Exhibit No.:____
Issue: Expert opinions relevant to Complaint
Witness: Lesa S. Adair
Type of Exhibit: Direct Testimony
Sponsoring Party: Symmetry Energy Solutions LLC
File No.: GC-2021-0316

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

FILE NO. GC-2021-0316

TESTIMONY

OF

LESA S. ADAIR

ON BEHALF OF

SYMMETRY ENERGY SOLUTIONS, LLC

DECEMBER 20, 2021

TABLE OF CONTENTS

I. WITNESS BACKGROUND

Q. Please state your name and business address.

A. My name is Lesa S. Adair. My business address is 2600 Dallas Parkway, Suite 300, Frisco, Texas 75034.

Q. By whom are you employed and in what capacity?

A. I am a Founding Partner at Pearson Adair & Co. ("Pearson Adair").

Q. Please describe your duties and responsibilities with Pearson Adair.

A. I am a consultant in the energy sector advising clients regarding issues between the wellhead and the end user along the natural gas, crude oil, and condensate value chains. I share day to day company management responsibilities with my partner Kyle Pearson and am the President of the firm.

Q. Please state briefly your educational background and employment experience.

A. I have a Bachelor of Science degree in Chemical Engineering from Oklahoma State University (Phi Kappa Phi, 1983), and a Master of Business Administration degree from Southern Methodist University (Finance Concentration, 1993). From 1982 through 1992, I held a number of roles with ARCO Oil & Gas Company, including as a gas engineer, operations supervisor, senior reservoir analytical engineer, and senior crude oil marketing representative. From 1992 through 2016, I held a number of roles with the oil and gas consultancy Muse, Stancil & Co. My final role at Muse, Stancil & Co., before leaving to join Pearson Adair, was as Chief Executive Officer. I have been with Pearson Adair since 2016.

Q. Please briefly describe the matters on which you have consulted in the past.

A. I have worked in the energy industry for more than 35 years. I have experience in

completing or managing reservoir engineering evaluations and operations, assessment of economic value for acquisition and divestiture activities, pipeline/plant engineering design and operations, natural gas, crude oil, and condensate trading and marketing, refinery operations, and natural gas and crude oil transportation logistics. I have also consulted on technical and commercial issues related to mergers, asset transactions, project development and start-up, bankruptcy/workout, development of business strategy, and dispute resolution including the assessment of regulated natural gas and crude oil transportation and storage asset operations, commodities trading organizations, and complex damage analyses associated with on-going operations in the energy sector.

Q. On whose behalf are you submitting this testimony?

A. I am submitting this testimony on behalf of Symmetry Energy Solutions LLC ("Symmetry").

Q. Was this testimony prepared by you or under your direct supervision?

A. Yes.

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

A. No.

Q. Have you ever testified before any other regulatory commission or agency?

A. I have been retained by the Alaska Department of Natural Resources in the past and have testified in hearings before legislative bodies in Alaska. I have also appeared as an expert witness in over thirty oil and gas related litigation matters since 2012 in the London Court of International Arbitration, the Supreme Court of South Australia, and U.S. state and federal courts in California, Colorado, Delaware, Indiana, North Dakota, Oklahoma,

Pennsylvania, Texas, Utah, and West Virginia.

II. PURPOSE OF TESTIMONY

Q. What is the purpose of your testimony in this proceeding?

A. Symmetry engaged Pearson Adair to analyze—based on publicly available information, information obtained from Spire Missouri Inc. and other parties through discovery in this action, and Pearson Adair's industry experience and expertise—whether, during Winter Storm Uri, Spire faced conditions on its Missouri West system that would justify the issuance of a system-wide Operational Flow Order (otherwise known as an "OFO") at all times the OFO was in place, and whether the OFO penalties Spire is seeking to impose in connection with Winter Storm Uri are justified or appropriate and comply with its tariff. My testimony presents Pearson Adair's analysis and findings. When I refer to "Spire" in this testimony, I am referring to Spire Missouri Inc. and its operating unit Spire Missouri West, unless I specify otherwise.

Q. What materials did you review in conducting your analyses and forming your opinions?

A. I reviewed publicly available information, including, among other things, the parties' filings in this docket; the Spire tariff on file with the Missouri Public Service Commission (the "Commission"), the tariff for Southern Star Central Gas Pipeline ("Southern Star") on file with the Federal Energy Regulatory Commission, and maps and other information regarding the Spire and Southern Star systems; Spire's written responses, and documents Spire produced, in response to discovery in this matter and related matters; and the transcript of the deposition of Spire's corporate representative in this matter and documents Spire produced in connection with that deposition.

Q. Please state a summary of your opinions and testimony.

A. Based upon my review, I have concluded that the OFO Spire issued on February 10, 2021 did not comply with the requirements of Spire's tariff because it was not justified when issued, and was not limited as practicable to address only the issues that purportedly necessitated the OFO either when it was issued or thereafter. Because Spire's OFO did not comply with Spire's tariff, the OFO penalties Spire is seeking to assess against Symmetry similarly contravene Spire's tariff.

OFOs, when properly issued, act as a tool to help ensure system integrity. However, as regulators have noted, OFOs are prone to abuse because pipelines and local distribution companies often have a financial incentive to issue OFOs too frequently, for longer than necessary, and with a scope broader than necessary to protect system integrity. Here, Spire's tariff prescribes two bases upon which it may properly issue an OFO. Those are (1) where necessary to protect the integrity of Spire's system or any portion thereof, and/or (2) to insure compliance with the requirements of upstream pipeline companies. Spire has failed to establish that it met either condition.

With respect to the first OFO predicate, Spire has produced no evidence of any operational threat to system-wide integrity. Spire has identified nothing more than one localized and temporary decline on the line pressure of its upstream pipeline on February 15, which did not impact Spire's ability to make deliveries to its customers. Spire's claim to have experienced threats to its system integrity is further belied by its $** [redacted] ** sale of ** [redacted] ** dekatherms of gas from storage on the same day it claims its upstream pipeline suffered a decline in line pressure. This is a very large quantity of gas. To put this number in perspective, this quantity of gas is more than sufficient to

serve all of Symmetry's customers on the Southern Star system for **[redacted]** full days. On all days during Winter Storm Uri, Spire's available gas in storage far exceeded marketers' purported delivery shortfalls, and Spire could have withdrawn more than enough gas to cover those shortfalls. An LDC faced with a legitimate threat to system integrity would not be expected to simultaneously have significant gas quantities available for sale and significant excess withdrawal capacity. Finally, although Spire has argued that its upstream pipeline experienced decreases in line pressure in one specific area, none of those pressure decreases were significant enough to impact Spire's ability to continue making customer deliveries.

With respect to the second OFO predicate, Spire's OFO was not necessary in order to comply with the two narrow OFOs Southern Star issued prior to the Spire OFO, or the system-wide OFO Southern Star issued after Spire's OFO. Regarding Southern Star's later system-wide OFO, Southern Star did not issue that OFO until the day after Spire issued its OFO—and hence that later OFO could not have necessitated Spire's OFO—and Spire's gas in storage was more than sufficient to allow Spire to comply with that later OFO even without Spire issuing its own OFO.

Furthermore, even if Spire's OFO were justified when issued—which it was not—Spire should have lifted the OFO long before February 19 and 20 because Spire would have known by no later than February 15, when it made the large gas sale out of storage, that it did not face threats to its system integrity justifying the OFO. Finally, Spire's tariff requires that its "actions with respect to its OFO's shall be reasonable, objective, non-discriminatory and consistent with the General Terms and Conditions for Gas Service, R-16 Priority of Service, and R-17." Regardless of whether Spire

employees subjectively believed at the time the OFO was issued that it was justified, an objective analysis—whether based on the facts available to Spire at the time or facts now known—shows that the OFO was not reasonable or necessary, and hence Spire violated its tariff in issuing it.

In the remainder of my testimony, I will describe gas distribution as a general matter, gas distribution on the Spire system, the relationship between Symmetry and Spire and how Symmetry delivers gas to its customers on the Spire system, and the bases for my opinion that Spire's OFO during Winter Storm Uri violated Spire's tariff.

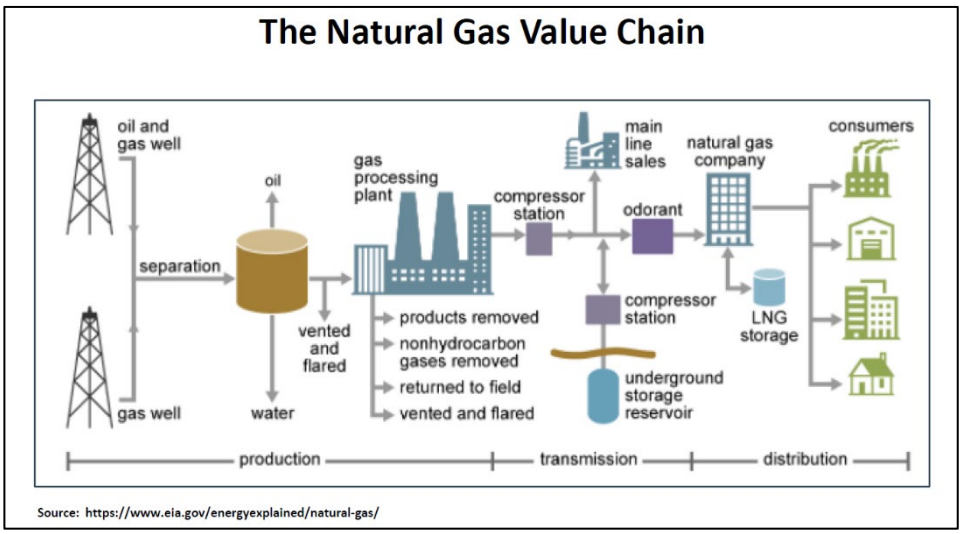
III. GAS DISTRIBUTION GENERALLY

Q. Please describe, at a high level, how natural gas distribution systems operate as a general matter.

A. The natural gas transportation network is comprised of transmission pipelines and local distribution systems. Transmission pipelines transport gas long distances, generally from supply sources or production areas to market areas or other pipelines that reach other market areas. Transmission pipelines are larger in diameter than local distribution systems, and operate at a higher pressure (200-1500 psi versus 10-200 psi). Interstate pipelines are transmission pipelines that cross state borders; intrastate pipelines are transmission pipelines entirely within one state. In the context of this matter, the Southern Star Central Gas Pipeline is the most relevant interstate pipeline and Spire Missouri West is the relevant local distribution company, or "LDC."

Schedule LA-1 is an image downloaded from the website of the U.S. Energy Information Administration at https://www.eia.gov/energyexplained/natural-gas/. This document provides a general overview of the natural gas production and delivery process

that is often described as the "natural gas value chain." That "value chain" consists of production areas, transmission segments, and distribution segments.



Q. What is a production area?

A. A production area, which is otherwise known as a field area, is an area where natural gas is produced. These areas have natural gas deposits in-ground, which are extracted, processed, and readied for delivery to customers.

Gas supplied to pipelines may come from any combination of the following sources: individual wells, or groups of wells, connected directly to the pipeline; gathering systems which gather gas from multiple individual wells or groups of wells through small diameter pipes; natural gas processing plant outlets; interconnections with other natural gas transmission pipelines; and storage facilities. In the production area, oil and gas reserves are developed and produced, and gas from the ground is separated into liquid and gaseous hydrocarbon streams and water. Natural gas is generally collected from wellheads into gathering pipelines. Depending on gas quality, the gas may be delivered to gas processing facilities for conditioning and processing prior to transmission, or it

may be treated at or near the wellhead and delivered directly to a transmission pipeline. Gas may also require compression to meet the pressure requirements for acceptance into the transmission pipeline.

Q. Why do pipelines have pressure requirements?

A. Natural gas moves along a pipeline or distribution system because of differences in pressure. Natural gas, or any liquid or gas in a confined space, naturally moves from areas of higher pressure to areas of lower pressure. Pipelines and distribution systems use compressors to create areas of high pressure, and system controls to manage flow from areas of high pressure to areas of lower pressure.

Q. How is gas measured?

A. Gas can be measured in two fundamental ways: either volumetrically, or by the energy content of the gas. The most common energy measure of gas is the British Thermal Unit, or "BTU," which is defined as the amount of heat required to raise the temperature of one pound of water by one degree Fahrenheit. One million BTUs is often abbreviated "MMBtu." One MMBtu is also commonly known as a "dekatherm." The most common volumetric measure for gas is cubic feet. 1,000 cubic feet, otherwise known as one "Mcf," of fully processed natural gas in a transmission pipeline generally has energy content of approximately, but not precisely, one dekatherm.

