North American Energy Standards Board

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via email and posting

TO:	NAESB Gas Electric Coordination Task Force (GECTF) Participants and Posting for Interested Parties
FROM:	Todd Oncken, Deputy Director
RE:	GECTF Kickoff Meeting Final Minutes – January 29-30, 2004
DATE:	February 6, 2004

NAESB Gas Electric Coordination Task Force
January 29-30, 2004
Hosted by American Gas Association, Washington, DC

1. Welcome

Ms. Kiselewich called the meeting to order and introductions of the co-chairs were made. Ms. Kiselewich thanked Ms. Arnaout and the American Gas Association for hosting the meeting. Ms. Kiselewich reviewed the mission statement of the task force and the FERC's interest in the topic as evidenced by Chairman Wood's letter (as shown in the winter 2003-2004 NAESB Review). The draft agenda was reviewed and an REQ presentation was added. Ms. Van Pelt moved, seconded by Ms. Chezar to approve the modified agenda. The agenda was approved absent objection.

Ms. Kiselewich noted the meeting was intended to serve as an educational forum where all participants could learn about the basics of the electric and gas industries. All presentations are available on the NAESB website as work papers for this meeting. Ms. Kiselewich reviewed the ground rules document, which was available as a work paper for this meeting.

2. Gas Presentation

Pipelines: Mr. Griffith and Mr. Love gave a presentation titled, 'Basic Gas Flow Dynamics and Related Scheduling Factors.' Mr. Griffith stated the goal of the presentation was to talk about the physical properties of gas and how they fit together and may affect getting gas to market. Mr. Griffith introduced the concepts of linepack, firm/interruptible transportation, Gas Day (a 24-hour period beginning at 9:00 a.m. CCT), and key terms used in scheduling. Mr. Love's part of the presentation focused on the scheduling process, including capacity allocation, confirmations, timelines, priorities and bumping. Mr. Love explained that there are three major inputs into the scheduling process: determine operating capabilities (on the given day, what capacity is available), contract rights / capacity release (what are the customers' rights); and customer nominations. Mr. Love noted that the pipelines struggle with scheduling deadlines daily and the bulk of transactions tend to occur during the timely nominations cycle.

Mr. Love summarized the Pipeline presentation, as follows:

- Pipeline operating dynamics vary from pipeline to pipeline yielding different capabilities to deal with flow variations.
- Current WGQ standards are the result of careful/reasoned compromise among the five WGQ segments.

- Current WGQ standards are very interdependent so that one seemingly small change could have significant impact throughout their entirety (ex. capacity release and nominations timelines).
- Scheduling processes are repetitive and highly interactive with all segments.
- Scheduling/flow reliability are influenced by the cycle in which changes are initiated.
- Any change to the processes/timelines must be weighed against reliability impacts and the need to be cost effective.
- Pipelines operate under specific rules regarding scheduling (scheduling timeline, Firm vs. Interruptible, capacity release and recalls, and allocation/balancing).

Questions on the presentation revealed that there are other services besides Firm and Interruptible transportation, including no-notice firm service and storage. Mr. Griffith noted that a pipeline's ability to support the alternative services is primarily based on the physical capabilities of the individual pipeline. Additionally, it was noted that electric generation is generally considered commercial consumers or customers of LDCs (see slide 4). A question was raised regarding the order of gas scheduling functions performed by pipelines. Ms. McVicker noted the potential conflict of some pipelines allocating first and then confirming, and others using the opposite process, could appear on the issues list. Mr. Griffith explained the order of the process is dependent on the physical characteristics of the pipeline, but the end result is an appropriate schedule with the system in balance.

3. Electric Presentations

Mr. Rodriquez and Mr. Tippit gave a presentation titled, 'Electricity 101,' which provided an overview of electricity, the electricity scheduling process, settlement and credit issues, and possible points of gas and power collaboration. Mr. Rodriquez noted that his first thought was the commodities were very different, but he could draw several parallels from the first presentation.

