Schumaker & Company

Report

Of the
Prudency Review of Spire STL Pipeline
for the
Missouri Public Service Commission

Case No. GR-2021-0127

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May 27, 2022

** Denotes Confidential Information **

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I. Executive Summary

Schumaker & Company consultants were engaged by the Missouri Public Service Commission ("Commission") to conduct a prudency review of the actions undertaken by Spire Inc. in deciding to build and operate an interstate pipeline under its subsidiary Spire STL Pipeline LLC ("Spire STL").

The Commission is charged with ensuring that Missourians receive safe and reliable utility service at just, reasonable and affordable rates. The Commission's mission statement states:[1]

We will:

1. Ensure that Missourians receive safe and reliable utility services at just, reasonable and affordable rates;
2. Support economic development through either traditional rate of return regulation or competition, as required by law;
3. Establish standards so that competition will maintain or improve the quality of services provided to Missourians.
4. Provide the public the information they need to make educated utility choices;
5. Provide an efficient regulatory process that is responsive to all parties, and
6. Perform our duties ethically and professionally.

The Spire STL pipeline is an interstate pipeline regulated by the Federal Energy Regulatory Commission (FERC). The Spire STL pipeline was built to primarily serve the customers of Spire Missouri East. The costs of this pipeline is being paid for by Spire Missouri East customers in current rates. In a manner similar to past incorporation of nuclear plant engineering and construction costs into utility rate base, the Commission's prudency standard can be applied to the costs of the Spire STL pipeline.

The prudency standard adopted by the Commission recognizes that a utility's costs are presumed to be prudently incurred, and that a utility need not demonstrate in its case-in-chief that all expenditures are prudent. "However, where some other participant in the proceeding creates a serious doubt as to the prudence of an expenditure, then the applicant has the burden of dispelling those doubts and proving the questioned expenditures to have been prudent."[2] In the case of Spire STL pipeline costs charged to customers, several parties have raised concerns including Consumers Council of Missouri, Environmental Defense Fund, Midwest Energy Consumers Group and the Office of the Public Counsel.

Schumaker & Company consultants applied the Commission's prudency standard in reviewing the decision making undertaken prior to the construction and operation of the Spire STL pipeline.

Summary of Findings and Conclusions

In summary, Schumaker & Company consultants found Spire Inc.'s ("Spire") (formerly Laclede Group Inc.) decision making surrounding the Spire STL pipeline was reasonable and consequently prudent based on our review of company documentation of that time. We found:

- The decision made by Spire to build the Spire STL Pipeline was reasonable and prudent.
  - The decision by Spire to construct the Spire STL pipeline was rendered after a long review process undertaken by Spire Missouri (at that time called Laclede Gas Company) which began in 2011 and culminated in January 26th 2017 with Spire STL pipeline filing its application for a 7(c) Certificate at FERC.
  - The operation of the Spire STL pipeline helped improve some operational issues within the distribution system.
  - Reconfiguring Spire Missouri East's supply portfolio has yielded financial and non-financial benefits for the customers of Spire Missouri East.
  - Spire developed a dashboard analysis showing potential financial benefits of STL pipeline.
  - Spire hired Concentric Consulting LTD ("Concentric") to develop an economic analysis of the Spire STL pipeline.
  - The Spire Project Gas team's evaluation of Spire Missouri East's gas supply portfolio was thorough and complete.
- The Spire Inc. Board of Directors were involved in the decision making process throughout this timeframe.
  - Communications between the Project Gas team, the Board of Directors and Strategy Committee was frequent and complete.
  - Several key benefits were presented during a Board Strategy Meeting.
- Missouri ratepayers have been shielded from the cost overruns by a precedent (founders) agreement that was negotiated at the start of the project.
  - A favorable transportation rate was negotiated between Spire Missouri East and Spire STL pipeline.
  - The Spire STL pipeline provides gas transportation services to Spire Missouri East at an allowed FERC rate that was established in the precedent agreement whereas services provided to Spire STL pipeline by Spire Missouri are provided at fully distributed cost to Spire STL Pipeline.
- A qualified Project Management team was put in place to manage the Spire STL pipeline Project.
  - Key individuals were hired with specific pipeline construction experience to run the project.
  - Competitive bidding was used to select Principal General Contractor.
  - Approvals at all levels of government were sought and granted.

- Spire Inc. has created an organization similar to what we have observed at other electric and gas utilities.
  - The Spire STL pipeline affiliate was created due to anticipated supply need and the absence of an available unaffiliated company that met Spire standards to partner with Spire on this effort.
  - Spire is in general compliance with the Missouri Affiliate Rules with respect to STL Pipeline.

Discussion of the last two points can be found in the Staff Memo filed with this Report.

- However, as further discussed in the recommendation memo, Staff has concerns regarding the availability and access to certain supporting documentation.
- Also, as discussed in the Staff memo, key risks for Spire remain with regard to the ongoing FERC certification process of the Spire STL Pipeline and the court review of that process. Those risks should be borne by Spire in future Commission proceedings.

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II. Spire STL Pipeline Background

This chapter provides a brief background on the Spire STL pipeline. Later chapters of this report address the justification to construct the pipeline and did that decision and the construction itself meet the Commission's prudency standard, and whether affiliate transaction rules are complied with regarding STL pipeline and Spire Missouri East.

A. Background

Spire Missouri East based its decision to build the Spire STL pipeline on information and data available on or before January 2017[3] which showed benefits to its customers by improving its gas supply portfolio. Benefits were expected to be realized in the areas of gas supply diversity, reliability, flexibility, improved system operations and lower gas portfolio costs. Several alternatives to the Spire STL Pipeline were evaluated and none were able to provide all of the benefits or provide a significant economic improvement over the supply portfolio that included the pipeline.[4] All of the subsequent improvements to the supply portfolio directly benefited Spire Missouri East customers.

On August 3, 2018, the Federal Energy Regulatory Commission (FERC) approved an order issuing a Certificate of Public Convenience and Necessity for the Spire STL pipeline, enabling the St Louis region to receive new sources of natural gas supply (specifically gas transportation). With this approval, the pipeline moved forward with land acquisition and other pre-construction activities.[5] Pipeline construction started in late 2018 and the pipeline was placed into service in late 2019.

FERC's approval of the Spire STL pipeline was challenged by the Environmental Defense Fund (EDF) on June 26, 2020, and EDF filed a brief asking the U.S. Court of Appeals for the D.C. Circuit to overturn FERC's approval of the project. According to EDF attorney Erin Murphy, "FERC unlawfully approved the Spire STL Pipeline without a sound determination that the project was needed. When FERC relies exclusively on an affiliate contract to justify the need for a pipeline, as it did with the Spire STL project, it threatens market integrity and harms ratepayers, who ultimately end up footing the bill for unnecessary gas infrastructure".[6] In June of 2021, a three judge panel of the U.S. Court of Appeals for the D.C. Circuit ruled that FERC "failed to adequately balance public benefits and adverse impacts"[7] in approving the pipeline and "ignored record evidence of self-dealing."[8] The panel also wrote that evidence showed the pipeline "is not being built to serve increasing load demand and that there is no indication the new pipeline will lead to a cost savings."[9] Spire Inc. appealed to the U.S. Supreme Court which rejected to hear the appeal.[10]

Currently the pipeline is operating under a temporary license, and FERC will revisit its decision to approve or not approve the Spire STL pipeline.

B. Missouri Public Service Commission's Prudency Rules

The Commission established its prudence standard in a 1985 case involving the costs incurred by Union Electric Company in constructing its Callaway nuclear plant. In determining how much of those costs were to be included in Union Electric's rate base, the Commission adopted a standard for determining the prudence of costs that had been established by the United States Court of Appeals, District of Columbia, in a 1981 case. The prudency standard adopted by the Commission recognizes that a utility's costs are presumed to be prudently incurred, and that a utility need not demonstrate in its case-in-chief that all expenditures are prudent. "However, where some other participant in the proceeding creates a serious doubt as to the prudence of an expenditure, then the applicant has the burden of dispelling those doubts and proving the questioned expenditures to have been prudent."[11] In the case of Spire STL pipeline costs charged to customers, several parties have raised concerns including Consumers Council of Missouri, Environmental Defense Fund, Midwest Energy Consumers Group and the Office of the Public Counsel.

The Commission, in the Union Electric case, further recognized that the prudence standard is not based on hindsight, but upon a reasonableness standard. The Commission cited with approval a statement of the New York Public Service Commission that:

> the company's conduct should be judged by asking whether the conduct was reasonable at the time, under all the circumstances, considering that the company had to solve its problem prospectively rather than in reliance on hindsight. In effect, our responsibility is to determine how reasonable people would have performed the tasks that confronted the company.[12]

Since its adoption, the Commission's prudence standard has been recognized by reviewing courts.[13]

More recently the Missouri Supreme Court, with regard to application of the prudence standard to affiliate transactions, has stated in Docket No. SC92964:

"A presumption of prudence is inconsistent with the rationale for the affiliate transaction rules and with the PSC's obligation to prevent regulated utilities from subsidizing their non-regulated operations."

"The affiliate transaction rules were enacted in an effort to prevent regulated utilities from subsidizing their non-regulated activities. To presume that a regulated utility's costs in a transaction with an affiliate were incurred prudently is inconsistent with these rules."

III. Pipeline Decision Making

This section discusses the process used by Spire Inc. to determine the need for the Spire STL Pipeline.

Finding III-1 **The decision by Spire Inc. to construct the Spire STL Pipeline was rendered after a long review process was undertaken by Spire Missouri which began in 2011 and culminated in January 26th 2017 with Spire STL Pipeline filing its application for a 7(c) Certificate at FERC.**

A. Project Gas/Project Timeline Key Dates Thru decision to proceed with Spire STL pipeline

The creation of Spire STL pipeline was the culmination of a process starting in early 2011. In 2011, a 3rd party developer proposed a REX lateral to St Louis and Spire Missouri filed a settlement stipulation with the PSC to interconnect with this pipeline, if constructed. It was never constructed. Sometime in the next couple of years, Spire began looking at other lateral options and spoke with a few potential partners for this project. In late 2013, Spire Missouri East (then known as Laclede Gas Company) formed a committee staffed with a cross section of key employees to review its gas supply portfolio[14]. The committee was named "Project Gas". Its objective is shown below in *Exhibit III-1*.

Exhibit III-1
Project Gas Objective
Late 2013

Objectives of this project

- In light of the rapidly changing North American natural gas marketplace, determine the optimal future gas supply portfolio that :
  - Fully maintains (consistent with past practice) reliable and favorable cost gas supplies for LGC and MGE regulated customers
  - Maximizes total value generated from underutilized regulated gas supply assets and commodity spend
  - Standardizes planning and forecasting methodologies between utilities
  - Capitalizes on any market opportunities to provide new service offerings using T&S and supply portfolios
  - Enables equitable sharing of risk and total value generated between customers and shareholders

Source: Information Request 42

Project Gas from its inception in 2013 to January 2017 studied the current state (2013) of Spire Missouri supply portfolio, examined and studied many factors that impact the supply portfolio, and recommended what the future supply portfolio should be. It completed its objective with the result being that a REX supply lateral was recommended as a gas supply project.[15]

The team studied U.S. and international gas market trends, environmental drivers, Midwest and Mid-continent area trends and implications, background and analysis on 13 key pipeline systems, Spire Missouri's system demand forecast, and many other factors that affect the supply portfolio.[16]

Highlights of Project Gas/Spire Decision Timeline are as follows:[17]

- June 16, 2014: initial Project Gas report distributed to Spire leadership council. Identified retention of IHS and PACE as consultants. Discussion of IHS reference case and North American gas market fundamentals driven by shale, exports, etc.[18]
- September 26, 2014: Siemens/PACE presentation finalized to provide update on Project Gas activities and analysis to date.
- Mid October 2014 Board Strategy Committee formed. Project Gas update provided overview, notes nearing completion of current state assessment and gas market forecasting. Noted evolving gas flows and basin outputs. Noted joint venture (JV) investment with pipeline operator as an opportunity.[19]
- November 4, 2014: Spire entered into a Non-Disclosure Agreement with ** [redacted] ** pipeline for discussion of potential gas supply projects.[20]
- November 10, 2014: Spire entered into a Non-Disclosure Agreement with ** [redacted] ** pipeline for discussion of potential gas supply projects.[21]
- March 5, 2015: Project Gas provided comprehensive update to full board during strategy session. Included review of Spire Missouri East gas supply portfolio. Noted lack of pipeline diversity impacts for Spire Missouri East: Limited capacity into citygate relative to peak demand, dependence on MRT and no-notice storage, traversing New Madrid fault, and limited pipeline competition absent new build. Included IHS presentation, with recommendation to obtain firm pipeline capacity from the Marcellus and enhance Rockies supply.[22]
- July 23, 2015: Requests for Proposals (St. Louis Lateral Process Description) are finalized and ready for release to potential project partners. (RFPs were sent to ** [redacted] **.) Included were tentative project criteria and tentative project terms.[23]
- October 28, 2015: Project Gas reported to the Board Strategy Committee that a REX lateral has been identified as a recommended gas supply project, and that ** [redacted] ** have been identified as the final two potential partners in the process. The project was being considered as a joint venture with these parties.[24]
- January 13, 2016: Spire Missouri presented REX lateral concept to the Commission, Advisors and Staff[25] in an agenda meeting.
- January 21, 2016: Project Gas reported to full board of directors that informal RFPs were sent to three pipelines with a qualitative assessment of the response terms. It was highlighted that there are significant benefits to utility customers. The presentation indicated that ** [redacted] ** was the leading contender in the bidding process. The assumed project price was ** [redacted] **. It contained a discussion of customer and shareholder impacts of

