



Spire Missouri Contingency Planning

November 15, 2021

Overview.

In compliance with the September 1, 2021 Order Regarding Further Investigation in this matter, Spire Missouri submits this first report on its current contingency plans, ongoing contingency plan development, and conditions affecting its ability to provide adequate gas supply and pressure to all customers for the winter of 2021-2022.

In the event of a winter weather event with limited or no supply from Spire STL Pipeline, our planning ensures we will be prepared to maximize the delivery of natural gas, protect lives and property, and care for impacted customers and communities.

In this report, we summarize our contingency planning as follows:

- Ongoing contingency plan development
 - Workshops and exercises
 - Outreach and coordination
- Conditions affecting our ability to provide adequate gas supply and pressure
 - Alternate supply update
 - National Weather Service winter weather update
- Current contingency plans
 - Crisis Management Plan
 - Emergency Curtailment Plan (under development)
 - Spire Missouri Response and Recovery Plan (under development)
- Attachments
 - Letter to transportation customers
 - Crisis Management Plan
 - Emergency Curtailment Plan
 - Spire Missouri Response and Recovery Plan

Ongoing contingency plan development.

During the last quarter, Spire Missouri hosted three contingency planning workshops and exercises. The intent of these was to develop the operating approach we will use to manage our response and recovery activities. In addition, we have conducted significant outreach and coordination with regional public and private entities. The intent of this outreach includes creating awareness and support, as well as ensuring an integrated approach in the event an emergency response is required.

Workshops and exercises

To develop key elements of its contingency plans, Spire Missouri is using a methodology based on Ready.gov preparedness planning. We hosted two workshops and a tabletop exercise, with additional preparation activities planned. A summary of each and associated preparations follows.

Pre-Workshop Planning Activities

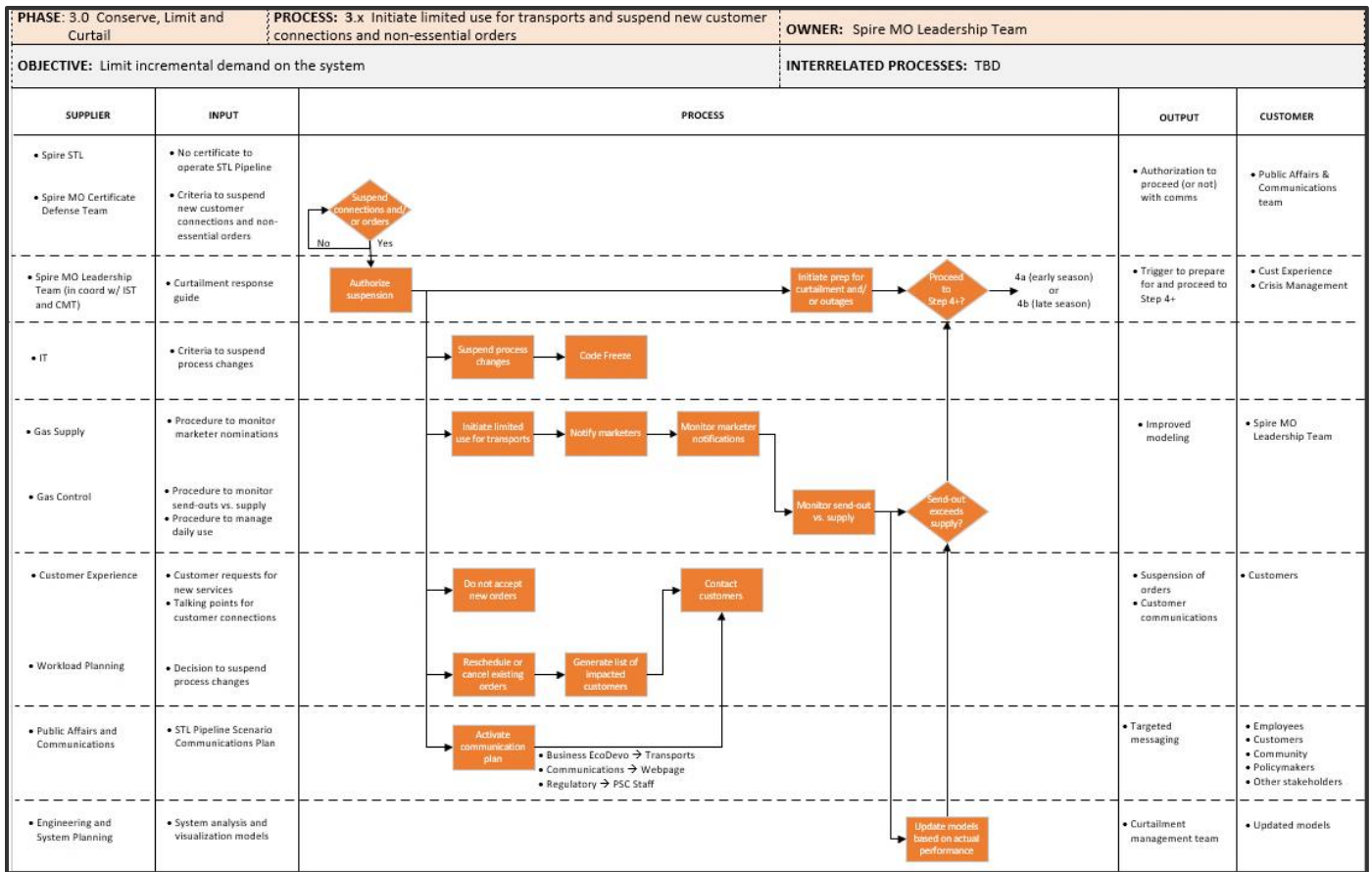
Immediately upon issuance of the D.C. Circuit order, Spire Missouri's Gas Supply department began an analysis of potential impacts including flow modeling, development of outage maps, and alternative supply availability. Much of this information has already been provided via Spire Missouri's FERC filings, responses to Staff data requests in this docket, and FERC data requests responses already filed in this docket.

