

Exhibit No.:

Issue(s): *Energy-Efficiency*
Weatherization
Co-Delivery Programs
Heat Pump Pilot

Witness: *Russell Drury*

Sponsoring Party: *MoPSC Staff*

Type of Exhibit: *Rebuttal Testimony*

Case No.: *GR-2025-0107*

Date Testimony Prepared: *May 30, 2025*

MISSOURI PUBLIC SERVICE COMMISSION

INDUSTRY ANALYSIS DIVISION

WATER, SEWER, GAS, AND STEAM DEPARTMENT

REBUTTAL TESTIMONY

OF

RUSSELL DRURY

**SPIRE MISSOURI INC.,
d/b/a Spire**

CASE NO. GR-2025-0107

Jefferson City, Missouri
May 2025

TABLE OF CONTENTS OF
REBUTTAL TESTIMONY OF
RUSSELL DRURY
SPIRE MISSOURI INC.,
d/b/a Spire
CASE NO. GR-2025-0107

Residential Energy Efficiency Program	1
Commercial and Industrial (C and I) Energy Efficiency Tariff Corrections	7
Weatherization Program	7
Co-Delivery Programs	9
Natural Gas Heat Pump Pilot.....	10
Conclusion	13

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23

OF

RUSSELL DRURY

**SPIRE MISSOURI INC.,
d/b/a Spire**

CASE NO. GR-2025-0107

Q. Please state your name and business address.

A. My name is Russell Drury, and my business address is Missouri Public Service Commission, 200 Madison Street, P. O. Box 360, Jefferson City, Missouri 65102.

Q. Are you the same Russell L. Drury who filed direct testimony in this case on April 23, 2025?

A. Yes.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to discuss Staff's positions regarding Spire Missouri Inc., d/b/a Spire's ("Spire Missouri", "Spire East" when referring only to the eastern service territory and "Spire West" when referring only to the western service territory) proposed tariff changes related to residential energy-efficiency rebate programs, weatherization programs, electric utility co-delivery programs and a new natural gas heat pump pilot program. In Shaylyn Dean's direct testimony (Page 2, lines 21-23), Spire Missouri has proposed multiple modifications of these programs to enhance its "energy efficiency portfolio."

RESIDENTIAL ENERGY EFFICIENCY PROGRAM

Q. What changes has Spire Missouri suggested for its residential energy efficiency program?

1 A. In Spire Missouri witness Shaylyn Dean’s Direct Testimony (page 3, lines 20-22
2 and page 4, lines 1-6), he states that Spire Missouri is proposing:

- 3 1. Adding a separate column for Smart Wi-Fi Enabled Thermostats for an
4 increased rebate amount of \$75.
- 5 2. Adding two Pool Heater options:
 - 6 a. If, greater than or equal to 84% thermal efficiency (“TE”) but less
7 than 94% TE, then \$400.
 - 8 b. If, greater than or equal to 94% TE, then \$750.
- 9 3. Adding Energy Star qualified Natural Gas Dryers in the amount of \$200.
- 10 4. Adding insulation an incentive option for greater than or equal to R-38
11 at \$.40/sq. foot up to \$750 max

12 Q. What are Staff’s recommendations on these proposed changes?

13 A. Staff has separate recommendations for each of the proposed changes listed in
14 Mr. Dean’s testimony.

- 15 1. Staff recommends the Commission accept the increased rebate amount for
16 Smart Wi-Fi Enabled Thermostats.
- 17 2. Staff recommends the Commission reject both pool heater rebate options.
- 18 3. Staff recommends the Commission reject the addition of the rebate for
19 Energy Star qualified Natural Gas Dryers.
- 20 4. Staff recommends the Commission accept the addition of the insulation
21 incentive option for the greater than or equal to R-38 option.

22 Q. Energy Star has been in the news quite a bit lately. Isn’t it going away?

1 A. While the future of Energy Star is in question, it is still the law of the land.
2 More importantly, the products available on the market that have received an Energy Star rating
3 are unlikely to begin concealing their energy efficiency, since this is a very significant part of
4 their marketing of such products. Since Energy Star is the current standard by which appliances
5 are judged, I have continued to include these references from Spire Missouri's testimony.

