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.

Attachment A
Issues Identified in the NAESB June 27, 2005 Filing to FERC in Docket No. RM05-25-000

Issues Identified by the GEIC in its report filed with the FERC on June 27, 2005

#	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 are 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 an 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 groups such as the ISOs and RTOs oversee the implementation of their respective market designs.

Attachment A
Issues Identified in the NAESB June 27, 2005 Filing to FERC in Docket No. RM05-25-000

#	Cat.	Description/Notes
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 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

[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.

Attachment A
Issues Identified in the NAESB June 27, 2005 Filing to FERC in Docket No. RM05-25-000

#	Cat.	Description/Notes
		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 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.

Attachment B
Gas-Electric Timeline Graphs

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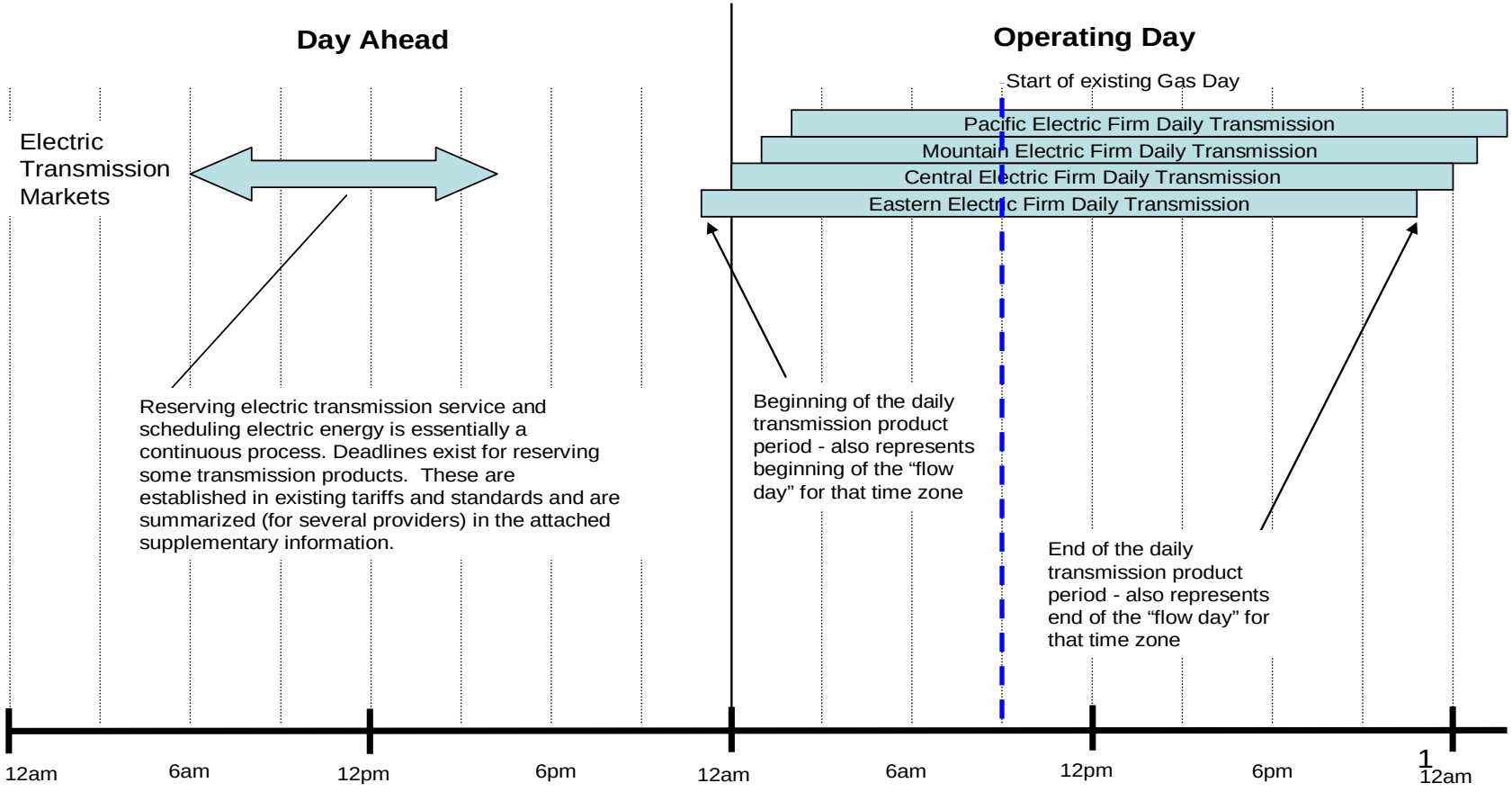
Current Processes Converted to Central Prevailing Time (CPT)



