North American Energy Standards Board

Gas and Electric Interdependency Final Report to the NAESB Board of Directors

[Date to be Filed]

Below is the final status report of the NAESB Gas-Electric Interdependency Committee (GEIC) and is supplemental to the June 27, 2005 report submitted to the Federal Energy Regulatory Commission ("Commission" or "FERC") in Docket No. RM05-28-000.

BACKGROUND[1]

In a December 2004 letter from Chairman Wood to Michael Desselle[2], 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 Regional Transmission Organizations (RTOs)/Independent System Operators (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.

On June 27, 2005 a report was submitted to the Commission which included communication standards between natural gas transmission service providers and power generators and will be included in the next published version of both the Wholesale Electric Quadrant (WEQ) and Wholesale Gas Quadrant (WGQ) standards (version 1 and version 1.8, respectively). Prior to publication, they are available as final actions from the NAESB web site[3] related to the request from which they originated – R04021.[4] Also in the report, the NAESB Gas-Electric Interdependency

[1] While the GEIC effort began in late 2004, a related and precursor NAESB effort began in 2003 with the creation of the NAESB Gas-Electric Coordination Task Force. This group prepared both an interim and final reports which were filed with the Commission on April 16, 2004 and November 30, 2004, respectively. Both reports included a discussion point list as their key deliverable, but also included several presentations. The point list and presentation materials were used as reference materials by the GEIC in its work. The two reports can be accessed from the NAESB web site at: http://www.naesb.org/doc_view2.asp?doc=ferc041604.pdf and http://www.naesb.org/doc_view2.asp?doc=ferc113004.pdf.

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

[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

Committee of the Board of Directors ("GEIC") identified thirteen issues and categorized them as (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 (Attachment A of this report). For the majority of the issues identified there was more than one category assigned.

The conclusions reached on the issues identified pointed to the crucial need for extraordinary coordination among regulators, NERC, NAESB and industry participants of both the natural gas and electric wholesale markets. As the issues list demonstrated, many of the items required the attention of more than one of the groups, and that 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, NAESB 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. 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 actions taken by the Board of Directors on June 22.

On June 22, 2005, the Board recognized that requests R04016 and R04020 were symptoms of many of the issues identified, and as such, charged the GEIC with the preparation of a standards development request that reflected the intent of both of these requests and included other aspects of gas-electric interdependency that were evident 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. An important direction from the Board in its instructions to the GEIC was that the members of the GEIC should ascertain a level of industry support for such actions anticipated by the request before standards development request is submitted. In summary, the committee members should not recommend actions in a standards request that they did not anticipate would garner sufficient industry support.

PROCESS USED BY THE NAESB GAS-ELECTRIC INTERDEPENDENCY COMMITTEE

The GEIC met four times (August 16, September 8, October 6, and October 24) following the June 22 Board of Directors meeting. The meetings were open and posted on the NAESB web site for all interested parties. Observers were welcomed, and did attend the meetings. Notes were taken for all meetings and posted on the web site along with agendas and work papers. The board committee is considered a named committee of NAESB – the members are named by the Chairman of the Board of Directors and are either board members, members of the NAESB Advisory Council, or specifically requested to join because of their knowledge of the markets. The work products of the committee were prepared by the committee members with staff administrative support and forwarded to the Board of Directors for review and approval. The GEIC is chaired by Jim Templeton, a NAESB Board member and former chairman of the organization.

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.

CONCLUSIONS REACHED BY THE NAESB GAS-ELECTRIC INTERDEPENDENCY COMMITTEE

In discussions of possible standards development efforts, six potential activities were identified where existing standards should be reexamined to determine whether updates or new business practices could be written to further improve the interaction between the gas and electric industries. The six activities are an outgrowth of the analysis of 13 issues described in the June 27 report to the FERC on gas-electric interdependency[5], most of which require policy direction if they are to be undertaken. As a link to the issues identified on June 27 (Attachment A), the six activities identified in this report are the items where the GEIC has determined that standards development by NAESB might be explored. Similarly, these six activities identified have policy implications. During the identification of the potential development activities, general concerns were voiced by committee members on the interaction of the wholesale gas and electric quadrants and the commitment of both groups to come equally to the table with solutions. The status of the two outstanding requests (R04016 and R04020) was also discussed.

