UNITED STATES OF AMERICA
FEDRAL ENERGY REGULATORY COMMISSION

Reliability Technical Conference	)	Docket No. AD12-1-000
North American Electric Reliability Corporation	))	Docket No. RC11-6-000
Public Service Commission of South Carolina and the South Carolina Office of Regulatory Staff	)))	Docket No. EL11-62-000

(Not consolidated)

POST-TECHNICAL CONFERENCE COMMENTS OF THE INTERSTATE NATURAL GAS ASSOCIATION OF AMERICA

Pursuant to the "Request for Evidence of Commissioner Philip D. Moeller on EPA Issues for the November 2011 Reliability Conference,"[1] the Interstate Natural Gas Association of America (INGAA) herein submits the following post-technical conference comments. INGAA is comprised of 26 members, representing the vast majority of the interstate natural gas transmission pipeline companies in the U.S. and comparable companies in Canada. INGAA's members, who operate approximately 200,000 miles of pipelines, serve as an indispensible link between natural gas producers and consumers.

In association with the Federal Energy Regulatory Commission's (FERC or Commission) November 29-30, 2011 Reliability Conference, Commissioner Moeller posed several questions on whether certain rules under consideration by the Environmental Protection Agency (EPA) could impact the reliability of electric supply. With regard to natural gas pipelines, the Commissioner asked whether "natural gas pipelines can be authorized and built in a manner that will allow new gas plants to enter service when needed for reliability."[2] The answer to the

[1] *Reliability Technical Conference*, Request for Evidence of Commissioner Philip D. Moeller on EPA Issues for the November 2011 Reliability Conference, Docket Nos. AD12-1-000, *et al.* (November 14, 2011).

[2] Request for Evidence of Commissioner Moeller, Question 20.

Commissioner's question is unequivocally yes. There is no question that natural gas pipeline infrastructure can be expanded in a timely, market-responsive manner provided shippers make the firm contractual commitments to natural gas transportation service necessary to finance and receive approval for the addition of new pipeline capacity.

I. The Natural Gas Industry Has a Proven Track Record of Building Infrastructure on a Timely and Environmentally Responsible Basis to Meet Increased Natural Gas Demand.

Over the decades, the interstate natural gas pipeline industry consistently has constructed infrastructure to deliver natural gas safely and reliably from supply and production points to end users. From January 2000 through February 2011, the interstate pipeline industry constructed and placed into service 14,600 miles of interstate pipeline that added 76.4 Bcf/d of capacity. The cost of these projects totaled approximately $46 billion. Industry investments in pipeline infrastructure equaled or exceeded $8 billion per year in three of the past four years.[3]