Attachment B
Gas-Electric Timeline Graphs

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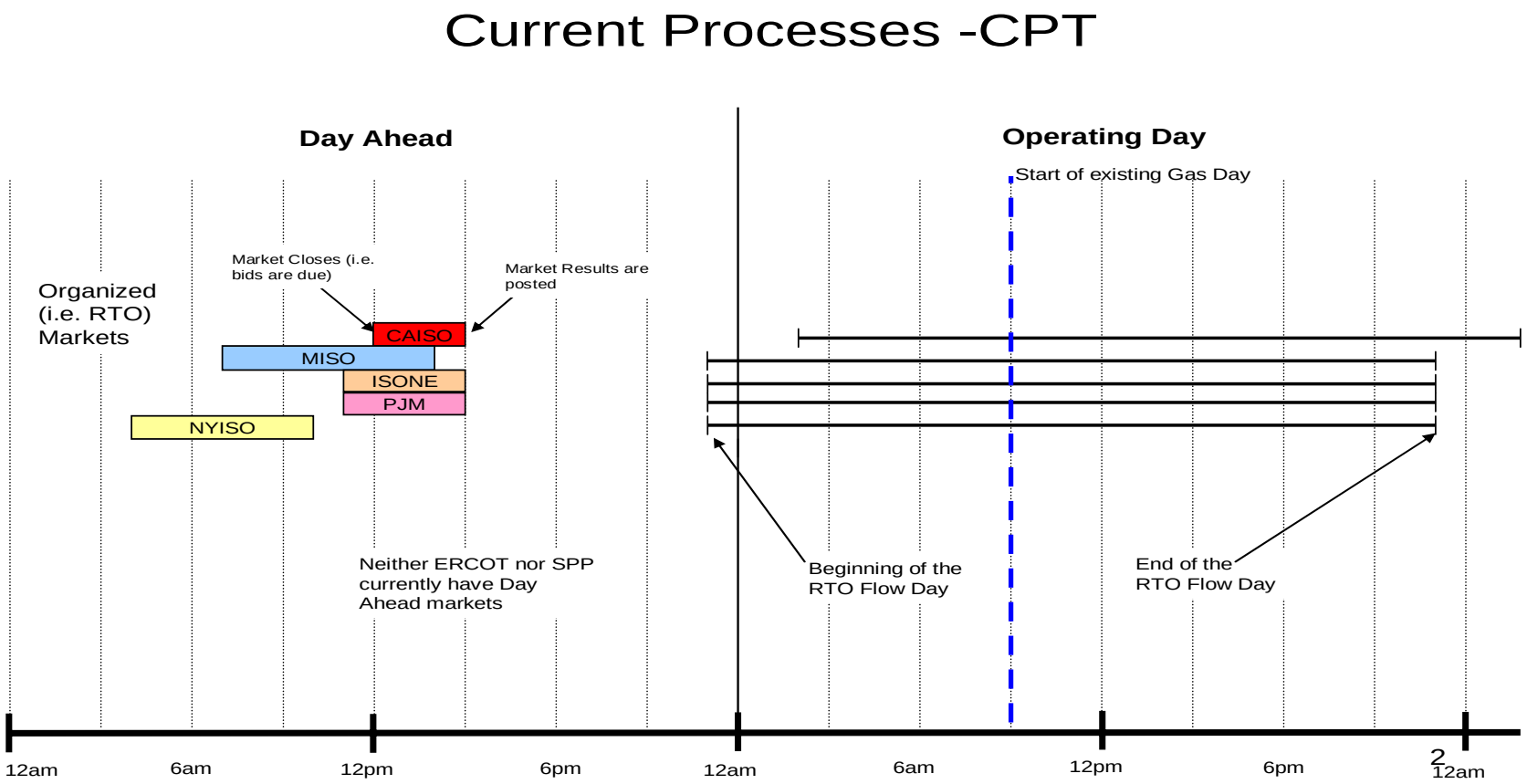

