

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Grid Resiliency Pricing Rule

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Docket No. RM18-1-000

COMMENTS OF THE NATURAL GAS SUPPLY ASSOCIATION

Pursuant to the Federal Energy Regulatory Commission’s (“Commission” or “FERC”) Notice Inviting Comments,¹ the Natural Gas Supply Association (“NGSA”) hereby respectfully submits these comments in response to the proposed Department of Energy (“DOE”) Grid Resiliency Pricing Rule (“NOPR”).² As discussed further herein, the underlying premise and the solutions proposed for adoption in the NOPR have no basis, and NGSA urges that the Commission not adopt the proposed rule.

I. Executive Summary

The DOE NOPR would take the Commission in the wrong direction. Over the past two decades, the Commission has encouraged competitive energy markets. The Commission has not been in the business of choosing winners (and thereby losers). Adopting the recommendations in the DOE NOPR, however, would put the Commission’s “finger on the scale” by establishing subsidies for certain uneconomic generators using certain fuel types. This is unwise policy.

The facts do not support the DOE proposal. NGSA urges the Commission to review the evidence in the markets, and the rationale asserted for the proposed rule, to evaluate whether DOE has supported its proposal with a sound factual basis. The evidence shows that generators with 90-day on-site fuel are no more reliable or resilient than natural gas generators with firm pipeline service. Experience with the 2014 Polar Vortex and the recent hurricanes does not support the proposed rule. Indeed, those experiences demonstrate that on-site fuel does not insulate coal and nuclear facilities from weather-related disruptions.

Under the law, FERC cannot adopt the DOE proposal unless it finds, based on sound evidence, that there is a problem to solve and that the proposed rule would solve the problem. Any action by FERC in this area must meet the legal requirements of Section 206 the Federal Power Act (“FPA”)³ and the Administrative Procedure Act (“APA”).⁴ The substance of the DOE proposal

¹ *Grid Reliability and Resilience Pricing*, Notice Inviting Comments (Oct. 2, 2017) (“October 2 Notice”).

² *Grid Resiliency Pricing Rule*, Notice of Proposed Rulemaking, 82 Fed.Reg. 46,940 (Oct. 10, 2017).

³ 16 U.S.C. § 824e.

and the timeline for this rulemaking both fail to meet these legal requirements. Because the assertion of a problem in the DOE NOPR is unsupported by the facts in the markets, the evaluations of the electric reliability organization tasked with evaluating these metrics, or the performance of electric generation availability during the recent natural disasters, there is no sound basis for adopting the proposed rule under Section 206 of the FPA.

FERC should not adopt the DOE proposal. For the reasons listed above, and discussed in more detail below, FERC should not adopt the DOE proposal.

II. Introduction

On September 28, 2017, the Secretary of Energy (“Secretary”) submitted a letter to the Commission proposing, pursuant to Section 403 of the Department of Energy Organization Act,⁵ a rule for consideration and final action by the Commission.⁶ The Secretary has requested that the Commission take expedited action on the NOPR because, he asserted, it was needed as a first step to prevent premature retirements of base load resources and to enhance the resiliency of the electric grid.⁷ On October 2, 2017, the Commission issued a Notice Inviting Comments on the proposed rule. NGSA requests the Commission consider the following comments in evaluating this request by the Secretary.

III. Interest of NGSA

Founded in 1965, NGSA represents integrated and independent energy companies that produce and market domestic natural gas, and is the only national trade association that solely focuses on producer-marketer issues related to the downstream natural gas industry. NGSA encourages the use of natural gas within a balanced national energy policy and supports the

⁴ 5 U.S.C. § 706(2).

⁵ 42 U.S.C. § 7173.

⁶ Letter from R. Perry, Secretary of Energy to N. Chatterjee, Chairman, C. LaFleur, Commissioner, and R. Powelson, Commissioner, FERC, *Secretary of Energy’s Direction that the Federal Energy Regulatory Commission Issue Grid Resiliency Rules Pursuant to the Secretary’s Authority Under Section 403 of the Department of Energy Organization Act* (Sept. 28, 2017) (“Secretary Letter”), <https://energy.gov/sites/prod/files/2017/09/f37/Secretary%20Rick%20Perry%27s%20Letter%20to%20the%20Federal%20Energy%20Regulatory%20Commission.pdf>.

