

As set forth below, INGAA urges the Commission to convene a series of timely and tightly-focused regional technical conferences, starting in New England, over the next several months, to identify and address any current and emerging issues regarding how the increased reliance on natural gas for electric power generation may affect the reliability of the electric bulk power grid. The Commission should lead this initiative, establishing an open, organized and public stakeholder process devoted to formulating solutions that recognize regional differences consistent with ensuring electric reliability at reasonable costs to consumers. FERC should seek active state regulatory agency¹ participation in these regional conferences. FERC also should direct the North American Electric Reliability Corporation (NERC), the ISOs/RTOs and other Planning Authorities to participate in this “bottom up” market participant process to determine whether certain electric generators or groups of electric generators hold sufficient quantities of firm natural gas transportation capacity to ensure electric reliability and, if not, how much additional firm transportation capacity is required. This stakeholder process should be open to both gas and electric industry participants including natural gas pipelines.

INGAA asserts that the Commission should actively participate in the regional conferences and appoint a commissioner to lead each regional technical conference. Each region should be directed to report back to the Commission on its findings and recommended solutions, for its particular region, by December 2012. Finally, INGAA supports a limited role for NAESB in developing business practice standards after the Commission has provided the necessary policy guidance.

¹ INGAA uses the term state regulatory agencies in these comments to include state public service commissions and state public utility commissions.

EXECUTIVE SUMMARY

The natural gas industry is reliable today, and INGAA strongly believes it will remain reliable into the future as natural gas usage for electric generation increases. Increasing natural gas consumption in the electric power sector is not a new phenomenon and the pipeline industry has served this market reliably over the years. Consumption of natural gas in the electric sector was 7.4 Trillion cubic feet (Tcf) per year as of 2010, up from 5 Tcf just 10 years earlier, which was up from 3.2 Tcf per year in 1990.² Throughout this period of significant increase in the use of natural gas for electric generation, which correlated with declining gas usage in other sectors, the natural gas sector and the interstate pipeline network have remained reliable. This being said, the electric power sector's use of natural gas is projected to grow significantly. Thanks to revolutionary technological drilling advances that have unlocked abundant shale gas supplies, the United States has developed a significant, economically-accessible natural gas resource base³ that will allow natural gas to continue to meet the increased demand of the electric power sector. Given the widespread sources of supply throughout the United States and natural gas' cleaner-burning characteristics, natural gas is projected to experience strong demand growth during the coming decades. While the increased demand for natural gas will come from various sectors, such as the vehicle, industrial,

² See North American Electric Reliability, *2011 Special Reliability Assessment: A Primer on the Natural Gas and Electric Power Industries Interdependencies in the United States*, December 2011 at 36.

³ See U.S. Energy Information Administration (EIA), *Annual Energy Outlook 2012 (AEO2012) Early Release Overview*, January 23, 2012, Figure 2, U.S. natural gas production, 1990-2025. EIA projects that shale gas production will increase from 5.0 trillion cubic feet in 2010 (23 percent of total U.S. dry gas production) to 13.6 trillion cubic feet in 2035 (49 percent of total U.S. dry gas production). In addition, EIA projects that total domestic natural gas production will grow from 21.0 Tcf in 2009 to 26.3 Tcf in 2035, shale gas production will grow to 12.2 Tcf in 2035, when it makes up 47 percent of total U.S. production—up considerably from the 16-percent share in 2009. Further, according to EIA's *AEO2011*, natural gas supply has increased 480 Tcf since the AEO 2010. See http://www.eia.gov/forecasts/aeo/source_natural_gas.cfm.

and power sectors, the electric power sector consistently has been identified as the sector that will most significantly increase its use of natural gas.

Greater reliance on natural gas for electric power generation presents emerging issues. The natural gas industry is structured on the premise that it is the responsibility of the individual shipper to determine what type or quantity of contracted transportation services it wishes to subscribe to with the pipeline to achieve the level of reliability it (the shipper) desires. Pipeline shippers determine how much service disruption risk they are willing to take when signing up for different types of pipeline services. The Commission's initiative in this proceeding presents an important opportunity for electric power stakeholders and regulators to focus on how these customer decisions should be made, as well as the likely outcomes of their choices during period of high demand. Thus, the initial question to be answered in these regional dialogues is: what level of firm natural gas transportation service is required to ensure that region's acceptable level of electric reliability. These determinations will require the participation of, and input from, various stakeholders, including electric generators, ISOs/RTOs and other Planning Authorities in non-RTO regions, NERC and its regional entities, regulatory agencies under their statutory requirements, and the Commission under its Federal Power Act (section 215) and Natural Gas Act authority.

According to the U.S. Energy Information Administration (EIA), 24 percent of the nation's electricity power generation already is produced using natural gas. EIA projects that the percentage of electricity generation from natural will increase to 27 percent in 2035.⁴ INGAA members already are experienced with responding to changing

⁴ EIA, *AEO2012 Early Release Overview*, January 23, 2012, Executive Summary, Figure 3, Electricity generation by fuel, 1990-2035, available at: http://www.eia.gov/forecasts/aeo/er/executive_summary.cfm.

usage patterns associated with increased reliance on natural gas for generation of electric power. It is clear that natural gas offers significant opportunities for generating lower cost and more environmentally friendly power. Still, because natural gas is not stored on site and since gas storage is not always near-by, the electric power industry, under the Commission's and state regulatory agency oversight, will need to address operational and cost recovery issues related to delivering the fuel to generators when and as needed. While issues related to how the pricing of electricity – in order to recoup the costs of natural gas supply and transportation costs – will need to be addressed in some regions, this does not change the fact that the gas industry is reliable and will remain reliable.

