**via posting**

**TO:** NAESB Gas-Electric Harmonization (GEH) Forum Participants and Interested Industry Parties

**FROM:** Caroline Trum, NAESB Staff, Director Wholesale Electric Quadrant

**RE:** Staff Notes from theNAESB Gas-Electric Harmonization Forum Meeting – November 8, 2022

**DATE:** November 30, 2022

Dear NAESB Gas-Electric Harmonization Forum Participants,

A NAESB Gas-Electric Harmonization (GEH) Forum meeting was held on November 8, 2022 at 8:00 AM Central. Mr. Gee, Ms. Tierney, and Mr. Wood presided over the meeting. The notes below reflect the NAESB staff summary of the meeting.

A recording of the meeting has been posted on the NAESB GEH Forum webpage: <https://naesb.org/recordings/geh110822recording.mp4>

The chat log from the meeting has been posted on the NAESB GEH Forum webpage: <https://naesb.org/pdf4/geh110822chat.docx>

| **Notes from the November 8, 2022 NAESB Gas-Electric Harmonization Forum Meeting** | |
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| **Administrative:** | Mr. Booe welcomed the participants. He noted that the NAESB GEH Forum meeting originally scheduled for December 1, 2022 had been rescheduled for December 5, 2022 and that the comment period for this meeting, if needed, will be extended. Mr. Booe stated that the revised schedule of meetings is posted on the NAESB GEH Forum page of the NAESB website.  Mr. Booe reminded the participants of the NAESB Antitrust and Other Meeting Policies.  Mr. Booe indicated that a number of comments had been submitted and that the NAESB office had updated the compiled comments document to include those received after the comment period and that these comments have been highlighted. He stated that as with past meetings, queue preference for speakers will be given to participants that have submitted written comments or previously requested the opportunity to provide comments during the meeting. |
| **Opening Remarks** | Mr. Booe asked if there were any opening remarks from the panelists.  Mr. Wood acknowledged that over the years, the gas and electric industries have developed in different manners, both in regulatory and business structure. He indicated that harmonizing the two industries will involve not just enhancements to each industry but also require gas and electric market participants to work together to serve customers in meeting their energy needs both today and in the future.  Ms. Tierney thanked those participants that submitted written comments, noting their importance for not only the meeting record but also reviews of the forum activities by FERC and NERC. She stated that, as pointed out by several of the commenters, beyond the impact of severe weather events, the energy industry also has to work together to balance market needs with different state legislative goals, such as reduction of greenhouse gas emissions. Ms. Tierney encouraged the participants, in working to understand the issues, to continue to look beyond their own institutional business interests in order to develop potential solutions.  Mr. Gee noted that over the past few decades, the United States has obtained a greater percentage of its electric generation from natural gas-fired resources, meaning that there are more customers that are potentially requiring access to natural gas during critical, peak periods. He stated that forum efforts are intended to help assure that all those that need access to natural gas can do so. Mr. Gee reminded the participants that FERC and NERC have specifically asked NAESB to address the issues included as part of Recommendation 7 of the FERC, NERC and Regional Entity Staff Report: The February 2021 Cold Weather Outages in Texas and the South-Central United States. He indicated that as part of the forum process, all positions will be given the appropriate time for consideration.  Mr. Desselle stated that the areas in which written comments are solicited ahead of each meeting are intended to facilitate discussions that result in the identification of possible issues and creative solutions. He noted that while some of the survey questions may be regulatory in nature, the topics are responsive to the areas identified by FERC and NERC staff and the charge of Recommendation 7.  Mr. Huff stated he has been encouraged by the comments and ideas that have evolved over the past few meetings and asked participants to continue to engage together to identify potential solutions. |
| **Discussion of Comments Submitted in Response to October 24, 2022 Request** | Mr. Booe stated that the participants would begin the meeting by addressing the comments submitted in response to Question 1.  **Question 1**: Expansion of natural gas infrastructure/capacity has been a solution offered by several participants during the Forum discussions.  a) What are the barriers to building the additional infrastructure/capacity that may be helpful in supporting the Bulk Electric System?  b) How can these barriers be eliminated?  Interstate Natural Gas Association of America (INGAA)  Mr. Smith stated that from the perspective of INGAA, there are two main barriers that may be preventing the build out of additional natural gas infrastructure. He identified as the first barrier potential hinderances that may serve to disincentive power generators from executing long-term agreements for capacity. Mr. Smith explained that as part of considerations regarding new natural gas infrastructure, the FERC must find that there is an actual need and has historically done so through precedent agreements that identify long-term agreements for capacity. He indicated that the second issue may be a lack of awareness in the role natural gas can play in reducing greenhouse gas emissions and supporting the long-term transition to cleaner energy.  