NORTH AMERICAN ENERGY STANDARDS BOARD
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June 27, 2005
Filed Electronically

The Honorable Magalie Salas
Secretary
Federal Energy Regulatory Commission
888 First Street N.E.
Washington, D.C. 20585

RE: Docket No. RM05-28-000: Standards for the Coordination of Business Practices Between Public Utilities and Interstate Natural Gas Pipelines
NAESB Report on the Efforts of the NAESB Gas-Electric Interdependency Committee and the Business Practices on Pipeline – Gas-Fired Generation Facility Communications (NAESB Request No. R04021)

Dear Ms. Salas:

The North American Energy Standards Board ("NAESB") herewith submits this status report to the Federal Energy Regulatory Commission ("FERC" or "Commission") regarding NAESB's activities undertaken by the Gas-Electric Interdependency Committee (GEIC) and the business practices ratified for the Wholesale Electric Quadrant and Wholesale Gas Quadrant related to request no. R04021. The report reflects the activities of the GEIC from November 2004 to June 2005, and the NAESB standards development efforts of the Business Practices Subcommittees from December 2004 to May 2005. The meetings were open to any interested party and announcements and agendas were posted along with all work papers, presentations and minutes on the NAESB web site.

This effort began with a NAESB task force, the Gas-Electric Coordination Task Force (GECTF), performing primarily scoping activities in 2004. Two reports were provided to the Commission from NAESB regarding GECTF activities – on April 16, 2004[1] and November 30, 2004[2]. Its work products were a basis for our current activities and included issues identified, a level of categorization of the issues, and identification of some of those items to be further considered for possible development of NAESB standards through the submittal of requests for standards development. Three requests for standards development were received related to the GECTF efforts[3]:

- R04016, submitted by KeySpan Utility Services and Duke Energy Gas Transmission, to address standards development for Energy Day, which is assigned to both quadrants,

[1] The NAESB Interim GECTF report can be accessed on the NAESB web site at the following page address: http://www.naesb.org/protected/ferc041604.pdf

[2] The NAESB Final GECTF report can be accessed on the NAESB web site at the following page address: http://www.naesb.org/protected/ferc113004.pdf

[3] The three standards requests can be accessed on the NAESB web site at the following page addresses http://www.naesb.org/pdf/r04016.pdf, http://www.naesb.org/pdf/r04020.doc, and http://www.naesb.org/pdf/r04021.doc

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- R04020, submitted by Tennessee Valley Authority, to develop business practice standards relating to electric transaction scheduling and timelines, which is assigned to the Wholesale Electric Quadrant, and

- R04021 submitted by Natural Gas Pipeline Company of America, CrossCountry Energy and Salt River Project, to address daily communications between pipelines and entities that control power generation facilities. The request is assigned to both quadrants. These communications standards would include anticipated power generation fuel requirements for the upcoming day as well as notification anytime plans change. Likewise standards for pipeline communications for any operating problems that might hinder power plants from receiving required contractual quantities when needed would be developed.

The standards developed to address Request No. R04021 are included in this report. Work is pending on requests R04016 and R04020, and may not begin until outstanding policy issues are resolved and further direction from both the industry and regulatory agencies is received.

To emphasize the importance of gas-electric coordination, at the September 2004 NAESB Board of Directors meeting, NAESB extended this work effort to our Board of Directors level through a Gas-Electric Interdependency Committee (GEIC). The committee reported to the Board of Directors through the Board Managing Committee. The committee's mission was to review issues requiring gas-electric interdependency at an executive level and identify actions that might result in additional NAESB standards development. It held meetings from November 2004 to June 2005, and its analysis is provided as part of this status report.

Please note that we are filing this report electronically in Adobe Acrobat® Print Document Format (.pdf), and each enclosure is bookmarked separately. All of the documents are also available on the NAESB web site (www.naesb.org). Please feel free to call me at (713) 356-0060 or refer to the NAESB website should you have any questions or need additional information regarding this interim status report.

Respectfully submitted,

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

cc without enclosures:
Chairman Patrick H. Wood III, Federal Energy Regulatory Commission
Commissioner Nora Mead Brownell, Federal Energy Regulatory Commission
Commissioner Joseph Kelliher, Federal Energy Regulatory Commission
Commissioner Suedeen Kelly, Federal Energy Regulatory Commission

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James Buccigross, NAESB Executive Committee Chairman
Lou Oberski, NAESB Executive Committee Vice Chairman (WEQ)

Enclosures (all available publicly on the NAESB web site – www.naesb.org):
(1) Gas Electric Interdependency Report
(2) Appendix 1: Related Minutes and Voting Records Regarding the Standards
(3) Appendix 2: Ratification Ballot and Comments Regarding the Standards
(4) Appendix 3: Request Nos. R04016, R04020 and R04021
(5) Appendix 4: Related Board and Board Committee Minutes and Work Papers
(6) Appendix 5: Listing of Transcripts

