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Witness:	**James Rieske**
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Case Nos.	**GR-2022-0179**
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SPIRE MISSOURI INC.

CASE NO. GR-2022-0179

REBUTTAL TESTIMONY

OF

JAMES RIESKE

OCTOBER 2022

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DIRECT TESTIMONY OF JAMES RIESKE

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is James Andrew Rieske, and my business address is 700 Market Street, Saint Louis, MO 63101.

Q. WHAT IS YOUR PRESENT POSITION?

A. I am currently Director, Measurement for Spire Missouri Inc. ("Spire").

Q. PLEASE STATE HOW LONG YOU HAVE HELD YOUR POSITION AND BRIEFLY DESCRIBE YOUR RESPONSIBILITIES.

A. I have been the Director, Measurement for Spire since June 2018. In this role I am responsible for the customer metering used to serve Spire customers in all regions. This includes the administration of all programs that purchase, maintain, test, and retire all customer metering.

Q. WHAT WAS YOUR EDUCATIONAL BACKGROUND AND PROFESSIONAL EXPERIENCE PRIOR TO ASSUMING YOUR CURRENT POSITION?

A. I earned my Bachelor of Science in Mechanical Engineering from the University of Missouri, Columbia. I joined Spire in January 1990 in our Engineering Department. I served various roles in the Engineering Department for three years. The next year was spent working as a Field Supervisor in our Instrumentation and Control Department. For the next fourteen years, I worked in various roles in Engineering where I spent the last six of those fourteen years managing all the day-to-day compliance programs. For the next five years I led the project to deploy Asset Management and Field Data Collection Systems of Spire's Enterprise Resource Planning software for all of the Missouri Regions. In 2015, I took over the management of Spire's Asset Management Systems and the business processes that maintain all asset data.

Q. HAVE YOU PREVIOUSLY FILED TESTIMONY BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION ("COMMISSION")?

A. Yes. I most recently filed testimony in Case No. GR-2021-0108.

Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A. The purpose of my testimony is to respond to the recommendation of Staff of the Commission ("Staff") and the Office of the Public Counsel ("OPC") that the some of the Company's investments in Ultrasonic advanced metering reading technology ("AMI") be disallowed in rates and rate base.

I. ULTRASONIC METERING TECHNOLOGY

Q. IN CASE GR-2017-0215 AND GR-2017-0216, SPIRE PURCHASED MODULES IN SERVICE FROM LANDIS & GYR. DID THAT PURCHASE CONTEMPLATE PLANS FOR A FUTURE WHOLESALE METER CHANGE OUT THAT WOULD REPLACE THE METERS OR METER INTERFACE UNITS THAT WERE PURCHASED?

A. Yes. The details in the case were built around the system having an end of life in April 2025. The purchase price was established based on the current (depreciated) value of the devices that were in service. As part of the purchase, the agreement with Landis & Gyr to operate the network system was extended by five years to April 2025. The depreciation schedule on the communication devices (modules) was set based on the known end of service date for the network of April 2025. The Company has been clear and consistent in discussing this system that the network had a defined end of life in 2025 and the evidence presented in the case referenced above demonstrated how the amended agreement and module purchase benefited Spire's customers.

Q. STAFF WITNESS FERGUSON TESTIFIED THAT SPIRE MET WITH CERTAIN STAFF MEMBERS ON JUNE 9, 2021 TO DISCUSS METER REPLACEMENT AND A NUMBER OF OTHER TOPICS. HOWEVER, WITNESS FERGUSON STATES THAT DISCUSSION DID NOT LAY OUT IN DETAIL PLANS AND STRATEGIES FOR HOW SPIRE WOULD PERFORM A WHOLESALE METER REPLACEMENT. DO YOU AGREE?

A. Spire believed the discussion and power point presented at the meeting clearly set out Spire's plan to perform a wholesale meter replacement. Moreover, I would note that in its last rate case, Spire was very clear about its meter replacement strategy and plans.

Q. PLEASE DESCRIBE SPIRE'S METER REPLACEMENT STRATEGY AS PRESENTED TO STAFF IN ITS LAST RATE CASE AND THE MEETING HELD ON JUNE 9, 2021.

A. The Company was very specific both in its responses to data requests as well as in my GR-2021-0108 Surrebuttal Testimony that an enterprise-wide decision was made to establish the Ultrasonic meter as the residential meter standard. The strategy called for using the Ultrasonic meter anytime a residential meter was replaced for any reason or when a new meter installation was required. The decision to use Ultrasonic meters when replacing meters coincided with studies that showed increasing inaccuracy of Spire's existing meters in sample populations that warranted increased replacements of underperforming meter populations.

