Via email and posting

September 16, 2022

**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 - September 14, 2022 – Responses Related to Item 3ai

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 September 7, 2022 <https://www.naesb.org/pdf4/geh092322w1.docx>. The following responses were submitted regarding question/topic 3ai:

Please provide comments and any specific recommendations for the forum attendees to consider regarding [Recommendation 24] “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 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.”

| **Responses Submitted by September 14, 2022 – 3a(i)** |
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| **Question/Topic** | 3a(i). Please provide comments and any specific recommendations for the forum attendees to consider regarding [Recommendation 24] “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 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.” |
| **#** | **Organization** | **Representative** | **Market/Segment** | **Comment & Specific Recommendation** |
| 1 | LS Power | Marji Phillips | WEQ – Generator | See Response to 3a |
| 2 | Aspen Environmental Group | Catherine Elder | Other/Observer | We’ve assumed these last decades that the market will decide how much capacity to build. What FERC can conclude from the Uri example is that the market did not properly value capacity and the need to operate under extreme conditions. Many of us recognize that the public, and by extension, the market is not good at valuing low probability, extreme events. Analytic exercises that evaluate the supply(capacity)/demand balance under extreme conditions are enormously important in getting that story out and give our planners and policy makers a forum and context in which to think. My staff and I contributed analysis of this kind to the 20201 Integrated Energy Policy Report of the California Energy Commission as I also did after the Aliso Canyon gas well leak. As for financing, see answer 3a above. Along with doing the supply(capacity)/demand balance work, the study should identify which generating units must operate. Alternatively, under the kinds of conditions that occurred with Uri, it may be that almost all generators become critical. The study should also describe and explore the risk of extreme events and recognize that the “standard” 1-in-10 criterion often applied does not begin to capture the intense suffering citizens will experience during extreme conditions or that extreme conditions are likely to occur more often than in the past, due to climate change. We must re-think reliability and willingness to pay to avoid extreme outcomes. The study might also rank both the cost and effectiveness of solutions as it sure seems (but should be confirmed) that winterizing wells may be a least-expensive option for making supply more secure and then compare the cost of adding underground storage and some LNG needle peakers versus new pipeline capacity. |
| 3 | Natural Gas Supply Association | Pat Jagtiani | WGQ Producer | First and foremost, NGSA believes that market solutions provide the best means to address the need for more resources in the most efficient manner that reduces costs to consumers. At FERC’s conference in Burlington, Vermont last week, a number of panelists and FERC commissioners questioned ISO-NE’s current market construct that is not procuring sufficient resources to ensure reliable operations. ISO-NE has been trying to solve gas supply issues with market design enhancements, but imperfections exist because generators do not have a mechanism to recover costs for investment in services that would support new gas infrastructure, such as pipeline capacity and storage, on-site storage and LNG imports, or dual fuel capabilities. In these instances, in which there are near-term risks and limited options, it may be necessary for states, the regional operator and stakeholders to work together to expeditiously develop and implement additional market-based products, at least on a temporary basis. |
| 4 | Process Gas Consumers Group & American Forest Paper Association | Andrea Chambers | WGQ End User | Commenters agree with 3.a.i. are believe that local entities with jurisdiction over natural gas infrastructure at the distribution level and service to retail consumers are also the proper authorities to require firm transportation for gas-fired generators serving those utilities in cases where they are not purchasing wholesale electric generation. These local entities are best positioned to require firm transportation because they are most aware of the existing infrastructure constraints in their locality as well as what capacity is needed to meet the region’s demand. These local entities should also coordinate with the FERC as discussed in 3a. |
| 5 | Interstate Natural Gas Association of America | Christopher Smith | WGQ Pipeline | A survey of interstate pipelines found that from 2006-2016 pipelines delivered 99.79% of “firm” contractual commitments to transportation customers at the primary delivery points specified in their contract. Traditionally, gas-fired power generators have had the benefit of using existing pipeline capacity that was funded by other shippers. Generators might not be able to rely on this benefit in the future as pipelines become constrained through higher utilization by firm shippers and increasing numbers of dispatchable power generators that will be needed to complement renewable generation and that rely on natural gas.A pipeline’s ability to provide extra contractual flexibility beyond what is in its tariff is contingent upon how much physical capacity is available in the existing pipe, which is limited by the finite size of the pipeline, certificated maximum pressures to ensure safety, and how firm shippers are using their contractual commitments. 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. Gas generators cannot continue to rely on interruptible capacity and pipeline operators’ best efforts to support flexibility, particularly during coincident peak periods, when the pipeline’s firm shippers are using their capacity, and additional pipeline capacity is not available. Relying on best efforts to accommodate flexible scheduling is simply not a sustainable approach. In these instances, it is additional capacity that is required, and no level of coordination can change that fact.In addition to extreme cold weather events, the electric industry’s needs stand to change dramatically in the coming years as the grid integrates more renewable resources and increasingly relies on gas generators, which can be dispatched quickly and ramp up easily, to play an integral role in balancing the system. An ISO New England study found that even in a deep decarbonization scenario, demand for natural gas during the peak hour in 2040 was only 14% lower than in 2021 as electrification efforts shifted consumption patterns. This indicates that today’s level of pipeline capacity is roughly the minimum necessary to reliably run the grid even as the generation mix changes dramatically. Gas is not a “just in time” fuel, as some characterize it, because the bulk of pipeline customers make advance arrangements to ensure it arrives on time. Looking forward, very little analysis has been done looking at whether existing gas infrastructure can accommodate steeper and more frequent ramping requirements, without impacting gas industry operations and service to other shippers (and ultimately retail customers), and whether the electric industry should rely on pipeline flexibility, which isn’t always available, for their own electric reliability. The availability of natural gas for power rests on the existence of sufficient gas infrastructure to serve power market needs. But there simply isn’t enough pipeline infrastructure to meet the demand for natural gas. Pipeline infrastructure, including storage, takes years to certificate and build, and there must be foresight into what the electric grid needs to reliably meet power demand as well as the flexibility required to accommodate changing gas consumption patterns. It may also take time for power market customers and regional operators to craft solutions that make it possible for power market stakeholders to financially commit to needed gas capacity additions that make such projects economically viable. Additionally, permitting reform at the federal, state, and local levels is essential to remove obstacles to natural gas infrastructure development. By removing barriers to infrastructure development, FERC will not need to identify “zones” with insufficient pipeline capacity. Markets will make that determination and pipeline companies will develop the infrastructure needed to address the constraint. |