Exhibit No.:	_____
Issue(s)	WNAR
Witness/Type of Exhibit:	Mantle/Direct
Sponsoring Party:	Public Counsel
Case No.:	GR-2021-0108

DIRECT TESTIMONY

OF

LENA M. MANTLE

Submitted on Behalf of the Office of the Public Counsel

SPIRE MISSOURI, INC.

CASE NO. GR-2021-0108

May 12, 2021

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Spire Missouri Inc.'s d/b/a Spire Request for Authority to Implement a General Rate Increase for Natural Gas Service Provided in the Company's Missouri Service Areas	)))))	Case No. GR-2021-0108

VERIFICATION OF LENA M. MANTLE

Lena M. Mantle, under penalty of perjury, states:

1. Attached hereto and made a part hereof for all purposes is my direct testimony in the above-captioned case.

2. My answer to each question in the attached direct testimony is true and correct to the best of my knowledge, information, and belief.

*/s/Lena M. Mantle*_____
Lena M. Mantle
Senior Analyst
Office of the Public Counsel

TABLE OF CONTENTS

DIRECT TESTIMONY

OF

LENA M. MANTLE

SPIRE MISSOURI, INC.

d/b/a SPIRE MISSOURI EAST & SPIRE MISSOURI WEST

CASE NO. GR-2021-0108

Q. Would you state your name and business address?

A. My name is Lena M. Mantle and my business address is P.O. Box 2230, Jefferson City, Missouri 65102. I am a Senior Analyst for the Office of the Public Counsel ("OPC").

Q. Would you describe your experience and your qualifications?

A. I started working for the OPC in my current position, as a Senior Analyst in August 2014. In this position, I advise the Public Counsel and provide expert testimony on a variety of topics including the implementation of interim rate mechanisms. Prior to working for the OPC, I worked for the Missouri Public Service Commission Staff ("Staff") from August 1983 until I retired in December 2012. During my employment on the Commission Staff, I worked as an Economist, Engineer, Engineering Supervisor, and Manager of the Energy Department.

Attached as Schedule LMM-D-2 is a brief summary of my experience with OPC and Staff along with a list of the Commission cases in which I filed testimony, Commission rulemakings in which I participated, and Commission reports to which I contributed. I am a Registered Professional Engineer in the State of Missouri.

Q. What is the purpose of your direct testimony?

A. Section 386.266.3 RSMo. allows Spire, Inc. ("Spire") as a gas corporation to make an application to the Commission to request an adjustment to rates, outside of a general rate proceeding, to account for the impact on utility revenues due to variation in weather, conservation, or both. The purpose of this testimony is to

explain OPC's position that the Commission reject Spire's proposed weather normalization adjustment rider.

Q. What recommendations do you make in this testimony?

A. I recommend the Commission not approve any interim rate mechanism to account for the impact of weather and conservation.

If Spire provides information that the Commission believes justifies the imposition of an interim rate mechanism on its smallest customers, then I recommend the Commission: (1) change the interest charged in the current weather normalization adjustment rider ("WNAR") to be consistent with § 386.266; (2) update certain components of the WNAR; and (3) modify the current WNAR as described in this testimony.

An Interim Rate Mechanism for Weather and Conservation Should Be Rejected

Q. Did Spire provide testimony that describes why the Commission should grant Spire an interim rate mechanism that accounts for the impact of weather and conservation?

A. No. One witness, Mr. Wes Selinger, provided testimony proposing the Commission replace its current Weather Normalization Adjustment Rider ("WNAR") with a Rate Normalization Adjustment ("RNA"). No witness describes why it is necessary for the Commission to grant Spire either the WNAR or the RNA proposed by Mr. Selinger. It seems that it is Spire's position that once the Commission grants Spire an interim rate adjustment mechanism under this statute, Spire need not ever again explain to the Commission why it should approve a rate adjustment mechanism to account for fluctuations in revenues due to weather or conservation.

Q. Why should Spire have to justify its need for a rate mechanism for weather if an interim mechanism is allowed by statute?

A. While an interim rate mechanism that accounts for the impact of weather, conservation, or both is allowed by statute, it is a privilege, not a right guaranteed by statute. While I am not an attorney, I have spent considerable time reviewing § 386.266. This state statute gives the Commission the "power to *approve, modify, or reject*" (emphasis added) such a mechanism.[1] This means the Commission has discretion regarding the mechanism requested by Spire.

Q. What should Spire show to justify an interim mechanism to account for weather and conservation?

A. In a rate case, billing determinants and revenue requirement are used to establish non-gas volumetric rates. The billing determinants used to calculate these non-gas volumetric rates are normalized for weather in the rate case resulting in rates that will provide the revenues set by the Commission if normal weather occurs.

The one thing that is certain about Missouri is that the weather is never normal. It is warmer than normal and cooler than normal but never normal. When the weather is warmer than normal, then natural gas usage is lower meaning that, everything else being constant, Spire will not collect as much revenue from the non-gas volumetric rate. If the weather is cooler than normal, everything else being constant, then Spire will collect more revenue than what was used to set the non-gas volumetric rates.