North American Energy Standards Board
Wholesale Electric and Wholesale Gas Business Practice Standards
for Transmission Service Provider-Power Plant Operator Communications
and the
Gas and Electric Interdependency Report

This is the report of the NAESB Wholesale Electric and Wholesale Gas Quadrants for business practices and the report of the Gas and Electric Interdependency Committee (GEIC). The standards were approved by the NAESB Executive Committee on May 31, 2005 and the report of the GEIC was approved by the Board of Directors on June 22, 2005. Member ratification for both the WGQ and WEQ members is pending, with ballots for the WEQ due on July 8, 2005. The WGQ ratification ballot will be issued to WGQ members after the WGQ EC has approved a supplemental recommendation regarding technical implementation of the standards (the WGQ EC is scheduled to vote on the supplemental recommendation on July 11, 2005), so we expect the ratification period to conclude in mid-August.

BACKGROUND ON NAESB

NAESB is a non-profit, industry-driven organization that was established in January 2002 to propose and adopt voluntary standards and model business practices designed to promote more competitive and efficient natural gas and electric service, as such standards apply to electronic data interchange ("EDI") record formats and communications protocols and related business practices that streamline the transactional processes of the natural gas and electric industries. NAESB supports all four quadrants of the gas and electric industries—wholesale gas, wholesale electricity, retail gas, and retail electricity—and recognizes the ongoing convergence of the gas and electric businesses by ensuring that its standards receive the input of all industry quadrants when appropriate.

NAESB is the successor to the Gas Industry Standards Board ("GISB"). GISB, which was carefully structured to ensure that all segments of the wholesale gas industry have an equal voice, was incorporated in September 1994 to develop standards for the wholesale natural gas industry. In early 1995, GISB became an accredited member of the American National Standards Institute ("ANSI"), largely in part because of its balanced voting structure and focus on consensus. In October 1995, the GISB Board of Directors approved broadening GISB's scope beyond electronic data interchange record formats and communications protocols to include related business practices that streamline the transactional processes of the gas industry. Immediately after the change in scope, GISB began working on standards that would be reported to the Commission in March 1996. GISB, and its successor the NAESB Wholesale Gas Quadrant ("WGQ"), have made successive filings of new and/or modified standards as the needs of the industry have changed.

NAESB was incorporated in January 2002. Shortly following, NAESB was reaccredited by ANSI as a standards development organization. Consistent with its role of supporting all four quadrants of the gas and electric industries, NAESB is organized into four quadrants—the Wholesale Gas Quadrant (WGQ), Wholesale Electric Quadrant (WEQ), Retail Gas Quadrant, and Retail Electric Quadrant -with industry segment membership in each of the quadrants being defined by each quadrant's procedures. All participants in each of the four markets are able to join NAESB, belong to one or more of its quadrants and segments, and be afforded the full benefits of membership.

EXECUTIVE SUMMARY

In a December 2004 letter from Chairman Wood to Michael Desselle[1], the chairman noted that the January 2004 cold snap in New England highlighted the need for better coordination between the natural gas pipelines and the electric grid, including RTOs/ISOs and gas-fired power generators. He noted that he was pleased to see the efforts underway by NAESB to develop business practices in both industries that would alleviate the coordination problem and be in place for the next winter season. This report provides business practices developed jointly by both industries, briefly describes the process used to develop those business practices; plus, it highlights several issues requiring focus if additional efforts to coordinate the two industries are to be successful.

NAESB COMMUNICATION BUSINESS PRACTICES

The NAESB business practices were developed jointly by both wholesale electric (WEQ) and wholesale gas (WGQ) quadrants of NAESB through the NAESB standards development process. This report represents the work products of the first joint standards development between the two quadrants.

The standards discussed in this section of the report represent 6,132 man-hours contributed by the NAESB members and other industry participants[2] in 14 NAESB multi-day Business Practices Subcommittee meetings over the span of five months (December 2004 to April 2005). They were developed in open meetings, where all interested parties were welcomed and encouraged to participate regardless of membership status within NAESB. The meetings where the business practices were drafted were facilitated by Mr. Miles of the Federal Energy Regulatory Commission.

The business practices ratified by membership will be included in the next published version of both the WEQ and WGQ standards (version 1 and version 1.8, respectively). Prior to publication, they will be available as final actions from the NAESB web site[3] related to the request from which they originated – R04021.[4]

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[1] The Chairman's letter can be accessed from the NAESB web site at http://www.naesb.org/protected/ferc121404.pdf.

[2] A roster of participants is provided in Appendices 1 and 4 to this filing (provided via attendance lists for each meeting). Participation in NAESB subcommittees is not limited by NAESB membership status.

[3] The final actions after ratification for request no. R04021 may be accessed from the NAESB web site at http://www.naesb.org/weq/weq_Final.asp and http://www.naesb.org/WGQ/wgq_Final.asp.

