

NORTH AMERICAN ENERGY STANDARDS BOARD

801 Travis, Suite 1675 • Houston, Texas 77002 • Phone: (713) 356-0060 • Fax: (713) 356-0067 email: naesb@naesb.org • Web Site Address: www.naesb.org

> October 17, 2016 Filed Electronically

The Honorable Kimberly D. Bose Secretary Federal Energy Regulatory Commission 888 First Street N.E., Room 1A Washington, D.C. 20426

RE: NAESB Status Report for Submittal to the Commission Concerning FERC Order No. 809, *Coordination of the Scheduling Processes of Interstate Natural Gas Pipelines and Public Utilities* (Docket No. RM14-2-000)

Dear Ms. Bose:

The North American Energy Standards Board ("NAESB") is voluntarily submitting this report to the Federal Energy Regulatory Commission ("FERC" or "Commission") in response to the April 16, 2015 FERC Order No. 809, *Coordination of the Scheduling Processes of Interstate Natural Gas Pipelines and Public Utilities*¹ and the subsequent September 17, 2015 Order on Rehearing.² As you know, the Order on Rehearing requested "...that the natural gas and electric industries, through NAESB, begin considering the development of standards related to faster, computerized scheduling and file such standards or a report on the development of such standards with the Commission by October 17, 2016."³ The purpose of this report is to inform the Commission of action taken by NAESB, since the submission of the July 29, 2016 status report,⁴ in response to the Commission's requests related to computerized scheduling in Paragraph 107 of FERC Order No. 809.⁵ This report is preceded by three status reports submitted to the Commission on July 29, 2016, August 4, 2015⁶ and December 22, 2015⁷ in Docket No. RM14-2-000 that highlight the organization's activities as directed by the NAESB Board of Directors. Upon ratification of any relevant NAESB Business Practice Standards, NAESB will file a report with the Commission informing the Commission of their adoption. Further, NAESB will file a quarterly update with the Commission concerning the progress of the standards development process.

The cover letter, report and enclosures are being filed electronically in Adobe Acrobat[®] Portable Document Format (.pdf), with each enclosure bookmarked separately. The entire filing is also available on the NAESB website (<u>www.naesb.org</u>). Please feel free to call the office at (713) 356-0060 or refer to the NAESB website (<u>www.naesb.org</u>) should you have any questions or need additional information regarding the report.

Respectfully submitted,

Rae McQuade

Ms. Rae McQuade President & COO, North American Energy Standards Board

¹ Order No. 809, *Coordination of the Scheduling Processes of Interstate Natural Gas Pipelines and Public Utilities*, 80 Fed. Reg. 23197 (Apr. 24, 2015), FERC Stats. & Regs. ¶ 31,368 (cross-referenced at 151 FERC ¶ 61,049) (2015) (Order No. 809).

² Order on Rehearing, *Coordination of the Scheduling Processes of Interstate Natural Gas Pipelines and Public Utilities*, 152 FERC ¶ 61,212 (2015) (Order on Rehearing).

³ Id. at P1.

⁴ The July 29, 2016 *NAESB Status Report for Submittal to the Commission Concerning FERC Order No.* 809 may be accessed at the following link: <u>https://www.naesb.org/pdf4/ferc072916_naesb_order809_status_report.pdf</u>.

⁵ Order No. 809, 151 FERC ¶ 61,049.

⁶ The August 4, 2015 *NAESB Update Report for Submittal to the Commission Concerning FERC Order No. 809* may be accessed at the following link: <u>https://www.naesb.org/pdf4/ferc080415_naesb_update_report_order809.pdf</u>.

⁷ The December 22, 2015 *NAESB Status Report for Submittal to the Commission Concerning FERC Order No. 809* may be accessed at the following link: <u>https://www.naesb.org/pdf4/ferc122215_naesb_order809_status_report.pdf</u>.



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cc:

Chairman Norman C. Bay, Federal Energy Regulatory Commission Commissioner Collette Honorable, Federal Energy Regulatory Commission Commissioner Cheryl LaFleur, Federal Energy Regulatory Commission

Mr. Michael Bardee, Director, Office of Electric Reliability, Federal Energy Regulatory Commission

Mr. Max Minzner, General Counsel, Office of the General Counsel, Federal Energy Regulatory Commission

Mr. J. Arnold Quinn, Director, Office of Energy Policy and Innovation, Federal Energy Regulatory Commission

Ms. Jamie L. Simler, Director, Office of Energy Market Regulation, Federal Energy Regulatory Commission

Mr. J. Cade Burks, Chairman and CEO, North American Energy Standards Board Ms. Valerie Crockett, Vice Chairman WGQ, North American Energy Standards Board Mr. Michael Desselle, Vice Chairman WEQ, North American Energy Standards Board Mr. William P. Boswell, General Counsel, North American Energy Standards Board Mr. Jonathan Booe, Executive Vice President & CAO, North American Energy Standards Board

Terry Thorn, Advisory Council, North American Energy Standards Board Sue Tierney, Advisory Council, North American Energy Standards Board

Enclosures (all documents noted in the appendices are available publicly on the NAESB website - http://www.naesb.org):

Appendix A	WGQ Business Practices Subcommittee (BPS) meeting minutes and
	work papers from July 12, 2016 to the present
Appendix B	NAESB 2016 WEQ Annual Plan adopted by the Board of Directors on
	September 1, 2016
Appendix C	NAESB 2016 WGQ Annual Plan adopted by the Board of Directors on
	September 1, 2016
Appendix D	Links to the July 29, 2016 WGQ Executive Committee notational
	ballots and notational ballot results
Appendix E	September 1, 2016 NAESB Board of Directors minutes
Appendix F	List of available transcripts
Appendix G	End Notes – NAESB 2016 WEQ and WGQ Annual Plans

UNITED STATES OF AMERICA FEDERAL ENERGY REGULATORY COMMISSION

Coordination of the Scheduling Processes of Interstate Natural Gas Pipelines and Public Utilities

Docket No. RM 14-2-000

REPORT OF THE NORTH AMERICAN ENERGY STANDARDS BOARD

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The North American Energy Standards Board ("NAESB") is voluntarily submitting this report to the Federal Energy Regulatory Commission ("FERC" or "Commission") to inform the Commission of action taken by NAESB in response to FERC Order No. 809⁸ and to supplement the related status reports previously submitted to the Commission. As all reports submitted by NAESB to the Commission are informational in nature, NAESB is not advocating for Commission action or inaction on any of the issues presented.

To support the report and to offer a complete record of the NAESB activities completed in response to FERC Order No. 809, seven enclosures are attached to this submittal.

- 1. Appendix A provides the WGQ Business Practices Subcommittee (BPS) meeting minutes and work papers from July 12, 2016 to the present
- 2. Appendix B provides the 2016 WEQ Annual Plan adopted by the Board of Directors on September 1, 2016
- 3. Appendix C provides the 2016 WGQ Annual Plan adopted by the Board of Directors on September 1, 2016
- 4. Appendix D provides links to the July 29, 2016 WGQ Executive Committee notational ballots and notational ballot results
- 5. Appendix E provides the September 1, 2016 NAESB Board of Directors minutes
- 6. Appendix F provides a list of available transcripts
- 7. Appendix G provides the end notes for the NAESB 2016 WEQ and WGQ Annual Plans

NAESB's activities in response to the Commission's request in Paragraph 107 of FERC Order No. 809 have been underway since early 2015 and were described in previous status reports submitted to the Commission on December 22, 2015,⁹ August 4, 2015,¹⁰ and July 29, 2016.¹¹ As an update to those status reports, NAESB is submitting this report as requested in Paragraph 1 of the September 17, 2015 Order on Rehearing. In that paragraph the Commission requested "...that the natural gas and electric industries, through NAESB, begin considering the development of standards related to faster, computerized scheduling and file such standards or a report on the development of such standards with the Commission by October 17, 2016."¹² As stated by the FERC, the development of the standards related to scheduling supports the efforts of the Commission to improve coordination of the wholesale natural gas and electric markets, as additional standardization may "...provide an opportunity for faster and more frequent scheduling of intraday nominations...."¹³

⁸ Order No. 809, *Coordination of the Scheduling Processes of Interstate Natural Gas Pipelines and Public Utilities*, 80 Fed. Reg. 23,198 (Apr. 24, 2015), FERC Stats. & Regs. ¶ 31,368 (2015) (cross-referenced at 151 FERC ¶ 61,049 (2015)), *order on clarification*, 152 FERC ¶ 61,095, *order on reh'g*, 152 FERC ¶ 61,212 (2015), *order on clarification*, 153 FERC ¶ 61,049 (2015).

⁹ The December 22, 2015 NAESB Status Report for Submittal to the Commission Concerning FERC Order No. 809 may be accessed at the following link: <u>https://www.naesb.org/pdf4/ferc122215_naesb_order809_status_report.pdf</u>.

¹⁰ The August 4, 2015 NAESB Update Report for Submittal to the Commission Concerning FERC Order No. 809 may be accessed at the following link: <u>https://www.naesb.org/pdf4/ferc080415_naesb_update_report_order809.pdf</u>.

¹¹ The July 29, 2016 *NAESB Status Report for Submittal to the Commission Concerning FERC Order No.* 809 may be accessed at the following link: <u>https://www.naesb.org/pdf4/ferc072916_naesb_order809_status_report.pdf</u>.

¹² Order on Rehearing, 152 FERC ¶ 61,212.

¹³ Order No. 809, 151 FERC ¶ 61,049 at P 107.

As reported in the July 29, 2016 NAESB status update to the Commission, the NAESB Board of Directors approved the addition of five items to the 2016 Wholesale Electric Quadrant (WEQ) and Wholesale Gas Quadrant (WGQ) Annual Plans in response to the April 16, 2015 FERC Order No. 809. These annual plan items were a direct result of the NAESB Gas-Electric Harmonization (GEH) Forum activities between January 12, 2016 and May 13, 2016, as described in the July 2016 report. The five 2016 WEQ and WGQ Annual Plan items are:

- <u>2016 WGQ Annual Plan Item 3(b)(i)/2016 WEQ Annual Plan Item 7.b.i</u>: GEH Forum Issue 22 – It would be desirable to have a set of terminology agreed upon by participants to characterize shapes, profiles, ratable, non-ratable, and so forth to facilitate discussion,
- <u>2016 WGQ Annual Plan Item 3(b)(ii)/2016 WEQ Annual Plan Item 7.b.ii</u>: GEH Forum Issue 25 – Communication protocols with LDCs, gas generator operators and natural gas marketing companies,
- <u>2016 WGQ Annual Plan Item 3(b)(iii)/2016 WEQ Annual Plan Item 7.b.iii</u>: GEH Forum Issue 26 Improve efficiency of critical information sharing (related to issues 22 and 25),
- <u>2016 WGQ Annual Plan Item 3(b)(iv)/2016 WEQ Annual Plan Item 7.b.iv</u>: GEH Forum Issue 33 – Use of multiple confirmation methods in addition to traditional confirmations for intraday nominations. There is currently a good definition of Confirmation by Exception (CBE) in NAESB standards. CBE however, may not be available everywhere but there may also be additional confirmation methods that could benefit from standardization, and
- <u>2016 WGQ Annual Plan Item 3(b)(v)/2016 WEQ Annual Plan Item 7.b.v:</u> GEH Forum Issue 36 – Level of confirmations: there is a wide range of data elements that are exchanged, from a minimum amount to a very large set of data. In the "Art of Scheduling," pipelines confirm at different levels, with potential for disparities. Greater standardization could produce confirming efficiencies. (For example, confirm at the shipper-to-shipper level. Or, if there are confirmations at a lower level of detail, it would be driven by model type). See issue 17 in the first presentation.