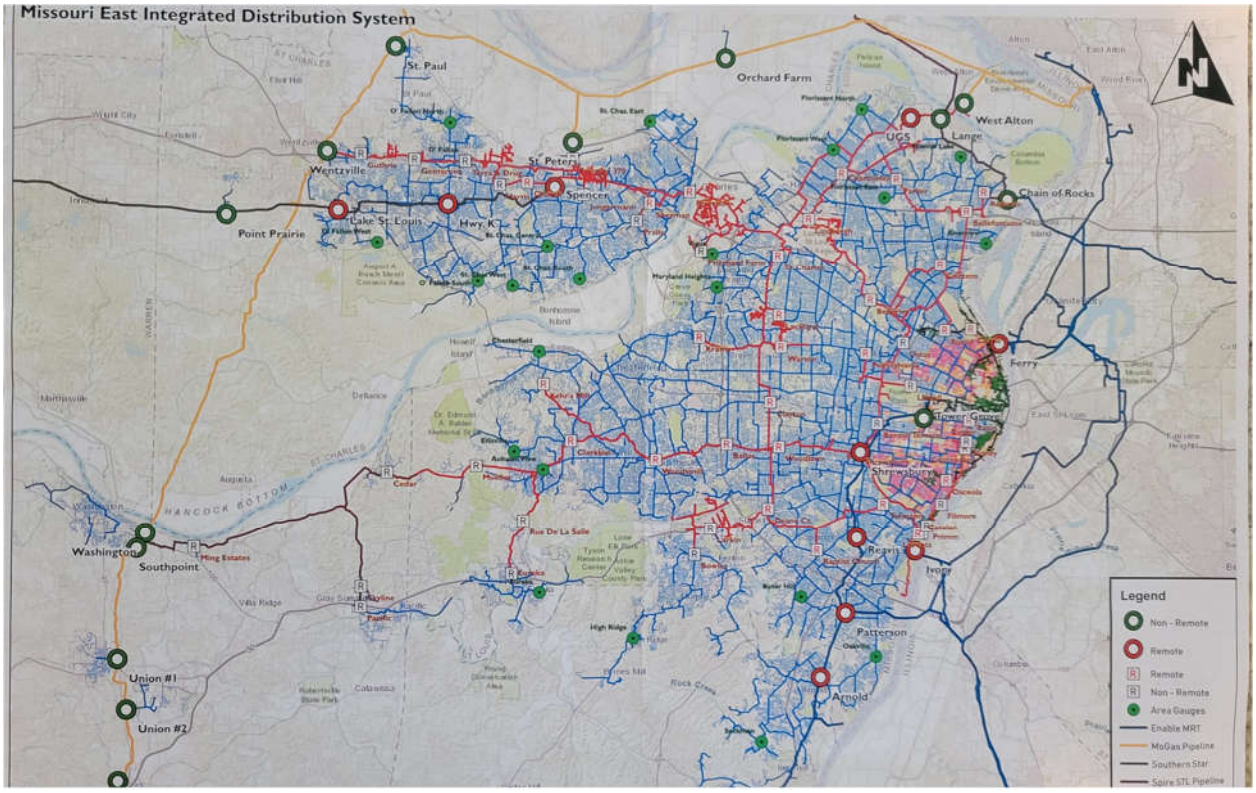
proceeding with ** [redacted] ** partnership to build lateral vs. re-negotiating existing agreements with ** [redacted] ** without a lateral. Highlighted risks with ** [redacted] ** as a partner, including credit quality. Supply diversity discussion highlighted freeze offs and earthquake risk as potential concerns to be mitigated.[26]

- April 27, 2016: Spire STL pipeline provided update to board strategy committee. Internal team members and team structure is identified. Team reported that they have evaluated and considered multiple approaches for Spire to develop construct and own 100% of Spire STL pipeline. Discussion of outside expertise needed to facilitate the process (engineering, design, regulatory, etc.). Reported that ** [redacted] ** had conducted extensive route review and preliminary environmental and cultural work (presumably as part of their RFP). The presentation included section titled, "Request for Approval to Build and Own and Operate an Interstate Pipeline." Included analysis of portfolio cost impact of various foundation shipper rates. Contained discussion of Spire resolutions to create Spire STL Pipeline, Spire Midstream Resources subsidiaries and approval to construct, own and operate pipeline. It also contained authorization for both Spire Missouri and Spire STL pipeline to enter into precedent agreement.[27]
- July 6, 2016: Pipeline Team conduct pre-filing meeting with FERC in Washington DC.
- July 2016: FERC accepted Spire STL Pipeline into pre-filing process.[28]
- October 19, 2016: Pipeline team made report to strategy committee. Costs and investment generally going up. Discussion of Precedent Agreement terms including quantity and price; "we determined the $.22 negotiated rate meets the needs of both parties." Noted "continuing to negotiate and finalize the precedent agreement for foundation shipper Laclede Gas (LGC) [Spire Missouri East]." Sought to increase the total project budget from $200M to $220M.[29]
- Late 2016/Early 2017: Final Discussions were held with ** [redacted] ** about a potential partnership to build the pipeline. There were serious concerns about ** [redacted] ** ability to raise the capital to build the pipeline. ** [redacted] ** was unable to get the capital to finance the project.[30]
- January 2017: Spire Missouri executed precedent agreement to become foundation shipper on Spire STL pipeline, and Spire STL files application for 7(c) Certificate at FERC.[31]

Spire Missouri East Distribution System

In 2017, Spire Missouri East served approximately 650,000 customers in the St. Louis and ten other counties in eastern Missouri.[32] The St. Louis-area distribution system is shown on the color coded map below in *Exhibit III-2*.

Exhibit III-2
Spire Missouri East Distribution System
as of February 2022



Source: Interview 2 & 3

Gas flows from the various transmission pipelines into the 300-psi system shown in solid red. The 300-psi system is the backbone of the distribution system. This system ultimately distributes the gas to the lower pressure systems, 60 psi, 25 psi and low pressure shown in dark blue, light blue and pink, respectively. The gas flows primarily from east to west within the 300-psi system.[33] Spire Missouri East does not expect any significant growth in gas demand over time but it does expect that there would be load shifts within its service area.[34] Load is shifting from the eastern part of the service territory to the west.[35]

Finding III-2 **The operation of the Spire STL pipeline helped improve some operational issues within the distribution system.**

One of the operational issues facing Spire Missouri East during the review process is that MRT East pipeline was proving unreliable and could not guarantee pipeline pressure levels in the winter. This was proving problematic in the distribution system. This is further highlighted by the comparison of pressures in *Exhibit III-3*.[36]

Exhibit III-3
System Pressure Distribution
2019 to 2021

	Pressure at Low Point		
Location	1/30/2019-08:17	2/15/2021-8:00	Increase
	PSI	PSI	PSI
Clarkson	63	162	99
South Point	82	222	141
Woodsmill	89	159	71
Jungerman	92	182	90
Spencer	95	164	69
St. Charles Bridge	158	200	42
St. Peters	110	196	86
Terra & Drug	68	130	62
Wentzville	87	136	49
			79

Source: Information Request 51

For example, on 1/30/19 the gas day average temperature was 4 degrees and the pressure in parts of the 300-psi system dropped to 68 psi.[37] The following winter, on 2/15/21 the gas day average temperature was 2 degrees. The STL pipeline was in service at this time and the lowest pressure recorded on the 300-lb. system on that day was 130 psi. The pressure point that recorded 68 psi on 1/30/19 was at 130 psi on 2/15/21.

B. Spire Missouri East Supply Portfolio Pre Spire STL

Gas utility supply planning principles[38]

One of the responsibilities of a local distribution company (LDC) is to develop a portfolio of natural gas supplies that can be delivered to its service territory to serve customer demand. Typical LDC gas supply portfolios consist of some combination of gas supplies purchased at a liquid trading point, long-haul and/or short-haul pipeline capacity, underground storage, peaking supplies (e.g., LNG, liquid propane, propane air), and citygate delivered supplies. Not all utilities hold all types of gas supply assets; specific circumstances dictate the types of assets held by a particular utility (e.g., location, access to specific assets, cost, and market conditions).[39]

There are also several different approaches to acquiring assets for a gas supply portfolio. Utilities execute contracts to purchase natural gas supplies and to obtain access to pipeline capacity, storage, or peaking supplies. These contracts typically vary in duration, with contracts for existing infrastructure typically shorter term (e.g., one season to a few years), while contracts for new infrastructure typically

longer term (e.g., 10-20 years), although there are exceptions to both. Alternatively, utilities can build or acquire assets – both natural gas supplies and infrastructure – for their gas supply portfolios.[40]

In addition to type of asset and method of acquisition, there are several other factors to consider when choosing assets to include in a gas supply portfolio. Important considerations include: ability to meet forecasted demand, cost level and stability, flexibility, diversity, reliability, and operational considerations.[41]

Ability to Meet Forecasted Demand: Because LDCs are required to meet firm customer needs under a variety of weather and economic conditions, and because factors such as future weather are difficult to predict, utilities typically build gas supply portfolios that can meet customers' forecasted needs under a wide range of demand scenarios. For example, it is important to ensure that an LDCs' gas supply portfolio is sufficient to meet customer demands under assumed extreme cold conditions, known as "design day," "design winter," and "design year." It is also critical that an LDC's gas supply portfolio be designed to serve daily fluctuations in demand that occur as a result of changing weather. It is not appropriate to plan solely for an average demand day, as many days will have demand that exceeds an average day and LDCs have an obligation to serve and are responsible for delivering under extreme weather conditions.[42]

Cost: The total cost to acquire and deliver gas supply to customers is clearly an important factor for utilities to consider when developing a gas supply portfolio to ensure that customers are being served in cost effective and reliable manner. "Cost" encompasses both the cost level as well as cost stability. Especially for assets that have long lives or long-term contracts, it is important to not only consider cost today, but the potential for significant changes in costs over time. Cost stability is one reason that many LDCs utilize hedging as part of their overall gas supply portfolio strategy.[43]

Flexibility: Flexibility refers to the ability of a gas supply portfolio to serve potentially changing needs over time. For example, demand growth may not be uniform across the service territory. To the extent that assets provide the flexibility to change delivery points to suit the needs of shifting load centers, those assets would provide greater value to the portfolio than assets that have one fixed delivery point. The flexibility to access multiple supply sources or to allow for intra-day load swings are other examples of flexibility that add value to a gas supply portfolio.[44]

Diversity: Having access to a diverse range of gas supplies, transportation paths, and types of assets in the portfolio provides value in the sense that it provides the opportunity to mitigate the effects of a price spike and to take advantage of lower prices in different locations. If a utility purchases all its gas from one supply location, and has not hedged, its customers will be subject to price swings experienced in that supply location. Adding diversity to an LDC's portfolio through access to multiple supply locations or through adding storage can provide value by mitigating the effects of price swings.[45]

Reliability: Because utilities have an obligation to serve firm customers, it is critical that the supply portfolio provide utilities with reliable delivered gas supplies. Generally, utilities back-up their obligations to firm customers with firm supply contracts and corresponding pipeline transportation capacity. While supply and delivery disruptions, and restrictions due to weather, operational issues,

or other factors are generally rare, they do occasionally occur, and these upstream reliability concerns are often considered when making portfolio decisions.[46]

Operational Considerations: Operational considerations must be factored into the decision-making process due to the specific configurations of a distribution system, the size, location, and needs of customers, and the ability of gas to be transported across the distribution system. Due to the unique characteristics of distribution systems, utilities may have requirements to receive certain amounts of natural gas at specific locations on their system to maintain delivery pressures, serve growing loads and/or allow for greater flexibility or security of supply. These operational considerations also play a role in determining an appropriate gas supply portfolio.[47]

Overview of Spire Missouri East Supply Portfolio

Spire Missouri East serves approximately 650,000 customers in St. Louis and other areas of eastern Missouri. Spire Missouri East's planning standard is for a design winter based on the weather pattern experienced during the winter of 1935-1936 because it is the most difficult winter to meet from a supply adequacy perspective due to a 5-week cold period that occurred from January to mid-February of 1936. Total send out during the design winter for Spire Missouri East is expected to be approximately 76 Bcf, and approximately 110 Bcf for the year that includes a design winter (assuming a 365 day year). Spire Missouri plans for peak design day send out ranging from 990 MMcf to 1,183 MMcf, depending on the scenario. In addition, while Spire Missouri East expects that it will experience load shifts within its service territory over time, Spire Missouri East does not expect any significant growth or decline in the total forecasted demand over time.[48] Spire Missouri East's gas supply contracts other than with the Spire STL pipeline were not evaluated in this report but are addressed by the Commission Staff in actual cost adjustment (ACA) reviews.

In July 2017, Spire Missouri East held pipeline transportation contracts on eight interstate pipelines, each of which is described below:

Mississippi River Transmission ("MRT"): MRT consists of approximately 1,650 miles of pipe, that includes: (i) the mainline ("MRT-ML") segment spanning from Louisiana to Missouri (including deliveries to Spire Missouri East's citygates); (ii) a west line ("MRT-W") that runs from eastern Texas and connects to the mainline in northern Louisiana, and (iii) an east line ("MRT-E") that runs from central Illinois, with interconnects with multiple pipelines, to Spire Missouri East citygates in St. Louis. Approximately 21% of the system miles were installed prior to 1950, and more than 62% of the system miles were installed prior to 1970. Spire Missouri East can use its capacity on MRT in multiple ways. First, it can purchase gas on the MRT-W or the MRT-ML segments in northern Louisiana or Arkansas, and deliver it directly to Spire Missouri East's citygates using the MRT-ML. Spire Missouri East e can also use its capacity on the MRT-ML to deliver gas from Enable Gas Transmission ("EGT") to Spire Missouri's East citygate. In addition, Spire Missouri East can use its capacity on the MRT-E leg to deliver gas from Trunkline Gas Company ("Trunkline") or Natural Gas Pipeline Company of America ("NGPL") to Laclede's citygate. Lastly, Spire Missouri East holds a contract for underground storage service on MRT as well as a southbound contract to fill its storage on MRT.

EGT: The EGT system consists of approximately 5,950 miles of pipe, with the majority of the facilities in Arkansas and Oklahoma, with lesser amounts in Louisiana and northeastern Texas, and very small amounts in Kansas, Mississippi, Missouri, and Tennessee. Over 11% of the system miles were installed prior to 1950, and more than half of the system miles were installed prior to 1970. EGT does not deliver directly to Spire Missouri's citygates, but rather Spire Missouri East requires one or more downstream pipelines in conjunction with EGT in order to deliver gas to its citygates. Specifically, Spire Missouri East can purchase gas in Oklahoma on EGT, and then transport that gas to either the MRT-ML for delivery to its distribution system or to Trunkline for subsequent redelivery to the MRT-E, for ultimate delivery to its distribution system.

