**via posting**

**TO:** Interested Industry Parties

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

**RE:** Final Minutes from February 15, 2024 – Joint WEQ/WGQ/RMQ BPS Meeting

**DATE:** February 29, 2024

**WHOLESALE ELECTRIC QUADRANT**

**WHOLESALE GAS QUADRANT**

**RETAIL MARKETS QUADRANT**

**Joint WEQ/WGQ/RMQ Business Practices Subcommittees**

**Conference Call**

**February 15, 2024 – 1:00 PM to 4:00 PM Central**

**FINAL MINUTES**

1. **Welcome**

Mr. Phillips welcomed the participants to the meeting. Ms. Trum provided the antitrust and meeting policies reminder. Mr. Phillips reviewed the agenda. Mr. Watson moved, seconded by Ms. Hogge, to adopt the agenda. The motion passed a simple majority vote without opposition.

Mr. Phillips reviewed the draft minutes from the January 31, 2024 meeting with the participants. No modifications were offered. Mr. Burden moved, seconded by Mr. Schoene, to adopt the draft minutes as final. The motion passed a simple majority vote without opposition. The final minutes for the January 31, 2024 meeting are available at the following link: <https://naesb.org/pdf4/weq_wgq_rmq_bps013124fm.docx>

1. **Review Industry Submitted Presentations, Comments, and Work Papers**

Mr. Phillips stated that participants submitted several presentations and work papers for discussion during the meeting: [Overview of Interstate Fundamentals & Regulatory Requirements/NAESB Standards](https://naesb.org/member_login_check.asp?doc=weq_wgq_rmq_bps021524w4.pdf), [Overview of Enbridge’s Link InfoPost (Algonquin) G/E Coordination Flyout](https://naesb.org/pdf4/weq_wgq_rmq_bps021524w5.pdf), [Argonne National Laboratory Presentation](https://naesb.org/pdf4/weq_wgq_rmq_bps021524w3.pdf), [Texas Gas and Gulf South Over-Under Performance Critical Notice Examples](https://naesb.org/pdf4/weq_wgq_rmq_bps021524w6.pdf), and comments from [EPSA](https://naesb.org/pdf4/weq_wgq_rmq_bps021524w1.docx) and [Xcel Energy](https://naesb.org/pdf4/weq_wgq_rmq_bps021524w2.docx). He explained that the joint subcommittees would begin discussion by reviewing the submitted presentations and then the submitted comments.

Overview of Interstate Fundamentals & Regulatory Requirements/NAESB Standards

Mr. Phillips asked Ms. Mabry and Ms. Van Pelt to review the presentation. Ms. Mabry started by reviewing considerations in determining a pipeline’s capacity and linepack availability. She explained that linepack provides short-term flexibility for pipelines but there are limiting factors for useable linepack, the maximum allowable operating pressure being the upper limit and the delivery pressure obligations and minimum pressure requirements at compressor stations being the lower limit. Mr. Phillips asked what kind of flexibility useable linepack provides pipeline operators. Ms. Mabry responded that linepack is finite and not incremental capacity but rather a buffer to help temporarily manage natural variations that occur between supply and consumption of natural gas.