Driven by Standards Requests R16003, R16004, and R16007, three additional annual plan items were included on the 2016 WGQ Annual Plan through a notational vote on June 24, 2016¹⁴ and subsequently assigned to the WGQ Business Practice Subcommittee ("BPS"). All three items are related to the GEH Forum efforts and propose additional standardization in areas related to communication protocols, information-sharing practices, and the current methodologies that support the nomination and confirmation process. The three additional 2016 WGQ Annual Plan items are:

- <u>2016 WGQ Annual Plan Item 3(c)(i)/R16003</u>: (Submitted by Skipping Stone and Environmental Defense Fund, Inc. on March 28, 2016) Develop business practices as needed to support R16003 and attachment: Special Efforts Scheduling Services for Natural Gas Pipeline Transportation The proposed standard addresses certain business practices relating to Best Efforts scheduling for natural gas pipeline transportation that is: a) scheduled outside of the standard grid-wide nomination cycles, b) permits flow changes outside of standard schedule flow periods; and/or c) involves Shaped Flow Transactions (as defined in the proposed standard),
- <u>2016 WGQ Annual Plan Item 3(c)(ii)/R16004</u>: (Submitted by FIS Global on May 3, 2016) Develop business practices as needed to support R16004: "Update the NAESB 1.4.1 Nomination dataset to remove all non-necessary data elements and to evaluate the use of all Mutually Agreed and Business Conditional data elements for their continued relevance,"
- <u>2016 WGQ Annual Plan Item 3(c)(iii)/R16007</u>: (Submitted by FIS Global on May 11, 2016) Develop business practices as needed to support R16007: "Update the NAESB Nomination dataset and related datasets to support the ability for a service requester to submit a single nomination with hourly quantities when such a service is supported by the TSP."

The NAESB WGQ BPS initiated the standards development efforts with a conference call held on July 12, 2016 to review the five 2016 WGQ Annual Plan items. Also during the call, the submitters of the three Standards Requests – R16003, R16004 and R16007 – delivered presentations on each of the requests. Since that time, the WGQ BPS has held six GEH-related conference calls and a two-day face-to-face meeting, with as many as 59 participants in each of these meetings.

Given the substantial number of items to consider and the interrelated nature of the issues, the subcommittee developed an order of approach for addressing the items to ensure that each topic will be considered as efficiently

¹⁴ The June 24, 2016 notational ballot may be accessed at the following link: <u>https://www.naesb.org/pdf4/bd060316ballot.docx</u>.

and effectively as possible. The order of approach and work plan is shown and described below and maps out the path that the subcommittee will follow when considering the items.

NAESB Wholesale Gas Quadrant Business Practices Subcommittee Order of Approach:

Item 1.	GEH Item 22 – Terminology (Ongoing)
Item 2.	Standards Request R16003(a) – Definitions Related to Special Efforts
Item 3.	Standards Requests R16003(b) and R16007 – Nominations of Hourly Quantities
Item 4.	GEH Item 36 – Level of Confirmations
Item 5.	GEH Item 33 – Multiple Confirmation Methods
Item 6.	GEH Items 25&26 - Communication Protocols and Improve Efficiency of
	Critical Information Sharing
Item 7.	Standards Request R16003(c) – Special Efforts Nominations
Item 8.	Standards Request R16003(d) – Special Efforts Capacity Release
Item 9.	Standards Request R16004 – Update Nomination Dataset

As Standards Request R16003 touches upon many areas within the wholesale gas standards, the subcommittee divided the request into four parts to make the work more manageable. Each part reflects different aspects of the standards request, including: (a) Definitions Related to Special Efforts, (b) Nominations of Hourly Quantities, (c) Special Efforts Nominations, and (d) Special Efforts Capacity Release. As noted above, Item 1, concerning terminology, will be an ongoing priority throughout the effort while addressing each of the items. Related to Item 3, the subcommittee determined that it would address Standards Requests R16007 and R16003(b) together, as both requests propose similar concepts related to the nominations of hourly quantities. Upon completion of Item 3, the subcommittee will proceed with two consecutive efforts to consider standards development in response to GEH Item 36- Levels of Confirmation, Item 4, and GEH Item 33- Multiple Confirmation Methods, Item 5. Although both Item 4 and Item 5 relate directly to the confirmation process, the subcommittee will address the items separately. Under Item 4, Levels of Confirmation, the subcommittee will analyze the four levels on which confirmations are currently performed and determine whether any benefits exist to standardizing the data elements exchanged between the parties at a certain level. When addressing Item 5, Confirmation Methods, the subcommittee will discuss the use of methods, such as confirmation by exception, in addition to traditional confirmations for intraday nominations. Subsequently, the WGQ BPS will discuss Item 6 concerning potential standards development related to critical information communication with local distribution companies (LDCs), Generators, and Marketers to support GEH Items 25 & 26. In the following meetings, the subcommittee will complete the work related to Standards Request R16003 as Items 7 and 8 and end the standards development effort with a second evaluation of the NAESB Nomination Dataset under Standards Request R16004 - Item 9.

To date, the subcommittee has partially addressed Items 1 and 2 by reviewing a number of definitions and developing a new definition. Additionally, the subcommittee has voted out a proposal for standards addressing Item 3. Currently, the subcommittee is continuing to hold discussions on Item 4, Levels of Confirmations. Item 2 above addresses definitions particular to special efforts; however, given the continuous discussion of terms as part of Item 1, the WGQ BPS placed work on the definitions related to special efforts in R16003(a) (Item 2) on hold until related standards work is complete.

As previously mentioned, the WGQ BPS standards development effort began in July. To date, the WGQ BPS has developed the work plan described above and focused most of its efforts on addressing Items 1, 2, 3, and 4. To support discussions and potential standards development related to Item 3, the subcommittee developed a survey and requested comments by September 29, 2016. The survey results, including a list of concerns provided by a number of LDC participants, aided in the development of the subcommittee's first proposal for standards development. The proposal specifically addressed 2016 WGQ Annual Plan Item 3(c)(i)/R16003 and 2016 WGQ Annual Plan Item 3(c)(iii)/R16007, captured in the work plan as Item 3. The proposal offered a new definition for the term "Shaped Nomination" and one related proposed standard directed towards Transportation Service Providers that offer Shaped Nominations. Both the proposed definition and the proposed standard can be found below:

NAESB WGQ Proposed Definition:

A Shaped Nomination is a nomination in which a Service Requester provides both a daily quantity and a quantity for each hour of the Gas Day.

NAESB WGQ Proposed Standard:

Where a Transportation Service Provider offers a service under its tariff, general terms and conditions, and/or contract provision(s) which expressly provides for a Service Requester to submit a Shaped Nomination, such nomination should be submitted using the NAESB standards.

The proposal also included instructions to the Information Requirements and Technical Subcommittees (IR/Tech) on the technical implementation to be concurrently developed to facilitate the new definition and standard.

Although the motion for the WGQ BPS to adopt the proposal was supported overall by the participants, concerns were raised that, if the same vote had been held in the WGQ Executive Committee, the motion would fail due to a lack of requisite support from individual segments. The votes in opposition included five votes cast from the five voting participants in the LDC segment, one vote from the End Users segment, and two votes from the Services segment. As Executive Committee procedures require a minimal threshold support, 40% from each segment, in order for a standard to pass, it was noted that any issues with the proposed standard will need to be addressed by the WGQ Executive Committee before moving forward.

Currently, completion dates are being discussed within the WGQ BPS and will be a focus of the upcoming October 27, 2016 WGQ Executive Committee meeting. During the December 8, 2016 Board of Directors meeting, the board members will consider for approval any dates that the WGQ Executive Committee finalizes during its meeting in October. Based on informal discussions with co-chairs of the WGQ BPS, Items 3-5 on the order of approach list – (3) Standards Requests R16003(b) and R16007 – Nominations of Hourly Quantities, (4) GEH Item 36 – Level of Confirmations, (5) GEH Item 33 – Multiple Confirmation Methods – are expected to be completed by the first quarter of next year. The finalization of further completion dates will be included in a subsequent status report along with an update on the standards development effort.

Additionally, given the proximity of the October 27, 2016 WGQ Executive Committee meeting, the WGQ BPS anticipates requesting guidance and direction regarding the grouping of any proposed standards recommendations. The WGQ BPS will hold its next conference call on October 18, 2016 followed by a face-to-face meeting on October 27-28, 2016. During these meetings, the subcommittee will continue to follow the order of approach with an eye toward efficiently completing each portion of the standards development effort. The WGQ BPS is scheduling additional face-to-face meetings and conference calls throughout this year and into the next. The WGQ BPS meetings and conference calls are open to all interested parties and the minutes for each meeting are posted on the NAESB website.

NAESB will continue to provide quarterly updates informing the Commission of the standards development process. At any point, should the commission want to alter the timeline and set different milestones, NAESB welcomes any communications. As always, NAESB appreciates the guidance of the Commission and the leadership of the Board of Directors, and looks forward to working with the industry to develop standards that support the wholesale and retail natural gas and electricity markets.