6 Q. Why does Staff support the rebate increase for Smart Wi-Fi
7 Enabled Thermostats?

8 A. In its research for this proposed change, Spire Missouri performed a
9 Total Resource Cost Test ("TRC") as a cost/benefit analysis. A TRC is used by utility
10 companies to compare "the life cycle benefits that the measure or program will deliver to the
11 costs associated with achieving those benefits."¹ In a TRC, a score of "1" or above is desirable.
12 Any score at or above that value is considered to be a positive for the program resulting in a net
13 effect of decreasing the cost of the resource for Spire Missouri. ** [REDACTED]

14 [REDACTED]

15 [REDACTED]

16 [REDACTED]

17 **

¹ [Program Design and Management: The Total Resource Cost Test](#). Accessed May 13/14, 2025.

1 The technology provided by these thermostats allows the user to take control of their
2 gas-operated HVAC systems by setting different temperature settings for times of the day when
3 the home will likely be vacant versus occupied. This provides benefit in both comfort and
4 convenience for the user but most importantly it reduces energy consumption/demand and thus
5 reduces costs for the consumer.²

6 Q. Why does Staff recommend the Commission reject both options of the proposed
7 rebate programs for gas pool heaters?

8 A While many rebate programs demonstrate clear benefit to most rate payers by
9 providing them incentives for products that will result in improved energy efficiency,
10 this proposed program fails to provide a benefit to the vast majority of Spire Missouri customers
11 because most customers do not have a pool. A 2019 study conducted by LendingTree shows
12 that 1.2% of homes in Kansas City (MO) and 3.5% of homes in St. Louis have pools.³ Staff's
13 position is that it is inappropriate for all rate payers to fund a program that would benefit so
14 few, especially for what would be considered a luxury item. Additionally, no cost/benefit
15 analysis was provided in response to DR 0159 in regards to this program. The only evidence
16 provided in Mr. Dean's direct testimony in support of this proposal is on page 4, line 13, where
17 he states the proposal is similar in rebate amount to what is being offered by SoCalGas.

18 Q. Why does Staff recommend the Commission reject the proposed rebate
19 programs for Gas Dryers?

20 A. Staff recommends rejection of this newly proposed program due largely to
21 a lack of a cost/benefit analysis. In Spire Missouri's rate case No. GR-2021-0108, the

² <https://www.energy.gov/node/2194902>. Accessed May 13/14, 2025.

³ [Swimming Pools Are a Prized Amenity in the Summer | LendingTree](#) Accessed May 22, 2025.

1 Office of Public Counsel (“OPC”) recommended that the Commission reject the incentive
2 increases because Spire Missouri had not provided a cost/benefit analysis or other evidence to
3 support the programs.⁴ Staff raises the same objection to rebate and incentive increases in that
4 case.⁵ In response to DR 0159, Spire Missouri stated a cost/benefit analysis on the proposed
5 Natural Gas Dryer Program has still not been conducted.

6 Additionally, in response to DR 0158, in which Spire Missouri was asked about the
7 benefit of the proposed rebate programs to non-participant customers, Spire Missouri replied:
8 “By lowering overall gas consumption, participants contribute to decreasing the actual gas load
9 and greenhouse gas emissions for the entire community, including those who do not
10 participate.” If the effect of this program is to encourage those already using gas dryers to
11 replace their current system with a new Energy Star qualified dryer, then the statement is
12 accurate and would likely be beneficial. If the effect is to encourage consumers currently using
13 electric dryers or contractors who are constructing new homes to switch to or install gas dryers
14 to increase gas supply load, then the statement is contradictory. Gas dryers emit carbon dioxide
15 and other greenhouse gases while electric dryers in and of themselves do not produce emissions.
16 Actual emissions comparisons will depend upon the source of energy used to generate
17 electricity for electric dryers, with more carbon intensive energy such as coal generating more
18 emissions than cleaner sources such as solar, wind, natural gas, or nuclear. Spire Missouri did
19 not provide an analysis of current and future carbon emissions across its service area associated
20 with electric dryers, and therefore has not substantiated their claim of environmental benefit.