Additionally, during discussions of these possible efforts, concerns were identified that may pose roadblocks in garnering sufficient industry support to proceed. Modification by the gas industry of established processes and practices to address problems that affect both industries will not necessarily improve the gas/electric interface unless the electric industry also works to address the electric problems. If modifications are made, they should be made in both the gas and electric industries to ensure both are working to improve gas/electric coordination.

The six efforts identified that could be included in a standards development request were:

1. Consistent with the 2/27/04 Order in Docket No. RP04-151-000[6], consider the development of standards to support Capacity Release pricing on an index[7] for those pipelines that have the FERC authority to discount capacity on an index basis. The concerns raised included:

    - Removal of the pricing cap to make it more attractive for firm gas transportation holders to release the capacity to others was raised during the discussion, but it would require regulatory policy changes and is specifically not anticipated as part of this item.

2. Review the possibility of adding an additional intraday nomination cycle with bumping rights to provide more flexibility to shippers, including power generators, with firm transportation rights such that they can nominate for natural gas supporting their market clearing times. Current problems exist within the day-ahead and real-time power markets for nominations (See the graphical depiction of the electric timelines to the gas nomination timelines as Attachment B). Tennessee Valley Authority and others have noted that this problem may have been exacerbated by some pipelines' decisions to move to hourly and daily balancing; but others have remarked that the GEIC has not reached this conclusion. Technological advances make additional nomination cycles and changing the last "no bump" cycle to later in the day potential feasible solutions. As with #4 below, consensus has not been reachable when determining the need and amount of change required by each of the two industries to develop workable solutions. The concerns raised were:

    - Adding an additional cycle may have impacts on the timing of the existing nomination cycles.

    - The timing of the various nomination cycles may have different impacts on different parties and/or other NAESB standards, which must be considered before any changes are made.

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[5] NAESB prepared and submitted a report on June 27, 2005, in Docket No. RM05-28-000, "Standards for the Coordination of Business Practices Between Public Utilities and Interstate Natural Gas Pipelines," which included 10 communication standards between transporters of natural gas and power generation facilities as well as 13 coordination issues identified, most of which had policy implications.

[6] The referenced order can be accessed from the FERC web site (elibrary function from http://www.ferc.gov, or http://elibrary.ferc.gov/idmws/nvcommon/NVViewer.asp?Doc=10074967:0)

[7] A work paper was independently provided by National Fuel Gas Distribution, and is attached (Attachment C).

- Additional Wholesale Electric Quadrant standards may be needed to take advantage of a revised gas nomination cycle.
- The proposed business practices may be more acceptable to the gas industry if developed in conjunction with Item 4 below.

3. Consistent with the 11/22/05 Order in Docket Nos. RP06-69-000 and RP06-70-000[8], review the ability of pipelines to shift gas for primary firm transportation within a pipeline path without having to re-offer as secondary firm transportation service. The concerns raised were:

   - Current no bump rules limit firm customers' ability to divert gas to another market mid-day without reallocation. If pipelines could be operationally indifferent, then they could switch deliveries without facing the equity issues that arise for those customers who were not originally scheduled because they did not contract for firm transportation, but delivery is switched from firm transportation customers to customers who also did not contract for firm transportation. However, this may conflict with current tariff and policy equity issues. Any business practices created must be non-discriminatory.
   - If it is determined that this function is appropriate, policy changes may be required.

   Explanation of a possible implementation:

   Customers who have scheduled their primary firm capacity through a point of restriction may not divert their nomination after the timely nomination deadline to a new delivery point, even if the path of the gas through the restriction does not change, just the delivery or receipt point. A customer, who wishes to change a delivery from his storage point to his city gate, risks losing his transportation priority because the pipeline is obligated to treat any change in a nomination as a new nomination requiring rescheduling with other new intra-day nominations. Revised nominations could be allowed on the same contract when (1) the intra-day nomination has the same scheduling priority that is being scheduled and could be allowed to flow on the same Gas Day as the intra-day nomination through a posted point of restriction, even if subject to a partial restriction, and (2) the nomination does not result in a net increase in the total volume scheduled under the contract though the posted point of restriction. These conditions would ensure that scheduled service for other customers through a restriction is not affected by the intra-day nomination.

   Example 1: The customer has 100 dekatherms scheduled to flow from a primary receipt point through the posted point of restriction to a primary delivery point. Under the same contract, the customer then requests a nomination change to move 50 of the 100 dekatherms to a secondary delivery point that is outside its Transportation Path but still through the posted point of restriction. Under the enhanced nomination procedures proposed herein, this nomination change would be allowed because the intra-day nomination (i) has a scheduling sequence priority that is being scheduled and allowed to flow, and (ii) would not change the total quantity of gas scheduled to flow through the posted point of restriction under the same contract.