Likewise, if its customers conserve their natural gas usage, Spire does not receive the revenue requirement from its non-gas volumetric rates as set by the Commission.

Absent an interim rate mechanism for weather and conservation, Spire absorbs all the risk associated with weather and conservation. If actual usage is

[1] Section 386.266.5 RSMo.

below the billing determinants set in the rate case, there is no way for Spire to recover the revenues that it did not receive. Likewise, when actual usage is above the billing determinants, the revenues Spire receives exceed the normalized revenues set in the rate case resulting in increased earnings for Spire.

When the weather is warmer than the normal used to set rates, customers enjoy lower bills because their usage was lower and Spire's earnings suffer. On the other hand, if usage is higher, customers suffer higher bills because the weather resulted in higher usage and Spire retains the extra revenue from these non-gas volumetric rates as earnings.

An interim rate mechanism that accounts for volatility due to weather and conservation moves the risk of fluctuations of weather from Spire to its customers. Such a mechanism assures Spire that it will get to collect extra revenues if the weather is warmer than normal or customers work to conserve usage. If weather is cooler than normal, customers will be returned the excess they paid.

To justify the Commission's approval of such a mechanism, Spire should justify to the Commission why the customers should take on this risk and what the customers receive in return for taking on this risk.

Q. Are you aware of any information that you would like to point out to the Commission that shows Spire does not *need* the mechanism?

A. Yes. It seems Spire's need for the revenues collected through this mechanism are not great enough for Spire to make sure that it is actually collecting the revenues the Commission has said that it could.

Q. Would you explain your basis for this statement?

A. As Spire prepared a summary file for its most recent request to change its WNAR rates,[2] it discovered in February 2021 that it had failed to change in its billing

[2] Case GR-2021-0280, In the Matter of the Spire Missouri Inc.'s d/b/a Spire Missouri East and Spire Missouri West filing of its Proposed Weather Normalization Adjustment Rider Tariff Sheets.

system the WNAR rate approved by the Commission effective October 1, 2020. Spire, of its own accord, had been giving customers a credit through the WNAR when it should have been collecting additional revenue. It seems that the revenue that Spire had requested and the Commission approved for collection was not great enough for Spire to make sure that the revenues were actually being collected.

Q. Do you recommend the Commission approve any interim rate mechanism to adjust rates to account for fluctuations in revenues due to weather and conservation?

A. No. I recommend the Commission reject Spires' request for such a mechanism. Spire has not shown a need for the rate mechanism and seems to take for granted this shifting of risk to its customers. This is demonstrated by Spire's lack of testimony providing justification for the Commission to grant it an interim mechanism in this case and not making sure a rate change approved by the Commission was implemented.

For these reasons, I recommend the Commission reject any mechanism for interim rates to account for fluctuations in weather and/or conservation for Spire.

Appropriate Mechanism if Adequate Justification for Interim Rate Mechanism is Provided

Q. If Spire provides testimony regarding its need for an interim rate mechanism to account for the impact of weather and conservation, and the Commission determines Spire has justified its need for such a mechanism, what type of interim mechanism should the Commission approve?

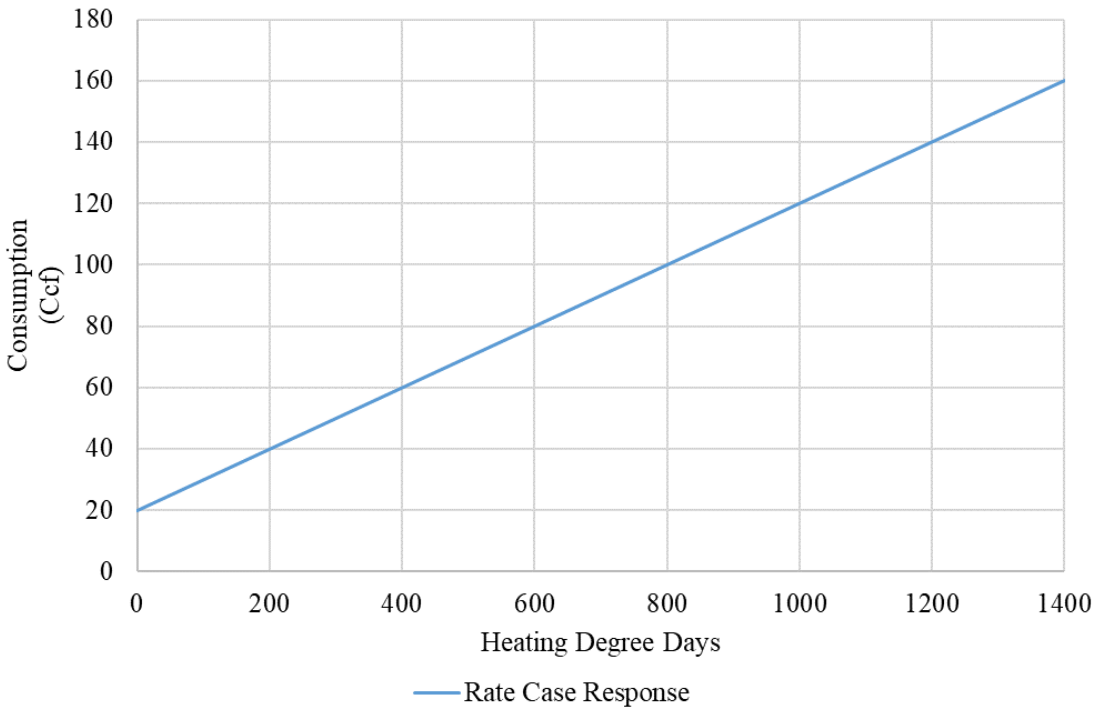
A. The current WNAR is an excellent interim rate mechanism to capture fluctuations due to weather and conservation. Therefore, I recommend the Commission approve the WNAR with the updates and modifications identified in this testimony, which includes changing the interest rate to be consistent with § 386.266.

