APPENDIX H

FIRM VS. NON-FIRM GAS TRANSPORTATION: RATIONALE AND RISKS

Summarized by the Northeast Gas Association

Natural gas is transported by natural gas pipeline companies on the basis of contracts.

To obtain gas transportation service from an interstate pipeline ("pipeline company"), a customer, known as a "shipper," secures available transportation services, via contract, with the pipeline company or with another shipper who wants to release its transportation service. The shipper must meet the pipeline company's credit standards and execute a contract. Then the shipper files a nomination with the pipeline company to use the contracted service. Confirmation of the nomination is made by the pipeline company, and the actual gas flow is then scheduled by the pipeline company.

There are two basic types of contracts:

> Firm transportation – transportation service for which facilities have been designed, installed and dedicated to a certified volume. Firm transportation service is not subject to prior claim by another customer and is the highest quality service offered to customers. Firm transportation service takes priority over interruptible service.
> Interruptible transportation – transportation service which is subject to interruption when deliveries under such service would interfere with or restrict deliveries under transportation services having higher priority.

Firm transportation service is offered to customers under schedules or contracts which anticipate no interruption under almost all operating conditions. Firm services for pipeline companies are generally provided under filed rate tariffs approved by the Federal Energy Regulatory Commission ("FERC"). Non-firm or interruptible transportation service is made available to a shipper without a guarantee for delivery. Firm transportation service is typically sold on the basis of a "fixed demand or reservation charge" (i.e., you pay for the service whether you use it or not), whereas interruptible service is typically sold on a "commodity basis" (i.e., you pay only if you use it).

While interruptible transportation service is often available on a pipeline, it does not have the same level of certainty or security as does firm transportation service. Shippers who strictly rely on interruptible transportation service take the risk that they will be restricted at the least advantageous times. So the choice of firm versus non-firm service levels of transportation service may negatively impact reliability of delivery to such end-users as power generators.

Power generators have the option of contracting for either firm or interruptible transportation. If firm transportation service is not available (i.e., the firm capacity is fully subscribed by other shippers), the pipeline companies in the region have been willing to spend capital if necessary to build facilities required to provide firm service to power developers who have requested and are willing to pay for such service. Similarly, the pipeline companies have clearly explained "non-firm" risks to the power generators.

Contracting for interruptible transportation service is a practice that has been authorized by regulatory agencies and offered for many years on the natural gas delivery system. It provides certain customers – mainly larger commercial and industrial customers that have dual-fuel capability – the opportunity to have lower transportation costs by permitting interruption of gas usage on short notice, generally in peak-load seasons. The customer may also be able to secure gas supplies at a price based on its alternate fuel price. In New England, the peak load season is the winter period. If extreme cold weather is experienced, these interruptible customers may be required to switch to their alternate fuel. Gas customers retain their primary rights for firm sales and transportation since they generally do not have an alternative fuel option and rely solely on natural gas for their energy needs (namely, residential and commercial customers).

The U.S. Department of Energy has observed:

"Interruptible gas contracts and firm service on a temporary basis allow pipeline operators to increase utilization of their fixed assets and better manage costs of service on average. Higher utilization overall enhances the economic return on pipeline assets, encourages further investments in the gas delivery system, and provides opportunities for large-volume energy consumers, such as industrial customers and electricity generators, to obtain energy supplies at lower prices. Sales of off-peak interruptible capacity also generate revenues that contribute toward at least a portion of pipeline capital costs, providing benefits to firm service customers as well."

In conclusion, the natural gas industry notes that the most recent winter, 2002-2003, was one of the coldest winters in recent years for this region. The two main interstate pipelines serving the Commonwealth, Algonquin and Tennessee, as well as the Distrigas LNG facility, recorded some of their highest sendout days in history during this most recent winter. It was a winter in which ISO-NE set a new wintertime electric peak (as did the New York ISO). The pipelines report that at no time was a generator's firm gas transportation requested by the generator and not provided during this winter period.

Regional generators, however, did voluntarily at times opt to curtail their deliveries of electricity to the electric grid in order to sell their natural gas into the natural gas market. It was to the generator's economic advantage to choose to sell its gas into the gas market rather than use it to generate electricity (i.e., the purchase price for power was too low to support the generator's burning gas during those times). The issue of pricing incentives and ISO rules is integral to moving towards a higher level of electric reliability in the Commonwealth and region.