⁴ Case GR-2021-0108 Dr. Geoff Marke Rebuttal Testimony Page 12, lines 6-10.

⁵ Case GR-2021-0108 Kory Boustead Rebuttal Testimony Page 2, lines 12-13.

1 Staff does not recommend approval of Spire Missouri's program for conversion to gas dryers
2 from electric dryers.

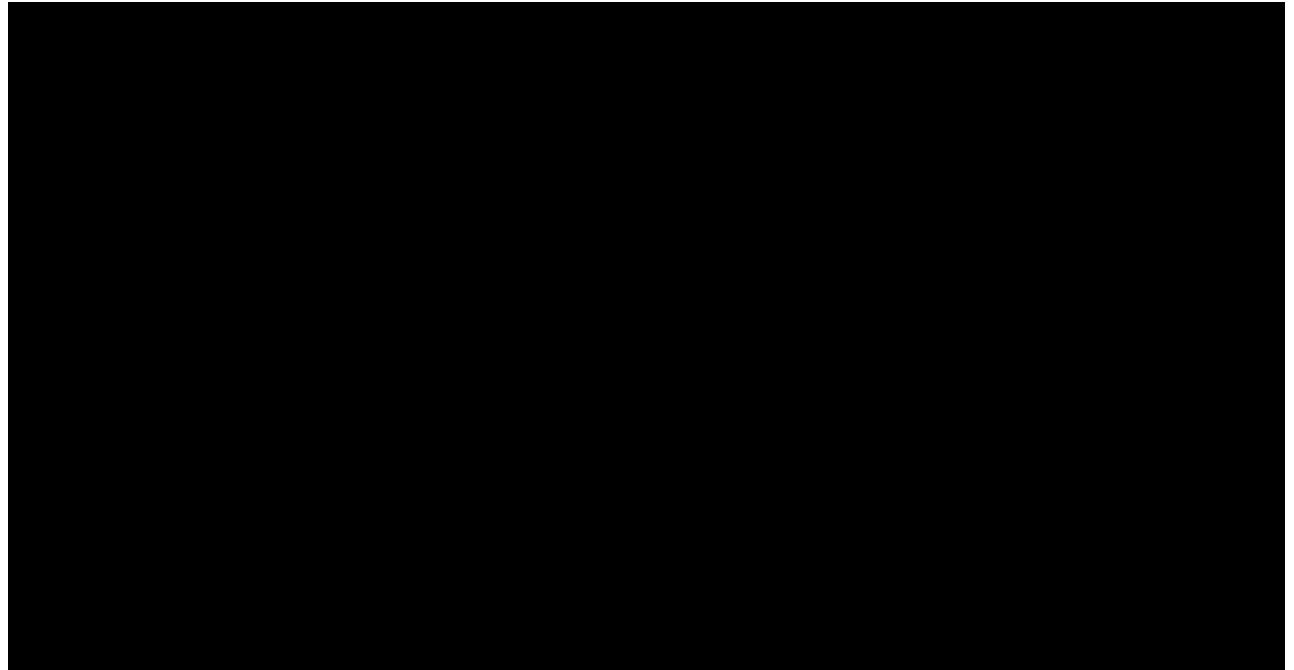
3 Q. Why does Staff recommend the Commission approve the proposed insulation
4 incentive option program for greater than or equal to R-38?

5 A. Good home insulation is extremely valuable for energy savings throughout the
6 year, not just in heating months. Insulation is rated using the "R-value." According to
7 Energy Star, the R-value represents the "measure of insulation's ability to resist heat traveling
8 through it. The higher the R-Value the better the thermal performance of the insulation."⁶ This
9 directly impacts the consumer by reducing heating and cooling costs due to reduced energy
10 demand. In response to DR 0159, Spire Missouri included the TRC results for their current
11 insulation incentive programs. ** [REDACTED]

12 [REDACTED]
13 [REDACTED]
14 [REDACTED]
15 [REDACTED]
16 [REDACTED] ⁷

⁶ [Recommended Home Insulation R-Values | ENERGY STAR](#) Accessed May 22, 2025.