September 13-17 Initial Contingency Planning Workshop

This five-day workshop launched our detailed planning to develop our approach to manage a cold weather event without supply from Spire STL Pipeline. Approximately thirty-five subject matter experts from all operational functions (e.g., gas control, gas supply, GIS, customer experience) and from multiple geographies met in person at our St Louis offices. During this workshop, we focused in three primary areas: Alternate Supply & System Modeling; Curtailment Planning; Customer Support. Key deliverables included:

- Considerations related to alternate supply options
- System response modeling based on temperature variations
- Initial categories of critical needs customers
- Initial listing of conservation and curtailment actions and sequencing
- Process workflows aligned to conservation and curtailment actions
- Listings of key customer support actions and considerations

Each of these deliverables established the starting point needed to develop an extensive set of actions to support our customers. A key deliverable from the workshop was a set of process workflows that would form the basis of the steps and actions for our response and recovery plan. A visual of one of these workflows is shown below.



October 13 Tabletop Exercise

Tabletop exercises are discussion-based sessions where team members meet in an informal, classroom setting to discuss their roles during an emergency and their responses to a particular emergency situation. In preparation for the exercise, we translated the process workflows developed in the September workshop into a set of process worksheets that would be followed during the exercise. See a visual of a process worksheet below.

Process Objectives & Trigger	Proc. Ref	Step	Responsible Role(s) to Perform Action	Prerequisites and Inputs for the Action Step	Action Step	Output to Whom	Supporting Systems and/or
6.0 Perform controlled system disconnect of all customers except critical loads EVENT TRIGGER Pressure trends insufficient to rectify pressure loss	6.1.0	1	Gas Control	Pressure/temperature Modeling requirements	Monitor system pressure and temperature	n/a	SCADA
	6.2.0	2	Gas Control	Trigger criteria Pressure	Determine whether pressures are dropping in system areas	Notification to Field Ops and GIS to start preparations	Memotemplate
	6.2.1	3	Gas Control	Trigger criteria Pressure	Assess current event compared to past pressure trends	Notification to CCT and GIS and Spire MO(?) that trigger has been met, including supporting	Memotemplate
	6.6.0	4	Gas Control GIS	Gas control notification of pressure dropping GIS isolation mapping	Determine optimal isolation zones	Recommended isolation zones to CCT and GIS	
	6.6.1	5	CCT Leader with consult from CCT, GSS, Gas Control and Field Ops	Recommended isolation zones	Confirm isolation zones	Recommended isolation zones to CCT and Spire MO	
	6.3.0	6	Spire MO Emergency Curtailment Plan Leader with consult from CCT, Gas Supply, Gas Supply	Trigger met/ notification from Gas Control accompanied by supporting data/analysis including recommended isolation zones	Authorize controlled system disconnect	Authorization memo to CCT and IST with Cc to CMT	Memotemplate
	6.5.0	7	Gas Supply Gas Ops	CCTL/Spire MO authorization memo	Continue OFO	Rolling OFO	Marketer Rolling OFO issuance procedure Transport customer OFO notification procedure
	6.7.0	8	GIS	CCTL/Spire MO authorization memo	Prepare and distribute customer list	Email customer list to outage email address and Communications	
	6.7.1	9	GIS	Customer list	Prepare and distribute value list	Email value and customer list to Field Ops Directors	
	6.8.0	10	Field Ops CCT Member Customer Experience	CCTL/Spire MO authorization memo	Field Ops executor mobilization activities	Authorization memo to Field Ops team to initiate plans and execution of activities	
		11	Customer Experience	CCTL/Spire MO authorization memo	Prepare Customer Experience	Email, written and verbal communication of talking points to all Customer Experience employees	
	6.8.1	12	Field Ops CCT Member	CCTL/Spire MO authorization memo	Identify "Back on the ground" Field Ops Lead	Identified leader communicated to Field Ops Team and CCT	
	6.8.2	13	Field Ops	Authorization memo from Field Ops CCT Member to Field Ops team	Assign "off" orders to technicians	"Off" orders assigned to individual technicians	Click
	6.5.2	14	Customer Experience	Authorization memo from Spire MO Customer disconnect lists	Initiate Customer communications for specific areas	Automated message to customers	Automated outage system email, text and phone calls