[4] NAESB standards can be accessed in a number of ways. The standards are available for download in the protected area of the NAESB web site free of charge or can be purchased in electronic format from the NAESB Office. Access to the protected area of the NAESB web site is free to all current NAESB members as a benefit of NAESB membership, and non-members can register for home page access for $3500 per year. The Commission has previously recognized that, "[I]t is common practice for standards organizations to charge for copies of their standards in order to defray the publishing costs as well as some of the administrative, legal, and other costs of developing the standards." In addition to the standards themselves, all agendas, working papers, and subcommittee meeting minutes are publicly accessible on the NAESB web site free of charge.

The standards adopted by the two NAESB Executive Committees related to request R04021 are:

Proposed NAESB WEQ and WGQ Definition:

D1F Power Plant Operator (PPO) is the term used to describe the entity(ies) that has responsibility for gas requirements for a natural gas-fired electric generating facility(ies) and is responsible for coordinating natural gas deliveries with the appropriate Transportation Service Provider(s) (TSP) to meet those requirements. The PPO performs a number of coordinated activities, including, but not limited to, power plant operations, unit dispatch, natural gas procurement and/or gas transportation arrangements. Because each PPO is structured differently, specific responsibilities within each PPO should be determined by the PPO and the point of contact for the PPO should be communicated to the TSP(s). This definition applies to NAESB WEQ Standard Nos. [D2, S1B, S2X, S3X, S13, S15, and S16] and NAESB WGQ Standard Nos. [D2, S1B, S2X, S3X, S14, and S16].

Proposed NAESB WEQ and WGQ Definition:

D2F A Power Plant Operator's Facility is the term used to describe the natural gas-fired electric generating unit(s) under the direct control of the Power Plant Operator. This definition applies to NAESB WEQ Standard Nos. [S2X and S3X] and NAESB WGQ Standard Nos. [S2X and S3X].

Proposed NAESB WEQ and WGQ Definition:

D3F Balancing Authority (BA) is the term used by the Wholesale Electric Quadrant to describe the entity responsible for integrating electric resource plans ahead of time, for maintaining electric load-interchange-generation balance within its metered boundaries, and for supporting electric interconnection frequency in real time. In certain circumstances, a BA may be a Regional Transmission Organization or Independent System Operator. This definition applies to NAESB WEQ Standard Nos. [S15 and S16] and NAESB WGQ Standard No. [S16].

Proposed NAESB WEQ and WGQ Standard:

S1BF The Transportation Service Provider (TSP) / Power Plant Operator (PPO) communication standards set forth in NAESB WEQ Standard Nos. [D1, D2, D3, S1B, S2X, S3X, S13, S15, and S16] and NAESB WGQ Standard Nos. [D1, D2, D3, S1B, S2X, S3X, S14, and S16] do not convey any rights or services beyond or in addition to those contained in the TSP's tariff and/or general terms and conditions and/or do not impose any obligations that would otherwise be inconsistent with the requirements of applicable regulatory authorities, including affiliate code of conduct requirements. These communication standards should be used in addition to the NAESB WGQ standard nomination timeline and scheduling processes for the TSP's contract / tariff services. In the event of a conflict between any of these communication standards and the TSP's tariff or general terms and conditions, the latter will prevail.

Proposed NAESB WEQ and WGQ Standard:

S2XF The Power Plant Operator (PPO) and the Transportation Service Provider(s) (TSP) that is directly connected to the PPO's Facility(ies) should establish procedures to communicate material changes in circumstances that may impact hourly flow rates. The PPO should provide projected hourly flow rates as established in the TSP's and PPO's communication procedures.

Proposed NAESB WEQ and WGQ Standard:

S3XF Subject to the conditions of NAESB WEQ Standard No. [S1B] and NAESB WGQ Standard No. [S1B], this standard applies to a Power Plant Operator (PPO) and the Transportation Service Provider (TSP) to whose system the PPO facility(ies) is directly connected or with whom the PPO is a Service Requester.

A PPO should not operate without an approved scheduled quantity pursuant to the NAESB WGQ standard nomination timeline and scheduling processes or as permitted by the TSP's tariff and/or general terms and conditions, and/or contract provisions. However, if the PPO reasonably determines that it has circumstances requiring the need to request gas scheduling changes outside of the above-referenced nomination and scheduling processes and the affected TSP(s) supports the processing of such changes, the PPO should provide its requested daily and hourly flow rates to the TSP(s) (1) as established in the TSP's and PPO's communication procedures pursuant to NAESB WEQ Standard No. [S2X] and NAESB WGQ Standard No. [S2X] and/or (2) as specified in the TSP's(s') tariff or general terms and conditions.

Based upon whether or not the PPO's request can be accommodated in accordance with the appropriate application of the affected TSP's(s') tariff requirements, contract provisions, business practices, or other similar provisions, and without adversely impacting other scheduled services, anticipated flows, no-notice services, firm contract requirements and/or general system operations, the PPO and all of the affected TSPs should work together to resolve the PPO's request.