⁷ [Recommended Home Insulation R-Values | ENERGY STAR](#) Accessed May 13, 2025.



**

**COMMERCIAL AND INDUSTRIAL (C AND I) ENERGY EFFICIENCY TARIFF
CORRECTIONS**

Q. What changes has Spire Missouri proposed for its Commercial and Industrial Energy Efficiency Tariff?

A. According to Shaylyn Dean's Direct Testimony (page 5, lines 4-10), the proposed changes to the C and I Tariff are minor grammatical edits. Changing the word "turn" to "tune" and adding an "(s)" to the end of the word "gallon" to make it "gallon(s)." Staff recommends the Commission accept these changes.

WEATHERIZATION PROGRAM

Q. What change has Spire Missouri proposed for its Weatherization Program?

A. According to Mr. Dean's Direct Testimony (Page 5, lines 14-21), Spire Missouri has requested an increase of \$200,000 annually for the Weatherization Program for the Spire West service territory. This increase would bring the total funding for Spire West up to

1 the same level of funding as Spire East at \$950,000 (total program budget: \$1.9 million). These
2 funds are provided to local Community Action Agencies (“CAAs”) for distribution to
3 income-eligible customers.

4 Q. Does Staff recommend the Commission support this proposed change to the
5 Weatherization Program?

6 A. No, Staff recommends the Commission reject the proposed change to the
7 Weatherization Program. Each year Spire West continues to have a carryover amount that rolls
8 into the Program budget for the following year. ** [REDACTED]

9 [REDACTED]
10 [REDACTED]

11 [REDACTED]

12 [REDACTED]

13 [REDACTED]

14 [REDACTED]

15 [REDACTED]

16 [REDACTED]
17 [REDACTED] **. The data seems to demonstrate the current funding is ample for
18 the program to continue. Staff would consider a re-evaluation of this in a future rate case if
19 there was a trend of no carryover in the program.

1 Q. Is Spire Missouri proposing any additional changes to the
2 Weatherization Program?

3 A. Yes, in his testimony on page 6, lines 5-14, Mr. Dean states Spire Missouri has
4 made the following changes:

- 5 1. Redlined Section A under the terms and conditions on the Weatherization Tariff
6 Sheet No. R-28 to accurately reflect that funding is administered by the local
7 community action agency or non-profit partner in the Company's
8 service territory.
- 9 2. Made a couple of changes to Section B to include non-profit partners within the
10 first sentence regarding the weatherization guidelines. The additional changes
11 in this section emphasize making the language more flexible for the community
12 action agencies ["CAAs"] and our non-profit partners to make repairs to keep
13 homes off the deferral list, so that customers can move forward with upgrades.

14 Q. Does Staff support these changes?

15 A. Yes, Staff recommends the approval of these changes. It helps clarify the role
16 of the CAAs in regards to the funding provided to them by Spire Missouri.

17 **CO-DELIVERY PROGRAMS**

18 Q. Does Staff support Spire Missouri's current Co-Delivery Programs?

19 A. Staff largely supports the Co-Delivery Programs between Spire Missouri,
20 Ameren, Evergy and Independence Power and Light with a few exceptions. The Co-Delivery
21 Programs were included in the Total Resource Cost Test/Cost Benefit Analysis conducted by
22 Spire Missouri. In its response for DR 0159, Spire Missouri disclosed that three (3) of
23 the 23 programs scored below the desired 1.00 score on a TRC. Simply put, the cost outweighs
24 the benefit for these three programs:

1. Line item 4-Residential-Income-Eligible Single-Family Program (Co-Delivery Ameren)-Building Envelope-Ceiling Insulation-R-11 – R-49 with a seven year (2024-2030) average score of 0.64.

2. Line item 12-Residential-IPL Single Family Weatherization Program (Co-Delivery IPL MOW)-Building Envelope-Attic Insulation with a seven year (2024-2030) average score of 0.81.

3. Line item 21-Residential-PAYS Program (Co-Delivery Ameren)-Building Envelope-Attic Insulation with a seven year (2024-2030) average score of 0.97.