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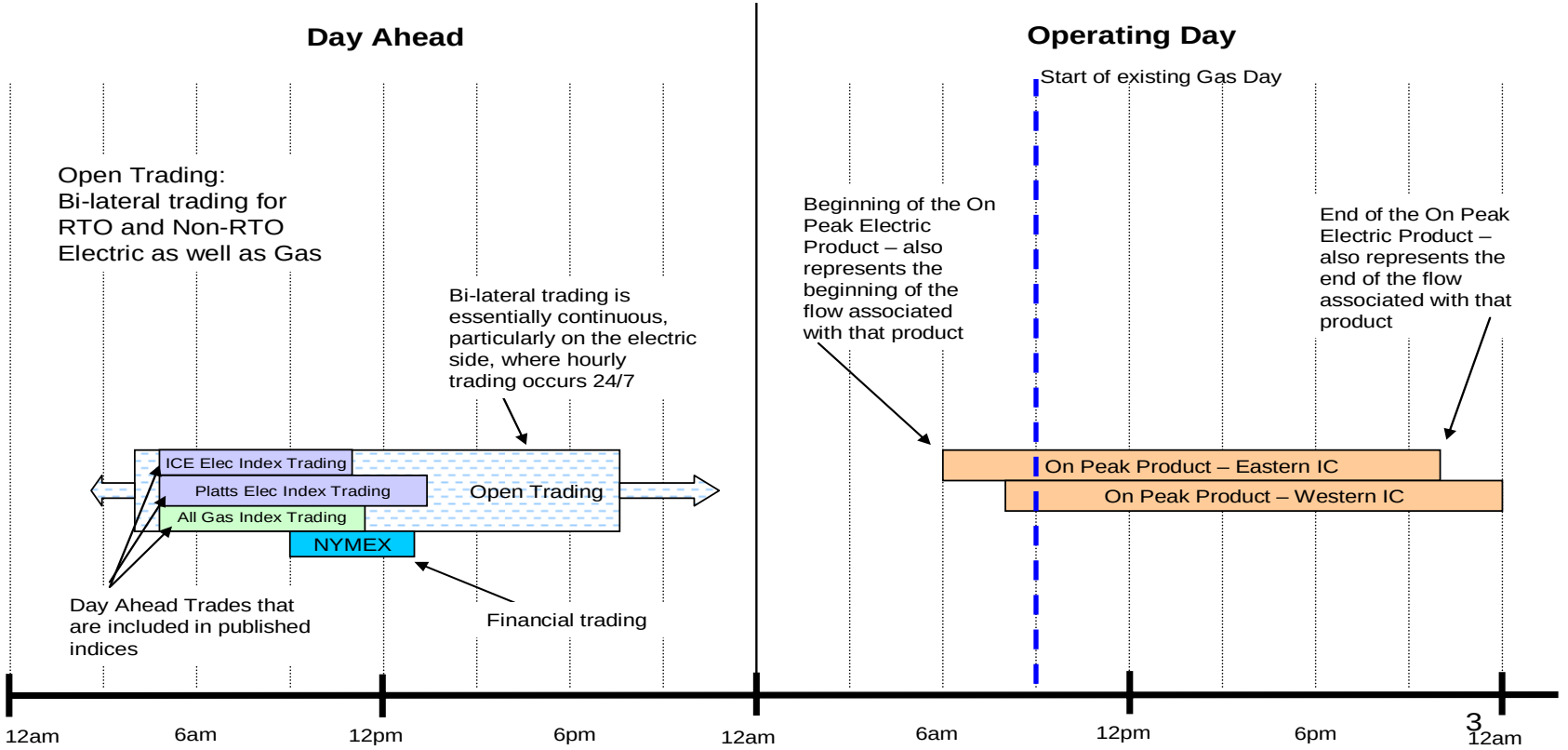
Attachment B
Gas-Electric Timeline Graphs

Current Processes - CPT



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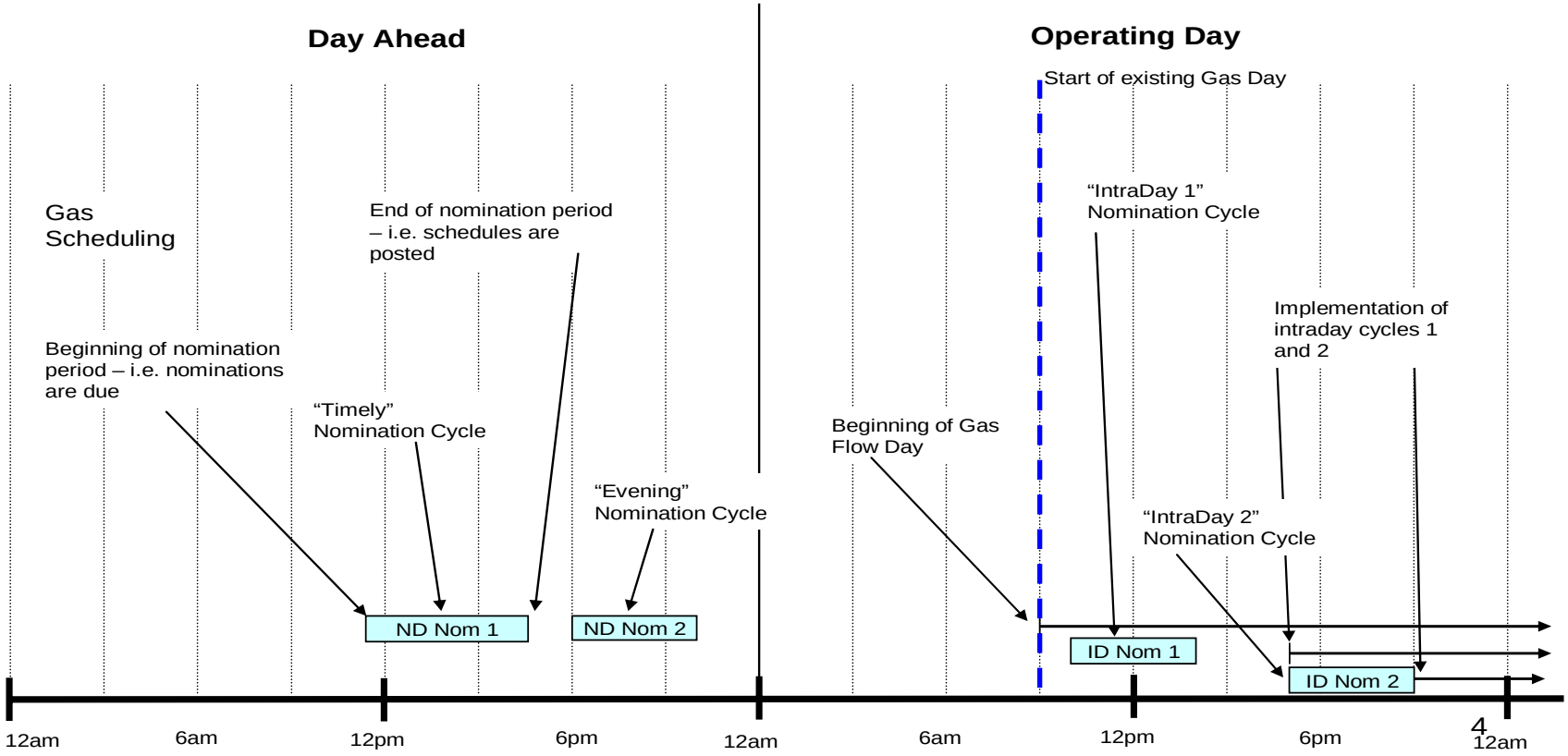
Attachment B
Gas-Electric Timeline Graphs