This initial strategy was incorporated into Spire's existing meter programs and was not a mass replacement strategy. A component of this strategy was responsive to the expiration of the Landis & Gyr network in Spire East, which requires replacement of the

communications modules on all Spire East meters by April 2025. The Company had done a preliminary analysis that a strategy of aggressive meter replacements versus module replacements would be more economical for Spire customers, particularly if the replacement could be done while Company personnel were already the customer premises for another reason, such that little or no additional effort was required to replace the meter. The use of the Ultrasonic meter had not yet begun in the Spire East territory.

Q. HOW DID SPIRE ARRIVE AT THE DECISION TO USE ULTRASONIC METERS?

A. In 2018, Spire studied next generation metering systems and equipment available across the primary vendors in the industry. The Itron Ultrasonic meter demonstrated compelling capability that could meet the goals Spire developed for potential future customer improvements. The Ultrasonic meter integrates advanced measurement capability with electronic data capture that allows the meter to sense what is happening during meter operation. The integrated module sends data on conditions and can act automatically to stop the flow of gas, if necessary. This capability renders a diaphragm meter with a module attached obsolete. Spire's study also looked at factors that could impact the availability and price of existing diaphragm meters. Spire believed that in the short term we would be able to purchase the Ultrasonic meter with far more capability at the same price point, or cheaper, than the existing mechanical diaphragm meters with connected modules. The technology was studied and tested extensively before it was recommended as the new residential meter standard.

Q. MS. FERGUSON NOTES THAT "[N]OWHERE IN THIS RULE DOES IT STATE THAT THE COMMISSION HAS A REQUIREMENT THAT A METER BE

REPLACED AFTER IT HAS BEEN IN SERVICE FOR 10 YEARS OR MORE." DOES COMMISSION RULE 20 CSR 4240-10030(19) REQUIRE THE REPLACEMENT OF METERS OVER 10 YEARS OLD?

A. As a practical matter, yes. The rule very prescriptively states that the meter must be removed, inspected, and accuracy tested at an interval not to exceed 120 months. The rule states:

> (19) Unless otherwise ordered by the commission, each gas service meter installed shall be periodically removed, inspected and tested at least once every one hundred twenty (120) months, or as often as the results obtained may warrant to insure compliance with the provisions of section (18) of this rule.

Ms. Ferguson's testimony that the rule does not require replacement after ten years ignores that fact that inspection and accuracy testing can only be performed at a Company facility equipped to perform such inspection and testing. This means testing requires removal to transport the meter to the Company facility, which in turn requires replacement in order to ensure continuous measurement. This has been the practice in every region of Spire and virtually every gas company in the country for decades and has been described in great detail in responses to data requests in this case.

Q. DOES THE COMPANY BELIEVE IT IS COST-EFFECTIVE FOR SPIRE TO REUSE DIAPHRAGM METERS?

A. No. Once diaphragm meters have been removed and transported to a Company facility for testing, it is not cost effective to reuse the old meters. As a practical matter, at ten years old, the meters are at the end of their useful life, or at a minimum become less accurate and need to be tested regularly. Accordingly, they would need to be repeatedly removed and tested, which is both costly and inconvenient for customers.

Q DID THE COMMISSION COME TO THE SAME CONCLUSION IN GR-2021-0108?

A. Yes, on page 47 of the Amended Report and Order,

> "The Commission finds that recovery for the cost of replacement of meters, replaced on an as-needed basis, is appropriate in instances where: the service was already disconnected; the existing meter needs replacement; and the alternative is a new diaphragm meter. The safety features and comparable costs make Spire Missouri's choice of a new ultrasonic meter (about $170 to $200) justified in instances where the options to replace an already disconnected meter are a new diaphragm meter (about $170 to $200 for a new ultrasonic meter, minus an approximate $25 difference in the cost of a new diaphragm meter equals about $145 to $175) or a refurbished diaphragm meter ($221)."

Q. DID THE COMMISSION'S ORDER IN GR-2021-0108 FIND THAT COST RECOVERY FOR METERS USED TO REPLACE METERS THAT WERE LESS THAN TEN YEARS OLD WAS APPROPRIATE?

A. No. The Order disallowed the installation costs of new meters installed to replace diaphragm meters that were less than ten years old. In compliance with the Order, Company Witness Michelle Antrainer provides further details on Spire's current process of charging any meter change prior to ten years of age to expense, which Spire is proposing to continue.

