



To: Railroad Commission of Texas

From: Virginia Palacios and Katherine Culbert, Commission Shift

Date: Monday, November 1, 2021

Subject: Comments on 16 TAC §3.65 and §3.107 (New rule and amendment per SB 3 and HB 3648)

Thank you for your careful consideration of our comments on proposed new 16 TAC §3.65 and proposed amendments to §3.107 to implement HB 3648 and SB 3. Commission Shift is a new statewide 501(c)3 nonpartisan nonprofit organization based in Laredo, Texas. Our mission is to build public support for reforming oil and gas oversight in Texas. We humbly submit these suggestions to ensure the reliability of the natural gas supply chain in winter energy emergencies.

These comments were prepared by Commission Shift's executive director, Virginia Palacios, and deputy director, Katherine Culbert. Palacios has 10 years' experience working on environmental science and policy issues related to oil and gas in Texas; reviewing Railroad Commission (RRC) rules, data, and procedures; and serving as an expert witness before several states' public utility commissions regarding pipeline safety. She also has one year of experience working on state-level policies in Texas regarding investor-owned transmission and distribution electric utilities. Culbert is a registered Professional Engineer in New York State and has over 20 years of experience in process safety and project management for the chemical and oil and gas industries, including eight years in Texas. She has worked with multiple oil and gas companies managing large process safety projects, performing process hazard analyses and site audits, and has been the Safety and Regulatory Manager for a pipeline company. Culbert has facilitated numerous RRC pipeline safety audits and has written and revised operations and maintenance manuals to meet regulatory compliance.

Summary of recommendations

Natural gas fuel supply issues were a primary cause of power outages we experienced this February, as they have been in the past. The RRC must craft critical infrastructure designation rules so that our gas supply chain and electricity supply chain will be reliable in a weather emergency.

The Federal Energy Regulatory Commission (FERC) and the North American Electric Reliability Corporation (NERC) have produced at least two reports in the past ten years emphasizing the need for the RRC to make data-informed management decisions to protect the natural gas supply chain in winter energy emergencies. In 2011, FERC and NERC

identified gas supply shortages as a significant cause of electric generator outages and derates in 2011 and in prior years' winter power outages.¹ The 2011 report recommended that lawmakers and state regulators explore "the adoption of minimum, uniform standards for the winterization of natural gas production and processing facilities."²

This year, a preliminary review of the February 2021 winter freeze by FERC and NERC found that 31% of unplanned generator outages, derates, and start-up failures were caused by fuel issues, and 87% of fuel issues were natural gas fuel supply issues.³ This preliminary finding identified natural gas fuel supply issues as the second-largest cause of outages and derates, behind electricity generator freezing issues. Natural gas production declines caused by shut-ins, freezing issues, and power outages, and mechanical failures and power outages at processing facilities were identified as the root causes of natural gas fuel supply issues.⁴ FERC and NERC recommended that regulators such as the RRC require gas production and transportation facilities to "have cold weather preparedness plans, including measures to prepare to operate during a weather emergency."⁵ Examples of measures include "covering or sheltering sensitive facilities, adding heating equipment, and installing backup generation at critical sites."⁶

The following changes to proposed rule §3.65 are needed:

1. Create a process that ensures off-grid gas supply chain facilities will be weatherized.
2. Don't allow operators to get exceptions so easily.
3. Specify criteria to ensure the right facilities are designated as critical.
4. Reduce redundancies between RRC's critical infrastructure designation and ERCOT's critical load application.
5. Use penalties to encourage operators to weatherize and file for critical infrastructure designation.
6. Collect connectivity information on form CI-D and CI-X attachments.

1. Create a process that ensures off-grid gas supply chain facilities will be weatherized.

Critical infrastructure designation should determine not only which gas supply facilities can potentially maintain electricity service in an energy emergency, but also which gas supply

¹ Federal Energy Regulatory Commission and North American Electric Reliability Corporation. (2011). Report on Outages and Curtailments During the Southwest Cold Weather Event of February 1 - 5, 2011. <https://www.ferc.gov/sites/default/files/2020-04/08-16-11-report.pdf>

² Id. at 214.

³ Federal Energy Regulatory Commission, & North American Electric Reliability Corporation. (2021, September 23). February 2021 Cold Weather Grid Operations: Preliminary Findings and Recommendations. Slides 8 and 9. <https://www.ferc.gov/media/february-2021-cold-weather-grid-operations-preliminary-findings-and-recommendations-ppt>

⁴ Id. at 10.

⁵ Id. at 21.