Appendices

Appendices:

- A...... WGQ Business Practices Subcommittee (BPS) meeting minutes and work papers from July 12, 2016 to the present
- B...... NAESB 2016 WEQ Annual Plan adopted by the Board of Directors on September 1, 2016
- C..... NAESB 2016 WGQ Annual Plan adopted by the Board of Directors on September 1, 2016
- D...... Links to the July 29, 2016 WGQ Executive Committee notational ballots and notational ballot results
- E...... September 1, 2016 NAESB Board of Directors minutes
- F List of available transcripts
- G...... End Notes NAESB 2016 WEQ and WGQ Annual Plans

Appendix A: WGQ Business Practices Subcommittee (BPS) meeting minutes and work papers from July 12, 2016 to the present

	Appendix A: NAESB WGQ Business Practice Subcommittee (BPS) GEH Related Meeting Minutes and Work Papers				
Date	Link to Agendas, Notes and Transcripts	Work Papers, Comments and Transcripts			
July 12, 2016	WGQ BPS Conference Call with Web Conferencing - GEH Related Meeting Meeting Minutes: <u>https://www.naesb.org/pdf4/wgq_bps071216fm.doc</u>	R15008 Memo from WGQ IR/Technical to WGQ BPS – Revised: https://www.naesb.org/member_login_check.asp?doc=wgq_bps071216w1.docx Suggested Redlines to the WGQ BPS January 21, 2016 Draft Minutes, Submitted by D. Davis, Williams: https://www.naesb.org/pdf4/wgq_bps071216w2.doc			
July 28, 2016	WGQ BPS Conference Call with Web Conferencing - GEH Related Meeting Meeting Minutes: <u>https://www.naesb.org/pdf4/wgq_bps072816fm.doc</u> Attachment: R16003 Meeting Minutes Attachment: <u>https://www.naesb.org/member_login_check.asp?doc=wgq_bps0728_16a1.doc</u>	Additional Background Material and Work Paper for R16003, 7/20/16: https://www.naesb.org/pdf4/wgq_bps072816w1.docx Description of Spreadsheet Work Paper for R16003, 7/22/16: https://www.naesb.org/pdf4/wgq_bps072816w2.docx Graphic Examples 1, 7/20/16: https://www.naesb.org/pdf4/wgq_bps072816w3.xlsx Work Paper re: TETCO Language as 1 example of Best Practices: https://www.naesb.org/member_login_check.asp?doc=wgq_bps072816w4.pdf R16003 Work Paper Boardwalk Additional Redlines Nominations Standards: https://www.naesb.org/member_login_check.asp?doc=wgq_bps072816w5.docx Suggested Redlines to the WGQ BPS July 12, 2016 Draft Minutes, Submitted by D. Davis, Williams: https://www.naesb.org/pdf4/wgq_bps072816w6.doc July 28 Work Paper: https://www.naesb.org/member_login_check.asp?doc=wgq_bps072816w7.doc			
August 11, 2016	WGQ BPS Conference Call with Web Conferencing - GEH Related Meeting Meeting Minutes: https://www.naesb.org/pdf4/wgq_bps081116fm.doc Attachments: Parking Lot: https://www.naesb.org/pdf4/wgq_bps081116a1.doc Order of Approach: https://www.naesb.org/pdf4/wgq_bps081116a2.doc R16003: https://www.naesb.org/pdf4/wgq_bps081116a3.doc	R16003 August 11 Work Paper: <u>https://www.naesb.org/member_login_check.asp?doc=wgq_bps081116w1.doc</u> Suggested Redlines to the WGQ BPS July 28, 2016 Draft Minutes, Submitted by D. Davis, Williams: <u>https://www.naesb.org/pdf4/wgq_bps081116w2.doc</u> Order of Approach: <u>https://www.naesb.org/pdf4/wgq_bps081116w3.doc</u>			

Appendix A: WGQ Business Practices Subcommittee (BPS) meeting minutes and work papers from July 12, 2016 to the present

	Appendix A: NAESB WGQ Business Practice Subcommittee (BPS) GEH Related Meeting Minutes and Work Papers				
Date	Link to Agendas, Notes and Transcripts	Work Papers, Comments and Transcripts			
August 25, 2016	WGQ BPS Conference Call with Web Conferencing - GEH Related Meeting Meeting Minutes: https://www.naesb.org/pdf4/wgq_bps082516fm.doc Attachments: Parking Lot: https://www.naesb.org/member_login_check.asp?doc=wgq_bps0825 16a1.doc Work Paper: https://www.naesb.org/member_login_check.asp?doc=wgq_bps0825 16a2.doc R16003A: https://www.naesb.org/member_login_check.asp?doc=wgq_bps0825 16a3.docx	R16003: https://www.naesb.org/pdf4/wgq_bps082516w1.doc Suggested Redlines to the WGQ BPS August 11, 2016 Draft Minutes, Submitted by D. Davis, Williams: https://www.naesb.org/pdf4/wgq_bps082516w2.doc Wholesale Gas Quadrant BPS Work Paper on R16007: https://www.naesb.org/pdf4/wgq_bps082516w3.docx R16003A Work Paper - Recommendations from FIS: https://www.naesb.org/member_login_check.asp?doc=wgq_bps082516w4.docx R16003B Work Paper - Recommendations from FIS: https://www.naesb.org/member_login_check.asp?doc=wgq_bps082516w5.docx R16003C Work Paper - Recommendations from FIS: https://www.naesb.org/member_login_check.asp?doc=wgq_bps082516w6.docx R16003D Work Paper - Recommendations from FIS: https://www.naesb.org/member_login_check.asp?doc=wgq_bps082516w6.docx R16003D Work Paper - Recommendations from FIS: https://www.naesb.org/member_login_check.asp?doc=wgq_bps082516w6.docx R16003D Work Paper - Recommendations from FIS: https://www.naesb.org/member_login_check.asp?doc=wgq_bps082516w7.docx			
September 29, 2016	WGQ BPS GEH Related Meeting with Web Conferencing , Houston, TX (Held at the NAESB Office) Meeting Minutes: <u>https://www.naesb.org/pdf4/wgq_bps092916fm.doc</u>	WGQ BPS Questions: https://www.naesb.org/pdf4/wgq_bps092916w1.doc R16007 Work Paper , 9/12/16: https://www.naesb.org/pdf4/wgq_bps092916w2.docx Enable Midstream Response to Confirmation Questions: https://www.naesb.org/pdf4/wgq_bps092916w3.pdf Enbridge Response to Confirmation Questions: https://www.naesb.org/pdf4/wgq_bps092916w4.pdf Confirmations Examples FIS Work Paper, REVISED: https://www.naesb.org/pdf4/wgq_bps092916w5.pptx Questar Response to Confirmation Questions: https://www.naesb.org/pdf4/wgq_bps092916w6.doc			

Appendix A: WGQ Business Practices Subcommittee (BPS) meeting minutes and work papers from July 12, 2016 to the present

	Appendix A: NAESB WGQ Business Practice Subcommittee (BPS) GEH Related Meeting Minutes and Work Papers				
Date	Link to Agendas, Notes and Transcripts	Work Papers, Comments and Transcripts			
October 4, 2016	WGQ BPS Conference Call with Web Conferencing - GEH Related and No-GEH Related Meeting Meeting Minutes: <u>https://www.naesb.org/pdf4/wgq_bps100416dm.doc</u> Attachment: R16007 and R16003(b): <u>https://www.naesb.org/pdf4/wgq_bps100416a1.docx</u>	Suggested Redlines to the WGQ BPS September 12-13, 2016 Draft Minutes, Submitted by D. Davis, Williams and S. Munson, FIS: https://www.naesb.org/pdf4/wgq_bps100416w1.doc Expressed Concerns by Various LDCs re: Proposal to Limit Confirmations to Level 2 Submitted by P. Connor: https://www.naesb.org/pdf4/wgq_bps100416w2.docx BPS GEH 10-3-16 R16007 and R16003b Work Paper: https://www.naesb.org/pdf4/wgq_bps100416w3.docx Work Paper Submitted by TVA: https://www.naesb.org/pdf4/wgq_bps100416w4.docx Suggested Redlines to the WGQ BPS August 18, 2016 Draft Minutes, Submitted by R. Hogge, Dominion Transmission: https://www.naesb.org/pdf4/wgq_bps100416w5.doc Suggested Redlines to the WGQ BPS September 29, 2016 Draft Minutes, Submitted by D. Davis, Williams: https://www.naesb.org/pdf4/wgq_bps100416w6.doc Suggested Redlines to the WGQ BPS September 29, 2016 Draft Minutes, Submitted by R. Hogge, Dominion Transmission: https://www.naesb.org/pdf4/wgq_bps100416w6.doc			

NORTH AMERICAN ENERGY STANDARDS BOARD 2016 ANNUAL PLAN for the WHOLESALE ELECTRIC QUADRANT Adopted by the Board of Directors on September 1, 2016

	Item Description	Completion ⁱ	Assignment ⁱ				
D	Develop business practices standards as needed to complement reliability standards						
st ap	evelop business practice standards to support and complement NERC reliability standar andards authorization requests (SARs) using the NERC/NAESB Coordination Joint Sta propriate. Current NAESB activities underway to develop business practice standards an item are:	ndards Develop	oment Process as				
a)	Parallel Flow Visualization/Mitigation for Reliability Coordinators in the Eastern Interconnection – Permanent Solution Note: Consideration should be given to provisional item 2.a. Work is being coordinated with the IDC Association. Status: Full Staffing	TBD	BPS				
b)	Perform consistency review of WEQ-008 Transmission Loading Relief Business Practice Standards and develop recommendation. ¹⁵ Status: Full Staffing	TBD	BPS				
c)	Revise TLR level 5 to be treated similarly to TLR Level 3 in terms of treating the next hour allocation separately from that of current hour. (<u>R11020</u>) Status: Full Staffing	TBD	BPS				
d)	Develop, modify or delete business practices standards to support NERC activities related to NERC Time Error Correction (BAL-004-0) Status: Monitor	1 st Q 2017	BPS				
e)	Assess impact to NAESB Business Practices with FERC approval of removing the PSE (Order RR15-4-000) and LSE (Order RR15-4-001) from the NERC Compliance Registry Status: Not Started	TBD	BPS/CISS				
	 Modifications to WEQ-004 Coordinate Interchange Business Practice Standa Tie type e-Tags <u>R16008</u> 	ards for Dynam	ic Tags and Pseu				
	Status: Started	TBD	CISS/BPS				
f)	Develop, modify or delete business practices standards to support NERC activities related to NERC Inadvertent Interchange BAL-006 Status: Complete	2 nd Q 2016	BPS				
D	evelop business practice standards in support of the FERC RM05-25-000 and RM0	05-17-000 (OA	TT Reform) ¹⁶				
a)	Develop version 3 business practice standards to better coordinate the use of the tran	emission syste	m among neighbo				

a) Develop version 3 business practice standards to better coordinate the use of the transmission system among neighboring transmission providers.

Status: Underway

Request R05004 was expanded to include the <u>Order No. 890 (Docket Nos.RM05-17-000 and RM02-25-000)</u>, (<u>Order No. 890-A (Docket Nos. RM05-17-001, 002 and RM05-25-001, 002</u>), and <u>Order No. 890-B (Docket Nos. RM05-17-03 and RM05-25-03)</u> "Preventing Undue Discrimination and Preference in Transmission Services"

¹⁶ FERC Order No. 890, issued February 16, 2007, can be accessed from the following link: <u>http://www.naesb.org/doc_view4.asp?doc=ferc021607.doc</u>.

¹⁵ In some sections of WEQ-008 it appears that the standards are applicable to all of the Interconnections and other it appears that the standards are only applicable to the Eastern Interconnection. The title indicates the standards are applicable to the Eastern Interconnection.