Q. Before getting to your suggested changes, would you explain how this mechanism accounts for weather and conservation?

A. I will start with how the mechanism accounts for weather. In a rate case, the relationship between weather and usage is measured to determine what the usage, and subsequently revenues, would have been given normal weather. For gas usage, weather is measured in heating degree days ("HDD") with HDD being the difference between 65 degrees Fahrenheit ("^{O} F") and the actual mean daily temperature.[3] The colder it is, the greater the HDD.

The Figure 1 below shows a hypothetical relationship between usage and HDD.

Figure 1



This graph shows that, for this customer class, as measured in the rate case, an increase of 200 HDD results in consumption increasing by 20 Ccf or for a change

[3] Mean daily temperature is the sum of the daily high and the daily low temperatures divided by two.

of one (1) HDD, usage changes by 0.10 Ccf. Using this line, the usage for any HDD point can be estimated.

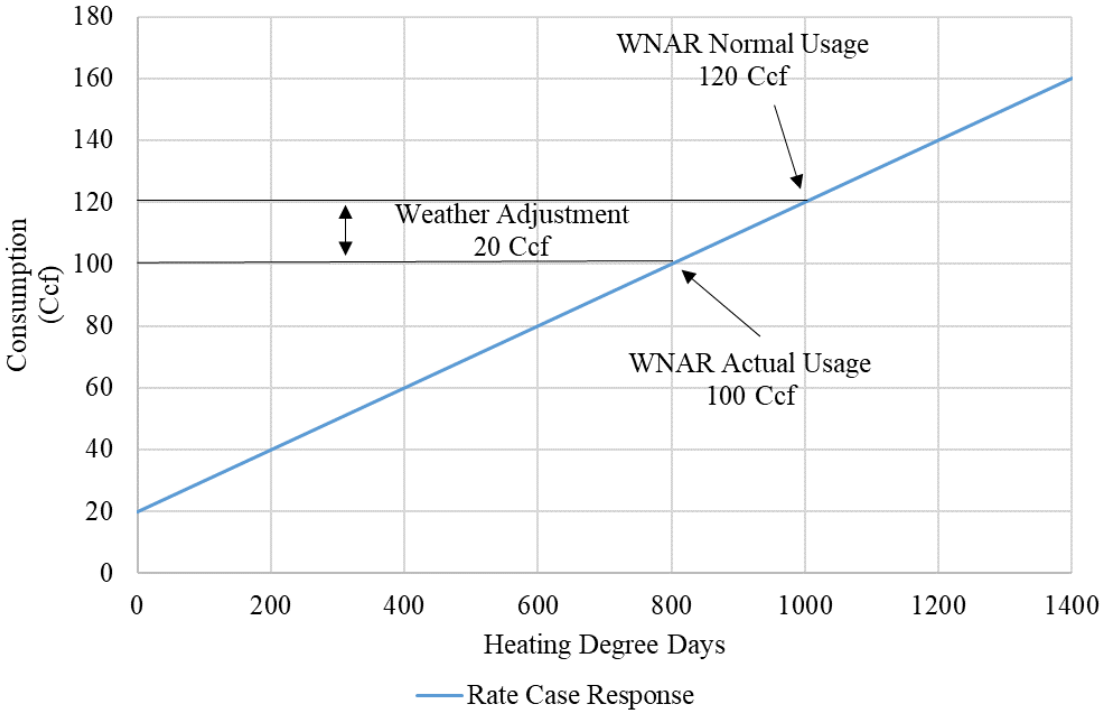
Q. How is the relationship of usage to weather estimated?

A. While the relationship in Figure 1 was created for simplicity, for a utility the relationship is estimated by developing a regression model using the most recent usage data for a customer class and the actual HDD associated with each usage data point.

Q. How is the relationship between HDD and usage used to calculate a weather normalization adjustment?

A. Let's go back to our hypothetical relationship. Assume normal weather was 1,000 HDD and the actual weather was warmer than normal with HDD of 800. Figure 2 shows the usage at 800 HDD is 100 Ccf and at 1,000 HDD is 120 Ccf.