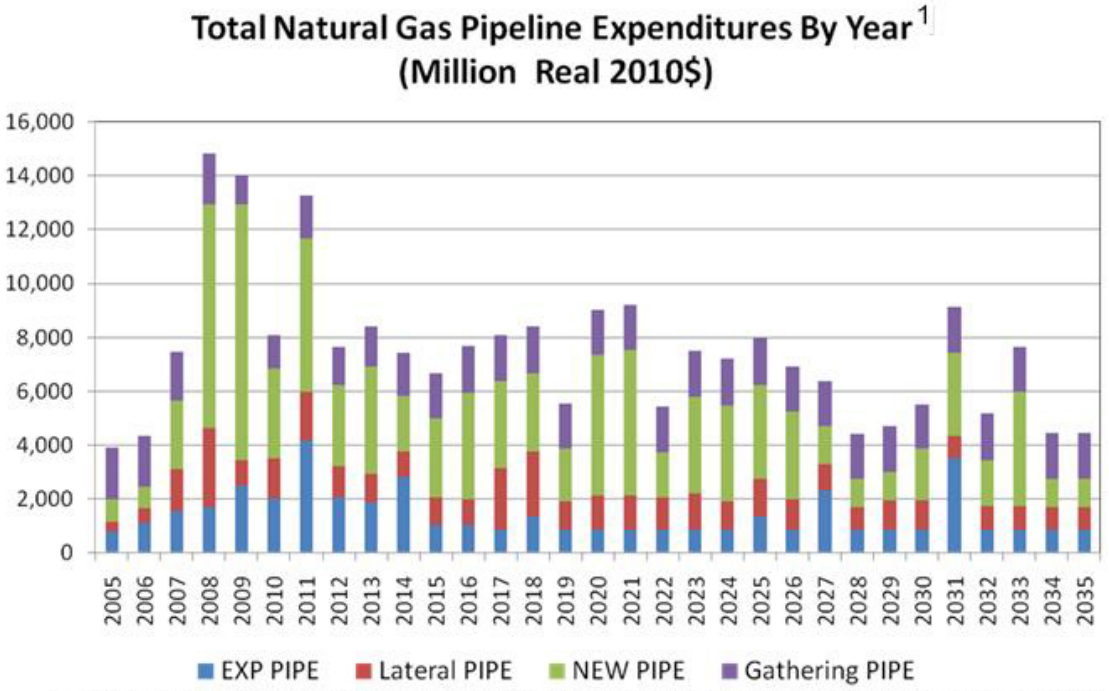
It has been forecasted that the natural gas industry will add over 43 Bcf/d of new natural gas transmission capacity over the next 25 years to meet demand.[4] This equates to: approximately 1,400 miles per year of new natural gas mainline; 600 miles per year of new laterals to/from natural gas-fired power plants, processing facilities, and storage fields; 24 Bcf per year of new working gas in storage; and 197,000 horsepower per year for pipeline compression.[5]

[3] See *North American Natural Gas Midstream Infrastructure Through 2035: A Secure Energy Future*, Executive Summary, prepared for The INGAA Foundation, Inc. by ICF International, June 28, 2011.

[4] *Id.*

[5] *Id.* The INGAA Foundation report predicts that over 55 GW of coal-fired generation capacity will be retired by 2030 and will be replaced by gas-fired generation. The pipeline mileage discussed above accounts for this new gas-fired capacity and demonstrates that the industry is capable of expanding at this expected level.

Further, as illustrated below, it has been projected that the cost of new natural gas transmission needed over the next 25 years is approximately $5.7 billion per year, or over $141 billion (real 2010$) total. Gathering and processing adds an additional $2.6 billion per year on average over the next 25 years, or about $64 billion total.[6]



1. Pipeline project costs are represented in the year the project enters service. While in actuality, pipeline investment costs are generally spread over one or more years leading up to a project entering service.

Source: ICF International

These projections are well in line with industry's established record of raising capital for infrastructure development and the industry's proven annual construction record. As long as the Commission maintains policies that support an adequate return on the investment, INGAA believes that the natural gas industry will continue to raise capital and build infrastructure on a timely and environmentally responsible basis for those shippers making the necessary firm

[6] *Id.*

contractual commitments required to finance the addition of new pipeline capacity, as discussed further in Section III below.

a. Some generators can site new power generation in close proximity to existing pipeline infrastructure thereby reducing the scope and timeline for new pipeline facilities to serve incremental power generation.

The interstate natural gas transmission system is a dynamic network of over 220,000 miles of interstate pipelines and approximately 220 FERC-jurisdictional storage facilities.[7] There is considerable flexibility in this network and, in many cases, it likely will be possible to integrate increased demand for natural gas transportation to serve electric generators without any significant enhancements to the physical infrastructure.