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		Item Description	Completion ⁱ	Assignment ⁱⁱ		
	i)	Group 4: Preemption; Request No. R05019 (Part of Preemption and Comp	etition)			
		1) Short-Term Firm Preemption and Competition (OATT Section 13.2 and	nd 14.2)			
		Status: Started	1 st Q, 2017	OASIS		
		2) Long-Term Rollover Rights Competition (OATT Section 2.2) Status: Complete	2 nd Q, 2016	OASIS		
	ii)	Group 6: Miscellaneous (Paragraph 1627 ¹⁷ of FERC Order No. 890)				
		 Paragraphs 1627 of Order 890 – Posting of additional information on OASIS regarding firm transmission curtailments Status: Started 	TBD	OASIS/BPS		
		 Redispatch Cost Posting to allow for posting of third party offers of planning redispatch services. Status: Started 	TBD	OASIS/BPS		
	Develop business practices standards to improve the current operation of the wholesale electric market and develo and maintain business practice and communication standards for OASIS and Electronic Scheduling					
a)		te remaining incremental enhancements to OASIS as an outgrowth of the ESB March 29, 2005 conference on the future of OASIS (R05026).	TBD	OASIS/BPS		
	the S to al gene	bing <u>statement</u> completed by SRS. There were a number of assignments from Standards Request. The outstanding item is Enhance the TSR result postings low showing of (i) limiting transmission elements and (ii) available eration dispatch options that would allow acceptance of reservation request. us: Started				
b)	the S to al gene Statu) Req	bing <u>statement</u> completed by SRS. There were a number of assignments from Standards Request. The outstanding item is Enhance the TSR result postings low showing of (i) limiting transmission elements and (ii) available eration dispatch options that would allow acceptance of reservation request.	TBD	OASIS		
,	the S to al gene State) Req State	bing <u>statement</u> completed by SRS. There were a number of assignments from Standards Request. The outstanding item is Enhance the TSR result postings low showing of (i) limiting transmission elements and (ii) available eration dispatch options that would allow acceptance of reservation request. us: Started uirements for OASIS to use data in the Electric Industry Registry (<u>R12001</u>)				
,	the S to al gene Statu) Req Statu Pevelop) Rev Auth mee	bing <u>statement</u> completed by SRS. There were a number of assignments from Standards Request. The outstanding item is Enhance the TSR result postings low showing of (i) limiting transmission elements and (ii) available eration dispatch options that would allow acceptance of reservation request. us: Started uirements for OASIS to use data in the Electric Industry Registry (<u>R12001</u>) us: Not Started				

¹⁷ Paragraph 1627 of FERC Order No. 890, issued February 16, 2007: We agree with suggestions for the posting of additional curtailment information on OASIS and, therefore, require transmission providers, working through NAESB, to develop a detailed template for the posting of additional information on OASIS regarding firm transmission curtailments. Transmission providers need not implement this new OASIS functionality and any related business practices until NAESB develops appropriate standards. These postings must include all circumstances and events contributing to the need for a firm service curtailment, specific services and customers curtailed (including the transmission provider's own retail loads), and the duration of the curtailment. This information is in addition to the Commission's existing requirements: (1) when any transmission is curtailed or interrupted, the transmission provider must post notice of the curtailment or interruption on OASIS, and the transmission provider must state on OASIS the reason why the transaction could not be continued or completed; (2) information to support any such curtailment or interruption, including the operating status of facilities involved in the constraint or interruption, must be maintained for three years and made available upon request to the curtailed or interrupted customer, the Commission's Staff, and any other person who requests it; and, (3) any offer to adjust the operation of the transmission provider's system to restore a curtailed or interrupted transaction must be posted and made available to all curtailed and interrupted transmission customers at the same time.

¹⁸ The "NAESB Accreditation Requirements for Authorized Certification Authorities" can be found at:

http://www.naesb.org/member_login_check.asp?doc=certification_specifications.docx.

¹⁹ http://www.nerc.com/pa/Stand/Pages/CIPStandards.aspx

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		Item Description	Completion ⁱ	Assignment ⁱⁱ
5	Ma	intain existing body of Version 3.x standards		
	a)	Add language to WEQ-001-4 Online Negotiation and Confirmation process to clarify Table 4-3 (<u>R09003</u>) Status: Started	1 st Q, 2017	OASIS
	b)	Create a new OASIS mechanism that allows for the merger of like reservations without the use of the resale mechanism ($\underline{R09015}$) Status: Complete	3 rd Q 2016	OASIS
	c)	Improve transparency to allow customers to determine whether they have been treated in a non-discriminatory manner by posting of additional information on OASIS when service is denied (i.e. refused or declined) by customer(s) using new SAMTS process across multiple transmission systems to serve their NITS load on multiple systems. (<u>R12006</u>) Status: Started	TBD	OASIS/BPS
	d)	Review and modify as necessary WEQ-004, EIR Business Practice Standards, e- Tag Specification, and e-Tag Schema to make the necessary modifications to recognize the Market Operator Role within the Electric Industry Registry Status: Complete	2 nd Q 2016	CISS
6.		relop and/or modify standards to support FERC Order Instituting Proceeding t tocols for Commission Forms (Docket No. AD15-11-000) ²⁰	o Develop Elect	tronic Filing
	a)	Develop business practices as needed to support electronic filing protocols for submittal of FERC Forms Status: Started	TBD	Joint WEQ/WGQ FERC Forms Subcommittee
7.	Ga	s-Electric Coordination		
	a)	Review FERC Order No. 809 ¶ 107 issued in Docket No. RM14-2-000 ²¹ regarding computerized scheduling and provide recommended direction concerning the development of standards or modifications to existing standards as needed to support the request of the Commission ²² The recommended direction ²³ will require board approval, for both the timeline to be pursued and the framework for standards development. ²⁴ Status: Complete	2016	Gas-Electric Harmonization Forum, NAESB Board of Directors, WEQ EC & WGQ EC

²⁰ The FERC Order Instituting Proceeding to Develop Electronic Filing Protocols for Commission Forms, issued on April 16, 2015, can be found through the following hyperlink: <u>https://www.naesb.org/pdf4/ferc041615_electronic_filing_protocols_forms.pdf</u>

²³ The steps for the GEH forum shall be:

 Provide a forum for industry education from both the natural gas and electric industries regarding gas-electric coordination specific to computerized scheduling, and confirmations including a streamlined confirmation process, if necessary (FERC Order No. 809 Order on Rehearing, Docket No. RM14-2-001)

²¹FERC Order No. 809 can be found through the following hyperlink: https://www.ferc.gov/whats-new/comm-meet/2015/041615/M-1.pdf ²²FERC Order No. 809 ¶107. While NAESB's modified standards represent an improvement over the currently effective standards, we continue to recognize that additional intraday nomination opportunities could promote more efficient use of existing pipeline infrastructure and provide additional operational flexibility to all pipeline shippers, including gas-fired generators. The modified NAESB standards reflect reduced intraday processing times from the current NAESB standards (i.e., three hours instead of the current four hours), and existing operational limitations, including the manual processes utilized by pipelines for processing nominations, may affect the ability of the gas industry to add additional standard nomination cycles applicable to all shippers. However, the use of computerized scheduling would appear to provide an opportunity for faster and more frequent scheduling of intraday nominations for those shippers and their confirming parties willing to commit to scheduling electronically. We request that gas and electric industries, through NAESB, explore the potential for faster, computerized scheduling when shippers and confirming parties all submit electronic nominations and confirmations, including a streamlined confirmation process if necessary. Providing such an option would enable those entities that need greater scheduling flexibility to have their requests processed expeditiously.

⁽²⁾ Identify potential issues specific to computerized scheduling, and confirmations including a streamlined confirmation process, if necessary which could be based on the education provided in step 1

⁽³⁾ Identify potential solutions to the issues identified in step 2

⁽⁴⁾ Identify potential schedules for standards development including status and progress reports to the board

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			Item Description	Completion ⁱ	Assignment ⁱⁱ
b)		Resulting from the efforts of annual plan item 7(a), develop standards as needed and directed by the Board of Directors, which are specifically assigned to the WEQ			
	i.	term	H Forum Issue 22 ²⁵ : "It would be desirable to have a set of inology agreed upon by participants to characterize shapes, profiles, ble, non-ratable, and so forth to facilitate discussion"		
		1.	Consider and determine if WEQ standards are needed, and develop a recommendation and report to the Board of Directors	TBD	WEQ EC and related subcommittees
		2.	Develop WEQ standards according to the recommendation of item 7b(i)1.	TBD	WEQ EC and related subcommittees
	ii.		H Forum Issue 25 ²⁶ : Communication protocols with LDCs, gas erator operators and natural gas marketing companies		
		1.	Consider and determine if WEQ standards are needed, and develop a recommendation and report to the Board of Directors	TBD	WEQ EC and related subcommittees
		2.	Develop WEQ standards according to the recommendation of item 7b(ii)1.	TBD	WEQ EC and related subcommittees
	iii.		H Forum Issue 26 ²⁷ : "Improve efficiency of critical information ring (related to issues 22 and 25)		
		1.	Consider and determine if WEQ standards are needed, and develop a recommendation and report to the Board of Directors	TBD	WEQ EC and related subcommittees
		2.	Develop WEQ standards according to the recommendation of item 7b(iii)1.	TBD	WEQ EC and related subcommittees

https://www.naesb.org/pdf4/geh_report_addendum_041816_clean051316.docx ²⁶ Id.

²⁷ Id.

²⁴ FERC Order on Rehearing ¶1 – September 17, 2015 [Docket No. RM14-2-001] In Order No. 809, the Commission revised its regulations relating to the scheduling of transportation service on interstate natural gas pipelines to better coordinate the scheduling practices of the wholesale natural gas and electric industries, as well as to provide additional scheduling flexibility to all shippers on interstate natural gas pipelines.²⁴ The Commission also requested that natural gas and electric industries, through the North American Energy Standards Board (NAESB), explore the potential for faster, computerized scheduling when shippers and confirming parties all submit electronic nominations and confirmations, including a streamlined confirmation process if necessary. On May 18, 2015, the Desert Southwest Pipeline Stakeholders (DSPS)²⁴ filed a request for rehearing of Order No. 809. On August 4, 2015, NAESB filed a report indicating that due to the press of implementing the revised nomination standards by April 1, 2016, it would not begin the development of computerized scheduling standards until after that date. As discussed below, the Commission denies DSPS' request for rehearing and directs El Paso Natural Gas Company, L.L.C. (El Paso), Transwestern Pipeline Company, LLC (Transwestern), and TransCanada-North Baja Pipelines (TransCanada-North Baja) to make an informational filing within 90 days of the date of this order. In addition, while we recognize the time commitments in implementing the revised nomination timeline, the Commission requests that the natural gas and electric industries, through NAESB, begin considering the development of standards related to faster, computerized scheduling and file such standards or a report on the development of such standards with the Commission by October 17, 2016. ²⁵ The GEH Forum Issues may be found in the GEH Survey Addendum:

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			Item Description	Completion ⁱ	Assignment ⁱⁱ
	iv.	addi curre NAE there	I Forum Issue 33 ²⁸ : "Use of multiple confirmation methods in tion to traditional confirmations for intraday nominations. There is ently a good definition of Confirmation by Exception (CBE) in SB standards. CBE however, may not be available everywhere but e may also be additional confirmation methods that could benefit e standardization"		
		1.	Consider and determine if WEQ standards are needed, and develop a recommendation and report to the Board of Directors	TBD	WEQ EC and related subcommittees
		2.	Develop WEQ standards according to the recommendation of item 7b(iv)1.	TBD	WEQ EC and related subcommittees
	v.	data large diffe could shipp of de	I Forum Issue 36 ²⁹ : "Level of confirmations: there is a wide range of elements that are exchanged, from a minimum amount to a very e set of data. In the "Art of Scheduling," pipelines confirm at rent levels, with potential for disparities. Greater standardization d produce confirming efficiencies. (For example, confirm at the per-to-shipper level. Or, if there are confirmations at a lower level etail, it would be driven by model type.) See issue 17 ³⁰ in the first entation."		
		1.	Consider and determine if WEQ standards are needed, and develop a recommendation and report to the Board of Directors	TBD	WEQ EC and related subcommittees
		2.	Develop WEQ standards according to the recommendation of item $7b(v)1$.	TBD	WEQ EC and related subcommittees
•	Deman	d Res	ponse		
8		ne Cou	or modify Demand Response Standards as needed in response to the art decisions regarding the final D.C. Circuit ruling on FERC Order	1 st Q, 2016	DSM-EE Subcommittee
	Status:	Comp	lete		

8.