Q. STAFF WITNESS EUBANKS RECOMMENDS THE COMMISSION DISALLOW RECOVERY OF 7.5% OF THE SMART METER ACCOUNT, WHICH REPRESENTS THE PERCENTAGE OF METER INSTALLATIONS THAT RESULTED IN REMOVAL OF A DIAPHRAGM METER LESS THAN YEARS OLD AND METERS WHERE SPIRE PROVIDED NO DOCUMENTED AGE. IN YOUR OPINION, SHOULD THE COST OF THE NEW ULTRASONIC DEVICES THAT HAVE BEEN INSTALLED AND ARE CURRENTLY IN-SERVICE BE DISALLOWED?

A. Absolutely not. The Company disagrees with reducing the Ultrasonic plant account balances for equipment used to replace diaphragm meters that were less than 10 years old. If anything, Spire believes that the account for the original diaphragm assets should be adjusted since these assets are no longer in service. The reduction of the account where the new assets are booked exacerbates the stranded cost issue of the original assets. Customers are using and receiving the benefits of the new ultrasonic meters so the Ultrasonic meter accounts should not be the account disallowed as proposed by Staff.

Q. WHAT DO YOU RECOMMEND TO THE COMMISSION?

A. If any account is adjusted based on the replacement of diaphragm meters that are less than ten years old, it should be account 381 for the diaphragm meters.

Q. ARE THERE DIFFERENT CIRCUMSTANCES AND SITUATIONS BETWEEN SPIRE EAST AND SPIRE WEST RELATING TO METER INFRASTRUCTURE?

A. Yes. Given that the contract with Landis & Gyr expires in 2025, Spire East is "on the clock" and must replace those meters. Thus, it is important to consider different strategies to effectively move off the Landis & Gyr network, which requires every meter or module in the Spire East territory to be replaced. The inside meter population in the Spire East service territory adds complexity to the replacement strategy. The Company, regulators, and other interested stakeholders will need to evaluate the cost, convenience, and nuances associated with replacing nearly 150,000 indoor meters. If a Spire employee already is doing work at the premises of an indoor meter customer, the convenience and cost might warrant replacement sooner than 10 years. Further discussions will take place with Staff and OPC as our contract runs out in 2025.

Q. MS. FERGUSON STATES THAT IT SEEMS THAT METER REPLACEMENT WOULD HAVE MADE MORE SENSE IF IT HAD BEGUN IN THE SPIRE EAST TERRITORY INSTEAD OF THE SPIRE WEST TERRITORY. WHY DID METER REPLACEMENT BEGIN IN SPIRE WEST'S TERRITORY?

A. Spire West's metering system already utilized Itron technology. Therefore, the installation of the Ultrasonic meters did not impact the process Spire uses to gather monthly meter readings. Since the Spire East customers were on a Landis & Gyr system, an alternative option for acquiring meter readings had to be implemented once the Ultrasonic meters were installed. Spire wanted to minimize the length of time the duplicate processes were necessary.

Q. OPC WITNESS ROBINETT EXPRESSES A CONCERN AS TO WHETHER THE NEW ULTRASONIC METERS CAPABILITIES CAN BE UTILIZED ABSENT THE SECONDARY INVESTMENT INTO A NEW NETWORK. HOW DO YOU RESPOND?

A. Witness Robinett's concern is unwarranted. As discussed in my rebuttal testimony from GR-2021-0108, there are four key benefits of the ultrasonic meters that are not at all dependent on any network: (1) customer safety, (2) employee safety, (3) increased accuracy, and (4) reliability. One of the most common causes of natural gas explosions are large leaks or open fuel runs on the customer's side of the meter. We commonly encounter these situations due to copper theft or where unused, uncapped fuel runs are mistakenly valved on. The results of these situations can be catastrophic. Ultrasonic meters can easily prevent these explosions from occurring. Each ultrasonic meter comes factory equipped with an automatic internal shut-off valve built in. When the meter detects

a flow rate of 500 cubic feet per hour on the customer side of the meter for a period of approximately ten seconds, the shut-off valve on the meter automatically closes, stopping the flow of gas to the customer premises. This stops the building from filling with natural gas and creating the conditions for a potential explosion. Each ultrasonic meter also contains a factory-installed temperature sensor. The sensor is linked to the automatic shut-off valve, which will activate when the temperature sensor detects an external temperature of 176 degrees Fahrenheit or greater. The sensor is designed to activate when it detects heat from a fire or explosion. This prevents natural gas from acting as a continued fuel source in a structure fire, regardless of whether it was originally caused by the ignition of natural gas. This detection has the benefit of reducing the overall severity and duration of a fire, which is a safety benefit to both customers and first responders. Also, until the new network is in place, the Company will still have the ability to shut off ultrasonic meters with a remote control device.