Given the timeline of many coal-fired plant retirements, the time to commence such a focused, dedicated dialogue is now. As more gas-fired generators are relied on to produce electricity, INGAA asserts that it is important to convene a series of dedicated and focused technical conferences among all interested stakeholders, including NERC and the appropriate Planning Authorities and RTOs, to resolve the following questions:

- (1) To what degree will natural gas-fired generation be relied upon to ensure the reliability of the electric bulk power grid?
- (2) How much and what type of firm pipeline capacity (or some other reliable back up fuel source) will be required, given other generating resources in the market, to ensure the reliability of the bulk power grid?
- (3) Who should be responsible for holding the necessary pipeline capacity (or some other reliable back up fuel source)?
- (4) How will the cost of holding that capacity be recovered?
- (5) What type of tailored pipeline services could be provided to better serve natural-gas fired generators?

EIA projects that demand for natural gas in electricity generation will grow from 7.4 Tcf in 2010 to 8.9 Tcf in 2035.

- (6) How will the costs associated with providing those services be recovered from electricity customers?

INGAA urges the Commission, working in conjunction with the state regulatory agencies, where appropriate, to proceed diligently and to work with the regions to tailor solutions for ensuring electric reliability that best fit their circumstances and market model. The different regions of the country have diverse grid demands, varied market structures, and distinct projected electric load growth projections. As a result, the pipeline infrastructure in each region has been tailored to serve the needs of various customers in that region. Therefore, the Commission, working with all stakeholders, should consider regional differences when resolving electric-gas integration issues. FERC must be prepared to not only lead these efforts but to resolve the issues within its jurisdiction if solutions cannot be achieved by consensus.

The Commission may wish to convene a New England-focused technical conference first, with a goal of ensuring continued reliability in that region. This exercise also could serve as a model for other regions. New England is a logical place to begin this process, because there is already an established dialogue between the New England ISO and natural gas industry participants. Increased reliance on natural gas has been a topic of discussion in New England for many years, yet without FERC guidance, electricity reliability concerns have not been resolved.

INGAA is confident that with strong FERC leadership, and with appropriate input from state regulatory agencies, the electric power industry can ensure a continued high level of electric reliability at reasonable cost. The interstate pipeline industry stands ready to continue to meet the market demand for natural gas transportation and to

continue to offer customized pipeline transportation services to meet the dynamics of an expanding electric power generation market.

COMMENTS

1. The United States Has Abundant Supplies of Natural Gas, and Interstate Pipelines Have a Proven Track Record of Reliably Delivering that Supply and Are Well-Equipped to Continue that Reliable Service.

The United States has an abundant, diverse supply of natural gas that can be developed prudently and economically in addition to a well-developed natural gas transportation infrastructure that provides consumers with access to that supply.⁵ EIA estimates that the United States possessed 2,214 Tcf of technically recoverable natural gas resources as of January 1, 2010. The enormous increase in proved and probable natural gas reserves in North America has firmly established natural gas as the fuel of choice for incremental and replacement power generation. Natural gas reserves are expected to be available for power generation and other uses over the long-term at a competitive delivered cost, and the cleaner-burning qualities of natural gas will provide the power generation industry an effective compliance tool with which to meet the strict air emission standards that are expected to become effective in the near future.

The interstate natural gas pipeline industry stands ready to meet the increased demand from the electric power industry. Assuming there is economic support, in the form of firm contracts, for the required services and infrastructure, there are no operational reasons that pipelines cannot serve electric generators reliably. Interstate pipelines currently provide, and historically have provided, highly reliable services. For example, the joint report issued by the staffs of FERC and NERC following the power outages in the Southwest during February 2011 concluded that “[t]he pipeline network,

⁵ See EIA, *AEO2012 Early Release Overview*.

both interstate and intrastate, showed good flexibility in adjusting flows to meet demand and compensate for supply shortfalls,”⁶ and that no interstate or intrastate pipelines contributed to the outages.⁷

To the extent new pipeline infrastructure is required to meet the demand growth from the electric power sector, the interstate pipeline industry stands ready to meet this challenge. The interstate pipeline industry has a proven track record of building infrastructure and providing services in response to increased demand from the market. Over the decades, interstate pipelines consistently have constructed infrastructure to deliver natural gas safely and reliably from supply and production areas to market. From January 2000 through February 2011, the interstate pipeline industry constructed and placed into service 14,600 miles of interstate pipeline, adding 76.4 Bcf/d of capacity. The capital investment in these projects totaled approximately \$46 billion. Moreover, industry investments in pipeline infrastructure equaled or exceeded \$8 billion per year in three of the past four years.⁸ Consequently, the interstate natural gas pipeline industry is confident it can build any necessary infrastructure and serve the demands of electric power generators reliably, efficiently, and consistent with its obligations to the full range of customers that contract for sufficient natural gas transportation services to meet their particular needs.

