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April 25, 2023

**TO:** NAESB Gas-Electric Forum and Interested Parties

**cc:** NAESB Board of Directors, Executive Committee (EC) Members, EC Alternates, Members, and Advisory Council

**FROM:** Rae McQuade, NAESB President & Jonathan Booe, NAESB Executive Vice President & COO

**RE:** NAESB Gas-Electric Forum Survey Responses – April 24, 2023 – Revised with additional comments related to Questions 2.a.1, 2.b.1, and 2.b.2

Dear NAESB Members, GEH Forum Participants and Interested Parties,

Please find below the comments received by the NAESB Office in response to the survey/request for comments that was distributed on April 6, 2023: <https://www.naesb.org/pdf4/geh042723w1.docx>.

| **Responses Submitted by April 24, 2023** | | | | | |
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| **Question/Topic** | | **Measures to improve reliability of natural gas facilities during cold weather (freeze protection, electric supply)**  *2.a Additional state actions (including possibly establishing an organization to set standards, as NERC does for the Bulk Electric System entities) to enhance reliability of intrastate natural gas pipelines and other intrastate natural gas facilities.*  The Forum was asked to consider the creation of an organization that could establish reliability standards for intrastate natural gas facilities and pipelines; however, there has not been much discussion regarding this topic as part of the GEH Forum record specific to state actions.  Question   1. Should state legislative and/or regulatory authorities consider the creation of such an organization, and if so, what actions should the organization undertake to enhance the reliability of pipelines and natural gas facilities? | | | |
| **#** | **Organization** | | **Representative** | **Market/Segment** | **Comment & Specific Recommendation** |
| 1 | NGSA | | Pat Jagtiani | WGQ Producer | NGSA does not see a need to create a new authority to develop standards for intrastate natural gas facilities given that states already have that authority if standards are needed, and such standards may be duplicative and conflict with other reliability standards that are already in place. If such a standards authority for intrastate facilities is considered, states should detail what role the new authority would serve that is distinct and how it would fill an existing oversight gap that is not already covered by existing authorities. |
| 2 | Kinder Morgan, Intrastate Pipeline Group | | Bill Wolf | WGQ Pipeline | As a general backdrop to understanding intrastate pipelines, it is important to note that the Federal pipeline market and the Texas pipeline market have developed very differently over time for very different reasons, responding to very different market dynamics. Texas intrastate pipelines serve not only electric generators and gas distribution companies, but many small local end users, cooperatives, and various small industries including agricultural and chemical uses. These users are very different than the typical customers of large interstate pipelines, and material differences between these very different markets need to be kept in mind when evaluating some of the questions being discussed by this Committee.  Specifically responding to this question, Texas state legislative or regulatory authorities should not create an organization to establish reliability standards for natural gas facilities and pipelines because the legislative design of the Texas gas market establishes reliability standards within the bilateral contracts entered by intrastate gas utility pipelines and their customers. In addition, the conduct of such intrastate gas utility pipelines is overseen in all aspects by, and subject to complaints before, the Railroad Commission of Texas, which can serve to ensure the reliable performance of gas transportation and delivery functions in the market. In addition, because intrastate pipelines are subject to the laws of the state of Texas and regulation by the Railroad Commission of Texas, it is unlikely an independently established organization would have jurisdiction or legal authority to regulate intrastate pipelines unless that legal authority is conveyed to it by the state legislature. |
| 3 | American Electric Power | | Kate Daley | WEQ – Generator | The benefits and challenges of an organization to establish reliability standards for intrastate natural gas facilities and pipelines is worth considering. While Congressional action or multiple state legislatures/regulatory bodies acting in tandem could take significant time and effort, such an organization – perhaps using a NERC-like structure – has the potential to create efficiencies and bolster reliability through consistent standards. As it relates to Bulk Power System reliability, clear regulatory authority is needed over natural gas when used for electric generation. |
| 4 | AGA | | Matthew Agen | WGQ – LDC | States have the authority to regulate intrastate pipelines. For example, in Michigan, the Public Service Commission regulates intrastate pipelines and facilities and related standards of performance. On the other hand, the Pipeline and Hazardous Materials Safety Administration also sets the minimum federal pipeline safety regulations for intrastate pipelines. Lastly, data does not support the implication that intrastate pipeline reliability in Michigan is problematic.  This question raises serious jurisdictional issues, as it is not clear what jurisdiction states would be relinquishing to such a proposed entity that would establish reliability standards for intrastate facilities and what the benefits would be. It is not clear how a “NERC” for intrastate facilities would be any different than just a state acting within its authority. For example, if Texas, California, Michigan, or Pennsylvania see an issue on the intrastate pipeline system, each state would be in the best position to address the matter. It is also not clear how “intrastate” would be defined. Natural gas utilities are regulated by state commissions and AGA is concerned that a “NERC” for intrastate facilities would also apply to distribution facilities. In short, states should maintain their authority over intrastate facilities, as well as distribution facilities. To address matters, each state could encourage the development of groups representing different market participants that could have meetings for extreme weather events when needed. |
| 5 | MISO | | Bobbi Welch | WEQ – ISO/RTO | Currently, there is a jurisdictional gap when it comes to the regulation of wellheads (i.e., producers). This presents a problem that relies on intrastate requirements to meet interstate reliability performance needs.  As FERC’s jurisdiction does not extend to the wellhead, MISO believes that state regulators can play a valuable role regarding the reliability of service from wellheads within their jurisdiction. For example, state regulators could determine what is an acceptable reliability baseline for wellhead operations and to what extent wellheads should be winterized or protected to prevent water and other liquids in the gas from freezing and blocking the flow of gas (a/k/a freeze-offs).  To ensure there is a level playing field across all states and to the extent not addressed otherwise at the federal level, it will be important for states to agree on an appropriate reliability baseline. If there are variances in performance expectations from one state to another, it could lead to competitive advantages and disadvantages in the market. From that perspective, MISO recommends the establishment of a nationwide forum so that states can collectively agree on how to address this issue. |
| 6 | Gas & Oil Association of West Virginia | | Charlie Burd | WGQ – Producer, Pipeline, LDC | If there is to be an organization setting such standards, it should be one organization that promulgates standards for the entire industry. NAESB has traditionally filled that role, and we see no reason for creating a separate such entity at this point. Having state legislatures or agencies address this may prove counterproductive. Such an approach may result in a patchwork of standards, which end up being different in every state, thus rendering them not truly a “standard” across the industry. |
| 7 | Nebraska Public Power District | | Thomas Schroeder | WEQ – Generator | No. Issues with the natural gas production during extreme cold weather events are already being addressed. |
| 8 | AF&PA and Gas Consumers Group | | Andrea Chambers & Jameson Calitri | WGQ End User | AF&PA and PGC would support state legislative bodies or regulatory authorities adopting laws and regulations to enhance the reliability of pipelines and natural gas facilities in their respective states; provided that these reliability standards do not interfere with our contractual rights to our gas pipeline capacity and gas supplies.  • AF&PA and PGC would support cost-effective measures to increase weatherization of fuel supply facilities, including natural gas production and processing facilities, as this seems to have been a major issue in recent storms. NERC’s final report on Winter Storm Uri indicated that 87 percent of unplanned generation outages due to fuel issues were related to natural gas, and were predominantly related to production and processing issues, while 13 percent involved issues with other fuels such as coal or fuel oil. Natural gas fuel supply issues were caused by natural gas production declines, with 43.3 percent of natural gas production declines caused by freezing temperatures and weather, and 21.5 percent caused by midstream, wellhead, or gathering facility power losses, which could be attributed either to rolling blackouts or weather-related outages such as downed power lines. On February 15, 2021, natural gas processing declined 80% according to the report. According to a report on Winter Storm Elliott, by Energy Ventures Analysis, one of the primary reasons for the significant drop in natural gas generation in PJM during the storm was the lack of available fuel supply. As temperatures dropped rapidly in the region, natural gas production in the Appalachian region dropped by 27% due to well freeze-offs.  • AF&PA and PGC also support the construction of more pipeline capacity as a means to increase grid reliability and also avoid the adverse environmental impacts of burning oil as a consequence of inadequate natural gas transportation capacity to provide gas supplies, especially during storm events. The AVE report indicates that in the NE-ISO and NYISO regions, during Winter Storm Elliott, natural gas generation averaged only 10.6 GW, which represents a drop of over 25%, as plants struggled to operate amid reduced natural gas deliveries from one pipeline system supplying the regions. To compensate for the loss of available natural gas-fired generation, ISO-NE and NYISO called on oil-fired backup generators and dual-fueled (natural gas and fuel oil) power plants. Between December 23 & 26, hourly oil-fired generation averaged over 4.3 GW, which completely offset the loss of natural gas generation during that period.  • AF&PA and PGC oppose efforts to require all shippers to nominate on holidays and weekends absent any evidence that the inability to nominate gas on the weekend was an issue in either storm. Having reviewed the winter storm reports for both Winter Storm Uri and Winter Storm Elliott, the reports suggest that winterization caused a decrease in natural gas supply and that there were also problems with pipeline pressure on one pipeline. In both cases, there was no additional gas supply to be obtained during the storm. Therefore, allowing additional nominations would not appear to be a means to obtain more supply as the wells were frozen, the processing plants were down and at least one pipeline was struggling to maintain pressure on its system. AF&PA and PGC members do not want to incur the expense of having to staff round the clock when there is no indication that such measures will resolve the problem. Rather, it appears that weatherization of facilities and building additional pipeline capacity would address some of the issues that the reports indicate were primarily responsible for the lack of fuel experienced by generators. |
| 9 | Interstate Natural Gas Association of America | | Christopher Smith | WGQ Pipeline | INGAA submits this response on behalf of the interstate natural gas companies that comprise its membership. Although some of those companies also operate intrastate natural gas pipelines, INGAA does not represent the interests of intrastate pipelines and takes no position on survey questions as applied to intrastate pipelines. |
| 10 | Xcel Energy | | Terri Eaton | WEQ Marketer/Broker | Xcel Energy would support such a step, along the lines of the framework established for electric reliability under NERC, with industry input into the standards development process but ultimate approval of standards by FERC or other federal agency, such as TSA which currently has responsibility for pipeline cybersecurity. Standards would focus on steps needs to ensure a reliable gas supply, addressing potential operational issues including weatherization and cybersecurity.  Some sort of standard setting for gas well weatherization is also in order. |
| 11 | Atmos Energy | | Joe Christian | RMQ – Gas Market Company | No |
| 12 | Aspen Environmental Group | | Catherine Elder | Observer | My idea is an entity that can be fired up under adverse circumstances to facilitate communication and connect parties to shift resources where they are needed. I think it has to be interstate because it has to be able to share information between and among the pipelines, LDCs, generators, ISO/RTOs and large industrial customers. Now, should the states band together to create this via maybe NASEO? But a weather event isn’t going to be limited to a single state usually. |
| 13 | Great River Energy | | Katie Ege | WEQ – Generator | Firm transportation or back up fuel along with heat tracing and building around some enclosures to ensure the unit will be able to start in cold weather. The morning peak is tricky with natural gas units if there is no storage so having MISO commit units in the DA vs RT runs would help ensure natural gas availability. |
| 14 | Southwest Gas Corporation | | John Olenick | WGQ – LDC | No |
| 15 | SPP | | Joshua Phillips | WEQ – ISO/RTO | To the extent such organization is developed, a focus should be regional or national organizations to avoid different reliability directive for each state. 50 sets of reliability standards would be a challenge to manage. |
| 16 | New England LDC Group | | John Rudiak & Eric Soderman | WGQ - LDC | Intrastate facilities currently fall under the jurisdiction of their respective states’ authority and its unique utilization and operating environment which varies across the country such that each state could examine their specific information and market dynamics to assess a need for further oversight as opposed to a national organization. |
| 17 | Ohio Oil and Gas Association | | Rob Brundrett | WGQ – Producer, Pipeline, LDC | NAESB has traditionally filled the role as organizing body for setting standards. We see no reason for the creation of a brand new organization. Have state legislatures or agencies may prove counterproductive. Each of these groups have different views and philosophies including political on these issues. That type of approach may create more of a national patchwork of standards, which would make it nearly impossible to comply and the potential move away from one true national “standard.” |

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| **Question/Topic** | | **Measures to improve reliability of natural gas facilities during cold weather (freeze protection, electric supply)**  *2.a Additional state actions (including possibly establishing an organization to set standards, as NERC does for the Bulk Electric System entities) to enhance reliability of intrastate natural gas pipelines and other intrastate natural gas facilities.*  Several recommendations for consideration included in this section of the February Survey suggested enhancing intrastate reliability through greater transparency, increased information sharing, and utilization of secondary markets.  Questions   1. Are there specific state actions that would promote increased information sharing and transparency or greater consistency in how existing information is shared between intrastate market participants? 2. What specific actions could be considered by state regulators to support secondary intrastate markets? | | | |
| **#** | **Organization** | | **Representative** | **Market/Segment** | **Comment & Specific Recommendation** |
| 1 | NGSA | | Pat Jagtiani | WGQ Producer | 2.) To the extent possible, States should consider legislation or through their public service commission, propose rules and regulations to develop a framework for intrastate natural gas facilities that is similar to the regulations that currently exist in interstate natural gas markets. Some of the essential components that would substantially bolster transparency in intrastate markets include standardized EBBs, critical notices, capacity release provisions, compliance with NAESB standards and compliance with affiliate rules of conduct. Also, FERC may be able to achieve some of these goals as part of their oversight authority of NGPA § 311 pipelines.  3.) See response to Number 2 above. |
| 2 | Kinder Morgan, Intrastate Pipeline Group | | Bill Wolf | WGQ Pipeline | 2. & 3.) Ideas to promote information sharing and transparency have been considered and rejected by the legislature and regulators in favor of a market design in which the parties to a contract are free to decide whether they would like the commercially sensitive elements of their transaction to become public or to remain confidential. Access to certain operating condition information pertinent to the customer is specifically available pursuant to terms of their contract with the pipeline and often are available via form of electronic bulletin board available to customers.  In addition, as noted above, it is important to note that the Federal pipeline market and the Texas pipeline market have developed very differently over time for very different reasons, responding to very different market dynamics. Secondary capacity markets work well in the interstate markets because of the type of customer, larger typical contract volume, and point-to-point nature of the transportation paths. Intrastate pipelines provide a combination of long-haul, point-to-point service along with distribution-like services to small customers who do not have the resources necessary to manage their own gas supply and transportation needs. Many of these customers rely on intrastate pipelines to provide a reliable, delivered product that bundles transportation, storage, and supply on a firm basis to deliver natural gas to the points they need it in a reliable manner. This is an incredibly important service that intrastate pipelines provide, and one that has been recognized repeatedly by the Railroad Commission of Texas and the Texas legislature. These customers make up a significant part of the contract portfolio of intrastate pipelines and would be materially adversely affected by changes in state law that would require them to manage all aspects of their supply and transportation needs separately and independently. |
| 3 | American Electric Power | | Kate Daley | WEQ – Generator | 2. & 3.) As discussed during the April 4, 2023, NAESB GEH meeting, on peak days, additional capacity is not available to be released in the secondary market. All shippers likely would be using their full contractual rights to meet their obligations. |
| 4 | AGA | | Matthew Agen | WGQ – LDC | 2.) For intrastate matters states have varying regulatory mechanisms. For example, Michigan utilities have central system control operational groups that coordinate amongst themselves and interstate pipelines control groups to address intrastate reliability. Additionally, the use of secondary markets is not applicable to Michigan utilities that do not flow gas off their system. Each state’s use of the intrastate system seems to be based on its energy needs and market participants; hence the individual states are in the best position to address any intrastate matters. |
| 5 | MISO | | Bobbi Welch | WEQ – ISO/RTO | 2.) MISO supports increased information sharing and transparency by intrastate pipelines. If this recommendation is pursued, MISO recommends that intrastate pipelines follow the same NAESB business practice standards for postings as those used by interstate pipelines for purposes of consistency. |
| 6 | Nebraska Public Power District | | Thomas Schroeder | WEQ – Generator | This has not been an issue with our ability to secure natural gas during cold weather events. |
| 7 | AF&PA and Gas Consumers Group | | Andrea Chambers & Jameson Calitri | WGQ End User | 2. & 3.) AF&PA and PGC support requirements to share more information about intrastate pipeline operations through open and transparent postings to all shippers on the pipeline, especially during a storm or other event that affects the reliable operation of the pipeline. Intrastate pipelines could be required to post information on a website that is available to all shippers, which is similar to what FERC requires for intrastate pipelines. The state regulators could also mandate the specific information that must be provided on a uniform and timely basis. AF&PA and PGC also support the increased sharing of information related to the levels of storage inventory. While some pipelines post information on their storage inventory, many do not. AF&PA and PGC support uniform requirements for all pipelines to post up-to-date information on storage levels.  AF&PA and PGC note that their members are experiencing OFOs for most of the month on certain pipelines and that the information posted by these pipelines is not very detailed, which makes it difficult for AF&PA and PGC members on these pipelines to determine when they will be able to obtain transportation. As such, AF&PA and PGC would like to see pipelines share more detailed information on OFOs. The current FERC regulations do not require much detail other than to provide “timely information that will enable shippers to minimize the adverse impacts” of OFO measures. These regulations should be updated to require pipelines to share specific information regarding OFOs on a uniform basis that will enable shippers to plan ahead and mitigate or avoid any adverse impacts. |
| 8 | Xcel Energy | | Terri Eaton | WEQ Marketer/Broker | We continue to support widespread adoption of reporting requirements that align with FERC’s requirements under 18 C.F.R. § 284.13. In addition, intrastate pipelines should be being subject to the same requirements as interstates under 18 CFR § 284.13, Reporting Requirements for Interstate Pipelines. |
| 9 | Great River Energy | | Katie Ege | WEQ – Generator | None |
| 10 | Southwest Gas Corporation | | John Olenick | WGQ – LDC | Possibly, but not sure what specific actions could be considered at this time |
| 11 | Evergy | | Alan Kloster | WEQ – Generator | Evergy supports the increased information sharing and transparency of the intrastate market participants, similar steps to what has been taken on the interstate system. |
| 12 | SPP | | Joshua Phillips | WEQ – ISO/RTO | 2.) The additional information from intrastate impacts would be beneficial for managing the Bulk Electric System when gas generators experience sudden changes in availability due to fuel supply. From discussion, adopting the use of critical or other such notice of operating conditions seems to be absent within intrastate jurisdictions. State commissions should consider whether adopting existing NAESB standards for those intrastate resources are appropriate. Additionally, consideration should be made as to whether entities injecting or withdrawing from an interstate pipeline can be required to follow FERC adopted NAESB standards, such as submitting notices either to the interstate pipeline for posting or posting such operational notices on own. |
| 13 | New England LDC Group | | John Rudiak & Eric Soderman | WGQ - LDC | States could consider some level of reporting if applicable and appropriate similar to interstate pipelines. |