Q. What is a market area?

A. A market area is an area where there is significant natural gas demand. Market areas generally correspond to urban areas, areas with significant industrial or agricultural bases, and other places where natural gas is consumed but not produced.

Q. To whom do pipelines deliver natural gas?

A. Pipelines deliver natural gas to other pipelines, to large customers that take gas directly from the pipeline (such as natural-gas-powered electricity generation plants, hospitals, large manufacturing plants, and the like), and to LDCs.

Q. What are local distribution companies?

A. LDCs receive gas from pipelines (or storage held on those pipelines), and deliver that gas to residential customers, commercial businesses, and others over service lines that are smaller in diameter, and lower pressure, than interstate or intrastate pipelines. Here, Spire West is the LDC that receives gas from the Southern Star interstate pipeline.

Q. Can natural gas be stored, or once it is produced must it be immediately transported to be used by end users?

A. Yes, natural gas can be stored. Natural gas is stored in large volumes in underground facilities. Gas storage facilities may be accessible in the production area or in the market area. Gas storage facilities are developed to support pipeline operations and as a means to offset price volatility. Gas transmission operators rely on gas storage capacity to provide system flexibility, backstop receipt and delivery capabilities during system disruptions, and support system reliability. Available storage capacity is often also made available to shippers to provide receipt and delivery flexibility for physical gas in day-to-day operations and as a tool to manage price volatility. Some storage facilities are developed for purely commercial storage operations with capacity fully subscribed to marketers, large industrial end users, utilities, and the like who may purchase gas for storage in low demand periods and deliver gas out of storage to meet peak needs during periods of high demand, or in other words to buy low and avoid having to purchase supplies at peak market prices. Gas in storage also plays an important role in protecting

the integrity, and ensuring the function, of the gas distribution system.

Q. How does gas in storage protect the integrity, and ensure the function, of gas distribution systems?

A. Storage plays a very important role in balancing pressures and volumes on gas distribution systems. Pipeline companies and LDCs must ensure the pressures on their systems stay within designated operational limits to ensure safe and reliable service. On the high-pressure end, the design of a pipeline or LDC network dictates the maximum pressure at which it can safely operate. This limit is commonly referred to as the "Maximum Allowable Operating Pressure" or "MAOP." If too much gas is delivered into a pipeline without an offsetting increase in gas being taken off of the pipe, the pressure on the pipeline will rise, and eventually may exceed the MAOP. Most gas distribution systems have built-in safety features which are designed to activate when MAOP is exceeded. Those systems may vent gas, shut off supply, or take other actions to prevent pressures rising to the point of a catastrophic failure, such as a pipeline or valve rupture. Those preventative actions would disrupt the ordinary course of deliveries, and may, but would not necessarily, cause an interruption in gas supply. On the low-pressure end, a certain minimum pressure must be maintained to deliver gas on a gas system. If withdrawals of gas from a system exceed supply of gas to the system, pressures on the system may drop, and the ability to deliver gas over the pipe may be impacted, unless additional gas is added to the system. If the amount of gas on a line falls below a certain point, there will not be enough gas to support system pressure and push the gas along the line. In that case the system may not be able to deliver gas in all locations.

Q. Is there a limit to how much gas can be stored in underground storage, and how much of the gas in storage can be used?

A. Yes. Underground storage capacities have defined limits both in terms of the available inventory of gas a party may hold in storage at any given time (known as the "Maximum Storage Quantity" or "MSQ"), as well as how much gas can be withdrawn from, or injected into, storage on any given day (known as the "Maximum Daily Withdrawal Quantity" or "MDWQ," and the "Maximum Daily Injection Quantity" or "MDIQ," respectively).

Q. Why is there a limit on the maximum amount of gas that can be withdrawn from underground storage in a given day?

A. Generally, storage facility infrastructure can only support withdrawing a certain quantity of gas per day. Storage provider contracts with storage customers generally set maximum limits on the amount each customer can withdraw per day so that the withdrawal capacity is allocated among customers.

IV. GAS DISTRIBUTION TO CUSTOMERS ON SPIRE MISSOURI WEST

Q. Is Spire Missouri West an LDC?

A. Yes. Spire Missouri West is an LDC operated by Spire Missouri, Inc.

Q. Please describe Spire Missouri, Inc.'s corporate structure, as you understand it.

A. Spire Missouri, Inc.'s ultimate corporate parent is Spire, Inc., which was formerly known as Laclede Group, Inc. According to Spire, Inc.'s public filings with the Securities and Exchange Commission, Spire, Inc. has two reportable business segments: Gas Utility and Gas Marketing. (See Schedule LA-2.)

The Gas Utility segment consists of Spire's regulated natural gas distribution

operations and is the company's core business segment in terms of revenue and earnings. The Gas Utility segment is comprised of the operations of Spire Missouri, Inc. (formerly known as Laclede Gas Co.) which serves St. Louis, Kansas City, and other areas in Missouri; Spire Alabama, Inc. (formerly known as Alabama Gas Corp.) which serves central and northern Alabama; and the Spire EnergySouth, Inc. subsidiaries Spire Gulf, Inc. and Spire Mississippi, Inc. which serve southern Alabama and south-central Mississippi.

The Gas Marketing segment includes Spire Marketing, Inc., which provides unregulated natural gas services primarily in the central and southern United States. Spire Marketing, Inc. competes against Symmetry, Constellation NewEnergy, Inc., Clearwater Enterprises, LLC, and other gas marketers in the Missouri natural gas market and elsewhere. According to Spire, Inc.'s SEC filings and Spire Marketing's 2020 Annual Registration Report filed on January 31, 2021 with the Missouri Secretary of State (Schedule LA-3), various individuals including Spire Missouri's Chairman of the Board, Chief Financial Officer and Treasurer, Former Chief Financial Officer, and multiple Directors also hold Director positions at Spire Marketing. I have created a demonstrative summarizing that overlap. (See Schedule LA-4.)

Q. How is gas transported to Symmetry customers on the Spire Missouri West system?

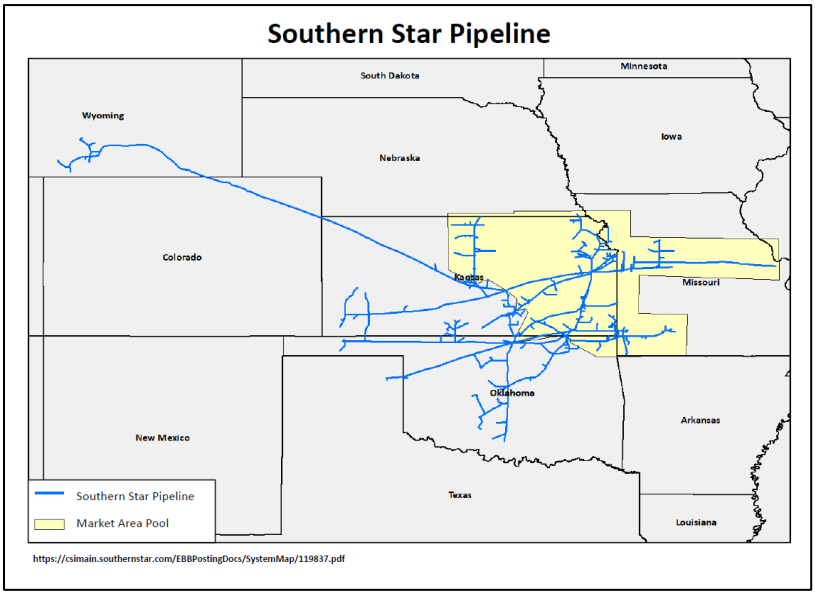
A. Gas is delivered to Symmetry customers on the Spire Missouri West system by two interstate pipelines, the Southern Star Central Gas Pipeline (otherwise known as "Southern Star") and the Panhandle Eastern Gas Pipeline (otherwise known as "Panhandle"). Of those two, Southern Star is by far the more significant source of supply to Spire West.

Q. Please describe Southern Star.

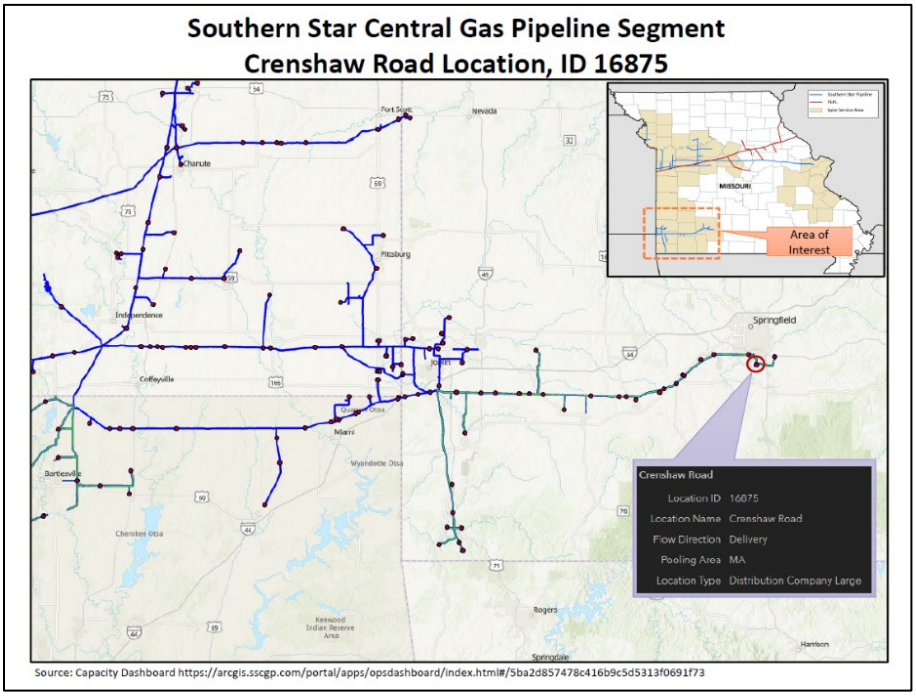
A. Southern Star is a large interstate pipeline system that transports gas from production areas in the Mid-Continent and Rocky Mountains to a market area in Kansas, Missouri, and Oklahoma. Southern Star has approximately 5,800 miles of pipeline and is connected to eight gas storage fields. Southern Star transports gas into the Southwestern portion of Missouri, ending in Springfield. Southern Star also has a large segment of pipeline that runs across central Missouri, delivering gas to Kansas City and Columbia, and continuing to St. Charles County. Southern Star also has a short segment that delivers gas to Vernon County, Missouri.

Q. Have you included any maps of the Southern Star system with your testimony?

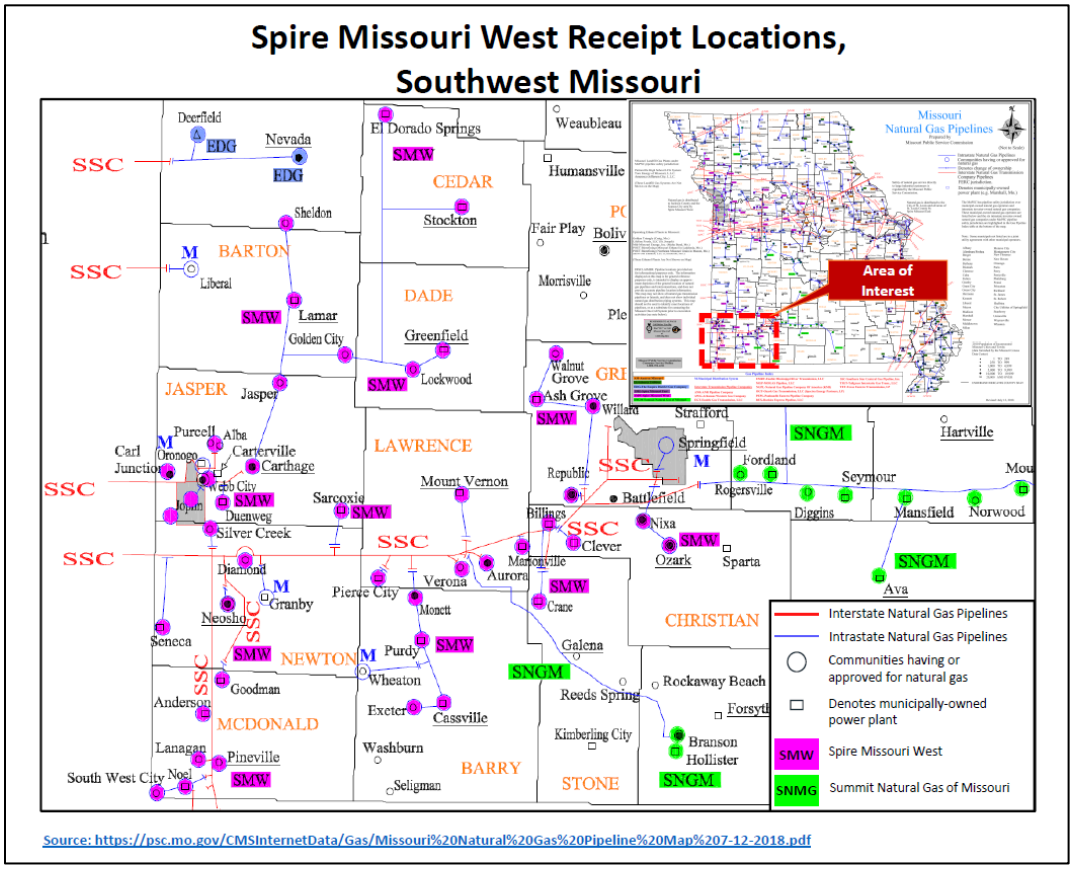
A. Yes. Attached as Schedule LA-5 is a map of the Southern Star pipeline system that was created using a base map of the states from ESRI ArcGIS, and overlaid with mapping shapefiles containing pipeline location information for Southern Star Pipeline downloaded from the Pipeline and Hazardous Materials Safety Administration. The area representing the Southern Star market area was then hand drawn as another layer on the ESRI ArcGIS map based on the Southern Star map at https://csimain.southernstar.com/EBBPostingDocs/SystemMap/119837.pdf. Therefore, this schedule provides an accurate geographic overview of the extent of the Southern Star pipeline system and the relative sizes of the production and market areas served by the pipeline.