Figure 2



The weather adjustment is the normal Ccf minus the actual Ccf as predicted by the line. Therefore, the weather adjustment to usage in this example is 20 Ccf (120 Ccf minus 100 Ccf).

Q. What if it was colder than normal?

A. If normal HDD was 800 and the actual was 1,000 HDD, the weather adjustment would be -20 Ccf (100 Ccf minus 120 Ccf).

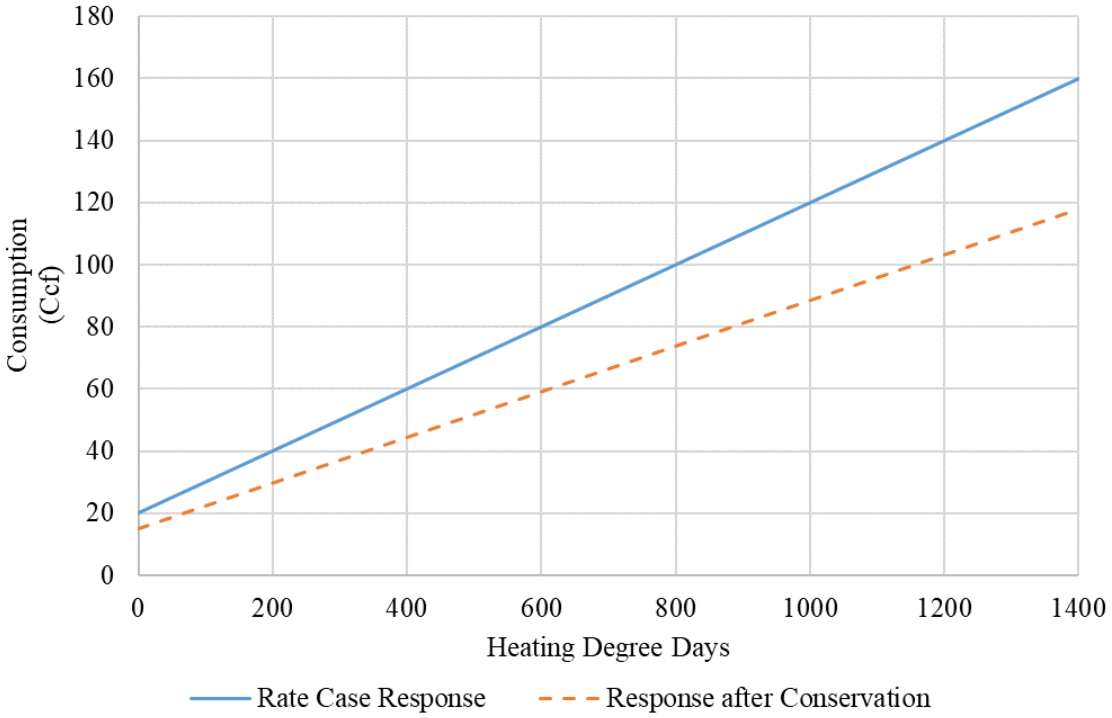
Q. How is this related to the WNAR?

A. The WNAR includes a coefficient (β) that is the measurement of the usage response of the customers to weather as defined in the rate case. Weather normalization adjustments in Ccfs are calculated for each billing cycle and each month based on this coefficient and the actual and normal weather measured for each billing cycle. The adjustments are then multiplied by a rate to calculate how much revenue was not collected or was over-collected. The adjustments are summed across billing months and then divided by the billing determinants in the last rate case resulting in a WNAR rate that is applied for the next 12 months.

Q. How does the WNAR account for conservation?

A. To help explain how the WNAR accounts for conservation I have created additional graphs. In Figure 3 below, the solid line represents the customer class' response to weather at the time of the rate case. The dashed line shows the response to weather of the same customer class after time passes and customers have taken steps to reduce their usage (conservation).