While the Commission’s current pipeline certificate authorization process is working well, INGAA would support the Commission’s refinement of its certificate

⁶ See *Report on Outages and Curtailments During the Southwest Cold Weather Event of February 1-5, 2011: Causes and Recommendations*, prepared by the Staffs of the Federal Energy Regulatory Commission and the North American Electric Reliability Corporation, August 2011, at 213, (“Southwest Outage Report”).

⁷ *Id.*

⁸ 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.

process in the event that the electric power industry indicates a need for the construction of natural gas pipeline infrastructure more quickly than the current Commission process would allow. Such refinements could include expanding the scope of the Commission's blanket certificate regulations and improving interagency coordination in order to expedite the permitting timeline.

Moreover, as long as the Commission maintains policies that support an adequate return on investment, INGAA believes that the natural gas industry will continue to attract capital and build infrastructure in a timely and environmentally-responsible manner for those shippers making the necessary firm contractual commitments required to finance new pipeline capacity. Still, if an electric utility or generator anticipates a change to its generation fleet and the need for additional interstate natural gas pipeline capacity and/or a transportation contract, it is essential that the electric market participants adequately communicate their needs for natural gas transportation services to the interstate pipeline industry as early in the generator's planning cycle as possible so that any necessary additional capacity or facilities can be constructed in a timely manner.

2. The Commission Should Take the Lead Role in Addressing Electric Reliability Issues.

As the lead regulator with jurisdiction over both wholesale natural gas and electric power markets, and the entity that has been charged with ensuring the reliability of the electric power grid,⁹ FERC is in a unique position to identify impediments to gas-electric integration and effectuate change. As such, INGAA believes FERC must play the lead

⁹ Under Section 215 of the Energy Policy Act of 2005 (EPAct 2005), Congress gave FERC jurisdiction over the Electric Reliability Organization (i.e., NERC), regional entities and others, for the purposes of approving and enforcing reliability standards. States have important responsibility over integrated resource planning. INGAA recognizes that FERC's authority in the Electric Reliability Council of Texas (ERCOT) is significantly less than its authority over other areas, but FERC's reliability authority is the same in all U.S. portions of the three Interconnections.

role in facilitating industry-wide discussion. The establishment of this docket, with the leadership of the individual commissioners, is a step in the right direction. Additionally, since the state regulatory authorities have such an important role in regulating electric utilities, in both organized and non-RTO markets, it similarly is important that the states work in conjunction with the FERC to lead this effort to ensure continued reliability of the bulk power market as it becomes more dependent upon natural gas.

Strong FERC leadership and active participation by FERC commissioners in these regional conferences will increase the likelihood of consensus (or near consensus) solutions after a full discussion of relevant issues, including the degree to which electric generators are contracting appropriately for both supply and firm transportation services and the impact such decisions have on the reliability of the electric power grid. In particular, in situations where regulators believe the solution will require electric power generators to incur additional costs to ensure an appropriate level of reliability, it is unlikely that market participants acting in their economic self-interest will consent voluntarily to such costs.¹⁰ In these instances, the Commission must be prepared to resolve such issues promptly if the regional process does not produce an effective recommended solution.

¹⁰ In addition to the reluctance of individual market participants (or classes of market participants) to agree to accept such obligations, there may be instances in which an organized market operator may have different views on appropriate solutions. Since generators compete across markets, generators within one market likely would oppose obligations that would place them at a competitive disadvantage with other generators in adjacent regions. A regional transmission market operator likely would be sympathetic to such concerns, both because the generators are stakeholders in its region and because consumers within its market may be disadvantaged by the solution. Further, while it is important that the Commission be mindful of the significant differences among regions and the important role of the states in shaping such markets, the resulting recommendations also should be reviewed from the perspective of their consistency with the goals of promoting competitive wholesale markets and ensuring the reliable delivery of both natural gas and electricity to consumers.

INGAA therefore urges the Commission to convene a series of dedicated and focused technical conferences among all interested stakeholders, including natural gas pipelines, to resolve the following questions:

- (1) To what degree will natural gas-fired generation be relied upon to ensure the reliability of the electric bulk power grid?
- (2) How much and what type of firm pipeline capacity (or some other reliable back up fuel source) will be required, given other generating resources in the market, to ensure the reliability of the bulk power grid?
- (3) Who should be responsible for holding the necessary pipeline capacity (or back up fuel capability)?
- (4) How will the cost of holding that capacity be recovered?
- (5) What type of tailored pipeline services could be provided to better serve natural-gas fired generators?
- (6) How will the costs associated with providing those services be recovered from electricity customers?

Certain areas are exclusively the domain of the Commission to consider and analyze, and they should not be decided by others. For example, the contract-design-build model for developing interstate natural gas pipeline and storage infrastructure, as well as the principles of open access and prevention of undue discrimination between similarly situated gas transportation customers are bedrock processes and principles backed up by long-standing FERC rules, regulations, policy and precedent. The interstate natural gas pipeline industry has an established record of providing reliable and efficient service to its customers, and stands ready to develop, as it has in the past and does today, new and expanded services when customers demonstrate contractual support for them.