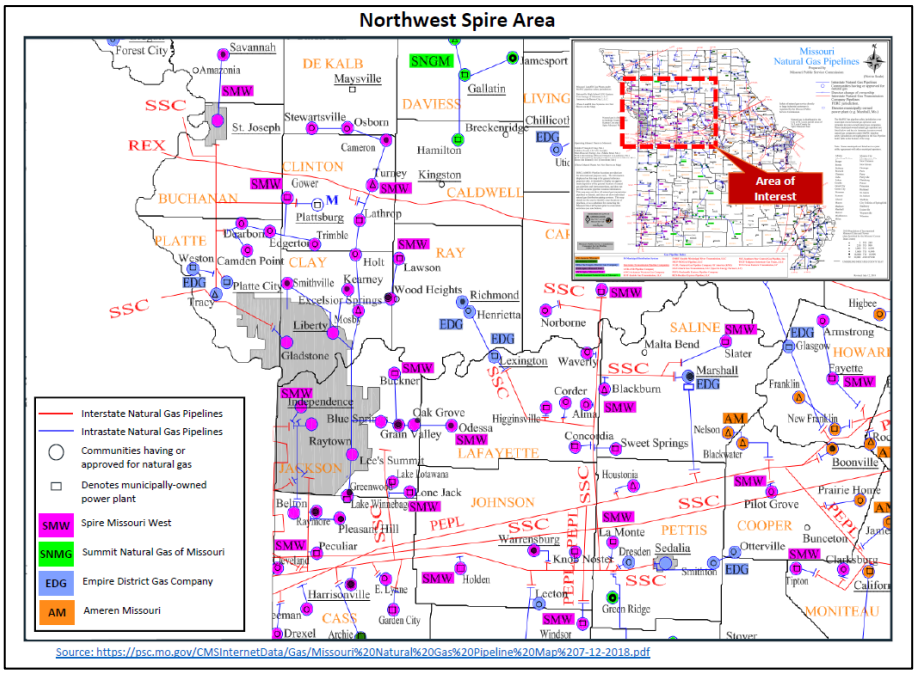


Attached as Schedule LA-6 is a map that was created by taking a screenshot of information from the Southern Star Capacity Dashboard at https://arcgis.sscgp.com/portal/apps/opsdashboard/index.html#/5ba2d857478c416b9c5d5313f 0691f73. This schedule provides additional details regarding the Southern Star pipeline system in southwestern Missouri, and also depicts the location of the Crenshaw Road delivery point which I will discuss later in my testimony.

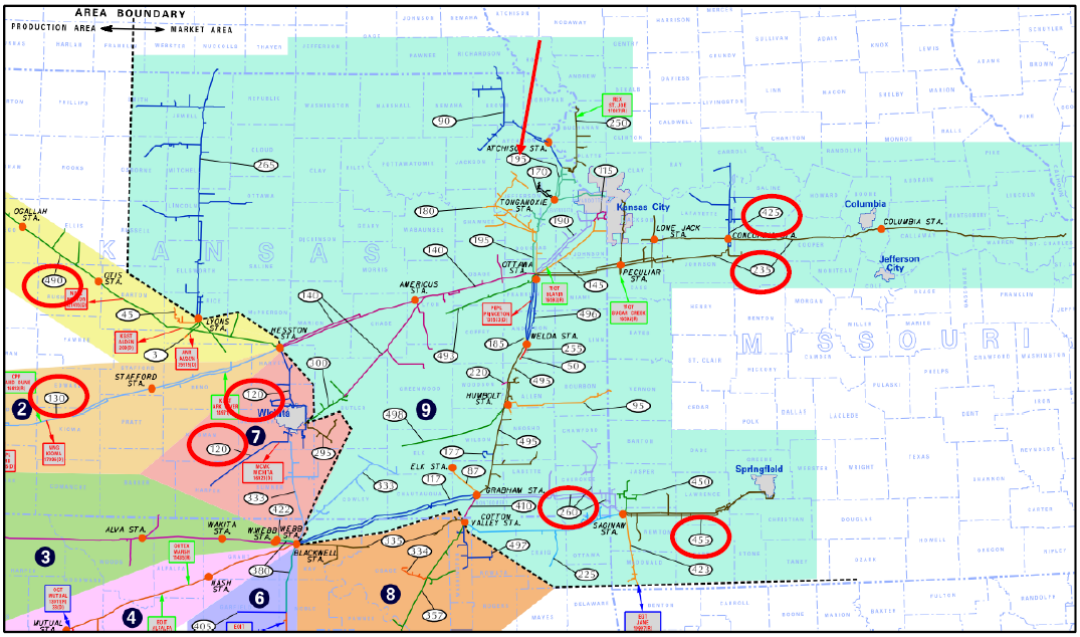


Attached as Schedules LA-7 and LA-8 are excerpts from the Missouri Gas Pipelines Map published by the Commission at https://psc.mo.gov/CMSInternetData/Gas/Missouri%20Natural%20Gas%20Pipeline%20Map%207-12-2018.pdf as shown in Schedule LA-9. These excerpts provide additional detail on the Southern Star system and the various Spire delivery points in southwestern and northwestern Missouri, respectively. Pearson Adair added a legend to each map and provided the inset of Exhibit LA-9 to orient the reader.





Schedule LA-10 is based on the Southern Star pipeline map at https://csimain.southernstar.com/EBBPostingDocs/SystemMap/119837.pdf and identifies the Southern Star pipeline segments by number. Pearson Adair added red circles to highlight those pipeline segments that were subject to the Southern Star February 9 segment-specific OFO attached as Schedule LA-11.

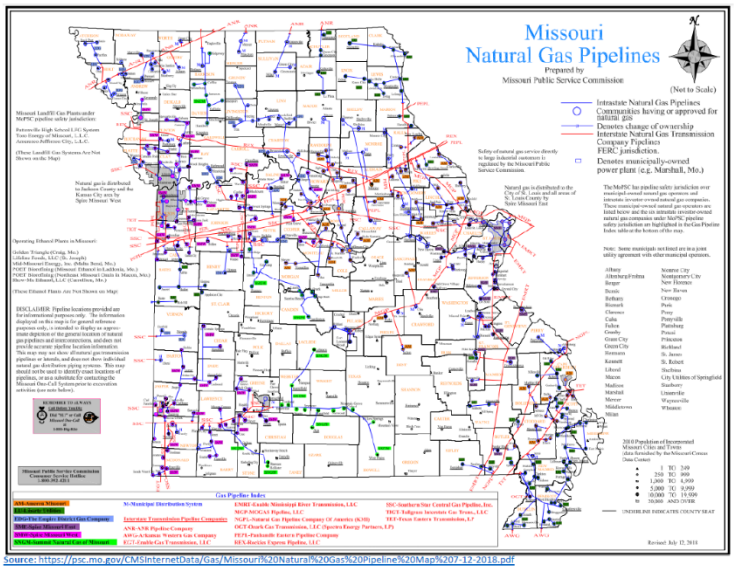


Q. Please describe Spire's system.

A. Spire operates a distribution system that receives gas from numerous delivery points within Southern Star's Market Area Pool. Southern Star essentially forms the backbone or trunk of the Spire system. In other words, the Spire gas delivery lines that run out from each of those delivery points are not substantially interconnected with each other; rather, for practical purposes, each constitutes a separate small gas delivery network taking gas off of Southern Star.

Q. Have you included any maps of the Spire system with your testimony?

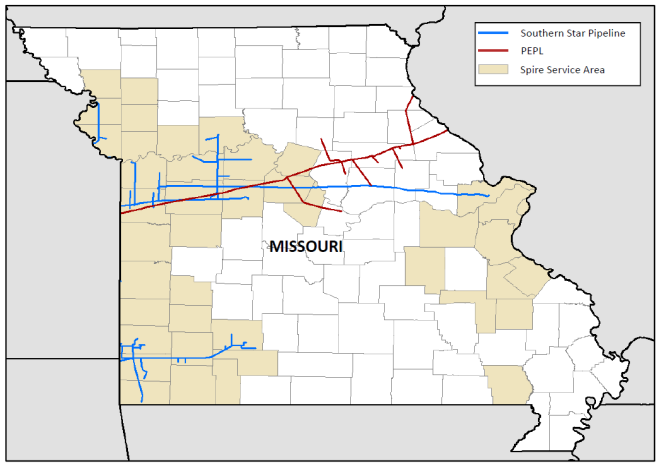
A. Yes. Schedule LA-9 is a copy of the Missouri Natural Gas Pipelines map that is available from the Commission at https://psc.mo.gov/CMSInternetData/Gas/Missouri%20Natural%20Gas%20Pipeline%20Map%207-12-2018.pdf. This map includes interstate transmission pipelines and municipal gas distribution systems operating within the state of Missouri. The map also identifies pipeline and distribution system operators. Review of this map demonstrates the discontinuous nature of Spire's distribution assets as well as the multiple connections from Southern Star's transmission system supplying geographically diverse distribution systems along the western border of the state of Missouri. As reflected on this map, Spire has numerous Southern Star receipt points located across the state of Missouri.



Source: https://psc.mo.gov/CMSInternetData/Gas/Missouri%20Natural%20Gas%20Pipeline%20Map%207-12-2018.pdf

The map attached at Schedule LA-12 was created using mapping shapefiles containing pipeline location information for Southern Star and Panhandle that were downloaded from the Pipeline and Hazardous Materials Safety Administration and overlaid on top of the Missouri county base map from ESRI ArcGIS on which the Spire service area counties identified by Spire at https://www.spireenergy.com/county-map-service-areas were highlighted. This schedule provides an overview of the Spire service area and the transmission systems supplying Symmetry customers on the Spire system, namely Southern Star and Panhandle.

Spire Missouri Service Area



Sources: PHMSA; ESRI ARC Map, https://psc.mo.gov/CMSInternetData/Gas/Missouri%20Natural%20Gas%20Pipeline%20Map%207-12-2018.pdf

Q. Please describe Spire's customer base.

A. Spire has two distinct classes of customers: sales customers and transportation customers. For Spire's sales customers, Spire purchases supplies of natural gas, arranges for the necessary transportation of that gas, and ultimately sells and delivers the gas to the end use customer. For Spire's transportation customers, the customers themselves are responsible for purchasing and arranging for transportation of gas into Spire's system. Transportation customers can arrange gas purchases and transportation themselves, or they can contract with a "marketer" (otherwise known as an "aggregator") such as Symmetry to do so.