NGPL: NGPL consists of over 9,000 miles of pipe, with two legs – one from New Mexico, the Texas panhandle and Oklahoma, and the other from eastern and southern Texas and Louisiana, connected by a crossover – that deliver gas to the Chicago metropolitan area. More than 11% of the system miles were installed prior to 1950, and more than 75% of the system miles were installed prior to 1970. NGPL does not deliver directly to Spire Missouri East's citygates, but rather Spire Missouri East can purchase gas in either Oklahoma or Texas and transport that gas on NGPL to the MRT-E for redelivery to Spire Missouri East citygates.

Trunkline: Trunkline consists of over 2,200 miles of pipe, spanning from southern Texas to the Indiana/Michigan border. None of Trunkline was installed prior to 1950, but over 90% of the Trunkline system miles were installed between 1950 and 1970. Trunkline does not deliver directly to Spire Missouri East's citygates, but rather Spire Missouri East can purchase gas in either south Texas or east Louisiana and transport that gas on Trunkline to the MRT-E for redelivery to Spire Missouri East citygates. In addition, Spire Missouri East can use its capacity on Trunkline to bring gas from EGT to the MRT-E for ultimate delivery to Spire Missouri East. Spire Missouri East can also use its capacity on Trunkline to bring gas from Panhandle Eastern Pipeline ("PEPL") to the MRT-E through a backhaul on Trunkline.

PEPL: PEPL consists of approximately 6,000 miles of pipe, spanning from the Oklahoma panhandle to Michigan. More than 42% of the system miles were installed prior to 1950, and close to 90% of the system miles were installed prior to 1970. PEPL does not deliver directly to Spire Missouri's citygates, but rather Spire Missouri East can purchase gas in western Kansas or western Oklahoma, and transport that gas on PEPL either to MoGas for ultimate redelivery to Spire Missouri, or to Trunkline (backhaul) and then to the MRT-E for delivery to Spire Missouri.

Rocky Mountain Express (REX) consists of over 1,700 miles of pipeline from Wyoming to Ohio, directly accessing both Rockies production and Marcellus/Utica production. The REX system currently provides bi-directional capability to flow gas both west-to-east out of the Rockies and east to-west out of the Marcellus/Utica. REX is a relatively new pipeline, with all of its system installed since 2000. Spire Missouri can purchase Marcellus/Utica shale gas in eastern Ohio on REX and transport that gas to MoGas for ultimate delivery to Spire Missouri East's citygates.

MoGas Pipeline ("MoGas"): MoGas is a regional pipeline that consists of approximately 263 miles of pipe, almost all located in Missouri, with a very small amount of pipe located in Illinois. More than 26% of the system miles were installed prior to 1950, with the rest of the system miles were

installed since 1980. MoGas is directly connected to the Spire Missouri distribution system, but is not directly connected to upstream production. Therefore, Spire Missouri can use its capacity on MoGas to bring gas from either PEPL or REX for delivery to its citygates.

Southern Star Central ("SSC"): SSC is a reticulated system that consists of approximately 5,850 miles of pipe, primarily in Kansas, Oklahoma, and Missouri, with lesser amounts in Wyoming and Colorado, and very small amounts in Texas and Nebraska. Almost 25% of the system miles were installed prior to 1950, and over 58% of the system miles were installed prior to 1970. Spire Missouri East's existing SSC contracts provide the capability to purchase gas in western Oklahoma and the Texas panhandle transport gas on SSC directly to Spire Missouri East's citygates.

As summarized in the figure below, Spire Missouri East currently holds upstream and downstream firm pipeline transportation and storage contracts that provide a total of 1,265,829 dth/d of deliverability to Spire Missouri East's citygate. This capacity is comprised of 743,622 dth/d of long-haul pipeline transportation capacity, 357,000 dth/d of on-system storage deliverability, and 163,200 dth/d of propane deliverability. Spire Missouri East's existing gas supply portfolio as of July 2017 is presented in *Exhibit III-4*.

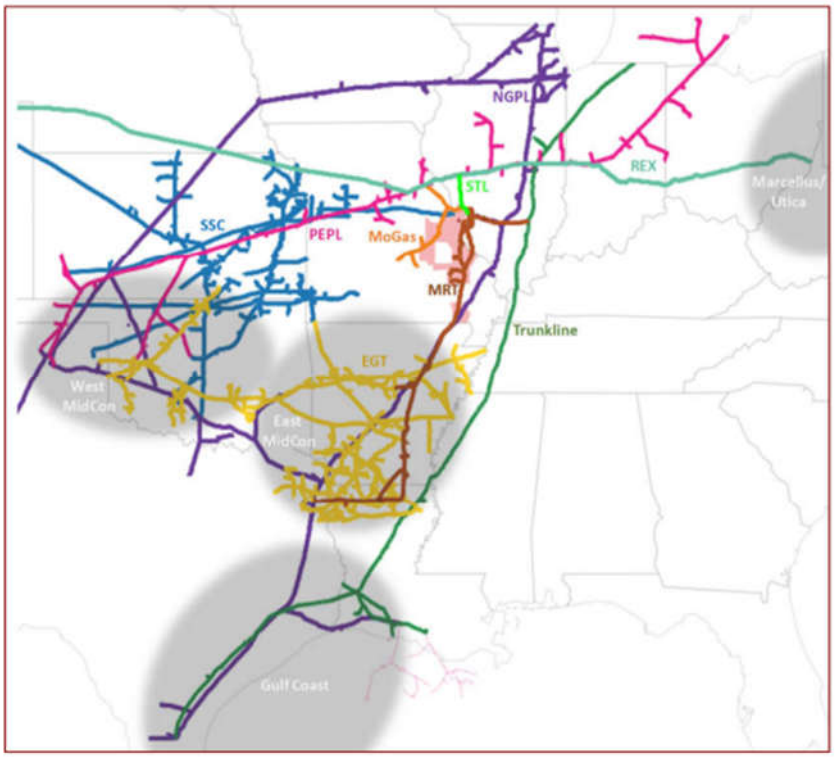
Exhibit III-4
Spire Missouri East's existing gas Transportation and Storage Portfolio
as of July 2017

Citygate Supplies	Current Portfolio
MRT	660,329
MoGas	55,000
SSC	30,300
On System Storage	357,000
Propane	163,200
STL	-
Total	**1,265,829**
Upstream Pipelines	**Current Portfolio**
EGT	135,000
NGPL	80,000
Trunkline	90,000
PEPL	45,462
REX	20,000
Total	**370,462**
Storage	**Current Portfolio**
MRT Max Withdrawals	383,226
MRT Capacity	22,000,000

Source: Concentric Report 7/2017

Prior to the STL Pipeline, Spire Missouri East purchased the vast majority of its gas supplies in three regions: (1) western-central Oklahoma (i.e., west MidCon); (2) northern Louisiana, Arkansas, and eastern Oklahoma/east Texas (i.e., east MidCon); and (3) southern Texas and southern Louisiana (i.e., Gulf Coast). In December 2016, Spire Missouri added the REX contract to its portfolio, which allows it to purchase a small amount of supply (i.e., 20,000 dth/d) from the Marcellus/Utica supply area in eastern Ohio utilizing its existing transportation portfolio as shown in *Exhibit III-4* and *Exhibit III-5*.[49]

Exhibit III-5
Map of pipelines in Spire Missouri East's existing portfolio, plus STL



Source: Concentric Report 7/2017

Issues with pre-STL Pipeline Supply Portfolio

On March 5, 2015, Project Gas provided a comprehensive update to the full board regarding existing issues with the Spire Missouri East gas supply portfolio during a strategy session. The issues noted include lack of pipeline diversity impacts for Spire Missouri, limited capacity into citygate relative to peak demand, dependence on MRT (supplied 70% to 80 % of Spire Missouri East's gas)[50] and no-notice storage, traversing New Madrid fault, and limited pipeline competition absent new build. The presentation included an IHS Consulting Services (IHS) presentation, with recommendation to obtain firm pipeline capacity from the Marcellus region in the East and enhance Rockies supply in the West.[51] A number of alternate solutions were explored including the construction of a pipeline to address these deficiencies as well as cost impact to the supply portfolio for each of the alternatives.[52]

Propane Injection

Spire Missouri East's propane injection peaking system is old, nearing obsolescence, and a challenge to operate and maintain. The direct injection of propane into the system causes operational issues due to its much higher BTU content (2516 BTU/CuFT) vs. (1030 BTU/CuFT) for natural gas.[53]

Underground Storage

In addition, the on system storage facility requires the use of compressors to fill the system since the existing feeds does not have adequate pressure to fill the system without compression.[54]

C. Spire Missouri East Portfolio with Spire STL pipeline

Spire Missouri East had decided to retire its propane facility. Since Spire Missouri East has contracted for 350,000 dth/d on Spire STL Pipeline, and the propane facility has a maximum daily withdrawal quantity of 163,200 dth/d, Spire Missouri East would need to reduce the citygate deliverability of its existing portfolio by 186,800 dth/d to maintain the same amount of citygate deliverability. Based on discussions with Spire Missouri East, its gas supply consultant Concentric understood that MoGas and SSC provide deliveries that are critical for maintaining pressure and serving customer demand on the west side of Spire Missouri East's distribution system that cannot be met by deliveries from other existing pipeline supply alternatives in Spire Missouri East's portfolio. In addition, Spire Missouri East had a long-term contract on MoGas and thus could not terminate its contractual commitment in the near-term. Therefore, Spire Missouri East's existing contractual commitments on MoGas and SSC were not candidates for meeting the reduction in contract demand required to maintain Spire Missouri East's existing deliverability. As a result, the 186,800 dth/d must have been reduced from MRT because it is the only other pipeline that provides deliveries directly to Spire Missouri East's citygates. Because Spire Missouri East utilized transportation on MRT in conjunction with other upstream pipelines to facilitate deliveries of gas to its system, a reduction in contract demand on MRT also provides the opportunity to reduce capacity on other upstream pipelines. Based on a review of the costs of the various pipeline transportation paths to serve Spire Missouri East's customers using MRT, one reasonable portfolio that included STL Pipeline and excluded propane would eliminate 95,000 dth/d on the MRT-ML and 91,800 dth/d on the MRT-E, and also eliminate 135,000 dth/d of upstream capacity on EGT, 11,800 dth/d of upstream capacity on NGPL, and 80,000 dth/d of upstream capacity on TGC ("Portfolio STL"), as summarized below in *Exhibit III-6*.[55]

Exhibit III-6
Spire Missouri East Portfolio with STL
as of July, 2017

Citygate Supplies	Current Portfolio	Portfolio STL	Difference
MRT	660,329	473,529	(186,800)
Mogas	55,000	55,000	-
SSC	30,300	30,300	-
On System Storage	357,000	357,000	-
Propane	163,200	-	(163,200)
STL	-	350,000	350,000
Total	**1,265,829**	**1,265,829**	**-**
Upstream Pipelines	**Current Portfolio**	**Portfolio STL**	**Difference**
EGT	135,000	-	(135,000)
NGPL	80,000	68,200	(11,800)
TGC	90,000	10,000	(80,000)
PEPL	45,462	45,462	-
REX	20,000	20,000	-
Total	**370,462**	**143,662**	**(226,800)**

Source: Concentric Report

Finding III-3 **There are several benefits form the Spire STL Pipeline.**

D. Benefits from Portfolio STL

Non-Financial Benefits[56]

Increased Supply Diversity—Spire STL pipeline provides the opportunity for Spire Missouri East to enhance the diversity of its natural gas supply portfolio through increased access to supplies that it has not traditionally accessed. Ninety eight percent of Spire Missouri East's current portfolio accesses supplies from south and west of Missouri (i.e., west MidCon, east MidCon, and the Gulf Coast) and the remaining 2% accesses supplies from the east (i.e., Marcellus/Utica). Specifically, Spire STL pipeline's interconnection with REX provides direct access to natural gas produced in the Marcellus/Utica supply areas, which is the largest and is projected to continue to be the most prolific supply basin in North America. The development of abundant natural gas supplies in the Marcellus/Utica region has completely changed the United States' gas flows and created unprecedented cost savings and reliability advantages. As a result, many utilities and other natural gas users have been attempting to shift their gas supply portfolios to provide access to this substantial and growing source of supply. Spire STL pipeline provides Spire Missouri's customers greater access to these prolific Marcellus/Utica natural gas supplies through REX, mitigating Spire Missouri East's existing heavy reliance on the MidCon and Gulf Coast supplies, thus diversifying gas supply options for the benefit of Spire Missouri East's customers.[57]

Enhanced Flexibility- Spire STL pipeline provides the flexibility to access multiple sources of supply at a liquid supply point in very close proximity to Spire Missouri East's distribution system. Specifically, Spire STL pipeline's interconnect with REX does not only provide direct access to Marcellus/Utica supplies, but it also provides direct access to Rockies supplies, as well as indirect access to Gulf Coast, MidCon, and potentially western Canadian supplies through its various interconnects with a number of interstate pipelines. The flexibility to access a number of supply sources increases the gas-on-gas competition and thus increases the benefits of buying gas at points on REX. LDCs typically contract for pipeline capacity back to the nearest liquid trading point to minimize transportation costs, provide supply security, allow price transparency, and enable the flexibility of transactions with multiple potential counterparties. Spire STL pipeline allows Spire Missouri East the flexibility to transact at a liquid point very near its citygate served by multiple supply sources for the benefit of its customers.[58]

Operational Considerations—Spire STL pipeline will provide deliveries into the distribution system at a pressure high enough to allow for direct injection into Spire Missouri East's on-system storage facility under most operating conditions, therefore minimizing compressor usage.[59] Spire Missouri East also has the opportunity to reconfigure its existing portfolio for the benefit of customers by not renewing certain existing pipeline capacity while maintaining the same citygate delivery capability.[60] By reconfiguring its existing portfolio to take advantage of Spire STL pipeline's high operating pressure (750psi on a peak day) pressure and better distribute gas into Spire Missouri East's distribution system. This will mitigate pressure problems in Spire Missouri East's 300 psi distribution system.[61]

Ability to Meet Customer Demand without On-System Propane-- Spire Missouri East is contracting for 350,000 dth/d of capacity on the Spire STL pipeline (i.e., 186,800 dth/d more than necessary to fill the gap created by retiring its propane facility),

Financial Benefits

There are two parts to this question; first, "Were there any alternatives to the pipeline that yielded a financial benefit to Spire Missouri East?" Based on the information available to Concentric, Concentric determined that none of the alternative portfolios evaluated represent a significant economic improvement for Spire Missouri's customers over the portfolio with Spire STL pipeline. In addition, many of the alternative portfolios evaluated have operational challenges making them not suitable alternatives for the portfolio with Spire STL Pipeline.[62] Second, was the cost of Spire Missouri's gas supply portfolio that showed the annual cost of the gas with Spire STL Pipeline less expensive than the gas portfolio in place without the pipeline? *Exhibit III-7* shows a benefit of $1,906,000 in annual savings with the Spire STL Pipeline compared to the then- current gas supply portfolio. This dashboard is an updated version of the one presented to the Strategy committee on 4/ 27/16. *Exhibit III-9*. Lastly, this supply portfolio was updated once more when the Precedent Agreement with Spire STL pipeline was finalized and showed an annual savings of $8,459,000 annually on *Exhibit III-8*.