The elements of each process worksheet included:

- Process objectives and trigger
- Action step description
- Responsible role(s) to perform the action
- Prerequisites and inputs for the action step
- Outputs and recipient
- Supporting systems and/or resources

During the full-day exercise, a facilitator guided approximately twenty subject matter experts from operational functions through a discussion of response and recovery actions using a realistic scenario that could result in unplanned outages. The team followed and enhanced documented contingency plan processes built from the workflows developed in the September 13-17 Contingency Planning Workshop.

October 21 Winter Supply Meeting and Contingency Planning Pre-Meeting with Missouri Public Service Commission (“MoPSC”) Staff

Spire Missouri Gas Supply, Planning, Regulatory and Legal Staff met with MoPSC Procurement, Tariff and Safety staff, and Staff leadership and counsel, as well as a representative of the Office of Public Counsel in Jefferson City. In addition to making an annual winter supply update presentation, Spire Missouri personnel also presented an early overview of the Company’s alternative supply, contingency planning, and emergency preparedness efforts surrounding the Spire STL Pipeline situation. This meeting provided valuable insight to the Company and reinforced appropriate communication channels for emergency purposes.

November 10 Final Contingency Planning Workshop

The final planning workshop was held in place of a planned functional exercise to develop more detailed elements and actions. A functional exercise will be held in early December. This will place it closer to when the team could begin responding to mitigate a potential unplanned outage and in turn serves as a more effective preparedness tool.

The workshop deliverables included key elements to finalize our preparedness for a response:

- Identification of internal personnel to fill roles on operational support and leadership teams
- Day-by-day action plan
- Daily and hourly operational response plans
- Frequency and content of situation reports
- Critical needs business customer categories
- Updated process sequencing for restoration of services

Outreach and coordination

Elected Officials

Spire Missouri has engaged in continuous outreach with federal, state, county, and municipal elected officials since the June 22nd court decision. The entire Missouri federal delegation has been kept abreast of the issue and the ongoing efforts of the Spire STL Pipeline to stay operational, and eight of the ten have made comments in committee hearings and/or have filed support letters in the FERC docket.

The Spire Inc. CEO and General Counsel traveled to Washington D.C. to meet in person with the federal delegation and members of the U.S. Senate Energy and Environment Committee. The Missouri Governor, Lt. Governor, Attorney General, and members of both the Missouri Senate and House

Utilities Committees filed support letters with the FERC and receive frequent updates from Spire Missouri about the project and regulatory proceedings.

County Executives, their staff, and councils located in the Missouri East region have all had in-person meetings with Spire government affairs employees to discuss the project and possible impact on the region. These offices receive both email and telephone updates as the situation evolves or new information is acquired. The St. Louis Municipal League, which has a membership of over 100 local Mayors and City Administrators, has written support letters and receives updates from Spire Missouri at all of its membership meetings.

Finally, Spire has had an initial discussion with the United States Department of Energy and will be meeting with DOE representatives this week to discuss its contingency plans.

Regional Emergency Management Partners

Spire Missouri's crisis management personnel continue to meet twice weekly with regional emergency management partners. This joint engagement remains in a constant state of information sharing (i.e. formal, informal, verbal, and/or written) outside of the regularly scheduled meetings as well.