Q. What do marketers like Symmetry do?

A. As a marketer of natural gas, Symmetry arranges purchases and sales of natural gas to satisfy its customers' natural gas needs. Unlike pipeline companies or LDCs such as Spire, a marketer does not own physical assets commonly used in the supply of natural gas such as pipelines or storage fields. Instead, Symmetry purchases gas from suppliers, and contracts for transport and delivery of that gas over interstate pipelines and LDCs to its end-user customers. Symmetry does not drill for gas or own any physical transportation or storage infrastructure. Rather, Symmetry is wholly dependent on third parties for supply and transportation. As such, Symmetry is subject to the market's inherent laws of supply and demand. Symmetry competes with other marketers in the industry, such as Spire Marketing, Constellation NewEnergy, Inc., Clearwater Enterprises, LLC, Bluemark Energy, LLC, and others.

Q. Since marketers like Symmetry do not own physical transportation or storage infrastructure, how do marketers arrange for gas deliveries?

A. There are multiple ways in which marketers can acquire access to transportation and storage infrastructure. One way is through the use of Asset Management Agreements, otherwise known as "AMAs." An AMA is an agreement in which one party, such as a utility, allows another party, such as a marketer, to manage the first party's storage, transportation capacity, gas supply, or some combination of the foregoing. Under an AMA, the asset manager seeks to maximize the value of the released assets, with revenue shared between the asset manager and the asset owner, while ensuring that the asset owner receives necessary gas supplies. The asset manager also generally pays the asset owner a fee, in addition to sharing revenue. Where the asset owner is a regulated utility, that utility's ratepayers benefit from an AMA because the additional revenues the utility earns through the AMA reduce the costs the ratepayers must pay for gas service. A marketer like Symmetry benefits from taking on the role of asset manager under AMAs because the marketer can efficiently utilize asset owners' excess assets to efficiently serve customers on multiple systems. AMAs are governed by FERC Order 712, and are a common feature of the natural gas industry.

Q. What is the relationship between Symmetry and Spire?

A. As I explained above, Symmetry buys gas for its customers and arranges on its customers' behalf for the transportation of that gas over interstate pipelines and LDCs for delivery to Symmetry's customers. Symmetry contracts with Spire for delivery of gas from Spire's city gates to Symmetry's customers behind Spire's system. Symmetry's relationship with Spire is governed by two key documents: Spire's tariff and a series of Aggregation Service Agreements. (See Schedules LA-13, LA-14.) Under the terms of the Aggregation Agreements, Symmetry is able to aggregate the gas it purchases for its

customers into pools, which are groups of customers whose gas supply and gas consumption are aggregated for purposes of gas delivery, balancing and billing. Symmetry's end use customers are also Spire's transportation customers and each has a separate Transportation Agreement with Spire. (See Schedule LA-13.)

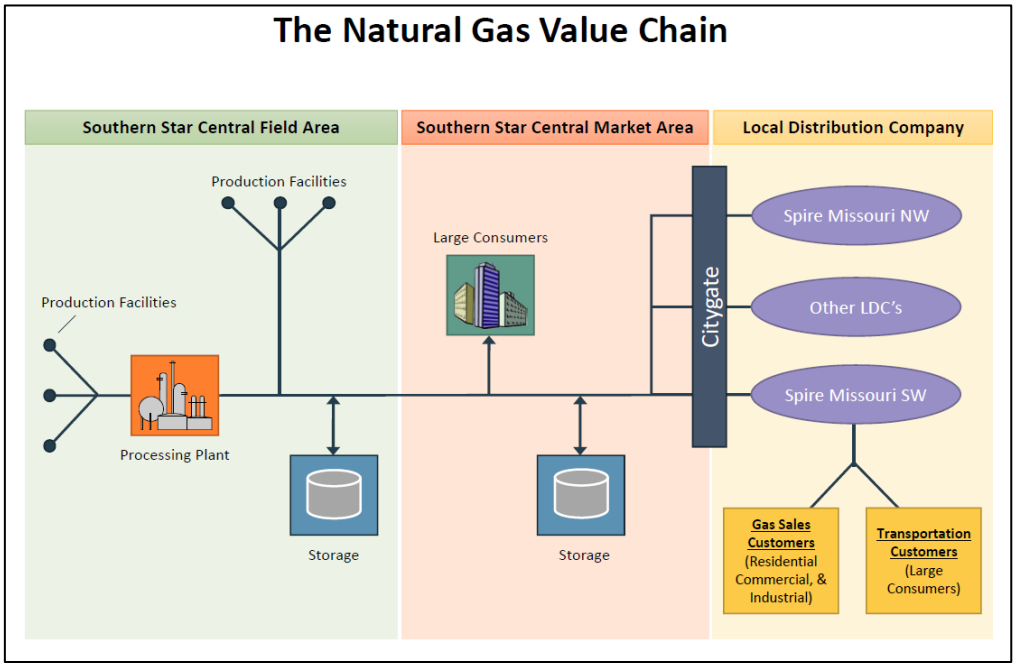
Q. Where are Symmetry's customers behind Spire's city gates located and how do they receive gas from the Spire system?

A. Symmetry has approximately 300 customers behind the Spire system. Of those, fewer than five receive gas from the Panhandle pipeline; the rest receive gas from Southern Star. A majority of Symmetry's customers on the Spire system are on line segment 195 of the Southern Star system, which is in the Kansas City area. As I will describe later, this is not an area in which Spire claims to have suffered any actual system integrity issues during Winter Storm Uri.

Q. Please describe the process by which customers on Spire receive natural gas deliveries.

A. Pearson Adair created the graphic attached as Schedule LA-15 to provide an overview of the natural gas value chain for customers connected to a Spire distribution point. The production area (otherwise known as the field area) serving these customers is comprised of oil and gas producing fields and gas processing facilities in Kansas, Oklahoma, Texas and as far west as Wyoming. Gas is collected from the outlet of gas processing plants and, in some areas, directly from field facilities, for transmission on the Southern Star pipeline system. Gas supplies from the production area are commingled in the Southern Star pipeline for transmission at high pressure to the Southern Star market area, which includes Spire. Large industrial consumers with the capability to receive gas directly

from the transmission pipeline may receive gas off of the system directly into their facilities. Other customers receive gas from distribution pipelines operated by their LDC, in this case Spire. For those customers, the gas is transferred from the interstate pipeline to the LDC at the LDC's city gate, and then the gas is transported across the LDC's distribution system to the end user customer.



Q. How do transportation customers on the Spire system arrange for the delivery of their required quantities of gas?

A. Spire transportation customers arrange for the delivery of gas by means of submitting "nominations" for such gas deliveries to the upstream pipeline, in this case Southern Star. Where a transportation customer utilizes a marketer such as Symmetry, the marketer is responsible for submitting those nominations to Southern Star.

Q. What is a nomination?

A. Gas that is aggregated on the Southern Star system is transported through the pipeline

system based on shipper instructions, which are called "nominations." Shippers nominate gas receipts and deliveries by submitting written instructions to the pipeline for delivery on each gas day. These written nominations include the expected MMBtus of gas receipts at specific locations along the system, as well as the expected MMBtus of gas deliveries at specific delivery points out of the system. For customers that receive gas deliveries over an LDC's delivery system, the delivery point for the nomination is usually an LDC city gate.

Q. What is a city gate?

A. The point at which gas transmission systems connect to gas distribution systems is often referred to as the "city gate." At that point, the gas is measured and sampled, stream pressure is reduced from the higher-pressure levels in the transmission pipeline to distribution pressure levels, the gas is odorized for safety, and the distribution system transports the gas to consumers.

"City gate" is a term of art in the natural gas industry that is used to describe the place at which an LDC's system connects to an interstate pipeline. Referring to a single "city gate" is a bit of a misnomer in the case of Spire, since, as described above, Spire has numerous independent interconnections with Southern Star, not just one. In the market area, Southern Star has interconnections with many delivery locations where the gas flows from the high-pressure transmission pipeline, through pressure reduction, metering, gas sampling, odorization, and heating for receipt into the lower pressure local gas distribution networks.

Q. What happens if a customer uses more or less gas than that customer, or its agent, nominated for delivery?

A. Because gas is fungible, gas that is nominated for delivery to a particular customer is aggregated with all other gas on an LDC's distribution system. The customer then takes gas off of that system, and the amount the customer takes from the system is recorded by a gas meter. Spire's tariff provides for a monthly balancing process to account for situations in which a customer's deliveries differ from its actual consumption. If a transportation customer on the Spire system consumes less gas than it (or its agent) nominated for delivery—which means the customer delivered more gas to the LDC's system than the customer used—then Spire owes the customer a credit. Conversely, if a transportation customer on the Spire system consumes more gas than it (or its agent) nominated for delivery—which means the customer delivered less gas to the LDC's system than the customer used—then the customer owes Spire a credit.

However, for customers that use a marketer such as Symmetry, those credits are not determined on a per-customer basis. Rather, the nominations and deliveries of customers that use a marketer like Symmetry are "pooled" together with other customers of that marketer, and the deliveries and usage of all customers in a pool are netted together to determine whether the pool as a whole used more or less gas than was nominated. Under Spire's tariff, this process is performed monthly; in other words, Spire's system is "monthly balanced." This means that, except in the context of an OFO (which will be discussed later), it is irrelevant whether a pool is out of balance on a particular day; what is relevant is whether the pool was long or short for the month as a whole. Indeed, Spire's system, as a monthly-balanced system, is designed to handle daily imbalances.

V. NATURAL GAS TRADING

Q. How is natural gas traded as a general matter?

A. Physical natural gas trading refers to the buying and selling of physical quantities of gas. In these trades, sellers and buyers agree that the seller will deliver a certain quantity of gas to a certain location on certain date(s) for a certain price. The location will usually be a delivery point on a pipeline; the date may be one particular date or may provide that the seller will provide a quantity of gas on multiple dates; and the price may be fixed in advance or may be based on a future price, such as a market index. For example, a buyer and seller may agree on the first of the month that the seller will deliver 10,000 MMBtus to a pipeline delivery point on the 10th of the month, with the price to be based on the index price on the 10th. Because prices are often not fixed at the time a trade is agreed, buyers and sellers may end up purchasing or selling gas at prices substantially different than they expected at the time a trade was agreed.

VI. OPERATIONAL FLOW ORDERS, IN GENERAL

Q. What is an Operational Flow Order, or "OFO"?

A. An Operational Flow Order, or OFO, is a mechanism used to preserve the integrity of a pipeline or distribution system by requiring customers on those systems to meet certain requirements, such as ensuring that deliveries and receipts are balanced so as to avoid an over-pressure or under-pressure situation. One of the primary purposes of OFOs is to deter customers and shippers on a system from over-delivering or under-delivering gas during times of system stress. Typically, an OFO provision of a pipeline, LDC, or utility tariff will provide that, when the natural gas system's integrity is threatened, the pipeline or utility may require that customer deliveries and receipts be in balance on a daily basis

(with the exception of a certain percentage tolerance), and if deliveries and receipts are not in balance, the pipeline or utility may impose penalties based on the volume of the over- or under-delivery. Different tariffs have different language governing the circumstances under which a pipeline or LDC can properly issue an OFO.

Q. Are there different kinds of OFOs?

A. Yes. OFOs can be system-wide, segment- or customer-specific, or otherwise limited. For example, if a pipeline is at risk of customers overdrawing gas from storage, an OFO can be targeted at directing customers not to withdraw more than their maximum daily quantities from storage. Indeed, this is precisely what Southern Star did with its first OFO during Winter Storm Uri.

Q. Are there other tools that pipelines and LDCs have to protect the operational integrity of their pipelines?

A. Yes. For example, customer curtailments are another method by which pipelines and LDCs can act to protect system integrity when it is threatened.

Q. Please explain what you mean by that.

A. Pipelines and LDCs can issue what are called curtailment notices or curtailment orders. These are notices that instruct customers to reduce their gas usage and are intended to reduce physical demand on the affected pipeline system.

Q. Are there any limitations on a pipeline or utility's ability to issue an OFO?

A. Yes. The Federal Energy Regulatory Commission, or "FERC," has explicitly recognized that OFOs are prone to abuse. FERC has noted that pipelines "have incentives to favor OFOs as the first option, not the last resort," because "shippers—not pipelines—bear the costs that result from imposition of OFOs." Pipelines have an incentive to issue OFOs

"too frequently, for too long, and [that are] larger in scope than required to protect the integrity of system operations." FERC Order No. 637, FERC Stats & Regs. Regulations Preambles (July 1996-December 2000) P31,091, at 31,312-13. FERC has taken various actions in an attempt to prevent pipelines from abusing OFOs, including by rejecting proposed tariffs that would have allowed pipelines to issue OFOs any time a shipper was out of balance on the pipeline even if there were no adverse impact on system operations. *See B. Algonquin Gas Transmission LLC*, 134 FERC § 61,008 (2011) ¶ 461 OPERATIONAL FLOW ORDERS (OFOS), 2006 WL 1995396.