⁶ Id.

facilities will have to comply with the RRC's future weather emergency preparedness rules for gas supply chain facilities.⁷ However, the proposed rule only ensures companies on the gas supply chain submit their Critical Customer Information (CCI) to electric entities, but it does not go far enough to ensure reliability in the gas supply chain.

The current proposed rule 16 TAC §3.65 reflects an interpretation that the only purpose of critical infrastructure designation is for electric entities to have gas supply chain facilities' information so that the electric entities can prioritize electric load shed in the event of an energy emergency.⁸ This interpretation neglects to acknowledge Section 5 of Senate Bill 3 which requires the commission, by rule, to "require a gas supply chain facility operator to implement measures to prepare to operate during a weather emergency," but which will only apply to facilities that are both: "(1) included on the electricity supply chain map," and "(2) designated as critical by the commission."

Not all facilities are connected to power, and electricity access may not be the sole weatherization measure these operators can take to prepare to operate in a weather emergency. Because of the way that proposed rule §3.65 is currently framed, gas well operators that are not currently connected to power may determine that they do not need to apply for critical infrastructure designation. If facilities that are not currently connected to power apply for an exception to critical infrastructure designation, the RRC's future weather emergency preparedness rules will not apply to them. This means that large parts of the natural gas supply chain may remain unweatherized and the RRC will not have the authority to enforce weatherization standards for these facilities. This will leave our gas supply chain and electric grid vulnerable once again.

Gas Technology Institute offered several winterization methods in the 2011 FERC/NERC report to prevent freezing in gas operations. Many, but not all, of these methods require electricity. Gas wellheads that are not connected to grid power may be able to avoid freeze-offs by employing some of these methods, even if they do not use grid power:⁹

1. Methanol injection to prevent freezing
2. Buildings or "huts" to enclose production equipment and other weather sensitive equipment
3. water removal from the gas stream by glycol dehydration.
4. Heat application for freeze protection
5. A combination of techniques including flow line insulation, methanol injection, gas fired line heaters, keeping flow lines level, minimizing flow chokes, and including fiberglass huts over the wellheads.
6. Pipeline pigging
7. Practical piping and equipment construction considerations for freeze protection such as drainage, and tubing diameter.

⁷ See Section 5, Tex. S.B. 3, 87th Leg., R.S. (2021).

⁸ Railroad Commission of Texas. Sept. 10, 2021. Proposed New 16 TAC §3.65 and Proposed Amendments to §3.107 to Implement HB 3648 and SB 3. p. 2 of 22, lines 10 – 15.

⁹ p. 17 of the GTI report in FERC/NERC (2011).

8. Water removal techniques such as solid absorption, drip pots, or instrument filters.

2. Don't allow operators to get exceptions so easily.

Do not allow critical infrastructure exceptions for facilities that are not yet prepared to operate in a weather emergency, but which also supply local distribution companies (LDCs) and electric generation facilities that serve human needs customers. Senate Bill 3 stipulates that the RRC's critical infrastructure rules must "require that only facilities and entities that are prepared to operate during a weather emergency may be designated as a critical customer under this section."¹⁰

This restriction on applicability would only make sense to apply after the RRC (1) identifies which facilities are needed to supply electricity generators and LDCs serving human needs customers, and (2) finalizes its weatherization rules. In other words, in the future it would make sense for the RRC to remove critical infrastructure designation from gas supply chain facilities that are not compliant with the RRC's future weatherization rules. Along these lines, electric entities should not be in the position of supplying power to gas supply chain facilities that are not compliant with weatherization rules.

The currently proposed 16 TAC §3.65 allows operators to get an exception from critical infrastructure designation -and the RRC's future weatherization rules- if "the facility's operator asserts the facility is not prepared to operate during a weather emergency."¹¹ The proposed rule does not require the RRC nor the operator to consider that facility's connection to LDCs and electric generation facilities that serve human needs customers.

If the proposed rule is finalized without resolving this issue, it is highly likely that our grid will remain as vulnerable as it was in February. We will have no assurance that the electric generation facilities will have access to the fuel supplies they need to operate. There will be a patchwork of facilities that apply for critical infrastructure designation, with no guarantee that these facilities connect to one another. For example, even if all the gas pipeline facilities in the state are weatherized and designated as critical infrastructure, this proposed rule leaves open the possibility that none of the gas well facilities in the state will be designated as critical infrastructure. Freeze-offs at the wellhead would result in the same catastrophic events we saw this February.

Members of the Senate Business and Commerce committee reiterated the importance of resolving this issue in a letter to the RRC sent on October 8th: "Under no circumstances should a component of the natural gas supply chain that is directly tied to electric power generation be allowed to opt out of the critical designation requirements, and subsequent weatherization."¹²

¹⁰ See Section 4, Tex. S.B. 3, 87th Leg., R.S. (2021).