Mr. Gee questioned if the consideration of precedent agreements is a requirement under Section 7 of the Natural Gas Act or a case law construct. He asked if FERC should use a different construct beyond precedent agreements in making determinations regarding new natural gas infrastructure. Mr. Smith responded that under legislative requirements to approve new natural gas infrastructure, the FERC must find that such infrastructure is in the public interests which it has achieved through an evaluation of precedent agreements and that precedent agreements can often provide the best evidence as to if there is a long-term market need for additional capacity. He indicated that for this reason, it is important to remove any barriers preventing power generators from entering into long-term agreements for capacity. Mr. Smith noted that while INGAA is not advocating for a new system, FERC has recently indicated it may also consider broader factors in determinations of the public interest for new infrastructure and that if so, it would also be beneficial to receive input from stakeholders and electric market operators regarding the need for natural gas as a balancing resource. Mr. Desselle commented that while ISOs/RTOs typically remain agnostic as to fuel resources, they could likely provide perspective on resource adequacy, reliability, and resiliency needs.  Ms. Tierney asked, beyond precedent agreements, what kinds of information could be taken into account in determining a public interest in new infrastructure. Mr. Smith responded that while there are a number of areas that could be considered, precedent agreements already take a considerable amount of this information into account as entities are entering into long-term agreements for capacity based on evaluations of factors such as long-term demand forecast and state goals for electrification. He expressed concern the consideration of factors that are already accounted for through other means could serve to lengthen the process without adding new probative information. Mr. Smith added that information regarding the types of resource capabilities that might be necessary from the electric market operator perspective, such as a need for dispatchable fast ramping, could be helpful.  LS Power Department  Mr. Spencer stated that existing legal and regulatory requirements and policy barriers may act to prevent the expansion of infrastructure, and, as such, it may be helpful to explore other solutions, including state and regional policies and compensation mechanisms that could better balance the electric and gas reliability needs of consumers. He stated that this could include the allocation of pipeline capacity as well as price incentives and cost-recovery mechanisms. Mr. Spencer noted that both natural gas-fired electric generators and LDCs require gas for reliable operations but that performance requirements imposed on LDCs, either by contract or through regulation, mean that LDCs may need to hold capacity in reserve until the end of the gas day, which typically falls after evening peak demand for electricity. He explained that while LDCs are typically able to fully recover costs related to reserving firm capacity, electric generators are not often able to do so and that generator non-performance penalties may be less costly than contracting for firm natural gas supply.  Mr. Wood asked what types of mechanisms could remove risks around firm procurement by electric generators and better incentivize their participation in the natural gas market. Mr. Spencer indicated a preference for market-based solutions but noted that any solution will need to provide long-term certainty that generators will be able to recover costs associated with firm procurement. He suggested that fuel-neutral policies that could provide certainty of long-term cost recovery could include mechanisms that incentivize generators with dual-fuel capabilities as well as additional transmission or transportation capability. Mr. Wood noted that another factor to consider in fuel-neutral policies is that some generation resources, such as solar and wind, do not require additional upstream contracts to operate.  Ms. Tierney commented that there are states that have enacted policies meant to help offset costs from certain “out-of-market” elements that would otherwise not be recoverable. She suggested that a similar path could be considered for costs associated with assuring reliability during extreme weather events.  Mr. Gee asked if LS Power has engaged in any discussions with state regulators regarding modifications to LDC service obligations. Mr. Spencer responded that while LS Power has not developed a specific proposal, there may be implications to the service obligation requirements that could be re-evaluated to determine if they are aligned with other policies, such as electrification and decarbonization.  Process Gas Consumers and the American Forest and Paper Association  Ms. Chambers emphasized the importance of removing any obstacles for electric generators in contracting for firm pipeline transportation to serve peak load demand. She explained that these barriers could be removed by allowing recovery of firm transportation costs as well as the operation of capacity markets in addition to energy markets, where such markets would be cost-effective. Ms. Chambers continued by stating that given the increased need for ramping capabilities by gas-fired power generators to help ensure reliability due to increased penetration of renewable resources, expansion of pipeline capacity could be beneficial, even if only incrementally so. She also noted the necessity to balance environmental policy goals with the realities of the market structure and reliability needs.  