Current Processes - CPT



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Attachment B
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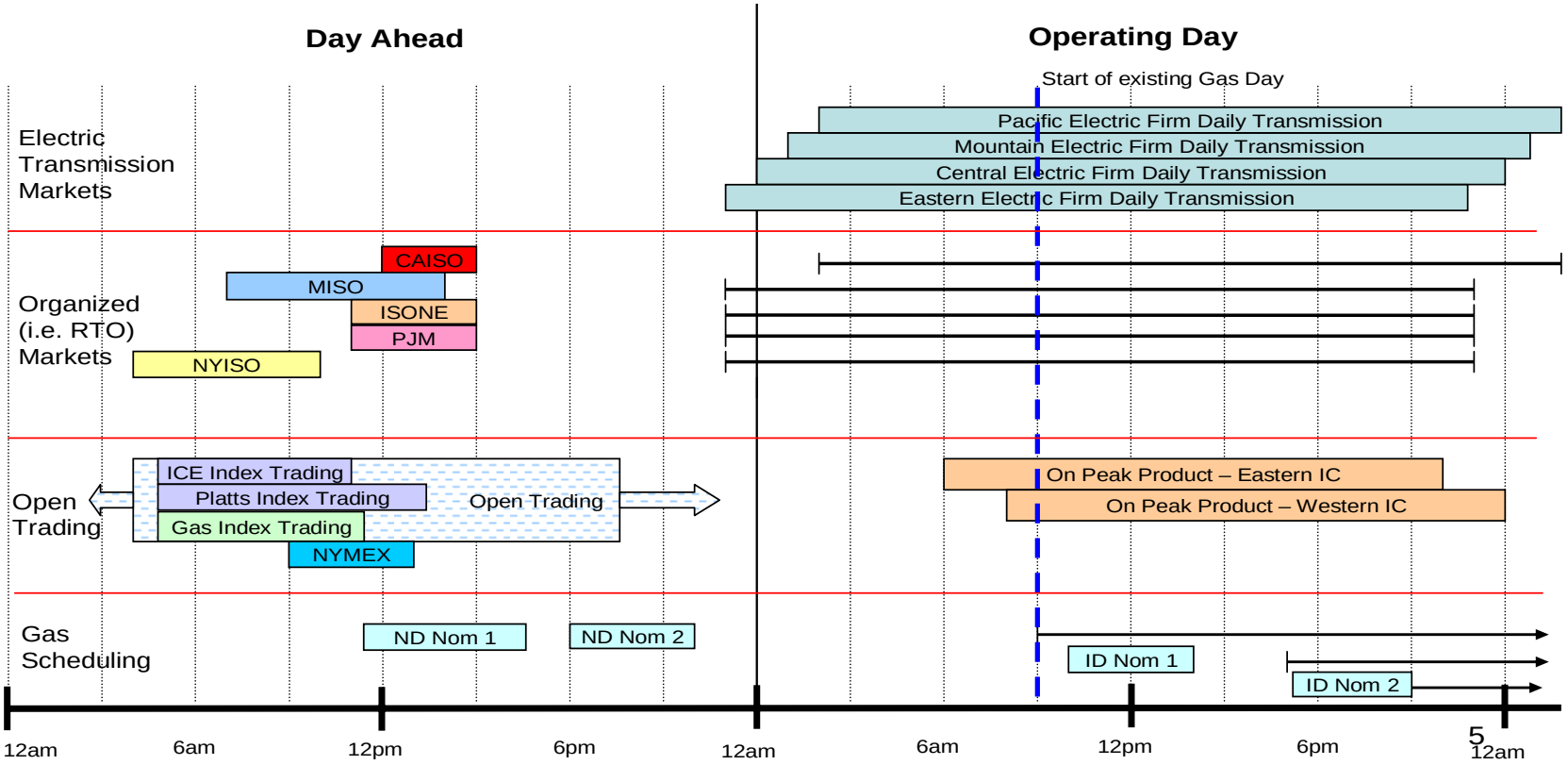
Current Processes - CPT