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| **#** | **Organization** | | **Representative** | **Market/Segment** | **Comment & Specific Recommendation** |
| 1 | NGSA | | Pat Jagtiani | WGQ Producer | NGSA believes that a diverse portfolio of natural gas assets is critical to maintaining reliable service, especially during critical constrained periods and that entering into firm contractual arrangements and having storage available are key components of any reliable portfolio. We understand that Texas has considered some actions along these lines and we encourage other states, regions, as well as regional operators to assess whether gas-fired generators in their region have taken steps to build a diverse portfolio that is aligned with the level of reliability they require and that they are confirming that each gas generator’s running parameters are realistic and are in line with how they can actually perform based on their contractual commitments as well as the gas industry operating parameters such as ratable takes and the NAESB nomination cycles and flow times. |
| 2 | Kinder Morgan, Intrastate Pipeline Group | | Bill Wolf | WGQ Pipeline | In the first instance, natural gas storage should not be thought of as a back-up source of supply, but rather a tool to manage gas costs and ensure reliable delivery of natural gas. In addition, however, the Public Utility Commission of Texas and ERCOT have worked to implement the firm fuel supply service (“FFSS”), an electric wholesale market ancillary service that would provide a power price premium to generators that can demonstrate firm gas storage and transportation rights on which they can rely to fuel power generation during a weather emergency. The FFSS with on-site fuel has already been successfully deployed in ERCOT during a weather emergency. The FFSS product now needs to include intrastate gas storage and pipeline transportation so that it can be implemented for off-site storage facilities at a scale appropriate for the size of ERCOT’s gas-fired generation fleet. |
| 3 | Nebraska Public Power District | | Thomas Schroeder | WEQ – Generator | None that I know of here in Nebraska |
| 4 | AF&PA and Gas Consumers Group | | Andrea Chambers & Jameson Calitri | WGQ End User | Recent experience with cold weather in the Pacific Northwest during Winter Storm Elliott shows the benefit of market-area storage and LNG peaking facilities that help meet natural gas demand during extreme weather events and deal with so-called needle peaks, or peak demand requirements that are only experienced on the very coldest days or the most extreme weather events. [Strategic storage key to keeping Pacific Northwest warm | Williams Companies](https://www.williams.com/2023/01/31/strategic-storage-key-to-keeping-pacific-northwest-warm/). Paying generators to sign up for such services would provide incentives need to support construction of storage. |
| 5 | Xcel Energy | | Terri Eaton | WEQ Marketer/Broker | First, firm transportation is no antidote to freezing wellheads. Steps must be taken to require weatherization of gas wells.  Second, we support expanded use of storage and we have a significant amount of storage on our system. However, storage alone will not solve the problem of gas shortages due to freezing wellheads. Further, storage is likely a far more expensive (i.e., less economical) solution than weatherization of wellheads. New storage services would require adequate geological conditions, and likely require firm long-term financial commitments from users. |
| 6 | Great River Energy | | Katie Ege | WEQ – Generator | Firm transport of pipelines is too expensive for a unit that runs less than 5% of the year. |
| 7 | Southwest Gas Corporation | | John Olenick | WGQ – LDC | Not sure if any states have taken any action in this area. |
| 8 | Evergy | | Alan Kloster | WEQ – Generator | Evergy supports taking steps to require weatherization of gas wells and expand the use of storage.  Some states are considering requirements for natural gas generators to carry a certain percentage of the gas supply in firm storage. These types of firm storage requirements may work for some geographical regions and power generation users but may be more challenging in certain areas of the country to implement. |

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| **#** | **Organization** | | **Representative** | **Market/Segment** | **Comment & Specific Recommendation** |
| 1 | NGSA | | Pat Jagtiani | WGQ Producer | NGSA believes that it would be helpful for all intrastate pipelines to provide firm service options to its customers, including gas-fired generators. While some may offer firm services, this is not uniform across the board. |
| 2 | American Electric Power | | Kate Daley | WEQ – Generator | AEP utilizes natural gas storage and firm transportation to support its natural gas-fired generation. Generators must make challenging decisions to balance the need for such services to maintain reliability with the costs of those services.  Importantly, access to pipeline transportation capacity is only part of the equation. Adequate natural gas supply must be available to be transported to delivery points. Specifically, subscribing to 100% firm transportation would not have solved reliability issues related to natural gas during recent winter storms. For example, during Winter Storm Uri, there was limited gas supply injected into pipelines because 30% of domestic production was shut-in due to freeze-offs. If wellheads and other supply facilities and equipment freeze, there is no gas to move. Subscribing to firm transportation will not address disruptions in supply. |
| 3 | Nebraska Public Power District | | Thomas Schroeder | WEQ – Generator | No |
| 4 | Great River Energy | | Katie Ege | WEQ – Generator | None |
| 5 | Southwest Gas Corporation | | John Olenick | WGQ – LDC | Given that Texas is the only state that has a combination of natural gas production, intrastate pipelines, and a power system that relies on those assets to reliably operate, it seems this question is directly related to Texas and how it regulates its intrastate pipelines and generation assets it likely has little applicability to any other state and most states other than Texas likely do not need to take any actions. |
| 6 | American Public Gas Association | | Stuart Saulters | RMQ – Gas Market Company | APGA would like to reiterate the fact that almost all of its members are owned, operated, and governed by the communities that they serve. This means each locality sets rates and policies for its natural gas distribution system, not the state public utility commission. In this way, communities are able to set policies for their utility that best meet the needs and resources of the community. Accordingly, changes at the state-level may not have the intended impact for the 1,000 public gas systems across the country.  While APGA does not have any specific recommendations, we would like to reemphasize the need for any actions not to impede upon existing contracts and for the costs of any proposals to be fairly allocated to market participants so as to not unduly burden public gas distribution systems and their customers. |

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| **Question/Topic** | | **Measures to improve reliability of natural gas facilities during cold weather (freeze protection, electric supply)**  *2.b Programs to encourage and provide compensation opportunities for natural gas infrastructure facility winterization*  Two recommendations included as part of the February Survey suggested the consideration of strategies and requirements to incentivize weatherization of critical gas facilities, including those reliant on electric power; however, not many specific proposals have been offered.  Question   1. Are there any strategies, requirements, economic incentives or other compensation mechanisms that could encourage winterization for natural gas infrastructure facilities that should be recommended by the Forum? | | | |
| **#** | **Organization** | | **Representative** | **Market/Segment** | **Comment & Specific Recommendation** |
| 1 | NGSA | | Pat Jagtiani | WGQ Producer | There is an inherent incentive for upstream natural gas operators to ensure that their production continues to flow so they can continue to sell their gas. Thus, producers are already incentivized to take safe and operationally sound steps to maintain operations during cold weather events. Producers make decisions about their investment and drilling of individual wells based on economics and the cost of weatherization obviously can influence those decisions. Therefore, if regulators and industry stakeholders find that it is essential for BES reliability for upstream natural gas facilities to be weatherized beyond the steps that would be taken by reasonably prudent operators, then NGSA believes it would be appropriate to consider economic incentives that would result in such actions. However, it is important to note that there is no amount of weatherization activity that can guarantee 100% performance given that extreme weather events can create situations that are beyond an operator’s control. Critically, personnel safety and environmental protection must be maintained. |
| 2 | Kinder Morgan, Intrastate Pipeline Group | | Bill Wolf | WGQ Pipeline | The Texas legislature has already mandated weatherization of facilities for gas supply chain and gas pipelines facilities. Those mandates were implemented by the Railroad Commission of Texas in its Statewide Rules 65 and 66. 16 TEX. ADMIN. CODE §§ 3.65, 3.66. |
| 3 | American Electric Power | | Kate Daley | WEQ – Generator | AEP has participated in NERC Reliability Standards efforts to develop existing and proposed new weatherization standards for natural gas generators, and voted to support those efforts.  As previously mentioned, freezing temperatures during Winter storms Uri and Elliott caused natural gas supply infrastructure to freeze and natural gas supply to be shut in. FERC, NERC and state regulators should consider jurisdictional issues and requirements for weatherization of natural gas supply facilities and equipment. Regulators should consider minimum requirements to weatherize natural gas infrastructure so that during a winter storm a significant amount of gas production is not lost when it is needed the most. Proposals for individual suppliers to post publicly information regarding their well-head freeze-offs during severe weather should be considered and could incent weatherization efforts. |
| 4 | AGA | | Matthew Agen | WGQ – LDC | Weatherization of upstream facilities is foundational to safe and reliable service to customers. The downstream impacts of improperly weatherized facilities can be severe, including inadequate supply or system pressure that trigger emergency operations and/or potential curtailment measures. FERC could play a role in requiring weatherization investment as a pre-requisite for interconnection to the interstate natural gas system.  Weatherization should already be an expectation. Providing special compensation to, for example, upstream producers or processors for what should already have been done is not appropriate. Market fundamentals should incentivize weatherization investments and economic incentives are not necessary. Upstream market participants that choose not to weatherize may experience a reduction in market share as interruptions due to cold weather, for example, would incentivize customers to more reliable suppliers, thus encouraging the necessary steps toward weatherization. |
| 5 | MISO | | Bobbi Welch | WEQ – ISO/RTO | MISO supports the establishment of just and reasonable cost recovery policies and/or mechanisms that would aid the investment into winterization of natural gas infrastructure facilities. As this is a complex issue, the form of the cost recovery will likely vary depending upon the role the infrastructure owner plays in the market. Therefore, a multi-pronged approach to cost recovery may need to be considered depending upon the segment of the owner or participant. |
| 6 | Gas & Oil Association of West Virginia | | Charlie Burd | WGQ – Producer, Pipeline, LDC | We do not think any mandated requirements to weatherize natural gas production or gathering facilities are necessary or appropriate, as those activities are not regulated. Producers and gatherers have the economic incentive to take reasonable steps to weatherize their facilities and from our experience do so. For instance, gas producers in Appalachia have for a long time, among other things, used heaters during the winter to prevent freeze-offs. |
| 7 | Nebraska Public Power District | | Thomas Schroeder | WEQ – Generator | None that I am aware of. |
| 8 | AF&PA and Gas Consumers Group | | Andrea Chambers & Jameson Calitri | WGQ End User | AF&PA and PGC believe incentives should be provided to natural gas suppliers selling firm supply to verify that the facilities from the wellhead to the pipeline, including the processing facilities, have taken reasonable, cost-effective measures to winterize their facilities to withstand the lowest temperatures experienced in their region. |
| 9 | Interstate Natural Gas Association of America | | Christopher Smith | WGQ Pipeline | INGAA maintains its opposition to winterization requirements for interstate natural gas pipeline facilities. As INGAA explained in its response to the February Survey, the interstate natural gas pipeline industry has a strong record of reliably fulfilling its contractual obligations to customers with primary firm rights.[[1]](#footnote-1)  Moreover, winterization requirements would not address the primary causes of the problems seen in Winter Storms Uri or Elliott. Winter Storm Uri “was not an event that tested the capacity of the natural gas transportation system.”[[2]](#footnote-2) In fact, during Winter Storm Uri, “natural gas pipelines were only minimally affected by power outages (because most have backup power) and were largely able to meet their firm transportation commitments.”[[3]](#footnote-3) PJM’s Winter Storm Elliott Continued Outage Analysis stated that 69% of the forced outages for gas units arose from issues other than gas supply (e.g., turbines, plant equipment). Impacts to natural gas production—not issues with interstate pipelines—appear to be the primary cause of the remaining 31% of forced outages.[[4]](#footnote-4)  The imposition of additional resilience requirements would impose significant costs on natural gas customers with little benefit to electric customers.  If the GEH Forum Panel chooses to pursue creation of incentives for winterization of interstate natural gas pipelines, it should take steps to ensure that electric customers ultimately bear the cost of winterization. For example, FERC has “establish[ed] a policy to permit enhanced recovery of modernization costs” to “address concerns regarding the safety of the Nation’s natural gas infrastructure and the safe operation of natural gas pipelines” and to “encourage investments in infrastructure improvements and upgrades to enhance the efficient and safe operation of natural gas pipelines.”[[5]](#footnote-5) There are problems with recovering costs under this policy in its current form, but, setting aside those problems, a pipeline’s firm shippers pay any costs covered through the tracker. Because natural gas-fired generators typically do not hold firm transportation rights, they would avoid paying those costs. The GEH Forum should consider this cost-causation issue if it chooses to develop incentives for winterization of interstate natural gas pipelines. |
| 10 | Xcel Energy | | Terri Eaton | WEQ Marketer/Broker | We have previously proposed public postings of data and information regarding individual suppliers with well-head freeze-offs during severe weather. Such postings would arm buyers with information to help them understand if they will receive the gas they are contracting for during severe weather. Such postings would create a significant incentive for gas suppliers to weatherize their facilities to remain competitive. |
| 11 | Southwest Gas Corporation | | John Olenick | WGQ – LDC | Not sure of what strategies, requirements, economic incentives, or other compensation mechanisms are realistically available (i.e. someone has the authority to actually require those given the natural gas wellhead decontrol act of 1989). |
| 12 | Evergy | | Alan Kloster | WEQ – Generator | Evergy supports proposed public postings of data and information regarding individual suppliers who are experiencing well-head freeze-offs during severe weather events. That could also potentially incentivize natural gas production facilities to weatherize to remain competitive. |
| 13 | SPP | | Joshua Phillips | WEQ – ISO/RTO | One compensation mechanism could be a winterized gas product. Similar to renewable natural gas, a gas product certified to operate at certain temperatures could be considered for ensuring cold weather does not impact delivery. These gas molecules could be tracked within the system to confirm delivery interruptions when force majeure is claimed. |
| 14 | New England LDC Group | | John Rudiak & Eric Soderman | WGQ - LDC | Winterization standards should be required of producers that have not already chosen to invest in their infrastructure to protect supplies from disruption. These could be done by establishing minimum facility requirements (perhaps in the applicable terms and conditions tariffs) to be accepted as a receipt point operator into intrastate or interstate pipelines. |
| 15 | Ohio Oil and Gas Association | | Rob Brundrett | WGQ – Producer, Pipeline, LDC | OOGA does not believe that mandated requirements to weatherize natural gas production or gathering facilities are necessary or appropriate that this time. These activities are not regulated. Producers and gatherers have the economic incentive to take responsible and reasonable steps to weatherize their facilities. From our perspective this has happened. Gas producers in the Appalachian Basin have for a long time used methods such as heaters during colder winter months to prevent freeze-offs.  OOGA also does not believe that modifying the NAESB form sales agreement is appropriate. We want to ensure that the parties to any agreement are able to negotiate terms at arm’s length basis. |