Of course, what will be required to serve a particular generator will be location specific and will depend on a variety of factors, including the distance from the mainline transmission pipeline, whether there is existing or anticipated capacity available on that pipeline, and the ease of expanding capacity on the mainline transmission pipeline, if that is necessary. In some cases, all that may be needed for new gas-fired generators to receive natural gas transportation service is a lateral pipeline that can be constructed relatively quickly and efficiently. Where it is needed, new mainline capacity can be added in many cases without the need to build a new greenfield pipeline. For example, pipelines can add parallel lines along an existing pipeline to increase capacity (looping) to support increased generation or add mainline compression to boost existing mainline capacity. Parallel lines typically are constructed in the same right-of-way as the original pipeline and therefore would not require considerable additional land acquisition for the new segment. Similarly, additional compression typically is installed on land owned in fee by

[7] FERC, *Jurisdictional Storage Fields in the United States (Updated November 30, 2010).*

the pipeline company and would not cause significant impacts to the environment, communities or additional landowners.

b. Existing underutilized natural gas generators in some regions can support an increase in generation as coal units come off-line.

According to a 2010 INGAA and INGAA Foundation report, natural gas fueled combined cycle (NGCC) electric generation units are running at relatively low capacity utilization factors of seven to 35 percent in the regions with the most "at risk" coal-fired generating capacity.[8] "To replace the generating capacity of "at risk" coal-fired power plants and dispatch power in these regions, NGCCs would need to increase their capacity utilization factors to a range of 40 to 138 percent."[9] Therefore, additional pipeline facilities may not needed to serve some of the existing underutilized gas-fired generation units. Depending on the location of these plants, the amount of available pipeline capacity serving those plants, their utilization factors and the amount of gas-fired generation available to replace retired coal generation, these undertulized natural gas generators can fill some of the increased natural gas demand without any significant pipeline construction.

II. The FERC Processes Natural Gas Pipeline Certificate Applications Efficiently and on a Reasonably Standardized Time Frame.

Interstate pipelines can be built on a timely and reasonably predicable schedule to meet additional demand from gas-fired electric generators. The U.S. Energy Information Administration (EIA) confirms that "[a]n interstate natural gas pipeline construction or

[8] See *Coal-Fired Electric Generation Unit Retirement Analysis*, Executive Summary, prepared for INGAA and The INGAA Foundation, Inc. by ICF International, May 20, 2010.

[9] *Id.* While there appears to be existing natural gas fueled combined cycle (NGCC) electric generating capacity in some regions that could be used to support reductions in coal-fired generating capacity, additional NGCC generation would need to be built in other regions to support generation. See *Coal-Fired Electric Generation Unit Retirement Analysis*, pp. 2-3.

expansion project takes an average of about three years from the time it is first announced until the new pipe is placed in service. The project can take longer if it encounters major environmental obstacles or public opposition," and that "[a] FERC review of an interstate pipeline project takes from 5-18 months, with an average time of 15 months."[10]

The FERC has an established record of processing pipeline certificate applications in a fair and timely manner to meet planned in-service dates while fulfilling requirements under the National Environmental Policy Act (NEPA) and honoring other public interest obligations in connection with evaluating whether a new facility will serve the public convenience and necessity. There is no reason to believe that the FERC will be unable to process applications efficiently to meet increased gas demand for delivery to gas-fired generation. The Commission itself confirms its commitment to meet the growing demand for natural gas by being ready and able to "continue to respond quickly when companies propose to expand and construct needed pipelines and related facilities."[11] Absent unforeseen challenges, there is a fairly standardized FERC time frame for review of pipeline project applications.

The Commission's pre-filing process has streamlined and enhanced the Commission's environmental review of pipeline infrastructure projects and assists the pipeline in developing a pipeline route and establishing mitigation measures in a manner that promotes support and compromise from the pipeline developer and project stakeholders while the pipeline is preparing its formal certificate application. The vast majority of proposed major interstate natural gas pipeline projects use the Commission's pre-filing process. The Commission reports that when a project requires a more extensive environmental review and issuance of an Environmental

[10] U.S. EIA, *About U.S. Natural Gas Pipelines: Natural Gas Pipeline Development and Expansion,* http://www.eia.gov/pub/oil_gas/natural_gas/analysis_publications/ngpipeline/develop.html

[11] FERC, *Gas Pipelines*, http://www.ferc.gov/industries/gas/indus-act/pipelines.asp

Impact Statement, it can issue an order on the project approximately 10 months from when a pipeline files its application, depending on whether the pipeline company uses the Commission's pre-filing process.[12] If a project's NEPA review necessitates an Environmental Assessment, the Commission can review and approve the project in an even shorter time frame.