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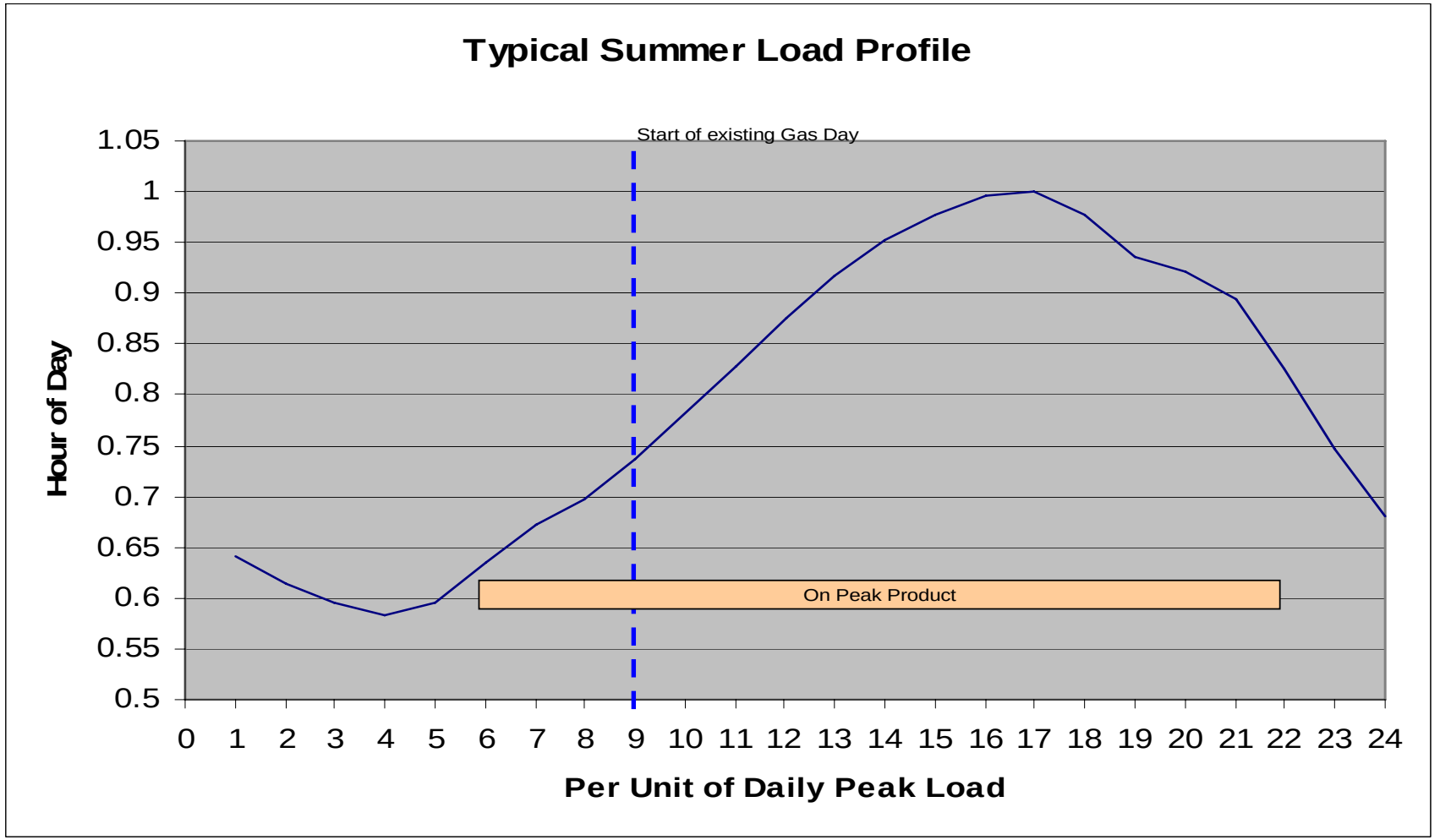
Gas-Electric Timeline Graphs



