be applied to bill and arrearage assistance
DollarHelp	Fluctuates	$114K from shareholders and customers donations	Bill assistance set at 300% FPL
Keeping Warm (Proposed by Company)	$200,000 (pending)	TBD	Bill credit assistance to eligible customers in the winter

Historically, Missouri regulators have approved programs designed around existing bad debt due to concerns surrounding the legality of discriminatory rates.[7] 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 a

[7] Although there have been some "piloted" low-income rate design programs in the past on a limited basis.

> 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.[8]

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

A. I am recommending that costs related to the residential customer charge be waived for income-eligible residential customers which includes those 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 from LIHEAP eligibility.

Q. Why are you proposing this manner of bill assistance?

A. My recommendation is based on a variety of factors including:

1. Ease of administration (tied to existing LIHEAP eligibility)
2. A general targeted approach allows for greater participation
3. Waiving the fixed charge amount should have an impact on seasonal disconnections (e.g., energy-burdened Spire customers are more likely to voluntarily disconnect natural gas service in the summer) resulting in more revenue certainty; and
4. Finally, the approach is reasonable given the time constraints due to the sudden change in law and near-term uncertainty surrounding the economy and social safety net programs in general.

[8] Senate Bill No. 4. 103rd General Assembly (2025) https://www.senate.mo.gov/25info/pdf-bill/tat/SB4.pdf p. 84.

Q. How does your proposal differ from the Universal Affordability Tariff ("UAT") that the Missouri American Water Company ("MAWC") proposed in its most recent rate case?

A. MAWC's UAT differed in two critically important ways.

First, the UAT was in line with the principles of cost-causation and could not accurately be called a "low-income" rate because MAWC's low-income customers are subsidizing MAWC's higher-income customers. We know this because MAWC triangulated its customers' billing usage data with its cost-of-service study and publicly available census trac data to provide empirical evidence that it costs more per gallon to serve customers with more discretionary water usage than customers who have more stable water usage. Additionally, the discretionary usage of water is highly correlated with income levels. As explained by MAWC witness Charles Rea:

> lower income customers that do not use water for seasonal discretionary purposes are actually subsidizing higher income customers that do use water for seasonal discretionary purposes. It therefore cannot be credibly asserted that a discount tariff that reduces costs for lower income customers is an undue subsidy. To the contrary, it is helping to reduce a subsidy that already exists in the other direction.[9]

This is illustrated in Table 5:

[9] Case No. WR-2024-0320 Direct Testimony of Charles Rea, p. 37, 21-23 thru p. 38, 1.

Table 5: MAWC low, middle, and high residential-income customer's cost of service[10]

Residential Cost of Service	Maximum Day Peaking Factor	Maximum Hour Peaking Factor	Allocated Revenue Requirement	Cost per Thousand Gallons
High Income Group	6.85	2.09	$135,721,292	$14.02
Middle Income Group	3.37	1.54	$118,888,348	$8.46
Low Income Group	1.80	1.41	$15,376,318	$7.01

To be clear, if the rate had been approved, the Commission could have taken solace in stating that no "handout" was truly given and the new tariffed rate would not be discriminatory. Pricing service in the manner proposed by MAWC would merely be following the principles of cost-causation. The UAT represented the ideal scenario with empirical evidence substantiating that rate design. Unfortunately, that level of analysis has not been undertaken in this case.

Second, MAWC proposed a tiered tariff approach tied to income levels. This is a much more targeted approach, with the majority of the benefits flowing to customers with the greatest need as seen in Table 6.

Table 6: MAWC's proposed Tiered Income-Eligible Rate[11]

Household Income	Water Basic Service Discount	Water Volumetric Discount
0% - 50% FPL	75%	75%
51% - 100% FPL	55%	55%
101% - 150% FPL	25%	25%

[10] *Ibid*. p. 36
[11] *Ibid*. p. 23.

This approach is slightly more complicated to administer than a flat discount but will almost certainly have a greater impact on arrearage and bad debt management.

Q. How did the Commission respond to the Universal Affordability Tariff?

A. Although a Report and Order has not been issued at the time of my drafting this testimony, a recent Commission Agenda meeting included the following discussion:

Hahn: There are a lot of things I could say about this proposal, but I think I'll leave it simple, which is I think it leaves ratepayers exposed to a lot of risk and the fact that it doesn't have a program cap. There's no shared costs between shareholders and ratepayers like several other affordability tariff programs. It's unclear who it applies to or how long it applies. I think that not having a cap, not knowing who is qualified, we really don't know the level of exposure for ratepayers, and I'm really not comfortable with that. I think moving forward there will be a low-income workshop where we can explore affordability programs. And so I would assume that we would visit about these types of programs in that workshop. So with that, I would not recommend approving the program. Commissioner Coleman what are your thoughts?

Coleman: Thank you, Madam Chair. So definitely I think that this would place all the costs on the ratepayers and no cost on the investors. So, I agree that we should disallow the universal affordability tariff proposed by the Company.

Hahn: Thank you Commissioner Coleman. Commissioner Kolkmeyer?

Kolkmeyer: Thank you, Madam Chair. I agree with both of you. What concerns me as much or more than anything is there's no cap. And I think we need to look at this and it needs to be more fine-tuned at this time. So, no, I'm not in favor of this.

Hahn: Thank you Commissioner Kolkmeyer. Commissioner Mitchell?