Ms. Mabry stated that compressor stations are located strategically along natural gas pipelines to help ensure continuous gas flow and that a drop in pressure can be a trigger for a pipeline to issue an operational flow order (OFO). She explained that OFOs are issued to indicate high system utilization or expected increases in system utilization, which often correlate with less flexibility. Ms. Mabry stated while OFOs can be system-wide, they are typically limited to the geographic location where high utilization of the system is occurring or expected. Mr. Dorr asked why an operator would issue an OFO as opposed to a notice of force majeure in a situation when the supply drop can be attributed to a delivery issue from an upstream pipeline. Ms. Mabry responded that an operator uses a force majeure only when there is an issue on that operator’s pipeline system whereas an OFO is based on operational conditions being observed by the operator. She stated that a drop in supply may not always trigger the release of an OFO, noting that linepack can sometimes provide the flexibility needed to meet demand in such instances. Mr. Phillips asked if an operator issuing an OFO due to a drop in supply would be aware of a force majeure event declared by an upstream party or another pipeline. Ms. Mabry stated that pipeline operators do not have visibility into other operator’s systems. She explained that an operator only has knowledge as to if natural gas has been delivered to a receipt point. Mr. Almquist stated that within thirty-days of issuing an OFO, pipeline operators are required to provide a report describing the operational factors that led to the decision. Mr. Phillips asked, if an OFO is issued due to a drop in supply, will the report provide details on the cause of the constraint. Ms. Mabry responded that the report focuses on the operational conditions that impacted the asset on which operator declared the OFO. She noted the difficulty for an operator to pinpoint the specific reason for a drop in supply. Mr. Dibble agreed, reminding the participants that an OFO relates to expected or encountered operational conditions while a force majeure would serve as notice that an operator is having an issue with its system that makes it unable to perform.

Ms. Welch asked if operators have the ability to pack specific segments of a pipeline. Ms. Mabry responded that operators can generally divide a pipeline into segments by compressor station but that this capability is dependent on the size of the pipeline and differs across the various pipeline systems. She explained that if an operator has the ability to segment the pipeline, linepack can be focused to areas where high market demand is located or expected. Ms. Welch asked if linepack can be replenished during multi-day events. Ms. Mabry stated that during prolonged periods of draft, where more natural gas is being consumed than delivered to a pipeline, the physical limits of transporting natural gas can mean operators may require several days to fully replenish supply on the pipeline, potentially extending beyond the conclusion of the event. Ms. Bagot asked how a pipeline operator may make a determination regarding the geographical area of the OFO. Ms. Mabry responded that when issued during a weather-related event, the OFO from the pipeline operator may be focused to areas of high utilization. Mr. Mattox asked if compressor stations are mono-directional or bi-directional, meaning they can be used to control pressure on both upstream and downstream segments of the pipeline. Ms. Mabry stated that this is system specific, noting that some operators have the ability to seasonally change flow patterns.

Mr. Brooks asked if local distribution companies (LDCs) provide information to pipeline operators during the gas day on their withdraws from storage facilities or changes to planned withdraws. Ms. Mabry stated that pipeline operators may use historical data but typically rely on accurate nominations to forecast expected demand and system usage. She explained that once the gas day starts, the ability to increase nominations during intraday cycles may be capped by flow rate limits. Mr. Brooks asked if there is real-time communication between LDCs and pipeline operators. Ms. Mabry stated that communication across the customer base is key, noting that any data that can be provided to help pipeline operators anticipate demand is encouraged. Mr. Brooks asked if there are any regulatory requirements that could facilitate real-time information exchanges between pipeline operators and LDCs. Mr. Cordara stated that pipeline operators are limited in their ability to conduct conversations outside of the electronic bulletin board (EBB) posting process. He explained that FERC Order No. 787 allows exceptions for information exchanges related to gas-electric coordination with power plant operators. Mr. Brooks asked if data on real-time usage from LDCs could be beneficial for pipeline operators. Mr. Cordara explained that metering data at receipt points provides information as to real-time usage but that pipeline operators do not have notice and are not aware of circumstances that may lead to increases or drops in demand that differ from scheduled volume. Mr. Brooks suggested that communications from LDCs to upstream/midstream parties may be an area to further discuss.