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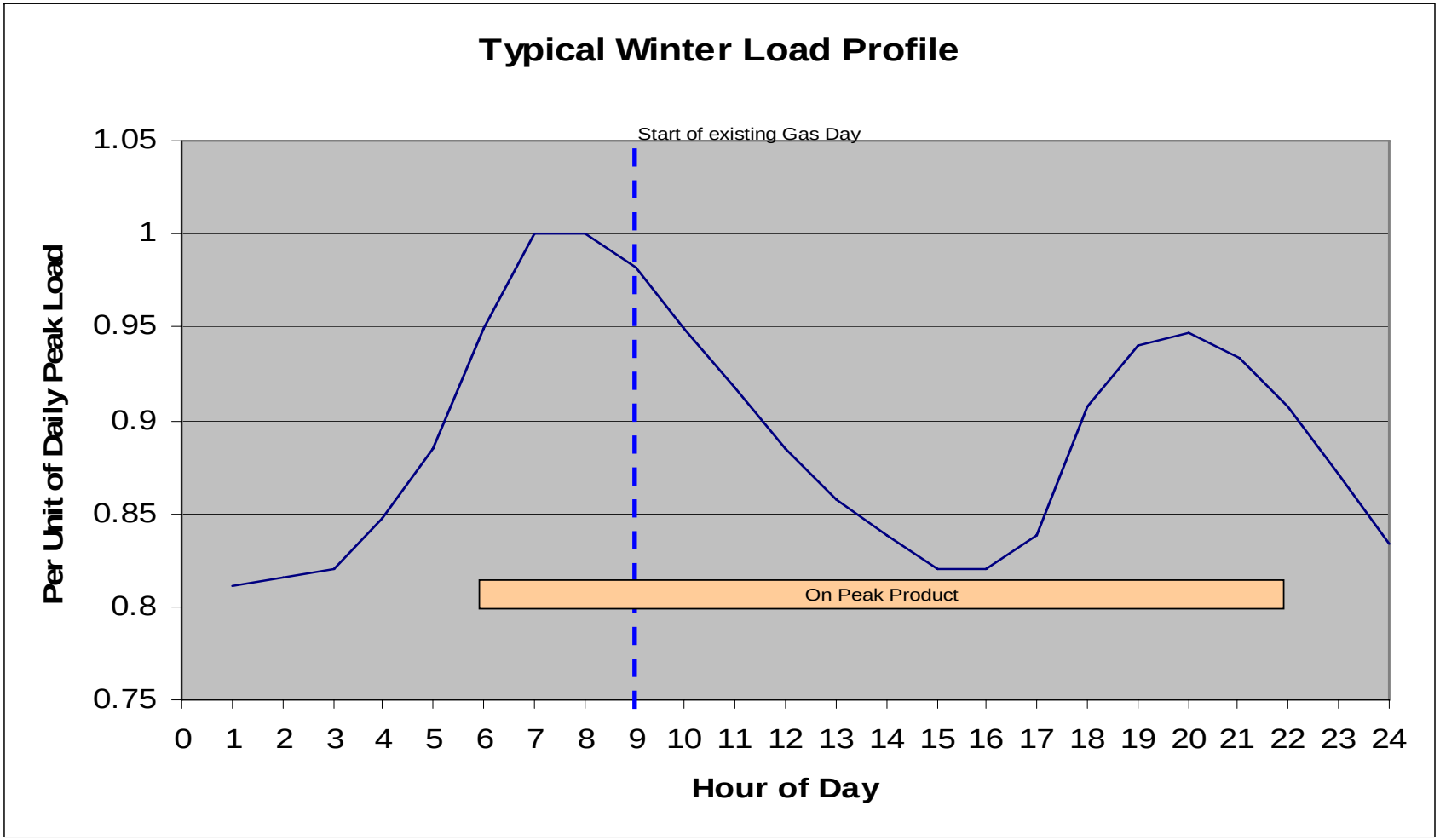