Q. WHAT IS YOUR RESPONSE TO MS. FERGUSON'S TESTIMONY THAT SPIRE IS NOT CURRENTLY COMPLETING ITS METER REPLACEMENTS IN ACCORDANCE WITH THE COMMISSION'S ORDER IN CASE NO. GR-2021-0108 SO AS TO RECEIVE FULL COST RECOVERY.[1]

A. Contrary to Ms. Ferguson's belief, Spire has taken measures to follow the guidelines of the Stipulation. Spire made an adjustment in its direct case for meters that were less than ten years old, and, since the issuance of the Order, the overall percentage of meters that are less than 10 years old that have been replaced is approximately one-third of the percentage that was disallowed for Spire West in Case No. GR-2021-0108. In my opinion, this shows

[1] Ferguson Direct, p. 37.

great improvement. And to achieve this level of improvement, Spire has had to make significant efforts. Specifically, when the Order was issued, the Company had to communicate the new guidelines to hundreds of technicians on how to document the replacements and exceptions. At this same time, the Company's mobile field work systems were being extended to regions outside of Missouri. This restricted changes to clearly mark field orders for when a meter could be replaced until March 2022. Nonetheless, Spire was able to implement this change within its field work systems in May 2022.

Q. MS. FERGUSON TESTIFIED THAT SPIRE MISSOURI DID NOT PERFORM A COST BENEFIT ANALYSIS OR ISSUE A REQUEST FOR PROPOSALS (RFP) TO DETERMINE THE BEST COST SUPPLIER FOR ITS METERS.[2] WHAT IS YOUR RESPONSE?

A. A meter is part of a meter reading ecosystem comprised of the meter, a communications module, software and hardware to program the communications devices to the meter, software and hardware to read the meter in AMR (i.e., via a van) or AMI (i.e., a 2-way network). There are also extensive integrations required for Company asset management and billing systems. An RFP for meter suppliers was possible when the Company was buying diaphragm meters because a module for the meter reading system could be added after purchase. In contrast, the Itron Ultrasonic meter has an integrated communications module that is specific to Itron. The competing Ultrasonic Meter also has a module specific to the system to which it communicates. This means a utility must choose the Ultrasonic meter specific to the ecosystem that the utility already has in place or it must replace the entire ecosystem and all the equipment on each customer meter. Accordingly, there is no

[2] Ferguson direct, p. 33. a

practical way to use an RFP to select an Ultrasonic meter. That said, it is important to reiterate that the Ultrasonic meter is currently being purchased for less than what it costs to buy the leading diaphragm meter – module equivalent. The Company diligently studied the cost factors and capability in selecting the Itron Ultrasonic Meter and in my opinion the price paid for the meters is favorable to Spire and its customers.

Q. STAFF WITNESS FERGUSON TESTIFIES THAT SPIRE RELAYED TO STAFF THAT IT DOES NOT TRACK EXACT COST SAVINGS FROM INSTALLING ULTRASONIC METERS. CAN SPIRE QUANTIFY SAVINGS ASSOCIATED WITH THE DEPLOYMENT OF ULTRASONIC METERS?

A. The Company strives to be transparent in the impact of this program and will evaluate how to measure future savings as it relates to key areas of this deployment. The Company has identified areas of anticipated savings associated with the deployment of Ultrasonic meters. One form of savings is created by replacing aging meter populations before they fail. The current program has accelerated this effort but has not been in place long enough to allow effective measurement of anticipated cost savings. Repair expenses are part of larger buckets of work that go through natural cycles based on the quantity of and capacity to perform the work and therefore savings associated with meter repairs can be difficult to quantify. Two other primary forms of savings are in back office and field investigations, and customer turn-offs. These savings will not be fully realized until the Ultrasonic meter is more widely in service. When enough ultrasonic meters are in place, existing processes can be replaced with ones that leverage the new technology and can tangibly change the effort that drives expenses. As the ultrasonic meter ecosystem further develops, Spire is willing to work with Staff on appropriate reporting measures to quantify these savings.

II. CONCLUSION

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.'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-2022-0179**

AFFIDAVIT

STATE OF MISSOURI CITY OF ST. LOUIS	)))	SS.

I, James Rieske, of lawful age, being first duly sworn, deposes and states:

1. My name is James Rieske. I am Director, Measurement for Spire Missouri Inc. My business address is 700 Market Street, St. Louis, Missouri 63101.

2. Attached hereto and made a part hereof for all purposes is my rebuttal testimony on behalf of Spire Missouri Inc.

3. Under penalties for perjury, I declare that the foregoing is true and correct to the best of my knowledge and belief.

James Rieske (Oct 6, 2022 20:32 CDT)

Signature

James Rieske

Printed Name

Dated: 10/06/2022