FERC should request that NERC,¹¹ ISOs/RTOS and other Planning Authorities also work to identify and address threshold issues that are critical to assessing the scope of the interrelationship between the natural gas and electric power markets both generally and in specific regional markets. INGAA encourages FERC to continue working with NERC and the Planning Authorities, including ISOs/RTOs, to identify any electric reliability concerns associated with increased reliance on natural gas as a fuel source. NERC, the Planning Authorities and ISOs/RTOs can help establish a common framework for each region to use in analyzing and addressing the electric reliability implications of greater reliance on natural gas-fired electric generation. In this role, NERC and the Planning Authorities can provide input to the regions to help determine whether certain electric generators, or groups of generators, hold sufficient firm pipeline transportation capacity, or alternatives such as dual fuel capability, to ensure the reliability of the electric grid. FERC has the ultimate authority and responsibility to ensure electric reliability.

In sum, the Commission should facilitate a series of timely, focused technical conferences that will permit interested stakeholders to identify emerging issues that may impede gas-electric integration and propose solutions to assure reliability of the electric power market in the context of increasing reliance on gas as the generation fuel. The Commission should identify a lead commissioner to participate in each of these regional meetings, open to all stakeholders, to facilitate the meetings.

¹¹ On July 20, 2006, FERC certified NERC as the nation's Electric Reliability Organization (ERO) pursuant to EAct 2005. *North American Electric Reliability Corporation*, Order Certifying North American Electric Reliability Corporation as the Electric Reliability Organization and Ordering Compliance Filing, 116 FERC ¶ 61,062 (2006).

The Commission should commence these technical conferences in the near future and develop a schedule for holding these conferences so that each region can report back to the Commission on its findings and recommended solutions to the above listed questions, for its particular region, by December 2012. If the regions do not make sufficient and timely progress in proposing solutions by December 2012, FERC must be prepared to act promptly.

3. The Commission Should Avoid a One-Size-Fits-All Approach and Should Consider Regional Differences When Addressing Electric Reliability.

INGAA acknowledges there are significant differences between organized and non-RTO electric power markets, as well as differences *among* organized RTO markets. In addition, there are differences between regions on a host of factors that can affect natural gas/electric power integration issues and the electric reliability issues surrounding the increased use of natural gas in a particular region.¹² The Commission therefore should avoid a one-size-fits-all approach and should take these regional differences into account when addressing electric reliability. At the same time, INGAA believes that absent some guidance from the Commission, in some cases, it is unlikely that the regional markets participants acting in their financial self-interests will produce effective or timely solutions.

The Commission should establish and oversee the regional forums in which all stakeholders, including the various segments of the natural gas industry, can receive even-handed treatment from a regulator that has the jurisdiction and the expertise to craft policies that will balance the variety of public policy issues that arise in connection with natural gas and electric power integration. While it is clear that there may be some

¹² Such factors include the mix of generating technologies and fuels, reserve margins, the adequacy of electric transmission, and the availability of natural gas pipeline and storage capacity to serve a region.

variation in how these policies are structured and implemented, due to differences between regional power markets, it is important that there be a common starting point grounded in an informed understanding, and the statutory obligation to regulate both markets, that only the Commission uniquely possesses.

Regional differences may demand regional solutions, subject to FERC, and state regulatory agencies' oversight, and, among others, participation by NERC and the Planning Authorities. As the demand for natural gas by the electric power sector increases over the next five to ten years, the challenges to the pipeline industry in responding to that demand are likely to vary from region to region. For example, the amount and type of existing pipeline infrastructure and natural gas storage facilities varies significantly by region. In areas such as the Southeast, where generators have committed to firm service and, accordingly, pipeline infrastructure has been built to support such service, the challenges of responding to increased demand by the power generation industry almost certainly will be different than in other regions where that is not the case. Similarly, the challenges of responding to increased demand may be different in the Midwest and Southeast, where more extensive storage facilities have been built, than in the Northeast and New England, which has fewer storage facilities.¹³ Moreover, the level of increased demand for natural gas transportation will almost certainly vary by region, and also by pipeline within a region, depending on the nature of the infrastructure (reticulated or long-haul), the load profile of the load servicing entities,

¹³ LNG storage may be a solution in markets where the geology does not support in ground storage; still the challenge is that someone must be willing to contract for the service on a firm basis to underwrite the cost of its development.

the amount of coal generation retirements and the alternative fuel mix, including intermittent generation and state-driven public policy mandates or targets.

Different challenges also are presented by the different types of markets in which the generators are located and the generators that participate in those markets. There are differences between merchant generators in organized markets, operated by an RTO or ISO, as compared to non-RTO markets, also called bilateral electric markets, which are characterized by contracting directly between electric generators and load serving entities, such as municipal utilities or state-regulated investor-owned utilities. Moreover, in the non-RTO markets, investor-owned utilities still own and dispatch a large percentage of their own generation.

In organized markets, generators typically are dispatched on a least-marginal-cost basis, and, under some market structures, generators may receive no compensation if they are not dispatched. To increase their chance of being dispatched (and paid), merchant generators in organized markets have an incentive to keep their marginal costs (which include the costs associated with pipeline transportation) as low as possible. This decreases the incentive for merchant generators in organized markets to contract for firm natural gas transportation services because there is no assurance of cost recovery. By contrast, in non-RTO markets, the contractual arrangements between a generator and a load serving entity may be negotiated at a level sufficient to recover the costs of pipeline transportation. Again, since a large percentage of generation in non-RTO markets is owned directly by municipal and investor-owned utilities, the electric utility is able to recover the costs of natural gas transportation services through the utility's state-regulated rates.