⁷ Secretary Letter at 1.

benefits of competitive markets. NGSA members trade, transact and invest in the U.S. natural gas market in a range of different manners. NGSA has consistently advocated for well-functioning natural gas markets, policies that support market transparency, efficient nomination and scheduling protocols, just and reasonable transportation rates, non-preferential terms and conditions of transportation services and the removal of barriers to developing needed natural gas infrastructure. NGSA has a long-established commitment to ensuring a public policy environment that fosters a growing, competitive market for natural gas. NGSA also supports a balanced energy future, one which ensures a level playing field for all market participants and eliminates inappropriate regulatory barriers to supply.

IV. Factual Issues

A. Natural Gas Is a Reliability Asset for the Power Sector – Not a Vulnerability.

The Secretary Letter and DOE NOPR suggest that there is risk to greater reliance on natural gas because, unlike coal and nuclear plants, natural gas generators do not have on-site fuel supplies. By requiring additional payments to certain baseload generation resources with 90 days of on-site fuel, the DOE NOPR is selectively benefitting those facilities that use a source other than natural gas without justification. To be clear, NGSA supports fuel diversity and the use of all fuel sources and technologies for generating electricity based on competitive market outcomes in which all resources compete on their ability to perform. However, NGSA disagrees with the conclusion in the Secretary Letter and resulting DOE NOPR, and believes that the facts clearly prove that natural gas is a major *contributor* to the reliability of the grid and has proven to be just as reliable, if not more reliable in many circumstances, than other fuel sources, including coal and nuclear. Natural gas generators have flexibility and quick-start capabilities that play an essential role in balancing intermittent resources and maintaining the reliability of

the modern grid. As discussed in more detail below, the important role natural gas plays in maintaining electric reliability cannot be ignored.

The natural gas industry has a remarkable track record for reliability and resilience that continues to grow stronger with every new pipeline interconnection and the expansion of production into more areas across the country. The facts are impressive with interstate pipelines delivering 99.79 percent of firm contractual commitments over the last decade⁸— a number that includes fulfilling firm shippers’ requests during the Polar Vortex when natural gas demand was at a record high and nine percent higher than the previous winter.⁹

As explained in greater detail in the NGC White Paper, the physical characteristics and operations in the natural gas industry make the delivery of natural gas inherently reliable and resilient, particularly because “the natural gas system has many ways of offsetting the impact of disruptions.”¹⁰ Further, failure at a single point typically has only a localized effect, due to pipeline operators’ ability to manage natural gas on the transportation system.¹¹ Natural gas can also be stored, allowing it to serve as a supply cushion and provide operational flexibility for constraints on the pipeline transportation system.¹²

⁸ According to an April 2017 Interstate Natural Gas Association of America (“INGAA”) survey of 51 interstate pipelines, over the ten-year period 2006-2016, pipelines delivered 99.79 percent of “firm” contractual commitments to firm transportation customers at primary delivery points (i.e., the points specified in their contract). Natural Gas Council, *Natural Gas Systems: Reliable & Resilient*, at 8 (July 2017), http://www.ngsa.org/download/analysis_studies/NGC-Reliable-Resilient-Nat-Gas-WHITE-PAPER-Final.pdf (“NGC White Paper”).

⁹ See generally FERC Staff Presentation, *Commission and Industry Actions Relevant to Winter 2013-14 Weather Events*, Docket No. AD14-8-000 (Oct. 16, 2014), <https://www.ferc.gov/media/news-releases/2014/2014-4/10-16-14-A-4-presentation.pdf> (“2014 Staff Weather Event Presentation”). See also FERC Staff Presentation, *Winter 2013-2014 Operations and Market Performance in RTOs and ISOs*, Docket No. AD14-8-000, at 4 (Apr. 1, 2014), <https://www.ferc.gov/legal/staff-reports/2014/04-01-14.pdf> (“During each of these cold events, customers who had firm transportation capacity on natural gas pipelines generally managed to secure natural gas deliveries.”).

