



NORTH AMERICAN ENERGY
STANDARDS BOARD



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NAESB GAS ELECTRIC HARMONIZATION FORUM

JANUARY 12, 2023



Background & Progress to Date

- July 29, 2022: NAESB receives letter from Chairman Glick and Jim Robb requesting that NAESB establish a forum to identify actions that will improve the reliability of the natural gas infrastructure system as necessary to support the bulk electric system and to address recurring challenges stemming from natural gas-electric infrastructure interdependency (Key Recommendation 7)
- August 30, 2022: NAESB holds first Gas Electric Harmonization (GEH) Forum and receives guidance from Chairman Glick, Jim Robb and Greg White concerning the request. FERC and NERC Staff present a summary of the Staff Report on the February 2021 Cold Weather Outages and establishes a scope of work for the NAESB GEH Forum highlighting 16 specific topics within 3 categories:
 1. Measures to improve gas-electric information sharing for improved system performance during extreme cold weather emergencies
 2. Measures to improve reliability of natural gas facilities during cold weather (freeze protection, electric supply)
 3. 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
- September – December, 2022
 - Four meetings on September 23rd, October 21st, November 8th, December 5th, each providing an opportunity to respond to specific questions offered by the Chairs of the NAESB GEH Forum through written comments or during the meeting intended to solicit recommendations related to the categories identified by FERC and NERC staff during our August 30th organizational meeting.
 - 429 individuals representing 232 organizations have participated on our calls since September
 - 34 sets of comments from 21 organizations/groups have been submitted since September



FERC and NERC Request

- Charge to Forum: Ideally, the Forum participants will produce one or more plans for implementing concrete actions to increase the reliability of natural gas infrastructure system necessary to support the Bulk Electric System, with deadlines, which identify the applicable entities with responsibility for each action.
- 1. Measures to improve gas-electric information sharing for improved system performance during extreme cold weather emergencies
 - 1.a Whether and how natural gas information could be aggregated on a regional basis for sharing with Bulk Electric System operators in preparation for and during events in which demand is expected to rise sharply for both electricity and natural gas, including whether creation of a voluntary natural gas coordinator would be feasible
 - 1.b Expanding/revising natural gas demand response/interruptible customer programs to better coordinate the increasing frequency of coinciding electric and natural gas peak load demands and better inform natural gas consumers about real-time pricing
 - 1.c Electric and natural gas industry interdependencies (communications, contracts, constraints, scheduling)
- 2. 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 Bulk Electric System entities) to enhance the reliability of intrastate natural gas pipelines and other intrastate natural gas facilities
 - 2.b Programs to encourage and provide compensation opportunities for natural gas infrastructure facility winterization
 - 2.b.i [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 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.
 - 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]



FERC and NERC Request (cont.)

- 3. 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
 - 3.a Which entity has authority to require certain natural gas-fired generating units to obtain either firm supply and/or transportation or dual fuel capability, under what circumstances such requirements would be cost-effective, and how such requirements could be structured, including associated compensation mechanisms, whether additional infrastructure buildout would be needed, and the consumer cost impacts of such a buildout
 - 3.a.i [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.
 - 3.b [Recommendation 24] Possible options for increased regasification of liquid natural gas (including possible Jones Act Waivers)
 - 3.c Which entity has authority, and under what circumstances, to take emergency actions to give critical electric generating units pipeline transportation priority second only to residential heating load, during cold weather events in which natural gas supply and transportation is limited but demand is high
 - 3.d Whether resource accreditation requirements for certain natural gas-fired generating units should factor in the firmness of a generating unit's gas commodity and transportation arrangements and the potential for correlated outages for units served by the same pipeline(s)
 - 3.e Whether there are barriers to the use of dual-fuel capability that could be addressed by changes in state or federal rules or regulations. Dual-fuel capability can help mitigate the risk of loss of natural gas fuel supply, and issues to consider include facilitating testing to run on the alternate fuel, ensuring an adequate supply of the alternate fuel and obtaining the necessary air permits and air permit waivers. The forum could also consider the use of other resources which could mitigate the risk of loss of natural gas fuel supply



FERC and NERC Request (cont.)

- 3. 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
 - 3.f Increasing the amount or use of market-area and behind-the-city-gate natural gas storage
 - 3.g [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 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
 - 3.h Whether or how to increase the number of “peak-shaver” natural gas-fired generating units that have on-site liquid natural gas storage.



Recommendations/Proposals for Consideration

- Through discussion, written comments, and the recorded chat from each meeting, over 300 recommendations/proposals have been offered by the participants. In general, these recommendations/proposals have fallen into ten categories of topics in addition to a number of generalized recommendations/proposals.

1. Electric Market Design
 - a. Cost Recovery Mechanisms for Reliability
 - b. Fuel/Transportation Requirements
 - c. Market Timing
2. Gas Market Design
 - a. Intraday Reporting Requirements
 - b. Line-pack Adjustments in During Critical Events
 - c. Interstate Capacity Release Market
 - i. Market Transparency
 - ii. Demand Response
 - iii. Capacity Management
 - d. Pipeline Service Options/Scheduling
 - i. Additional Nomination Periods
 - ii. Modify “No Bump” Policy
 - iii. Weekend Scheduling Opportunities
3. Information Sharing
 - a. Capacity Availability
 - b. Critical Natural Gas Assets
 - c. Operational Notices
 - d. Price Formation
4. Infrastructure
 - a. Incentives
 - b. Permitting
 - c. Pipeline
 - d. Storage
 - e. Regional
 - f. Temporary
5. Intrastate Gas Market
 - a. Capacity Release Market
 - b. Transparency
6. Jones Act Waivers
7. Improved Planning
8. Service Prioritization
9. Resiliency Requirements
10. Weatherization