The Commission should keep these regional and market design differences in mind when determining how each region should ensure electric reliability and how to permit the recovery of the costs associated with ensuring such reliability. In the proposed technical conferences, FERC and the states should enlist, as appropriate, the assistance of NERC and the Planning Authorities, as appropriate, so that regional issues may be appropriately considered.

INGAA believes that New England is a logical place to begin a FERC-led technical conference process, as there is already an established dialogue between the New England ISO and natural gas industry participants. While discussions have been going on for many years, strong FERC participation would assist industries in a timely resolution of how to structure the electric industry to encourage fuel transportation and supply decisions that will ensure electric reliability. While additional conferences in other regions logically will deal with the unique needs and different stakeholder groups in those regions, these regions may benefit from the research done to date in New England. By establishing narrowly focused and regionally tailored technical conferences, in an open, organized, public manner, with all the appropriate stakeholders invited to participate, the Commission will allow all interested parties to identify and recommend potential solutions relative to their region's ability to ensure electric reliability. If, however, a region cannot achieve consensus (or near consensus) on what is necessary for that region to ensure electric reliability, the Commission must be prepared, as part of its reliability authority, to resolve issues within the scope of its jurisdiction.

4. Interstate Pipelines Are Designed Around Firm Transportation Service Obligations. In Addition, Interstate Pipelines Stand Ready to Develop New Services, Including Additional Firm Services Adapted to Operating Demands of Electric Generators.

The natural gas transportation system serves many types of customers – traditional local distribution customers, industrial end users, producer/marketers, and electric power generators – all without undue discrimination. There is a strong Commission presumption against cross-subsidization among customers through rates or services. The foundation for obtaining transportation service is an open-access, contract-based model, in which interstate gas pipelines’ tariffs are no longer structured to curtail service based on end-use priorities in the unlikely event that a pipeline cannot meet all of its firm delivery obligations. Moreover, in the interstate market, natural gas transportation services are provided on an unbundled basis from the commodity.

Consequently, the reliability of natural gas markets is founded upon customers individually taking responsibility for the portfolio of natural gas transportation, storage and supply services tailored to meet their particular needs. The restructuring of wholesale natural gas markets has been an extraordinary success. In examining how the natural gas and electric power markets can be integrated more effectively, the factors that have made natural gas restructuring such a success must be understood and not be undermined.

A central pillar of interstate natural gas pipeline regulation since restructuring has been that pipelines are required to offer firm transportation service and have an affirmative obligation to serve their firm customers.¹⁴ As a general matter, interstate

¹⁴ See 18 C.F.R. § 284.7(a)(1) & (3) (2011) (“An interstate pipeline that provides transportation service under subparts B or G . . . must offer such service on a firm basis Service on a firm basis means that

natural gas pipelines are designed and constructed to meet the firm contractual commitments made by the shippers that utilize the transportation capacity. In fulfilling its obligation under the Natural Gas Act to determine that a pipeline project is in the public convenience and necessity, the Commission typically bases its decisions on the existence of primary firm contractual commitments. Most pipelines have not been designed, constructed or certificated to include the type of capacity that would be analogous to the “reserve margin” for electricity and, in the competitive environment that the gas restructuring has produced, the rate design afforded most pipelines has no room to include “reserve margin” costs. During peak demand periods, when capacity is being utilized fully by a pipeline’s firm transportation customers who have paid for that service, there typically is no capacity available for interruptible transportation service.

Nonetheless, in many regions of the country, generators rely on interruptible¹⁵ pipeline transportation service.¹⁶ On a number of pipelines, generators operating in organized markets actually have reduced their firm contractual quantities over the last several years and now rely more heavily on interruptible transportation. In some instances, merchant generators rely upon pipeline capacity acquired on the secondary market (released capacity and interruptible pipeline capacity) for the remainder of their needs. There is inherent risk associated with such reliance on interruptible transportation service because, as the name suggests, such service may be “interrupted” or “bumped” by

the service is not subject to a prior claim by another customers or another class of service and receives the same priority as any other class of firm service.”).

¹⁵ See 18 C.F.R. § 284.9 (“Service on an interruptible basis means that the capacity used to provide the service is subject to a prior claim by another customer or another class of service and receives a lower priority than other such classes of service.”).

¹⁶ See *Gas and Electric Infrastructure Interdependency Analysis*, prepared for the Midwest Independent Transmission System Operation by EnVision Energy Solutions, February 22, 2012, and NERC, *2011 Special Reliability Assessment*.

a higher priority service, such as firm service.¹⁷ It is not a reflection on the reliability of natural gas or the natural gas pipeline infrastructure when a pipeline has scheduled its firm customers' nominations and has no capacity left to schedule lower priority, cheaper, interruptible transportation. The pipeline is not "curtailing" the customer in such circumstances; rather, the customer has not contracted sufficiently for its needs. The firm customers are paying reservation charges to reserve the capacity for which they have subscribed. Accordingly, it would not be economically justifiable to give them a lesser priority on the days in which they need capacity. Here, the consumer is getting the service for which it has paid.

