OLR RESEARCH REPORT

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EXPANDING GAS SUPPLY IN THE STATE

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You asked whether there are proposals to expand the gas pipeline system serving the state to provide greater access to the gas being produced in the Marcellus Shale formation in Appalachia. You also asked for options to encourage increased gas supply to the state.

SUMMARY

Connecticut is currently served by three interstate pipeline systems, Algonquin, Iroquois, and Tennessee. The company that owns the Algonquin pipeline has proposed expanding its existing pipeline's capacity to facilitate the transmission of gas from the Marcellus Shale formation. Still in its developmental stage, the project is not expected to be in-service until November 2016. The Williams Pipeline Company and Cabot Oil and Gas, an independent natural gas producer, are working to develop a new pipeline to connect Marcellus Shale gas supplies in northern Pennsylvania with major northeastern markets, including Connecticut. While still in the permitting stage, it could be in use by March 2015.

Because any interstate pipelines that would be supplying gas from the Marcellus Shale are regulated by the Federal Energy Regulatory Commission (FERC), the state's ability to encourage their expansion through regulatory changes is limited. However, the state could explore ways to make the environment for pipeline expansion more attractive to

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developers through steps like streamlining permitting processes and encouraging the growth of natural gas demand through financial incentives, such as tax credits, rebates, and lower Contribution in Aid of Construction charges on consumers.

PIPELINE PROPOSALS

Existing Pipeline Network

Three interstate gas pipelines currently serve Connecticut: Algonquin, Iroquois, and Tennessee. The Algonquin pipeline system connects in New Jersey to the Texas Eastern Transmission Pipeline system and supply points in the Gulf of Mexico and Texas. In Connecticut, it runs from Danbury northeasterly to Thompson, with major spurs to North Haven and New London.

The Iroquois pipeline begins at the Canadian border in New York. It connects with the TransCanada pipeline system, which sends gas from Alberta in western Canada. It enters Connecticut at Sherman and runs southeast through Milford, then offshore to Long Island. The Iroquois pipeline connects with both the Algonquin and Tennessee pipelines in Connecticut.

The Tennessee pipeline system begins in the Gulf of Mexico and travels through the eastern part of the United States and ends in Massachusetts. It enters Connecticut in Greenwich and runs northeasterly to Suffield. There is also a spur from a Tennessee pipeline in Massachusetts to Torrington.

The Marcellus Shale

The Marcellus Shale is a black shale formation extending from Ohio and West Virginia northeast into Pennsylvania and southern New York, where it underlies part of the Catskill Mountains (see figure 1).

Figure 1: Marcellus Gas Formation

Although geologists have long known about the formation's gas resources, its depth and structure made gas exploration and extraction very difficult and expensive. Interest only recently increased due to enhancements to gas well development technology, specifically horizontal drilling and hydraulic fracturing ("fracking"). These developments, among other things, have led the United States Geological Service (USGS) to substantially increase its estimate of the amount of gas available in the formation. In 2011, USGS estimated that the formation contains 84 trillion cubic feet of undiscovered, recoverable natural gas. In contrast, in 2002 it had estimated that there was only about 2 trillion cubic feet of recoverable gas.

The proximity of natural gas to markets, including those in New England, has encouraged drilling in the formation. More than 3,300 gas wells have been drilled across Pennsylvania in the last few years, although there is currently a moratorium on drilling in New York state, primarily due to environmental concerns regarding fracking. However, the construction of the Millennium pipeline in New York state's southern tier has increased access to the formation. The pipeline, which began commercial service in December 2011, extends from Steuben County in southwestern New York to Rockland County, northwest of New York City.

Pipeline Proposals

Algonquin issued a notice to local gas companies and other potential consumers in New England seeking to identify the level of potential market interest for its proposed Incremental Market project. The project would expand the capacity of the existing Algonquin pipeline system. The incremental capacity would enable gas to be transported out of the Marcellus Shale formation into the connections with the Algonquin pipeline system in New Jersey and New York and subsequently into New England. The company anticipates that the project could go into service in 2016. Further information about the project is available at http://www.spectraenergy.com/Operations/New-Projects/Algonquin-Incremental-Market-AIM-Project/.

The Williams Pipeline Company and Cabot Oil and Gas, an independent natural gas producer, are working to develop a pipeline project to connect Marcellus Shale gas supplies in northern Pennsylvania with major northeastern markets by 2015. The 121-mile Constitution Pipeline is being designed with a capacity to transport enough natural gas to serve approximately 3 million homes. Buried underground, the pipeline would extend from Susquehanna County, Pennsylvania to the Iroquois Gas Transmission and Tennessee Gas Pipeline systems in Schoharie County, N.Y. The proposed project route generally follows Interstate 88 in New York's southern tier. Before the pipeline can be constructed, the developers must obtain a federal certificate of public convenience and necessity from FERC and various state and local permits. In April 2012, the developers requested that FERC initiate a pre-filing environmental review of the proposed pipeline route. The developers anticipate that they will begin negotiations to obtain easements for the pipeline in fall 2012, begin construction in April 2014, with a planned in-service date of March 2015. Further information on the project is available at http://constitutionpipeline.com/.