Highlights of the presentation included:

- Electricity is complex because there is no real storage, it requires the coordination of fuel (gas) management, there are highly interconnected transmission systems, there are many entities (170 different transmission providers) and few standardized rules, and finally, the conflicts between federal and states rights.
- Open Access Same-time Information System (OASIS) is a communication protocol mandated by FERC Order 889 which allows electric transmission customers to conduct business through electronic means. OASIS postings include: Available Transmission Capacity (ATC), Total Transmission Capacity (TTC), transmission products and prices, ancillary service offerings and prices, specific requests and responses, and transmission service schedules.
- Transmission is rated on a scale of 7-0 with firm being priority 7 and non-firm priority being from priority 6-0 based on duration. Priority 7 is the highest priority.
- When a request for transmission is submitted on OASIS, providers perform calculations according to flowgates to determine if transmission is available.

Available Transfer Capability is limited by the most constrained Available Flowgate Capacity.

- While it can be projected, it is impossible to determine on which path electricity will flow.
- The Transaction Information System (Electronic Tagging or e-TAG) documents interchange transactions by identifying source to sink flows, providing a common link for all parties, and indicating losses, transmission reservation, and contract information.
- A power transaction has day-ahead, real time, and settlement components. Power is traded on peak, off peak, super peak, balance of week, balance of month, monthly or term, with delivery hours quoted in Hour Ending (HE).
- For day-ahead transactions, daily firm requests (on most providers) must be entered in no later than 10 am CST the day prior to the start of service. Most day-ahead business is conducted from 6:00 am to noon, with checking out (a final verification process) and preparing books for the hourly desk and next day being from noon to the end of the day.
- Independent System Operators (ISOs) have their own procedures and timelines.
- For real time transactions, hourly transactions occur the day-of flow, with transmission constraints and unit outages partly driving the need for real time trading.
- Existing inconsistent trading and scheduling timelines between gas and power make it impossible to unwind/enter a position.
- The intention of OASIS Phase II (currently under development and being led by the NAESB Electronic Scheduling Subcommittee and Information Technology Subcommittee) is to develop a robust platform that can be easily integrated into enterprise systems, including EMS systems, market systems, transmission auctions, scheduling systems, position management systems, deal blotters and billing and settlements systems. There is an expected two year timeframe for the development of OASIS Phase II.
- In general, standardization and cross commodity standardization (where appropriate) will help the power industry.

Questions on the presentation revealed that the transmission availability analysis currently performed are essentially based on a contract path, but some ISOs and RTOs are shifting their models to treat it like a pool. Participants discussed the electric trading day and it was noted that the times varied by market. Through an example, it became clear that the day-ahead market was actually 12 hours, not 24 hours. It was also noted that to simplify the process many organizations use block accounting, which obviates the need to carry a 24-hour transactions over three days to reconcile for ramping. Additionally, it was noted that in the power world there is firm energy and firm transmission, and they have two different meanings.

Possible gas/electric conversion issues were noted during discussion. A large issue identified was that the gas timeline and electric timeline don't match, which means higher risk for power companies. Further, it was noted that mismatch made it difficult to mitigate unexpected

weather-related issues. Mr. Gildea suggested that a trend in the energy industry is a move towards spot markets, and as that develops the need to make decisions real time is increased. Mr. Mancini stated that for planning purposes it was important to understand whether there would be gas to support a request for generation to be put on the system.

Retail Electric: Mr. Berman gave a presentation titled, 'A Retail Electric Perspective on Billing and Settlement.' Highlights of the presentation included:

- Two market transactions are valued based on hourly patterns of retail megawatt-hour usage: wholesale supply of retail customers settled by the regional pool; and wholesale supply of local distribution companies billed out by the wholesale supplier.
- Both transactions rely on hourly electric usage data to price up the value of the supply and both transactions are settled, explicitly or implicitly, by real time accounting of hourly usage on a day-after basis.

Questions on the presentation revealed that changes to the wholesale electric timelines would trickle down to the retail burden to supply the data.

4. Gas Presentations

Producers: Mr. McKelvey gave a presentation on the Producers' Perspective. He noted that his presentation represents the views of his company, not necessarily the views of the whole producer community. Mr. McKelvey's presentation addressed: producer priorities, first of month process schematic, production forecast process, marketing and trading, transportation and exchange, nominations and confirmation, and the accounting process. Mr. McKelvey noted that a goal of producers is to design supply sources for maximum efficient flow. Mr. McKelvey stressed that there is no way to adjust production in a real-time manner - it is either on or off.

Mr. McKelvey summarized his presentation, as follows:

- The cooperative efforts of the last several years have allowed the producers and other industry segments to create a very reliable nomination/confirmation process.
- The current 4-cycle nomination process allows a producer to ensure product flows with high reliability.
- Producers and natural gas consumers have varying needs for volume management flexibility. All are important!
- We look forward to working with the Task Force to consider the needs of all parties along the value chain.