Further, the interstate natural gas pipeline model is premised on incremental rate treatment for pipeline expansions (unless the expansion benefits all pipeline customers). That is, the rates paid by the customers that subscribe capacity on an expansion must recover the complete cost of the expansion; existing customers that do not wish to subscribe capacity on the expansion are insulated from subsidizing the expansion shippers. Rates may be rolled-in only if the expansion benefits all, including existing, customers. In practice, most pipeline capacity expansions are priced incrementally. This model has worked well because it has promoted prudent, responsible expansion of the pipeline network and has avoided lengthy, divisive battles among customer groups over cost responsibility and cost allocations.

Despite the heavy reliance by electric generators on interruptible transportation services, the interstate pipeline has generally been able to accommodate the needs of the

¹⁷ In general, firm nominations are scheduled ahead of interruptible nominations. Thus an interruptible shipper may be "bumped" by a valid nomination by a firm shipper. This general rule, however, is subject to the Commission's "no bump" rule, which provides that an interruptible customer cannot be bumped during or after Intraday Nomination Cycle 2.

electric industry. Because pipeline operators plan for and anticipate peak day conditions, pipelines have varying amounts of operational flexibility on non-peak days. For example, many pipeline operators, when possible without adverse effects on system operations or other customers, often will permit customers, including local distribution customers and electric generators, to take their gas in more flexible, non-ratable quantities on a best-efforts basis, despite ratable take provisions in the pipeline's tariff. As demonstrated in the Southwest Outage Report, pipelines utilized such flexibility and worked closely to coordinate efforts to allow supplies to continue to flow during the cold weather event.¹⁸ As a result, the Commission staff and NERC concluded in their joint report that problems were not caused by pipeline operations or transportation services.

Indeed, interstate pipelines have demonstrated a consistent ability to operate their systems flexibly to meet their customers' needs and minimize service interruptions of firm contracted, nominated, and scheduled capacity under many varied and extreme operating conditions. This high reliability has also been an historic hallmark of the industry's service to electric generating customers. Given appropriate determination of the amount and nature (firm or interruptible) of the services needed, and appropriate regulatory policies in the electric market to encourage adequate contracting for such services, there is absolutely no reason to believe that natural gas supplies will not be available and delivered as needed if the parties adequately contract for the services they need and expect.

Still, the inherent flexibility of pipeline systems may decrease as an increasing number of gas-fired generators attempt to schedule deliveries of natural gas. As the amount of installed gas-fired generating capacity increases, and as both new and existing

¹⁸ Southwest Outage Report at 68-69.

gas-fired generators are dispatched at higher capacity factors, the frequency with which generators will be able to receive interruptible transportation or utilize capacity release at “secondary” firm points will diminish. Similarly, the ability of pipeline systems to provide hourly flexibility, non-ratable flow and pressure variations may also diminish in some markets as a greater number of generators seek to take advantage of the system’s limited flexibility.¹⁹

The interstate pipeline industry stands ready to design and seek the Commission’s approval of customized services to accommodate electric generators as their demand for natural gas transportation increases. In fact, a number of pipeline companies already offer tailored services targeted to electric generators’ needs for additional nomination cycles, greater flow variability, higher pressure commitments, little or no notice, and revised “bumping” rules.²⁰ INGAA’s members are committed to continuing to work with all pipeline customers, including gas-fired generators, to provide such new, tailored and appropriately-priced services for electric generators. Pipelines will continue to offer such services, open to all customers, without undue discrimination. Yet, since these

¹⁹ Pipeline shippers cannot rely on pipeline line pack as a substitute for contracting for the appropriate amount of pipeline service. Pipeline line pack generally is dedicated to pipeline operations and allows gas injected in one area of a pipeline system to be simultaneously withdrawn from a different area of the system. On some pipelines, it also supports certain pipeline transportation or storage services. Line pack must be kept reasonably stable across the whole system or capacity through the system is reduced. Line pack is not a substitute for a shipper injecting its own gas into the pipeline.

²⁰ See e.g., *Texas Gas Transmission*, ENS Service (offers 11 new nomination cycles each day); *Transwestern Pipeline*, FTS-5 Service (provides for flows in 16 hours as part of its Phoenix expansion); *Rockies Express Pipeline*, IBS Service (offers an imbalance management service designed to allow shippers transporting volumes to a specific delivery point to elect for a range of swing-up and/or swing-down from nominated quantities under the linked transportation agreement); *Natural Gas Pipeline Company of America*, FRSS Service (provides a shipper with firm reverse storage service designed to meet the needs of the electric generation market during the summer peak periods); *CenterPoint Energy*, RSS Service (offers a No-Notice service aimed at power plant/swing-type markets and designed to meet a shipper’s unscheduled peak or swing demands), and EFT Service (allows shippers to take service at accelerated levels above 24-hour ratable takes); and *El Paso Natural Gas*, FTH Service (offers hourly firm services that allow shippers to take gas at non-ratable flows within the day).

customized services often require the pipeline to set aside capacity for when and if the customer wishes to use the service, these services cost more than traditional firm transportation service. For this reason, pipelines at times have achieved limited success in marketing such services. INGAA urges the Commission to utilize the proposed technical conferences to facilitate the identification of potentially desirable service variations and to foster dialogues between the natural gas and electric industries regarding the need for and composition of such services. As noted above, however, the Commission should avoid a one-size-fits-all approach to pipeline services and recognize that different regions, different markets, and different pipelines may require different baskets of services.