INGAA recognizes that a pipeline project, especially a new greenfield line, may take more time or require additional mitigation measures if its route includes an urban area or an environmentally sensitive area. Pipeline looping and compression additions on existing lines, however, may take less time to construct and place into service, particularly given that lower cost mainline expansions can be constructed under pipelines' blanket certificates.

If a generator anticipates that it will convert a coal generation plant to a natural gas-fired plant, or if a new power plant is to be located near a particular interstate pipeline, INGAA encourages the power plant operator to work with the pipeline company early in the planning process so that the pipeline and the generator can develop any infrastructure needed to serve the power plant in tandem. This way the generator and the pipeline can minimize the likelihood of any mismatch between the in-service date of the power plant and the initiation of natural gas transportation service. Since a generator may need advanced time to comply with EPA rules, such as installing emissions-control technology on an existing power plant, for example, the generator and pipeline(s) should have sufficient time to work together to meet the customer's service and infrastructure needs.

[12] FERC, *Timeline: Traditional and Pre-Filing Process.*

III. Pipelines are Designed Based on the Firm Transportation Contractual Commitments Made by Shippers that Support the Project.

Interstate pipelines have served electric generators successfully for many years and readily will build infrastructure to provide additional pipeline capacity based on the customer's firm contractual commitments and reasonable rates of return on investment. As INGAA has stated in other forums, the natural gas pipeline system has considerable operational flexibility for supplying natural gas reliably to generators at their required pressures, provided that a generator has contracted for the appropriate pipeline transportation service. The electric industry must execute the necessary level of firm transportation contracts to justify the development of needed pipeline infrastructure in order to serve those generators which must run in order to maintain the reliability of the electric grid.

During peak or high-load conditions in the natural gas market, power generators and/or their Regional Transmission Organization (RTO) or Independent System Operator (ISO), increasingly need firm natural gas transportation service as an essential component for achieving a high level of electric reliability. Interruptible transportation service rarely is available on the pipeline grid on such days because firm transportation customers are using their full contractual rights. If a generator is not able to access natural gas transportation on peak days, it is because the generator has not contracted for appropriate pipeline transportation service. It would appear that such generator had not been given the right economic incentives from the electric wholesale power market to subscribe to firm gas transportation services.

Natural gas pipeline companies do not build interstate pipeline projects based on the assumption that there will be a future market for natural gas transportation. The construction and development of natural gas pipeline infrastructure is capital-intensive and often requires developers to access debt and equity markets to proceed beyond the initial stages of

development. In order to attract the capital necessary to develop a project, a pipeline company must demonstrate that there is a reliable, long-term revenue stream that will support and provide an adequate return for the investment in the project. A pipeline company can only demonstrate that this revenue stream exists by obtaining long-term firm transportation service commitment from shippers, such as natural gas-fired generators, for the pipeline capacity to be created by the proposed project. Pipeline companies cannot make the capital investments necessary simply by projecting that there will be a future demand for the capacity.

Further, pipeline companies must rely on the existence of long-term firm commitments from project shippers to obtain Commission authorization to proceed with construction of the project. Indeed, in a recent report on the interdependency of natural gas and electric power, the North American Electric Reliability Corporation recognized that "[p]ipeline infrastructure and capacity is expanded based on firm contracts from its customers."[13] The Commission's Certificate Policy Statement requires that a pipeline demonstrate a market need for the project to show that the benefits of the project outweigh any adverse consequences. Pipeline companies typically demonstrate this by filing precedent agreements with project shippers. During the initial development stage of a project, pipeline companies hold open seasons to determine whether sufficient market interest exists for the project. Pipeline projects then are built based on long-term firm contractual commitments from shippers for natural gas transportation. A successful open season will lead to a pipeline developer and potential shippers executing precedent agreements, pursuant to which the pipeline developer has committed to proceed with the development and construction of the project and the shipper has committed to take long-term

[13] *2011 Special Reliability Assessment: A Primer of the Natural Gas and Electric Power Interdependency in the United States*, North American Electric Reliability Corporation, December 2011, p. 2.

firm service on the project upon completion of construction. This has been the customary process for the development of pipeline infrastructure since the advent of the open access era.