Questions on the presentation addressed the different production characteristics of traditional reservoirs vs. coal seam methane. Ms. Heslington explained that it can take some development time before a coal seam well is ready to produce, and a shut in of a coal seam well would likely mean a total loss. Ms. Heslington said information from the market and pipelines is key in managing the productivity of a coal seam well for the reasons noted above. It was also noted that the 'maximum level' flow of a well could be set by field rules or regulatory obligations.

LDCs: Mr. Novak gave a presentation titled, 'Gas Nomination Timeline Impact Upon LDC Operations.' Mr. Novak's presentation addressed: LDC goals and obligations; LDC/customer

load characteristics; general concepts; gas supply planning/nomination timeline; no-notice service; third party transportation on LDCs; regional pipeline grid considerations; important gas scheduling 'Rules of the Road'; and the impact of gas-fired generation behind the city gate (the custody transfer point).

Key points of Mr. Novak's presentation included:

- The goal of an LDC is to provide safe, economic and reliable service to customers.
- Natural gas consumption varies according to several variables, including type of customer, weather, and time.
- The gas nomination timeline is a key tool in helping to match system supplies with customer demand. To that end, the LDC contracts for a mix of firm services, (including no-notice services) and supplies to meet its requirements.
- Concerning the gas nomination timeline and transportation on the gas grid, LDCs have multiple roles: pipeline shipper (nomination role); transportation scheduling (operator role); and point operator at the city gate (confirmation role).
- The impact of gas-fired electric generation behind the city gate depends on the character of service provided by the LDC and the operating profile of the generating facility: base load, intermediate load, or peaking.
- The key to successfully sharing the gas grid is a combination of appropriate gas supply and transportation contracting decisions (for services on both the pipelines and the LDC) and ensuring that operators are never surprised. Good communication is essential to ensure that gas systems can respond with short notice to increase or decreases in generating plant consumption.

5. Update on the Gas-Electric Interdependency Task Force

Ms. McVicker reported on the Gas-Electric Interdependency Task Force, a NERC group which focuses on the electricity reliability impacts of the interdependency of the industries. She noted the goal of the task force is to make recommendations to NERC regarding reliability issues. The GECTF leadership took it as a task item to contact the task force leadership. It was noted that the next meeting of the group has not been scheduled, but a preliminary report was issued in November 2003.

6. Presentation on Power Plant Dispatching

Ms. McVicker gave a presentation on Power Plant Dispatching. She explained dispatching relies on load forecasts, and weather can heavily impact the forecasts. Highlights of Ms. McVicker's presentation included:

- Utilities have base, intermediate and marginal generation facilities, with base facilities running all the time and marginal facilities running only when needed. The marginal facilities typically run on gas purchased according to the NAESB timelines.
- Utilities are faced with two possible scenarios on load deviation: Having excess gas that is not usable due to forecasting too high, or not having enough gas and not being able to purchase gas because the NAESB timelines have passed.

- Utilities have 10 minutes to balance when their load drops. That means gas generation is the only practical supply source to create adequate response. Otherwise, the load drop impacts reliability. If gas is not available, the utility is forced to shed load, which has huge impacts since it has the same obligation to serve that LDCs have.
- Most utilities with the obligation to serve will have firm transportation.

During discussion, Mr. Linderman noted that a recent study has indicated that 85% of cogeneration facilities are single fuel (gas). Additionally, it was suggested that it is more challenging for the utilities to use flexible pipeline products and services to meet their needs, because the utilities are usually the new load and the flexible pipeline products and services are being used to serve the existing load.

7. Question & Answer on all presentations

All questions were addressed during the individual presentations.

8. Drafting of Preliminary Issues list

To facilitate the next GECTF meeting, the task force developed a preliminary issues list for future discussion. The list shown below is not exclusive and participants were welcomed to submit additional items to the NAESB Office prior to the next meeting, or to raise additional issues during the next meeting. Concern was raised on the process for approval of the issues list. That discussion was deferred to a subsequent meeting.