OPTIONS FOR CREATING MORE GAS SUPPLY

The state's options to encourage an increased supply of natural gas focus mainly on ways to (1) facilitate the expansion of the interstate pipeline system through Connecticut and (2) stimulate the state's natural gas demand to create an attractive market for increased supply.

Facilitating Pipeline Expansion

State regulatory options regarding interstate pipelines are limited because federal law extensively regulates the siting of natural gas facilities, including pipelines (Natural Gas Act, 15 U. S. C. §§ 717-717w). Federal case law has determined that the Natural Gas Act gives FERC "exclusive jurisdiction over transportation and sale of natural gas in interstate commerce for resale" (*Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293 (1988)).

In practice, FERC has stated that it encourages cooperation between interstate pipeline developers and local authorities, although this does not mean that local authorities "through application of state and local laws, may prohibit or unreasonably delay the construction of facilities approved by [the] commission" (*Maritimes & Northeast Pipeline, L. L. C., Algonquin Gas Transmission Co.*, 2001 WL 1638755 (F.E.R.C.) (2001)). Nevertheless, FERC generally works with and consults with state agencies in permitting pipeline projects.

Under state law, the Connecticut Siting Council must review the siting of proposed pipeline expansion or modification projects. It cannot grant a certificate for a pipeline unless it finds that there is a public need for the facility and that it will not unnecessarily jeopardize people or property along its route. The council must (1) identify the facility's environmental impacts that, on their own or cumulatively, conflict with state policy and (2) determine that the negative impacts are not sufficient reason to deny the application. In determining the facility's environmental impact, the council must consider ecological balance; public health and safety; scenic, historic, and recreational values; forests and parks; air and water purity; and fish and wildlife.

To further encourage pipeline expansion, the state could consider measures to shorten and simplify the Siting Council approval process as it applies to pipelines, such as creating a presumption of public need for these projects or allowing certain technical modifications that meet prescribed requirements to proceed without Siting Council approval.

Depending on the specifics of a proposed pipeline, federal regulations also requires the Department of Energy and Environmental Protection to determine that a pipeline project is consistent with the state's Coastal Management Act (15 CFR 930; CGS § 22a-90 et seq.). In general, FERC cannot issue a license for it unless DEEP makes this determination. The state could explore ways to streamline this approval process when it applies.

In addition, the state could consider expanding the sales and use tax exemption for furnishing gas to consumers through pipelines (CGS § 12-412(18)). Under Department of Revenue Service Ruling 92-9, only the pipe, valve assemblies, and connectors are considered exempt from sales and use taxes. To encourage further pipeline development, the state could allow other pipeline items, such as turbine meters, electric sensors, and computer monitoring systems to qualify for the exemption. It could also explore ways to reduce pipeline property taxes.

Increasing Consumer Demand

The state could also encourage interstate pipeline expansion by stimulating consumer demand for natural gas, which could in turn help the gas companies commit to the long-term supply contracts that help support pipeline development. However expanding the demand without simultaneously increasing the supply of gas could also lead to price increases for existing customers.

Although heating with natural gas can be significantly less expensive than other fuels, the up-front costs of equipment, installation, and utility charges, can be a major barrier to conversions. To help overcome these costs, the state could consider creating new, or increasing existing, consumer financial incentives such as tax credits and rebates for purchasing and installing high efficiency heating systems fueled by natural gas.

From a financing perspective, the state could develop programs to provide 0% or low-interest financing for heating system conversions with an "on-bill" repayment mechanism that would allow for loan collection through the consumer's utility bill. It could also explore ways to encourage alternative financing options, such as gas conversion "leases" that allow a third-party to supply equipment to a customer for a monthly fee.

The state could also explore ways to reduce the Contribution in Aid of Construction (CIAC) charge that consumers converting to natural gas may have to pay. When utilities apply for approval of an expansion project they must determine if the expected revenue from a new customer (i.e., the "hurdle rate") will meet the company's minimum rate of return on capital investments required to connect the customer to the system. If the revenue is less than the underlying connection costs, the customer must pay a CIAC charge to cover the shortfall.

The state could consider lengthening and standardizing the time frames during which the company must meet its minimum rate of return, thus giving the companies a longer time to meet revenue expectations and potentially allowing more customers to avoid CIAC charges. It could also explore ways to allow these charges to be (1) waived or reduced under certain circumstances or (2) financed over a longer period of time instead of having to be paid up-front.

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