Ms. Mabry overviewed pooling transactions, explaining that at pooling locations, natural gas from multiple producers or sources is aggregated at a single point on the system. She stated that pooling transactions are designed for confidentiality and do not provide insight to the source of the natural gas or the ultimate market for delivery. Mr. Phillips asked how customer ranking processes occur at pooling points when there are drops in supply. Ms. Mabry responded that the shipper determines the impact to its customers when a drop in supply occurs. Mr. Pedersen asked how a shipper makes this determination. Mr. Schoene responded that ranking determinations are controlled by contractual obligations between the seller and buyer of natural gas. He explained that while not universal and situationally specific, market participants generally consider baseload transactions as firm and daily transactions as interruptible. Mr. Hensley stated that for Southern Star Central Gas Pipeline, the tariff establishes that natural gas is ranked by priority of service and then according to contractual arrangements. Mr. Schoene noted that counterparties should be in open communication to understand the potential ranking process impact of the contractual arrangement for the buy and sell transaction. Mr. Pedersen asked if there are standards that address the ranking process and timing of related communications. Ms. Van Pelt stated that the contract dataset within the NAESB WGQ Business Practice Standards provides a mechanism for shippers to identify rankings to pipeline operators but does not establish or guide the ranking process. Mr. Phillips noted that additional information regarding the ranking process, such as a walk-through of the timeline between when a force majeure is issued and a customer receives notice that there has been a cut in supply, could be helpful for discussions.

Mr. Fitzpatrick asked for clarification regarding the distinction between an OFO and a critical day notice. Ms. Mabry explained that a critical day notice is a form of OFOs. She stated that a pipeline’s tariff often dictates the various levels of OFOs that can be issued and the type of notice is included in the OFO. Ms. Jagtiani asked how the issuance of an OFO impacts flowrate flexibility and the ability of a shipper to increase nominations during intraday cycles. Ms. Mabry stated that an OFO acts as an instruction to shippers and point operators to stay within tariff-defined flow requirements and is typically issued for an entire gas day. She explained that assuming capacity is available, a shipper should be able to nominate up to its scheduled quantity during intraday cycles.

Ms. Van Pelt reviewed the FERC regulatory requirements and NAESB WGQ Business Practice Standards that address critical notices. She explained that 18 CFR §284.12(b)(3)(vi) requires an interstate pipeline to post notices of OFOs, critical periods, and other critical notices on its informational posting website and notify affected parties. Ms. Van Pelt stated that the NAESB WGQ Business Practice Standards support implementation of the FERC requirements by providing mechanisms to facilitate the posting and notice requirements.

Due to time constraints and to accommodate future availability of other presenters, Ms. Van Pelt agreed to continue with the presentation during the February 29, 2024 beginning with a review of capacity and flow reporting requirements.

Argonne National Laboratories Presentation

Mr. Phillips asked Mr. Folga and Mr. Craig to review the presentation. Mr. Folga provided an overview of the Argonne National Laboratory NGinsight tool, noting that the NAESB GEH Forum Report included two recommended actions to expand the tool functionality as a mechanism to improve situational awareness. He explained that the tool uses EDI to collect publicly available data from the EBBs of approximately 75% of interstate natural gas and offshore pipelines and can provide near-real-time data in areas such as gas volumes consumed by individual customers, unsubscribed capacity availability, critical and non-critical notices, and planned service outages. Mr. Folga stated that the tool overlays other relevant datasets, including utility service areas and weather alerts, that allows the dashboard mapping to provide insights into interdependencies between natural gas supply and electric generation. He noted that the tool uses AI and machine learning techniques to help categorize and flag important critical notices for wholesale electric market participants. Mr. Folga stated that tool users have identified additional functionality that could be beneficial, such as incorporating data from natural gas processing plants, production facilities, and LDCs and increasing geographic granularity. He explained that Argonne National Laboratory has the capability to expand tool functionality but is dependent on additional funding to implement these changes.

Mr. Maddox asked how users can access the tool. Mr. Craig stated that users may login to view the tool map dashboard or access through API. Mr. Brooks asked how often the tool collects data. Mr. Craig responded that data collection is typically timed to the natural gas nomination cycle as this is the frequency most pipelines update informational postings. He explained that some natural gas pipelines provide hourly postings and, in such instances, the tool will update the data accordingly. Mr. Folga stated that critical notices are typically incorporated into the tool as they are issued. Mr. Brooks asked if the tool automatically receives data via EDI when informational postings are updated. Mr. Folga responded that where available, the tool is signed up to receive push notifications but that most systems do not have this capability, meaning that the tool performs inquiries of these systems on a periodic basis. He explained that Argonne National Laboratories coordinates with a pipeline on the data retrieval process.