Figure 3



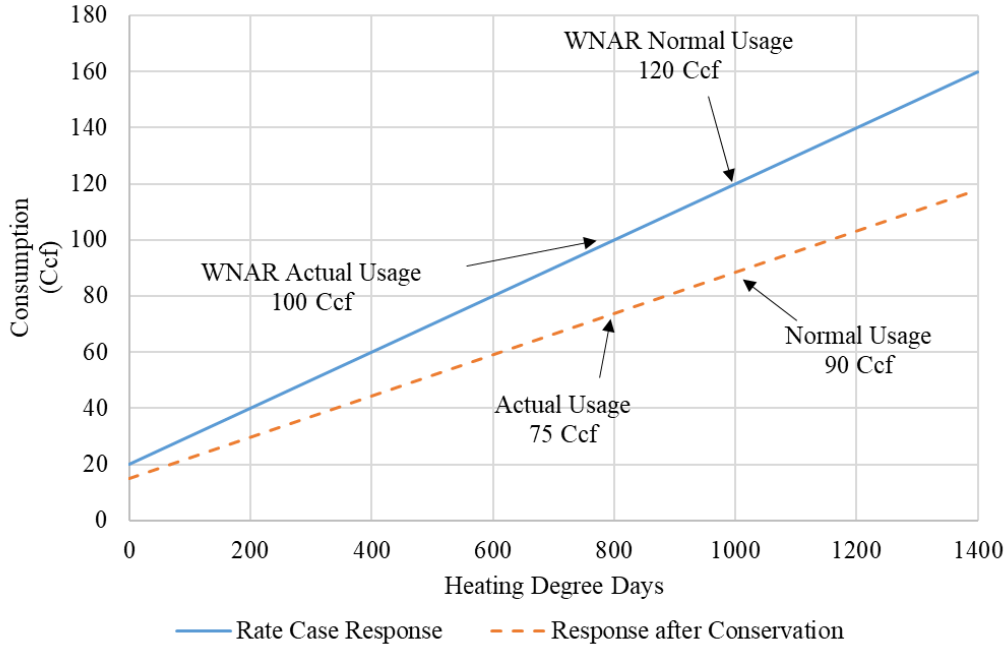
The response to weather as set in the rate case is the solid line showing an increase of 200 HDD results in consumption increasing by 20 Ccf.

After time passes and conservation occurs, the response to weather of this same class as shown by the dashed line in this graph is 15 Ccf for a change in HDD of 200.

Q. What happens when the actual weather is warmer than normal?

A. To get an understanding of what would occur I have taken the example one-step further as shown in Figure 4 below. Warmer than normal means that the actual HDD is lower than the normal HDD. In this example, normal HDD is 1,000 and actual is 800. Then the WNAR calculated normal usage would be 120 Ccf while the WNAR actual usage would be calculated at 100 Ccf resulting in a weather adjustment of 20 Ccf. This 20 Ccf would be used to calculate the WNAR rate.

Figure 4



However, according to the dashed line that represents the new relationship between usage and weather after conservation, the weather adjustment for normal weather, would be 15 Ccf, the difference between 90 Ccf and 75 Ccf.

The weather normalization adjustment of 20 Ccf calculated using the WNAR relationship is greater than the 15 Ccf weather adjustment using the relationship after conservation. Because the WNAR line is used to determine the WNAR rate, not the after conservation line, in this example, the weather normalization adjustment is 33% higher than it would have been had the conservation relationship line been used.

Q. Does this difference account for the all the change in usage due to conservation effects?

A. No, it does not.

Q. Are you proposing a modification to the mechanism to capture more conservation effects?

A. No. To do so would require re-estimating the class response to weather on an annual basis. This would significantly increase the complexity of the mechanism. As described later in this testimony, Spire has issues with the complexity of the current mechanism so I am reluctant to increase the complexity of the mechanism any further.

In addition, by not recovering all of the effects of conservation, the mechanism, while moving much of the risk to the customers, leaves some risk regarding conservation on Spire.

Q. You made a recommendation to the Commission that the interest rate included in the WNAR should be changed. What is the current interest rate required by the WNAR?

A. The current WNAR tariff sheets provide that each month, carrying costs, at a simple rate of interest equal to the prime bank lending rate (as published in The Wall Street Journal on the first business day of such month), minus two percentage points, be applied to Spire's average beginning and ending monthly WNAR balances.

Q. What interest rate should be charged in the WNAR?

A. Statute states that for the mechanisms enacted as a result of § 386.266, interest at the utility's short-term borrow rate is to be included in the true-up of the difference between what was ordered to be collected and what was actually collected. For consistency, the short-term borrowing rate is also applied to Spire's average beginning and ending monthly WNAR balances.

Q. What in the current WNAR needs to be updated?

A. There are two components of the current WNAR that should be updated: (1) the coefficient β; and (2) the Weighted Residential Volumetric Rate ("WRVR").

Q. What is the β coefficient and why does it need to be updated?

A. The β coefficient is the measurement of the relationship between usage and weather. The β that is in the current tariff sheets reflects the relationship between weather and usage as measured in the last rate case. The current β for Spire East is 0.1493772 and for Spire West is 0.1291586. This means for every one (1) heating degree day increment, the average residential customer of Spire East uses 0.1493772 therm. The average residential customer of Spire West uses 0.1291586 Ccf.

Not only is this coefficient different between Spire East and Spire West, it changes between rate cases. How customers use natural gas in the test year in this case is different than it was in the test year of the last rate case for a variety of reasons including increases and decreases in customers and conservation efforts of the customers. That is why usage is normalized for a variety of factors in each rate case. As a part of this normalization of usage used to calculate normal revenue, the relationship between weather and usage is measured. The β coefficient is a result of that process.

Q. Can you recommend to the Commission the correct βs to use in WNAR rates?

A. Not at this time. These should be determined through Staff's weather normalization process in this case.

Q. The other change to the current WNAR that is necessary is an update to the weighted residential volumetric rate ("WRVR"). What is the WRVR and why does it need to be updated?