In recognition of their propensity for abuse, federal regulations provide that interstate pipelines "must take all reasonable actions to minimize the issuance and adverse impacts of operational flow orders (OFOs) or other measures taken to respond to adverse operational events on its system," and OFO penalties may be imposed "only to the extent necessary to prevent the impairment of reliable service." 18 CFR § 248.12(b)(2)(iv)-(v). FERC policy is to "adopt incentives and procedures that minimize the use and potential adverse impact of OFOs." FERC Order No. 637.

Similarly, state utility tariffs generally include terms meant to limit utilities' abilities to call OFOs unnecessarily, or to call OFOs that are too broad. Spire's tariff includes such terms.

Q. In preparation for your testimony, have you reviewed the OFO provisions of Spire's tariff?

A. Yes. The OFO provisions of Spire's tariff are included in Schedule LA-13.

Q. Please identify the relevant OFO provisions of Spire's tariff.

A. The relevant portions of Spire's tariff are as follows:

- Tariff Sheet No. 16.7 provides, in part, as follows: "Notice of Operational Flow Orders (OFO's) and Periods of Curtailment shall be provided as far in advance as practicable and prospectively may be changed by Company [i.e., Spire] upon reasonable advance notice as conditions warrant. Where practicable, OFO's will be issued by 12 noon Central time and will be effective the second day after issuance, thereby providing time for Transportation Customers to adjust their nominations in accordance with the OFO. Company may make OFO's effective with a shorter notice if necessary to protect the integrity of its system and/or where such actions are necessary to insure compliance with the requirements of upstream pipeline companies and shall permit Transportation Customers to adjust nominations as necessary to reasonably comply with the OFO." The purpose of this term is to ensure that customers have sufficient time between when an OFO is announced and when it goes into effect to balance their gas deliveries and receipts.
- Tariff Sheet No. 16.8 provides, in part, as follows: "Notice of an OFO shall specify the nature of the problem sought to be addressed, the anticipated duration of the required compliance and the parameters of such compliance. Upon termination of an OFO, Spire West will post on its website the rationale for lifting that particular OFO...." The purpose of this term is to ensure that customers have sufficient information regarding the requirements of the OFO to allow them to comply with it.
- Tariff Sheet No. 16.8 further provides, in part, as follows: "Company may issue Operational Flow Orders (OFO's) to Transportation Customers as necessary to

protect the integrity of its system or any portion thereof and/or to insure compliance with the requirements of upstream pipeline companies." The purpose of this term is to specify and limit the circumstances in which Spire can call an OFO in order to avoid Spire calling an OFO when not necessary or for an improper purpose. Under Spire's tariff, there are only two permissible bases to issue an OFO: (1) when necessary to protect system integrity, and (2) to insure compliance with requirements of upstream pipelines.

- Tariff Sheet No. 16.8 further provides, in part, as follows: "Any OFO, along with associated conditions and penalties, shall be limited, as practicable to address only the problem(s) giving rise to the need for the OFO." The purpose of this term is to ensure that Spire does not abuse its power to issue OFOs by issuing OFOs that are broader or longer-lasting than necessary to address the problem giving rise to the need for the OFO.
- Tariff Sheet No. 16.8 further provides, in part, as follows: "Company may issue notice of an OFO as provided in section (1) above to instruct all customers or agents served through a given pipeline segment, on a distribution system or any portion thereof or any individual agent or customer to control their usage to avoid either Under-Deliveries or Over-Deliveries. The Company will specify in the OFO whether customers or agents are required to avoid Under- Deliveries, Over-Deliveries, or both." The purpose of this term is to specify some of the ways in which an OFO can be limited, namely by pipeline segment or individual agent or customer.
- Tariff Sheet No. 16.8 further provides, in part, as follows: "Conditions which

threaten the integrity of the Company's distribution system may include but are not limited to, exceeding the maximum allowable operating pressure of the distribution system segment, loss of sufficient line pressure to meet distribution system delivery obligations, or other conditions which may cause the Company to be unable to deliver natural gas consistent with its tariff." The purpose of this term is to specify some of the conditions that may threaten system integrity.

- Tariff Sheet No. 16.8 further provides, in part, as follows: "Conditions relevant to compliance with the requirements of upstream pipelines may include, but are not limited to, 1) situations where relevant Company resources are being used at or near their maximum tariff or contractual limits; and, 2) situations where actions are necessary to comply with a relevant OFO or the functional equivalent of a relevant upstream pipeline OFO, Critical Notice or force majeure." The purpose of this term is to specify some of the upstream pipeline conditions that may justify issuance of an OFO.
- Tariff Sheet No. 16.8 further provides, in part, as follows: "Company's actions with respect to its OFO's shall be reasonable, objective, non-discriminatory and consistent with the General Terms and Conditions for Gas Service, R-16 Priority of Service, and R-17." The purpose of this term is to require that Spire acts reasonably and objectively in connection with the issuance of an OFO. This further limits the ability of Spire to impose or extend the duration of an OFO unless there is an objective basis.
- Tariff Sheet No. 16.8 further provides, in part, as follows: "Before issuing an OFO, Spire West will attempt to identify specific customers causing the

conditions that give rise to the need for the OFO, and attempt to remedy those problems through requests for voluntary action; provided, however, exigent circumstances may exist which require immediate issuance of an OFO." This term reflects that Spire should not issue an OFO as a first step any time it perceives a possible threat to the integrity of its system, but instead should first attempt to pursue less drastic and more narrow and targeted measures.

- Tariff Sheet No. 16.9 provides, in part, as follows: "Authorized Usage: A transportation service customer's authorized usage during an OFO shall be equal to that customer's daily retainage-adjusted confirmed nomination in MMBtus…. Interrupted Supply: On any day on which a transportation service customer's supply is partially or totally interrupted for any reason, that customer's authorized usage shall be limited to the retainage-adjusted confirmed nomination in MMBtus being delivered to Company on behalf of that customer…. Spire West will not apply an OFO penalty to a Transportation Customer whose conduct during an OFO is compliant with the OFO or Spire West directives." The purpose of this term is to explain how a customer's authorized usage is determined for purposes of calculating OFO penalties.
- Tariff Sheet No. 16.12 provides, in part, as follows: "Unauthorized Deliveries: Over-Deliveries and/or Under-Deliveries which vary from customer's authorized usage level under an OFO … shall be subject to the penalties described in Section B-5 Penalties for Unauthorized Usage. (a) Individual Customers: Unauthorized Deliveries for individually balanced customers shall be calculated by comparing each customer's retainage-adjusted confirmed nominations with actual usage less

contract demand. (b) Pools: Unauthorized Deliveries for pools subject to aggregated balancing as defined under Section A-4 Aggregation, shall be calculated by comparing the group members' total retainage-adjusted confirmed nominations with their total actual usage less contract demand. (c) Meter Reading: Actual usage during an OFO shall normally be provided by electronic gas measurement (EGM) equipment. If Company is unable to obtain data from a customer's EGM device, the customer's usage shall be determined by actual meter reads." The purpose of this term is to explain how deliveries shall be determined for individually-balanced and pool-balanced customers.

- Tariff Sheet No. 16.12 further provides, in part, as follows: "Refusal to Comply: Company may disconnect from its system or refuse to accept the nomination of a customer which endangers system stability and/or safety by continuing to incur Unauthorized Deliveries." This term provides that, if a customer's failure to comply with an OFO endangers system stability, Spire may disconnect that customer's gas service.
- Tariff Sheet Nos. 16.13 and 16.14 explain how OFO penalties are calculated. Tariff Sheet No. 16.13 provides, in part, as follows: "Penalties for Unauthorized Usage: A customer or pool's unauthorized usage under an OFO or during a POC shall cause the incurrence of penalties. All revenues received from unauthorized use charges will be considered as gas cost recovery and will be used in the development of the gas cost recovery amount during the ACA audit as set forth in the Purchased Gas Adjustment schedule (PGA). (a) Tolerance Levels: Penalties shall be assessed: (i) During an OFO or POC, when Unauthorized Over-

Deliveries to EGM meters exceed 5% of authorized daily delivery levels. (ii) During an OFO, when Unauthorized Under-Deliveries to EGM meters exceed 5% of authorized daily delivery levels." Tariff Sheet No. 16.14 provides, in part, as follows: "Penalties during OFOs: Penalties for Unauthorized Over-deliveries or Underdeliveries shall be calculated as follows: (i) Standard OFO Penalties: For each day of the Standard OFO, the greater of $5 or 2½ times the daily midpoint stated on Gas Daily's Index for Southern Star Central Gas Pipeline (Oklahoma) times the MMBtu of Unauthorized Over- or Under-deliveries that exceed the tolerance level applicable under Section B-5-a Tolerance Levels. (ii) POC and Emergency OFO Penalties: For each day of the POC or Emergency OFO, the greater of $10 or 5 times the daily midpoint stated on Gas Daily's Index for Southern Star Central Gas Pipeline (Oklahoma) times the MMBtu of Unauthorized Over-or Under-deliveries that exceed the tolerance level applicable under Section B-5-a Tolerance Levels.... Responsibility for Payment: Unauthorized Over- or Under-Delivery Penalties for individually balanced customers shall be billed to and collected from the applicable customer. Unauthorized Over- or Under- Delivery Penalties for pools shall be billed to and collected from the agent representing the aggregated customers. Customers will continue to have ultimate responsibility for all charges on the account."

VII. WINTER STORM URI

Q. What was Winter Storm Uri?

A. Winter Storm Uri was a severe winter storm that caused much of the Mid-Continent region—including Missouri, Kansas, Oklahoma, and Texas—to experience historically

cold temperatures during certain days in February 2021.

Q. What impacts did Uri have on the natural gas market?

A. Uri had significant effects on natural gas markets during the period of the storm. The historically low temperatures caused both a drop in natural gas supply and an increase in natural gas demand, which caused prices to spike and ultimately led to an inability for many industry participants to obtain sufficient quantities of gas. On the demand side, natural gas demand generally increases when temperatures decrease, due to increased demand for natural gas to burn as a heating source, and as a source for natural-gas-driven electric plants (which power electric heaters, among other things). On the supply side, the historically low temperatures caused the failure of certain physical infrastructure that is critical to the supply of natural gas—including electric generating plants and well production, gas processing, and pipeline infrastructure—which meant that supply was significantly curtailed precisely as demand was increasing.

Q. In your professional experience, had you ever witnessed a storm having as significant an impact on natural gas infrastructure and markets as Uri did?

A. No. In my decades of professional experience in the natural gas industry, I have never seen any event have as significant an impact on natural gas supplies as Winter Storm Uri.

VIII. SPIRE'S AND SOUTHERN STAR'S OFOS DURING WINTER STORM URI

Q. Did Spire issue an OFO during February 2021?

A. Yes. Spire issued one OFO during February 2021.

Q. When was Spire's OFO issued?

A. Spire issued its OFO on February 10, to be effective at 9:00 a.m. on February 12. (Schedule LA-16.)

Q. What action does Spire have to take to "issue" an OFO?

A. Spire's tariff provides that, in order to issue an OFO, Spire must provide notice of the OFO to its transportation customers. Pursuant to Spire's tariff, that notice must include "the nature of the problem sought to be addressed, the anticipated duration of the required compliance and the parameters of such compliance," and notice must, where practicable, be issued "by 12 noon Central time and will be effective the second day after issuance[.]"

Q. What were the requirements of Spire's OFO?

A. Spire's OFO stated as follows: "Due to predicted extreme cold weather beginning 09:00 am Friday, February 12, 2021, until further notice, Spire Missouri West is issuing a standard operation [sic] flow order (Standard OFO). In order to maintain and protect the integrity of our distribution system, Spire Missouri is requesting that all end users control their usage to avoid any Under-Deliveries. Please see our tariff for the charges with non-compliance with this Standard OFO." Spire's OFO specified that the basis for its OFO was to protect its distribution system integrity, not for any other reason. Spire's OFO did not provide an expected duration, as required under Spire's tariff, but instead merely said the OFO would last "until further notice." Furthermore, according to the testimony of Symmetry's witnesses in this case, Symmetry gas supply personnel did not receive notice of the OFO until February 11, 2021, the day before the OFO was to go into effect, despite the tariff requirement that, where practicable, an OFO not go into effect until the second day after issuance.