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| **Question/Topic** | | **Measures to improve reliability of natural gas facilities during cold weather (freeze protection, electric supply)**  *2.b Programs to encourage and provide compensation opportunities for natural gas infrastructure facility winterization*  A recommendation has been offered to consider changes to force majeure language contained within natural gas contracts as part of the February Survey and has been discussed during the February 2 and April 4 meetings of the GEH Forum.  Question   1. What changes can be made to existing force majeure contract language to promote weatherization? | | | |
| **#** | **Organization** | | **Representative** | **Market/Segment** | **Comment & Specific Recommendation** |
| 1 | NGSA | | Pat Jagtiani | WGQ Producer | NGSA does not believe it would be prudent to consider changes to the force majeure contract language. The existing force majeure language was crafted to provide a fair balance between performance obligations and performance risk, recognizing that these provisions are intended to take into consideration things that occur that are beyond a parties’ control. To the extent parties determine a specific situation warrants different treatment, then the parties are free to negotiate different terms from what is provided in the standard contract. However, we must recognize that any changes that hold a supplier accountable for events that are beyond their control increases their risk and the increased risk will be factored into costs of doing business and ultimately, including risks beyond a parties’ control could influence a parties’ willingness to enter into a contract that does not provide sufficient protections.  Also, it should be noted that the FERC/NERC Cold Weather Report’s recommendation that mentions force majeure clauses is limited to BA’s having a greater line-of-sight into the reliability risks that generators may face so that they can better understand those risks and incorporate those risks into their operational planning. See Key Recommendations 8.[[6]](#footnote-6) |
| 2 | Kinder Morgan, Intrastate Pipeline Group | | Bill Wolf | WGQ Pipeline | In a competitive market, commercial considerations should drive changes to force majeure contract language in the first instance. In fact, many contracting counterparties negotiate changes to various contract provisions in the base NAESB contract, including the force majeure provision. To that end, if there is a demand for change from customers of a pipeline, the pipeline will provide competitive responses to contract terms or the customers will go elsewhere. Where the state has invested in reliable gas delivery in a program like the FFSS, certain changes consistent with such reliability, and the additional investment represented by the program, have prompted limited changes to proposed force majeure contract language. |
| 3 | American Electric Power | | Kate Daley | WEQ – Generator | Natural gas suppliers should not be able to claim force majeure for failure to weatherize their facilities and equipment. As noted in 2.b.1., there should be some minimal requirement for natural gas suppliers to winterize/weatherize their facilities and equipment.  If a natural gas-fired generator makes firm transportation and supply arrangements, and they are interrupted and the gas is not delivered, the generator should not be subject to RTO penalties – either financial or performance accreditation. |
| 4 | AGA | | Matthew Agen | WGQ – LDC | AGA is supportive of NAESB initiating the process of updating the force majeure provision in the NAESB base contract. Force majeure should not apply to interruptions due to simple cold weather events. The force majeure provision in the NAESB base contract should be revised to narrow its scope and prevent risk shifting onto end-users. A revised force majeure provision could strengthen market incentives for winterization investments. |
| 5 | MISO | | Bobbi Welch | WEQ – ISO/RTO | Currently, natural gas generators bear much, if not all, the risk and cost associated with managing wellhead performance. While generators can try to hedge against this risk, current force majeure language permits wellhead entities to claim force majeure for a broad spectrum of conditions. If the scope of force majeure language was narrowed; however, it would presumably help to send better market signals towards promoting winterization investments at the wellhead. |
| 6 | Gas & Oil Association of West Virginia | | Charlie Burd | WGQ – Producer, Pipeline, LDC | We do not believe an update to the form is warranted at this time. Being a form document, the parties to any actual gas sale agreement can, and do, negotiate modifications to the form on an arm’s-length basis. There is no basis in law to modify such agreements.  *See United Gas Pipe Line Co. v. Mobile Gas Service Corp., 350 U.S. 332 (1956); Federal Power Comm’n v. Sierra Pacific Power Co., 350 U.S. 348 (1956).* |
| 7 | Nebraska Public Power District | | Thomas Schroeder | WEQ – Generator | None that I am aware of. |
| 8 | AF&PA and Gas Consumers Group | | Andrea Chambers & Jameson Calitri | WGQ End User | AF&PA and PGC support the language that would not allow a party to declare a force majeure event without taking reasonable, cost-effective steps to winterize their facilities. |
| 9 | Interstate Natural Gas Association of America | | Christopher Smith | WGQ Pipeline | INGAA is not taking a position on the force majeure language in the NAESB Base Contract for Sale and Purchase of Natural Gas at this time. |
| 10 | Xcel Energy | | Terri Eaton | WEQ Marketer/Broker | Currently, the NAESB standard form gas contract has a circular force majeure out, providing that “low temperatures which cause freezing or failure of wells or lines of pipe” constitute force majeure events. Effectively this language says that if a supplier does absolutely nothing to prevent freeze-offs, it can still claim force majeure if its wells or lines freeze. This language creates a significant disincentive to weatherize.  We suggest that the NAESB standard form contract incorporate a limit on the application of force majeure to temperatures identified by the gas supplier in the contract (or better yet, in a public posting). This will enable buyers to understand the likelihood that they will be able to receive the gas for which they have contracted. In addition, we recommended incorporation of specific force majeure notice and information requirements into the standard form gas contract. |
| 11 | Great River Energy | | Katie Ege | WEQ – Generator | None |
| 12 | Southwest Gas Corporation | | John Olenick | WGQ – LDC | In the NAESB 2002 base contract and the NAESB 2006 base contracts, section 11.2 would need to be modified to remove "(ii) weather related events affecting an entire geographic region, such as low temperatures which cause freezing or failure of wells or lines of pipe."  In addition, there would likely need to be language inserted that would exclude "weather related events affecting an entire geographic region, such as low temperatures which cause freezing or failure of wells or lines of pipe" from being defined as force majeure events because those type of events could arguably be included in Section 11.2(i), which states "physical events such as acts of God, landslides, lightning, earthquakes, fires, storms or storm warnings, such as hurricanes, which result in evacuation of the affected area, floods, washouts, explosions, breakage or accident or necessity of repairs to machinery or equipment or lines of pipe." |
| 13 | CenterPoint Energy | | TJ Noland and Brian Fields | WGQ – LDC | CenterPoint Energy supports updating the force majeure section of the NAESB base contract. The overall changes should reflect a reasonable standard for parties to maintain their assets (such as performing proper winterization) in preparation for severe weather events.  CenterPoint Energy suggests changes to address the following areas  • Add a definition of “Gas Supply” as it relates to deal specifics  • Sec 11.2 - Remove language to limit force majeure language to specific extreme events that directly affect the delivery of gas to be covered under the notice.  • Sec 11.2 - Exclude any event that would have been prevented by weatherization or other preventative measures.  • Sec 11.3 - Include language about preventable weatherization and pooling Point or Hubs where gas continues to flow at the same location.  • Sec 11.3 – Limit the ability to claim force majeure with loss of buyer’s market.  • Sec 11.5 – Add language to the written notification requirements that would help the non-claiming party to better understand the event that caused the force majeure, total impact, timing, and remedies. |
| 14 | Evergy | | Alan Kloster | WEQ – Generator | Evergy suggests that NAESB consider changes to the existing force majeure conditions. Currently “low temperatures which cause freezing or failure of wells or lines of pipe” constitute force majeure events. The current language appears to provide no incentive for natural gas producers and distributors to weatherize in order to prevent freeze-offs because they can claim force majeure at any temperature they believe is “low”. NAESB should restrict force majeure to temperatures specifically identified by the gas supplier in the contract or by public posting. This would give buyers a better ability to determine the likelihood that they will not be able to receive the gas for which they contracted in extreme weather. Force majeure declarations should have specific notification requirements in the standard form gas contract. |
| 15 | SPP | | Joshua Phillips | WEQ – ISO/RTO | SPP is working within the gas and electric industry to better understand these challenges and plans to submit a standards request that seeks increased transparency regarding force majeure and clarification around gas interruptions. Areas of concern that have been discussed are allowance for cold weather being a force majeure event, even when the forecasted, as well as the details associated with a force majeure event being so basic as to simply state cold weather caused the event. |
| 16 | New England LDC Group | | John Rudiak & Eric Soderman | WGQ - LDC | The current NAESB force majeure language is exceptionally broad allowing for significant relief for producers and shippers during cold weather events when their services are most needed. There should be a review of the current language and changes made to the language and definition of force majeure  Force majeure should not apply to interruptions due to cold weather events. The force majeure provision in the NAESB base contract should be revised to narrow its scope and prevent risk shifting onto end-users. A revised force majeure provision could strengthen market incentives for weatherization. |
| 17 | Ohio Oil and Gas Association | | Rob Brundrett | WGQ – Producer, Pipeline, LDC | See above. There is no basis in law to modify existing contracts |

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| **Question/Topic** | | **Measures to improve reliability of natural gas facilities during cold weather (freeze protection, electric supply)**  *2.b Programs to encourage and provide compensation opportunities for natural gas infrastructure facility winterization*  Question   1. Are there any recommendations for action related to area 2.b that have not been previously offered and should be included for consideration? | | | |
| **#** | **Organization** | | **Representative** | **Market/Segment** | **Comment & Specific Recommendation** |
| 1 | NGSA | | Pat Jagtiani | WGQ Producer | NGSA does not have any additional recommendations. |
| 2 | Nebraska Public Power District | | Thomas Schroeder | WEQ – Generator | None that I am aware of. |
| 3 | Interstate Natural Gas Association of America | | Christopher Smith | WGQ Pipeline | INGAA does not have any additional recommendations at this time. |
| 4 | Southwest Gas Corporation | | John Olenick | WGQ – LDC | No |