Staff questions the benefit of continuing the funding of these three (3) programs and contends the dollars provided to them may be of greater benefit if applied to a different, more cost-effective program. Staff therefore recommends discontinuation of these three (3) programs that failed the TRC test.

NATURAL GAS HEAT PUMP PILOT

Q. What does Staff recommend for Spire Missouri's proposed Natural Gas Heat Pump Pilot Program?

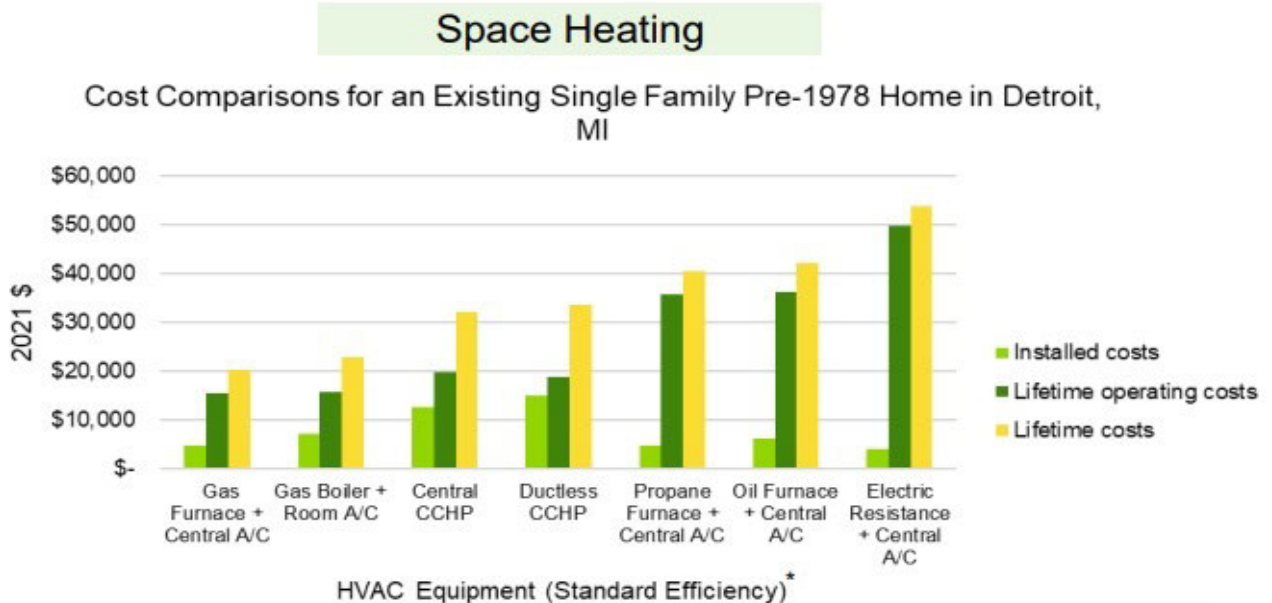
A. Staff recommends the Commission approve the Natural Gas Heat Pump Pilot Program proposed by Spire Missouri in Shaylyn Dean's direct testimony on pages 12 and 13. Industry analysis demonstrates significant benefit for the implementation of gas heat pumps ("GHPs"). To begin with, GHPs are extremely efficient. The following chart was taken from Spire Missouri's response to Staff DR 0147⁸:

⁸ The Heat Pumps Are Coming! How Thermally-Driven, Hybrid, and Latent Cooling Solutions Can Drive Building Decarbonization, Glanville, et.al. (included in response to DR 0147).

