From: Joe Obergfell
Sent: Friday, March 26, 2004 2:54 PM
To: naesb@naesb.org
Subject: GECTF Comments

I am attaching American Electric Power's comments in response to the recent GECTF discussions regarding the "interaction between the scheduling of electric and gas transactions."

I understand that under some of the sub points lists we made corrections in our meeting . Some of the enclosed comments are reitereations of those corrections.

Please consider our position as we move forward in our review process.

(See attached file: GECTF Preliminary Discussion Sub.doc)

Joe Obergfell
Manager, Gas Operations

GECTF Preliminary Discussion Sub-Points List
Purpose: The purpose of this list is to expand the Preliminary Discussion Points List in an effort to understand and frame the issues.

Flexibility/Planning:

~~**1.1 Identify the impact of weather and other uncontrollable factors on generation and gas load swings**~~

- –Issues may include pricing, unknown generation needs, and gas units being turned on or off with short notice.
- –While there may not be available services to mitigate, there could be market-based tools available.
- –There is a lack of historical statistics with respect to extreme weather on generation unit availability.
- Issue may also include loss of gas availability due to force majeure situation (unexpected maintenance, or a back hoe breaks open line for example)

1.2 Discuss ways to accommodate the natural gas requirements of new generation as it comes on-line in various regions.

a. **The impact of gas on infrastructure of new gas fired facilities**
b. **The impact of gas infrastructure of non-scheduled gas fired generation coming ~~n~~ or going off without notice**

Gas input supply, transportation capacity availability, and capacity contract rights (types of available services) are relevant to new gas-fired generation facilities.
o Type of generation facility and physical location of the facility are relevant issues.
o Lack of national electric scheduling standards is problematic.
o Electric generation facility citing is a regulated process.
o Lack of planning for peaking needs.
o Alignment of purchase of proper services, if available.
o An increase in gas-fired generation coming on line could result in gas flow control which would limit the gas flow at particular points.
o New services are needed such as real time natural gas service – this does not currently exist.
Services do exist currently. Under various names numerous pipelines offer Park and Loan, No-notice, and storage services that provide for natural gas usage under differing circumstances.
o What are the current solutions for handling the needs of peaking generation facilities.
o The multiple levels of services on pipelines and LDCs can impact users (multiple jurisdictions). Is this issue for GECTF to evaluate? Services offered by pipelines/LDC's will be\should be\are consistent with capability of each pipeline/LDC.

1.3 Identify differences in the factors driving dispatch priority between natural gas and power.

o Natural gas follows contractual commitments while there is more flexibility in electric (buy power/generate). This needs clarification. I would suggest: natural gas contractual commitments fall under two categories where a generation facility is concerned; 1.) gas supply and 2.) pipeline transportation. The first, gas supply, relates to the consumers rights and obligations with a

supply source (Volume rights, price, term). The second would relate to a transportation service providers' (pipelines) obligation to provide delivery service under certain conditions (rate schedules) and the consumers rights and obligations in receiving gas deliveries under those agreements. I would also make a point that gas flow does not necessarily follow either of these categories. A facility may have a purchase agreement covering a minimum and maximum take amount with a supplier on a daily basis and transportation agreements with a pipeline covering a maximum daily quantity (separate from the supply agreement) with neither contract covering the specific allocation of takes (hourly) by the consumer.

o Scheduling impacts available services. Available services impact scheduling.

o Pipeline are common carriers and must follow tariffs (including priority of service).

o Service priority first – if IT is scheduled, price of service rules.

o Electric has an overriding obligation to serve, but the determination of which generation resources are used is based on pricing.

o One to one versus conglomerate relationship.

o Electric transmission tariffs (OATTs) contain curtailment policies.

o The ISO works to maintain the balance between generation and load.

o There are several electric transmission priorities and curtailment of schedules according to the priorities is done to address congestion if market price does not act as a limiter.

o This issue affects the retail markets.

o How soon does the generator know when he needs the gas?

o A generator might not have Firm Transmission service on a pipeline. Available rate schedules cover this situation. Generators have historically not been willing to pay for firm transportation on interstate pipelines.

o RTOs/ISOs don't verify a generator has gas supply and capacity arranged before they accept a generator's bid.

o That verification is not necessary due to the economics or risk – a generator is obligated to purchase the obligation on the real time market. A pipeline does not connect gas service to a generator unless it can provide the gas requirements under some rate schedule to that generating unit.

o The above was identified as a factor for the January 2004 difficulties in the North East.

o Potential inappropriate market rules or market mitigation (price cap).

o Timing issue of when gas is scheduled versus when electric is scheduled. See note above. *Scheduling* of gas should not be used interchangeably with *flow* of gas. Although gas is scheduled on a day ahead basis for the timely and evening cycles – gas flow **is** real time. Should we clarify in this document what is meant by this issue?

o Generation load projections might not equal real time load. As scheduled gas nominations will not equal real time load.