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| **Question/Topic** | | **Measures to improve reliability of natural gas facilities during cold weather (freeze protection, electric supply)**  *2.c Methods to streamline the process for, and eliminate barriers to, identifying, protecting, and prioritizing critical natural gas infrastructure load [See also Recommendation 28 – Guidelines to identify critical natural gas facility loads]*  The FERC-NERC-Regional Entity Staff Report: February 2021 Cold Weather Outages in Texas and the South Central United States addressed coordination activities in advance of Winter Storm Uri and stated that “Generally, natural gas infrastructure facilities engaged in little coordination with their electric power providers prior to the Event. For instance, there was little coordination as to critical load designation and demand response programs.” Key Recommendation 7 asked the Forum to consider methods to streamline the process for and eliminate barriers to identifying, protecting, and prioritizing critical natural gas infrastructure load. As part of the responses to the February Survey, there was strong support among all respondents for the consideration of a federal and state information sharing effort between electric system operators and natural gas facility operators to help ensure that critical natural gas facilities reliant upon electricity are protected from load shed.  Questions   1. Are there existing impediments to identifying, protecting, and prioritizing critical natural gas infrastructure load that could be eliminated? 2. How could a federal-state information sharing effort be facilitated, who are the necessary parties, and how should the effort be coordinated? | | | |
| **#** | **Organization** | | **Representative** | **Market/Segment** | **Comment & Specific Recommendation** |
| 1 | NGSA | | Pat Jagtiani | WGQ Producer | 1.) Since Winter Storm Uri, Texas and some regional operators have taken steps to identify critical gas infrastructure to prevent load shedding of these facilities and NGSA supports consideration of these and other efforts that are working toward that goal.  2.) NGSA supports consideration of federal-state information sharing to progress efforts to prevent the load shedding of critical natural gas infrastructure. We do not have any specific suggestions on how this should be facilitated. |
| 2 | Kinder Morgan, Intrastate Pipeline Group | | Bill Wolf | WGQ Pipeline | See Response to 2.b.1. In addition, the Texas electric supply chain map will be iterative and will be further refined with additional input, including by the Texas Electric Reliability Council (“TERC”). The TERC brings together representatives of the power and natural gas industries so that they can better understand each other’s operations and coordinate necessary regulatory changes at the respective regulatory agencies. |
| 3 | American Electric Power | | Kate Daley | WEQ – Generator | 1.) Serving identified critical gas infrastructure is essential to reliability. In some cases, natural gas electric generation is underserved in favor of gas delivery to other industrial customers. Targeted coordination in identifying critical gas infrastructure, such as electric compression stations and associated facilities, is essential to ensure reliable natural gas delivery to a natural gas-powered generator.  Critical natural gas infrastructure owners/operators should be required to identify their equipment with their electric transmission and distribution service providers so they don’t inadvertently shed that load during emergencies.  In addition, during times of natural gas transportation or supply constraint, RTOs must be able to identify which natural gas-fired generators are critical to maintaining reliability of the grid or will contribute to a smaller controlled service interruption. Hypothetically, if there is only enough gas to run unit A or unit B, but not both, the RTO could determine which unit to dispatch. This topic is worth further exploration. |
| 4 | MISO | | Bobbi Welch | WEQ – ISO/RTO | Currently, the identification of critical natural gas infrastructure electric load is being discussed at NERC as part of standards development Project 2021-07 Phase 2 Extreme Cold Weather Grid Operations, Preparedness and Coordination. In that effort commenters have requested that natural gas infrastructure entities identify their critical natural gas infrastructure electric loads as they are better equipped to perform this task than NERC registered entities. MISO supports the completion of this effort. |
| 5 | Nebraska Public Power District | | Thomas Schroeder | WEQ – Generator | 1.) None that I am aware of.  2.) Ask the natural gas pipelines and producers to identify critical infrastructure and provide that information to the electric power producers or RTO/ISO’s |
| 6 | AF&PA and Gas Consumers Group | | Andrea Chambers & Jameson Calitri | WGQ End User | 2.) AF&PA and PGC support natural gas pipeline compressor stations and processing facilities that run on electricity being designated as critical electric loads. We are not aware of any impediments to this being done. We assume the electric grid operators should consult with the natural production and transportation system operators to identify those facilities. |
| 7 | Interstate Natural Gas Association of America | | Christopher Smith | WGQ Pipeline | INGAA is not aware of any existing impediments to identifying, protecting, and prioritizing critical natural gas infrastructure load. In fact, following Winter Storm Uri, many pipelines responded to requests from ISOs/RTOs with information regarding critical natural gas facilities to protect those facilities from load shed.  If the GEH Forum chooses to pursue this recommendation, INGAA suggests that the Forum take the following steps to avoid introducing impediments:  • Coordinate with other agencies when defining “critical facility.” For example, TSA issues Pipeline Security Guidelines which include a list of criteria for criticality developed by the agency and in consultation with industry. A uniform definition will avoid introducing confusion inherent in different facilities labeled as “critical” for different purposes.  • Prohibit public disclosure of critical facility lists. Recent attacks on electrical substations have demonstrated bad actors’ willingness to target critical infrastructure. For security reasons, any information exchanged pursuant to this recommendation should remain non-public. |
| 8 | Southwest Gas Corporation | | John Olenick | WGQ – LDC | 1.) There could be confidentiality agreements in place that prohibit this type of sharing and those agreements would need to be addressed.  2.) The necessary parties would likely include all state regulatory commissions, FERC, NERC, and the various ISOs that operate in the US, all the electric and gas utilities in the US, all the interstate and intrastate pipelines in the US, plus any other power generators that are not regulated by one of those entities. |
| 9 | Winterberry Energy | | Paul Sierer | Observer | Intrastate natural gas pipelines should be required to post critical notices on an electronic bulletin board similar to the Interstate pipelines |
| 10 | Evergy | | Alan Kloster | WEQ – Generator | 1.) Evergy believes there are no known impediments between the gas and electric industry today that would prohibit open communication between its operators.  2.) Evergy supports information sharing between gas and electric operators, especially during forecasted extreme events. |
| 11 | SPP | | Joshua Phillips | WEQ – ISO/RTO | 1.) Under request R21006, there was limited interest at NAESB in undertaking this sort of effort as evidenced by a no action recommendation. The demonstrated limited interest in defining those facilities is indicative of a need for additional direction or mandates from the FERC, NERC, Transportation Security Administration, State Commissioners, legislative bodies, or other regulatory entity to undertake such action. While some states do require these sorts of identification, a national or regional standard/guideline would be beneficial for ensuring clarity under certain weather situations. |
| 12 | New England LDC Group | | John Rudiak & Eric Soderman | WGQ - LDC | Independent System Operators (ISOs) already exist as independent and federally regulated entities that coordinate regional transmission to ensure non-discriminatory access to the electric grid and a reliable electricity system. In New England for example, ISONE already has established an efficient and organized communication channels with all necessary stakeholders to assess these issues as they arise both in long, near and short-term planning and execution of plans to reliably meet the region’s energy needs.  Unlike power generators that utilize natural gas, Gas LDCs already have rigorous processes in place to assess its needs for the critical gas infrastructure which it acquires and maintains as needed to meet its customer demand during the most extreme weather events.  The largest impediment to reliably serving the gas the fired generation fleets is that is no organized planning process to acquire, maintain and operate facilities dedicated to their needs as they have always relied upon “just in time” fuel when available. |

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| **Question/Topic** | | **Measures to improve reliability of natural gas facilities during cold weather (freeze protection, electric supply)**  *2.c Methods to streamline the process for, and eliminate barriers to, identifying, protecting, and prioritizing critical natural gas infrastructure load [See also Recommendation 28 – Guidelines to identify critical natural gas facility loads]*  Within this section of the February Survey, the recommendation related to the adoption of emergency preparedness plans that include items such as Jones Act waivers as well as short-term waivers of air emission limits, RPS requirements, and pipeline quality specifications received high support among both wholesale natural gas and wholesale electric market respondents; however, respondents did not provide many details concerning the development, content, or utilization of such emergency preparedness plans.  Question   1. What types of actions, pre-authorizations, or waivers would be of the greatest benefit to consider for inclusion in such plans, and when should such plans be utilized? | | | |
| **#** | **Organization** | | **Representative** | **Market/Segment** | **Comment & Specific Recommendation** |
| 1 | NGSA | | Pat Jagtiani | WGQ Producer | NGSA supports the use of expedited waivers during critical events to maintain reliable operations, including targeted and short duration Jones Act waivers when necessary. To expedite the waiver approval process, serious consideration should be given to implementing a blanket pre-approval process for each of the applicable agencies with such authorities, such as DOE, EPA and FERC, instead of requiring operators to submit requests in the midst of a crisis and the risk of any delay impeding the ability to do what is required to maintain reliable operations. Agencies could institute a rebuttable presumption that a waiver is granted when certain conditions exist. |
| 2 | AGA | | Matthew Agen | WGQ – LDC | AGA does not support blanket quality waivers because states/regulatory commissions have certain natural gas quality requirements. A FERC waiver would not eliminate the need to deliver pipeline quality gas to utility customers as defined by any requirements. Any plan for a waiver at the interstate level should not contradict with state requirements. |
| 3 | MISO | | Bobbi Welch | WEQ – ISO/RTO | MISO supports the establishment of criteria that would define under what conditions an entity is pre-authorized to receive a waiver – e.g., at the time a Reliability Coordinator declares a state of emergency. Once the system is in an emergency condition, there is no time to waste. Therefore, if certain conditions warrant the granting of a waiver, this should be done ahead of time as opposed to waiting until an emergency condition exists. This only serves to delay the ability of an entity to act pending authorization. |
| 4 | AF&PA and Gas Consumers Group | | Andrea Chambers & Jameson Calitri | WGQ End User | AF&PA and PGC support measures to increase fuel supply during extreme weather events, but have concerns about reducing pipeline quality specifications and believe that any such waivers be considered as part of the standards process with input from end users who might be impacted. |
| 5 | Interstate Natural Gas Association of America | | Christopher Smith | WGQ Pipeline | INGAA opposes this recommendation to the extent it seeks to require waiver of pipeline quality specifications under certain circumstances. Interstate natural gas pipelines maintain quality specifications to protect the integrity of their systems from, among other things, the corrosive potential of certain gas blends. The specifications also protect the pipelines’ customers who may not be able to safely use certain gas blends. Each pipeline should have the discretion to waive its quality specifications; waiver should not be required under circumstances dictated by third parties.  To the extent this recommendation seeks waivers of quality specifications at the pipelines’ discretion, this recommendation likely would yield minimal benefits. Many pipeline tariffs already include a provision allowing for waiver of their quality specifications. Moreover, pipelines have a financial incentive to transport as much natural gas through their systems as possible and, typically, are able to run full with natural gas that meets quality specifications even in extreme conditions. This recommendation is unlikely to lead to a meaningfully higher volume of natural gas moving through interstate pipelines.  INGAA takes no position at this time with respect to waivers of the Jones Act, air emissions limits, or RPS requirements. |
| 6 | Xcel Energy | | Terri Eaton | WEQ Marketer/Broker | Jones Act waivers and emissions waivers, issued in advance, would be extremely helpful. We would recommend that such waivers be available in the event of declaration of an EEA-1 or higher emergency level issued by a Reliability Coordinator. |
| 7 | Southwest Gas Corporation | | John Olenick | WGQ – LDC | Not sure. |
| 8 | Winterberry Energy | | Paul Sierer | Observer | Jones Act Waivers, short-term suspension/relaxation of air emissions limits and pipeline quality specifications. |
| 9 | Evergy | | Alan Kloster | WEQ – Generator | Evergy supports an automatic trigger for Jones Act and emissions waivers based on emergency levels issued by a Reliability Coordinator. This would be the ideal situation. |
| 10 | New England LDC Group | | John Rudiak & Eric Soderman | WGQ - LDC | While pre-authorization of Jones Act waivers would be a productive and logical part of the plan to address these issues, the waiver does not obligate anyone to acquire such fuel and/or be compensated for such acquisition rendering the waiver useless without underlying agreements to acquire the fuel.  Emissions waivers in emergency situations seems to be a logical and prudent part of a plan to enhance the reliability of the system.  Changes to gas quality could have significant damaging impacts to end users who have already designed their equipment to accept the standards established by FERC tariffs and the industry. |

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| **Question/Topic** | | **Measures to improve reliability of natural gas facilities during cold weather (freeze protection, electric supply)**  *2.c Methods to streamline the process for, and eliminate barriers to, identifying, protecting, and prioritizing critical natural gas infrastructure load [See also Recommendation 28 – Guidelines to identify critical natural gas facility loads]*  Question   1. Are there any recommendations for action related to area 2.c that have not been previously offered and should be included for consideration? | | | |
| **#** | **Organization** | | **Representative** | **Market/Segment** | **Comment & Specific Recommendation** |
| 1 | NGSA | | Pat Jagtiani | WGQ Producer | We are not aware of any additional actions that would be warranted. |
| 2 | Nebraska Public Power District | | Thomas Schroeder | WEQ – Generator | None that I am aware of. |
| 3 | Interstate Natural Gas Association of America | | Christopher Smith | WGQ Pipeline | INGAA does not have any additional recommendations at this time. |
| 4 | Southwest Gas Corporation | | John Olenick | WGQ – LDC | Not sure. |