¹¹Railroad Commission of Texas. Sept. 10, 2021. Proposed New 16 TAC §3.65 and Proposed Amendments to §3.107 to Implement HB 3648 and SB 3. p. 10 of 22, lines 14 - 17.

¹² Senate Business and Commerce Committee. October 8, 2021. Comments on Critical Designation Rules. Retrieved from: <https://drschnetner.com/2021/10/senate-bc-comments-on-critical-designation-rules/> Accessed on October 29, 2021.

3. Specify criteria to ensure the right facilities are designated as critical.

The RRC should add explicit criteria and processes to proposed rule 16 TAC §3.65 to ensure that the rule is applicable and mandatory to gas supply infrastructure that provides fuel to electric generation facilities and LDCs serving human needs customers. Such criteria should not be a matter of forms, internal procedures, or guidance but should be a formalized part of the rule language.

We recommend the RRC require operators to submit form CI-D and CCI for their facilities unless they supply the commission with documentation demonstrating which of their facilities do not at any point supply fuel to an electric generation facility or human needs customers. Only facilities that don't supply fuel to an electric generation facility or LDCs serving human needs customers should be granted an exception to critical infrastructure designation. It should be up to the RRC to determine which facilities are critical, not up to the gas companies. Part of this exercise will include following every possible line back to every possible wellhead, not only relying on the way gas is flowing on one day.

The Senate Business and Commerce Committee members and other individuals who have already commented on this proposed rule have expressed concern that too many facilities will be included in critical infrastructure designation, and that the electric entities will have a hard time prioritizing load shed if unnecessary facilities are designated as critical. That assessment disregards how easy it would be for operators to simply submit an exception request as the rule is currently written. The proposed rule states that "... all entities designated in subsection (b) are critical gas suppliers..." yet it allows critical gas suppliers to opt out of being critical. Once a facility is designated as critical, then it needs to be required that the facility is properly weatherized and available to operate in a weather emergency.

It may be that significant portions of the natural gas supply chain are changing suppliers and transporters so frequently that facilities' status as critical would be dynamic. We can envision the RRC setting up a nimble electronic reporting system that could capture such changes in supply and service on a regular basis, but that system is not yet in place. Until it becomes available, a safer solution would be to err on the side of designating more natural gas supply chain facilities as critical than not.

4. Reduce redundancies between RRC's critical infrastructure designation and ERCOT's critical load application.

Gas supply chain operators are already able to submit their facilities' information to their utilities to be considered critical load, as the RRC has reminded the industry of multiple

times this year with “notices to operators.”^{13,14,15} The RRC has not clarified whether operators will still be able to submit an ERCOT *Application for Critical Load Serving Electric Generation and Cogeneration* (“ERCOT Critical Load Application”) with their electric utility after 16 TAC §3.65 is finalized. If the ERCOT Critical Load Application process remains available, gas supply chain facilities might simply pay the \$150 exception fee with the RRC,¹⁶ file the ERCOT Application, and never be held accountable to the RRC’s penalty guidelines nor future weatherization requirements. There is no provision to disallow a facility from filing as a critical load with its electric utility if the facility is not properly weatherized.

Table CCI that is required to be submitted requests the information be submitted to “the electric entity providing power,” which does not specify if the information should be submitted to the transmission and distribution utility provider or the Retail Electric Provider (REP). The RRC should clarify which electric entity operators should submit Table CCI to. With REPs changing in Texas regularly, it seems that this information could again be lost and will not be available when an emergency happens. In competitive areas of the state, the information needs to be submitted to the transmission and distribution utility provider to ensure load shed does not affect the critical facilities, and it would be helpful for Table CCI to specify this as a requirement.

5. Use penalties to encourage operators to weatherize and file for critical infrastructure designation.

In addition to closing the ERCOT Critical Load Application process after 16 TAC §3.65 is finalized, RRC should re-evaluate the fees and penalties associated with the rule. The current fee and penalty structure makes it far cheaper for an operator to apply for an exception to critical infrastructure designation than to participate in the designation process. Aside from the critical infrastructure process, the future weatherization rules will potentially expose operators to greater risk of penalties if they violate the weatherization rules.¹⁷ An operator that wants to avoid the potential risk of future inspections, violations, and penalties would naturally choose to file for an exception to critical infrastructure designation if there is no criteria indicating the RRC will deny their application for an exception.