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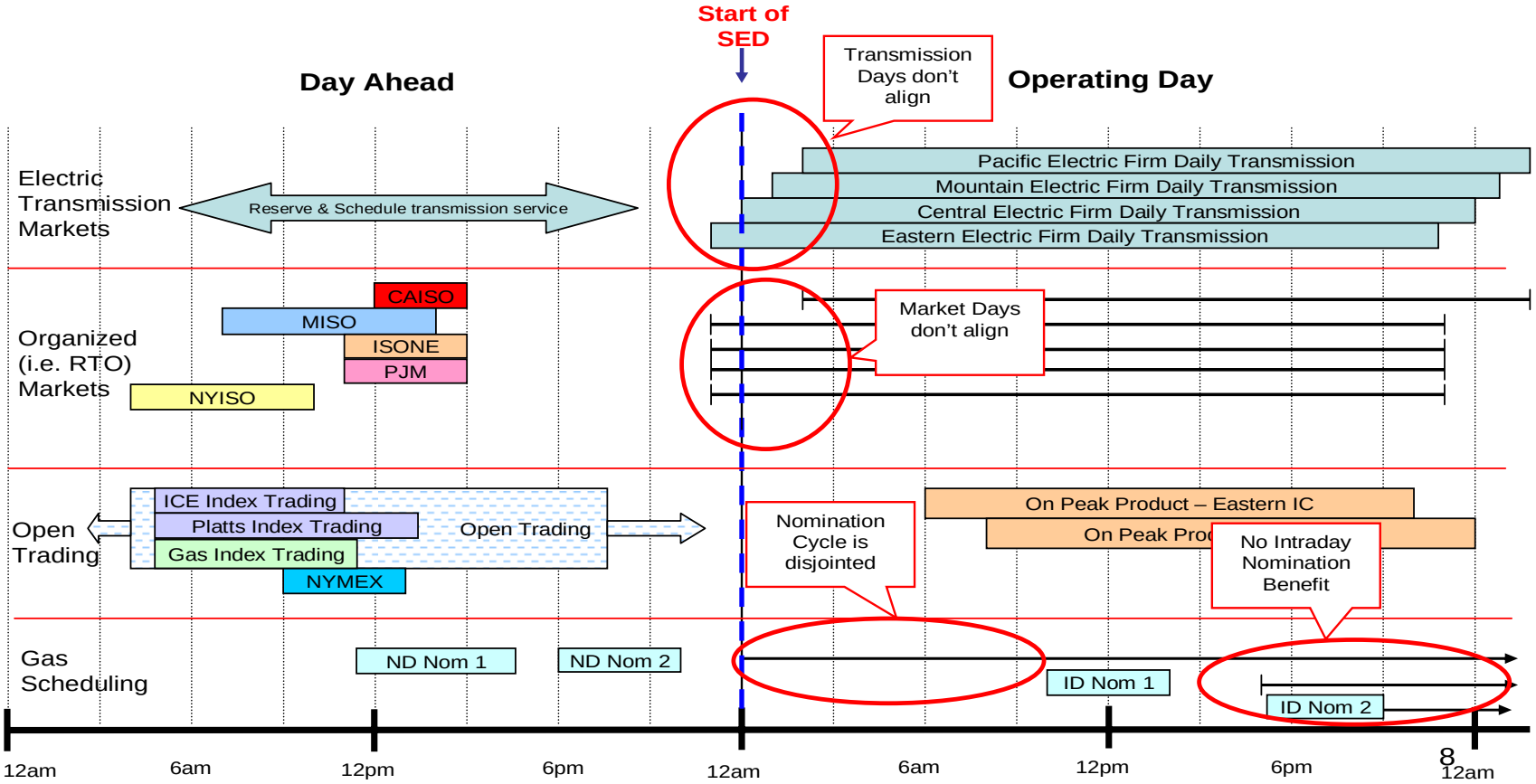
Attachment B
Gas-Electric Timeline Graphs

"As Requested" Standard Energy Day

With Other Processes as They Exist Today



Attachment C
National Fuel Gas Distribution Work Paper on Item 1

TO: **J. Templeton, Chair, GEIC**
FROM: **M. Novak**
DATE: **August 16, 2005**
RE: **Proposed Standards Development - NAESB Report on WEQ and WGQ Business Practice Standards for Transmission Service Provider-Power Plant Operator Communications and the Gas and Electric Interdependency Report (June 27 Report)**

Within the June 27 Report, Issue #9 and Issue #10, deal with diversion gas and/or capacity from LDCs to the real-time generation market. Issue #9 references market-based pricing and issue #10 references tariffs and development of business practices. Any attempt to monetize shipper releases of pipeline capacity in terms of real-time generation load price fluctuations is currently bound by the maximum tariff rates applicable to capacity, as well as bidding rules.

Current NAESB WGQ Standards governing capacity release are more restrictive on pricing beneath the maximum tariff rate than current Commission policy requires. As currently structured, NAESB WGQ Standard 5.3.26 requires the releasing shipper to determine whether bidding should take place in terms of dollars and cents or as a percentage of maximum rate. NAESB WGQ Standard 5.3.19 can be read to restrict re-releases to be on the same terms and basis as the primary release when a more current reading of Commission policy would say this is a matter between the releasing and replacement shipper subject to broader bidding rules and maximum tariff rate limits. Additionally, the standards can be read to restrict the form of releases to volumetric and reservation forms that at the time these standards were drafted, appeared to comport with all the options necessary.

In more recent years, pipelines have sold capacity at discounted rates where the effective rate was tied to a published price index. Commission policy allows that releasing shippers should be free to offer the same type of pricing arrangement that the pipeline offers. At least where pipelines offer discounts based upon price indices, Commission policy appears to support releasing shippers offering the same type of pricing in a capacity release.