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| **Question/Topic** | | **Recommended Studies: Three topic areas addressed if federal and state entities with jurisdiction over natural gas infrastructure should cooperate to further study and enact measures to address natural gas supply shortfalls during extreme cold weather events including: (2.b.i) possible financial incentives for the natural gas infrastructure system necessary to support the BES to winterize or otherwise prepare to perform during extreme cold weather events; (3.a.i) market/public funding for generators to have firm transportation and supply and invest in storage contracts. Such funding may need to finance infrastructure necessary to provide additional firm transportation capacity, because many existing pipelines were financed and constructed to serve LDCs and may not have sufficient additional firm capacity; and (3.g) possible investments in strategic natural gas storage facilities, which could be located to serve the majority of pipelines supplying natural gas-fired generating units, and preserved for use during extreme cold weather events**  As part of Key Recommendation 7 of the FERC-NERC-Regional Entity Staff Report: February 2021 Cold Weather Outages in Texas and the South Central United States, the forum was asked to consider if federal and state entities should work together to further study and enact measures in the three areas described above.  Question   1. What steps should the industry take to initiate the studies recommended in the FERC-NERC-Regional Entity Staff Report: February 2021 Cold Weather Outages in Texas and the South Central United States? | | | |
| **#** | **Organization** | | **Representative** | **Market/Segment** | **Comment & Specific Recommendation** |
| 1 | NGSA | | Pat Jagtiani | WGQ Producer | NGSA supports the types of studies referenced in this recommendation to ensure that there is sufficient natural gas infrastructure available to reliably meet the demand of the power sector and to examine ways in which power markets can support additional investment in natural gas infrastructure when additional capacity is needed. Regional operators, particularly ISO-NE, have been grappling with how to financially support solutions in the face of constrained pipeline capacity to their region and others are finding that pipelines in their region are increasingly capacity-constrained, which limits the level of flexibility that they were once accustomed to gas generators having on those pipeline systems. Without the ability of gas generators to enter into long-term financial commitments, expanding gas pipeline and storage will not occur because developers must view any new projects as being financially viable and they must also be able to demonstrate “need” to FERC by showing that there is a high level of customer subscription for the project.  In multiple rounds of comments in this forum, NGSA has encouraged that regional operators examine ways to make it more likely that gas generators can sign contracts and invest in gas infrastructure assets that will be an essential component that they rely upon in order to run when called upon. In the first round of comments in September, NGSA stated:  Current market design in organized markets often results in a disincentive for advance contracting and purchases of natural gas, which runs counter to what is required to ensure reliability. In organized power markets, generators face uncertainty about whether they will run until regional operators dispatch them. Consequently, generators in those markets often find it difficult to take on the financial risk of procuring their fuel in advance when they are unsure about how much fuel they need and whether they will be able to recover fuel-related costs. In many instances, generators continue to rely on interruptible transportation and supply contracts (that are typically only available when the gas system is not constrained), and day-of gas purchases that arise to meet electric system balancing requirements that expose generators to more volatility associated with spot market purchases.[[7]](#footnote-7)  Recently, ISO-NE’s problem statement emphasized this point: “Specifically, the electricity markets are not designed to spur investments in supporting infrastructure needed to ensure a reliable clean energy transition. While the region is in the process of developing a plan and cost allocation methodology for assuring investments in the transmission infrastructure required to integrate renewable resources, there is no comparable plan to ensure the region has sufficiently robust, long duration, sources of balancing energy (including for the meantime, sufficient supplies of natural gas). In essence, the prevailing assumption is that the fuel markets will ensure sufficient fuel supply in response to high prices in the electricity markets. For a variety of reasons, this assumption is proving to be flawed.”[[8]](#footnote-8)  NGSA believes that this forum should recommend that FERC and regional operators collaborate with regional stakeholders to develop market design changes that mitigate the financial risk associated with advance fuel procurement and contracting by gas generators by placing more value on reliability. Also, we should explore other ways to encourage improved contracting and fuel procurement practices such as considering greater awareness of generator contractual commitments, power market capacity accreditation enhancements, the timing of day-ahead awards, and new flexible pipeline services. Given that the scope of this forum is not limited to serving power customers that operate only in organized markets, we would also be interested in gaining a better understanding about whether integrated utilities are also experiencing similar issues.  (1) Consideration of Design Changes in Organized Markets.  At a meeting last year, PJM presented a problem statement, which precipitated the creation of Senior Task Force on Gas-Electric Coordination. According to the problem statement, one of the primary problems with market design issues is as follows:  “Under the current wholesale electric market design, the risk/reward that Market Participants with gas generators face discourages fuel procurement at the very time generation is most needed. As need and gas costs rise, the profit margins of Market Participants with gas generators fall, often going negative. At extreme prices, there may even be corporate limitations that prevent fuel purchases altogether (authorization protocols, cashflow requirements, etc.). Also, market design limitations can create perverse generator behavior with respect to the way they use their dual fuel capability. Generators that can maximize profits (or limit losses) will have incentive to burn limited backup fuel resources as gas procurement risk/reward falls. Often this results in backup fuel consumption well in advance of peak weather or need.”[[9]](#footnote-9)  Not only does current market design in organized markets discourage fuel procurement “at the very time” it is most needed, but it also discourages procurement “in advance” of when it is needed, which is ideally when fuel procurement should take place.  Notably, vertically integrated utilities and local distribution companies do not experience the same disincentive to procure fuel and, as a result, do not face the same level of reliability risk that we see in organized markets. Specifically, vertical utilities and LDCs (that have obligation to serve) do not face the same level of exposure because they have cost recovery mechanisms that allow them to actively manage their gas supply and capacity needs and invest in an expansive portfolio of long-term firm contracts and storage that support the level of reliability they require. Not only do advance contractual arrangements support a high level of reliability, but they also help to avoid or minimize the need to purchase large amounts of natural gas in the more volatile spot market, thereby mitigating their cost exposure. Organized markets should strive to replicate these practices to the extent possible through market design changes that value reliability and provide market signals that incentivize enhanced generator procurement practices. While this may appear to be a difficult or expensive undertaking when viewed in isolation, it should be evaluated in the broader context of the benefits derived from avoiding costly, damaging, and life-threatening power outages, as well as supporting the energy transition.  (2) Greater Awareness of Contractual Information and Improved Capacity Accreditation Practices.  NGSA supports recommendations in the FERC-NERC Final Report, such as Recommendations 1.G and 8, that give regional operators greater insight into the types of contracts gas generators have so they have a more accurate understanding of potential vulnerabilities that may exist due to contracting practices. Similarly, ensuring that capacity accreditation is in line with the actual expected availability of generation units for all resources could be a valuable tool for more appropriately valuing advance arrangements for reliable fuel delivery.  (3) Timing of Day-ahead Awards.  To the extent possible, region operators may want to consider whether changing the timing of day-ahead generator awards would assist gas generators in their region by giving them more timely notice about the amount of fuel they will need to purchase during the morning period when the gas market is most liquid. Late day award notifications force generators into the market when most gas has already been sold for the day (generally by 9am ET). This risks gas availability as well as higher priced purchases during illiquid periods. The gas industry does not “set” a time for purchases. Many gas customers purchase on a monthly basis and the percentage sold in the daily market is generally completed in the early morning hours. This also holds true for gas pipeline scheduling where most capacity is scheduled during the timely gas cycle and later cycles are used more for balancing.  (4) Facilitated Discussions to Find Mutually Agreeable Service Options.  A recent ISO-NE study found that, as more renewables are added to the grid and electrification efforts accelerate, natural gas demand will actually increase during cold weather periods when wind and solar resources underperform.[[10]](#footnote-10) When pipeline systems are operationally constrained, whether by higher utilization by firm shippers or increased hourly takes, a gas generator’s ability to attain services and accommodations become more limited. In those instances, there may be (1) insufficient spare capacity to offer firm transportation and storage services to generators if there is an increased demand for those services (as recommended in FERC-NERC report on Uri), (2) less ability to rely on “spare” interruptible capacity, and (3) more limited operational intra-day flexibility to accommodate best efforts swings.  As these new patterns of electricity usage create a need for greater hourly swings by generators to balance the variability of renewable resources, it will be important to assess whether pipeline systems will also have the operational capability to manage the need for increased hourly flows. A pipeline’s ability to provide customers with intra-day flexibility (non-ratable takes) is contingent upon how much physical capacity is actually available in the existing pipe, which is limited by the finite size of the pipeline and its operational parameters. It also depends on how much line pack is available at a certain location in the pipe and how much the pipeline can let certain shippers draw on that line pack without causing an operational issue on the pipeline. During peak weather events, however, sudden unexpected takes can literally drain a pipeline system and impact its pressure – harming system operations and service to all shippers.  If a pipeline has insufficient capacity to provide the level of intra-day flexibility a customer requires, no level of coordination can change that fact.[[11]](#footnote-11) However, given that most pipeline customers currently receive such “services” without additional costs on a best-efforts basis for much of the year, it may be difficult for gas generators to justify paying for flexible services that provides guaranteed hourly flexibility. If generators are compensated for purchasing this needed level of intra-day flexibility, pipelines will have the proper compensation to stand ready to serve through, for example, expanding capacity, increasing line pack in locations of the pipe where it is most needed, calling on increased supplies through OBAs with interconnecting pipelines and pulling on system storage. The costs of providing these services should be properly allocated to ensure that they are not borne by other customers.  While there are a variety of flexible market options available to generators in the gas market today, NGSA believes it would be helpful for this forum to recommend discussions between providers of natural gas services and their power customers to find mutually agreeable service options for flexible pipeline firm transportation and storage services or third-party services that provide the flexibility generators require. While these types of conversations typically occur between a company and its customer, the time may be ripe for a fuller discussion of what prevents such flexible services from coming to fruition and ways to encourage customers to invest in these services rather than relying on pipelines to accommodate those needs on a best-efforts basis.  Lastly, NGSA has been working with NERC over the past year to garner industrywide support from various trade groups, agencies, regional operators and others for a study to be performed that looks at whether each region of the country has sufficient natural gas infrastructure in place that can support the increased and more frequent ramping that may be asked of gas-fired generators to support increased levels of variable energy resources. We anticipate that completing this important work will take time and therefore, our hope that work on this effort will be started as soon as possible to fill in this critical knowledge gap as we continue through the transition. We strongly encourage this Forum as well as FERC and NERC to make this study a key recommendation of the Forum report and any subsequent actions that are taken based off of that report. |
| 2 | Kinder Morgan, Intrastate Pipeline Group | | Bill Wolf | WGQ Pipeline | Financial incentives for natural gas infrastructure in Texas are addressed in the response to Question 2.a.4. The Texas legislature is currently evaluating new market models for Texas’s energy only wholesale electricity market. It is not clear to what extent these models would make it more possible for generators to afford firm transport and supply and to invest in storage contracts, but that possibility should be considered. Kinder Morgan Inc. (“KMI”) does not believe there should be state investment in strategic natural gas storage to supply natural gas-fired generation or to preserve gas for use during cold weather events. KMI’s gas storage facilities already achieve that result and were developed by responding to market signals for these services within the Texas market. |
| 3 | Nebraska Public Power District | | Thomas Schroeder | WEQ – Generator | Even if all natural gas fired power generators have Firm transportation the timing of dispatch by the RTO/ISO's could preclude their ability to schedule the natural gas on the pipeline or procure the natural gas. |
| 4 | Interstate Natural Gas Association of America | | Christopher Smith | WGQ Pipeline | INGAA reiterates its support for the studies described in 3.a.i and 3.g above. Because each RTO/ISO uses different mechanisms to compensate generators, study of market funding for generators may require a separate analysis for each RTO/ISO. An RTO/ISO-specific analysis would enable stakeholders to determine how to structure compensation mechanisms or other incentives and who is eligible to receive those incentives. |
| 5 | Southwest Gas Corporation | | John Olenick | WGQ – LDC | That question is probably best answered by the federal and state entities with jurisdiction over natural gas infrastructure, as those are the entities that "should cooperate to further study and enact measures." |
| 6 | New England LDC Group | | John Rudiak & Eric Soderman | WGQ - LDC | A minimum amount of dedicated gas infrastructure should be established for power generation. This should be a coordinated effort of the ISOs, RTOs, EDCs and power generators. |

| **Responses Submitted by April 24, 2023** | | | | | |
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| **Question/Topic** | | **Recommended Studies (see above)**  The February Survey included two potential topics to consider for further study related to the area of gas-electric market infrastructure interdependencies: (1) a recommendation that the U.S. Department of Energy, NERC, or a national laboratory, should consider conducting a study that would evaluate if there are adequate generator resources and sufficient fuel supplies to accommodate the increased use of variable resources and (2) a recommendation that NERC should consider conducting a study, in conjunction with a diverse group of interests, that would assist the industry in better understanding regional requirements regarding pipeline capacity levels required to accommodate new generator usage patterns for ramping. While there was near unanimous support from wholesale natural gas respondents, there was less support for these study recommendations among wholesale electric respondents.  Questions   1. In order to help ensure efficient utilization of industry resources and avoid duplicative efforts, could these recommendations for areas of potential study be combined with the study proposal recommendations contained in the FERC-NERC-Regional Entity Staff Report: February 2021 Cold Weather Outages in Texas and the South Central United States? 2. Should the industry take steps to initiate the studies recommended in the February Survey, and if so, what should be done? | | | |
| **#** | **Organization** | | **Representative** | **Market/Segment** | **Comment & Specific Recommendation** |
| 1 | NGSA | | Pat Jagtiani | WGQ Producer | 2.) The study recommended in the FERC-NERC report (primarily focused on how to financially support needed natural gas infrastructure) and the study referenced in this question (related to determining if new infrastructure may be required) are both extremely important to study and quickly take action so that this country is adequately prepared to reliably meet our nation’s energy needs. However, each of these studies are very distinct with each intended to achieve vastly different purposes and outcomes. The “can gas infrastructure support increased ramping?” study would be purely data driven modeling that will assess whether we need more infrastructure. The FERC/NERC study is more of a study reviewing potential solutions to finding ways to financially support new gas infrastructure when it is determined that it is needed. Both studies will present resource intensive efforts and complexities and for that reason, it is imperative that each study moves on its own separate but parallel courses to ensure that one study does not take priority over the other.  3.) Over the past year, NGSA has been working closely with NERC staff to create an informal group of over 25 stakeholders from industry, consultants, trade groups, regulators and regional operators to work together on a scoping document for this study that would look, by region, at whether there is sufficient gas infrastructure to support the increased calls for flexibility and ramping of gas units as they are called upon more frequently to balance variable energy resources. Some initial communications with DOE have indicated some interest in finding a way to get this study underway in order to close this critical information gap. DOE funding of this study, in conjunction with relying on this diverse group of industry to also act as an advisory group for the study, will help the study maintain its credibility as an unbiased data assessment that reveals those areas where potential infrastructure shortfalls exist; thereby providing essential information that can then be used by policymakers to ensure those shortfalls are addressed (in any number of ways) and that we can continue our lower emissions energy transition without delay. |
| 2 | Nebraska Public Power District | | Thomas Schroeder | WEQ – Generator | No |
| 3 | Interstate Natural Gas Association of America | | Christopher Smith | WGQ Pipeline | INGAA does not have any recommendations for additional studies at this time. |
| 4 | Southwest Gas Corporation | | John Olenick | WGQ – LDC | Not sure. |
| 5 | SPP | | Joshua Phillips | WEQ – ISO/RTO | A study of cold weather impacts upon gas and electric systems may demonstrate additional infrastructure is needed. However, if only the electric industry is required to meet reliability requirements to maintain system reliability, and there is no such obligation on gas systems through force majeure due to forecasted cold weather, it will not yield meaningful results.  To ensure gas is a reliable fuel source for the nation and electric grid there must be some standard for providing that service without the ability for gas supply to evaporate from production cuts under to forecasted weather events. |
| 6 | New England LDC Group | | John Rudiak & Eric Soderman | WGQ - LDC | 2.) Yes |

| **Responses Submitted by April 24, 2023** | | | | | |
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| **Question/Topic** | | **Recommended Studies: Three topic areas addressed if federal and state entities with jurisdiction over natural gas infrastructure should cooperate to further study and enact measures to address natural gas supply shortfalls during extreme cold weather events including: (2.b.i) possible financial incentives for the natural gas infrastructure system necessary to support the BES to winterize or otherwise prepare to perform during extreme cold weather events; (3.a.i) market/public funding for generators to have firm transportation and supply and invest in storage contracts. Such funding may need to finance infrastructure necessary to provide additional firm transportation capacity, because many existing pipelines were financed and constructed to serve LDCs and may not have sufficient additional firm capacity; and (3.g) possible investments in strategic natural gas storage facilities, which could be located to serve the majority of pipelines supplying natural gas-fired generating units, and preserved for use during extreme cold weather events**  Question   1. Are there any additional recommended studies related to the areas identified in 2.b.i, 3.a.i, and 3.g that have not been previously offered and should be included for consideration? | | | |
| **#** | **Organization** | | **Representative** | **Market/Segment** | **Comment & Specific Recommendation** |
| 1 | NGSA | | Pat Jagtiani | WGQ Producer | The two studies noted above are the most important studies to prioritize now that are essential to preserve future reliability. |
| 2 | Kinder Morgan, Intrastate Pipeline Group | | Bill Wolf | WGQ Pipeline | In Texas, pipeline capacity limitations were not the issue that limited gas supply to power generation facilities. Rather, it was the lack of available gas supply from production sources. As noted earlier, the Railroad Commission of Texas has undertaken extensive weatherization efforts under Rules 65 and 66 to ensure the continued operation of gas facilities from the wellhead to the end-user of the gas. |
| 3 | Nebraska Public Power District | | Thomas Schroeder | WEQ – Generator | Study what it would take for all RTO/ISO's to dispatch natural gas fired generation far enough in advance prior to/during extreme cold weather events such that they can procure their natural and schedule with the natural gas pipelines prior to the Timely nomination deadline (i.e. provide notice of dispatch prior to 9:30 a.m. CT the day before natural gas will begin to flow. Dispatch must include the natural gas needed for the entire "Gas Day") |
| 4 | AF&PA and Gas Consumers Group | | Andrea Chambers & Jameson Calitri | WGQ End User | AF&PA and PGC recommend that the forum consider the findings of the study produced by Energy Ventures Analysis on Winter Storm Elliott that examines the impact of that storm on the Northeast, the Southeast, SPP and ERCOT regions, what caused different regions to suffer outages and what factors helped other regions retain electric power during that Storm as it moved across the entire country. While the report emphasizes the problems that are expected due to the upcoming retirements of coal plants, it also provides useful information about generation supply mix in various regions and how fuel supply shortages occurred and how they were mitigated in some areas. The study can be found at 2023\_02\_23-EVA-Winter-Storm-Elliott-Report.pdf (evainc.com). Also, other studies might be out there that we are not familiar with, but we support the forum considering the studies that have looked at the actual problems that occurred during there events and focus on addressing those issues. |
| 5 | Interstate Natural Gas Association of America | | Christopher Smith | WGQ Pipeline | INGAA does not have any recommendations for additional studies at this time. |
| 6 | Southwest Gas Corporation | | John Olenick | WGQ – LDC | Maybe |