1. **Continue to Discuss** **2024 WEQ Annual Plan Item 6 / 2024 WGQ Annual Plan Item 4 / 2024 RMQ Annual Plan Item 3 – Gas-Electric Market Coordination**

The participants will continue discussions during the next meeting. Ms. Stabley proposed an area of future discussion. She suggested there be consideration as to if data regarding forecasted hourly load profiles from natural gas-fired generators, including those connected to an interstate pipeline and located behind the citygate, would be beneficial for natural gas system operators.

1. **Identify Next Steps and Action Items**

Mr. Phillips noted that conversations generated by the presentations identified several new topics of discussion related to interstate pipeline system operations, including how ranking processes take place at pooling points during extreme weather conditions, how operational flow orders are issued and communicated, and how additional insight into system conditions between midstream parties may be beneficial. He asked interested participants to provide additional feedback in these areas for the next meeting.

1. **Discuss Future Meetings**

Mr. Phillips stated that at the next meeting, the participants will continue review of the presentations, starting with the Overview of Interstate Fundamentals & Regulatory Requirements/NAESB Standards, and then move to the comments submitted for discussion during the February 15, 2024 meeting. Ms. Trum stated that NAESB would work with the Joint BPS co-chairs to distribute an agenda for the meeting.

1. **Adjourn**

The meeting adjourned at 3:59 PM Central by consensus.