Q. Did Spire issue a notice of curtailment to any of its customers?

A. Yes. Spire issued one notice of curtailment during February 2021. This notice of curtailment was issued on February 15, 2021, was directed to customers in a specific area

of Spire's service territory where Spire contends it was facing actual integrity issues, and stated: "Southwest Missouri customers immediately asked to reduce natural gas usage …. With natural gas supplies impacted in southwest Missouri, Spire is implementing an emergency curtailment plan in the Joplin, Nixa and Ozark MO areas. Spire is also asking customers to reduce usage immediately. To prevent system outages due to frigid weather conditions, Spire is asking customers to turn thermostats as low as they can comfortably tolerate and to minimize the use of any other natural gas appliances over the next 48 hours…. In addition, Spire is asking commercial and industrial customers to reduce their gas usage at facilities to minimum levels necessary to protect buildings and inventory. This request does not apply to hospitals, nursing homes, essential food processors, and other human needs applications." (Schedule LA-17.)

Q. Did Southern Star issue any OFOs during February 2021?

A. Yes. Southern Star issued three OFOs during February 2021. (Schedules LA-18, LA-19, LA-20.)

- On February 9, 2021, Southern Star issued a segment-specific OFO effective February 11, 2021, which provided, in part, as follows: "Southern Star Central Gas Pipeline ('SSCGP') is issuing a Standard OFO applicable to Receiving Parties taking deliveries on Line Segments 235 (Sedalia), 425 (Carrollton), 260 (Southern Trunk), 455 (Springfield), 120 (Hesston-Wichita), 130 (Kansas Hugoton), and 490 (Rawlins Hesston), pursuant to Section 10 of its FERC Gas Tariff's General Terms and Conditions ('GT&C'), due to point operators taking more gas off the system than is scheduled, and considering any no-notice Maximum Daily Quantity ('MDQ') at the location, during the current below normal temperatures

and high demands…. Takes at any delivery point on Line Segments 235, 425, 260, 455, 120, 130, and 490 shall not exceed the sum of the quantity scheduled by Southern Star and confirmed by the Receiving Party for the account of all Shippers delivering gas at that point, plus the remaining MDQ(s) for that Delivery Point under Rate Schedules TSS and STS. Receiving Parties who take gas in excess of that amount at any delivery point on those line segments will be subject to penalties pursuant to GT&C Section 10 for failure to comply with this OFO." (Schedule LA-18.)

- Also on February 9, 2021, Southern Star issued a storage OFO effective February 11, 2021, which provided, in part, as follows: "Per Section 10.2 of the General Terms and Conditions ('GT&C') of its FERC approved tariff, Southern Star Central Gas Pipeline ('Southern Star') is issuing a system wide Standard Operational Flow Order ('Standard OFO'), to be effective at 9:00 A.M. CST February 11, 2021. This notice is being issued to all storage customers under Rate Schedules TSS, STS, FSS, and FS1 to protect the integrity of the Southern Star's storage facilities due to high withdrawal levels from Southern Star's storage fields. This OFO requires each shipper with an agreement or agreements under Rate Schedules TSS, STS, FSS, or FS1 to adjust its receipts and/or deliveries so as to maintain[:] 1. Storage withdrawals at or below the applicable Maximum Daily Withdrawal Quantity ('MDWQ') under each agreement; and 2. Storage inventories at or above 0% of its contractual Maximum Storage Quantity ('MSQ') under each agreement. Failure to specifically adhere to this OFO will result in penalties for all quantities withdrawn from storage on any day above the

applicable MDWQ and/or for inventories below 0% of the MSQ. Penalties for failure to comply will be as set forth in GT&C Sections 10.3 and 10.4." (Schedule LA-19.)

- On February 11, 2021, Southern Star issued a system-wide OFO effective February 13, 2021, which provided, in part, as follows: "Southern Star Central Gas Pipeline ('SSCGP') is issuing a Standard OFO applicable to Receiving Parties taking deliveries on ALL Line Segments, pursuant to Section 10 of its FERC Gas Tariff's General Terms and Conditions ('GT&C'), due to point operators taking more gas off the system than is scheduled, and considering any no-notice Maximum Daily Quantity ('MDQ') at the location, during the current below normal temperatures and high demands. This order will be effective at 9:00 A.M. CST on February 13, 2021.... Takes at any delivery point on ALL Line Segments shall not exceed the sum of the quantity scheduled by Southern Star and confirmed by the Receiving Party for the account of all Shippers delivering gas at that point, plus the remaining MDQ(s) for that Delivery Point under Rate Schedules TSS and STS. Receiving Parties who take gas in excess of that amount at any delivery point will be subject to penalties pursuant to GT&C Section 10 for failure to comply with this OFO." (Schedule LA-20.)

IX. OPINIONS REGARDING SPIRE'S OFO

Q. Have you formed any opinions regarding whether Spire's OFO was justified and proper under the terms of Spire's tariff?

A. I have. Based on my review of the materials I described earlier and my professional experience and expertise, I do not believe that any conditions existed that would have

justified Spire issuing a valid OFO under the terms of its tariff.

Q. What are the bases for your opinion that Spire's OFO was not properly issued under its tariff?

A. Under the terms of Spire's tariff, Spire is permitted to issue an OFO only in certain circumstances, namely (a) where necessary to protect the integrity of Spire's system or any portion thereof, and/or (b) to insure compliance with the requirements of upstream pipeline companies. Based on the information I have reviewed, and on my training and experience, I do not believe either of those circumstances existed on either the day Spire issued its OFO or the day the OFO took effect.

Q. What are the bases for your conclusion that an OFO was not necessary to protect the integrity of Spire's system or any portion thereof?

A. Spire's tariff specifically references two conditions that may threaten system integrity and justify issuance of an OFO. Those conditions include (1) exceeding maximum system pressures, and (2) loss of sufficient line pressure to meet distribution system delivery obligations. Additionally, the tariff contemplates that an OFO may be issued where "other conditions may cause [Spire] to be unable to deliver natural gas consistent with its tariff." As I noted above, exceeding maximum system pressures can cause dangerous conditions on a distribution system, and loss of sufficient line pressure can impair a system's ability to transport gas over the system. In Spire's discovery responses in this matter, Spire specifically stated that there were no instances in which it was at risk of exceeding the maximum allowable operating pressure of its distribution system. (Schedule LA-21, Spire Response to SES DR 12.) Therefore, I can discard that as a possible justification for the OFO.

Q. What about risk of loss of line pressure on the Spire system?

A. Based on the information I have reviewed and my knowledge and experience, there was no risk of a loss of system-wide line pressure justifying a system-wide OFO. I have come to this conclusion for various reasons. First, in its discovery responses in this matter, Spire identified only one area of its system where it claimed to have faced a risk of loss of line pressure, namely an area of Southwest Missouri, and only one location where its upstream pipeline faced an actual significant drop in system pressure, namely a location on or near the Crenshaw valve. (Schedules LA-21, LA-22.) According to Spire's discovery responses, pressure on that segment of Southern Star began falling at around 4:15 p.m. on February 15, reached a low point of approximately 318 psi at 2:35 a.m. on February 16, and began to increase thereafter. This kind of localized and time-limited pressure issue did not warrant a system-wide OFO. As further confirmation that this was not a system-wide issue, Spire limited its curtailment to a handful of areas in Southwest Missouri; Spire did not seek to curtail usage elsewhere on its system, including in the Kansas City area where the vast majority of Symmetry's customers are located.

Q. Why does the sort of localized and time-limited pressure issue Spire faced not warrant a system-wide OFO?

A. First, the observed pressure level does not appear to have dropped to a severe level. According to Spire's discovery responses, the "low low" alarm on this line segment is set at 300 psi, which is lower than the observed low-point pressure of 318 psi reached on this segment during the purported low-pressure threat. Based on my knowledge and experience, pressure that is higher than the point at which at "low low" alarm would be

triggered does not represent a severe threat to system integrity, even at one particular location.

Second, the data produced by Spire does not address how this observed pressure data compares to the system operating pressures historically at that point in the system or at any period during high natural gas demand.

Third, a localized and time-limited operating pressure issue does not demonstrate a widespread threat to system integrity that would have justified the expansive system-wide OFO Spire issued. This dip in system pressure was observed over less than 12 hours beginning on the evening of February 15, five days after the Spire system-wide OFO was issued. A pressure drop at one localized point could have resulted from any number of factors, such as a local demand issue, a pipeline gas leak, or a local valve issue. It is not evidence of a system-wide issue.

Similarly, the fact that Spire or Southern Star may have experienced pressure drops on one area of its system is not indicative of an integrity issue anywhere else on Spire's system because Spire's various lines off of Southern Star do not appear to be interconnected with each other. Regarding the Crenshaw inlet pressure specifically, as reflected in Schedule LA-6, the Crenshaw delivery point is located at the end of the Southern Star south leg, and does not appear to be interconnected with other portions of the Spire system. A pressure drop in Southwest Missouri would have no significant impact on pressures on other areas of the system, including in Northwest Missouri where the majority of Symmetry's customers behind Spire are located.

Finally, emails that Southern Star sent to Spire on February 14, 15, and 16, and that Spire produced to Symmetry in this matter, reflect that deliveries to the Crenshaw

point were substantially in balance with usage on those dates, which indicates that the pressure problem at Crenshaw may have resulted from something other than insufficient supply. (Schedule LA-23.)

Q. Are there any other bases for your opinion that a system-wide OFO was not necessary to protect the integrity of Spire's system?

A. Yes. In my opinion, the fact that Spire never physically curtailed or shut off any customers on the Spire system shows that the integrity of the Spire system in whole or in part was never actually at risk. If Spire truly did not have sufficient gas flow into its system to maintain system pressures—and hence the ability to make deliveries—the only remaining option to maintain system pressure would be to physically curtail customer deliveries, which Spire never did.

Q. Does Spire have the ability to physically alter the amount of gas a customer can take from its system?

A. Yes. Spire can shut off gas access to any customer on its system, including its commercial and industrial transportation customers who purchase gas from marketers like Symmetry.

Q. Does Symmetry have a similar ability to do so?

A. No. Symmetry has no control over the physical ability of its customers to use gas. Symmetry can issue requests that its customers reduce their usage, but Symmetry has no way to force its customers to do so.

Q. Turning to the next predicate that Spire's tariff establishes for the issuance of an OFO, what are the bases for your conclusion that an OFO was not necessary to insure compliance with the requirements of upstream pipeline companies?

A. Spire has claimed that its OFO was justified by an OFO issued by its upstream supplier, Southern Star. But the only OFOs that Southern Star issued prior to Spire's OFO on February 10, such that they could arguably have served as a predicate for Spire's OFO, were (1) an OFO directing shippers not to withdraw more than their maximum allowable daily quantities from storage, and (2) an OFO directing shippers to ensure deliveries and receipts were in balance on particular specified segments.

First, regarding Southern Star's storage OFO, as discussed in additional detail below, the evidence I reviewed makes clear that Spire was never at risk of exceeding its maximum daily allowable withdrawals.

Second, regarding Southern Star's segment-specific OFO, that OFO only affected a limited portion of the Spire system, and therefore did not justify a system-wide OFO.