Exhibit III-7
Dashboard Gas Portfolio $0.21 reservation charge STL pipeline
as of Late 2016 (dollars are in thousands)

MRT Rate Increase	Inc./(Decr.)	
T&S Impact	$5,668	6.0%
Total Portfolio Impact	($2,067)	(0.6%)
No MRT Rate Increase		
T&S Impact	$9,220	10.1%
Total Portfolio Impact	$1,486	0.5%
Removing Propane	($1,000)	
Turnback Sharing	$1,161	*30%*
Total Impact incl. Propane		
MRT Rate Increase		
T&S Impact	$5,829	6.4%
Total Portfolio Impact	($1,906)	(0.6%)
No MRT Rate Increase		
T&S Impact	$9,381	10.3%
Total Portfolio Impact	$1,647	0.5%

Source: Spire Gas portfolio dashboard late 2016

Exhibit III-8
Dashboard Gas Portfolio with Precedent Agreement update
as of January 2017

	LGC Portfolio Cost Impact - $000		
	MRT Rate Increase	Inc./(Decr.)	
	T&S Impact	$3,526	3.6%
	Total Portfolio Impact	($7,414)	(16%)
	No MRT Rate Increase		
	T&S Impact	$8,855	9.7%
	Total Portfolio Impact	($2,085)	(0.5%)
	Removing Propane	($2,000)	
	Turnback Sharing (MRT)	$955	.8%
1			
2			
3	**Total Impact incl. Propane** (No Turnback Sharing)		
4	MRT Rate Increase		
5	T&S Impact	$1,526	1.7%
6	Total Portfolio Impact	($9,414)	(2.1%)
7			
8	No MRT Rate Increase		
9	T&S Impact	$6,855	7.5%
10	Total Portfolio Impact	($4,085)	(0.9%)
11			
12	**Total Impact incl. Propane** (w/Turnback Sharing)		
	MRT Rate Increase		
	T&S Impact	$2,481	2.7%
	Total Portfolio Impact	($8,459)	(1.9%)
	No MRT Rate Increase		
	T&S Impact	$7,810	8.5%
	Total Portfolio Impact	($3,130)	(0.7%)

Source: Spire Gas Portfolio Dashboard January 2017

Finding III-4 **Spire hired Concentric Consulting to develop an economic analysis of the Spire STL pipeline.**

Concentric Consulting Analysis

In July 2017, after the precedent agreement was signed, Concentric developed a hypothetical daily dispatch analysis ("Dispatch Analysis") to compare the potential economic benefits to Spire Missouri East's customers using a gas supply portfolio that includes Spire STL pipeline versus a portfolio comprised of alternatives to Spire STL pipeline.[63]

Using the Dispatch Analysis, Concentric first developed a baseline portfolio cost over the Forecast Period assuming that Spire STL pipeline will replace the existing capacity associated with the propane facility plus current contractual commitments on other pipelines so the that the total contracted citygate deliverability remains the same. In addition, Concentric estimated the cost that would be required for incremental capacity on other pipelines in order to produce a cost to Spire Missouri's customers that was equivalent to or less than the cost of the portfolio with a new pipeline. (referred to as the "Portfolio STL"). In other words, using the Dispatch Analysis, Concentric determined the "price to beat" for incremental capacity on other pipelines to have a portfolio that was less expensive than the portfolio with a new pipeline. The analysis assessed whether it was likely that the other pipeline alternatives would have been a reasonable economic substitute for contracting on a new pipeline. The methodology and assumptions used in Concentric's Dispatch Analysis are discussed in detail in Appendix A of the Concentric report. The cost evaluations were comprehensive and conservative. The following alternatives were evaluated:[64]

Alternative portfolio A: Additional capacity on SSC

In July 2017, Spire Missouri East had multiple contracts with SSC to deliver a total of 30,300 dth/d from SSC's production area to Spire Missouri East's citygate via an 8-inch, approximately 200-mile lateral ("Little Mo") that extends across Missouri to Spire Missouri East's citygate. It is Concentric's understanding that the lateral is currently fully subscribed. Thus, if Spire Missouri East required significant incremental capacity on SSC, the entire 200 miles of the Little Mo lateral would likely need to be looped. Looping 200 miles of pipeline to deliver additional capacity to Spire Missouri, it is not likely that SSC could provide Spire Missouri East the necessary incremental capacity at a cost comparable to Portfolio STL. [65]

The conclusion drawn in the Concentric report for this alternative is, "For both economic and operational reasons, Alternative Portfolio A does not represent a significant improvement compared to Portfolio STL".

Alternative B: Additional capacity on PEPL/MoGas

The Dispatch analysis in the Concentric report showed it was highly unlikely that PEPL and MoGas could provide Spire Missouri East the necessary incremental capacity at rates lower than offered by Spire STL pipeline. In addition, substantial additional distribution infrastructure would be necessary to effectively move the greater supplies delivered to the west side of Spire Missouri East's system to the east side of its distribution system.

The conclusion drawn in the Concentric Report for this alternative is, "For both economic and operational reasons, Alternative Portfolio B does not represent a significant improvement compared to Portfolio STL".

Alternative Portfolio: C Additional Capacity on MoGas

The Dispatch Analysis showed that MoGas would most likely not be able to supply incremental capacity at competitive rates. In addition, it would be difficult for Spire Missouri East to receive significant incremental supplies from MoGas for operational reasons. Substantial additional distribution or pipeline infrastructure would be necessary to effectively deliver to customers significantly greater supplies to the west side of the system.

Therefore, for both economic and operational reasons, Alternative Portfolio C does not represent a significant improvement compared to the Portfolio STL

Alternative D: Additional Capacity on NGPL

The Dispatch analysis showed for economic reasons, this Alternative Portfolio does not represent a significant improvement compared to the Portfolio STL.

Alternative E: Additional Capacity on MRT Main line

The following variations of the supply portfolio using MRT were explored in detail in the Concentric Report:

- Alternative Portfolio E1: Additional Capacity on MRT Mainline alone
- Alternative Portfolio E2: Additional Capacity on MRT Mainline and EGT
- Alternative Portfolio F: Additional Capacity on MRT East
- Alternative Portfolio F1: Additional Capacity on MRT-E and TGC from the south
- Alternative Portfolio F2: Additional Capacity MRT-E and NGPL from the south
- Alternative Portfolio F3: Additional Capacity on MRT-E and TGC from the north
- Alternative Portfolio F4: Additional Capacity on MRT-E and NGPL from the north

The Dispatch analysis showed for economic reasons Alternative Portfolios involving MRT do not represent a significant improvement compared to the Portfolio STL.

In summary, Concentric determined that none of the alternative portfolios evaluated represent a significant economic improvement for Spire Missouri East's customers over the portfolio with Spire STL pipeline. In addition, many of the alternative portfolios evaluated have operational challenges making them not suitable alternatives for the portfolio with Spire STL pipeline.[66]

E. Key Data Presented to the Board Strategy Committee for Approval of the Spire STL Pipeline.

Finding III-5 **Spire Board of Directors were involved in the decision making process throughout this timeframe.**

In October of 2015, Project Gas reported to the Board Strategy committee that the "REX" lateral (to eventually become the Spire STL pipeline) has been identified as a recommended gas supply project, and that ** [redacted] ** have been identified as the final two potential partners in the process. The project was being considered as a JV with these sources.[67] During January of 2016 it was reported to the full Board of Directors that bids have been sent out to three pipeline companies for the construction of the pipeline and that ** [redacted] ** was the leading contender. Discussion highlighted the risks with ** [redacted] ** as a partner, including credit quality. Supply diversity discussions highlighted freeze-offs and earthquake risk as a potential concerns to be mitigated. Later in January it was reported to the Board that negotiations were proceeding with ** [redacted] ** but other alternatives were being considered.

On April 27, 2016, a presentation was made to the Board Strategy Committee requesting approval to build, own and operate 100% of the Spire STL pipeline into the St Louis Market.[68]

Key areas addressed in the presentation were:[69]

- STL Pipeline Team Structure—Organization Chart
- Evaluated multiple approaches to develop, construct and own 100% of STL pipeline.
- Conducted meetings and rated nine Engineering, Procurement, and Construction Management Firms. Request for Proposals to be extended to 4 of 9 firms.
- Conducted meetings with and rated five environmental firms. Requests for proposals will be sent to 3 of the 5 firms
- Identified a FERC expert with over 15 years' experience at FERC as a Project Manager and Outreach Manager to assist with Public and Regulatory Affairs
- ** [redacted] **
- Validation of ** [redacted] ** route with an advanced routing tool (PPRO) which incorporates the latest technology and data sets
- Tallgrass update-proceeding with firm contract on Rockies Express to facilitate deliveries to STL pipeline.
- High level description of pipeline and project parameters
- Business case and sensitivity analysis of capex and shipper rate.
- Future gas portfolio analysis and sensitivity analysis
- Qualitative Rationale for STL pipeline
- Project Timeline
- Resolutions regarding the approval of the construction, 100% ownership and operation of a pipeline to serve eastern Missouri

Finding III-6 Several key benefits were presented during a Board Strategy Meeting.

Key Benefits of the Spire STL Pipeline Presented to the Board Strategy Committee 4/27/16

Non-Financial Benefits for Customers

- Offers more reliable and diverse gate capacity at similar cost
- Modernizes gas supply portfolio
- Removes problematic reliance on propane for peaking
- Provides capacity to support long term load growth in the market
- Creates incremental supply basin diversity, especially access to prolific low cost Marcellus/Utica gas

Future Gas Portfolio savings with Spire STL Pipeline as shown in *Exhibit III-9*

It shows a savings associated with Spire STL Pipeline of $4.494 million per year with no MRT rate increase and $8.046 million assuming an MRT rate increase.

Exhibit III-9
Spire Missouri East Future Portfolio Analysis
as of 4/27/16

LGC Portfolio Cost Impact (@ $0.1850) - $000		
MRT Rate Increase	Inc./(Decr.)	
T&S Impact	$3,035	3.2%
Total Portfolio Impact	($8,404)	(2.6%)
No MRT Rate Increase		
T&S Impact	$6,588	7.2%
Total Portfolio Impact	($4,852)	(1.5%)
Removing Propane	($1,000)	
Turnback Sharing	$1,358	*30%*
Total Impact incl. Propane		
MRT Rate Increase		
T&S Impact	$3,393	3.7%
Total Portfolio Impact	($8,046)	(2.5%)
No MRT Rate Increase		
T&S Impact	$6,946	7.6%
Total Portfolio Impact	($4,494)	(1.4%)

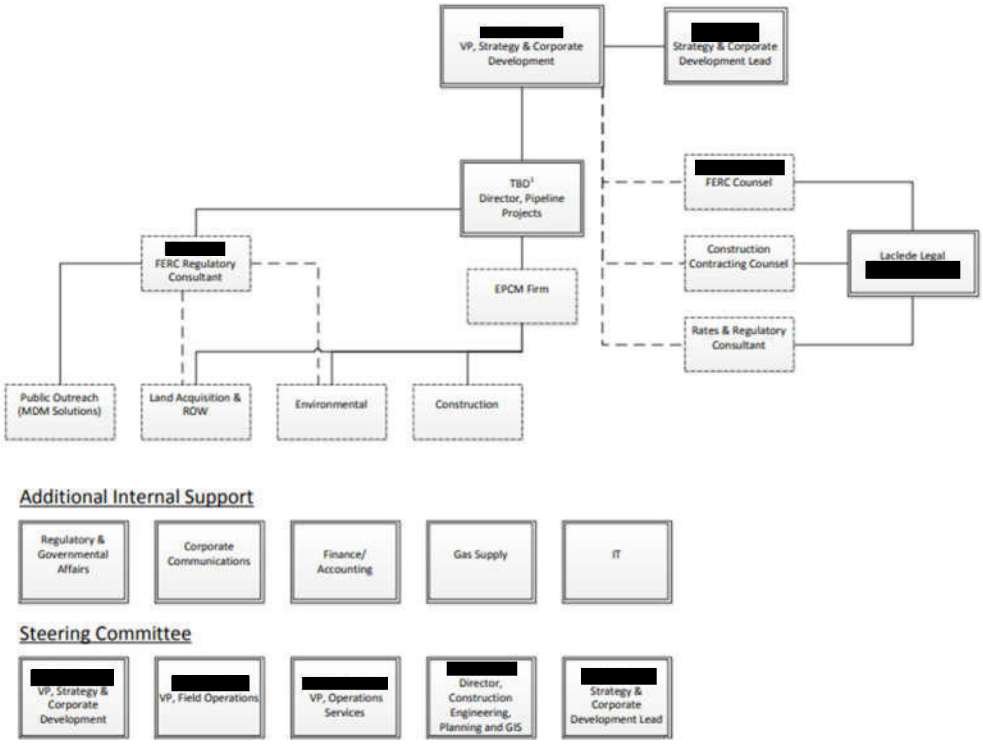
Source: Strategy Committee Deck 4/27/16

Spire STL Organization

The Spire STL Organization was formed early in 2016. The Organization Chart is shown below in *Exhibit III-10*.