²⁸ Id.

²⁹ *Id*.

³⁰ GEH Forum Issue 17 "Levels of Confirmation" can be found in the GEH Survey Addendum: <u>https://www.naesb.org/pdf4/geh_report_addendum_041816_clean051316.docx</u>

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PROVISIONAL ITEMS

1. **Optional Work to Extend Existing Standards**

- a) Prepare recommendations for future path for TLR³¹ (Phase 2) in concert with NERC, which may include alternative congestion management procedures³². Work on this activity is dependent on completing 2016 WEQ Annual Plan 1.a (Parallel Flow Visualization/Mitigation for Reliability Coordinators in the Eastern Interconnection Phase 1).
- b) Develop needed business practice standards for organization/company codes for NAESB standards and address current issues on the use of DUNs numbers. Common code usage is linked to the transition of the Registry from NERC to NAESB.

2. Pending Regulatory or Legislative Action

- a) Determine NAESB action needed to support FERC Action Plan for Smart Grid Technology.
- b) Develop business practice standards for cap and trade programs for greenhouse gas.
- c) Develop standards as needed in support of Variable Energy Resources (VERs) final order (RM10-11-000). (<u>NAESB</u> <u>Comments 3-2-11, FERC NOPR RM10-11-000, FERC Final Order No. 764, Docket No. RM10-11-000³³</u>)
- d) Should the FERC determine to act in response to NAESB's report of the Version 003.1 Business Practice Standards, and should the FERC recommend specific action, develop and/or revise Business Practice Standards as needed.

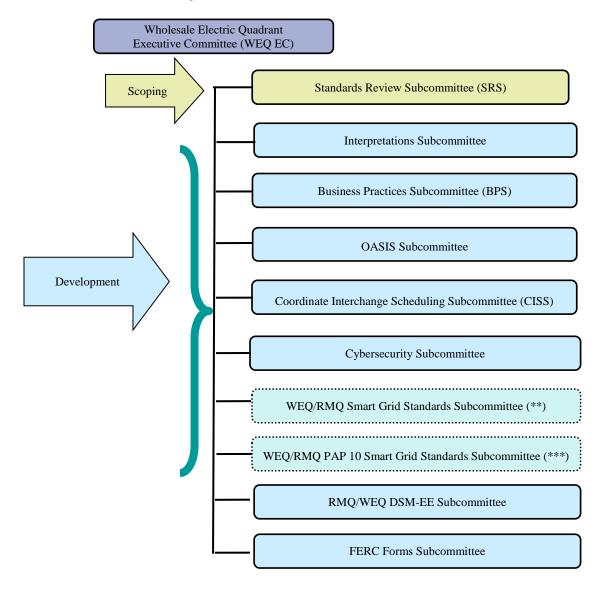
³¹ Phase 2 of the Parallel Flow Visualization looks at developing options for and reporting of the most cost effective alternatives to achieve curtail obligations assigned during Phase 1.

³² For additional information, please see comments submitted by PJM and Midwest ISO for this Annual Plan Item: <u>http://www.naesb.org/pdf3/weq_aplan102907w1.pdf</u>.

³³ For FERC Final Order No. 764, Docket No. RM10-11-000, specifically paragraph nos. 146 and 182 should be reviewed:

^{146.} The Commission concludes that an independent review of NERC standards and NAESB business practices is not necessary prior to the implementation of intra-hour scheduling. As noted by NERC, several entities currently offer intra-hour scheduling without any apparent conflict with Reliability Standards. NERC comments that it does not believe there are any existing standards that prohibit industry from implementing intra-hour scheduling, and no commenters have pointed to specific NAESB business practices that prevent industry from implementing intra-hour scheduling. The Commission therefore concludes that it is not necessary to delay adoption of the intra-hour scheduling requirements of this Final Rule pending further review of NERC Reliability Standards and NAESB business practices. To the extent industry believes it is beneficial to refine one or more existing NERC Reliability Standards or NAESB business practices to reflect intra-hour scheduling, stakeholders can use existing processes to pursue such refinements.

^{182.} Some commenters request that the Commission standardize protocols for reporting meteorological or forced outage data required by this Final Rule. The Proposed Rule did not contain standard protocols for data reporting and, as a result, the merits of such a requirement have not been fully addressed in the record. Whether standardization of data communications would facilitate or hinder development of power production forecasting may implicate a variety of data and communications issues that would benefit from broad industry input through standards development processes such as those used by NAESB and other organizations.



WHOLESALE ELECTRIC QUADRANT EXECUTIVE COMMITTEE AND SUBCOMMITTEE STRUCTURE

NAESB WEQ EC and Active Subcommittee Leadership:

Executive Committee (EC): Kathy York (Chair) and Roy True (Vice Chair)
Standards Review Subcommittee (SRS): Rebecca Berdahl, Ron Robinson
Interpretations Subcommittee: Ed Skiba
Business Practices Subcommittee (BPS): Jason Davis, Ross Kovacs, Narinder Saini
Open Access Same Time Information System (OASIS) Subcommittee: J.T. Wood, Alan Pritchard, Ken Quimby
Coordinate Interchange Scheduling Subcommittee (CISS): Joshua Phillips, Zack Buus
Cybersecurity Subcommittee: Jim Buccigross
Demand Side Management-Energy Efficiency (DSM-EE) RMQ/WEQ Subcommittee: Roy True (WEQ), Paul Wattles (WEQ), and Eric Winkler (RMQ)
FERC Forms Subcommittee (WEQ/WGQ): Leigh Spangler (WGQ), Dick Brooks (WEQ)

Inactive Subcommittees:

e-Tariff Joint WEQ/WGQ Subcommittee (e-Tariff): Keith Sappenfield (WGQ)

- (**) The Smart Grid Standards Subcommittee is a joint group of the retail electric and wholesale electric quadrants with other standards development groups such as OASIS (Organization for the Advancement of Structured Information Standards, not Open Access Same Time Information Systems related to NAESB standards and FERC actions), CalConnect, FIX and UCAIug, among others. Direction may be given from NIST, DoE or FERC and the group reports jointly to the NAESB Board Smart Grid Strategic Steering Committee and the WEQ and RMQ ECs.
- (***) The PAP 10 Smart Grid Standards Subcommittee is a joint group of the retail electric and wholesale electric quadrants with other standards development groups such as OASIS, UCAIug, OpenADE, ZigBee, ASHRAE, EIS Alliance, NARUC and includes other groups. Direction may be given from NIST, DoE or FERC and the group reports jointly to the NAESB Board Smart Grid Strategic Steering Committee and the WEQ and RMQ ECs.

	Item Description	Completion ⁱ	Assignment ⁱⁱ			
1. Update Standards Matrix Tool for Ease of Use ⁱⁱⁱ						
a.	Update the reference tool developed for Version 2.1 to reflect modifications applicable to Version 3.0 Status: Completed	1 st Q, 2016	IR/Technical			
2. Electr	onic Delivery Mechanisms					
a.	Review minimum technical characteristics in Appendices B, C, and D of the WGQ QEDM Manual, and make changes as appropriate. Status: Not Started	2016	EDM			
3. Gas-E	lectric Coordination					
a.	Review FERC Order No. 809 ¶ 107 issued in Docket No. RM14-2- 000 ¹ regarding computerized scheduling and provide recommended direction concerning the development of standards or modifications to existing standards as needed to support the request of the Commission ² The recommended direction ³ will require two-step board approval, for both the timeline to be pursued and the framework for standards development. ⁴ Status: Completed	2016	Gas-Electric Harmonization Forun NAESB Board of Directors, WEQ EC & WGQ EC			

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¹FERC Order No. 809 can be found through the following hyperlink: https://www.ferc.gov/whats-new/comm-meet/2015/041615/M-1.pdf

² FERC Order No. 809 ¶107. While NAESB's modified standards represent an improvement over the currently effective standards, we continue to recognize that additional intraday nomination opportunities could promote more efficient use of existing pipeline infrastructure and provide additional operational flexibility to all pipeline shippers, including gas-fired generators. The modified NAESB standards reflect reduced intraday processing times from the current NAESB standards (i.e., three hours instead of the current four hours), and existing operational limitations, including the manual processes utilized by pipelines for processing nominations, may affect the ability of the gas industry to add additional standard nomination cycles applicable to all shippers. However, the use of computerized scheduling would appear to provide an opportunity for faster and more frequent scheduling of intraday nominations for those shippers and their confirming parties willing to commit to scheduling electronically. We request that gas and electric industries, through NAESB, explore the potential for faster, computerized scheduling when shippers and confirming parties all submit electronic nominations and confirmations, including a streamlined confirmation process if necessary. Providing such an option would enable those entities that need greater scheduling flexibility to have their requests processed expeditiously.

³ The steps for the GEH forum shall be:

⁽¹⁾ Provide a forum for industry education from both the natural gas and electric industries regarding gas-electric coordination specific to computerized scheduling, and confirmations including a streamlined confirmation process, if necessary (FERC Order No. 809 Order on Rehearing, Docket No. RM14-2-001)

⁽²⁾ Identify potential issues specific to computerized scheduling, and confirmations including a streamlined confirmation process, if necessary which could be based on the education provided in step 1

Identify potential solutions to the issues identified in step 2 (3)

⁽⁴⁾ Identify potential schedules for standards development including status and progress reports to the board

⁴ FERC Order on Rehearing ¶1 – September 17, 2015 [Docket No. RM14-2-001] In Order No. 809, the Commission revised its regulations relating to the scheduling of transportation service on interstate natural gas pipelines to better coordinate the scheduling practices of the wholesale natural gas and electric industries, as well as to provide additional scheduling flexibility to all shippers on interstate natural gas pipelines.⁴ The Commission also requested that natural gas and electric industries, through the North American Energy Standards Board (NAESB), explore the potential for faster, computerized scheduling when shippers and confirming parties all submit electronic nominations and confirmations, including a streamlined confirmation process if necessary. On May 18, 2015, the Desert Southwest Pipeline Stakeholders (DSPS)⁴ filed a request for rehearing of Order No. 809. On August 4, 2015, NAESB filed a report indicating that due to the press of implementing the revised nomination standards by April 1, 2016, it would not begin the development of computerized scheduling standards until after that date. As discussed below, the Commission denies DSPS' request for rehearing and directs El Paso Natural Gas Company, L.L.C. (El Paso), Transwestern Pipeline Company, LLC (Transwestern), and TransCanada-North Baja Pipelines (TransCanada-North Baja) to make an informational filing within 90 days of the date of this order. In addition, while we recognize the time commitments in implementing the revised nomination timeline, the Commission requests that the natural gas and electric industries, through NAESB, begin considering the development of standards related to faster, computerized scheduling and file such standards or a report on the development of such standards with the Commission by October 17, 2016.