Spire Missouri continues to provide emergency management stakeholders the best available information with the understanding that not all conditions can be predicted, even if all variations of a future situation could be anticipated, planning for all cannot be done feasibly. The design and development of the Regional Plan does take into consideration that all planners continue to operate in a multiple-crisis environment (i.e. global pandemic, supply chain challenges, etc.) and these variables have been captured.

This regional planner meeting is a deliberate incident planning process that is intended to assist with the overall synchronization of a unified operational response, while the Regional Plan and processes are owned and operated by our emergency management partners. Spire Missouri's role in this deliberate planning process is to support our emergency management partners. Specifically, Spire Missouri has provided support to our regional emergency management partners by engaging with public health agencies, non-governmental organizations (NGOs), Medical Operation Center, Missouri Homeland Security, first responders and others at the local, state, and federal levels to provide situation updates.

FERC

Spire Missouri has continued to monitor the Spire STL Pipeline docket, and has made filings in that docket as appropriate, including responses to data requests from FERC Staff. To date, 109 letters of support for a Temporary Emergency Certificate have posted to the FERC docket, comprising 162 separate signatories. These letters comprise support from elected officials, industry groups, and individuals.

At this time, the *sua sponte* temporary emergency certificate issued September 14 for the Spire STL Pipeline only provides operating authority through December 13. It is unknown whether or when FERC may act to extend this temporary emergency certificate, or issue another, or the duration or conditions associated with any such order.

Transportation Customers

Spire Missouri business development representatives have spoken with all 153 Missouri East transportation customers to ensure their understanding of the situation and Spire's emergency curtailment plans. As a follow-up to these conversations, the Legal departments of many of these large customers requested a memorandum be provided from Spire describing the legal and regulatory background of the situation, and citation to applicable tariffs. Spire's Legal Department produced this document and provided it in response to requests from transportation customers. A copy of that memorandum is an attachment to this report.

Firm Customers

From the beginning, the purpose of our customer communications has been (1) to make the public **aware** of the potential risks should the Spire STL Pipeline be taken out of service and (2) to help them **prepare** for any potential service disruptions or outages. We began Phase 1 of our customer communications plan (Preparedness) on July 10 with earned media placements to reach customers through broad, or mass, communication channels, such as radio, newspaper and television, combined with organic and paid social media communications.

Early on, we also established a dedicated web page – SpireEnergy.com/Critical – which serves as a “hub” for Spire STL Pipeline-related updates, preparedness and safety tips, and other information.

To reach those who may not have Internet access, to complement the previously mentioned communications, and to span publications across the Greater St. Louis area, we also placed print advertisements focusing on awareness and preparedness in the St. Louis Post-Dispatch, St. Louis Business Journal, and the St. Louis American.

On Nov. 4, 2021, at the start of the winter heating season and without an extension or new temporary certificate for the Spire STL Pipeline beyond the coldest months in St. Louis, we shared a direct-to-customer transactional email with those active residential and non-transportation business customers who had an email on file within our system. A copy of that communication is an attachment to this document.

On Nov. 11, 2021, we conducted a news conference with partners from business, labor and community organizations to provide further clarity on the facts related to the Spire STL Pipeline and the potential for service disruptions and outages without the Spire STL Pipeline in service.

We have a formal emergency communications plan in place to update and inform customers should adverse weather events necessitate use of our emergency plans. And we have plans to communicate emergency updates through email, text and automated phone messages to the contact information we have on file for our active customers.

We will also continue to communicate with customers and the St. Louis community through media relations, organic and paid social media, print advertisements, handouts, and email, when appropriate.

Conditions affecting our ability to provide adequate gas supply and pressure.

Alternate supply update.

Spire Missouri has been hard at work securing all available supply for this winter in the event Spire STL Pipeline is not operational. Each of these alternatives carry unique cost and operational risk factors compared to Spire STL Pipeline. Summarized below are the efforts to date.

- Contracted for all available capacity on MRT's Main Line (this was a very small amount of 568 Dth/d)
- Contracted for all available capacity on MoGas (10,000 Dth/d)
- Evaluated making a receipt point change on an existing transportation contract to deliver additional capacity to points south on our system (~80,000 Dth/d), but have not done this yet because we believe this capacity will remain available and do not want to risk burdening our customers with additional costs prematurely.
- Coordinating with the Spire NGL team to repair a portion of its line and perform the necessary compliance testing to allow it to remain in service. This may allow us to vaporize propane at the Catalan location. This repair was recently completed, and the Spire NGL team is currently planning to perform the compliance work in December, with hopes of being able to operate by the end of December or early January if the compliance work is successful. This option could potentially add roughly 25,000 to 50,000 Dth/d of peaking capacity.
- Evaluated an LNG peaking facility and currently have an option through November 27 on equipment that could provide up to 10,000 Dth/d.