Exhibit III-10 (Confidential)
Proposed Spire STL Organization Chart
as of 4/27/16

**



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Source: Strategy committee presentation deck 4/27/16

Finding III-7 **Key individuals were hired with specific pipeline construction experience to run the project.**

Spire recognized that there is a difference between construction and operations personnel and went to the outside to hire the required skills. Spire STL hired two individuals to fill two key positions in the new organization in July 2016[70]:

- ** [redacted] ** —Director of Pipeline Projects. Mr. ** [redacted] ** provided overall direction and have ultimate responsibility for managing the Spire STL pipeline project. He brought 20 years' experience designing, constructing and managing all phases of pipelines and facilities projects, and had expertise in project management, pipeline and facilities design, project construction estimates and support, field survey solutions, environmental solutions, material and contractor logistics services , and field inspection and commissioning services[71].

- ** [redacted] ** ---Project Consultant Mr ** [redacted] ** served as "Advisor"/engineer for the project. Mr. ** [redacted] ** brought 30 years of experience in the pipeline industry and was well respected for his achievements and expertise relating to all aspects of gas pipeline development projects including specific field expertise for construction in Illinois and Missouri. ** [redacted] ** is not shown on the Organization Chart since he was a consultant

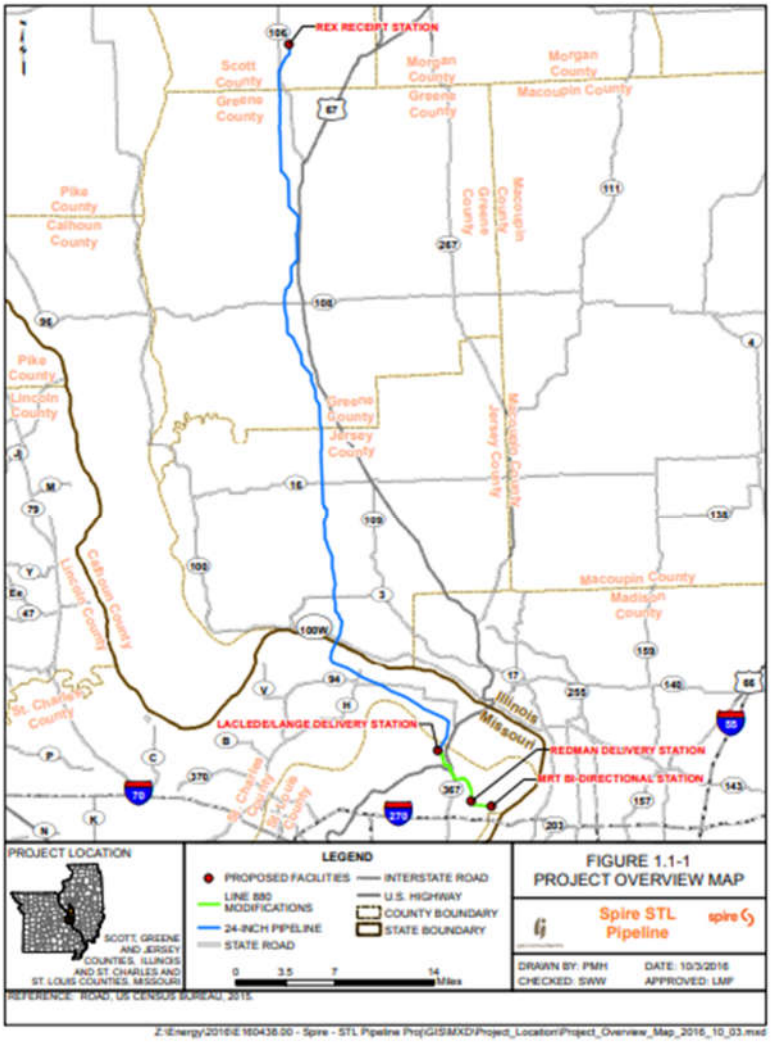
Description of Pipeline Project

The project was described in the *Draft Resource Report 1, October 2016*:

> The proposed Spire STL Pipeline Project ("Project") located in Scott, Greene, and Jersey Counties, Illinois, and St. Charles and St. Louis Counties, Missouri. The Project as proposed will consist of approximately 58 miles of new, greenfield, 24-inch diameter steel pipeline (referred to as the "24-inch pipeline" portion of the Project) originating at an interconnection with the Rockies Express Pipeline LLC ("REX") pipeline in Scott County, Illinois; extending down through Greene and Jersey Counties in Illinois before crossing the Mississippi River and extending east in St. Charles County, Missouri. The 24-inch pipeline then crosses the Missouri River and ties into an existing pipeline in St. Louis County, Missouri that is currently owned and operated by Laclede Gas Company ("LGC") [now Spire Missouri] (referred to as "Line 880"). As part of the proposed Project and subject to LGC's receipt of approval from the Missouri Public Service Commission ("MPSC"), Spire is proposing to purchase Line 880 from LGC and modify the pipeline before placing it into interstate service. Line 880 consists of approximately seven miles of existing 20-inch diameter steel natural gas pipeline located in St. Louis County, Missouri that will connect the 24-inch pipeline part of the Project to the Enable Mississippi River Transmission, LLC ("Enable MRT") pipeline along the western bank of the Mississippi River in St. Louis County, Missouri at the terminus of the Project. The total length of the Project pipelines will be approximately 65.0 miles. The overall design capacity of the Project pipeline is expected to be 400,000 dekatherms per day ("Dth/d"). No compression will be required. The Project will also include the construction of three new metering and regulating ("M&R") station interconnects with REX in Illinois and LGC and Enable MRT in Missouri and the construction of a new facility at an existing LGC site along Line 880.[72]

The original route map is shown below in *Exhibit III-11*.

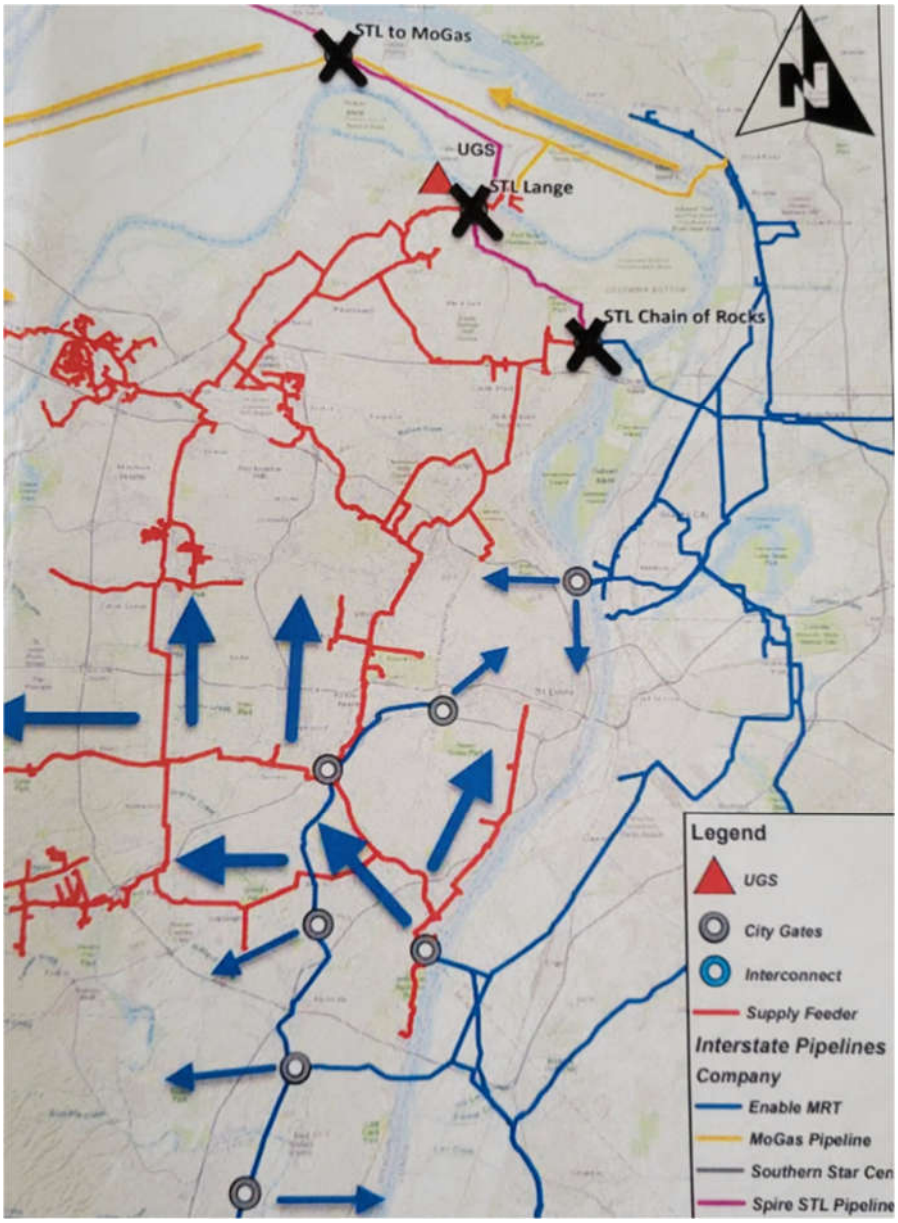
Exhibit III-11
Original STL Pipeline Route
as of October 3,2016



Source: Draft Resource Report 1, October 2016

There was a change to the terminus of the pipeline since this route map was prepared. The current installed terminus is shown on the map *Exhibit III-12*. Presently there are three interconnections at the southern end of the pipeline, STL to MoGas, STL Lange where it interconnects with Spire Missouri East supply feeder system and to the Underground Storage Facility (UGS), and STL Chain of Rocks where it interconnects with Enable MRT pipeline and Spire Missouri East's supply feeder systems.

Exhibit III-12
Current Terminus of STL Pipeline
as of March 1, 2022



Source: Interview #2&3

Pipeline Construction, Regulatory Approvals and Budget

Third-party pipeline developers that participated in the RFP process proposed to construct the pipeline using outside resources. They would have had to contract out 100% of the work related to this project, most likely to the same contractors listed below which would not have resulted in benefit accruing to Spire STL.[73]

Construction

There were three rounds of bidding for the construction of the pipeline in the fall of 2017. In the first round requests for bids were sent out by Spire to seven companies: Michels Corporation, Associated Pipe Line Contractors, Price Gregory International Inc., Rockford Corporation, Welded Construction, Precision Pipeline LLC and US Pipeline. Round 2 eliminated Welded Construction, Precision Pipeline LLC and US Pipeline. Round 3 consisted of negotiations on prices submitted in round 2. Michels Corporation was selected as the prime contractor.[74] The contract was for approximately $200 million.

Other contractors used in the project were:[75]

- Foltz Welding LTD: General Contractor
- Burns and McDonald: Environmental Engineering
- GAI: Environmental Engineering
- MDM: Land Acquisition, Public Affairs, and Regulatory Consultant
- Mott McDonald: Engineering
- Sagebrush Pipeline Equipment: Engineering and Equipment Fabrication
- Lake Superior Consulting: Operating and Maintenance procedures, Transmission Integrity Management Plan and Emergency Plans and Procedures.
- LRS: Farm Drainage; Drain tile Installation
- Farnsworth Group: Engineering
- Cleveland Integrity Services: Inspection
- Shaw Pipeline Services: Non-Destructive Examination, x-ray
- TG Mercer: Logistics
- Big River Pipeline Services: Drain Tile repair
- JD Hair and Associates: Engineering and Construction Monitoring
- Stutz Excavating: Post Construction Clean-up
- Springwater Pipeline Services: Post Construction Clean-up
- Terricon Consultants: Engineering

Construction started in late 2017. In November 2019 Spire requested and FERC authorized Spire to place most of the project facilities into service including the Mainline, North county extension, REX Receipt Station and the Spire

Missouri Lange and Chain of Rocks Delivery Station.[76] This section of the Pipeline was placed into service in November of 2019. Spire requested an extension of time to August 2021 to complete the remaining section to the MRT interconnect. That section was placed into service in the spring of 2020.

Approvals/Permits Required/Received for the Project:

- FERC Federal Energy Regulatory Committee
- U.S.FWS U.S. Fish and Wildlife Service
- USACE U.S. Army Corps of Engineers
- USDA U.S. .Dept. of Agriculture
- IDNR Illinois Dept. of Natural Resources
- ILEPA Illinois Environmental Protection Agency
- ILSHISPO Illinois State Historic Preservation Office
- ILDOA Illinois Dept. of Agriculture
- MDNR Missouri Department of Natural Resourses
- MDOC Missouri Dept. of Conservation
- MSHPO Missouri State Historic Preservation Office

Budget

The budget for the Spire pipeline project was $220 million and was presented to the Strategy Committee on 10/19/16[77] . The final cost came in at $294 million.[78] Most of the overage was due to an increase in construction and labor costs of $63 million primarily due to flooding of the pipeline right of way that caused significant delays and issues with construction. Other services and costs increased by about $10 million primarily driven by legal fees and condemnation.[79]

Finding III-8 **Missouri Ratepayers have been shielded from the cost overruns by a precedent (founders) agreement that was negotiated at the start of the project.**

The overrun of the project cost is not a significant issue for Spire Missouri East or its customers. Spire Missouri East's customers are largely insulated from cost overruns since it had negotiated a reservation rate of $0.23 dth/d with a $0.02 dth/d cap in January 2017[80] which used the $220 budget as guidance. This rate is in effect for 20 years[81] . The maximum rate Spire STL can charge was calculated by FERC at $0.375 dth/d. Spire Missouri's customers are benefiting from a gas transportation rate that is under FERC approved rates.[82]

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IV. Affiliate Relationships and Transactions

A. Affiliate Relationships

Organization of Spire Affiliates

The organization of the Spire and affiliates is shown in *Exhibit IV-1*[83] Spire Inc. is the holding company with 7 affiliates presented directly below. Three are gas utilities, Spire Alabama Inc., Spire Energy South Inc. and Spire Missouri Inc. Two gas utilities are organized to roll up organizationally to Spire Energy South, those being Spire Gulf Inc. and Spire Mississippi Inc. There is one gas marketing affiliate, Spire Marketing Inc., that markets gas throughout the US. There are several other companies labeled Other Segments in the Affiliate Organization chart, one of which is Spire STL Pipeline LLC, which rolls up organizationally to Spire Midstream LLC, then to Spire Resources LLC, which then rolls up to the Spire Inc. organization. These three companies (Spire STL Pipeline LLC, Spire Midstream LLC, and Spire Resources LLC) roll up to the Spire Inc. organization. These three companies (Spire STL Pipeline LLC, Spire Midstream LLC, and Spire Resources LLC) were created at the same time, when it was determined that Pipeline project would be constructed and operated inside of the Spire organization.[84] (For details on that decision, see *Chapter III* of this report).