To capture real-time generation load price fluctuations, a firm shipper (e.g. an LDC) should be able to propose a release rate based off a published electric price index. The rate would fluctuate each day between a releasing shipper specified floor and the maximum tariff rate. In theory, this would create an economic incentive to provide more short-term capacity to the gas-fired generation market because with the prospect of high release value, releasing shippers can explore replacement capacity alternatives that otherwise would not be cost-effective.

While no pipeline tariffs prohibit capacity release transactions based off published price indices, the NAESB Standards, which in most cases have been incorporated into pipeline tariff by reference, do not support index-based releases. NAESB standards should support such release transactions and if the Commission relaxed the prohibition on releases above the maximum applicable tariff rate, then standards can further evolve.

As a general matter, technology has progressed tremendously since the initial drafting of the NAESB WGQ Capacity Release Standards. Along with the evolution of Commission policy governing the capacity release market, there appears to be justification for GEIC considering development of a request for the WGQ to review and update its Capacity Release Standards.

Issues # 9 and #10 follow for reference.

Attachment C
National Fuel Gas Distribution Work Paper on Item 1

Selected Issues from June 27 Report

Issue #9: 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 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.

Issue #10: 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.

Attachment D
GEIC Member Roster

TO: Posting on NAESB Web Site

FROM: Rae McQuade, NAESB Executive Director

RE: Board Gas-Electric Interdependency Committee – Named Board Members

DATE: November 3, 2004

The Board Gas-Electric Interdependency Committee is chaired by Jim Templeton. The named Board members and Advisory Council members that comprise the Board Gas-Electric Interdependency Committee are as follows:

Name	Organization	Quadrant	Phone	Email
Vicky Bailey	Johnston & Associates		202-659-8400	vbailey@johnstondc.com
Adrian Chapman	Washington Gas Light	WGQ	703-750-7677	achapman@washgas.com
Valerie Crockett	Tennessee Valley Authority	WGQ	423-751-6096	vjcrockett@tva.gov
Mark Crosswhite	Southern Company	WEQ	205-257-0472	macrossw@southernco.com
Michael Desselle	American Electric Power	WEQ	214-777-1083	mddesselle@aep.com
Peter Flynn	National Grid USA	WEQ	508-389-3391	Peter.flynn@us.ngrid.com
Pete Frost	ConocoPhillips Gas & Power Marketing	WGQ	202-833-0917	Pete.w.frost@conocophillips.com
Robert Gee	Gee Strategies		703-698-2033	racbud@ix.netcom.com
Joseph Hartsoe	American Electric Power Service Corp	WEQ	202-383-3430	jrhartsoe@aep.com
Leonard Haynes	Southern Company Services	REQ	404-506-0206	ljhaynes@southernco.com
Sheila Hollis	Duane Morris		202-776-7810	sshollis@duanemorris.com
Reed Horting	PECO Energy	WGQ	215-841-6410	Reed.horting@exeloncorp.com
Richard Kruse	Duke Energy Gas Transmission	WGQ	713-627-5368	rkruse@duke-energy.com
Mark Maassel	Northern Indiana Public Service Company (NiSource, Inc.)	RGQ	219-647-6400	mtmaassel@nisource.com
Lyn Maddox	Oxadel Consulting, LLC	WGQ	281-465-8539	linmaddox@sbcglobal.net
Randy Mills	ChevronTexaco	WGQ	713-752-7815	Randymills@chevrontexaco.com
Ron Mucci	Williams Power	WEQ	918-573-4981	Ron.m.mucci@williams.com
Mike Novak	National Fuel Gas Distribution	RGQ, WGQ	716-857-7884	novakm@natfuel.com
Marty Patterson	Cinergy CBU	WGQ	513-419-6935	Marty.patterson@cinergy.com
John Procario	Cinergy	WGQ	513-287-3657	jprocario@cinergy.com
Rick Smead	Navigant Consulting	WEQ	713-646-5029	rsmead@navigantconsulting.com

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GEIC Member Roster

Name	Organization	Quadrant	Phone	Email
Larry Smith	Tennessee Gas Pipeline Company	WGQ	713-420-4299	Larry.smith@elpaso.com
Dennis Sobieski	PSEG Power	WEQ	973-430-6698	Dennis.sobieski@pseg.com
Joe Stepenovitch	Florida Reliability Coordinating Council	WGQ	813-289-5644	joestep@frcc.com
Jim Templeton	Comprehensive Energy Services	WGQ	713-759-6999	jrtemplton@aol.com
Ken Wiley	Florida Reliability Coordinating Council	WEQ	813-289-5644	kwiley@frcc.com
Jeanne Zaiontz	BP Energy	WEQ	281-366-4507	zaiontj@bp.com