Appendix C: NAESB 2016 WGQ Annual Plan adopted by the Board of Directors on September 1, 2016

		Item Description	Completion ⁱ	Assignment ⁱ
b.	stand	Iting from the efforts of annual plan item 3(a), develop lards as needed and directed by the Board of Directors, which pecifically assigned to the WGQ.		
	i.	GEH Forum Issue 22 ⁵ : "It would be desirable to have a set of terminology agreed upon by participants to characterize shapes, profiles, ratable, non-ratable, and so forth to facilitate discussion"		
		 Consider and determine if WGQ standards are needed, and develop a recommendation and report to the Board of Directors 	TBD	WGQ BPS
		2. Develop WGQ standards according to the recommendation of item 3b(i)1.	TBD	WGQ BPS
	ii.	GEH Forum Issue 25 ⁶ : <i>Communication protocols with LDCs, gas generator operators and natural gas marketing companies</i>		
		 Consider and determine if WGQ standards are needed, and develop a recommendation and report to the Board of Directors 	TBD	WGQ BPS
		2. Develop WGQ standards according to the recommendation of item 3b(ii)1.	TBD	WGQ BPS
	iii.	GEH Forum Issue 26 ⁷ : "Improve efficiency of critical information sharing (related to issues 22 and 25)		
		 Consider and determine if WGQ standards are needed, and develop a recommendation and report to the Board of Directors 	TBD	WGQ BPS
		2. Develop WGQ standards according to the recommendation of item 3b(iii)1.	TBD	WGQ BPS
	iv.	GEH Forum Issue 33 ⁸ : "Use of multiple confirmation methods in addition to traditional confirmations for intraday nominations. There is currently a good definition of Confirmation by Exception (CBE) in NAESB standards. CBE however, may not be available everywhere but there may also be additional confirmation methods that could benefit from standardization"		
		 Consider and determine if WGQ standards are needed, and develop a recommendation and report to the Board of Directors 	TBD	WGQ BPS
		2. Develop WGQ standards according to the recommendation of item 3b(iv)1.	TBD	WGQ BPS
	v.	GEH Forum Issue 36 ⁹ : "Level of confirmations: there is a wide range of data elements that are exchanged, from a minimum amount to a very large set of data. In the "Art of Scheduling," pipelines confirm at different levels, with potential for disparities. Greater standardization could		

⁵ The GEH Forum Issues may be found in the GEH Survey Addendum: <u>https://www.naesb.org/pdf4/geh_report_addendum_041816_clean051316.docx</u>

- ⁶ Id.
- ⁷ Id.
- ⁸ Id.
- ⁹ Id.

		Item Description	Completion ⁱ	Assignment ⁱⁱ
		produce confirming efficiencies. (For example, confirm at the shipper-to-shipper level. Or, if there are confirmations at a lower level of detail, it would be driven by model type.) See issue 17 ¹⁰ in the first presentation."		
		 Consider and determine if WGQ standards are needed, and develop a recommendation and report to the Board of Directors 	TBD	WGQ BPS
		2. Develop WGQ standards according to the recommendation of item 3b(v)1.	TBD	WGQ BPS
c.		ress standards development requests related to gas-electric nonization		
	i.	Develop business practices as needed to support <u>R16003</u> and <u>attachment:</u> Special Efforts Scheduling Services for Natural Gas Pipeline Transportation - The proposed standard addresses certain business practices relating to Best Efforts scheduling for natural gas pipeline transportation that is: a) scheduled outside of the standard grid-wide nomination cycles, b) permits flow changes outside of standard schedule flow periods; and/or c) involves Shaped Flow Transactions (as defined in the proposed standard).	TBD	WGQ BPS
	ii.	Develop business practices as needed to support <u>R16004</u> : "Update the NAESB 1.4.1 Nomination dataset to remove all non-necessary data elements and to evaluate the use of all Mutually Agreed and Business Conditional data elements for their continued relevance."	TBD	WGQ BPS
	iii.	Develop business practices as needed to support <u>R16007</u> : "Update the NAESB Nomination dataset and related datasets to support the ability for a service requester to submit a single nomination with hourly quantities when such a service is supported by the TSP."	TBD	WGQ BPS
Develoj Protoco	p and/ ols for	or modify standards to support FERC Order Instituting Proc Commission Forms (Docket No. AD15-11-000) ¹¹	eeding to Develo	p Electronic Filing
a.	Dev prot	elop business practices as needed to support electronic filing ocols for submittal of FERC Forms as: Underway	TBD	Joint WEQ/WGQ FERC Forms Subcommittee
Liauefi		tural Gas Master Agreement		
-	Con	sider and determine if a NAESB Liquefied Natural Gas (LNG) ter Agreement is needed	2016	WGQ Contracts
a.	Ivras			
a.		is: Not Started		

¹⁰ GEH Forum Issue 17 "Levels of Confirmation" can be found in the GEH Survey Addendum: <u>https://www.naesb.org/pdf4/geh_report_addendum_041816_clean051316.docx</u>

¹¹ The FERC Order Instituting Proceeding to Develop Electronic Filing Protocols for Commission Forms, issued on April 16, 2015, can be found through the following hyperlink: <u>https://www.naesb.org/pdf4/ferc041615_electronic_filing_protocols_forms.pdf</u>

NORTH AMERICAN ENERGY STANDARDS BOARD

Item Description	Completion ⁱ	Assignment ⁱⁱ
Program of Standards Maintenance & Fully Staffed Standards Work		
Business Practice Requests	Ongoing	Assigned by the EC ^{iv}
Continue review against plan for migration to ANSI ASC X12 new versions as needed and coordinate such activities with DISA.	Ongoing	Assigned by the EC ³
Information Requirements and Technical Mapping of Business Practices	Ongoing	Assigned by the EC ³
Interpretations for Clarifying Language Ambiguities	Ongoing	Assigned by the EC ⁴
Maintenance of Code Values and Other Technical Matters	Ongoing	Assigned by the EC ³
Maintenance of eTariff Standards	As Requested	Assigned by the EC ⁴

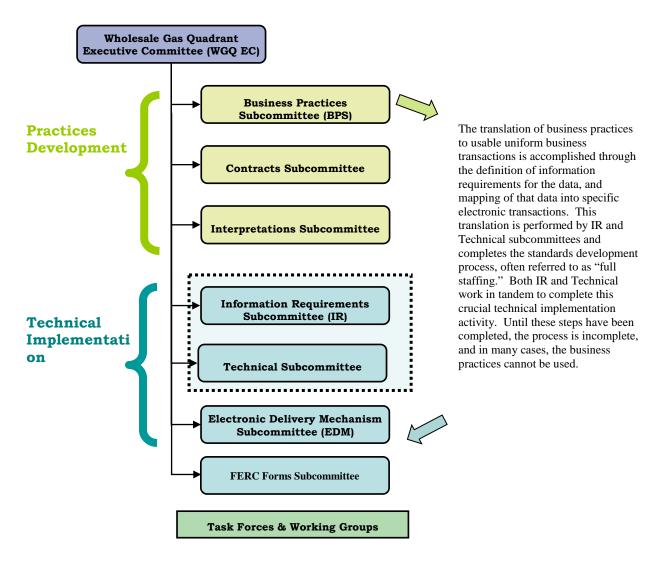
 Develop standards as needed in support of Variable Energy Resources (VERs) final order (RM10-11-000). (<u>NAESB</u> <u>Comments 3-2-11, FERC NOPR RM10-11-000, FERC Final Order RM10-11-000¹²</u>) In review of the NAESB standards, the Gas/Electric Operational Communications Standards may require changes, and other standards may be required or modified to support gas-electric coordination.

¹² For FERC Final Order, Docket No. RM10-11-000, specifically paragraph nos. 146 and 182 should be reviewed:

^{146.} The Commission concludes that an independent review of NERC standards and NAESB business practices is not necessary prior to the implementation of intra-hour scheduling. As noted by NERC, several entities currently offer intra-hour scheduling without any apparent conflict with Reliability Standards. NERC comments that it does not believe there are any existing standards that prohibit industry from implementing intra-hour scheduling, and no commenters have pointed to specific NAESB business practices that prevent industry from implementing intra-hour scheduling. The Commission therefore concludes that it is not necessary to delay adoption of the intra-hour scheduling requirements of this Final Rule pending further review of NERC Reliability Standards and NAESB business practices. To the extent industry believes it is beneficial to refine one or more existing NERC Reliability Standards or NAESB business practices to reflect intra-hour scheduling, stakeholders can use existing processes to pursue such refinements.

^{182.} Some commenters request that the Commission standardize protocols for reporting meteorological or forced outage data required by this Final Rule. The Proposed Rule did not contain standard protocols for data reporting and, as a result, the merits of such a requirement have not been fully addressed in the record. Whether standardization of data communications would facilitate or hinder development of power production forecasting may implicate a variety of data and communications issues that would benefit from broad industry input through standards development processes such as those used by NAESB and other organizations.

Appendix C: NAESB 2016 WGQ Annual Plan adopted by the Board of Directors on September 1, 2016



NAESB 2016 WGQ EC and Subcommittee Leadership:

Executive Committee: Jim Buccigross, Chair and Dale Davis, Vice-Chair Business Practices Subcommittee: Kim Van Pelt, Sylvia Munson, Willis McCluskey, Phil Precht, Ben Schoene Information Requirements Subcommittee: Dale Davis, Rachel Hogge Technical Subcommittee: Kim Van Pelt Contracts Subcommittee: Keith Sappenfield

Electronic Delivery Mechanism Subcommittee: Leigh Spangler

FERC Forms Subcommittee: Leigh Spangler, Dick Brooks

Appendix D: Links to the July 29, 2016 WGQ Executive Committee notational ballots and notational ballot results

	Appendix D: Links to NAESB WGQ Executive Committee Notational Ballot and Results – July 29, 2016				
Date	Link to Notational Ballot and Ballot Results	Work Papers			
July 15, 2016	NAESB WGQ Executive Committee Notational Ballot – Due July 29, 2016 Notational Ballot: <u>https://www.naesb.org/pdf4/wgq_ec071516_ballot.docx</u> Ballot Results: <u>https://www.naesb.org/pdf4/wgq_ec071516_results.docx</u>	WGQ 2016 Annual Plan as approved by the WGQ EC (Redline): https://www.naesb.org/pdf4/wgq_ec071516a1.docx			

Appendix E: September 1, 2016 NAESB Board of Directors Minutes

September 13, 2016

TO:	NAESB Board of Directors, Executive Committee (EC) Members, EC Alternates, and Invited Guests
FROM:	Jonathan Booe, NAESB Executive Vice President & CAO
RE:	Draft Minutes from the NAESB Board of Directors Meeting – September 1, 2016

NAESB BOARD OF DIRECTORS MEETING & MEETING OF THE MEMBERS Four Seasons Hotel, Houston, Texas Thursday, September 1, 2016 – 9:00 a.m. to 1:00 p.m. Central DRAFT MINUTES

1. Administration and Welcome

Mr. Burks welcomed the board members and guests in the room and on the phone. Mr. Booe provided the antitrust and meeting policy guidance and called the roll of the NAESB board members. Quorum was established. Mr. Burks recognized the incoming and outgoing members and thanked the invited guests for their attendance.