1. **Attendance**

| **First Name** | **Last Name** | **Organization** |
| --- | --- | --- |
| Denise | Adams | ONEOK, Inc. |
| Matthew | Agen | American Gas Association |
| Celso | Alonso | Energy Transfer Equity, L.P. |
| Karl | Almquist | Tallgrass Operations, LLC |
| Jumoke | Arowolo | Emera Energy Services |
| Robert | Aytes | Southwest Gas Corporation |
| Nancy | Bagot | Electric Power Supply Association |
| Rebecca | Berdahl | Bonneville Power Administration |
| Jonathan | Booe | NAESB |
| Tanner | Brier | Bonneville Power Administration |
| Dick | Brooks | Reliable Energy Analytics |
| Layne | Brown | Western Electricity Coordinating Council |
| Christopher | Burden | Enbridge (U.S.) Inc. |
| Simeon | Cheung | Southern California Gas Company |
| Jennifer | Coffee | Texas Pipeline Association |
| Pete | Connor | Rep. American Gas Association |
| Jim | Cordora | Kinder Morgan, Inc. |
| Brian | Craig | Argonne National Laboratory |
| Katie | Davis | Bonneville Power Administration |
| Jeremy | Diaz | National Fuel Gas Supply |
| Jay | Dibble | Chevron Natural Gas |
| Justin | Dorr | Avista Corporation |
| Terri | Eaton | Xcel Energy Inc. |
| Pedrom | Farsi | Arizona Public Service Company |
| Paul | Fadul | Los Angeles Department of Water and Power |
| Kathryn | Ferreira | New Jersey Natural Gas |
| John | Fitzgerald | Tennessee Valley Authority |
| Brian | Fitzpatrick | PJM Interconnection, LLC |
| Steve | Folga | Argonne National Laboratory |
| Ann | Garza-Beutz | Southern California Gas Company |
| Mark | Gracey | Kinder Morgan, Inc. |
| Shawn | Grant | California ISO |
| April | Gregory | Northern Natural Gas |
| Brandon | Guderian | Devon Energy Corporation |
| Tom | Gwilliam | Iroquois Gas Transmission System |
| Paul | Haas | Kinder Morgan, Inc. |
| Adrian | Harris | Bonneville Power Administration |
| Dee | Hastey | Big Data Energy |
| Ronnie | Hensley | Southern Star Central Gas Pipeline |
| Katherine | Herrera | American Gas Association |
| Rachel | Hogge | Eastern Gas Transmission & Storage, Inc. |
| Raj | Hundal | Powerex Corp. |
| Eva | Hunt | Avista Corporation |
| Patricia | Jagtiani | Natural Gas Supply Association |
| Alan | Johnson | NRG Energy, Inc. |
| Ivan | Kimball | Consolidated Edison Company of New York |
| Dmitriy | Kiselev | Consolidated Edison Company of New York |
| Debbie | Kupczyk | National Fuel Gas Supply |
| Matthew | Laudone | Salt River Project Agricultural Improvement & Power District |
| Nichole | Lopez | Kinder Morgan, Inc. |
| Gina | Mabry | Kinder Morgan, Inc. |
| Andrew | MacBride | National Grid |
| Rachel | Marsh | Calpine Corporation |
| Eli | Massey | MISO |
| Mike | Mattox | MISO |
| Ed | McCluskey | Duke Energy |
| Steven | McCord | TC Energy Corporation |
| Shawn | McGovern | Occidental Energy Marketing, Inc. |
| Michael | McLamore | Argonne National Laboratory |
| Jared | Meyer | KCP&L and Westar, Evergy Companies |
| Megan | Miller | Enbridge (U.S.) Inc. |
| Mark | Moyer | EQT Energy LLC |
| Liam | Noailles | Tallgrass Operations, LLC |
| Jerry | Noland | CenterPoint Energy Houston Electric, L.L.C. |
| Chris | Norton | American Municipal Power |
| Sydney | Novoa | American Public Gas Association |
| Gene | Nowak | Kinder Morgan |
| Linn | Oelker | LG&E and KU Services Company |
| Norman | Pedersen | Southern California Generation Coalition |
| Joshua | Phillips | Southwest Power Pool |
| Mark | Pranaitis | Avangrid Networks (Gas) |
| Farrokh | Rahimi | Open Access Technology Incorporated |
| John | Reynolds | NRG Energy, Inc. |
| Ronald | Robinson | Tennessee Valley Authority |
| Michael | Russ | National Fuel Gas Supply |
| Lisa | Russo | National Fuel Gas Supply |
| Cory | Samm | Hoosier Energy REC |
| Keith | Sappenfield | Cheniere Creole Trail Pipeline |
| Robert | Schacht | Argonne National Laboratory |
| Ben | Schoene | ConocoPhillips |
| Sarah | Shaffer | Equitrans, LP |
| Donnie | Sharp | American Public Gas Association |
| Lisa | Sieg | LG&E and KU Services Company |
| Lisa | Simpkins | Constellation Energy Generation |
| Christoher | Smith | Interstate Natural Gas Association of America |
| Tina | Smith | Municipal Gas Authority of Georgia |
| Leigh | Spangler | Latitude Technologies, an ESG Company |
| Sarah | Stabley | Piedmont Natural Gas |
| Karen | Stampfli | Tennessee Valley Authority |
| John | Stevenson | New York Independent System Operator, Inc. |
| Scott | Stewart | Bonneville Power Administration |
| John | Sturgeon | Duke Energy |
| John | Suchar | Williams |
| Keith | Sutherland | Emera Energy Services |
| Sarah | Tomalty | BP Energy |
| Caroline | Trum | NAESB |
| Jessica | Tyahla | UGI Central Gas Control, LC |
| Kimberley | Van Pelt | Boardwalk Pipelines |
| Carol | Vogel | Southwest Gas Corporation |
| Mallory | Waldrip | ISO-New England |
| Sam | Watson | North Carolina Utilities Commission rep. NARUC |
| Bobbi | Welch | MISO |
| Mark | Wilke | SWN Energy Services Company, LLC |
| Lisa | Yoho | Energy Transfer Equity, L.P. |