

New England States Committee on Electricity

New England States Committee on Electricity Issues Phase II of its Gas Study *New England Natural Gas Infrastructure and Electric Generation: Constraints and Solutions* Conducted by Black & Veatch

April 19, 2013 – The New England States Committee on Electricity (NESCOE) today issued Phase II of its Gas Study, *New England Natural Gas Infrastructure and Electric Generation: Constraints and Solutions*, conducted by Black & Veatch. The Phase II study includes a report and a detailed presentation.

The purpose of the NESCOE Gas Study is to analyze the current and future natural gas fuel supply and infrastructure in New England and to assist policymakers' understanding of the future implications for natural gas-fired power generation in New England, power system reliability and consumer costs over the long-term.

In Phase I, Black & Veatch assessed the adequacy of natural gas infrastructure in New England based on the studies and information available to date. Black & Veatch concluded it believes that New England's natural gas infrastructure will become increasingly stressed as regional demand for natural gas grows, leading to infrastructure inadequacy at key locations.

Phase II of the study was designed to assess the current state of natural gas infrastructure adequacy in New England and provide summary level estimates of the costs for a range of potential solutions. The natural gas market in New England experienced ever-increasing levels of supply constraints over the course of the past several winters, evidenced by frequent market price spikes.

Historical load and price analyses show that the region experienced supply stress, expressed as spot market basis spikes, when load levels approached 75% or more of existing firm contract capacity serving the market. This indicates that the current New England natural gas market balance is very tight, with small shocks to the system causing significant market impacts. In the absence of incremental natural gas infrastructure, regional load growth from the electric sector will increase the likelihood of constraints.

Black & Veatch identified the following as the most appropriate primary solutions to alleviate the infrastructure constraints: incremental natural gas pipeline capacity, incremental LNG imports, and electric transmission that enables imports from outside the region, particularly to reach the substantial and diverse supply resources north of, and proximate to, New England. Other alternatives - additional LNG peak-shaving capacity, dual-fueled generation and demand-side resources - can help to relieve capacity

constraints in a meaningful way, at least at a sub-regional level or as part of a blended solution.

Phase III of the study will analyze three scenarios, each with sensitivities, to explore the potential severity of infrastructure constraints as well as the benefits brought about by incremental infrastructure. The analysis will be structured as a Base Case, a High Demand Scenario, and a Low Demand Scenario, with sensitivities as follows:

Scenario	Sensitivity
Base Case	Pipeline
	Imported LNG
	Imported Canadian Electricity
	Dual Fuel and Demand Response
High Demand	Pipeline
	Imported LNG
	Imported Canadian Electricity
	Weather
Low Demand	Imported Canadian Electricity
	Dual Fuel
	LNG Peak Shaving
	Negative Load Growth

NESCOE expects Phase III to be complete in August/September 2013.

NESCOE appreciates the efforts of ISO-NE and New England stakeholders in moving forward discussions about New England's gas-electric challenges and potential solutions. NESCOE looks forward to continuing coordination in this area.

Study material is available at this link:

http://www.nescoe.com/Gas_Supply_Study.html