2. Adoption of the Consent Agenda

Mr. Burks reviewed the consent agenda, which included the <u>agenda</u>, the draft minutes from the <u>April 1, 2016</u> and <u>May 31</u>, <u>2016</u> Board of Directors meetings and the 2016 <u>Wholesale Gas</u>, <u>Wholesale Electric and Retail</u> annual plans. Ms. McKeever moved to adopt the consent agenda and Mr. Field seconded the motion. The motion passed without opposition.

3. Meeting of the Members and Strategic Session

Mr. Burks opened the meeting of the members, welcomed Mr. Thorn, and thanked him for agreeing to moderate this year's strategic session panel. Mr. Thorn initiated the strategic session by providing a few opening remarks and introducing strategic session panelists, Linda Breathitt, Vicky Bailey, Wayne Gardner, Pat Wood, Lorraine Cross, Branko Terzic and Christine Wright. He noted that the strategic session would take the form of a question and answer session with the panelists and encouraged board member engagement in the discussion. Also, he requested that the panelists shape their responses and provide remarks that would be helpful for NAESB as they consider how to proceed with standards development in 2017 and beyond. Through the discussion with the panelists, the following points on specific issues were highlighted.

- Access to reliable energy is the key to reliable, efficient and economical infrastructure food, water, transportation, communication and health.
- NAESB should continue to focus on coordination between the gas and electric industries as the interdependencies of the two markets increase.
- Energy security will be provided through policies that focus on using diverse fuel resources in addition to renewable generation and the principle outlined in COP 21.
- Continued focus on technologies that allow the population to use electricity more efficiently will create opportunities for new standards development related to communication protocols and cybersecurity.
- There is potential for an increased focus on methane emissions, with or without rulemaking related to the Clean Power Plan, which will present opportunities for standards development related to quantifying emissions.
- With the introduction and deployment of renewable technologies in each state, the state and federal nexus is increasingly important and NAESB should to continue support collaboration when possible. Increased awareness of NAESB's activities through organizations like NARUC would be beneficial.
- Renewable generation is continuing to grow as a result of market and economic drivers, rather than federal and state energy policies.
- The federal/state/local nexus for energy policy and ensuring that the needed infrastructure is available continues to be emphasized in applications of net metering, introduction of new technologies, customer integration of renewables all of which should be monitored by NAESB for determining where standards would be helpful to the markets.

Appendix E: September 1, 2016 NAESB Board of Directors Minutes

- Politicization of policy is a victory for the status quo. The introduction of politics into the energy markets makes it difficult to come to decisions in the best interests of the public, so it should be de-escalated, thus allowing the market to solve problems by diverse means that are public- interest-directed.
- Beyond FERC Order No. 809, continued focus on potential improvements to the nomination and confirmation process by the industry through NAESB is crucial to gas and electric market coordination.
- The growing market for plug-in electric vehicles may present opportunities for standards development that would help reduce some of the barriers for market entry.
- The California market has experienced scenarios where renewable generation is supporting other intermittent renewable generation and standards related to distributed generation management systems may be necessary in the future.
- Resolving capacity issues is critical to the success of the liquefied natural gas export market.
- In addition to the physical differences between electricity and natural gas, the regulatory structure of the wholesale natural gas market may make the possibility of developing natural gas regional transmission organizations not only difficult but ultimately not needed. Also, the current competitive nature of the wholesale natural gas market may make gas regional transmission organizations unnecessary.
- NAESB is in a unique position to support the newly opened and developing electric and gas markets.
- Additional transparency in the reporting of the calculations related to lost and unaccounted for natural gas may be helpful to those required to report, as it could highlight that the calculation behind the percentage is the result of several components, not just "lost" gas.
- Providing access to information about cybersecurity intrusions and sharing lessons learned from these events is the best way to improve the security of both cyber and physical assets.

Mr. Thorn thanked the panelists for their participation, and the meeting of the members and the strategic session of the board was adjourned.

4. Membership and Financial Reports

Ms. McQuade reviewed the <u>membership</u> and <u>financial</u> reports for with the participants. She noted that NAESB has lost eleven members since the beginning of the year accounting for three and a half percent of the total membership. Fortunately, this loss in revenue from membership dues has been recouped from a large increase in standards sales. With the exception of the expenses incurred from hosting the NAESB Gas Electric Harmonization Forum meetings, the organization is tracking pretty closely to the budget for 2016 and should expect to see roughly \$50,000 in net income for the year. Ms. McQuade referenced the information provided in the board materials and asked if there were any questions regarding membership or the finances. No questions were asked.

5. Reports from Board Committees

<u>Managing Committee</u>: Mr. Booe stated that the Managing Committee met in July to discuss if any action should be taken on a standard that failed to garner support from the Executive Committee after 18 months of subcommittee development. As a result of the meeting, NAESB will be hosting some training courses for Executive Committee members to remind them of their responsibilities as members. The Committee also met in August to discuss personnel matters and staff performance. All other communications took place via email.

<u>Parliamentary Committee</u>: Mr. Burks reviewed the activities of the Parliamentary Committee. He noted that the committee met in June and August to continue discussion on potential modifications to the NAESB governance documents to address issues that were raised concerning how majority votes should be conducted at the Board of Directors level.

<u>Revenue Committee</u>: Mr. Desselle provided a report of the Revenue Committee activities since the last board meeting. He noted that the committee also met in June and August and continued discussions concerning the publication cycles, communication efforts and the organization's revenue generation. He also noted that the Revenue Committee asked that he remind the Board of Directors about the membership clarification policy that was passed through a <u>resolution</u> during the December 2015 meeting and is scheduled to be implemented at the beginning of next year. As a result of those discussions, NAESB staff has posted two documents listing the entities included on the FERC list of public utilities under the Federal Power Act and interstate pipelines under the Natural Gas Act that do not have access to the current version of the standards through membership or purchase from NAESB.

Appendix E: September 1, 2016 NAESB Board of Directors Minutes

<u>Board Strategic Plan Ad Hoc Task Force</u>: Mr. Desselle provided an update of the activities of the Task Force since the last board meeting. He reviewed the results of the 2016 NAESB Standards Development Survey and noted that a report had been developed and posted for the meeting. Mr. Booe noted that the NAESB office will soon begin the process of developing the 2017 annual plans by submitting a request for comments to the members and scheduling meetings for the Annual Plan Subcommittees. He stated that the information gathered through the survey and the discussions during the strategic session are intended to be considered in the development of the plans, and encouraged participants to review the information as they develop comments.

6. Project Discussions and Leadership Session Reviews

Mr. Buccigross reviewed the discussions during the WGQ leadership meeting and noted that significant discussion surrounded the activities of the GEH Forum and the upcoming Triage Subcommittee conference call on Request R16009 concerning lost and unaccounted for gas reporting. Mr. Skiba provided a brief update of the activities of the WEQ Executive Committee and subcommittees and noted that the discussion during the leadership meetings focused on coordination efforts with NERC and the response from the Managing Committee related to the failed annual plan item. Mr. Precht provided a review of the projects underway in the retail quadrant and noted that the Triage Subcommittee should be aware that a recommendation will be made that Request R16009 be assigned to both the RMQ and the WGQ for possible parallel standards development. He also highlighted that the RMQ is very close to completing their work on the retail net metering standards.

7. Old and New Business

Mr. Booe provided an update of the regulatory activities of the organization and continued communication with the Department of Energy, the FERC, the NARUC, and NERC among others. Mr. Booe also reminded the participants that NAESB is going to provide an update on the NAESB activities related to FERC Order No. 809 on October 17, 2016 as requested in the September 2015 Order on Rehearing. Ms. McQuade stated that an update from the WGQ Business Practice Subcommittee will be needed to be included in the report. Ms. Crockett made a motion to modify the 2016 WEQ and WGQ annual plans to mark the items assigned to the GEH Forum in both plans as complete. Mr. Desselle seconded the motion and the motion passed without opposition. Mr. Burks gave the panelists and invited guests an opportunity to provide any closing remarks.

8. Adjourn

The meeting adjourned at 12:22 pm Central.

9. BOARD ATTENDANCE AND VOTE				
WHOLESALE GAS QUADRANT PRODUCERS SEGMENT				
Kathryn Skelton	Regulatory & Compliance Manager, Noble Energy, Inc.	Phone		
Randy E. Parker	Global Regulatory Advisor, ExxonMobil Gas and Power Marketing Company (a division of ExxonMobil Corporation)	In Person		
Mark Stultz	Senior Vice President – Regulatory Policy and Communications, North America Gas and Power, BP Energy	In Person		
Y.J. Bourgeois	Manager Regulatory Affairs - Marketing, Anadarko Energy Services Company	In Person		
Steven M. Salato	Manager Gas Scheduling & Operations, ConocoPhillips Company	In Person		
WHOLESALE GAS QU	ADRANT PIPELINE SEGMENT			
Douglas Field	Manager – Compliance, Southern Star Central Gas Pipeline	In Person		
Michael Langston	Vice President and Chief Regulatory Officer, Energy Transfer Equity, L.P.	In Person		
Gene Nowak	Vice President – Transportation & Storage Services, Kinder Morgan Inc	In Person		
Richard Kruse	Vice President – Regulatory and FERC Chief Compliance Officer, Spectra Energy Corp	In Person		
Kim Van Pelt	Manager of Regulatory Reporting and Compliance, Boardwalk Pipeline Partners, LP	In Person		
WHOLESALE GAS QU	ADRANT LOCAL DISTRIBUTION COMPANY (LDC) SEGMENT			
Craig Colombo	Energy Trader III, Dominion Resources	Phone		
Tim Sherwood	Vice President – Gas Supply Operations, Southern Company Gas			
Karl Stanley	Vice President of Commercial Operations NIPSCO, representing NiSource Inc.			
Mike Novak	Asst. General Manager, National Fuel Gas Distribution Corporation	Phone		
Donald Petersen	Supervisor – Gas Transportation, Pacific Gas and Electric Company			