Where the affected TSP determines that it is feasible to provide the PPO with changes in flow rates without additional communications, no additional communications are required. These procedures will govern such communications unless the applicable parties mutually agree to create alternative communication procedures.

Proposed NAESB WEQ Standard:

S13F The Regional Transmission Organizations, Independent System Operators, independent transmission operators, and/or Power Plant Operators should sign up to receive operational flow orders and other critical notices from the appropriate gas Transportation Service Provider(s), pursuant to NAESB WGQ Standard Nos. 5.2.2, 5.3.35, and 5.3.37, unless the party(ies) needing the information has arranged to receive it through an alternative communication process(es).

Proposed NAESB WGQ Standard:

S14F A Transportation Service Provider should provide Regional Transmission Organizations (RTO), Independent System Operators (ISO), any other appropriate independent transmission operators (ITO), and Power Plant Operators (PPO) with notification of operational flow orders and other critical notices through the RTO / ISO / ITO / PPO's choice of Electronic Notice Delivery mechanism(s) as set forth in NAESB WGQ Standard Nos. 5.2.1, 5.2.2, and 5.3.35 – 5.3.38.

Proposed NAESB WEQ Standard:

S15F Unless otherwise prohibited by agreement, tariff, or protocol rules, a Power Plant Operator should, upon request, provide pertinent information concerning the service level (i.e., firm or interruptible) of its procured gas transportation and the performance obligation (i.e., firm (fixed or variable quantity) or interruptible) of its procured gas supply to the appropriate independent Balancing Authority and/or Reliability Coordinator.

Proposed NAESB WEQ and WGQ Standard:

S16F Regional Transmission Organizations, Independent System Operators, other independent transmission operators, independent Balancing Authorities and/or Regional Reliability Coordinators should establish written operational communication procedures with the appropriate gas Transportation Service Provider(s) and/or Power Plant Operator(s). These procedures should be implemented when an extreme condition could occur, as defined in such procedures.

These procedures will govern unless the applicable parties in the gas and electric industry mutually agree to create alternative written communication procedures that are more appropriate and meet the parties' collective regional operational needs.

Training on and testing of such communication procedures should occur periodically.

PROCESS USED TO DEVELOP THE NAESB COMMUNICATION BUSINESS PRACTICES

The NAESB standards development process[5] is well-established and robust. The standards development process recognizes the principles of openness, transparency and balance of interests and provides the ability for NAESB to serve as a forum for the development of consensus-based standards. The same standards development process is used by all of the NAESB quadrants, except that all requests for standards that affect the WEQ must be submitted to the Joint Interface Committee (JIC), a group consisting of members from NAESB, the North American Electric Reliability Council and the ISO-RTO Council[6]. The NAESB standards development process is briefly discussed below.

Upon receipt of a request for standard, the NAESB Triage Subcommittee meeting is conducted to determine whether the request is within the scope of the organization; if so, which quadrant(s) should work on the request, and further which subcommittees within that quadrant should develop the standard(s). Then, for the WEQ-assigned requests, the JIC further evaluates whether the request should be developed by NAESB or NERC, with business practice related requests being assigned to NAESB and reliability related requests being assigned to NERC. Assuming the JIC assigns the request to NAESB for development, the WEQ EC will affirm the Triage Subcommittee recommendation and work will begin at the subcommittee level. All JIC meetings are open to any interested party and are transcribed.[7]

Full participation, including voting rights, is open to any interested party in all EC subcommittees, and participation is available for all meetings through teleconferencing and/or web-conferencing. Additionally, in-person subcommittee meetings are held at geographically diverse locations. EC subcommittees use balanced voting for non-administrative motions. Balanced voting procedures provide that each segment of a quadrant holds two votes to be apportioned equally to those participants of the segment present at the meeting either in person or by phone, with no individual having more than one vote[8]. The effect of balanced voting is that the interests of each industry segment participating at the meeting are represented without regard to number of segment participants in attendance. After the subcommittee completes its work on the standard, it prepares a recommendation for

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[5] NAESB's standards development process is patterned after the GISB procedures.

[6] The Joint Interface Committee was established through a Memorandum of Understanding that may be accessed from the NAESB web site: http://www.naesb.org/pdf/memorandum_of_understanding.pdf.

[7] To order the transcripts from JIC meetings, please contact the NAESB office.

[8] Balanced voting procedures, including examples of how the procedures are applied, are discussed in the NAESB Operating Practices. All NAESB Governance Documents can be downloaded from the NAESB web site at http://www.naesb.org/materials/gov.asp.

consideration by the EC. Prior to the EC's review of the recommendation, the recommendation is posted for industry comment[9] for a minimum of thirty days. However, the drafting subcommittee may choose to hold multiple comment periods prior to completion of the recommendation.