If a generator anticipates a change to its generation fleet and the need for additional interstate natural gas pipeline capacity and/or a transportation contract, INGAA encourages the generator to talk to its pipeline(s) about its needs early in the planning process. The pipeline typically will not expand its infrastructure until the generator signs a firm transportation contract and compensates the pipeline for the cost of any additional needed lateral or other pipeline expansion needed to support the generation facility. Waiting until the generator is sited to begin negotiations with the pipeline for the generator's firm transportation contract will unnecessarily impede and delay the development of infrastructure. The issue of subscribing to the appropriate level of firm transportation service to ensure reliability is not solely relevant to expansions but also applies to serving existing electric-generation load. To date, in much of the country, generators have relied largely on pipeline interruptible transportation services for their plants. Should generators wish to ensure gas delivery service, they should contract with the pipeline for firm transportation service. Pipelines will work with generators to develop additional firm services that are tailored to meet the unique timing needs of the electric industry.

IV. While INGAA Believes that the Commission's Pipeline Certificate Process Is Working Well, INGAA Supports Review of Additional Refinements.

In PacifiCorp's response to Commission Moeller's questions,[14] it suggested modifications to the blanket certificate program to accelerate the permitting timeline and suggestions to enhance cooperation among agencies to facilitate the certificate approval process. While INGAA believes the current pipeline certificate authorization process is working well,

[14] *Reliability Technical Conference*, PacifiCorp's Response to Request for Evidence of Commissioner Philip D. Moeller on EPA Issues for the Reliability Technical Conference, Docket No. AD12-1-000 (December 9, 2011).

INGAA supports the Commission's prompt review of any additional refinements in order to advance the certificate process, including expanding the scope of its blanket certificate regulations and improving interagency coordination in order to expedite the permitting timeline.

A transparent and predictable FERC certificate timeline is critical to meeting market demand for natural gas transportation service. Shippers also rely on the consistency of the FERC timeline for knowing by when they must sign their precedent agreements with a pipeline, which must be filed by the pipeline with its certificate application, in order for the customer to receive service by a date certain. Often there is little room in the market place for error, if any, in the FERC scheduling process. Any delays to the permitting process could make the project uneconomic and therefore restrict needed capacity from getting to the consuming public. As stated herein, it may take two to three years for capital-intensive pipelines to go from the planning stage to in-service. Should the electric market feel that this time frame is too long to meet the needs of the growing gas-fired generation market or is otherwise unworkable, then INGAA suggests that the Commission, industry and other agencies involved in the permitting process work to increase transparency and predictability of its certificate process and identify areas where the process could be expedited.

V. Conclusion.

INGAA appreciates the opportunity to comment on the role of the natural gas industry in ensuring electric reliability. There is no question that natural gas pipeline infrastructure can be expanded in a timely, market-responsive manner when shippers are ready to make the firm contractual commitments to natural gas transportation service necessary to finance the addition of new pipeline capacity. INGAA appreciates that opportunity to work with the Commission and other stakeholders to address the role that natural gas can play in meeting the nation's energy needs.

Respectfully submitted,

Joan Dreskin
General Counsel
Interstate Natural Gas
Association of America
20 F Street NW
Suite 450
Washington, DC 20001
(202) 216-5928
jdreskin@ingaa.org

DATE: January 5, 2012

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list of AD12-1-000, RC11-6-000, and EL11-62-000 in these proceedings and in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure.

Dated at Washington, DC this 5th day of January, 2012.

Joan Dreskin

_____

Joan Dreskin