| **Responses Submitted by April 24, 2023** | | | | | |
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| **Question/Topic** | | During the April 4 GEH Forum meeting, several participants indicated that there may have been confusion related to the question concerning “a voluntary natural gas coordinator.” As stated during the meeting, the purpose of the question was to solicit responses specific to the feasibility of creating “a voluntary natural gas coordinator,” and to receive thoughts and ideas as to how such an entity would operate. With this in mind, please feel free to respond to the previously offered survey question.  In the FERC-NERC-Regional Entity Staff Report: February 2021 Cold Weather Outages in Texas and the South Central United States, it was stated that the “BES depends, in large part, on the reliability of the natural gas infrastructure system, but unlike the BES, with its mandatory Reliability Standards enforced by FERC and NERC, the reliability of the natural gas infrastructure system rests largely on voluntary efforts.” It also asks the Forum to consider whether the creation of a voluntary natural gas coordinator be feasible.  Questions   1. Is the creation of a voluntary natural gas coordinator feasible – why or why not? 2. If feasible, what new or existing entity (or entities) should undertake this responsibility, and how should it operate? 3. What currently available or new information concerning natural gas operations would need to be provided to the coordinator?? | | | |
| **#** | **Organization** | | **Representative** | **Market/Segment** | **Comment & Specific Recommendation** |
| 1 | NGSA | | Pat Jagtiani | WGQ Producer | 1.) NGSA does not believe that the creation of a “gas coordinator” would be feasible or helpful and it could undermine market forces that help move supply to where it is needed, unless the gas coordinator solely operates as a voluntary clearinghouse, as detailed in response to question 2 below. In the following paragraphs, NGSA reiterates its comments from our prior submission made on March 31.  In the context of how the above statement from the FERC-NERC report refers to the BES reliability standards, it appears that the term “natural gas coordinator” would be something akin to a NERC for gas. At other times, references to this concept seem to envision an authority to direct the reallocation of gas or the building of new infrastructure. Regardless of which concept is intended by this question, it appears that the intent is for a “gas coordinator” to impose regulatory controls in lieu of allowing the market to make these determinations.  If a “NERC for gas” is what is intended for the concept of a gas coordinator, NGSA addressed this along with many other groups in a joint industry statement in response to a similar legislative proposal that described how such a proposal would create duplicative and conflicting regulatory authorities.[[12]](#footnote-12) Given that creation of such an entity would create conflicting oversight authorities, a gas coordinator may create more complications rather than be helpful and any serious consideration of a gas coordinator must detail what role the new entity would serve or what gap in current oversight it fills that is not already covered by existing authorities.  If a gas coordinator is envisioned to control the allocation of pipeline capacity and gas supplies, NGSA believes it would be inappropriate to create an entity that would completely reform a successful natural gas market, undercut contractual relationships, and diminish existing robust competition. The U.S. natural gas market has been widely recognized as a successful model where competition ensures that capacity does not go unutilized during peak periods and supply can be purchased at numerous liquid trading locations on an exchange like ICE or through bilateral arrangements. Indeed, the fact that for many years, generators have generally experienced no issues with attaining the gas they need to operate throughout the year except during a highly constrained period, in many instances without entering into long-term contractual arrangements, is a testament to the robust market that exists for natural gas. The large and diverse number of individual market participants across North America allows the market to optimize assets to ensure natural gas is delivered where it is valued the most. Gas suppliers, marketers and pipelines have a diverse set of assets to draw on to help enhance supply reliability during peak periods. For example, those with pipeline capacity can bring in LNG cargoes, draw from storage or pull gas in from other regions. Price signals play a huge part in driving these behaviors.  Centralized coordination of such a vast network would undermine the efficiencies produced by this market and would likely create innumerable disparities in its attempt to determine what is best. Superimposing command and control of a well-functioning market would be a step backwards, especially since there are much better ways to address gas unavailability concerns gas generators may experience during critical periods such as power market changes that make it more economically feasible for generators to make advance arrangements and to invest in a portfolio that is more aligned with the level of reliability they require. Also, it would be inequitable for a coordinator to pull supplies away from customers who have purchased firm pipeline capacity and direct that capacity to power generators or any customer that has not made such investments. As NGSA has stated numerous times in this forum, undercutting contractual arrangements that are in place would create significant uncertainty and instability in gas markets for all customers. Interstate pipelines determine priority by contract and eliminating the sanctity of contracts would undermine existing market capabilities, diminish the competitive forces that drive supply reliability and discourage generators from contracting, which should be a priority.  2.) As noted in NGSA’s response above, we do not believe that there is a need for a “gas coordinator,” whatever that may entail. It is our understanding that most, if not all, regional operators have natural gas experts with a gas background on their staff and that employee(s) should have full knowledge of what information available from pipelines and LDCs as well as what additional RTO-specific information is provided as a result of increased communications and agreements for the release of non-public information. In addition to these avenues for information gathering, there are companies that have expertise in aggregating pipeline and gas market data that can be purchased by regional operators and tailored to focus on what they find most relevant for their purposes.  If it is determined that there should be some type of “gas coordinator,” despite all of the avenues that are already available for gathering natural gas data, that coordinator should be an RTO-funded clearinghouse that is purely voluntary and operates with no regulatory authority. The “clearinghouse” would simply be tasked with compiling, aggregating, and assessing both gas and power information on a regional basis similar to an idea that was proposed to create a “gas desk” within ERCOT. This clearinghouse could provide natural gas market data to RTOs and vice versa (providing key data points on power markets to the gas industry).  3.) As more fully described in response to Number 2 above, this “clearinghouse” must be fully voluntary, and the data assessed by the clearinghouse would either be publicly available, from third-party aggregators, or mutually agreed upon non-public data that is highly protected. |
| 2 | Kinder Morgan, Intrastate Pipeline Group | | Bill Wolf | WGQ Pipeline | The creation of a voluntary natural gas coordinator in Texas is not feasible. Because of the very different nature of the Texas intrastate pipeline system as compared to the interstate pipeline system as discussed in response to Question 2.a.1., the Texas intrastate gas market is not a “system” that can be centrally coordinated. Rather, it is composed of many individual systems owned by different companies that have been developed to provide reliable gas delivery service to a wide range of customers based on customer need, market incentives, and commercial dynamics. As such, much of how such gas pipeline systems conduct business is intended to be confidential at the behest of both the customer and the pipeline. A centralized gas coordination role could require information that is commercially sensitive and intended to be confidential, which could create a chilling effect on pipeline development. For information that is not commercially sensitive, including outage and maintenance scheduling for pipelines, such information is already available to the end-use customer in accordance with the terms of their contract with the pipeline. Moreover, many larger intrastate pipelines, like KM, provide a form of electronic bulletin board for intrastate service that permits its customers to access and rely upon operational information, thereby allowing the customer to coordinate its own commercial activity with the pipeline’s operations. Lastly, and as noted above, because intrastate pipelines are subject to the laws of the state of Texas and regulation by the Railroad Commission of Texas, and are not subject to Federal regulation at all unless they voluntarily offer service under Section 311 of the Natural Gas Policy Act of 1978 (many intrastate pipelines do not), a “voluntary natural gas coordinator” could only be established through an act of the Texas legislature. |
| 3 | American Electric Power | | Kate Daley | WEQ – Generator | It is still unclear what a voluntary natural gas coordinator would do and therefore whether it would be beneficial. RTOs could evaluate the roles and responsibilities of current natural gas desks, without duplicating existing efforts. ERCOT previously requested a Natural Gas Desk be established allowing ERCOT visibility into gas pipeline operations. The Texas Railroad Commission rejected the request. |
| 4 | AGA | | Matthew Agen | WGQ – LDC | A natural gas coordinator may not be feasible because it would be difficult to have an effective coordinator based on the scope and structure of the natural gas system. Collecting historical reliability data is a good idea, but when it comes to operations and the coordination of natural gas deliveries, pipelines must follow FERC-approved tariffs. AGA and its members are unsure that an independent natural gas coordinator would provide the kind of assistance that would overcome the lack of firm transportation currently held by electric generators or available on the market.  Moreover, the issues in each part of the country are different. It would be difficult for a single entity to fully understand the issues with many different regions and production areas, wellhead to burner tip. A state/regional group that could discuss issues on critical days would be more effective, but in the end the lengths of the supply lines need to be accounted for in any regional group. The availability of capacity and natural gas scheduling is dictated by each pipeline’s FERC approved tariff, and a coordinator could not reallocate capacity or impact what was scheduled.  The U.S. natural gas interstate pipeline system is differentiated from the electric transmission system due to access to significant storage capabilities providing system balancing and resiliency. For this reason, it is not reasonable to compare BES mandatory standards to the natural gas system and draw conclusions of insufficiency. Additionally, the interstate natural gas system has a high-level of interconnectivity with both transmission and storage, along with distribution facilities, which aids in reliability.  As AGA explained in its March 31, 2023 survey response, the creation of a voluntary natural gas coordinator would appear to raise more issues than it resolves, and could threaten to increase the cost of service to LDC customers without any appreciable benefit. It should be understood that a voluntary natural gas coordinator would lack authority to take any meaningful action to improve system performance and would not have the ability to create transportation capacity or additional supply when not enough exists during extreme weather conditions. Furthermore, a coordinator could not redirect natural gas under contract from one entity to another. |
| 5 | MISO | | Bobbi Welch | WEQ – ISO/RTO | As previously stated in MISO’s response to the April 4, 2023, survey, MISO believes gas industry participants are in the best position to comment. That said, as other markets have found the creation of a reliability coordinator to be helpful and beneficial, we offer the following thoughts regarding the role of a Voluntary Natural Gas Coordinator (VNGC):  •The role should be more than summing and/or collecting and publishing information.  •The VNGC could coordinate and set common performance expectations.  •The VNGC could help set standards at the federal and/or state level. Entities could agree to comply with VNGC standards by signing an attestation.  •The VNGC could coordinate gas operations – along with electricity reliability coordinators to provide incremental benefits in support of reliability objectives for both industries. Currently, the approach to these functions is fragmented.  •The VNGC could help with risk identification, risk management and information sharing within the gas industry itself and between the electric and gas industries. |
| 6 | CAISO | | Shawn Grant | WEQ – ISO/RTO | 1.) The CAISO has a robust and successful gas and electric coordination working relationship, where we focus on reliability and not on economics. We do not see the benefit of a natural gas coordinator from the standpoint of our level of effort versus incremental improvements over our current working relationship with both interstate and intrastate gas companies. With that being said there may be others that do not have that same level of collaboration as we do at the CAISO and they may benefit from a voluntary natural gas coordinator.  3.) The CAISO does not experience information sharing issues with the intrastate LDCs. The CAISO has worked with the LDCs over many years to build trust and understanding between all entities to ensure energy can be delivered safely and reliably to all of our customers. The CAISO believes effective communication can be established between the electric and gas industries utilizing region-specific coordination opportunities without standardizing communications at the national level. The CAISO and LDCs utilize Non-Disclosure Agreements (NDA) that allows us to share information in a manner that can benefit all parties and maintain system reliability. This NDA framework allows for multiple points of coordination:  - The CAISO provides access, through a secure portal to each LDC, to a daily gas burn forecast for each hour of the next after the Day-Ahead Market has run. The CAISO also provides D+2 information and Real-Time Fifteen-minute market information to each of the LDCs through the same portal. This information provides the LDCs with calculated gas volumes for the electric generation they serve based on the electric market awards for the next day and adjustments to reflect conditions in Real-Time.  - The CAISO also created multiple natural gas nomograms that can be activated in the Day-Ahead Market or in the Real-Time Market if the LDCs deem it necessary due to their system conditions. These nomograms serve as a tool to optimally utilize gas availability restrictions by gas-fired generation resources served within defined gas zones.  - There are nightly communications between the CAISO system operations control room and each LDC’s gas operations control room to discuss current system conditions and any changes that may impact generation or gas usage for the next day. If there are real time events on the gas or electric side, communications between the control rooms are established to help facilitate the issues and reduce the impacts to both electric and gas reliability.  - Weekly outage meetings are held to discuss future gas facility outages that may impact generation coming up in the next week and next year. These meetings help facilitate planning and coordination on both the electric and gas side to maintain system reliability. |
| 7 | Nebraska Public Power District | | Thomas Schroeder | WEQ – Generator | I don’t understand how this “natural gas coordinator” could in anyway help with the issues that arose during the extreme cold weather events. |
| 8 | AF&PA and Gas Consumers Group | | Andrea Chambers & Jameson Calitri | WGQ End User | AF&PA and PGC support a voluntary effort to increase the reliability of natural gas service during winter storms. However, AF&PA and PGC do not support giving any authority the ability to reallocate firm transportation on pipelines or firm supplies from entities that have contracted for such services especially during winter storms when the shippers most need their firm natural gas supplies and transportation in order to operate in a safe manner. AF&PA and PGC encourage NAESB to look at revising electric markets to allow generators to obtain reimbursement for signing up for firm supplies if the generator must run during peak periods to provide reliable electricity to a region through any means that they can for peak periods, which many include purchasing products that are currently available from marketers, signing up for firm transportation if needed and available, signing up for storage, or even installing dual-fuel capability. |
| 9 | Interstate Natural Gas Association of America | | Christopher Smith | WGQ Pipeline | INGAA appreciates the clarification provided by the Forum Panel and NAESB during the April 4 meeting. INGAA reiterates the concerns described in its last survey response regarding a coordinator that would be responsible for prioritizing end uses of natural gas during periods of high demand or for otherwise reallocating capacity. INGAA does not have any additional comments on a voluntary gas coordinator at this time. |
| 10 | Xcel Energy | | Terri Eaton | WEQ Marketer/Broker | As we indicated in our response to the April 4 meeting survey, we see little practicality to this recommendation. Coordination works in the power grid, in part, due to the fact that electricity moves at almost the speed of light. Natural gas, in contrast, moves at 30 – 60 mph making grid-wide coordination less feasible and potentially problematic. Gas pipelines can’t increase supply into the pipeline (like power generators can), because they do not own or control gas production resources, would not change gas supply constraints due to lack of winterization, nor hold capacity rights to transport such gas to LDC’s or generators without disturbing existing rights holders. Natural gas users are best placed to evaluate their forecasts, acquire required supplies and schedule to meet those requirements. |
| 11 | Southwest Gas Corporation | | John Olenick | WGQ – LDC | I take issue because there is an assumption in this question that the natural gas infrastructure is unreliable. I do not believe that is the case nor do I believe that creating a "voluntary natural gas coordinator" is feasible or needed. |
| 12 | Evergy | | Alan Kloster | WEQ – Generator | Evergy believes there should be a stronger information sharing effort between electric system operators, pipelines, and the natural gas facility operators. This sharing would not just help ensure that critical natural gas facilities reliant upon electricity are protected from load shed but also to provide insight for the electrical system operators the fuel impact of critical generating assets for the purpose of maintaining reliability. |
| 13 | SPP | | Joshua Phillips | WEQ – ISO/RTO | 1.) Yes, it is feasible. SPP supports such efforts, as they will help ensure a reliable and economic energy grid.  Regional Transmission Organizations (RTOs) balance real time consumption and production for a product that is consumed instantaneously. While balancing supply and demand, RTOs across the country provide economic and reliable power through real time and day ahead markets, managing reliability reserves, identifying infrastructure needs, and other services. This coordination under RTOs is beneficial to those who join them. SPP’s members saved over $3.787 billion in 2022 through participation in our RTO, a 22-to-1 benefit to cost ratio. Other RTOs offer benefits to their customers as well.  Prior to RTO existence, vertically integrated utilities operated similar to gas systems of today with independent planning, production, delivery and services. The independently managed services limited transparency, created inefficiencies, and increased reliability risks due to a lack of regional coordination of those services.  Electricity and gas molecules are not an interchangeable product, therefore differences in approach are expected. The benefit of an independent coordinating entity, such as a Gas RTO, would provide improvements to manage reliable delivery of gas to consumers, with insight into alternative delivery paths, and optimized supply to balance demand. An additional benefit is improved communications through the entity responsible for overseeing the reliability of the gas system and meeting reliability requirements to ensure disruptions are minimized or negated on the entire system rather than managing a single path or pipeline.  2.) Exploration could be managed through existing footprints to match existing RTOs and ISOs, through regional areas, or nationally. Such discussion would be more appropriate with regulatory direction or industry support for the activity. |
| 14 | New England LDC Group | | John Rudiak & Eric Soderman | WGQ - LDC | A national natural gas coordinator is a complicated endeavor which may not yield the intended results as each region has its own unique supply resource and demand dynamics which are managed by regional policies and practices. A natural gas coordinator may not be feasible because it would be difficult to have an effective coordinator based on the scope and structure of the natural gas system.  Collecting historical reliability data is a good idea, but when it comes to operations and the coordination of natural gas deliveries, pipelines must follow FERC-approved tariffs including provisions related to capacity scheduling and curtailment. We do not believe that an independent natural gas coordinator would provide the kind of assistance that would overcome the lack of firm transportation currently held by electric generators or available on the market. As indicated in previous comments of the group, the underlying reliability issues are due to lack of physical infrastructure contracted for and used for power generation reliability, at least in the New England area we are most familiar with. |

**General Comments Submitted by American Electric Power – Kate Daley**

AEP supports increased coordination in operations and planning between the natural gas and electric industries. Such coordination is essential to reliability. AEP has a long history of investing in the grid to make it more reliable, resilient and secure. One of the most significant challenges posed to reliability is the fact that climate change and extreme weather are occurring in the midst of a major transformation of the grid. This transformation has highlighted two issues – (1) the criticality of natural gas and (2) the need for interregional transmission. The importance of natural gas and electricity coordination remains vital to addressing the first issue.

In 2015, FERC issued Order No. 809, calling for a unified effort to better coordinate the gas and electric industries. Despite those improvements, existing delivery incompatibilities between the gas and electric industries still threaten grid reliability and prevent electric generators from operating at maximum efficiency. A EP appreciates the efforts by NAESB, as directed by FERC and NERC, to continue conversations about natural gas and electric coordination following Winter Storm Uri.