During the EC's review of the recommendation, the EC processes the industry comments, makes any changes it deems necessary, and takes a vote. A recommendation must pass the EC of each applicable quadrant by a super-majority vote - an affirmative vote of at least 67 percent from each applicable quadrant EC and 40 percent from each of the segments of that quadrant. After passage by the EC, the recommendation is posted for ratification for thirty days and must receive an affirmative vote of 67 percent of the members of the applicable quadrant.

To refer to the meeting minutes, voting records and comments regarding the business practices adopted by NAESB for coordination of communications as related to request no. R04021, please access Appendix 1 of this report. Similarly, to refer to the ratification ballot, member voting record, comments and listing of relelvant transcripts, please access Appendix 2 of this report. The originating standards development request, Request No. R04021 may be accessed in Appendix 3 of this report.

GAS-ELECTRIC INTERDEPENDENCY ISSUES

In addition to the organization developing business practices, the Board of Directors of NAESB determined that the issue of gas-electric coordination was of sufficient strategic interest that they formed a board committee. Over the past six months, the board committee – Gas-Electric Interdependency (GEIC) – met to identify issues that warranted additional industry attention, but that may not necessarily result in standards development activities by NAESB. Their findings are noted below, along with the basis for developing the issues list and the link to work that had been undertaken by NERC.

Basis for Issues Development

Fundamentally the differences between the natural gas and electric industries pose inherent challenges to the interaction of the industries. These differences include but are not limited to the following.

- The lead time necessary to prepare for load fluctuations is shorter for the electric industry than the natural gas industry due to the inherent physical limitations of natural gas.
- Due to the necessary response time of the electric industry, instrumentation is necessarily much more precise both as to placement and timing than is the instrumentation in the natural gas industry.
- The electric industry is required to maintain a reserve margin to manage peak loads which depends on location but is generally 20%. Natural gas pipelines build capacity to match firm contractual commitments which in many cases include peaking needs of their customers. Conversely, natural gas pipelines have no cost recovery mechanism for capacity not supported by contracts.

[9] Comments on recommendations are welcomed from an interested industry participant, regardless of NAESB membership status.

- In balancing the "utility model" and the "market-driven model"[10], the interstate gas industry and FERC have fully adopted a market-driven model wherein capacity is built to fulfill request of contract customers. The power industry is still managing a balance between the two models, wherein utility reliability is maintained while accommodating and supporting market-driven transactions. This difference in models underlies the differences in capacity construction decisions.
- Load curtailment prioritization is not consistent between industries for peak day accommodation.

CONSIDERATIONS

As the issues are reviewed, several factors should be considered that contribute to the complexity of the interdependency for the gas and electric markets. Some of the factors are a simple recognition of industry practices in place today. Those considerations include:

- The regulatory framework for the wholesale gas market and the wholesale electric market are quite different. The electric market has a more complex regulatory framework. Consideration should be given that the gas framework not become overly complicated when addressing interdependency issues.
- The severity of the coordination issues and the relationship of the day-ahead electric market to the real-time electric market may vary significantly across regions, and this factor should be considered when reviewing the issues identified. As the issues are addressed, consideration should be given that costs not be imposed on regions where the issue is not present.
- When addressing the issues which incorporate regional differences, it should be considered that such incorporation may not be possible to entities, such as long-line pipelines, that do business across multiple regions.

Issues Identified

Following is a chart showing the issues identified along with a category as noted: (1) indicating policy direction and decisions from federal, state or provincial regulatory agencies or other groups, including issues between contractual parties, (2) appropriate for review for NAESB standards development, (3) appropriate to be forwarded to NERC for consideration for reliability standards development, (4) appropriate for review as regional issues, and (5) a national infrastructure concern. There can be more than one category assigned to a given issue.

In review of the chart, please note that the items are not grouped in any particular order to designate importance or the severity of the issue. These issues are of a long term nature and a considerable portion of the short-term concern on interdependency may be addressed through the communication standards noted earlier in this report.

[10] For purposes of this discussion, "utility model" is one wherein capacity is built for anticipated requirements and all users are required to pay for all capacity. The "market-driven model" is one in such capacity is built only for discrete customers who have requested and contracted for that capacity, and in which customers pay only for the capacity for which they have contracted. By way of example, in the power industry, transmission and local distribution tend to follow the "utility model", while generation and the sale of the electric commodity in wholesale markets tend to follow the "market-driven model".