American Gas Association  Mr. Agen noted that there are short-term infrastructure solutions that could be beneficial, such as additional compression, more natural gas storage, and investments to maintain existing infrastructure. He expressed agreement with Mr. Smith’s statement that precedent agreements are the best measure to determine new infrastructure needs but also noted the importance of considering the reliability and resiliency impacts of new infrastructure on both electric and natural gas systems, including how reliability and resiliency may be adversely impacted by unnecessary delays in the approval process.  Mr. Agen indicated that AGA would not be supportive of potential solutions that removed obligations to serve by LDCs. He explained that obligations to serve are meant to ensure that there is enough natural gas capacity and supply to meet peak demands, noting that a complete shutdown of natural gas delivery for a given area would result in costly and time-consuming operational requirements to bring systems and individual customers back online. Mr. Gee commented that this may be an area in which input from state regulators is helpful. Ms. Tierney agreed.  SoCal Gas  Mr. Peress stated that the industry could see benefits from improved reliability planning and forecasting practices to better account for extreme weather events and that recommendations or guidance from NERC could be beneficial in this area. He noted that new compensation mechanisms could also be helpful as ensuring reliability during critical events can be a costly, high-consequence but low probability endeavor. Mr. Peress expressed agreement with Mr. Agen’s statement against modifying LDC obligations to serve, explaining that this could undercut a fundamental tenant of the regulatory compact that is applicable to natural gas utilities. He stated that increases in electrification and reliance upon variable resources are contributing to higher peak day demand from the natural gas system and that the necessary infrastructure costs to meet this demand should be allocated in a manner that reflects this.  Mr. Wood asked how forecasting could be modeled to better accommodate extreme weather events. Mr. Peress indicated the importance of not just considering a “one-in-thirty year event” but also the greater frequency in which this events are occurring. Ms. Tierney commented on the impact that extreme weather events can have on an entire geographic region. Mr. Peress agreed, noting that within the Western Interconnection, prolonged weather conditions have been shown to have broad, regional impacts to gas load, power load, and the availability of natural gas imports and exports as well as output from renewable generation.  PJM, MISO, SPP & NYISO  Mr. Glazer indicated that under FERC Order 787, natural gas pipelines and ISOs/RTOs have effectively communicated and coordinated regarding day-to-day operations of the state of the natural gas and electric systems but that more clarity may be needed regarding non-public information about reliability aspects or potential reliability issues on the natural gas system that can be shared between the parties. He stated that there would also be a benefit to including natural gas pipelines as part of the electric long-term planning process as well as the interconnection process, noting the importance of ensuring that a new resource is located in an advantageous spot on both the electric grid to provide generation as well as to receive fuel from the natural gas system. Mr. Glazer concluded by stating other potential benefits could be realized from new market products beyond 24/7 firm that are designed to meet the needs of gas-fired electric generators, additional flexibility in the natural gas nominations process, and greater transparency in the secondary market for capacity release. He commented that greater transparency is likely an area that could be addressed through the NAESB standards development process.  Mr. Wood asked how greater transparency regarding the secondary capacity market could be achieved. Mr. Glazer responded that there could be greater consistency in postings of capacity release by LDCs, including real-time information. Mr. Gee asked if this could be done through disclosures by pipelines that are of the same degree and quality of information and made either through electronic bulletin boards or some other mechanism. Mr. Glazer indicated that this could provide more transparency but that there also may need to be information provided by LDCs. Mr. Wood noted that there may be other parties in the market beyond LDCs who could be offering capacity on a secondary market.  Mr. Wood asked if the ISOs/RTOs have any processes in place to monitor natural gas operations. Mr. Glazer responded that PJM has an operations desk dedicated to coordinating with the natural gas pipelines and indicated that other ISOs/RTOs likely do as well. He stated that FERC Order No. 787 has helped to facilitate operational level discussions between the industries.  