1. The GECTF should coordinate with the NERC GEITF to ensure that both groups are informed as to the other's progress and goals.
2. The GECTF Chairs should clarify the voting procedures to be used for the approval of the Final Issues list to be voted out of the subcommittee.
3. Impact of weather and other factors on generation and gas load swings..
4. The national Gas Day does not 'sync' with the various Power Days.
5. The nomination deadlines do not sync with the power deadlines.
6. Discuss the desire of certain parties to allow for cross-commodity netting in contractual arrangements.
7. Regional power timelines differ from region to region. WEQ members to provide additional information on various regions.
8. Notice requirements to be provided to pipelines / service providers by shippers (i.e., generators, LDCs, producers, marketers) of load and flow change.
9. Discuss ways to accommodate the natural gas requirements of new generation as it comes online in various regions. New gas generation coming on line:
   a. New gas-fired generation comes on line without realizing the impact on the gas infrastructure
   b. Non-scheduled generation comes on line without notice or nomination to the pipeline

10. There is one national "gas day", there are many regional "power days", creating associated difficulties in cross-commodity standardization.
11. The impact of any changes on natural gas requirements for power reliability concerns that are dependent on pipeline redundancy of facilities.
12. Dispatch priorities - power generation is dispatched off of price and time where as gas is dispatched off of contract rights.
13. Is the issue relating to power generation needs due to the structure of the portfolios for transportation contracts by power generators versus the need for changes to the natural gas day?
14. Communication protocols between natural gas and power operations / control room personnel – what information can be shared.
15. The timing of peaking requirements between natural gas markets and power markets is different.
16. Cost allocation for new gas infrastructure to support peaking. Notes: NAESB can discuss what the cost recovery mechanism is and not go into who pays for what.
17. There may not be proper market incentives to encourage entities with peaking requirements to diversify their transportation contract portfolios to support those requirements.
18. The implications that changes allowing more flexibility to non-firm shippers might have on the service levels and contractual rights of existing / traditional firm shippers.
19. Is there a need for new pipeline and LDC tariff service offerings to accommodate the need for additional scheduling flexibility for power generators?
20. The ability of the natural gas producers to be able to react to within the day requirement changes.
21. Is there a need for more intraday flexibility in gas scheduling to match / support power scheduling. (Tied to 5 and 13)
22. Does "Firm" mean the same thing in both commodities?

9. Next Meetings

The next GECTF meeting will be held in San Diego, CA on February 10 – 11, 2004 from 10:00 a.m. to 5:00 p.m. Pacific on day one and 8:00 a.m. to 3:00 p.m. Pacific on day two. Please note the times have changed from those originally posted.

10. Adjourn

The meeting adjourned at 2:00 p.m. Eastern on January 30, 2004.

11. Attendance

Name	Organization	Day One	Day Two
Arnaout, Mariam	American Gas Association	In Person	In Person
Bachert, Andrew L. R.	NYISO	In Person	In Person
Bakke, Roman	Southern California Edison	In Person	In Person
Berman, Ed	Baltimore Gas & Electric	In Person	In Person
Bittel, Jeff	Texas Gas Transmission	Phone	Phone
Bray, Mike	Shell Gas Transmission	In Person	In Person
Brechtel, Curt	Arizona Public Service	In Person	In Person
Brown, Ken	PSEG	Phone	Phone
Buccigross, Jim	Group 8760	In Person	In Person
Burch, Kathryn	Duke Energy Gas Transmission	In Person	In Person
Burden, Christopher	Williams Gas Pipeline	Phone	Phone
Burnett, Tina	Boeing	Phone	Phone
Calcagno, Suzanne	UBS Energy	In Person	In Person
Camp, Yvette	Southern Company	Phone	Phone
Cashin, Jack	EPSA	In Person	In Person
Chancellor, Craig	Calpine		In Person
Chezar, Dolores	KeySpan Energy	In Person	In Person
Colombo, Craig	Dominion Resources	In Person	In Person
Connor, Pete	NiSource, Inc.	In Person	In Person
Crockett, Valerie	Tennessee Valley Authority	In Person	In Person
Davidson, Pat	Southern California Gas Co.	In Person	In Person
Davis, Dale	Williams Gas Pipeline	In Person	In Person
Dawe, George	Duke Energy Corp.	In Person	In Person
Deegan, Jennifer	Washington Gas	In Person	In Person
Downs, Dan	NY Department of Public Service	In Person	In Person
Gildea, Michael	Constellation Generation	In Person	Phone
Gracey, Mark	Tennessee Gas Pipeline	In Person	In Person
Griffith, Bill	El Paso	In Person	In Person
Grygar, Bill	Panhandle Eastern		In Person
Gussow, Dona	Florida Power & Light Company	In Person	In Person