#	Cat.	Description/Notes
1	2	*Issue:* Gas-fired generators are not communicating well with the pipelines, which may result in gas-fired power generation coming online and taking natural gas without the prior nomination of pipeline capacity or taking natural gas but not taken evenly across the 24 hour period for which the gas was nominated – which may cause operational issues for the natural gas pipelines. *Note:* NAESB is addressing part of this issue through the communication standards contained within this report, and as related to Request No. R04021.
2	1-3-4	*Issue:* Some gas fired generators will come online although they have been informed by the pipeline that the pipeline cannot support their burn rates. *Note:* This is a contractual and regulatory issue and may indicate that a monitor and/or "hotline" for violations is warranted. Incentives and/or penalties for load management/balancing could be a potential remedy.
3	1	*Issue:* Generally speaking, burning gas without authorization and/or replacing the gas back into the pipeline timely is an issue. *Note:* Terms are typically addressed in the contracts between the parties, thus making this issue a commercial one. The note as addressed in item 2 above is also applicable.
4	1-4-5	*Issue:* Many electric market designs allow generators to assume risk on the availability of interruptible transportation while relying on those same generators to provide power to the grid on a non-interruptible basis. Moreover, the economics are such that to maintain a competitive stance, independent power plants are disincented to purchase firm gas and/or pipeline capacity. In addition, many gas-fired plants were assumed to be available to serve in contra-seasonal peaks. This assumption may no longer be valid. *Note:* The infrastructure was initially designed for gas to be delivered to a city gate and is now being used to support, in many cases on an interruptible basis the requirements of power generators but does not provide enough interruptible capacity in some parts of the country to support such interruptible generation in conditions of extreme demand. However, several factors may warrant the assumption of risk in purchasing interruptible gas service, including the availability of flexible pipeline capacity, long term planning of supply of gas for generation uses, and fuel use diversity.
5	1-2-3-4	*Issue:* The relative timelines of electric markets and gas nominations creates a situation in which a generator can actually pay for firm gas transportation and yet only get lower-quality secondary service. *Note:* Because of the mismatches in timelines, the benefits of firm gas transportation service may not be achieved by the power generator. NAESB has a request, R04020 assigned which addresses the electric timelines and a energy day request that addresses some of the mismatch between the two markets. Work has not begun on either request to date, although both requests have been processed and assigned, including processing through the Joint Interface Committee for assignment to NAESB. However, this is also a regulatory concern -- the gas timelines are embedded in FERC regulations and both a regional and reliability concern because the reliability of the power grid depends on the electric schedules and the regional

#	Cat.	Description/Notes
		groups such as the ISOs and RTOs oversee the implementation of their respective market designs.
6	1-2-3-4	*Issue:* The ISO/RTO Council (IRC) has expressed concern that NAESB should not alter their market timelines through standard development as this is a regional implementation – not a national concern. *Note:* The issue raised by the IRC is addressed in part though NAESB Request No. R04020 on electric schedule timelines. It is also a regulatory concern because of the OASIS FERC regulations, and is both a NERC and RTO issue because reliability of the power grid depends on the electric schedules and the regional groups such as the ISOs and RTOs oversee the implementation of their market designs.
7	1-5	*Issue:* On cold days (i.e. on peak gas consumption days) there is not enough interruptible transportation (unused firm capacity of the contract holder) to meet the gas demand served through that type of transportation. This situation results from the statutory design that the gas industry builds pipelines and capacity based on firm contracts only. In recognition of this design, gas LDCs purchase their own "reserve" capacity in the form of additional firm pipeline service. This recognition, however, is not widespread in the electric market community, where some electric regulators have not been willing to give electric utilities cost recovery for the same level of "reserve" transportation for a peaking generator. *Note:* Power generators holding firm transportation agreements to meet peak demand would necessarily have unused capacity on pipelines when demand requirements are not at peak levels. LDCs have similar periods where capacity is not needed to meet their demand requirements.
8	1-5	*Issue:* Gas LDCs purchase their own "reserve" capacity in the form of additional firm pipeline service, but electric regulators have not been willing to give electric utilities cost recovery for the same level of "reserve" transportation for a peaking generator. *Note:* The infrastructure was initially designed for gas to be delivered to a city gate and is now being used to support, on an interruptible basis, the requirements of power generators. Purchasing firm service for peak day demand may lead to overbuilding[11] the infrastructure where it can be expanded – so other services may be required.
9	1-5	*Issue:* Where voluntary arrangements between pipeline shippers could accommodate the real-time generation market (e.g. instantaneous diversion of gas from an LDC to an adjacent market) neither the pipeline nor releasers of capacity are allowed to charge short-term rates that would match the instantaneous market value of capacity to a peaking generator. Further, the ability of pipeline tariff terms (e.g., nomination cycles and release procedures) to accommodate such arrangements vary as to their flexibility. Modifications to policy would enable

[11] Overbuilding can occur when the customer need for capacity is only intermittent or short-term (such as a peaking generator), thus creating significant amounts of empty space for the rest of the year. In that instance other services are needed to fill the gap in order to finance the cost of new capacity. In the case of electric generation typically the empty new capacity would be available at times when other firm capacity is also available meaning both would be discounted by the market. This would seriously undermine the financing of the new capacity.