   Example 2: The customer has 100 dekatherms scheduled to flow from a primary receipt point to a primary delivery point. Unlike Example 1, however, the customer's scheduled nomination of 100 dekatherms does not flow through the posted point of restriction. Instead, the customer's existing scheduled nomination has a path that is entirely upstream of the posted point of restriction. Under the same contract, the customer then requests a nomination change to move 50 of the 100 dekatherms to a secondary delivery point that is further downstream and outside its Transportation Path, resulting in a path through the posted point of restriction. Under the enhanced nomination procedures proposed herein, this nomination would not be allowed because it would result in an increase in the total quantity scheduled to flow through the posted point of restriction under that contract.

[8] The referenced orders can be accessed from the FERC web site (elibrary function from http://www.ferc.gov, or http://elibrary.ferc.gov/idmws/nvcommon/NVViewer.asp?Doc=10887607:0 (RP06-69) and http://elibrary.ferc.gov/idmws/nvcommon/NVViewer.asp?Doc=10887606:0 (RP06-70)).

4. Review and modify the requirements for organized electric markets so that the markets clear in sufficient time to nominate within the existing gas nomination timelines (Attachment B provides a graphical representation of the differences in the gas and electric market timelines). Current timely gas nomination cycles occur long before the time when most organized electric markets clear their timelines and commit for the day ahead market. This disconnect leaves some generators two main options of either a) purchase and nominate gas transportation on a timely basis and risk not having their bid subsequently clear the power market or, b) wait to see if their bid clears the power market and risk relying upon the intraday gas transportation nominations without the level of assurances offered in the timely cycle for firm gas transportation services. Non-organized electric markets add another layer of timelines. As with #2 above, another debated point was the need and amount of change required by each of the two industries in coming to workable solutions. The concerns raised were:

    - It may be difficult for organized markets to be in compliance with this proposed business practice given the existing nomination timelines; the proposed business practices may be more acceptable to the electric industry if developed in conjunction with Item 2 above.
    - It will be necessary to gain consensus in the electric industry to standardize the electric timelines, each of which have been developed regionally. In the alternative, the electric industry can create business practices that support market clearing within the gas nomination cycles.
    - The ISOs and RTOs will need to make modifications to each of their separate processes to support NAESB business practices that require the electric markets to clear prior to the timely gas nomination timelines.

5. Require generators that offer into the day ahead market to have the appropriate commercial arrangements to fulfill the needed obligations. The concerns raised were:

    - Being too prescriptive as to how the obligations are met interferes with the risk management strategies of market participants.
    - To the extent this proposal needs to address reliability aspects of this issue, those concerns will be directed to NERC.
    - The issue of firm transportation as it relates to resource adequacy is being addressed as part of the proposed NERC Resource Adequacy Standard currently under development.

6. Develop the appropriate supporting definitions for new business practices for the Wholesale Electric Quadrant, including but not limited to definitions for: alternate fuel capability, usable alternate fuel capability, firm transportation service, firm sales service, firm supply, and "must run" generator. The concerns raised were:

    - In previous attempts, the Wholesale Electric Quadrant was unable to reach consensus on definitions of similar terms.
    - Although these definitions will apply to Wholesale Electric Quadrant, the definitions should be developed with the appropriate input from the Wholesale Gas Quadrant to ensure consistency with gas products.

As noted in the prior report of June 27, to accomplish the above standards development efforts will demand extraordinary coordination of the industry participants of both the natural gas and electric wholesale markets. Items 1-3 (all gas related) have some policies or statements in individual pipeline tariffs that may support the standards development but would clearly benefit from a direction provided by the FERC to support the much needed consensus building. Items 4-6 do not have specific policies in place today, and would require direction from FERC if consensus within the two industries would be achievable.

As general comments to the above six efforts, for all efforts that were focused on wholesale gas efforts (items 1, 2 and 3), a general comment was made that the wholesale electric quadrant should come to the table with a willingness to also make changes to their process. The discussion held so far does not indicate a willingness to

create business practices for wholesale electric markets. It is the opinion of the committee members that the organized electric markets, such as the ISOs and RTOs and their stakeholder groups, may not be interested in working within NAESB to create the needed business practices. It is anticipated that their approach would be regional solutions developed individually. Along these lines, the electric market participants of the GEIC have not identified any sponsors for the efforts directed at the wholesale electric market (items 4, 5 and 6), and a broader outreach to Edison Electric Institute and other WEQ NAESB members is in order.