Q. Please explain why Southern Star's segment-specific OFO did not justify a system-wide OFO.

A. The segment-specific OFO that Southern Star issued on February 9, provided, in part, that:

"Southern Star Central Gas Pipeline ('SSCGP') is issuing a Standard OFO applicable to Receiving Parties taking deliveries on Line Segments 235 (Sedalia), 425 (Carrollton), 260 (Southern Trunk), 455 (Springfield), 120 (Hesston-Wichita), 130 (Kansas Hugoton), and 490 (Rawlins Hesston), pursuant to Section 10 of its FERC Gas Tariff's General Terms and Conditions ('GT&C'), due to point operators taking more gas off the system than is scheduled, and considering any no-notice Maximum Daily Quantity ('MDQ') at the location, during the current below normal temperatures and high demands…. Takes at any delivery point on Line Segments 235, 425, 260, 455, 120, 130, and 490 shall not

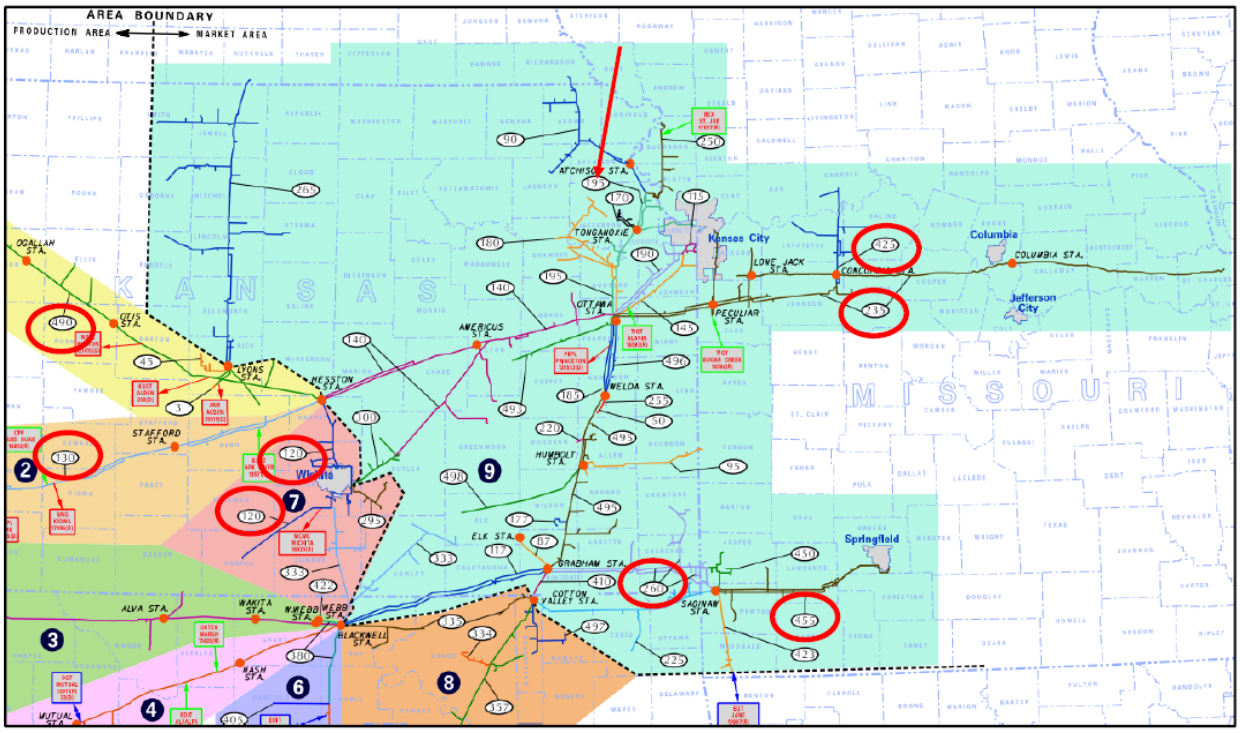
exceed the sum of the quantity scheduled by Southern Star and confirmed by the Receiving Party for the account of all Shippers delivering gas at that point, plus the remaining MDQ(s) for that Delivery Point under Rate Schedules TSS and STS. Receiving Parties who take gas in excess of that amount at any delivery point on those line segments will be subject to penalties pursuant to GT&C Section 10 for failure to comply with this OFO."

(Schedule LA-11.) In other words, this OFO only required balancing on specific segments of Southern Star's system.

Q. How do those particular line segments on Southern Star interact with or affect Spire's system?

A. As shown on Schedules LA-7, LA-8, LA-9, and LA-24, the Spire system is made up of discontinuous pipeline segments, and the Southern Star system is connected to the Spire system on more than one segment. Therefore, the segment-specific OFO only affected portions of the Spire system connected to those segments. Schedule LA-10 shows Southern Star's various pipeline segments, and the segments affected by this OFO are circled in red. As can be seen on this schedule, only three of the segments affected by this OFO are in Missouri. Two of those segments are associated with Southern Star delivery points located east of Kansas City while a third, segment 455, is associated with deliveries in the area west and southwest of Springfield. This segment-specific OFO would not have impacted any of Spire's delivery points or pipelines outside or upstream of these specific areas, which include the higher-load areas around Kansas City. Notably, a majority of Symmetry's customers on the Spire system take gas off of segment 195, which was not covered by this OFO.

If Southern Star's apparent concern about particular segments had borne out and pressures on those segments had dropped beyond a certain level, that could have impacted Spire's ability to make deliveries to customers off of those segments. However, such drops in pressure on particular line segments would not necessarily have impacted Spire's ability to make deliveries to customers on other line segments. And in the end, it is clear that Southern Star's concerns about those particular line segments were not borne out, as evidenced by the fact that Spire West was able to continue deliveries to customers on all line segments during Uri, and Southern Star ultimately sought waiver of all penalties associated with its OFOs.



Q. To the extent Southern Star's segment-specific OFO raised concern on Spire's part, what should Spire have done?

A. Spire could have issued notices for certain delivery points or customers served from

certain delivery points that have historically operated at lower pressures or for which operational problems have been an issue in the past. But Southern Star's segment-specific OFO did not justify Spire's system-wide OFO.

Q. Why would issuing notices for certain delivery points have been a more reasonable course of action than the declaration of a system-wide OFO?

A. Spire's tariff requires that any OFO be limited as practicable to address the problems giving rise to the OFO. Here, the purported problems giving rise to Southern Star's segment-specific OFO were localized, and therefore, pursuant to Spire's tariff, Spire's OFO—to the extent one was necessary at all—should have been localized as well. For example, Spire could have issued an OFO limited to the line segments specified in Southern Star's segment-specific OFO. However, to be clear, I have not concluded that any OFO (even a segment-specific OFO) was necessary.

Q. In your opinion, would Southern Star's subsequent February 11 system-wide OFO, effective on February 13, 2021, have justified Spire's OFO?

A. No. To the extent Spire claims that its OFO was justified by Southern Star's later system-wide OFO, that position is incorrect, because (a) Spire's OFO preceded Southern Star's system-wide OFO, and hence cannot be said to be based upon it, and (b) Spire did not need to issue a system-wide OFO to comply with Southern Star's system-wide OFO, because Spire could cover any shortfalls in gas deliveries from gas marketers like Symmetry by withdrawing additional gas from Spire's storage, as discussed below.

Q. Have you formed any other opinions regarding whether Spire's OFO complied with the other requirements of its tariff?

A. I have. Regardless of whether an OFO may have been justifiable under Spire's tariff

when it was initially issued—and I do not believe it was—Spire's tariff provides that any OFO must be limited as practicable to address only the problems giving rise to the OFO. Based on my analysis and professional experience and expertise, Spire's OFO was not limited as practicable to address only the problems giving rise to the OFO during the entirety of the period in which the OFO was in effect, and hence the OFO violated Spire's tariff.

Q. What are the bases for your opinion that Spire's OFO violated Spire's tariff because the OFO was not limited as practicable to address only the problems giving rise to the OFO?

A. I have concluded that Spire's OFO was insufficiently limited in at least two independent but related respects. First, as soon as Spire realized it was not facing system-wide threats to system integrity but rather only localized drops in pressure in particular geographic areas or on particular lines, Spire should have lifted its system-wide OFO and, if necessary and justified, replaced it with measures limited to protecting system integrity in those areas, such as a segment-specific OFO. Second, Spire realized, or should have realized, earlier than February 19 (when Spire announced the lifting of its OFO) that its system integrity was not at risk, and hence it should have lifted its OFO significantly earlier than it did. Furthermore, because Spire's OFO was left in place for too long and covered too broad a scope, the OFO penalties Spire is attempting to assess are improperly calculated as well.

Q. Please explain why Spire should have lifted its system-wide OFO as soon as it realized it was facing only localized drops in pressure in particular geographic areas or on particular lines.

A. As I testified above, the facts do not support Spire's claim that it faced widespread threats to the integrity of its system, and the single decrease in pressure that Spire identified in support of its claim was localized. Because Spire was aware that the only potential pressure issue it faced was contained and localized, it should have issued, at most, a segment-specific OFO. Regardless of whether the OFO may have been justifiable on the date it was issued, once it became clear that Spire's system did not face system-wide pressure drops, Spire should have withdrawn its system-wide OFO and, if necessary, replaced it with a narrower measure targeting the specific problems Spire actually faced.

For example, if conditions warranted, Spire could have replaced its system-wide OFO with a segment-specific OFO directing shippers to ensure sufficient deliveries to specific line segments. Furthermore, issuing more specific and narrow directives to Symmetry and other shippers on Spire's system would have made it more practicable for shippers to take steps to protect Spire's system integrity under the unprecedented conditions of Winter Storm Uri. Given the widespread supply shortages and increasing demand during Uri, Spire should have instructed customers and shippers to focus their efforts on areas of the system that were purportedly at risk. If, for example, Spire determined that pressures were falling on certain segments, Spire should have directed shippers to increase deliveries to those segments, and directed customers on those segments to reduce consumption. A generalized system-wide OFO did not provide sufficient information for shippers to prioritize and take actions that would address the isolated pressure issues that Spire claims gave rise to the need for the OFO.

Q. Please explain why Spire should have lifted its system-wide OFO earlier than February 19 (when Spire announced the lifting of its OFO) or February 20 (when

the OFO was lifted).

A. Even if Spire's OFO was justified when it was initially issued—and I do not believe it was—Spire should have lifted the OFO as soon as it became clear that Spire's entire system was not at risk. To be clear, based on the information I have reviewed, I do not believe that system was ever at risk, and consequently the OFO was improper from the outset. But additionally, based on the information I have reviewed and my professional knowledge and experience, Spire should have concluded—and the facts demonstrate Spire did conclude—that its system integrity was not at risk long before February 19 (when Spire announced the lifting of its OFO) or February 20 (when the OFO was lifted).

Q. Why should Spire have concluded, and why do you think Spire did conclude, that its system integrity was not at risk long before it lifted its OFO?

A. First, in its discovery responses in this matter, Spire explained that its decision as to when to lift the OFO was not based on threats to the integrity of its system—as Spire's tariff requires—but instead was based on market conditions and the duration of Southern Star's OFO. (See Schedule LA-21, Spire's response to DR 32 ("Spire left the OFO in place until such time as the gas marketers were substantially in balance and the gas markets returned to normal."); Spire's response to DR 33 ("Spire Missouri left the OFO in place for the same duration as Southern Star Pipeline and until market conditions normalized and supply for gas marketers returned to a balanced state."); Spire's response to DR 97 ("Spire was closely monitoring its system and ended the OFO once marketers were substantially in balance and the gas markets had returned to normal.").) These are not proper bases under Spire's tariff to keep an OFO in place.

Q. Why was it improper for Spire to base its decision on when to lift its OFO on

market conditions and the duration of Southern Star's OFO?

A. As explained above, Spire's tariff requires that, in all instances, an OFO must be limited as practicable to address only the problem(s) giving rise to the need for the OFO. A system-wide OFO is, by definition, not limited in any fashion. Furthermore, as explained above, Spire's tariff only provides two valid justifications for an OFO: (1) when necessary to protect system integrity, and (2) to insure compliance with the requirements of upstream pipelines. Spire's stated reasons for not lifting the OFO sooner do not meet these standards:

- There is no justification under Spire's tariff for waiting to lift its OFO "until market conditions normalized" or "until such time as the gas marketers were substantially in balance and the gas markets returned to normal" if Spire's system integrity was not at risk, and the OFO was not necessary to insure compliance with the requirements of upstream pipelines. As described below, Spire's system integrity was not at risk, and the OFO was not necessary to insure compliance with the requirements of upstream pipelines, because at all times during Uri Spire had more than sufficient gas in storage, and storage withdrawal capacity, to cover any marketer shortfalls. Indeed, in my view the only reason Spire would be motivated to keep its OFO in place "until such time as the gas marketers were substantially in balance" would be to maximize the OFO penalties Spire could charge. Spire's system is monthly balanced, and therefore being out of balance on a daily basis, absent a true system integrity issue, does not justify issuing and maintaining an OFO.
- Spire's tariff does not allow it to keep an OFO in place simply because one of its

upstream suppliers has an OFO in place. Rather, Spire may keep an OFO in place only if the OFO is *necessary to insure* its compliance with an upstream OFO. And as explained above, Spire was not at risk of violating any of Southern Star's OFOs. Because a system-wide OFO was not *necessary* to insure Spire's compliance with any of Southern Star's OFOs, Spire did not need to wait, and should not have waited, until Southern Star lifted its OFOs to lift its own OFO.

Q. Do you have any other bases for your conclusion that Spire should have concluded prior to February 19 or 20 that its system was not at risk?

A. Yes. Spire had access to real-time data regarding pressures on its systems, and according to discovery produced in this matter, only one portion of the Southern Star system serving Spire—namely the area around the Crenshaw valve—suffered pressure drops during Uri. Despite Symmetry's requests for information, Spire has pointed to no facts to suggest that it had any pressure drops on other portions of its system. As soon as Spire determined that it was not suffering widespread pressure drops on its system, it should have lifted the system-wide OFO.

Q. Do you have any other bases for your conclusion that Spire should have concluded prior to February 19 or 20 that its system was not at risk?