#	Cat.	Description/Notes
		pipelines and releasers of capacity to charge peaking generators short-term rates. *Note:* Historically, pipelines have used a combination of firm pipeline capacity, pipeline contracts, storage, balancing, parking services and curtailment priorities to mitigate fluctuating load requirements. Pipeline tariffs are designed to insure reliable service to all customers, so any accommodation of such voluntary arrangements would require a process to be certain there was no adverse impact on other customers. Should such arrangements be incorporated into tariffs, business practices can be developed for support. As for rate flexibility, in the past the Commission has experimented with market-based pricing for released capacity. Short-term monetizing of load price fluctuation (hourly, daily, weekly and seasonally) as well as daily and hourly volume accommodation may be appropriate for consideration.
10	1-2-5	*Issue:* If voluntary arrangements between pipeline shippers are created that accommodate the real-time generation market (e.g. instantaneous diversion of gas from an LDC to an adjacent market), business practices could be drafted that support the trade of gas from an LDC to an adjacent market. *Note:* Pipeline tariffs are designed to insure reliable service to all customers, so any accommodation of such voluntary arrangements would require a process to be certain there was no adverse impact on other customers. Should such arrangements be incorporated into tariffs, business practices can be developed for support.
11	1	*Issue:* If society is not willing to pay for firm transportation for peaking capacity, then regulators may want to consider, at the state and local level, an emergency response program that determines whether - at times of unanticipated extreme demand that requires emergency relief - it is better to interrupt electric demand being served on an interruptible basis or perhaps curtail other firm gas customers so that gas generators who have not contracted for firm services can be served for the "better social good." The curtailment activity would address emergency situations in which gas is being administratively redirected according to essential human needs criteria or other "social" factors. In the DOE Gas Disruption Analysis project, the ultimate end-game for state regulators is the valuation of essential human needs generation on a level playing field with other essential human needs users of gas. Redirecting gas from a customer with firm supply during a winter crisis, to a generator who ran out of interruptible supply should never happen. *Note:* This action would require regulatory changes and is a key aspect of the coordination difficulties between the gas and electric markets. The notion of end-use-based redirection of gas to a generator who just ran out because he didn't pay for firm supply, by taking gas away from someone else who did pay for firm supply, is not something that should ever happen just because winter came when the Weather Channel said it would.
12	1-2	*Issue:* Some pipelines or LDCs may not break down the volumes at meters where there is more than one contract volume due to the confidential nature and market sensitivity of the information. This information may be necessary for RTOs, ISOs and independent balancing authorities for grid operations where the gas is used for power generation. *Note:* Business practices can be written to report volume breakdowns so that

#	Cat.	Description/Notes
		volumes destined for electric generation can be identified after the confidential nature of the market data has been addressed.
13	1-2-3	*Issue:* In California ISO's comments to NAESB regarding its development of business practices for Request No. R04021, they discussed a network of informed contacts available as coordination issues arise. This contact approach may be applicable on other than a regional basis, such that all operating areas should have "Dedicated Lines" between key offices within that operating area and possibly adjoining connected areas to support informed and timely decision making. *Note:* Business practice standards can be written to implement a "hot line" that would respect any needed regional differences. Communication standards development was undertaken by NAESB and the results of that effort are presented in this report.

To refer to the meeting minutes, voting records and comments regarding the issues list above, please access Appendix 4 of this report. Appendix 4 also lists the relevant transcripts and committee work papers.

Coordination with NERC

On June 15, 2004, the NERC Board of Trustees approved several recommendations related to gas-electric coordination[12] are shown below, and many of the actions taken by the NAESB Business Practices Subcommittees in drafting the coordination standards and the discussions held by the NAESB Gas-Electric Interdependency Committee are supportive of those NERC recommendations. In particular, the NAESB efforts address, in part, recommendations 2, 5, and 7:

- Recommendation 2 NERC reliability coordinators or their delegates, subject to appropriate treatment of commercially sensitive information, should develop regular, real-time communications with pipeline operators about disturbances that could adversely impact the reliability of either the electric systems or the gas pipeline.
- Recommendation 5 NERC should include analysis of fuel infrastructure contingencies that could adversely impact the reliability of the electric systems in the NERC planning standards.
- Recommendation 7 NERC should, in concert with other energy industry organizations, formalize communications between the electric industry and the gas transportation industry for the purposes of education, planning, and emergency response.

NAESB has a strong working relationship with NERC and will continue to coordinate its standards development efforts with NERC to meet the needs of the two markets.

CONCLUSIONS AND SUMMARY

NAESB appreciates the support of the FERC in providing Mr. Miles to facilitate the NAESB standards drafting sessions. Through very aggressive meeting schedules, and with Mr. Miles'

[12] The NERC recommendations may be accessed from ftp://www.nerc.com/pub/sys/all_updl/docs/bot/Agenda-Items-0604/Item3-Attach1.pdf.

facilitation, the WEQ and WGQ prepared joint business practices in a very short time frame. We hope these business practices will prove helpful to the two industries.