A. The WRVR is the rate used to calculate the weather normalization adjustment amount in dollars for each billing month. This rate ($/Ccf) multiplied by the weather normalization adjustment in usage (Ccf) determines the weather normalization amount in dollars ($) that is to be collected from customers.

Currently for the billing months of November through April, the residential gas service rate (RS) non-gas volumetric rate is the same for all Ccfs or therms used. Therefore, for the billing months of November through April, the WRVR is the same as the non-gas volumetric rate. For the billing months of May through October, the non-gas volumetric rate is a two-block rate with the second block rate being higher than the first. The WRVR for these billing months is an average of the rates of these two blocks weighted by the number of customers whose usage ended in each block as determined in the most recent rate case.

In this case, the rates and billing determinants will change from the current rates. Therefore, the WRVR will need to be updated with the new rates and billing determinants from this rate case.

Q. Do you have any recommendations to simplify the WNAR?

A. Yes. Spire witness Selinger, in his direct testimony told the Commission that there were "issues" with the WNAR but did not provide what those issues were. To gain an understanding of these "issues," I requested a listing and detailed description of Spire's issue with the WNAR in data request 8000.[4] In response to this data request, Mr. Selinger gave the following as "issues" with the WNAR mechanism:

1. Requirement of semi-annual updates;
2. Four (4) separate rate components;
3. Billing cycle calculations;
4. Use of ranked degree days;
5. Requirement of an unbilled calculation; and
6. Greater than anticipated correlation to volumetric variances.

In my rebuttal testimony, I will address why Spire's issues 3 through 6 are not really issues with the WNAR. While I do not agree that the first two are issues either, the WNAR can be modified to address the first two and simplify the WNAR.

[4] Spire's response to OPC DR 8000 is attached to this testimony as Schedule LMM-D-1.

Q. What changes are you recommending?

A. I recommend that the WNAR be changed to require an annual filing instead of semi-annual filings. The differences between the actual and normal usage would still be calculated on a billing month basis but a filing would only be required once a year ending with the May billing month. The weather normalization amount would be calculated using the sum of the 12 monthly adjustments with interest.

At the end of the May billing month, a true-up would be done determining the difference between the WNAR amount calculated in the last WNAR rate change case and what was actually billed.

To determine the rate to be charged the customers, the true-up amount would be added to the weather adjustment amount. The sum of these two would then be divided by the volumetric billing determinants from this case resulting in a single rate to be charge over 12 months.

Spire would file to change the WNAR rate with the Commission annually on July 1 with an effective date of the first October billing read cycle end date. Staff would file its recommendation to the Commission by September 1.

Q. How would this take care of the second issue Spire has with the WNAR?

A. There would only be one rate component.

Q. Are there other changes you would like to propose?

A. Not at this time. However, as I review the current WNAR tariff sheets for the class cost-of-service and rate design filing the need for more changes may become apparent.

Q. Would you summarize your testimony?

A. Yes. A mechanism that allows for interim rates that account for changes in weather and conservation is a privilege and not a right for investor-owned gas utilities in Missouri. Such a mechanism shifts risk in revenue recovery away from Spire to

the customer thus increasing the volatility of bills for customers while decreasing revenue recovery risk for Spire. For this privilege, Spire should justify its request for a mechanism in each case. It has not done so in this case. The Commission has been authorized to grant, modify, or reject requests for such mechanisms. Since Spire has not provided a rationale for why the Commission should grant it such a mechanism, the Commission should not authorize an interim rate mechanism to account for weather and conservation for Spire.

If Spire provides justification and the Commission agrees the authorization of a mechanism is reasonable, then the Commission should continue Spire's weather normalization adjustment rider with modifications as set out in this testimony. The interest rate charged should be consistent with statute. The β and weighted residential volumetric rates should be updated for the weather normalization and used in this case to determine normalized revenues and the rate design approved by the Commission.

In addition, the accumulation periods should be changed to simplify the WNAR.

Q. Have you discussed Spire's WNAR with Staff?

A. Yes. I will respond to their proposed changes in my rebuttal testimony.

Q. Finally, what is your experience with weather normalization?

A. I was a part of the team on the Commission Staff that developed a cutting edge weather normalization process for electric utilities in the late 1980's and 1990s. This methodology is still the basis for the weather normalization methodologies used today by utilities across the nation. As shown in Schedule LMM-D-2, I was the Staff weather normalization expert witness in many cases while at the Commission. While much of my work was weather normalizing electric usage, the same principles apply to weather normalization of gas usage.

Q. Does this conclude your direct testimony?

A. Yes, it does.

Spire Missouri
GR-2021-0108

Response to Office of Public Counsel (OPC) Data Request 8000

On page 28 of his direct testimony, Selinger states that the WNAR has had issues.

Please provide 1) a detailed description of each issues including, but not limited to, why it was an issue for the WNAR; and 2) how Spire's proposed RNA will eliminate each issue.

Requested by John Clizer and Lena Mantle (john.clizer@opc.mo.gov and lena.mantle@opc.mo.gov).