Mitchell: Thank you Madame Chair. I appreciate your diplomacy and describing what were almost my thoughts exactly. And I also feel that we risk running afoul of state statute if we were to approve this. And I think calling it a pilot program with no limits, no caps, no end point and you know really no metrics that we are testing in the pilot program seems to me that its counterproductive to do that. So I agree with your position.[12]

Q. Can you respond to the Commission's concerns as it relates to both the UAT and your proposed Spire rate design?

A. I can.

Q. What is your response to the Commission's concern surrounding "leaving ratepayers exposed to cost uncertainty"?

A. MAWC's analysis and proposal were premised on the fact that the UAT was not discriminatory but instead corrected an intra- and inter-class subsidy borne by a subset of customers who happened to be low-income. As such, it can be argued that the UAT was never a bill assistance program. It was merely designing rates to align with the regulatory principle of cost causation. Costs associated with the tariff would be deferred to the next rate case where costs could be better allocated to cost-causing customers (and/or shareholders).

My proposed Spire bill assistance program is not supported by the same level of analysis as MAWC's UAT; therefore, I am not comfortable with characterizing my proposal as not constituting a subsidy. Although similarities in water and natural gas usage and investment as well as directional data from the Empower Dataworks study suggest that it may not be entirely too far off the UAT analysis. More to the point, the "exposure" range in my professional opinion can be surmised in Table 7.

[12] Missouri Public Service Commission (2025) Agenda 4-30-25. https://www.youtube.com/watch?v=8HIYt-b5JpU&t=2767s starting at 48:30

Table 7: Spire Energy Burden breakdown by percentage and number of customers

Estimated # of Spire Households under 150% of Federal Poverty Line (2021)	Average Monthly Discount	Average Yearly Discount	Total Costs at 100% participation	Total Costs at 20% Participation (LIHEAP proxy)
190,000	$20.00	$240.00	190,000 accounts $45.6 M	38,000 accounts $9,120,000

Q. What is your response to the Commission's concern surrounding the need for a program cap?

A. Nothing was preventing the Commission from ordering a cap under the UAT proposal, nor is anything preventing the Commission from ordering a cap in this docket.

I am generally against the idea of enforcing a "first-come, first-serve" approach to affordability. That being said, I would not be opposed to a $10 million annual cap that could be expanded based on feedback from Spire's income-eligible program collaborative and Commission approval if changes to the economy and Spire's customer base warranted such an action. Such a measure would seemingly be more than appropriate given the uncertainty in the near-term surrounding the economy.

Q. What is your response to the Commission's concern surrounding "who this program would apply to?"

A. The UAT applied a 75% cost reduction to households with incomes at 0% to 50% of FPL; a 55% discount to households at 51% to 100% of FPL; and a 25% discount to households at 101% to 150% of FPL.

My proposal for Spire assigns waives the fixed residential customer charge to households whose income is at or below 150% of the federal poverty line.

Q. What is your response to the Commission's concern surrounding "how long this program lasts?"

A. Both programs would last until parties could examine it in the Company's next filed rate case. Just like every other tariffed rate/program.

Q. What is your response to the Commission's concern surrounding "the need for shareholder contributions?"

A. I agree, but I do not believe that should be a poison pill for moving forward with either program as ultimately the Commission cannot order the Company what to do with its profits.

Q. What is your response to the Commission's concern surrounding "the lack of metrics tied to evaluating the program?"

A. Both MAWC and Spire meet with relevant stakeholders on a quarterly basis to discuss program metrics and access potential changes. Both the UAT and my proposed Spire program would be part of those discussions. Metrics to be examined would include but not limited to:

- Customer participation levels relative to annual budgeted amounts
- Bad debt and arrearage changes
- Disconnection trend lines (voluntary and involuntary)
- Geographic participation and 3rd party program administration numbers
- Cross-program participation (e.g., especially with weatherization)
- Qualitative customer and implementor feedback

Q. What is your response to the Commission's concern surrounding "running afoul of state law?"

A. The law has been signed and changed by Governor Kehoe and goes into effect August 28, 2025. This should no longer be an issue.

Q. What is your response to the Commission's suggestion that we can resolve this in a future workshop?

A. I believe there is value in well-organized, deliverable-focused workshops, but even the best Commission-sponsored workshops I have participated in take a long time to process and conclude. I fully support the idea of future workshops on this topic, but we should not let the perfect consensus-agreed design be the enemy of the good design. Especially given the successive double-digit rate increases seen in dockets approved by this Commission over the past couple of years and the large cost expenditure forecasts on the horizon.

Q. Is there anything else the Commission should be aware of regarding your proposal?

A. Yes, as stated earlier, LIHEAP funding is at risk of being discontinued after the end of September and before the winter season. This raises two immediate challenges, the first is that some sort of additional funding stream will be necessary to maintain some semblance of existing affordability levels. This current proposal is too small to cover the gap from lost LIHEAP assistance. Additionally, many low-income households will face further budgetary constraints if Medicaid, food, and/or housing assistance is ultimately cut and reduced from the federal budget as currently proposed by the executive office. This is on top of fears of a recession and growing worries surrounding tariffs and their impact on the price of everyday goods. I will make adjustments if appropriate in future testimony as these issues develop.

The Commission should also be cognizant that if LIHEAP funding is discontinued there will be an administrative void in determining eligibility and the processing of this proposed program. Today, bill assistance programs rely heavily on the Missouri Department of Social Services and local community action agencies to function as the "gatekeepers" of these programs. If funding for LIHEAP ceases/freezes there is a concern that there will be no "gatekeepers" to verify participants. As such, I am presently in talks with stakeholders over contingency plans if such a scenario arises for our existing bill assistance programs and the future introduction of this program. I will update future testimony accordingly on the progress of those talks.

Q. Does this conclude your testimony.

A. Yes.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc. d/b/a Spire's Request for Authority to Implement a General Rate Increase for Natural Gas Service Provided in the Company's Missouri Service Areas	))))	Case No. GR-2025-0107

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 5th day of May 2025.

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

My Commission expires August 8, 2027.

Tiffany Hildebrand
Notary Public