Similarly, the issues list provided with the categories indicates that action may be needed if further progress is to be made in improving the coordination of the gas and electric industries. While this issues list presents a wide range of possible actions, it must be noted that the electric industry has regional characteristics which many parties wish to preserve. In contrast, the gas industry employs a North American Energy Standards Board model. It is inherently difficult to address issues based on the difference in focus between the two industries. We hope that the issues list will spur the needed entities to consider actions they may take to improve coordination.

Adding emphasis to the need for better coordination is the Department of Energy's statistics that the use of natural gas to generate electricity ranges from 5,206 Bcf in 2000 to 5,352 Bcf in 2004. From 2003 to 2004, the use of natural gas to generate electricity saw an increase of 4.2%, while the overall consumption of natural gas stayed relatively flat – less than a 0.3% change.[13]

Extraordinary coordination among regulators, NERC, NAESB and industry participants of both the natural gas and electric wholesale markets is crucial if the issues identified are to be resolved. As the issues list demonstrates, many of the items require the attention of more than one of the groups. Also evidenced by the issues list, resolution of many of the items will be based on decisions neither made nor taken by NAESB.

Specific to NAESB, before NAESB can move further in developing business practice standards to address the coordination of the two industries, policy direction and industry willingness for change is required – otherwise, we may be in the position of developing business practices and striving to achieve industry consensus for standards that the industry is not convinced are needed. This collaboration will require that the parties put aside parochial interests and look to solutions that benefit the industries as a whole. Optimally, the contributors to developing business practices should be creative individuals with knowledge of the workings of both the gas and electric wholesale markets. Driving the development of business practices would be a qualitative cost-benefit analysis, with a focus on creation of standards that are less intrusive to already adopted wide-spread business practices and that recognize regional differences.

For the two outstanding requests R04016 (Energy Day assigned to both the wholesale gas and wholesale electric quadrants) and R04020 (Electric Market Timelines assigned to the wholesale electric quadrant); the requests have already been assigned to NAESB for action both by the NAESB Executive Committee and by the Joint Interface Committee. The requests have not been addressed at this time –through suggestions of the NAESB Executive Committee approved by the Board of Directors, as attention was focused on the communication and coordination standards reflected in request R04021.

NEXT STEPS

The Board recognizes that requests R04016 and R04020 are symptoms of many of the issues identified, and as such, charges the Board Committee with the development of a standards development request that reflects the intent of both of these requests and includes other aspects of gas-electric interdependency that are reflected in the issues lists (such as issues #5, #10 and #12) and targeted for business practices development. The request, once developed, would be reviewed by the Board for inclusion in the NAESB Annual Plan, and would be processed through NAESB's normal process for standards. In having the Board Committee

[13] In 2003, 5,135 Bcf were used to generate electricity compared to 2004 figures of 5,352 Bcf. Figures provided by the Energy Information Administration, Natural Gas Monthly April 2005.

develop this request, the organization would take full benefit of the work that contributed to the creation of this report, and will reflect the knowledge gained through this process. The Board would approve the draft request before submitting such request for processing and in this manner ensure that the industry support as presented by the Board of Directors, is indicated.

NORTH AMERICAN ENERGY STANDARDS BOARD
Wholesale Electric Quadrant Report
Table of Appendices

(effective 06/27/05)

Appendix 1: Related Minutes and Voting Records Regarding the Standards

NAESB Energy Day Subcommittee Meetings:
- December 1-2, 2004
- January 24-25, 2005
- February 9-10, 2005
- March 1-2, 2005
- March 21-22, 2005
- April 6-7, 2005
- April 18-19, 2005
- April 25-26, 2005

Executive Committee Meetings:
- February 8, 2005 Conference Call
- May 26, 2005 Conference Call
- May 31, 2005 Conference Call

Joint Interface Committee Meetings:
- September 21-22, 2004

Appendix 2: Ratification Ballot, Member Voting Record and Comments Regarding the Standards

Ratification Ballot for Recommendation R04021 (WEQ) – Due July 8, 2005

Request for Comments on Recommendation R04021 – Due May 25, 2005
Comments Submitted by:
- American Electric Power
- American Gas Association
- California ISO
- Conectiv
- Duke Energy Corporation
- El Paso Electric Company
- Entergy
- Entergy Services, Inc. Gas Group
- Mewbourne Oil Company
- the Pipeline Segment
- Progress Energy Carolinas
- Tennessee Valley Authority
- We Energies

Appendix 3: **Requests for NAESB Standards**

Request No. R04016
Request No. R04020
Request No. R04021

Appendix 4: **Related Board and Board Committee Minutes and Work Papers**

Board Gas-Electric Interdependency Committee:
- November 17, 2004 Conference Call
- February 1, 2005 Conference Call
- March 31, 2005 Meeting
- May 17, 2005 Meeting

Board of Directors Meetings:
- September 16, 2004 Meeting
- March 3, 2005 Meeting
- June 22, 2005 Meeting

Correspondence from the NAESB Advisory Council

Appendix 5: **Transcripts**
List of Available Transcripts
Procedures for Ordering Transcripts