A. Yes. Spire also took affirmative actions prior to February 19 and 20 that are plainly inconsistent with Spire's claim that it believed it faced genuine threats to system integrity. On February 15—a full five days before Spire lifted its OFO, and the same day on which Spire contends it was facing a pressure drop at the Crenshaw point—Spire offered to sell ** [redacted] ** dekatherms of gas out of its storage on Southern Star, through a third party, to Symmetry. Spire ultimately sold ** [redacted] ** dekatherms of

gas out of its storage on Southern Star. At the time Spire made that sale, on February 15, Spire was also withdrawing less than its Maximum Daily Withdrawal Quantity from storage, which means that in addition to believing it had a surplus of gas that it did not need to maintain system integrity, it also could have withdrawn more gas from storage if it needed to in order to protect system integrity. (Schedule LA-25.)

Q. Why does the fact that Spire sold this gas out of storage demonstrate that Spire no longer had concerns about the integrity of its system?

A. During times of inclement weather and system stress, gas in storage is a key component of a utility's ability to manage unexpected swings in supply and demand. Spire, if it were being prudent, would not sell gas out of storage unless it felt it would have more than enough gas in storage after the sale to support the integrity of its system. Based on my professional knowledge and experience, the fact that Spire sold gas out of storage while it was withdrawing less than its maximum daily withdrawal quantity indicates that, even after the sale, Spire had more than sufficient supply to support the integrity of its system regardless of marketer deliveries.

Q. How does that ** [redacted] ** dekatherms of gas Spire sold compare to the amount of gas that Symmetry and the other marketers purportedly failed to deliver to Spire West during Uri?

A. According to discovery Spire has produced in this matter, Symmetry's total delivery shortfall during the OFO period was ** [redacted] ** dekatherms, and all marketers' combined delivery shortfalls during Uri were ** [redacted] ** dekatherms. (Schedule LA-26.) Both of these figures are far lower than the ** [redacted] ** dekatherms of gas Spire sold out of storage on February 15.

Q. Can you put into context the volume of gas that Spire sold in this one transaction during an OFO period in which it also claims to have been suffering widespread threats to its system integrity?

A. Yes. Regarding the amount that Spire wanted to sell to Symmetry (**[redacted]** dekatherms), according to testimony from Symmetry witnesses in this case, going into February Symmetry had purchased roughly **[redacted]** dekatherms per day of baseload gas to serve all customers on Southern Star (not just on Spire) during the month of February, and anticipated purchasing up to **[redacted]** dekatherms per day of swing gas. That means Spire was attempting to sell Symmetry roughly four days' worth of gas for all of Symmetry's customers on Southern Star.

Even Spire referred to this sale in its public reporting as "***an unusually large*** off-system sale[.]" (Schedule LA-2.)

Q. What does Spire's sale of **[redacted] dekatherms of gas out of storage during the storm indicate to you?**

A. This indicates to me that the total marketer shortfall of **[redacted]** dekatherms during the OFO period, or any other supply or pressure issues on Spire's system, was not a genuine threat to the integrity of Spire's system, because Spire willingly sold more than that amount out of storage during the OFO period.

Q. Could Spire have used its gas in storage to make up for the marketer shortfalls?

A. Yes. Records Spire produced in this matter reflect Spire's storage position on Southern Star during February. Those documents reflect that, on all days during the storm, Spire's available gas in storage far exceeded marketers' purported delivery shortfalls, and Spire could have withdrawn more than enough gas to cover those shortfalls. As reflected in

Schedules LA-25 and LA-26, both of which were produced by Spire in this matter:

- Spire entered February with 8,768,820 dekatherms of gas in storage on Southern Star.
- The most that marketer deliveries to Spire were short on any given day was **[redacted]** dekatherms on February 16.
- In February, Spire could withdraw up to a maximum 493,813 dekatherms per day from its storage on Southern Star. But it never withdrew that much on any day during February, and on each day during February it could have withdrawn enough more to cover the marketer shortfalls.
- On February 12, when Spire contends marketers were short **[redacted]** dekatherms, Spire withdrew 332,389 dekatherms from storage – **[redacted]** dekatherms less than its maximum withdrawals.
- On February 13, when Spire contends marketers were short **[redacted]** dekatherms, Spire withdrew 322,955 dekatherms from storage – **[redacted]** dekatherms less than its maximum withdrawals.
- On February 14, when Spire contends marketers were short **[redacted]** dekatherms, Spire withdrew 399,557 dekatherms from storage – **[redacted]** dekatherms less than its maximum withdrawals.
- On February 15, when Spire contends marketers were short **[redacted]** dekatherms, Spire withdrew 408,767 dekatherms from storage – **[redacted]** dekatherms less than its maximum withdrawals.
- On February 16, when Spire contends marketers were short **[redacted]** dekatherms, Spire withdrew 322,852 dekatherms from storage – **[redacted]**

dekatherms less than its maximum withdrawals.

- On February 17, when Spire contends marketers were short **[redacted]** dekatherms, Spire withdrew 272,443 dekatherms from storage – **[redacted]** dekatherms less than its maximum withdrawals.
- On February 18, when Spire contends marketers were short **[redacted]** dekatherms, Spire withdrew 199,278 dekatherms from storage – **[redacted]** less than its maximum withdrawals.

I have prepared the demonstrative at Schedule LA-27 which shows the difference, on a daily basis, between how much Spire could have withdrawn from storage, and how much Spire did withdraw from storage plus the purported marketer shortfalls.

Q. Do you have an opinion regarding Spire's sale of gas out of storage apart from what that sale indicates concerning the lack of threats to Spire's system?

A. Yes. During Winter Storm Uri, when marketers' abilities to supply gas for their customers behind Spire's city gate were limited because of upstream supply cuts and other factors, Spire claims that it purchased gas on the spot market to make up for the marketers' shortfalls. Even if it were true that Spire purchased gas to make up for marketer shortfalls, such purchases were unnecessary to maintain system integrity, and hence unreasonable under Spire's tariff, because Spire had sufficient gas in storage to more than make up for marketer shortfalls.

Q. Given that Spire had sufficient gas in storage to make up for any marketer shortfalls, why was it unreasonable for Spire to supposedly purchase gas on the spot market to cover those shortfalls instead of relying on gas in storage?

A. Regulated natural gas utilities like Spire are required to maintain gas in storage in order to protect system integrity, in furtherance of their obligation to provide reliable service. Regulated utilities are not permitted to use storage gas as a profit center. Spire did the opposite: instead of utilizing its storage to supply needed gas to its system and in support of its alleged system integrity issues, Spire sold gas out of storage—including the **[redacted]** dekatherms it sold to Symmetry on February 15—for a significant profit and then instead supposedly covered the marketers' shortfalls with exorbitant spot purchases.

Q. How would these transactions potentially benefit Spire's parent company Spire, Inc.?

A. Most directly, Spire West appears to have profited from the sale of **[redacted]** dekatherms of gas out of storage, which it presumably purchased when gas prices were at their normal levels, for an elevated price of $**[redacted]** per dekatherm. Spire, Inc. appears

to have further profited from the spot gas sales because, according to discovery produced in this matter, ** [redacted] ** MMBtu of the spot gas Spire West purchased during the OFO period was purchased from Spire's unregulated affiliate Spire Marketing. According to Spire records, Spire West paid Spire Marketing ** [redacted] ** for that gas. (Schedule LA-26.)

Q. How could those purchases of spot gas from Spire Marketing benefit Spire's parent company, if it was just a transfer of funds from one subsidiary to another?

A. It could benefit the parent company because Spire will ultimately expect to recover those costs through the ACA/PGA process. A regulated gas utility is entitled to recover from its ratepayers what it pays for gas. But Spire Marketing, as an unregulated gas marketer, retains the profits it earns from sales of gas to regulated utilities (including Spire Missouri), and hence Spire, Inc. ultimately profits.

Q. Is there any other way Spire's actions during Uri may benefit Spire Marketing, and hence ultimately their shared parent company Spire Inc.?

A. Yes. As I noted above, Spire Marketing is a direct competitor of Symmetry and other marketers that operate in Missouri. If Spire is allowed to impose hundreds of millions of dollars in OFO penalties on marketers other than Spire Marketing, those marketers may be driven from the Missouri market. This would remove competitors to Spire Marketing, thereby increasing Spire Marketing's market power, likely leading to higher profits for Spire Marketing, at the cost of less choice, and higher prices, for Missouri consumers. Furthermore, if Spire attempts to collect these penalties from Symmetry's customers, this could competitively disadvantage Symmetry in relation to Spire Marketing. Ultimately, it is Missouri natural gas customers who would be harmed the most, as they would have

fewer alternatives for gas delivery services.

Q. From review of Spire, Inc.'s public filings with the SEC, what, if anything, did you learn about Spire, Inc.'s financial performance during the period of Winter Storm Uri?

A. According to Spire's 10-Q for the period ended March 31, 2021, which was filed on May 7, 2021 (Schedule LA-2), Spire, Inc. earned significant and extraordinary profits during Uri:

- Spire's operating revenues from external customers for its gas utility segment were over $1 billion for the three months ended March 31, 2021, compared to just under $680 million for the three months ended March 31, 2020.
- Because of what Spire described as the "favorable weather/volumetric impacts" due to Winter Storm Uri, Spire's gas utility segment's contribution margin for the three months ended March 31, 2021 was $22 million (or 6%) higher than the same period in the prior year.
- In total, Spire, Inc.'s net income for the quarter ended March 31, 2021 was $53.8 million (or 40%) higher than the same period in the prior year.
- Spire, Inc.'s net income for the six months ended March 31, 2021 was approximately $76 million (or 38%) higher than the same period the prior year.

Q. Did any other pipelines or LDCs, aside from Spire, issue OFOs during Winter Storm Uri?

A. Yes. Multiple pipelines and LDCs in the Mid-Continent region issued OFOs.

Q. Are all of those pipelines and LDCs seeking to collect penalties arising from the OFOs they issued during Uri?

A. No. Many of the pipelines and LDCs that issued OFOs during Uri have since voluntarily waived penalties associated with those OFOs, including Southern Star, which provides the majority of gas to Spire West's system. Other pipelines and LDCs that voluntarily waived or lowered OFO penalties in connection with Winter Storm Uri include Black Hills Energy, Kansas; Gulf South; and Kinder Morgan's El Paso Natural Gas Co., LLC.

On March 11, 2021, Southern Star filed a request with FERC to allow Southern Star to waive all OFO penalties in connection with Winter Storm Uri. In support of its waiver request, Southern Star noted that "[t]he purpose of issuing OFOs under Southern Star's tariff is to deter certain behaviors by Shippers and Point Operators on its system to ensure the integrity and reliability of its pipeline and storage operations during an event," and "[a]lthough many Shippers and Point Operators were unable to adhere completely to the OFOs" due to the unprecedented effects of Winter Storm Uri, "Shippers and Point Operators as a whole behaved in a manner that allowed Southern Star to sustain pipeline operations during a critical weather event and continue serving its markets without curtailing primary firm service." (Schedule LA-28 at 2.) In approving Southern Star's waiver request, FERC noted that "these extreme penalties do not accomplish the purpose of penalties, which is to deter behavior that could impair system reliability. The extreme weather event presented circumstances outside the control of the delivery point operators. Southern Star found no evidence of gamesmanship by any entity incurring penalties during this critical time. Rather, based upon the record in this proceeding, it appears that the cooperation of the pipeline's customers (including delivery point operators), helped maintain system integrity and, as a result, they should not be burdened by extreme penalties." (Schedule LA-29.) FERC further noted that "no shipper … has a right to a

windfall as the result of administration of penalties on other entities."

Q. Does this conclude your testimony?

A. Yes. However, my testimony is based on the information Spire has chosen to disclose to date. If Spire is permitted to offer additional evidence, I am prepared to supplement my testimony in response.

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

STATE OF Texas)
) **SS**
COUNTY OF Collin)

AFFIDAVIT OF LESA S. ADAIR

Lesa S. Adair, being first duly sworn, deposes and says that she is the witness who sponsors the accompanying direct testimony and schedules; that said testimony was prepared by her or under her direction and supervision; that if inquiries were made as to the facts in said testimony and schedules, she would respond as therein set forth; and that the aforesaid testimony and schedules are true and correct to the best of her knowledge, information, and belief.

Lesa S. Adair

Subscribed and sworn to before me this 20th day of December, 2021.

Notary Public

My commission expires: 9-7-24

TERRI BROERMAN
My Notary ID # 972656
Expires September 7, 2024