5. Contractual Arrangements and Cost Recovery.

To the extent that the Commission, the state commissions, or industry participants determine that new interstate pipeline infrastructure is required to meet the demand growth from the electric generation industry or that new pipeline services are desirable, the Commission must ensure that interstate pipelines are adequately compensated. Likewise, the Commission must ensure that pipelines are adequately compensated to the extent the Commission or state commissions determine that certain electric generators are required to increase the amount of firm transportation in their portfolios of pipeline transportation services. The interstate natural gas transportation industry is not and should not be put in the position to determine the amount of firm transportation services that must be held by various electric generators in order to alleviate electric reliability concerns. Still, to the extent the Commission and/or the states determines that certain generators are required to contract for additional firm transportation services, pipelines

must be remunerated for providing such service under the fundamental principles of cost-based ratemaking under the NGA.²¹ Such compensation is further necessary to avoid cross-subsidization of electric generators by interstate pipelines' existing, non-generator customers, and to ensure that the pipelines have sufficient resources to meet their service obligations to such non-generator customers.

INGAA recognizes that electric generators often face significant pricing pressures and may have a strong economic incentive to contract for interruptible rather than firm transportation services. As noted above, in organized markets, merchant generators typically are dispatched on a least marginal cost basis, and, under some market structures, merchant generators may receive no compensation if they are not dispatched. Therefore, it is understandable that certain electric generators have less economic incentive to contract for firm pipeline capacity. Nevertheless, to the extent the Commission and the states address this issue, or direct NERC and the state regulatory agencies to determine the amount of additional firm transportation services for which generators or groups of generators must contract to maintain an acceptable level of electric reliability, the Commission and state regulatory agencies must do so in a way that ensures interstate pipelines are properly remunerated for the services they provide.

INGAA and its members appreciate that there are important questions associated with the reliability of a bulk power grid increasingly dependent upon flowing natural gas supplies to generate electricity. Answering such questions with regard to the generation mix and the demand characteristics of such electric markets will inform the load profiles, the take requirements, and the mix of firm and interruptible natural gas transportation services that will support a reliable electric market. But in the first instance, these

²¹ *FPC v. Hope Natural Gas Co.*, 320 U.S. 591, 603 (1944).

questions are ones for the electric load-serving entities to examine and make some determinations. Then, policies governing cost recovery in the electric market must be put in place to support contracting for the natural gas supply and transportation services that are appropriately firm to support the appropriate level of reliability of the electric grid. Working through these issues will take time, and it is critical to begin this as more announcements are made about retiring coal-fired power plants. Thus, FERC must take a leadership role in setting a well-defined agenda and schedule for technical conferences that are designed to achieve timely results.

6. Different Types of Gas-Fired Generation Present Different Challenges for Pipelines in Developing Tailored Services.

The Commission is undoubtedly aware of the different challenges posed by the different markets in which gas-fired generation facilities are being deployed. The challenges associated with providing pipeline services to baseload generators are different from the challenges associated with providing services to peaking generators because the different types of generators have drastically different load profiles. Baseload generators, including gas-fired combined cycle units, already are well-positioned to utilize existing firm transportation service products because the high utilization rate of baseload units provides a strong economic incentive to contract for firm pipeline transportation services. To the extent such generators are in non-RTO markets, cost recovery mechanisms on the generator/load side of the market may be in place as a matter of state or municipal regulation.

Moreover, to the extent new pipeline infrastructure is required to serve baseload units, new firm contracts can be signed to support the necessary expansion facilities. Interstate pipelines stand ready to build such facilities consistent with the long-standing

practices and the Commissions' existing certificate procedures. By contrast, peaking generators have low load factor profiles, with consequently significantly higher per unit costs, that can present cost recovery issues and additional challenges when considering whether to contract for gas transportation or sign up for new pipeline transportation services. Pipelines are able to tailor services to support peaking generators. However, in order to ensure that gas supplies are delivered at the appropriate hourly usage rate required by the customer, capacity on the pipeline must be allocated to that service. In many cases, without new construction, there often is not sufficient flexibility in the system to provide the ramping capabilities that peaking generators need. Further, if a no-notice type service is needed, associated storage capacity would also likely be required. This can present a challenge in areas where storage availability is less prevalent.

In electric markets where it may be uneconomic for a peaking generator to contract for and pay for pipeline capacity,²² peaking-ramping generators will have no financial incentive to sign up for adequate natural gas transportation services, even when pipelines offer them. The issue is not the ability of the natural gas industry to perform on a reliable basis. Rather, the issue is the economic structure of the electric industry and its lack of clear market signals for peaking generators to minimize their fuel supply risks by contracting for adequate natural gas transportation services. As a result, INGAA requests that when the Commission convenes the proposed technical conferences, they include issues related to cost recovery with respect to pipeline transportation services for peaking and other generators.

²² NERC, *2011 Special Reliability Assessment* at 82.

7. The Commission Should Address Nearer-Term Solutions to Improve Communications between the Gas and Electric Industries.