1.5 The implications that changes allowing more flexibility to non-firm gas shippers might have on the service levels and contractual rights of existing / traditional firm shippers.

o If a pipeline is fully subscribed to FT shippers and a non-FT shipper comes on line it is because a firm shipper is not using the capacity. This is not correct. A non firm shipper may schedule interruptible deliveries and receive affirmative confirmation of scheduled volume if other scheduled volume under firm transportation service is not fully utilized by other customers. Be careful not to confuse pipeline transportation contracts with gas flow. A non FT shipper can pull gas from a pipeline even though the pipe is fully subscribed and even though non firm

schedules are not being permitted to flow. If a fully subscribed pipe does not have nominations in place for all the allocated FT capacity a non FT shipper can nominate supply.
o Resolution between an unscheduled non-FT user and pipeline would occur. This resolution currently resides in each pipelines tariff.
o FERC Policy addresses this.
o Unused firm capacity may be ~~is~~ sold.

1.6 Identify Examples of the service characteristics that could meet the market needs for increased delivery flexibility.
o Service Characteristics:
Firm vs. IT
Firm Balancing
Should be developed to work for both uniform flow markets and non-uniform flow markets without producing negative impacts on other markets.
Any service offerings are tied to operational characteristics.
Storage based services (non-notice or short notice).
Park & Loan
Linepack
Communication mitigation RFP procedure by pipeline.
There are economics to providing any service.
All of these service are in existence in some form on most if not all interstate pipelines.

1.7 Is there a need for more intraday flexibility in gas scheduling?
o The need for intraday flexibility in gas scheduling should be weighed for the needs of both industries.
o If a change is only for the benefit of the electric industry or for the sole benefit of the gas industry, then the change should not occur.
o Additional intraday nominations opportunities increase the availability of feedback data for the pipelines and would make the industries more transparent. This already (should) takes place through communication in the control rooms. Both gas (dispatch) to electric and electric to gas.
o There is the need for something closer to real time or same day flexibility, but the facilities are currently not in place.
o LDCs cannot manage additional flexibility (logistical issues).They can manage flexibility through their rates schedules – same as a pipeline.
o Flexibility is a commodity.(with a price)
o The physical nature of the commodities is different. It takes 2.5 to 3 days for gas input in the gulf to travel to New York. Electricity is instantaneous and cannot be stored. This is an accounting issue in terms of gas flow. Similar to a bank account, the gas you purchase (a cash deposit in your account) will never be the same gas consumed (I won't receive back the same dollar bills I deposited when I withdraw my money). Pipelines maintain steady gas flow throughout their systems using compression (compressor stations), line pack, and storage capabilities to provide real time delivery services to the market.

Timelines / Scheduling:

2.1 How does the NAESB WGQ standard gas day interact with the various power days? There is one NAESB WGQ standard gas day and there are many regional power days that create associated difficulties in cross-commodity standardization.

o There are obvious mismatches between the gas day and electric day-ahead and real time markets.

2.1/2.2 How do the NAESB WGQ standard nomination deadlines interact with the various power deadlines? Identify the impact of regional power timeline differences.

o Each electric market has its own timeline.

o Can we narrow the multiple electric timelines? (policy issue).

o Gas pipelines may serve multiple regional markets, however the gas day remains the same.

2.3 Identify notice requirements that are to be provided to pipelines and/or service providers by shippers regarding load and flow changes. Identify the need for increased and/or more formal communication protocols between natural gas and power operations / control room personnel.

o Communication procedures should be formalized. This could include informing the pipelines of a day ahead generation plan and projected gas needs in MMBtu or MCF as well as pipelines providing immediate notification of unplanned maintenance .

o Modifications should be communicated when known.

o There are potential confidentiality and code of conduct issues.

o There is a potential for coordinated maintenance outages.

2.4 Identify the impact of the timing of peaking requirement differences between natural gas markets and power markets.

o The winter gas usage peak is early in the morning or late in the afternoon. Electric shows the same peak.

2.5 Can the natural gas producers and marketers react to 'within the day' requirement changes?

o Real time does not exist. A real time natural gas scheduling process is not in place today. A real time gas flow process does exist. Via communication between gas controllers at a pipeline and generation dispatchers at a generation facility, the mechanism for dispatching gas requirements for increased power load is efficient.

o There is a need for coordinated process.

o Producers will not sell to a user requiring hourly service, but marketers are interested in services. (what services can a marketer offer that won't provided by a pipeline?)

o What is the reasonable minimum amount of notice necessary to affect a change of supply to meet load? (flow versus scheduled)

"Within the day" requirement change services currently exist via a pipelines tariff. Any intraday nomination notices impact accounting for gas under those services (accounting for imbalances).

Reliability:

3.1 Identify the impact of any contemplated changes on natural gas and power reliability.
Distinguish between coordination issues that are originated by 1) true reliability issues versus 2) those caused by trading risk management practices.

o Any possible changes need to be evaluated for their impact on reliability.

Terminology:
Clarify the differences in terminology between natural gas and power (e.g., does "Firm" mean the same thing in both commodities?)
Gas flow – the actual flow of gas on a pipeline
Scheduled gas – nominated volume for a given period of time