Response: The Company believes that the WNAR mechanism is more complicated than it needs to be. The mechanism is updated semi-annually and requires four (4) separate rate components be always in place (i.e. 2 CWNA and 2 SRR rates). The mechanism is calculated by billing cycle, uses ranked degree days, and requires an unbilled calculation. The mechanism has also not provided as close a correlation to volumetric variances as the Company anticipated. Please also see the Company's response to OPC Data Request 8001 for further explanation of this testimony.

The Company's proposed RNA will be tied to billing determinants set in this rate case. In addition, the RNA rates will be calculated on an annual basis and will not require heating degree day information.

Signed by: Wesley Selinger

Education and Work Experience Background of

Lena M. Mantle, P.E.

In my position as Senior Analyst for the Office of the Public Counsel ("OPC") I provide analytic and engineering support for the OPC in electric, gas, and water cases before the Commission. I have worked for the OPC since August, 2014.

I retired on December 31, 2012 from the Public Service Commission Staff as the Manager of the Energy Unit. As the Manager of the Energy Unit, I oversaw and coordinated the activities of five sections: Engineering Analysis, Electric and Gas Tariffs, Natural Gas Safety, Economic Analysis, and Energy Analysis sections. These sections were responsible for providing Staff positions before the Commission on all of the electric and gas cases filed at the Commission. This included reviews of fuel adjustment clause filings, resource planning compliance, gas safety reports, customer complaint reviews, territorial agreement reviews, electric safety incidents and the class cost-of-service and rate design for natural gas and electric utilities.

Prior to being the Manager of the Energy Unit, I was the Supervisor of the Engineering Analysis Section of the Energy Department from August, 2001 through June, 2005. In this position, I supervised engineers in a wide variety of engineering analysis including electric utility fuel and purchased power expense estimation for rate cases, generation plant construction audits, review of territorial agreements, and resolution of customer complaints all the while remaining the lead Staff conducting weather normalization in electric cases.

From the beginning of my employment with the Commission in the Research and Planning Department in August, 1983 through August, 2001, I worked in many areas of electric utility regulation. Initially I worked on electric utility class cost-of-service analysis, fuel modeling and what has since become known as demand-side management. As a member of the Research and Planning Department under the direct supervision of Dr. Michael Proctor, I participated in the development of a leading-edge methodology for weather normalizing hourly class energy for rate design cases. I took the lead in developing personal computer programming of this methodology and applying this methodology to weather-normalize electric usage in numerous electric rate cases. I was also a member of the team that assisted in the development of the Missouri Public Service Commission electronic filing and information system ("EFIS").

I received a Bachelor of Science Degree in Industrial Engineering from the University of Missouri, at Columbia, in May, 1983. I am a registered Professional Engineer in the State of Missouri.

Lists of the cases I have filed testimony as an OPC, the Missouri Public Service Commission rules in which I participated in the development of or revision to, and the cases that I provided testimony in follow.

Office of Public Counsel Case Listing

Case	Filing Type	Issue
WR-2020-0240	Direct, Rebuttal, Surrebuttal	Normalized customer usage, revenue stabilization mechanism
EO-2020-0262	Direct	FAC Imprudence
ER-2020-0311	Rebuttal	FAC rate change
ER-2019-0374	Direct, Rebuttal, Surrebuttal	Weather Norm Rider, Fuel Adjustment Clause
ER-2019-0355	Direct, Rebuttal	Fuel Adjustment Clause, Unregulated Competition tariff sheet
EO-2019-0067 & EO-2019-0068	Rebuttal	Prudence of GMO steam auxiliary costs and GMO and KCPL's wind PPAs
EA-2019-0010	Rebuttal, Surrebuttal	Energy Market Prices, Customer Protections
GO-2019-0058 & GO-2019-0059	Direct, Rebuttal	Weather
ER-2018-0145 & ER-2018-0146	Direct, Rebuttal, Surrebuttal	Purchased Power, Customer Bills, Crossroads, Resource Planning
EO-2018-0092	Rebuttal, Surrebuttal	OPC Opposition of Request for Approval of Changes to Resource Plan
WR-2017-0285	Direct, Rebuttal, Surrebuttal	Normalized base usage
GR-2017-0215 & GR-2017-0216	Direct, Rebuttal, Surrebuttal	Energy Efficiency and Low-Income Programs
EO-2017-0065	Direct, Rebuttal, Surrebuttal	Fuel Adjustment Clause Prudence Review
ER-2016-0285	Direct, Rebuttal, Surrebuttal	Fuel Adjustment Clause
ER-2016-0179	Direct, Rebuttal, Surrebuttal	Fuel Adjustment Clause,
ER-2016-0156	Direct, Rebuttal, Surrebuttal	Fuel Adjustment Clause, Resource Planning
ER-2016-0023	Direct, Rebuttal, Surrebuttal	Fuel Adjustment Clause
WR-2015-0301	Direct, Rebuttal, Surrebuttal	Revenues, Environmental Cost Recovery Mechanism
ER-2014-0370	Direct, Rebuttal, Surrebuttal	Fuel Adjustment Clause
ER-2014-0351	Direct, Rebuttal, Surrebuttal	Fuel Adjustment Clause
ER-2014-0258	Direct, Rebuttal, Surrebuttal	Fuel Adjustment Clause
EC-2014-0224	Surrebuttal	Policy, Rate Design