Exhibit IV-1
Spire Inc. Corporate Organization
March 1, 2020

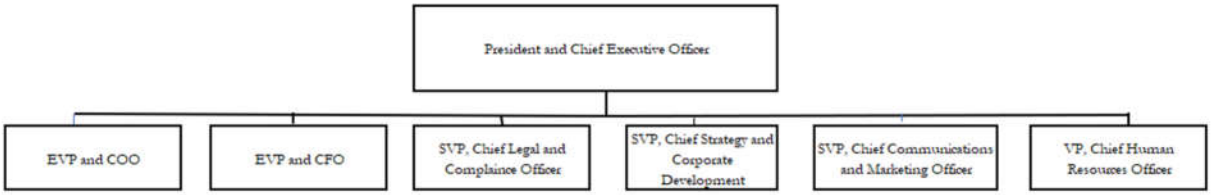
**

**
Source: DR 0036 Current org chart_03.01.2020.pdf

Management Organization at Spire Inc and Spire STL

The Spire organization upper management structure is shown in *Exhibit IV-2*. The president and CEO has 6 direct reports that encompass the management of the Spire companies.[85]

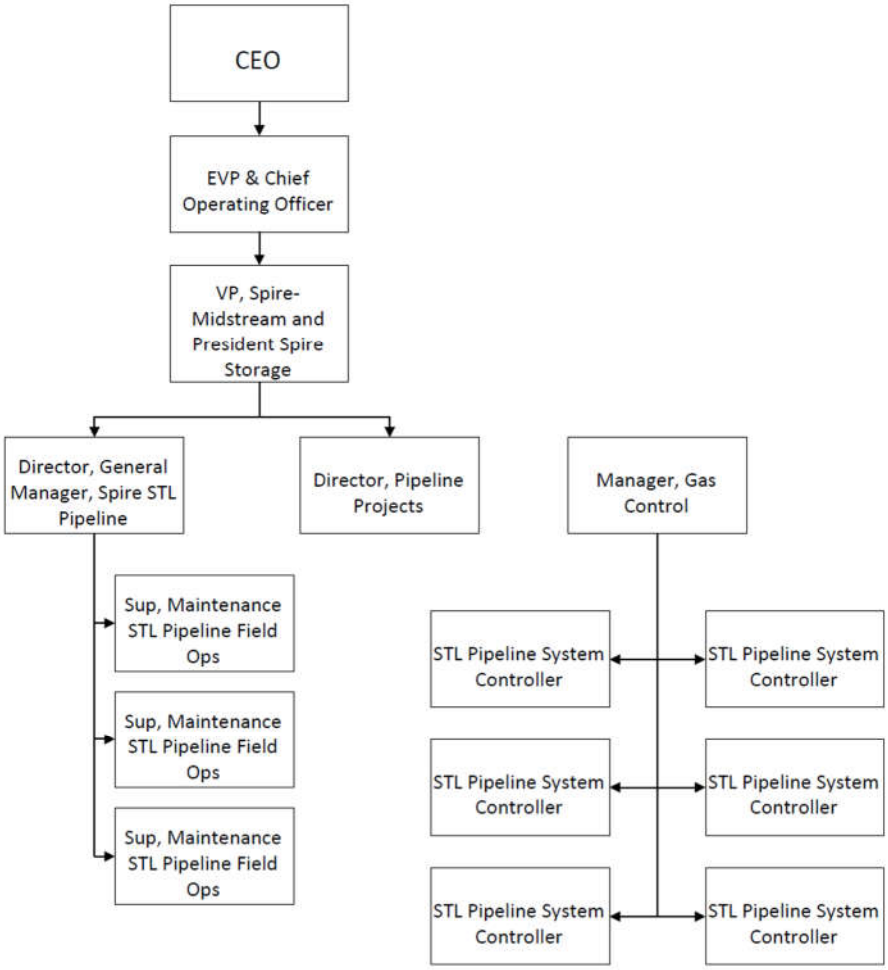
Exhibit IV-2
Spire Upper Management Organization
as of November 30, 2021



Source: Information Response #8, 2021 Report

Spire STL pipeline has its own management structure shown in *Exhibit IV-3*. The Spire STL pipeline organizational structure is focused on operations and maintenance. Supporting services are conducted outside of STL Pipeline, in the shared services area and billed to Spire STL Pipeline according to an affiliate agreement with the services and costs summarized in the Cost Allocation Manual (CAM).[86]

Exhibit IV-3
STL Pipeline Management Organization Chart
as of 2017



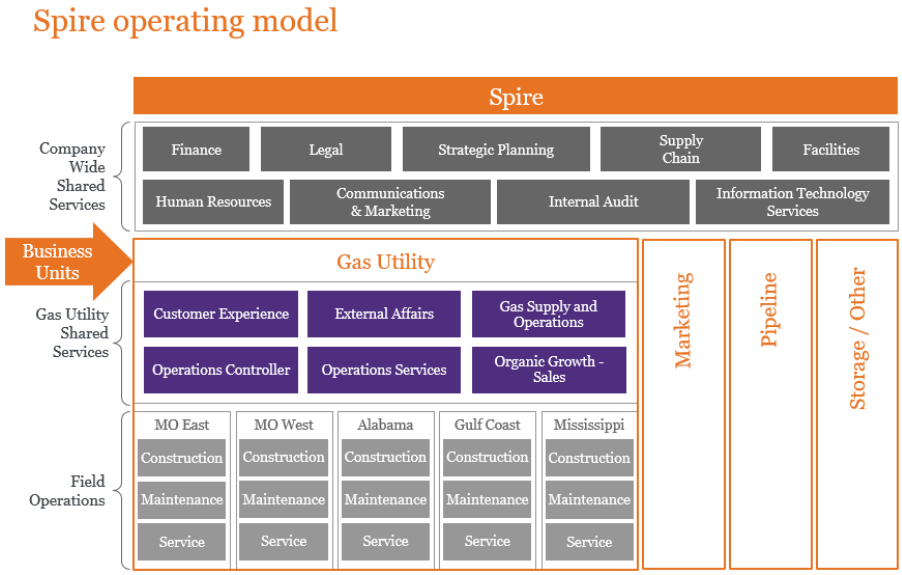
Source: Information Response #41

Spire Operating Model

While the Spire STL pipeline focuses on the operations and maintenance of the pipeline, the supporting business functions for Spire STL are provided by the shared services division. The agreement and guidelines for the shared services are documented in an Affiliate Shared Services

Agreement (see Section A) and with the Cost Allocation Manual (see Section B). A visual depiction of the Spire organization services, and business units is shown *Exhibit IV-4*. Services are provided to Spire affiliates, tracked and billed monthly, per the CAM.[87]

Exhibit IV-4
Spire Inc. Operating Model
March 1, 2020



Source: PMIA Information Response #31

The shared services division is currently embedded in the Spire Missouri regulated entity. However, currently under consideration is the creation of a separate affiliate, specifically for provision of these companywide shared services.[88]

Governing Regulations

The governing regulations for affiliate transactions in Missouri is 20 CSR 4240-40.015, from Chapter 40 Gas Utilities and Gas Safety Standards. The purpose of the rule is stated:[89]

> This rule is intended to prevent regulated utilities from subsidizing their non-regulated operations. In order to accomplish this objective, the rule sets forth financial standards, evidentiary standards and record keeping requirements applicable to any Missouri Public Service Commission (commission) regulated gas corporation whenever such corporation participates in transactions with any affiliated entity (except with regard to HVAC services as defined in section 386.754, RSMo Supp. 1998, by the General Assembly of Missouri). The rule and its effective enforcement will provide the public the assurance that their rates are not adversely impacted by the utilities' nonregulated activities.

In the Governing Regulations section, the rule is broken down into several parts and shown in Exhibits with commentary regarding Spire's Missouri situation and compliance following the exhibit. *Exhibit IV-5* has the first section of the Rules: Definitions.[90]

Exhibit IV-5
Section 1 of the MO Affiliate Rules: Definitions
in effect as of 2022

(1) Definitions.

(A) Affiliated entity means any person, including an individual, corporation, service company, corporate subsidiary, firm, partnership, incorporated or unincorporated association, political subdivision including a public utility district, city, town, county, or a combination of political subdivisions, which directly or indirectly, through one (1) or more intermediaries, controls, is controlled by, or is under common control with the regulated gas corporation.

(B) Affiliate transaction means any transaction for the provision, purchase or sale of any information, asset, product or service, or portion of any product or service, between a regulated gas corporation and an affiliated entity, and shall include all transactions carried out between any unregulated business operation of a regulated gas corporation and the regulated business operations of a gas corporation. An affiliate transaction for the purposes of this rule excludes heating, ventilating and air conditioning (HVAC) services as defined in section 386.754, RSMo by the General Assembly of Missouri.

(C) Control (including the terms "controlling," "controlled by," and "common control") means the possession, directly or indirectly, of the power to direct, or to cause the direction of the management or policies of an entity, whether such power is exercised through one (1) or more intermediary entities, or alone, or in conjunction with, or pursuant to an agreement with, one or more other entities, whether such power is exercised through a majority or minority ownership or voting of securities, common directors, officers or stockholders, voting trusts, holding trusts, affiliated entities, contract or any other direct or indirect means. The commission shall presume that the beneficial ownership of ten percent (10%) or more of voting securities or partnership interest of an entity constitutes control for purposes of this rule. This provision, however, shall not be construed to prohibit a regulated gas corporation from rebutting the presumption that its ownership interest in an entity confers control.

(D) Corporate support means joint corporate oversight, governance, support systems and personnel, involving payroll, shareholder services, financial reporting, human resources, employee records, pension management, legal services, and research and development activities.

(E) Derivatives means a financial instrument, traded on or off an exchange, the price of which is directly dependent upon (i.e., "derived from") the value of one or more underlying securities, equity indices, debt instruments, commodities, other derivative instruments, or any agreed-upon pricing index or arrangement (e.g., the movement over time of the Consumer Price Index or freight rates). Derivatives involve the trading of rights or obligations based on the underlying product, but do not directly transfer property. They are used to hedge risk or to exchange a floating rate of return for fixed rate of return.

(F) Fully distributed cost (FDC) means a methodology that examines all costs of an enterprise in relation to all the goods and services that are produced. FDC requires recognition of all costs incurred directly or indirectly used to produce a good or

service. Costs are assigned either through a direct or allocated approach. Costs that cannot be directly assigned or indirectly allocated (e.g., general and administrative) must also be included in the FDC calculation through a general allocation.

(G) Information means any data obtained by a regulated gas corporation that is not obtainable by nonaffiliated entities or can only be obtained at a competitively prohibitive cost in either time or resources.

(H) Preferential service means information or treatment or actions by the regulated gas corporation which places the affiliated entity at an unfair advantage over its competitors.

(I) Regulated gas corporation means every gas corporation as defined in section 386.020, RSMo, subject to commission regulation pursuant to Chapter 393, RSMo.

(J) Unfair advantage means an advantage that cannot be obtained by nonaffiliated entities or can only be obtained at a competitively prohibitive cost in either time or resources.

(K) Variance means an exemption granted by the commission from any applicable standard required pursuant to this rule.

Source: Information Response #48

Section 1 of the Rules is used for reference going forward, with as the rest of the rule is laid out in this section-by-section format.[91]

Exhibit IV-6
Section 2A1. of the MO Affiliate Rules: Standards, 2A
In effect as of 2022

(2) Standards.

(A) A regulated gas corporation shall not provide a financial advantage to an affiliated entity. For the purposes of this rule, a regulated gas corporation shall be deemed to provide a financial advantage to an affiliated entity if-

1. It compensates an affiliated entity for goods or services above the lesser of-

A. The fair market price; or

B. The fully distributed cost to the regulated gas corporation to provide the goods or services for itself; or

2. It transfers information, assets, goods or services of any kind to an affiliated entity below the greater of-

A. The fair market price; or

B. The fully distributed cost to the regulated gas corporation.

Source: Information Response #48

This portion of the Rules:2A1, shown in *Exhibit IV-6*, focuses on the price that a regulated entity will pay a non-regulated affiliate. Its purpose is to guard against funds following from the regulated entity to the non-regulated entity with the purchase of goods at above market rates. In this case, Spire Missouri East is paying a negotiated rate to Spire STL Pipeline of $0.25 Dth/d which is below the authorized tariff FERC rate of $0.357 Dth/d. Further, the Spire STL Pipeline is allowed a 14% ROE according to its FERC certificate and current filings show that the pipeline ROE is in the range of 8%.[92] Our review

suggests that Spire Inc./Spire STL did not receive a financial advantage from Spire Missouri East in the price Spire Missouri East paid for gas. Spire STL pipeline is a new business for Spire, and Spire Missouri its largest customer, with Spire Missouri East passing on transportation costs to its customers through the purchased gas adjustment.[93]

The second part of this Rule section, Rules:2A2, shown in *Exhibit IV-6*, is not applicable to the Spire Missouri / Spire STL Pipeline situation. Information, assets, goods or services other than gas and shared services (covered above) does not flow from Spire Missouri to Spire STL Pipeline.[94]

Exhibit IV-7
Section 2B-F. of the MO Affiliate Rules: Standards 2B-2F
In effect as of 2022

(B) Except as necessary to provide corporate support functions, the regulated gas corporation shall conduct its business in such a way as not to provide any preferential service, information or treatment to an affiliated entity over another party at any time.