In addition to responses to specific survey questions, AEP offers the following recommendations for consideration:

1. The RTOs should review and modify their unit commitment timelines to ensure that awards are issued earlier, especially during extreme events, in order to better align the commitments of the electric industry with the natural gas pipeline nomination timelines and physical realities of gas supply lines, particularly for RTO Reliability Unit Commitments (RUCs) to assess resource and operating reserve adequacy for the operating day, which can include unit commitments or de-commitments from the RTO. RTOs can and have issued RUCs with minutes to spare prior to the last gas nomination cycle. If the RUCs come after the last nomination cycle of the night for a plant to come online overnight, the generator has no ability to schedule gas transportation and purchase supply to meet the RTO’s request. The pipelines are dependent upon generators nominating appropriate gas transportation and supply in time for it to reach the plant. Gas being bought in sold in the marketplace needs to be aligned with demand/requirements in the power market. It would be ideal if each morning generators knew the precise unit requirements for the next day, so that gas supply could be optimized and gas supply cost could be minimized.

Currently, generators may face the choice of procuring gas supply in advance of an RTO’s award in the anticipation that the RTO may dispatch that unit, while risking that the unit may not be dispatched and the generator is stuck with additional costs to liquidate the gas supply. Earlier RTO awards would aid the ability of generators to participate in gas nomination cycles and purchase supply to meet unit commitments. As previously mentioned, additional nomination cycles would also be beneficial because it would give generators an opportunity to move gas to units that are RUCed at the last minute. In the current environment, RUCs that are outside the gas nomination cycles are at risk.

1. In addition, RTOs should provide multiday commitments ahead of emergency conditions, especially widespread, extreme cold temperatures, such as below 20 degrees Fahrenheit. This would provide generators clear, advanced direction to secure natural gas supply during normal trading periods and would provide more visibility into fuel delivery issues.

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**April 24, 2023**

The Texas Pipeline Association (TPA) appreciates the opportunity to submit these comments related to the Gas Electric Harmonization (GEH) forum stated purpose of improving gas-electric information sharing for improved system performance during extreme cold weather emergencies; improving the reliability of natural gas facilities during cold weather (freeze protection, electric supply); and improving the of generators to obtain fuel during when natural gas heating load and natural gas-fired generators are both in high demand for natural gas, at the same time that natural gas production may have decreased; and identifying measures to improve the ability of generators to obtain fuel during extreme cold weather events when natural gas heating load and natural gas-fired generators are both in high demand for natural gas, at the same time that natural gas production may have decreased.

**INTRODUCTION**

The TPA is the largest state trade association in the country representing solely the interests of the intrastate pipeline network and the Texas pipeline industry. The TPA consists of forty members who, collectively, engage in the gathering, processing, and transmission of natural gas and liquids through pipelines across Texas. As such we believe we are in a unique position to provide context and insight to issues being discussed. They are no way intended to be an exhaustive list of efforts carried out since Winter Storm Uri. These comments are submitted on behalf of TPA, are not meant to be reflective of interstate pipeline positions, and do not necessarily reflect the opinions of any individual TPA member. As such, we submit these general comments for consideration as opposed to specifically ranking matters in the proposed survey.

**GENERAL COMMENTS**

First and foremost, it must be said that the bulk of proposals put forth during GEH forum conversations both at the state level and now in this federal forum have little, if anything, to do with increasing the reliability of the Texas natural gas system, the electric generation fleet, or the operation of the electric grid. As discussed in more depth below, the primary barriers to obtaining fuel or transportation capacity service during extreme cold weather exist in an electric market that has not been conducive to allowing generators a means of recovering the costs associated with securing that service and provides generators no certainty as to when their assets will be called upon to operate. Neither of those issues could be remedied by upending the thriving natural gas market in Texas.

The Texas Pipeline Association (TPA) has been, and continues to engage with state regulators, legislators, electric generation counterparts as well as upstream natural gas stakeholders and downstream consumers to address any actual or perceived problems attributable to the intrastate natural gas system. Those efforts are detailed in greater depth below, but as a general matter, the TPA has stood ready and willing to serve as a resource in discussing these very technical and intricate concepts. Since Winter Storm Uri, however, some electric industry representatives, most notably power generation advocates, have continued to push for the state of Texas to adopt policies more in line with federally regulated interstate lines, yet are seemingly unable to articulate specifically what doing so would achieve given the remarkable differences between the two market structures.

Below is a summary of responses we have given to concerned parties over the past two years regarding regulation and operation of intrastate pipelines, a high-level overview of the differences between the inter and intrastate natural gas markets, as well as examples of ways issues can be addressed that are the subject of NAESB Gas-Electric Harmonization (GEH) Forum Survey.

1. **What’s already being done in Texas.**

The Texas Pipeline Association has participated in every legislative hearing and regulatory rulemaking on these issues since Winter Storm Uri. One such rulemaking at the Railroad Commission of Texas (RRC) was the adoption of a new curtailment rule similar to the emergency order commissioners issued during Uri to prioritize natural gas deliveries for human needs.[[13]](#footnote-13) The rule also elevated gas deliveries to electric generation facilities as high priority - higher than under the previous rule and second only to human needs customers and the distribution systems which serve the homes and hospitals of Texas, to name a few. During Uri, 99.95% of residential gas utility local distribution customers were able to maintain natural gas service.

It is also important to note that to date, no generator who secured both firm supply and firm transport service was curtailed by intrastate pipelines during Uri or any subsequent cold weather event. If the agreements were in place and the molecules showed up customers got the gas for which they contracted. This is invaluable as it demonstrates that with proper planning, intrastate pipelines are capable of serving both the human needs customers at both the LDC level, as well as the electric generation level.

In addition to the RRC rule, several pieces of legislation have been enacted in the state to address gas and electric reliability during extreme weather events, including increased coordination between the gas and electric industries. The following is just a sampling of the state-stewarded initiatives put into place since the conclusion of Winter Storm Uri: implementation of SB 3 directing the Designation of Critical Infrastructure facilities at both the PUC and the RRC; the adoption of weather preparedness standards at both the PUC and the RRC; completion and updating of the Texas Energy Supply Chain Map; and the formalization of a committee with the sole purpose of fostering communication between the gas and electric industry prior to any sort of winter event or other emergency, also known as Texas Energy Reliability Council (TERC).TPA participated heavily in the drafting of the various pieces of legislation and commented on all major rulemakings at each of the relevant agencies.

While we agree that securing contracts for firm supply, transport and storage is the best possible method of ensuring natural gas delivery to a generator, we do not, nor have we ever stated that it is the only method available. We *do* recognize that in one instance, there is a pipeline serving a power generation plant that is dedicated to serving local distribution companies (LDCs), i.e. human needs customers, and therefore is unable to offer firm service.[[14]](#footnote-14) This line was built specifically for LDC service many decades ago and has never offered firm service to any third parties. Those who have either built or bought facilities on that line did so with the knowledge of that limitation. Electing not to invest in the installation of additional is a business decision that those operators made, knowing the risk to reliability. To make a blanket statement insinuating that a single circumstance is somehow applicable to all operations in the state, and then using that single circumstance as some form of justification for a complete overhaul of a demonstrably successful system, profoundly misconstrues the actual state of operations in Texas.

That information notwithstanding, there are a number of intrastate pipeline operators who are willing to build lines to such areas and have offered to do so in return for securing firm transportation contracts.

If, for whatever reason, a generator does not want to enter into a firm transportation agreement in order to ensure service to their facility, it should be noted that other mitigation mechanisms exist to help those operators stay up and running, even if their deliveries of gas get curtailed or otherwise interrupted. Traditionally, interruptible service customers maintain internal storage sources or have an alternative source of fuel as interruptible contracts, if not expressly, then impliedly require installation of an alternative fuel capability.[[15]](#footnote-15) That is to say, that even in the limited instance where firm transportation service is not currently offered, it is well-established that there are other ways of bolstering reliability.

The following is an excerpt from a 2020 NERC *Fuel Assurance and Fuel-Related Reliability Risk Analysis for the Bulk Power System*,[[16]](#footnote-16) less than a year before Uri, where the NERC makes the following suggestions to generators regarding fuel assurance planning:

**“**Generator owners/operators should seek reliable delivery solutions from both a transportation and commodity perspective. Monitor and evaluate risks associated with varying levels of transportation or delivery options associated with the different types of transportation (e.g., interruptible transportation, firm transportation). Consider and evaluate a diverse portfolio of products that can be utilized to deliver fuel both reliably and cost-effectively; examples of these are as follows:

• Delivered bundled products

• Firm call options for periods of heightened fuel uncertainty

• Asset management arrangements

• Potential purchases from suppliers with firm capabilities

• Enhanced infrastructure considerations

• Storage capacity

• Liquefied natural gas (LNG) options

• Dual-fuel capability

• Interconnection with more than one pipeline

• On-site fuel reserve

Generator owners/operators should consider credible fuel-related contingencies that impact their facilities and provide fuel-related facility outage concerns as necessary to the reliability authority. Lastly, *where fuel delivery constraints are routinely evident, generator owners/operators should consider and investigate whether new options for fuel deliveries to a specific facility or their fleet are available.”*

This last sentence is of particular importance to note, specifically as it applies to Texas generation facilities that experienced outages in similar storms prior to February 2021.[[17]](#footnote-17)

**Regarding the assertion that the Texas intrastate market lacks transparency.**

It has been stated on more than one occasion that there is no transparency when it comes to intrastate pipelines in Texas. One such assertion is that “pricing,” i.e. the rates for transportation and storage, are not posted anywhere by intrastate pipeline and/or storage operators.

Contrary to these statements, both transportation and storage rates are required to be posted in Railroad Commission tariffs to the extent that the facilities are gas utilities- that is, that they are part of an intrastate pipeline system.[[18]](#footnote-18) Currently, under 16 Tex. Admin. Code 7.315, the following are just some of the provisions a gas utility is required to include in their tariff filings:

* a list of services the utility provides under the tariff (including transportation, underground storage, residential sales, sales for resale, electric generation sales, and “other”);
* the current rate detailing all charges that may apply under the contract as well as a description of the components used in calculating that rate, including any penalties, fees or taxes;
* any rate adjustment provisions; and
* the effective date of both the original agreed rate and that of any amendments.

There are additional requirements for gas utility distribution system services or sale, transportation and exchange services or rates, and transaction by a gas utility with another utility including filing contractual points of delivery and indicating whether the transaction is between affiliates. Note, while the customer’s name is required to be filed in the tariff with the Commission, one or both parties may request that information be kept confidential. Often, the customer is the party who requests their name be kept confidential.

As detailed more below, Texas is a competitive market and in a competitive market you do not publish your customer’s private contracts. Doing so would jeopardize competition in Texas and do nothing to enhance reliability.

**The Need to recognize unique nature of Texas operations.**

While we understand what a crucial role Texas natural gas plays in supplying other states as well as other countries, it cannot be overstated how unique Texas is in comparison, even to other states that have intrastate lines like California and Pennsylvania. Whatever reforms are recommended as a biproduct of these discussions, they will undoubtedly affect other states differently than Texas. No blanket recommendation can be made that, if implemented, would achieve a uniform result.

The state has been working non-stop since Winter Storm Uri to bolster coordination between the two industries and enhance reliability. Those efforts have continued into the 88th regular legislative session that began in January. The Chairman of the Texas PUC and the CEO and president of ERCOT have stated publicly, on multiple occasions, that the reforms put in place since last session are more than sufficient to ensure that we as a state never again experience a reliability crisis like the one we saw during Winter Storm Uri.[[19]](#footnote-19) The state regulatory bodies that oversee both the electric generation fleet as well as the natural gas utility pipeline networks sit on the Texas Energy Reliability Council and have been engaging in substantively similar conversations to those in the GEH forum for almost two years now. As established below, the unique scenarios Texas markets and their participants face require particular regulatory insight and are best served by the subject matter experts who have been helping navigate these new and ever-evolving issues. Duplicating these conversations and efforts at both levels of government is inefficient, illogical, and unnecessary given the immense amount of effort that has already gone into implementing these reforms at the state level.

While we continue our willingness and dedication to serve as a resource to those less familiar with the unique operations of intrastate natural gas utility pipelines, and how they affect supply to other parts of the country, it is unclear what this forum believes it can recommend that is not already being done extensively at the state level.

1. **High-level overview of the differences between the inter and intrastate natural gas markets.**

While there are a number of interconnections between the federally and state-regulated pipes, the two systems were developed under entirely different regulatory constructs and serve different (albeit complementary) needs. Intrastate pipelines run into several discrete problems that do not exist commonly in the interstate transport market. Areas in which those differences exist primarily include commercial operations and logistical/physical operations.

* 1. **Commercial Considerations.**
     1. *Differences in the markets - Competitive v. Cost of Service.*

There are more than 210 intrastate gas utility pipeline companies currently operating in Texas’s commercially driven and highly competitive intrastate market. These utility pipelines are businesses that compete to serve customers, and the customer business on those lines is commercially sensitive. As such, the accessibility of information is driven by commercial considerations in addition to regulatory ones.

Under this competitive, contract-based structure, the pipeline company assumes the financial risk in building a new line and needs some assurance from the other party (such as firm contracts commitments), that they will be able to recoup their costs.[[20]](#footnote-20) A recent example of this concept can be found in the final investment decision to move forward with the construction of the Matterhorn Express Pipeline from Waha to Katy, after having secured sufficient firm transportation agreements with shippers based on the pipeline’s own risk assessment.[[21]](#footnote-21)

This contractual relationship allows every customer the opportunity to customize the service they receive to their needs at competitive market rates, as compared to FERC regulated interstate lines, where pipelines are afforded recovery through rates collected under the cost-of-service model after demonstrating public convenience and necessity for an additional pipeline. If a customer would like to contract on an intrastate line but wants that line to operate like a FERC regulated line, they can structure their contract that way. Just as there is a large universe of intrastate gas utility pipelines[[22]](#footnote-22)- with thousands of receipt and delivery points- there are equally as many end-users contracting with those utilities. It is for this reason that maintaining flexibility in contracting is so important. It is also what makes contracting for service in Texas so desirable. Sophisticated parties can tailor agreements to suit their particular needs, and not be hamstrung by prescriptive and inflexible mandatory terms.

The public policy underlying these practices is to let the open market, and not the state – be it agency or legislature- dictate the economic and commercial decisions between gas utility pipelines and their customers.

* + 1. *What information is made available.*

There have been repeated calls for the implementation of Electronic Bulletin Boards (EBBs) on intrastate pipelines, citing the existence of similar boards on the interstate system. Past testimony in state legislative hearings allege that the information being requested is publicly available on interstate boards and so too should be required on intrastate boards.

This not only underscores the continued lack of comprehension of the difference in the two markets, but it also highlights a misconception about what certain data points might tell you. There seems to be an idea that intrastate pipelines should be required to post volumes and pressures at points along the systems because the interstates do so, however interstate pipelines are not required to post real-time volumes or pressures on their websites for public view. Access to certain intrastate operating condition information pertinent to the customer may be specifically available pursuant to terms of a contract, but that information (available via form of electronic bulletin boards) is available to *customers*. The assertion is that these EBBs reflect real-time flows and capacity, which they do not. Contrary to some claims by specific generators, this data would not “track the flow” of gas in Texas.[[23]](#footnote-23)

Information about available intrastate capacity can be secured in real time via instant messaging, email, or phone calls to pipeline companies. Any posting of that information would almost immediately be stale, misleading market participants as rapidly conducted transactions keep available capacity constantly in flux. EBBs are not a market clearinghouse for shippers to identify capacity available for contracting and they shouldn’t be implemented to do so in Texas.