Missouri Public Service Commission Rules

20 CSR 4240-3	Filing Requirements for Electric Utilities (various rules)
20 CSR 4240-14	Utility Promotional Practices
20 CSR 4240-18	Safety Standards
20 CSR 4240-20.015	Electric Utility Affiliate Transactions
20 CSR 4240-20.017	HVAC Services Affiliate Transactions
20 CSR 4240-20.090	Electric Utility Fuel and Purchased Power Cost Recovery Mechanisms
20 CSR 4240-20.091	Electric Utility Environmental Cost Recovery Mechanisms
20 CSR 4240-22	Electric Utility Resource Planning
20 CSR 4240-80.015	Steam Heating Utility Affiliate Transactions
20 CSR 4240-80.017	HVAC Services Affiliate Transactions

Missouri Public Service Commission Staff Testimony

Case No.	Filing Type	Issue
ER-2012-0175	Rebuttal, Surrebuttal	Resource Planning Capacity Allocation
ER-2012-0166	Rebuttal, Surrebuttal	Fuel Adjustment Clause
EO-2012-0074	Direct/Rebuttal	Fuel Adjustment Clause Prudence
EO-2011-0390	Rebuttal	Resource Planning Fuel Adjustment Clause
ER-2011-0028	Rebuttal, Surrebuttal	Fuel Adjustment Clause
EU-2012-0027	Rebuttal, Surrebuttal	Fuel Adjustment Clause
ER-2010-0356	Rebuttal, Surrebuttal	Resource Planning Allocation of Iatan 2
EO-2010-0255	Direct/Rebuttal	
ER-2010-0036	Supplemental Direct, Surrebuttal	Fuel Adjustment Clause
ER-2009-0090	Surrebuttal	Capacity Requirements
ER-2008-0318	Surrebuttal	Fuel Adjustment Clause
ER-2008-0093	Rebuttal, Surrebuttal	Fuel Adjustment Clause Low-Income Program
ER-2007-0004	Direct, Surrebuttal	Resource Planning
GR-2007-0003	Direct	Energy Efficiency Program Cost Recovery
ER-2007-0002	Direct	Demand-Side Program Cost Recovery
ER-2006-0315	Supplemental Direct, Rebuttal	Energy Forecast, Demand-Side Programs Low-Income Programs
ER-2006-0314	Rebuttal	Jurisdictional Allocation Factor
EA-2006-0309	Rebuttal, Surrebuttal	Resource Planning
ER-2005-0436	Direct, Rebuttal, Surrebuttal	Low-Income Programs, Energy Efficiency Programs, Resource Planning
EO-2005-0329	Spontaneous	Demand-Side Programs, Resource Planning
EO-2005-0293	Spontaneous	Demand-Side Programs, Resource Planning
ER-2004-0570	Direct, Rebuttal, Surrebuttal	Reliability Indices, Energy Efficiency Programs Wind Research Program
EF-2003-0465	Rebuttal	Resource Planning
ER-2002-424	Direct	Derivation of Normal Weather
EC-2002-1	Direct, Rebuttal	Weather Normalization of Class Sales Weather Normalization of Net System
ER-2001-672	Direct, Rebuttal	Weather Normalization of Class Sales Weather Normalization of Net System
ER-2001-299	Direct	Weather Normalization of Class Sales Weather Normalization of Net System
EM-2000-369	Direct	Load Research
EM-2000-292	Direct	Load Research
EM-97-515	Direct	Normalization of Net System

Case No.	Filing Type	Issue
ER-97-394, et. al.	Direct, Rebuttal, Surrebuttal	Weather Normalization of Class Sales Weather Normalization of Net System Energy Audit Tariff
EO-94-174	Direct	Weather Normalization of Class Sales Weather Normalization of Net System
ER-97-81	Direct	Weather Normalization of Class Sales Weather Normalization of Net System TES Tariff
ER-95-279	Direct	Normalization of Net System
ET-95-209	Rebuttal, Surrebuttal	New Construction Pilot Program
EO-94-199	Direct	Normalization of Net System
ER-94-163	Direct	Normalization of Net System
ER-93-37	Direct	Weather Normalization of Class Sales Weather Normalization of Net System
EO-91-74, et. al.	Direct	Weather Normalization of Class Sales Weather Normalization of Net System
EO-90-251	Rebuttal	Promotional Practices Variance
ER-90-138	Direct	Weather Normalization of Net System
ER-90-101	Direct, Rebuttal, Surrebuttal	Weather Normalization of Class Sales Weather Normalization of Net System
ER-85-128, et. al.	Direct	Demand-Side Update
ER-84-105	Direct	Demand-Side Update