(C) Specific customer information shall be made available to affiliated or unaffiliated entities only upon consent of the customer or as otherwise provided by law or commission rules or orders. General or aggregated customer information shall be made available to affiliated or unaffiliated entities upon similar terms and conditions. The regulated gas corporation may set reasonable charges for costs incurred in producing customer information. Customer information includes information provided to the regulated utility by affiliated or unaffiliated entities.

(D) The regulated gas corporation shall not participate in any affiliated transactions which are not in compliance with this rule, except as otherwise provided in section (10) of this rule.

(E) If a customer requests information from the regulated gas corporation about goods or services provided by an affiliated entity, the regulated gas corporation may provide information about its affiliate but must inform the customer that regulated services are not tied to the use of an affiliate provider and that other service providers may be available. The regulated gas corporation may provide reference to other service providers or to commercial listings, but is not required to do so. The regulated gas corporation shall include in its annual Cost Allocation Manual (CAM), the criteria, guidelines and procedures it will follow to be in compliance with the rule.

(F) Marketing materials, information or advertisements by an affiliate entity that share an exact or similar name, logo or trademark of the regulated utility shall clearly display or announce that the affiliate entity is not regulated by the Missouri Public Service Commission.

Source: Information Response #48

Section 2 B through F, shown in *Exhibit IV-7*, covers preferential treatment given by the regulated to the non-regulated entity in various circumstances. The Schumaker & Company work, interviews, and document review did not indicate any cases or situations where Spire STL Pipeline was treated any differently than another supplier.[95]

Exhibit IV-8
Section 3 of the MO Affiliate Rules: Evidentiary Standards for Affiliated Transaction
In effect as of 2022

(3) Evidentiary Standards for Affiliated Transactions.

(A) When a regulated gas corporation purchases information, assets, goods or services from an affiliated entity, the regulated gas corporation shall either obtain competitive bids for such information, assets, goods or services or demonstrate why competitive bids were neither necessary nor appropriate.

(B) In transactions that involve either the purchase or receipt of information, assets, goods or services by a regulated gas corporation from an affiliated entity, the regulated gas corporation shall document both the fair market price of such information, assets, goods and services and the fully distributed cost to the regulated gas corporation to produce the information, assets, goods or services for itself.

(C) In transactions that involve the provision of information, assets, goods or services to affiliated entities, the regulated gas corporation must demonstrate that it-

1. Considered all costs incurred to complete the transaction;

2. Calculated the costs at times relevant to the transaction;

3. Allocated all joint and common costs appropriately; and

4. Adequately determined the fair market price of the information, assets, goods or services.

(D) In transactions involving the purchase of goods or services by the regulated gas corporation from an affiliated entity, the regulated gas corporation will use a commission-approved CAM which sets forth cost allocation, market valuation and internal cost methods. This CAM can use benchmarking practices that can constitute compliance with the market value requirements of this section if approved by the commission.

Source: Information Response #48

Section 2 B through F, shown in *Exhibit IV-8*, covers the evidence required to be provided by the regulated entity to the Commission to document that the transaction did not benefit the non-regulated entity at the expense of the regulated entity. In the case of Spire Missouri East and Spire STL pipeline, Spire Missouri East determined that need for additional supply and the idea of a spur from an existing pipeline was voiced. After looking at various options, the spur was deemed the best solution and 3 outside companies partnered with Spire Missouri East to take this idea further. Confidentiality agreements were executed, RFPs were issued, responses received and considered, from each of the companies. Good faith negotiations occurred with these companies and in some instances resulted in term sheets with enough information to estimate project costs, risk sharing, and proposed reservation rates for the ultimate product. With this information, Spire Missouri was able to conduct models and run analysis to be sure that this venture would not raise rates to customers and in fact would reduce customer costs after the new pipeline was supplying product as well as providing benefits regarding reliability and supply diversity.[96]

Also, thorough review of the RFPs and negotiations with other pipeline operators indicates that it does not appear that the other parties could have offered this service for a lower rate than that being charged

by STL Pipeline. Regarding the question of a measurement of fully distributed costs for the project, Spire Missouri states: "given that this was a FERC-jurisdictional asset, Spire Missouri East likely could not have developed this project solely on its own. Even assuming Spire Missouri East could have developed this project on its own, its own fully distributed costs would have been substantially the same as those incurred by Spire STL Pipeline."

Please refer to the Staff's memorandum filed simultaneously with this report for further discussion of this section.

Exhibit IV-9
Section 4 of the MO Affiliate Rules: Record Keeping Requirements
In effect as of 2022

(4) Record Keeping Requirements.

(A) A regulated gas corporation shall maintain books, accounts and records separate from those of its affiliates.

(B) Each regulated gas corporation shall maintain the following information in a mutually agreed-to electronic format (i.e., agreement between the staff, Office of the Public Counsel and the regulated gas corporation) regarding affiliate transactions on a calendar year basis and shall provide such information to the commission staff and the Office of the Public Counsel on, or before, March 15 of the succeeding year:

1. A full and complete list of all affiliated entities as defined by this rule;

2. A full and complete list of all goods and services provided to or received from affiliated entities;

3. A full and complete list of all contracts entered with affiliated entities;

4. A full and complete list of all affiliate transactions undertaken with affiliated entities without a written contract together with a brief explanation of why there was no contract;

5. The amount of all affiliate transactions, by affiliated entity and account charged; and

6. The basis used (e.g., fair market price, FDC, etc.) to record each type of affiliate transaction.

(C) In addition each regulated gas corporation shall maintain the following information regarding affiliate transactions on a calendar year basis:

1. Records identifying the basis used (e.g., fair market price, FDC, etc.) to record all affiliate transactions; and

2. Books of accounts and supporting records in sufficient detail to permit verification of compliance with this rule.

Source: Information Response #48

Section 4, shown in *Exhibit IV-9*, covers the Record Keeping Requirements of the Affiliate Rules. The CAM and financial statements from Spire STL Pipeline and Spire Missouri East are just a few examples that support the fact that the Spire companies maintain separate books and records.[97]

Exhibit IV-10
Section 5 – 9 of the MO Affiliate Rules
In effect as of 2022

(5) Records of Affiliated Entities.

(A) Each regulated gas corporation shall ensure that its parent and any other affiliated entities maintain books and records that include, at a minimum, the following information regarding affiliate transactions:

1. Documentation of the costs associated with affiliate transactions that are incurred by the parent or affiliated entity and charged to the regulated gas corporation;

2. Documentation of the methods used to allocate and/or share costs between affiliated entities, including other jurisdictions and/or corporate divisions;

3. Description of costs that are not subject to allocation to affiliate transactions and documentation supporting the nonassignment of these costs to affiliate transactions;

4. Descriptions of the types of services that corporate divisions and/or other centralized functions provided to any affiliated entity or division accessing the regulated gas corporation's contracted services or facilities;

5. Names and job descriptions of the employees from the regulated gas corporation that transferred to a nonregulated affiliated entity;

6. Evaluations of the effect on the reliability of services provided by the regulated gas corporation resulting from the access to regulated contracts and/or facilities by affiliated entities;

7. Policies regarding the availability of customer information and the access to services available to nonregulated affiliated entities desiring use of the regulated gas corporation's contracts and facilities; and

8. Descriptions of, and supporting documentation related to, any use of derivatives that may be related to the regulated gas corporation's operation even though obtained by the parent or affiliated entity.

(6) Access to Records of Affiliated Entities.

(A) To the extent permitted by applicable law, and pursuant to established commission discovery procedures, a regulated gas corporation shall make available the books and records of its parent and any other affiliated entities when required in the application of this rule.

(B) The commission shall have the authority to-

1. Review, inspect and audit books, accounts and other records kept by a regulated gas corporation or affiliated entity for the sole purpose of ensuring compliance with this rule and make findings available to the commission; and

2. Investigate the operations of a regulated gas corporation or affiliated entity and their relationship to each other for the sole purpose of ensuring compliance with this rule.

(C) That this rule does not modify existing legal standards regarding which party has the burden of proof in commission proceedings.

(7) Record Retention.

(A) Records required under this rule shall be maintained by each regulated gas corporation for a period of not less than six (6) years.

(8) Enforcement.

(A) When enforcing these standards, or any order of the commission regarding these standards, the commission may apply any remedy available to the commission.

(9) The regulated gas corporation shall train and advise its personnel as to the requirements and provisions of this rule as appropriate to ensure compliance.

Source: Information Response #48

The last sections of the Rules, sections 5 - 9, shown in *Exhibit IV-10*, covers Records of Affiliate Entities, Access to Records, Record Retention, Enforcement and Training. Through discussions and review of documents we noted that books and records are being maintained by each of the Spire affiliates (Spire STL and Spire Missouri East specifically), and that access was made available.[98]

Gas Sales To / From Affiliates

The Spire CEO is the person in the Spire organization who has common authority over the LDC and marketing affiliates when it comes to gas supply purchases and sales transactions between the utilities and its affiliates. The number of people in the Gas Supply area of Spire Missouri who are involved with the purchased gas or the transportation from or sold gas to transportation to any affiliate is small with limited turnover. Training is provided including the Gas Supply and Transportation Standards of Conduct as well as FERC Affiliate Relations Rules upon entry to the department. Adherence to the applicable affiliated transaction standards and rules and knowledge of the regulatory process at both the state and federal levels and the ability to ensure all actions of the department company with regulations imposed by those entities is an essential job skill for the people in these areas. Additional training occurs periodically, annually for Affiliate Rules training and when deemed necessary for Gas Supply and Transportation Standards. The Regulatory team works closely with the Gas Supply team to ensure compliance and transparency.[99]

FERC Standards of Conduct Training

Training is a critical component of a company's ability to adhere to the FERC Affiliate Relations Rules. The FERC Standards of Conduct (SOC) Training was first given in 2019 and is given every couple of years. The presentation opens with introductions and a "guarantee" statement that SOC questions are always encouraged, and several methods given to contact either within the Spire organization directly or anonymously using a hotline and forbids retaliation against a good faith SOC violation report. Then the SOC framework is summarized into 4 definitions and 4 "Golden Rules": [100]

- 4 key definitions:
  - Transmission Function Employee (TFE)
  - Marketing Function Employee (MFE)
  - No-Conduit Employee (NCE)
  - Prohibited Transmission Function Information
- 4 Golden Rules
  - Independent Function Rules
  - No Conduit Rule
  - Non-Discrimination Rule
  - Transparency Rule

Once the key terms are defined, the training rules are stated and expounded upon, then examples and scenarios for what a violation would look like are presented. The training also specifies what Spire has done logistically to make compliance easier. For example:[101]

1. Access Restrictions on physical facilities:
    a. 700 Market St. St Louis – All STL pipeline personnel at this location are shared services employees; their STL pipeline material is maintained in secure locations that are inaccessible to MFEs and their computers are password-protected.
    b. 800 Market St. St Louis – STL pipeline's Gas Control operations are restricted with key-card protection, a logbook maintained to identify all individuals who enter, and access by MFEs is prohibited (except in special circumstances authorized and supervised by the define acronym SOC CCO).
    c. Spire Houston Office – STL pipeline's commercial group (President and one other commercial manager) maintain all STL pipeline information in secure locations that are inaccessible to MFEs and computers are password protected.
2. Restrictions on other areas:
    a. Information Systems – STL pipeline must ensure that MFEs are not able to access any electronic records of STL pipeline.
    b. Contractors and Consultants – STL pipeline must ensure that any contactors or consultants that fit the definition of TFEs follow the SOC rules and are trained within 30 days of coming on board.
    c. Books and records – All STL pipeline books and records should be protected against disclosure to MFEs (or any other selective disclosure) unless specifically designated as no longer Prohibited TFI (Transmission Function Information)

The training then goes on to call out exceptions to the SOC (emergencies, communications regarding the Affiliate's own request for service, and shipper's voluntary request). With the definitions and exceptions presented, the training then focuses on the SOC rules. Each rule is presented, tips given for compliance, and the SOC enforcement settlements discussed. Lastly various scenarios are presented describing situations where the SOC rules are violated and are not in the course of business operations.[102]

B. Internal Audit

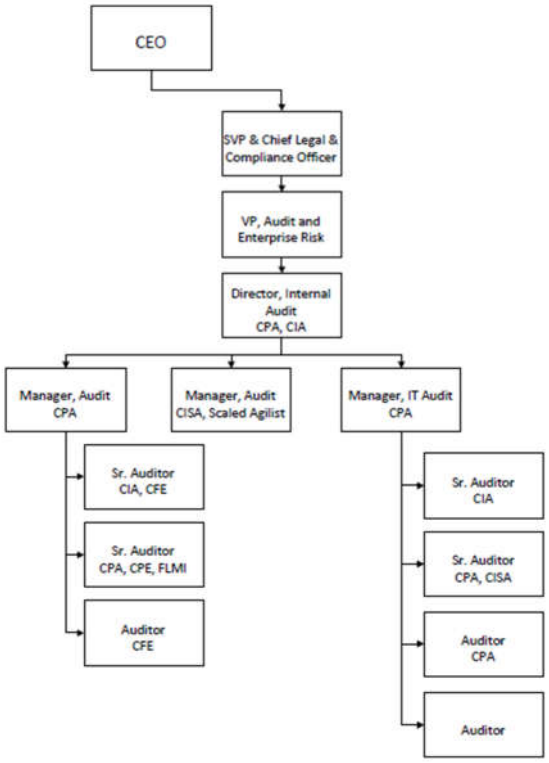
Internal Audit

Internal Audit plays an oversight role for affiliate transactions which are conducted in accordance with the CAM. The CAM and the affiliate transaction processes are audited every three years by internal

audit. Since Internal Audit plays an important in the affiliate transaction process through oversight, the Internal Audit department organization and processes were reviewed.[103]

Internal Audit is organized with the Audit VP reporting through legal to the CEO. It is not unusual for the Audit VP to report to the CFO for all issues or for administrative purposes only. But neither of these organizational structures sets up a conflict as the Internal Audit Department is charged with auditing financial areas as well as other areas through the company. The Audit department is comprised of 12 professionals as shown in *Exhibit IV-11*. The goal of the department is to have all auditors accredited with at least one certification and more are encouraged. Currently five of the department professionals have multiple accreditations.[104]

Exhibit IV-11
Spire Internal Audit Organization
as of February 28, 2022



Source: Information Response IR 50

Audits are well organized, starting with risk planning and creation of the annual audit schedule. When a specific audit begins it starts with the planning phase, moves to client outreach, fieldwork, wrap up and report issuance. Any recommendations in an audit report and tracked and resolved. Workpapers are all electronic and organized using the Galileo tool which has a dashboard for ease of seeing the status of engagements at any time.[105]

Spire Organization

Finding IV-1 **Spire Inc. has created an organization similar to what we have observed at other electric and gas utilities.**

Spire Inc. evolved out of what was previously Laclede Gas Company, which was basically strictly a Natural Gas Local Distribution Company (LDC). As Laclede Gas evolved into Spire Inc., the LDCs (Spire Missouri, Inc, Spire Alabama, Inc., Spire Energy South Inc. including Spire Gulf, Inc. and Spire Mississippi, Inc.) have been organizationally grouped together and the non-regulated entities have been grouped together into a separate organizational group – as shown in *Exhibit IV-1.* Spire STL (a FERC regulated entity) has been located within another organizational group (Spire Midstream, Inc.). There is discussion regarding the establishment of a service company (a shared services organization), although this has not been totally implemented at this time.