What many interstates *do* do is “path” (or map the infrastructure available to move product) how gas flows from point A to point B. At the interstate level, this is straightforward - a more or less straight shot, or “soda straw” model, from one point to another with little or no stops along the way. In Texas, it looks more like cobwebs with thousands of receipt and delivery points throughout, travelling in multiple directions, and gas coming on or off the system. Knowing a pressure or volume at any one point will in no way be indicative of where the gas came from or is going. What’s more, the fact that gas is reported at a certain point on an intrastate line does not mean gas or transportation capacity is actually available (uncontracted) at that point at the time it was reported.

Additional information some seem to be seeking is the identity of shippers and specific information about the capacity they hold on a particular pipeline. Historically this information has been held to be excepted from disclosure under the categorization of being a trade secret.[[24]](#footnote-24) While this is a rebuttable presumption, meaning it is not a blanket protection, any compilation of information such as customer names which is used in one’s business, and which gives it an opportunity to obtain an advantage over competitors who do not know or use it, have been protected by law time and again.

It is often the shipper who does not want their competitors to know this private information, and what’s more, it is not necessary for generation customers to contact pipelines and arrange transport service for their own use.[[25]](#footnote-25) The tariff filing requirements are designed to be as transparent as possible, stopping short of infringing on confidential competitive business information.

* 1. **Logistics and Physical Operations.**

As discussed above, much of the way interstate lines are regulated is based on a very straightforward, one entity “soda straw” style design.  Intrastate lines, in contrast, contract across multiple pipeline operators on a unitized basis. The system itself is very much non-linear.  There are multiple physical paths for gas flow and attempting to map out all points would severely limit operational flexibility while simultaneously restricting the optimal utilization of the pipeline asset.

Capacity on interstate lines is essentially a fungible commodity in that the product starts in one location and typically travels only in one direction, passing a handful of receipt and delivery points. Its value is the same to all customers. Intrastate utility lines on the other hand allow transportation service to be customized to distinct locations on a directional basis. That location, however, may not have the same value to another customer as it does for other customers with different needs and regional demand. Recognizing this difference between the inter and intrastate systems is crucial to understanding why imposing a one-size fits all approach to a fluid market would disproportionately affect some companies and customers more than others. Creating this level of uncertainty in the market ultimately disincentivizes the building of new generation, the building of new pipelines, and engaging in firm contracting in Texas.

1. **Issues identified by the GEH Forum Survey that *can* be addressed.**

There are a number of ways reliability can be enhanced and some of the mentioned concerns can be addressed, including keeping infrastructure construction expeditious; not upending a natural gas market that overall operates very well; mandating or enhancing the coordination and communication between generators and their regulatory authorities; and continuing to study and implement potential changes to electric market design.

**Keep infrastructure construction expeditious.**

As pointed out in the GEH forum survey, there is an increasing need for more pipeline infrastructure. The Texas Pipeline Association agrees. In both the state of Texas and in others there is a critical need for additional natural gas pipelines. One constraint that federally regulated interstate pipeline operators have that Texas regulated intrastate lines do not is the gauntlet of bureaucratic paperwork and permitting processes that significantly hamper the ease and ability of getting these lines built out.

In Texas, intrastate natural gas utility pipelines can be built with relative ease and in an expeditious manner. Construction and contracting in Texas is not permission based, and no need must be demonstrated for the approval of new pipeline infrastructure. Those wanting to build an intrastate pipeline file a notice with the Railroad Commission of their intent to build, and subject to meeting certain pipeline safety requirements and having the capital to build, operators can begin putting steel in the ground. The flexibility afforded industry participants by virtue of the competitive market is what attracts business to Texas and allows this infrastructure to be constructed and contracted for in a timely fashion to respond to market demands.

The reforms that some groups seek would undermine the risk-based investments made by pipeline companies and shippers by removing Texas’ nimble and successful intrastate natural gas pipeline system in preference of one which has historically expanded much more slowly due to burdensome regulatory frameworks with increasingly lengthy permitting timelines. With the state already seeing bottlenecks in high production areas, [[26]](#footnote-26) now is the time to aide in the safe but expeditious building out of natural gas infrastructure, not attempting to emulate a system that would do nothing but stymie it.

**Enhance coordination between generators and their regulatory authorities.**

It has been established time and again that intrastate pipeline operators serving electric generators in Texas already provide their customers with notice of planned outages well in advance - sometimes months in advance. Why the generators do not share that information with their regulatory body (ERCOT) we don't know, but it seems that is something they could easily do. ERCOT has acknowledged the need for this sharing of information at a number of different legislative hearings, although their proposal has always been for gas utility pipeline operators to provide that information to ERCOT directly. We find this proposal a curious one as ERCOT and the PUC do not oversee the operation of natural gas utilities.

Reforms to regulations mandating this sharing of information between the generators and their state regulatory body is far more likely to aid in grid reliability than any of those proposed by certain generation advocates to date.

**Electric market reforms.**

The Texas Senate Business and Commerce Committee and House State Affairs Committee continue to discuss proposed changes to the wholesale electric market design and the impact those changes may have on the reliability of the Texas electric grid. Committee members have spent dozens of hours questioning regulatory representatives, market participants, third-party consultants, and everyday consumers on their views of how the proposal might affect Texas operations of the grid and its electric market. Just last week state legislators heard hours of testimony regarding the proposed Performance Credit Mechanism (PCM) and the uncertainties and challenges associated with advancing such an unproven, costly, complex, and bureaucratic market design.

Another ongoing state initiative with reliability effects is the PUC- ERCOT implementation of the firm fuel supply service (“FFSS”) product which allows certain natural gas generation facilities who can demonstrate secured firm gas storage and transportation service to be compensated for meeting a higher resiliency standard. Phase I of the FFSS (applicable to facilities with certain quantities of on-site fuel) has already proven useful in a weather emergency in Texas. Phase II has focused on the incorporation of off-site fuel storage for eligibility under the program. While the current FFSS product has incorporated some pipeline networks for eligibility, the definition of “Qualifying Pipeline” effectively eliminates all Texas intrastate gas transmission lines, all gas distribution lines and about half of the gathering lines in the state from participating, leaving only those gathering lines which qualify as “non-utilities” because they only connect wells to gas plants or transmission pipelines.[[27]](#footnote-27)

In December 2022, the TPA respectfully submitted comments to ERCOT in their development of this resource, noting that intrastate pipeline operators serve more than 80% of the state’s electric generation fleet, and to effectively exclude them from participating in this service would be doing a great disservice to Texans who are counting on grid reliability. While the TPA continues to engage with regulators on this issue, it notes that this is yet another example of ongoing discussions at the state level geared toward enhancing electric reliability during extreme cold weather events.

In light of all that has been discussed above, it is important to give the reforms we have put into place time to work. It has only been two years, but we are already seeing the benefit, as discussed in recent NAESB GEH forum calls comparing Texas performance during Elliott to other parts of the country. Several industry experts, including the ERCOT Independent Market Monitor, have cautioned against making additional reforms until we know how the recently enacted reforms are going to perform.

**CONCLUSION**

At the end of the day, the Texas competitive generators have an electric rate design problem that makes it difficult for them to recover the costs of contracting for firm service in certain instances. This is a problem that cannot be solved by upending the entire intrastate gas industry and attempting to shoehorn federal regulatory mechanisms into a competitive market and to do so simply to appease a relatively small percentage of the market participants is irresponsible and illogical.

1. See Comments of the Interstate Natural Gas Association of America at 8-9, New England Winter Gas-Electric Forum, Docket No. AD22-9-000 (Nov. 7, 2022) (providing data regarding the performance of interstate natural gas pipelines). [↑](#footnote-ref-1)
2. FERC, NERC, February 2021 Cold Weather Grid Operations: Preliminary Findings and Recommendations at 15 (Sept. 23, 2021). [↑](#footnote-ref-2)
3. Id. [↑](#footnote-ref-3)
4. See PJM, Winter Storm Elliott Frequently Asked Questions at 8 (updated Apr. 12, 2023), <https://tinyurl.com/9sxbm7tu> (“The storm and the rapid onset of cold temperatures heavily impacted natural gas production, particularly in the Marcellus and Utica basins, which are the predominant source of the natural gas procured by gas generation in the PJM footprint. This led to significant loss of gas supply for all downstream gas consumers, particularly larger, more efficient gas-fired power generation units that require nominated supply and higher pipeline pressures to operate.”). [↑](#footnote-ref-4)
5. Policy Statement, Cost Recovery Mechanisms for Modernization of Natural Gas Facilities, 151 FERC ¶ 61,047, PP 26, 30 (2015); see also Order Denying Request for Clarification, Cost Recovery Mechanisms for Modernization of Natural Gas Facilities, 152 FERC ¶ 61,046 (2015). [↑](#footnote-ref-5)
6. Recommendation 8 in The Cold Weather report on Winter Storm Uri states: “To better provide Balancing Authorities with accurate information under TOP-003-5, R2.3.1.2 (“fuel supply and inventory concerns”), Generator Owners/Generator Operators should identify the full reliability risks related to the contracts and other arrangements they (individually or collectively)320 have made to obtain natural gas commodity and pipeline transportation for generating units, including but not limited to volumetric terms, transportation service types, and impacts from potential force majeure clauses. See FERC, NERC and Regional Entity Staff Report, The February 2021 Cold Weather Outages in Texas and the South Central United States, November 2021, pp. 203-204. [↑](#footnote-ref-6)
7. There are a variety of ways that generators, utilities, and industrial users can choose to purchase their natural gas. Generally, natural gas customers purchase their natural gas through a portfolio of products including prearranged contracts set at a pre-determined fixed price or indexed to an agreed variable, along with buying some supply in the daily spot market, where availability and prices fluctuate in response to weather and the availability of infrastructure capacity and storage. Many transactions are made in advance on a monthly. Depending on the location and the relative options available to a generator, relying on interruptible service may not pose issues during peak load conditions. Therefore, it is not always essential for generators to acquire firm capacity to ensure reliable fuel. [↑](#footnote-ref-7)
8. Draft ISO/EDC/LDC Problem Statement and Call to Action on LNG and Energy Adequacy Federal Energy Regulatory Commission New England Winter Gas-Electric Forum, September 8, 2022. [↑](#footnote-ref-8)
9. PJM Markets & Reliability Committee Meeting, Aug. 25, 2021. <https://pjm.com/-/media/committees-groups/committees/mrc/2021/20210825/20210825-item-05-2-natural-gas-and-electric-markets-problem-statement.ashx>. [↑](#footnote-ref-9)
10. ISO-NE “2021 Economic Study: Future Grid Reliability Study Phase 1, July 29, 2022 [↑](#footnote-ref-10)
11. There are tools in place today that are available to generators that are not often dispatched such as purchasing delivered gas or entering into OBAs or park and loans agreements with pipelines to provide flexibility to the extent that a pipeline system can operationally allow it. [↑](#footnote-ref-11)
12. “[W]e remain concerned that any proposal designed to create a new, additional pipeline reliability regulator will not effectively promote pipeline reliability, given that it will create duplicative and conflicting authority with existing federal and state agency regulatory programs.

    H.R. 6084 conflicts with current reliability programs and regulatory requirements. FERC, PHMSA, TSA and DOE each have existing authorities and programs to promote reliability. DOI, BOEM, BLM and other agencies have authority over energy production. State and local regulators have authority over intrastate natural gas pipelines and local gas distribution systems. Inserting a new regulatory entity into this mix without addressing existing regulatory challenges, including capacity constraints resulting from federal and state permitting obstacles, would not be helpful in accomplishing the Committee’s stated goals. However, we are committed to collaborating with the Committee, regulatory agencies, and other stakeholders to enhance existing programs to better protect our critical infrastructure and ensure the continued safe and reliable transportation of energy across our nation.

    H.R. 6084 also duplicates existing cybersecurity requirements. The cybersecurity standard-setting authority that this legislation would give to the proposed Energy Product Reliability Organization (EPRO) duplicates existing and forthcoming TSA pipeline cyber and physical security requirements. Last summer, TSA issued two pipeline cybersecurity Security Directives in response to recent incidents and will soon undertake a rulemaking to establish a permanent program. Congress risks disrupting these cybersecurity efforts by granting duplicative authority to EPRO and FERC.” See <https://www.afpm.org/newsroom/news/pipeline-trade-association-statement-proposed-energy-product-reliability-act> [↑](#footnote-ref-12)
13. 16 Tex. Admin. Code 7.455 [↑](#footnote-ref-13)
14. LDCs are understandably prohibited from offering firm service to other non-human needs customers, even if some of those customers may provide electricity to some human needs consumers as well as commercial, industrial, and other sorts of end users. [↑](#footnote-ref-14)
15. 49 FPC at 911-12, cited in *Arkansas Power & Light Co. v. Federal Power Commission*, 517 F.2d 1223, 1230 (1975). [↑](#footnote-ref-15)
16. <file:///C:/Users/jenni/AppData/Local/Microsoft/Windows/INetCache/Content.Outlook/2DJZGZCJ/Fuel_Assurance_and_Fuel-Related_Reliability_Risk_Analysis_for_the_Bulk_Power_System.pdf>. [↑](#footnote-ref-16)
17. <https://www.washingtonpost.com/nation/2021/03/06/texas-power-plants/> [↑](#footnote-ref-17)
18. There are slightly less than 10,000 negotiated rate tariffs currently on file at the Railroad Commission. [↑](#footnote-ref-18)
19. An example of these reforms already working is the use of the recently adopted supply chain map during the February 2022 winter season. On one particular occasion, the mapping committee, chaired by the PUC Executive Director and vice- chaired by the Executive Director of the Railroad Commission, used the data for the 65,000 plus mapped facilities to mitigate a potential gas-electric disruption within 10 minutes of being notified. The PUC and Railroad Commission worked together, ultimately preventing a loss of power to that facility. The committee held a meeting since that time where they discussed legislative recommendations that are aimed at improving communication and information sharing with regard to the map and the critical infrastructure on it. [↑](#footnote-ref-19)
20. With the exception of intrastate LDCs, who *do* operate under a rate and tariff structure. [↑](#footnote-ref-20)
21. “Matterhorn Express Pipeline Reaches Final Investment Decision.” *Business Wire*. May 19, 2022. <https://www.businesswire.com/news/home/20220519005711/en/Matterhorn-Express-Pipeline-Reaches-Final-Investment-Decision>. (*Last accessed October 27, 2022*). [↑](#footnote-ref-21)
22. Approximately 200. [↑](#footnote-ref-22)
23. An interstate customer’s flow information is used for imbalance management purposes and is for customer view only; it is not a public posting. Intrastate pipelines often provide similar access to customer flow information for the same purpose. [↑](#footnote-ref-23)
24. The Texas Atty. Gen. has determined before that pipeline customer information (names and delivery points) is a trade secret and not subject to Texas Open Records Requests - *see* Open Records Decision Nos. 552 (1990) and 5059 (2009). [↑](#footnote-ref-24)
25. It is presumed that those who seek this information do in hopes of it serving as “free discovery,” a negotiation tool or a litigation aide. [↑](#footnote-ref-25)
26. “Natural Gas Flaring Is Set to Rebound in Permian Basin,” Yahoo Finance, November 14, 2022. <https://finance.yahoo.com/news/natural-gas-flaring-set-rebound-150000373.html?guccounter=1> [↑](#footnote-ref-26)
27. That is to say, they do not connect to power plants or any end-use customer. [↑](#footnote-ref-27)