9. BOARD ATTENDANCE AND VOTE ATT				
WHOLESALE GAS QUADRANT END USERS SEGMENT				
Valerie Crockett	Senior Program Manager - Regulatory & Policy, Tennessee Valley Authority	In Person		
Paul Zhang	Financial Trading Desk Head, Florida Power & Light Company	Phone		
N. Jonathan Peress	Air Policy Director – Natural Gas, Environmental Defense Fund, Inc.			
Willis E. McCluskey	Senior Fuel Supply Analyst, Salt River Project Agricultural Improvement & Power District	Phone		
WHOLESALE GAS QUA	DRANT SERVICES SEGMENT			
Greg Lander	President, Skipping Stone, LLC	Phone		
Rakesh Agrawal	Executive Vice President, Blackstone Technology Group, Inc.	Phone		
Sylvia Munson	Industry Specialist, FIS	In Person		
Keith Sappenfield	Project Manager and Principal, Environmental Resources Management	Phone		
RETAIL ENERGY QUAL	PRANT ELECTRIC UTILITIES SEGMENT			
Phil Precht	Principal Business Analyst, Pricing & Regulatory Services, Baltimore Gas & Electric Company	Phone		
Debbie McKeever	Market Advocate, Oncor Electric Delivery Company LLC	In Person		
Brandon Stites	Director – Electric Distribution Design, Dominion Virginia Power	In Person		
Dennis Derricks	Director Regulatory Policy and Analysis, Wisconsin Public Service Corporation			
RETAIL ENERGY QUAL	DRANT GAS MARKET INTERESTS SEGMENT			
Leigh Spangler	President, Latitude Technologies Inc.			
Scott Mosley	Managing Director – Physical Operations, SouthStar Energy Services LLC			
Alonzo Weaver	Vice President of Engineering and Operations, Memphis Light, Gas & Water Division (APGA)	In Person		
Dave Darnell	President & CEO, Systrends USA	Phone		

9. BOARD ATTENDANCE AND VOTE		
RETAIL ENERGY QUADRANT ELECTRIC END USERS/PUBLIC AGENCIES SEGMENT		
Chris Villarreal	Director of Policy, Minnesota Public Utilities Commission	Phone
James P. Cargas	Senior Assistant City Attorney, City of Houston	
Susan Anthony	Retail Market Liaison, Electric Reliability Council of Texas, Inc. (ERCOT)	In Person
Tobin Richardson	President and CEO, ZigBee Alliance	
Robert G. Gray	Executive Consultant, Arizona Corporation Commission	
RETAIL ENERGY QUA	DRANT ELECTRIC SERVICE PROVIDERS/SUPPLIERS SEGMENT	
M. Joe Zhou	Executive Director, Advisory - Performance Improvement, Ernst & Young LLP	
J. Cade Burks	President, Big Data Energy Services	In Person
Rick Bluntzer	Senior Vice President, Global Regulatory Affairs, Just Energy	In Person
Barry Haaser	Executive Director, Green Button Alliance	In Person
Wendell Miyaji	Vice President - Energy Sciences, Comverge, Inc.	
WHOLESALE ELECTR	IC QUADRANT TRANSMISSION SEGMENT	
Armando Rodriguez	Senior Manager, Reliability Authority & Regional Operations, Tennessee Valley Authority	
Mike Anthony	Manager – Tariff Administration and Business Services, Duke Energy Corporation	
Alex DeBoissiere	Senior Vice President – Government Relations, The United Illuminating Company	Phone
Cameron Warren	Manager, Operations Engineering, Entergy Services, Inc.	In Person
Adrianne Collins	Transmission General Manager, Southern Company Services, Inc.	Phone
Robert King	Manager, Transmission Policy & Strategy, Bonneville Power Administration	In Person

9. BOARD ATTENDANCE AND VOTE ATTENDANCE AND VOTE				
WHOLESALE ELECTRIC QUADRANT GENERATION SEGMENT				
Joseph Hartsoe	Managing Director – Federal Policy, American Electric Power Service Corp.	Phone		
Kathy York	Senior Program Manager – Bulk Power Regulatory, Tennessee Valley Authority	Phone		
Lou Oberski	Managing Director NERC Compliance Policy, Dominion Resources Services, Inc.	Phone		
Brad Cox	Vice President – Markets & Compliance, Tenaska, Inc.	In Person		
Chris O'Hara	General Counsel – Gulf Coast Region, NRG Energy, Inc.			
Wayne Moore	Vice President - Operations Compliance Officer, Southern Company Services, Inc.	Phone		
William J. Gallagher	Special Projects Chief, Vermont Public Power Supply Authority	In Person		
WHOLESALE ELECTR	IC QUADRANT MARKETERS/BROKERS SEGMENT			
Roy True	Director of Regulatory and Market Affairs, Alliance for Cooperative Energy Services Power Marketing LLC (ACES)	Phone		
Timothy Gerrish	Director of Origination – Energy Marketing & Trading, Florida Power & Light Company	In Person		
Michael P. Ward II	Director of System Operations, Seminole Electric Cooperative Inc.			
Andrea Sanders Brackett	Senior Manager, Cybersecurity Governance, Policy and Standards, Tennessee Valley Authority			
Steve Johnson	Energy Management and Marketing Office Manager, Western Area Power Administration	In Person		
R. Scott Brown	Market Initiatives and Analysis – Exelon Corporation, Exelon Generation Company, LLC			
WHOLESALE ELECTR	IC QUADRANT DISTRIBUTION/LOAD SERVING ENTITIES (LSE) SEGMENT			
David Crabtree	Director - Federal Regulatory Affairs, Compliance & Transmission Policy, Tampa Electric Company	Phone		
Bruce Ellsworth	New York State Reliability Council	Phone		
Mark G. Lauby	Senior Vice President and Chief Reliability Officer, North American Electric Reliability Corporation			
Nelson Peeler	Vice President - Transmission System Planning and Operations, Duke Energy Corporation			

9. BOARD ATTENDANCE AND VOTE ATTENDANCE		
Paul McCurley	Director, Energy and Power Division and Chief Engineer, National Rural Electric Cooperative Association	
WHOLESALE ELECT	RIC QUADRANT END USERS SEGMENT	
Lila Kee	Chief Product Officer and Vice President of U.S. Business Development, GMO GlobalSign, Inc.	
Jerry Dempsey	Sr. Vice President; Business Development, Sales and Marketing, Open Access Technology International, Inc.	
WHOLESALE ELECT	RIC QUADRANT INDEPENDENT GRID OPERATORS/PLANNERS	
Wesley Yeomans	Vice President of Operations, New York Independent System Operator, Inc. (NYISO)	
Joel Mickey	Director of Market Design and Development, Electric Reliability Council of Texas, Inc. (ERCOT)	Phone
Michael Desselle	Vice President Process Integrity, Southwest Power Pool	In Person
Robert Ethier	Vice President Market Operations, ISO New England, Inc.	Phone
Ed Skiba	Consulting Advisor Standards Compliance, MISO	In Person
Nicholas Ingman	Director of Market Operations, Independent Electricity System Operator (IESO)	
Stu Bresler	Senior Vice President, Markets, PJM Interconnection, LLC	In Person
WHOLESALE ELECT	RIC QUADRANT TECHNOLOGY AND SERVICES	
David A. Wollman	Deputy Director, Smart Grid and Cyber-Physical Systems Program Office (NIST Engineering Laboratory), National Institute of Standards and Technology (NIST)	Phone
Jim Buccigross	Vice President - Energy Industry Practice, 8760 Inc.	Phone
David Nilsson	Vice President – Solutions, Power Costs, Inc.	In Person
E. Russell Braziel	President, RBN Energy, LLC	

Appendix E: September 1, 2016 NAESB Board of Directors Minutes

Name	Organization	Attendance
Wade Adams	Rice University	In Person
Vicky Bailey	BHMM Energy Services	In Person
Jonathan Booe	NAESB Office	In Person
Bill Boswell	NAESB General Counsel	In Person
Linda Breathitt	NAESB Advisory Counsel	In Person
Pete Connor	Representing AGA	Phone
Chuck Costello	Blackstone Technology	In Person
Lorraine Cross	Cross & Company	In Person
Dale Davis	Williams	In Person
Brian Fields	Calpine	Phone
Joe Gardner	MISO	In Person
Wayne Gardner	WE Gardner Company	In Person
Mark Gracey	Kinder Morgan	In Person
Tom Gwilliam	Iroquois Gas Transmission System, L.P.	Phone
Max Hermis	Spectra Energy	In Person
Rachel Hogge	Dominion	In Person
Shelia Hollis	Duane Morris	Phone
Nicole Lopez	Kinder Morgan	In Person
Elizabeth Mallett	NAESB Office	In Person
James Manning	NCEMC	Phone
Marcy McCain	Spectra	In Person
Ken McIntyre	NERC	In Person
Rae McQuade	NAESB Office	In Person
Josh Phillips	SPP	In Person
Steve Pryor	Blackstone Technology	In Person
Denise Rager	NAESB Office	In Person
Deepak Raval	NiSource	Phone
Narinder Saini	Energy	Phone
Valerie Salas	Cheniere Pipeline Co.	In Person
Lisa Simpkins	Exelon	In Person
Rick Smead	RBN Energy	In Person
Branco Terzic	Berkeley Group	In Person
Veronica Thomason	NAESB Office	In Person
Terry Thorn	JKM	In Person
Caroline Trum	NAESB Office	In Person

10. Other Attendance

Appendix E: September 1, 2016 NAESB Board of Directors Minutes

Name	Organization	Attendance
Jill Vaughan	Court Reporting	In Person
Christine Wright	Solar City	In Person
JT Wood	Southern Company	Phone
Pat Wood	Wood3 Resources	In Person
Charles Yeung	SPP	In Person

10. Other Attendance

Appendix F: List of Available Transcripts

Appendix F: List of Available Transcripts				
Date Meeting Description and Location Transcript				
September 1, 2016	NAESB Board of Directors Meeting including Meeting of the Members and Strategic Session with Web Conferencing, Houston, TX (Held at the Four Season Hotel Downtown) Meeting Minutes: <u>https://www.naesb.org/pdf4/bd090116dm.docx</u>	Transcripts from the meeting can be ordered from: Jill Vaughan, CSR 1803 Rustic Oak Ln, Seabrook, Texas 77586 281-853-6807		

Appendix G: End Notes – NAESB 2016 WEQ and WGQ Annual Plans

End Notes WEQ 2016 Annual Plan:

ⁱ Dates in the completion column are by end of the quarter for completion by the assigned committee, sub-committee or task force. The dates do not necessarily mean that the standards are fully staffed to be implementable by the industry, and/or ratified by membership. If one item is completed earlier than planned, another item can begin earlier and possibly complete earlier than planned. There are no begin dates on the plan.

ⁱⁱ The assignments are abbreviated. The abbreviations and sub-committee structure can be found at the end of the annual plan document.

End Notes, WGQ 2016 Annual Plan:

ⁱ Dates in the completion column are by end of the quarter for completion by the assigned committee. The dates do not necessarily mean that the standards are fully staffed to be implementable by the industry, and/or ratified by membership. If one item is completed earlier than planned, another item can begin earlier and possibly complete earlier than planned. There are no begin dates on the plan.

ⁱⁱ The assignments are abbreviated. The abbreviations and committee structure can be found at the end of the annual plan document.

ⁱⁱⁱ As implementation of business issues are presented to the Information Requirements Subcommittee and Technical Subcommittee, those issues will be given precedence over WGQ 2016 Annual Plan Item No. 1.

^{iv} The EC assigns maintenance of existing standards on a request-by-request basis.