Gwilliam, Tom	Iroquois Gas Transmission	In Person	In Person
Hadden, Ben	Conectiv Energy	In Person	In Person
Haga, Carl	Southern Company	In Person	
Hansen, Scott	Questar Pipeline	In Person	In Person
Henning, Bruce	Energy and Environmental Analysis	In Person	
Heslington, Sheri	Dominion E & P	In Person	In Person
Hetrick, Nancy	Northern Natural Gas	Phone	Phone
Hickman, Judy	Columbia Gas Transmission	In Person	In Person
Hinners, Gary	Reliant Energy	Phone	Phone
Holmes, Brad	Transwestern Gas	In Person	In Person
Johnson, Alan	Mirant	In Person	In Person
Kardas, Joe	National Fuel Gas Supply	In Person	In Person
Kenchington, Henry	U.S. Department of Energy	In Person	
Kijowski, Drake	PSEG Energy Resources & Trade	In Person	
King, Iris	Dominion Transmission	In Person	In Person
Kiselewich, Ruth	Baltimore Gas & Electric	In Person	In Person
Lauderdale, Melissa	Edison Electric Institute	In Person	In Person
Lewis, Jane	American Gas Association	In Person	
Linderman, Chuck	Edison Electric Institute	In Person	In Person
Love, Paul	Natural Gas Pipeline Co. of America	In Person	In Person
Mancini, Ken	PJM Interconnection	In Person	In Person
Maturo, Chris	NiSource, Inc.	In Person	In Person
McCain, Marcy	Duke Energy Gas Transmission	In Person	In Person
McGlone, Jim	U.S. Department of Energy	In Person	
McKelvey, Paul	ChevronTexaco	In Person	In Person
McQuade, Rae	NAESB	In Person	In Person
McVicker, Diane	Salt River Project	In Person	In Person
Mills, Randy	ChevronTexaco	In Person	In Person
Mount, Michael	R. J. Rudden Associates	In Person	In Person
Murrey, Sandy	We Energies		Phone
Newbold, Bill	Detroit Edison	Phone	Phone
Nielsen, Janie	Kern River Gas Transmission	Phone	Phone

Nishida, Leslie	Wisconsin Public Service Corporation	Phone	Phone
Novak, Mike	National Fuel Distribution	In Person	In Person
Oberski, Lou	Dominion	In Person	In Person
Oncken, Todd	NAESB	In Person	In Person
Oppenheim, Bill			In Person
Palmerino, Arlene	NY Department of Public Service	Phone	Phone
Perlman, Marjorie	Energy East	In Person	In Person
Peterson, Chris	FERC	In Person	In Person
Porter, John	Tennessee Valley Authority	In Person	In Person
Rodriquez, Andy	PJM	In Person	
Rosenberg, Marv	FERC	In Person	In Person
Rudden, Richard	R. J. Rudden Associates	Phone	
Schmolling, Christian	Natural Gas Week	In Person	
Schubert, Ken	TransCanada Pipelines	In Person	In Person
Schwecke, Rodger	Southern California Gas Co.	In Person	In Person
Shepard, Mike	Mewbourne Oil Co.	In Person	In Person
Simpson, Denise	Reliant Energy	Phone	Phone
Small, Albert	Downey & Small Assoc.	In Person	
Smith, Jimmy	Entergy	In Person	
Sullivan, Steve	Consolidated Edison of NY	Phone	
Thompson, Chuck	PJM	Phone	Phone
Thompson, Ed	Consolidated Edison of NY	Phone	
Tippett, Kalim	The Structure Group	In Person	
Van Pelt, Kim	Panhandle Eastern Pipe Line	In Person	In Person
Wah, Pauline	Southern California Gas Co.	In Person	In Person
White, Brian	NiSource Pipelines	In Person	In Person
Wight, Dean	FERC	In Person	In Person
Wilke, Mark	Trunkline Gas Company	In Person	In Person
Young, Jon	Columbia Gas Transmission	In Person	In Person
Young, Randy	Gulf South Pipeline	In Person	In Person
Zavodnick, Steve	Baltimore Gas & Electric	In Person	In Person