Finding IV-2 **The Spire STL pipeline affiliate was created due to anticipated supply need and the absence of a company available that met Spire standards to partner with Spire on this effort.**

At a Board of Director's meeting in April 2016, Spire STL Pipeline Company was created with two other new Spire affiliates. The creation of Spire STL pipeline was the culmination of a process starting in early 2011. In 2011, a 3rd party developer proposed a REX lateral to St Louis and Spire Missouri filed a settlement stipulation with the PSC to interconnect with this pipeline, if constructed. It was never constructed. Sometime in the next couple of years, Spire began looking at other lateral options and spoke with a few potential partners for this project. Later in 2013, Spire created a cross-functional group (Project Gas Assets and Supply, also referred to as Project Gas) to take a fresh look at all Spire gas sources. In early 2015, Project Gas found among other things limited capacity into the citygate relative to peak demand. Soon after this, discussions began with various companies to potentially partner with Spire in a JV to build a St Louis lateral pipeline (see Chapter 2 for details). When the JV options were exhausted, Spire looked at building the pipeline and bringing the needed people in-house to achieve that goal. To further that goal, in April 2016, the Spire STL pipeline affiliate was created.[106]

Finding IV-3 **Shared services division currently resides in the Spire Missouri East organization but is planned to be split out into a separate affiliate.**

The shared services area is currently embedded in the operating company, Spire Missouri, but plans are in place to separate out this division into a separate affiliate which we typically in other large natural gas utilities. Although we understand that plans are in place, there is currently no definitive timeline for when this will be completed.[107]

Finding IV-4 **Spire STL pipeline provides gas transportation services to Spire Missouri at a rate lower than the FERC maximum rate that was established in the precedent agreement whereas services provided to STL pipeline by Spire Missouri are provided at fully distributed cost to STL Pipeline.**

Spire STL pipeline provides gas transportation services for Spire Missouri East. Spire Missouri East is paying a negotiated rate to Spire STL pipeline of $0.25 Dth/d which is below the authorized tariff FERC rate of $0.375 Dth/d. The Spire STL pipeline is allowed a 14% ROE according to its FERC certificate and current filings show that the pipeline ROE is in the range of 8%.[108] [109] Spire STL pipeline can acquire support such as accounting services, human resources, and others from Spire as shown in *Exhibit IV-4*. This arrangement is like our experience with other pipeline companies which have both interstate and local facilities.

Finding IV-5 **The Internal Audits organization is well positioned in Spire, operating with credentialed professionals and is using automation appropriately.**

As shown in *Exhibit IV-11,* the Internal Audit organization reports through the legal organization to the CEO. An alternate configuration used in other organizations has the Internal Audit organization reporting through the financial area and CFO which has the appearance of a conflict of interest due to the fact that a significant number of internal audits are performed in areas that report to the CFO. However, at Spire the organization reports directly to the CEO, through the legal organization, avoiding this potential conflict of interest. Also, the auditors at Spire are appropriately credentialed with one or more certification per auditor for most in the department. Audits are well planned, and automation being used where most appropriate, i.e. with workpaper systems, from engagement planning to conclusion, and recommendation tracking.[110]

Finding IV-6 **Spire is in compliance with the Missouri Affiliate Rules with respect to STL Pipeline.**

Based on all the work performed in the course of this engagement, i.e. interviews, document review and analysis, which is summarized in the Governing Regulations section above, Spire is in general compliance with the Missouri Affiliate Rules.

[1] / Concentric Report 7/17
[2] / Appendix 1 to RFPS30034902200336 REQ NO.: RL122100087 TITLE: Gas Procurement Case Audit, Review, and Testimony Services
[3] / Concentric Report 7/17
[4] / Concentric Report 7/17
[5] / Spire Inc.
[6] / EDF>News and Blogs>for the media> Press release archive
[7] / *Environmental Defense Fund v. Federal Energy Regulatory Commission*, No. 20-1016 (D.C. Cir. 2021 June 22), p. 31.
[8] / *Environmental Defense Fund v. Federal Energy Regulatory Commission*, No. 20-1016 (D.C. Cir. 2021 June 22), p. 5.
[9] / Environmental Defense Fund v. Federal Energy Regulatory Commission, No. 20-1016 (D.C. Cir. 2021 June 22), p. 34.
[10] / US News and world report.com by Associated Press Wire Service Content 10/15/21 at 11:39 a.m.
[11] / *In the Matter of the Determination of In-Service Criteria for the Union Electric Company's Nuclear Plant and Callaway Rate Base and Related Issues* and *In the Matter of Union Electric Company of St. Louis, Missouri, for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customer in the Missouri Service Area of the Company,* Case Nos. EO-85-17 and ER-85-160, March 29, 1985 *Report and Order*, 27 Mo.P.S.C.(N.S.) 183, 194 (1985), quoting *Consolidated Edison Company of New York, Inc*., 45 P.U.R. 4th 331 (1982).
[12] / *In the Matter of the Determination of In-Service Criteria for the Union Electric Company's Nuclear Plant and Callaway Rate Base and Related Issues* and *In the Matter of Union Electric Company of St. Louis, Missouri, for Authority to File Tariffs Increasing Rates for Electric Service Provided to Customer in the Missouri Service Area of the Company,* Case Nos. EO-85-17 and ER-85-160, March 29, 1985 *Report and Order*, 27 Mo.P.S.C.(N.S.) 183, 194 (1985), quoting *Consolidated Edison Company of New York, Inc*., 45 P.U.R. 4th 331 (1982).
[13] / BAFO 01 State of Missouri 10/13/21
[14] / Spire Missouri STL Contracting Decision Timeline
[15] / ** [redacted] **
[16] / Information Request # 42
[17] / Spire Missouri STL Contracting Decision Timeline
[18] / ** [redacted] **
[19] / ** [redacted] **
[20] / ** [redacted] **
[21] / ** [redacted] **
[22] / ** [redacted] **
[23] / Spire Missouri STL Contracting Decision Timeline
[24] / ** [redacted] **
[25] / 4 /20/16 MPSC Presentation Deck
[26] / ** [redacted] **
[27] / ** [redacted] **
[28] / Spire Missouri STL Contracting Decision Timeline
[29] / ** [redacted] **
[30] / Interview# 2&3 and Spire Missouri STL Contracting Decision Timeline
[31] / Spire Missouri STL Contracting Decision Timeline
[32] / Concentric Report 7/17
[33] / Interview # 2&3
[34] / Concentric Report 7/17
[35] / Interview #5&6
[36] / Information Request 51
[37] / Interview # 2&3

[38] / Concentric Report 7/17
[39] / Concentric Report 7/17
[40] / Concentric Report 7/17
[41] / Concentric Report 7/17
[42] / Concentric Report 7/17
[43] / Concentric Report 7/17
[44] / Concentric Report 7/17
[45] / Concentric Report 7/17
[46] / Concentric Report 7/17
[47] / Concentric Report 7/17
[48] / Concentric Report 7/17
[49] / Concentric Report 7/17
[50] / Interview 5&6
[51] / ** [redacted] **
[52] / Concentric Report 7/2017
[53] / Interview #5&6
[54] / Interview 5&6
[55] / Concentric report 7/17
[56] / Concentric report 7/17
[57] / Concentric report 7/17
[58] / Concentric report 7/17
[59] / Concentric Report 7/17
[60] / Concentric Report 7/17
[61] / Interview 5&6
[62] / Concentric Report 7/17
[63] / Ibid
[64] / Ibid
[65] / Ibid
[66] / Concentric report 7/17
[67] / Spire Missouri STL Contracting Decision Timeline
[68] / ** [redacted] **
[69] / ** [redacted] **
[70] / Spire Missouri STL Contracting Decision Timeline
[71] / ** [redacted] **
[72] / Spire Pipeline Draft resource plan
[73] / Interview #9
[74] / Documents Dated 10/17 viewed on 2/9 on site.
[75] / Information request # 43
[76] / FERC document #2020-12235 publication date 6/5/2020
[77] / ** [redacted] **
[78] / Spire STL pipeline LLC Docket No. CP 17-40
[79] / Spire STL pipeline LLC Docket No. CP 17-40
[80] / Spire Missouri STL Contracting Decision Timeline
[81] / Interview #9
[82] / Interview #9
[83] / PMIA Information Response #6
[84] / ** [redacted] **
[85] / PMIA Information Response #8

[86] / PMIA Information Response #41
[87] / PMIA Information Response #31
[88] / Onsite meetings 2-9-22
[89] / Information Response #48
[90] / Information Response #48
[91] / Information Response #48
[92] / Information Response # 58
[93] / Staff's Investigation of Spire STL Pipeline's Application at FERC for a Temporary Certificate to Operate, August 16, 2020, Case No. GO-2022-0022 (EFIS Item No. 2).
[94] / Information Response #48
[95] / Information Response #48
[96] / Information Response #48
[97] / Information Response #8
[98] / Information Response #48 and 2/9/22 onsite interviews
[99] / Information Request Response #20 and 2/9 onsite interviews
[100] / Information Request Response #27
[101] / Information Request Response #27
[102] / Information Request Response #27
[103] / Onsite meeting 2/9/22
[104] / Onsite meeting 2/9/22 and Information Response 50
[105] / Onsite meeting 2/9/22
[106] / Information Response #48 and 2/9 onsite meeting discussion.
[107] / Information Response #48 and 2/9 onsite meeting discussion.
[108] / Information Response #48
[109] / Information Response #58
[110] / Onsite meeting 2/9/22 and Information Response #50

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Spire Missouri, Inc. d/b/a Spire (East) Purchased Gas Adjustment (PGA) Tariff Filing	)))	**Case No. GR-2021-0127**

AFFIDAVIT OF JOE DE FURIA

STATE OF Florida)
) ss.
COUNTY OF Martin)

COMES NOW Joe De Furia, and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Report;* and that the same is true and correct according to his best knowledge and belief, under penalty of perjury.

Further the Affiant sayeth not.

Joe De Furia

JOE DE FURIA

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Martin, State of Florida, at my office in Stuart, on this 24 day of May, 2022.

Notary Public

NOTARY PUBLIC

JUDYTH MARTINEZ
Notary Public, State of Florida
Commission# GG 345273
My comm. expires June 16, 2023

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Spire Missouri, Inc. d/b/a Spire (East) Purchased Gas Adjustment (PGA) Tariff Filing	)))	**Case No. GR-2021-0127**

AFFIDAVIT OF MARTHA KING

STATE OF Montana)
) ss.
COUNTY OF Madison)

COMES NOW Martha King, and on ~~his~~ her oath declares that ~~he~~ she is of sound mind and lawful age; that ~~he~~ she contributed to the foregoing *Report;* and that the same is true and correct according to ~~his~~ her best knowledge and belief, under penalty of perjury.

Further the Affiant sayeth not.

Martha J King
MARTHA KING

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Madison, State of Montana, at my office in Ennis, on this 23rd day of May, 2022.

LISA KIMMEY NOTARIAL SEAL STATE OF MONTANA

LISA KIMMEY
NOTARY PUBLIC for the
State of Montana
Residing at Ennis, Montana
My Commission Expires
June 08, 2022

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Spire Missouri, Inc. d/b/a Spire (East) Purchased Gas Adjustment (PGA) Tariff Filing	)))	**Case No. GR-2021-0127**

AFFIDAVIT OF DENNIS SCHUMAKER

STATE OF MI)
) ss.
COUNTY OF Washtenaw)

COMES NOW Dennis Schumaker, and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Report;* and that the same is true and correct according to his best knowledge and belief, under penalty of perjury.

Further the Affiant sayeth not.

DENNIS SCHUMAKER

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Washtenaw, State of MI, at my office in Ann Arbor, on this 20 day of May, 2022.

EMILY DUNN
Notary Public - State of Michigan
County of Washtenaw
My Commission Expires Jul 30, 2027
Acting in the County of Washtenaw

Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION

OF THE STATE OF MISSOURI

In the Matter of Spire Missouri, Inc. d/b/a Spire (East) Purchased Gas Adjustment (PGA) Tariff Filing	)))	**Case No. GR-2021-0127**

AFFIDAVIT OF PATRICIA SCHUMAKER

STATE OF MI)
) ss.
COUNTY OF Washtenaw)

COMES NOW Patricia Schumaker, and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing *Report;* and that the same is true and correct according to his best knowledge and belief, under penalty of perjury.

Further the Affiant sayeth not.

patricia schumaker
PATRICIA SCHUMAKER

JURAT

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Washtenaw State of MI, at my office in Ann Arbor on this 20 day of May, 2022.

Notary Public

EMILY DUNN
Notary Public - State of Michigan
County of Washtenaw
My Commission Expires Jul 30, 2027
Acting in the County of Washtenaw