National Weather Service winter weather update.

Spire Missouri's Gas Supply and Gas Control departments utilize a detailed winter forecast report known as the WSI North American Seasonal Forecast to conduct its seasonal planning. The 2021 version of this report was released on November 9, 2021. The report is subject to copyright and transmission limitations imposed by its publisher, The Weather Company/IBM.

The following update was provided to Spire Missouri from the regional emergency management partners and is included in their regional planning document. For the St. Louis region, the chance for warmer, normal and colder temperatures are 44%, 33% and 23%, respectively. This projected temperature information does not materially influence our planning.

Climatologically speaking, the coldest average temperatures occur in mid/late January. However, extreme cold (lows below zero) can happen roughly from the middle of December through the middle of February. The official Climate Prediction Center (CPC) forecast favors (44%) warmer than normal temperatures for St. Louis. The highest chances for warmer than normal conditions exist south and east of the area. However, colder than normal temperatures still have a 23% chance of occurring, with a 33% chance of near normal conditions for the winter season. Even if a warmer winter does occur, that does not mean we cannot get a short period of time with an extreme cold snap (see February 2021).

Three main factors influence this seasonal (December 1 - February 28) forecast: La Niña, recent (10-20 year) trends, and long-range climate models. La Niña has established relationships with weather patterns across the United States. However, for the St. Louis area, it accounts for only about 6% of our observed winter weather. Many other important phenomena that heavily

influence our weather are not predictable past 1-2 weeks out, and therefore cannot be used in seasonal forecasting. Over the past two decades, St. Louis has experienced a trend toward wetter winters. Note, this does not necessarily indicate snowier winters because of the increased precipitation. In fact, trends over the past twenty years actually show a decrease in observed snowfall. Finally, a majority of the long-range climate models show a warmer than normal winter (60-70% chance) along with near to above normal precipitation.

For this upcoming winter, La Niña is very *likely* (~75%). La Niña conditions typically favor colder than normal temperatures in the Upper Midwest, and warmer than normal conditions along the southern and eastern United States. St. Louis is in between these two areas. For precipitation, the strong signal for below normal precipitation in the southern US near the Gulf Coast. There is also a weak signal for wetter than normal conditions in the Ohio Valley, with St. Louis on the far northwestern edge of this signal. The key to remember though is that there is a lot of variability in winter seasonal temperatures during La Niña here in St. Louis. For example, the winter of 2011/12 was very warm, while the 2000/01 winter season was well below normal temperature wise. Both of those winters mentioned above had La Niña conditions.

Current contingency plans.

Spire will use three specific plans to manage any potential emergencies during this winter season. Current versions of these plans are included as attachments.

Crisis Management Plan.

At the highest level, Spire Inc. maintains a Crisis Management Plan that governs how Spire responds to any major emergency, accident or incident that has or may threaten the security, confidentiality, integrity, or general operations of the company. This plan is complete and maintained through formal change control.

The current version is provided in the attachments.

Natural Gas Enterprise Emergency Curtailment Plan.

Our emergency curtailment plan details the coordination and management of a natural gas emergency curtailment that is scalable to meet small and large response efforts. This plan utilizes an all-hazards approach to gas supply disruption(s) and will be leveraged with several other plans in response to an incident.

The current draft version is provided in the attachments.

Spire Missouri Response and Recovery Plan.

This plan is being specifically prepared to address a gas outage incident due to a potential Spire STL Pipeline shutdown combined with a cold weather event. It is being developed as a companion plan to the St Louis Regional Response plan. It augments the Spire Inc. internal Crisis Management and Emergency Curtailment plans that detail our company and business protocols and actions. This plan includes comments provided by the regional Emergency Management divisions of St. Louis and Saint Charles counties. Comments are expected from Jefferson County and the City of Saint Louis.

The current draft version is provided in the attachments.

Attachments.

Crisis Management Plan

Natural Gas Enterprise Emergency Curtailment Plan

Spire Missouri Response and Recovery Plan

Scott Carter letter to customers

Memorandum to transportation customers