The Commission can take some actions in the nearer term that will improve coordination of the electric and gas industries. Specifically, INGAA urges the Commission to:

1. Clarify that natural gas pipelines can communicate non-public transmission information with RTOs and other transmission system operators, and vice versa, on operational issues and that such communication is exempted from the Standards of Conduct rules.²³
2. Clarify that pipelines can communicate non-public transmission information with RTOs and other transmission system operators and that such communications are not a violation of NGA § 4(b).
3. Clarify that RTOs or transmission system operators can communicate non-public transmission information to a pipeline when there is an electric event that can increase demand on the pipeline, such as when a specific gas generator is not able to operate or when a non-gas plant loses service, and such that communication does not violate the RTOs' governance documents or the Standards of Conduct rules.

These clarifications would allow pipelines to engage in operational communications with their operational transmission counterparties in the electric industry

²³ INGAA notes that 18 C.F.R. § 358.1(c) of the Commission's regulations specifically exclude RTOs and ISOs from the Standards of Conduct rules, yet there still may be confusion in the both industries on the ability to communicate.

and vice versa. Such communications would remove some potential impediments to communications between the natural gas and electric industries.

8. There Is a Role for NAESB, Yet the Commission Must Provide NAESB with Policy Direction.

While there is a continued role for NAESB to facilitate gas-electric communication, policy direction must first come from FERC.²⁴ FERC has an established history of adopting NAESB standards by reference in its regulations after FERC has established policy. Until NAESB receives further policy direction from the Commission per NAESB's 2006 *Gas and Electric Interdependency Final Report*, INGAA believes NAESB's current role is limited. In that report, NAESB recognized that further regulatory guidance from FERC is necessary on six identified efforts to improve gas-electric coordination "as these efforts are controversial and the ability to achieve substantial industry consensus is not certain. . . . It is the committee's opinion that the lack of industry support poses sufficient roadblocks to development and regulatory policy guidance is needed before further efforts [on developing gas-electric standards] can be undertaken."²⁵ The report further stated that three of these six efforts "do not have specific policies in place today, and would require direction from FERC if consensus within the two industries would be achievable."²⁶ Because NAESB did not

²⁴ Per Article 2 NAESB's bylaws, NAESB's purpose is to "develop practices, not policy."

²⁵ NAESB, *Gas and Electric Interdependency Final Report*, February 24, 2006 at 7.

²⁶ NAESB, *Final Report* at 6. Specifically, NAESB requested direction on the following possible standards to improve gas-electric coordination: "(1) Consider the development of standards to support Capacity Release pricing on an index for those pipelines that have the FERC authority to enter into negotiated rates and discount capacity on an index basis. (2) Review the possibility of adding an additional intraday nomination cycle with bumping rights to provide more flexibility to shippers, including power generators, with firm transportation rights such that they can nominate for natural gas supporting their market clearing times. (3) Review the ability of pipelines to shift gas for primary firm transportation within a pipeline path without having to re-offer as secondary firm transportation service. (4) Review and modify the requirements for organized electric markets so that the markets clear in sufficient time to nominate within the existing gas nomination timelines. (5) Require generators to offer into the day ahead market to have the appropriate commercial arrangements to fulfill the needed obligations. (6) Develop the appropriate

receive policy direction from FERC, five of the six items remain unresolved today. INGAA encourages FERC to provide NAESB with sufficient policy direction, where appropriate, for NAESB to develop additional standards.

However, INGAA cautions that modifying the gas-electric day timeline and nomination/scheduling protocols, at this time, would be premature. Modifying an already well-functioning gas day applicable across the country to accommodate generators in different electric markets that continue to rely on interruptible transportation in many parts of the country, on several different electric day timelines, would not create pipeline capacity or alter a shipper's contractual rights.

INGAA supports a NAESB role in developing gas-electric business practice communication standards. In the near term, FERC should clarify what are permissible communications between pipelines and ISOs/RTOs and other transmission system operators. Once FERC has provided such policy direction, NAESB can begin developing new business practice communication standards promptly in this area. FERC also should ask NAESB to review whether there are improvements to Order Nos. 698 and 698-A which can improve pipeline-generator communications.

CONCLUSION

As the electric industry transitions to greater use of natural gas over the next five to ten years, interstate pipelines stand ready to meet demand by continuing to provide reliable service, by building new infrastructure and, where needed, by offering new, tailored services. INGAA urges the Commission to convene a series of timely, and

supporting definitions for new business practices for the Wholesale Electric Quadrant, including but not limited to definitions for: fuel capability, usable alternative fuel capability, firm transportation service, firm sales services, firm supply, and "must run" generator." NAESB developed standards on issue one (1), capacity release.

tightly-focused regional technical conferences – open to all stakeholders, starting in New England, over the next several months – to identify and address how the increased demand for natural gas for electric power generation may affect the reliability of the electric bulk power grid. The Commission should actively participate in these regional conferences and appoint a lead commissioner to each regional technical conference. Each region should be directed to report back to the Commission on its findings and recommended solutions, for its particular region, by December 2012. With strong FERC leadership and with appropriate input from state regulatory agencies, the electric power industry can ensure a continued high level of electric reliability at reasonable cost to customers.

Respectfully submitted,

A handwritten signature in black ink that reads "Joan Dreskin". The signature is written in a cursive style with a large initial "J" and "D".

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