Currently proposed fees and penalties

¹³ Railroad Commission of Texas. (2021). Notice to Operators: Application for Critical Load Serving Electric Generation and Cogeneration. <https://www.rrc.state.tx.us/media/5bwf5b0z/2021-notice-to-operators-critical-load-form-3-17-2021.pdf>

¹⁴ Railroad Commission of Texas. (2021). Notice to gas facility operators and gas pipeline facility operators: Preparation by operators for winter 2021-2022. http://www.ercot.com/content/wcm/key_documents_lists/174326/Final_-_pdf_-

¹⁵ Railroad Commission of Texas. (2021). Notice to Operators: Reminder to File ERCOT Designation for Critical Loads Serving Natural Gas-Fired Electric Generation. https://www.rrc.texas.gov/media/ov2j2bsh/2021-nto_ercot-critical-load-10-22-2021.pdf

¹⁶ Proposed 16 TAC §3.65 (d).

¹⁷ See Section 6, Tex. S.B. 3, 87th Leg., R.S. (2021).

Form	Filing fee	Frequency	Minimum penalty for failure to file
CI Designation (CI-D)	None	2/year	\$1,000
CI-D: Table CCI	None	2/year	\$2,500
CI Exception (CI-X)	\$150	Once	\$1,000

The above table demonstrates that operators would risk higher penalties if they file for critical infrastructure designation than if they file for an exception. A better system would require operators to pay a penalty greater than \$2,500 if they applied for and are granted an exception but are later found to supply gas to electric generation facilities or LDCs serving human needs customers.

6. Collect connectivity information on form CI-D and CI-X attachments.

The proposed forms (ci-d-attachment and ci-x-attachment) are going to provide an overwhelming amount of data to the RRC's Critical Infrastructure Division that the RRC already has in its databases. The RRC assigns things like the T-4 number and the Gas Well ID number, the agency does not need to collect that information again. It will be time consuming and repetitive for the gas companies to create the lists with every piece of information included.

The proposed forms are missing an opportunity to collect information that will prevent gas supply issues for electric generation facilities because the forms only ask if pipelines and LDCs are connected to natural gas electric generation facilities. More useful information would include which upstream facilities those pipelines are also connected to, so that the RRC can determine which other facilities should be considered critical infrastructure. Conversely, RRC should collect information about which pipelines gas wells connect to. Without looking at the full supply chain, there will continue to be gaps in weatherization and the possibility of electric generation facilities losing their supply fuel.

Nonetheless, there is no provision for what is going to happen tomorrow. Gas companies sell their gas to the highest bidder, and they may turn valves and provide gas to a different customer tomorrow, which may change the answers on the forms. RRC should conduct an analysis to determine whether it is possible to except certain upstream or midstream facilities from critical infrastructure designation, or if the dynamic nature of gas flows truly makes all these facilities critical.

Additionally, there are many gas supply chain facilities that are not connected to the grid, so the requirement to submit the CCI is not applicable, however there is no provision for that instance. In the case where there is no electricity at a facility, there does not seem to be a reason to file form CI-D, as it is specified that the only reason to file the form is "to acknowledge critical designation of facilities under §3.65(b) and certify that critical customer information (defined in §3.65(a)(3)) described on Commission Table CCI has or will be provided to the facility's electric utility pursuant to §3.65(e)." If there is no electricity at a

facility, there is no reason to provide information to an electric utility because there is no electric utility. Nonetheless, facilities that supply fuel to electric generation facilities and LDCs serving human needs customers should still be designated as critical infrastructure so that they will be required to weatherize, even if they are not connected to grid power.

Conclusion

Everyone who lives in Texas now or will live in Texas is counting on the Railroad Commission of Texas to secure the parts of the natural gas supply chain that are essential to the operation of our electrical grid. Gas supply chain operators alone will not voluntarily make the changes that are necessary. A competent and functioning oversight body is an important ingredient to providing the leadership necessary to secure the grid this winter and in future winters.

The RRC should have responded to FERC and NERC's 2011 recommendations by requiring weatherization 10 years ago. The consequences of the RRC's inaction were dire. Hundreds of Texans died because of widespread power outages this February, and those of us who did not will always remember that traumatic experience. Collectively, Texans have been saddled with hundreds of billions of dollars in damages and we face higher gas and electric utility costs. Please do not let this be another year where the RRC ignores recommendations and instead carves out loopholes for the industry's worst actors.

Now is the time for the Railroad Commission to ensure the reliability of the gas supply chain by making data-informed management decisions that benefit all Texans. The following changes to proposed rule 16 TAC §3.65 and amendments to §3.107 will help to secure reliability of the gas supply chain and electric grid in energy emergencies:

1. Create a process that ensures off-grid gas supply chain facilities will be weatherized.
2. Don't allow operators to get exceptions so easily..
3. Specify criteria to ensure the right facilities are designated as critical.
4. Reduce redundancies between RRC's critical infrastructure designation and ERCOT's critical load application.
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