Ms. Tierney commented that additional transparency, especially for secondary markets that operate intrastate and may not be subject to FERC jurisdiction, could be an area to explore as part of discussions on better alignment of the electric and gas industries. Mr. Glazer agreed, noting the importance of gas-electric coordination on both an operational and planning level for resiliency planning.  Mr. Huff asked if, in addition to greater transparency, there are changes to electric market operations that could support better operational coordination, such as multi-day unit commitments. Mr. Glazer responded that while there are modifications that could be considered, additional transparency and more flexible market products would be a more viable, less disruptive first step. Mr. Desselle indicated that SPP has convened a task force comprised of SPP representatives and its stakeholders to investigate ways to improve resource adequacy within the SPP footprint, including through multi-day unit commitments and ramping changes. He noted that SPP also supports standardizing transparency requirements to help ensure uniform and consistent information is being provided to ISOs/RTOs.  Eversource Energy  Mr. Soderman stated that while he would be open to a dialogue regarding modifications to policies and procedures impacting LDCs, changes in this area may not have the intended benefit as there are some regions of the country in which pipelines frequently operate at full capacity, meaning that LDCs are relying on imported LNG to meet demand. He indicated that additional transparency could be beneficial but that the key to resolving existing gas-electric market issues are additional infrastructure and a consistent supply to ensure natural gas can be delivered to where it is needed.  Mr. Booe stated that the participants would next address Question 2.  **Question 2**: Please provide general comments and recommendations concerning the following related to information sharing:   1. What information is currently not shared between interstate pipelines, LDCs, gas-fired power generators, and the ISO/RTOs that would be helpful in situations of constrained capacity/unanticipated demand? 2. What information is currently not shared between intrastate pipelines, LDCs, gas-fired power generators, and the ISO/RTOs that would be helpful in situations of constrained capacity/unanticipated demand? 3. What are the barriers to sharing the information, and how can they be eliminated?   d) How could/should the information be shared?  Interstate Natural Gas Association of America (INGAA)  Mr. Smith stated that as highlighted by Mr. Glazer, natural gas pipelines and ISOs/RTOs share information under FERC Order No. 787 and that natural gas pipelines also make information publicly available through a number of means, such as disclosures made as part of FERC Form 576 filings as well as postings on pipeline electronic bulletin boards that cover operational information such as utilization rate and capacity. He indicated that while natural gas pipelines strive to make information available as close to real-time as possible, there is also a need to ensure accuracy of the information posted in order to help facilitate informed decision making by others. Mr. Smith added that the natural gas pipelines are open to discussions regarding solutions for additional transparency and committed to coordination with the electric market. He noted natural gas pipelines offer an array of services to customers but that some of these services are dependent upon excess capacity, which may not always be available as pipelines are designed to meet the peak needs of firm shippers.  Mr. Gee agreed that a pipeline’s electronic bulletin board contains a significant amount of information but noted that some commenters have indicated a need for more detailed or different information. He stated that it would be helpful to hear from those commenters about any specific data points that could be useful.  LS Power  Mr. Spencer indicated that one area where additional information would be beneficial is data regarding actual gas flows, explaining that a natural gas pipeline’s informational posting website only provides information regarding nominations. He stated that an understanding of actual gas flow on a pipeline would help to identify where there is available capacity which could better facilitate discussions on how capacity should be allocated during extreme conditions.  PJM, MISO, SPP & NYISO  Mr. Glazer explained that ISOs/RTOs often communicate with each other, in real-time, information that may not publicly available but is vital to ensure reliability between adjacent systems. He indicated that while some natural gas pipelines do share this type of information, more robust, standardized information sharing regarding a wide-area view of system operations during critical events or anticipated events would assist with operational planning during such times and reiterated the need for additional transparency regarding the secondary capacity market. Mr. Desselle agreed, noting that additional information could better facilitate planning decisions between ISOs/RTOs and generators during extreme conditions.  Mr. Smith stated that natural gas pipelines often do not have information regarding future available capacity as this is dependent upon decisions made by firm shippers. He indicated that providing such data would likely require natural gas pipelines to speculate about the actions firm shippers may take and could invoke liability issues under FERC’s duty of candor obligation if those speculations are incorrect. Mr. Glazer commented that information about expected system conditions could be appropriately caveated so parties have a clear understanding that actual real-time operations may vary. He stated that it may be beneficial to have additional clarity regarding the responsibilities under FERC’s duty of candor rule and coordination communications between the natural gas and electric industries under FERC Order No. 787.  