As noted, items 4- 6 require more effort from within the electric industry, including RTOs/ISOs. It is NAESB's role to develop commercial business practice standards, it is NERC's role, or the soon to be created Electric Reliability Organization (ERO), to develop reliability standards, and it is the ISO/RTO Council's role to operate electric transmission systems and administer markets consistent with the standards developed by NERC and NAESB. There is a sufficiently high degree of commercial, markets and reliability interdependence associated with items 4-6 such that the electric industry participants should work together to ensure as seamless a market structure as possible.

References in items 4-6 to NERC and the ISOs/RTOs is not intended to signal any abdication of NAESB's role or responsibility in these areas. Conversely, to ignore the need for the electric industry to address needed change will leave a "one-sided" GEIC report that offers only gas-related solutions. Therefore, it is important to ensure that this report is not perceived as "one-sided" offering gas related solutions without charging NAESB to find compatible solutions on both sides. As such, this report acknowledges the need for change on both the gas and the electric side, the respective role of each organization and the need to find a joint/collaborative solution where one impacts the other. These issues have been before the electric industry for quite some time. NERC identified interdependency issues years ago but no standards have yet resulted from their efforts. While participants in the electric industry (NERC, NAESB and the ISOs and RTOs) have collaboratively developed gas-electric communications standards as a first step, further collaboration on the more difficult issues has not occurred, despite NAESB's efforts to facilitate such a process, and it will require the Commission to provide guidance to the electric industry in the form of Commission rulemakings or orders benefiting the industry by streamlining the joint interface process[9] for assigning work.

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 Committees and by the Joint Interface Committee. At the Board meeting on June 22, the Board instructed the Executive Committees to not proceed with these requests even though they had been submitted, approved as within NAESB's scope, assigned to the appropriate quadrants and had also been approved by the Joint Interface Committee. The Board recognized that requests R04016 and R04020 were symptoms of many of the issues identified, and as such, delayed action on the requests. The two outstanding requests would be reconsidered by the Board for development after the GEIC had completed its analysis and prepared new standards development requests. It was anticipated that the new standards requests would supersede and replace them. The submitters of the requests have agreed to withdraw them once the final report and/or request(s) for standards development is completed.

NEXT STEPS

In considering the development of new requests that would address one or more of the six development efforts identified by the GEIC, the concerns identified the potential need for regulatory policies, as these efforts are controversial and the ability to achieve substantial industry consensus is not certain. Because of this concern, the committee did not prepare requests for standards development as directed by the Board of Directors in June.

[9] The joint interface process for assigning work to NERC or NAESB based on whether the development activity is predominantly of a commercial nature (NAESB) or reliability nature (NERC) is outlined in the Memorandum of Understanding between NERC, NAESB and the ISO-RTO Council, signed May 15, 2003, and can be accessed from the NAESB web site: http://www.naesb.org/pdf/memorandum_of_understanding.pdf.

Instead, the committee highlighted the six areas that may be beneficial for standards development, if the industry supports such development. It is the committee's opinion that the lack of industry support poses sufficient roadblocks to development and regulatory policy guidance is needed before further efforts can be undertaken. Instead of requests, the committee prepared this report, which was endorsed by the Board of Directors notationally on put date here and will be forwarded to the FERC as a final update report on gas-electric interdependency issues. With the Board approval of this report as a final update, the submitters withdrew their requests R04016 and R04020[10], as the roadblocks noted above apply equally well to the requests. The GEIC efforts are considered complete with the submittal of this final report as endorsed by the Board of Directors to the FERC.

[10] Request No. R04016 to develop a standard definition for Energy Day was submitted to NAESB on May 25, 2004 by KeySpan Utility Services and Duke Energy Gas Transmission and assigned jointly to the Wholesale Gas Quadrant and Wholesale Electric Quadrant for standards development. The Joint Interface Committee voted to support its assignment to NAESB on September 21, 2004.

Request No. R04020 to establish business standards relating to electric transaction scheduling and timelines was submitted to NAESB on June 29, 2004 by Tennessee Valley Authority and assigned to the Wholesale Electric Quadrant for standards development. The NERC/NAESB Joint Interface Committee voted to support its assignment to NAESB on January 18, 2005.