Category		Max. Efficiency Rating ²	TDHP Field Demo Savings / Performance Target ³
Residential	Water Heater	0.90 UEF (Storage) 0.96 UEF (Instantaneous)	>50% energy savings over 0.62 UEF baseline, >1.20 UEF target
	Warm-air Furnace	99.0 % AFUE	>45% energy savings over 92% AFUE furnace baseline, >140% COP _{seasonal} target ⁴
	Boiler	96.0% AFUE (Water) 83.4% AFUE (Steam)	
Commercial (Non-Residential)	Water Heater	97% TE (Storage) 99% TE (Instantaneous)	>50% energy savings over 82% TE baseline, >130% TE target
	Weatherized Furnace	>90% TE ⁵	>40% energy savings over 80% TE baseline, >1.30 COP _{heating} target
	Boiler	99.4% AFUE (Water) 84.2% TE (Steam)	>40% savings over 80% TE baseline, >130% TE target, (N/A for steam)

As the chart demonstrates, residential heat pumps demonstrate a greater than 45% energy savings when operating over 92% annual fuel utilization efficiency (“AFUE”) and commercial heaters demonstrate energy savings greater than 40% when operating over 80% thermal efficiency. This clearly translates to overall reduced utility costs for the consumer. A study conducted in Michigan by Guidehouse Inc. also shows that the average lifecycle cost of a GHP is lower than propane, oil and electric heating options including installation costs and lifetime operating costs as demonstrated in the chart below.⁹

⁹ [DTE Heat Pump Breakeven Analysis - Summary for EWR Collaborative - March 15, 2022](#). Accessed May 13-15, 2025.



- Central CCHP have **lower lifecycle costs** than oil & propane furnace and electric resistance heating, but **higher lifecycle costs** compared to gas furnace and boilers.
- A gas furnace/AC system has **lower lifecycle cost** than a central CCHP over a 15 yr. lifetime, primarily due to **upfront cost differences**.
- Existing homes may require **electrical system upgrades** (e.g., panel, wiring) of around **\$2,500** when replacing a fuel-fired option with an electric HP system.
- All-electric new construction can save up to **\$6,000** in **avoided gas pipeline costs**.

Additionally, GTI Energy stated in a report that reliability in extremely cold conditions is also a major benefit of GHPs.¹⁰ They are widely used in the northern U.S. states.

Finally, Spire Missouri included the implementation of the Natural Gas Heat Pump Pilot Program in its “2024 Integrated Resource Plan” (Page 40) proposal in case file No. GO-2025-0161. On February 13, 2025, the Commission accepted the proposal for this resource plan.

¹⁰ ROLE OF COMBUSTION-BASED BUILDING EQUIPMENT IN DECARBONIZATION by GTI Energy. Response to DR 0147.

CONCLUSION

Q. Can you please summarize Staff's stances on the issues addressed in your testimony?

A. Spire Missouri has proposed multiple tariff changes related to residential energy-efficiency rebate programs, weatherization programs, electric utility co-delivery programs and included a new natural gas heat pump pilot program.

1. Residential energy-efficiency rebate programs:

a. Rebate increase for Smart Wi-Fi Enabled Thermostats – Staff recommends Commission approval.

b. Gas Pool Heater Rebate Program (both options) – Staff recommends Commission rejection.

c. Gas Powered Dryer Rebate Program – Staff recommends Commission rejection.

d. Insulation Incentive Option for R-38 or higher – Staff recommends Commission approval.

2. Weatherization Program \$200,000 increase to Spire West to bring it level with Spire East – Staff recommends Commission rejection.

3. Spire Missouri Ameren, Evergy, Independence Power and Light Co-Delivery Programs – Staff recommends no change with most co-delivery programs but does recommend the discontinuation of the programs that scored below the desired score of 1.00 on the TRC provided in response to DR-0159. Those funds should be reallocated within the same overarching Program.

4. Natural Gas Heat Pump Pilot Program – Staff recommends Commission approval.

Q. Does this conclude your testimony?

A. Yes, it does.

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 RUSSELL DRURY

STATE OF MISSOURI)
)
COUNTY OF COLE) ss.

COMES NOW RUSSELL DRURY and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Rebuttal Testimony of Russell Drury*; and that the same is true and correct according to his best knowledge and belief.

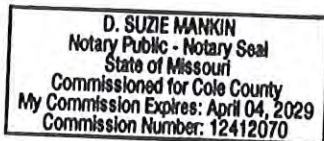
Further the Affiant sayeth not.



RUSSELL DRURY

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 23rd day of May 2025.





Notary Public