Ms. Tierney suggested that information regarding expected system conditions could be informed by historical data during similar past circumstances as well as analysis of long-term shipper behavior. She asked if there are any specific mechanisms or circumstances that can help identify expected behavior. Mr. Smith responded that executed contracting agreements are the best measure for natural gas pipelines in determining potential system needs.  Mr. Thanos commented that both the electric and natural gas industries may need to make operational changes in order to achieve better coordination. Ms. Tierney agreed, noting that a number of ideas have been discussed through the forum activities, such as addressing differences in transparency between the electric and gas markets as well as modifying payment structures to better incentivize natural gas-fired generators to obtain firm capacity.  CAISO  Mr. Grant stated that CAISO has established a robust information sharing system with the intrastate LDCs operating within its footprint and that there may be regional opportunities for better information sharing. He explained that through the use of non-disclosure agreements with LDCs, CAISO has built a framework that allows for multiple points of coordination, including a secure portal to provide information regarding daily gas burn forecasts, tools like natural gas nomograms, weekly outage meetings, and regular communications between control rooms.  Process Gas Consumers and the American Forest and Paper Association  Ms. Chambers commented that additional information sharing with end users regarding real-time operations on natural gas pipelines as well as anticipated issues, especially related to capacity, would be helpful. She stated that prior notice of changes in operating conditions, ahead of the issuance of an operational flow order would also be useful. Ms. Chambers explained that this information could be used to better inform end user decisions regarding operational safety as well as if there may be unused capacity that could be made available on the secondary market. Mr. Gee commented that the a system’s operating condition is valuable market information and that there may need to be further considerations as to the information that can be shared and in what manner as to avoid any potential discriminatory treatment.  Texas Competitive Power Advocates  Ms. Richmond explained that generators operating within the ERCOT footprint are required to adhere to a number of transparency requirements, including disclosing information regarding the capacity of a resource, which pipeline(s) a natural gas-fired generator is connected to, and attestations of coordination with those natural gas pipelines. She stated that while new market products can be beneficial, there is also a need for greater transparency regarding firm natural gas contracting practices as well as additional access to firm service.  Mr. Mann, as a representative of the Texas Pipeline Association, indicated that unlike other regions of the country, Texas does not have as many barriers in the creation of new natural gas infrastructure. He stated that following Winter Storm Uri, Texas regulators held numerous hearings and enacted several rulemakings intended to foster better communications between the natural gas and electric industries prior to and during a weather event or other emergency. Mr. Mann stated that ensuring electricity production by natural gas-fired generators may require a reliable natural gas supplier, firm transportation service on a natural gas pipeline, and access to natural gas storage. He suggested that electric rate designs could be modified to better incentivize generators to obtain these types of services.  Mr. Wood commented that the ability for natural gas-fired generators to be able to contract for firm service may be of key importance due to increases in natural gas consumption by these resources. He stated that as the electric industry is utilizing natural gas in a different manner than in the past, there may also be an increased need for no notice types of service, which will likely require additional natural gas infrastructure. Mr. Gee indicated that this may be an area to continue discussions during a future meeting. |
| **Next Steps and Other Business** | Mr. Booe stated that the December 5, 2022 meeting will likely include a continuation of the discussion topics not addressed during today’s meeting. He indicated that the NAESB office will work with leadership to develop an agenda and identify any additional requests for comments. |
| **Adjourn:** | The meeting was adjourned at 11:01 AM Central. |
| **Work Papers Provided for the Meeting:** | **Meeting Related Documents:**   * Announcement: <https://naesb.org/pdf4/geh110822a.docx> * Agenda: <https://naesb.org/pdf4/geh110822ra.docx> * Antitrust Guidance and Other Meeting Policies: <http://www.naesb.org/misc/antitrust_guidance.doc>   **Meeting Materials**   * GE Forum Survey: <https://naesb.org/pdf4/geh110822w1.docx> * GE Forum Survey Responses – November 1, 2022: <https://naesb.org/pdf4/geh110822w2.docx> |
| **Attendees:** | Please see the posted participant attendance record:<https://naesb.org/pdf4/geh110822a2.docx> |