¹⁰ NGC White Paper at 6.

¹¹ *Id.* at 7.

¹² *Id.* at 7-8.

Our nation is very fortunate to have abundant natural gas resources that enable our industry to satisfy our customers' needs. In only a few years' time, the United States has become the biggest producer of natural gas in the world. Indeed, estimates of the gas resource base have more than doubled in the last decade.¹³ And just since 2010, production has grown almost 30 percent, with government forecasts calling for production to once again reach the record of near 75 billion cubic feet per day this year.¹⁴ More than a half million wells produce natural gas, spread out over 30 states throughout the country. With most new natural gas production coming from on-shore shale plays and less than 5 percent of production coming from offshore production,¹⁵ the potential for hurricanes to impact the natural gas market is dramatically diminished. Also, Marcellus and Utica shale has brought natural gas closer to consuming markets thereby decreasing reliance on long-haul transportation movements.¹⁶ Natural gas supplies are connected to an extensive pipeline network to get gas to market.

The United States has a vast network of interconnected pipelines that provides multiple transportation and storage options for gas users. Natural gas pipelines and storage are predominantly located underground, which protects them from exposure to severe weather such as cold snaps and hurricanes. Some interstate pipelines have two or more pipelines running parallel, often in the same right-of-way (called pipeline loops), which allows flows to continue

¹³ See generally Potential Gas Committee, *Biennial Report of Potential Supply of Natural Gas in the United States* (Dec. 31, 2014); see also Potential Supply of Natural Gas in the United States, *Presentation on Report of the Potential Gas Committee* (Dec. 31, 2014), at 7 (Apr. 8, 2015), <http://potentialgas.org/wp-content/uploads/2016/10/pgc-press-release-april-2015-slides.pdf>; Potential Supply of Natural Gas in the United States, *Presentation on Report of the Potential Gas Committee* (Dec. 31, 2016), at 8 (July 19, 2017), http://potentialgas.org/wp-content/uploads/PGC_Press_Conference_2017_07-19-2017_Final.pdf.

¹⁴ See U.S. Energy Information Administration, "Short-Term Energy Outlook," at 1 (May 2017), <https://www.eia.gov/outlooks/steo/archives/May17.pdf>; see also U.S. Energy Information Administration, STEO Custom Table Builder (select Frequency, Year Range, and U.S. Natural Gas) (last visited Oct. 20, 2017).

¹⁵ NGC White Paper at 8.

¹⁶ *Id.* at 11 ("In the unlikely event of an unavoidable disruption of supply at a well or in a field, producers have many other options to balance their supply commitments, including increasing production in other areas or using natural gas they have in storage.").

even when a single line has an unexpected issue. Also, the Marcellus and Utica basins have resulted in pipeline flow reversals and bi-directional flows on a number of long-line pipelines, creating more flexibility and bolstering reliability since gas can be fed from both directions.

The U.S. Energy Information Administration (“EIA”) describes the natural gas pipeline network as follows:

- The U.S. natural gas pipeline network is an intricate transportation system made up of about 3 million miles of mainline and other pipelines that links natural gas production areas, and storage facilities with consumers.

. . . .

- About 302,000 miles of wide-diameter, high-pressure interstate transmission pipelines (pipelines that cross state boundaries) and intrastate transmission pipelines (pipelines that operate within state boundaries) transport natural gas from the producing and processing areas to storage facilities and distribution centers. Compressor stations (or pumping stations) located along the length of the pipeline network keep the natural gas flowing forward through the pipeline system. More than 300 companies operate mainline transmission pipelines.
- More than 1,100 local distribution companies deliver natural gas to end users through hundreds of thousands of miles of small-diameter service lines.¹⁷

The vast array of supply, storage, and delivery options available has resulted in a highly flexible and resilient natural gas industry in which operational issues rarely result in an impact on deliveries to gas customers. Unlike the power industry, natural gas moves through a pipe at a rate that allows it to be redirected or isolated to a local area as opposed to causing a cascading event. This allows operators the ability to redirect a shipper’s gas using other available supply and transportation options to continue service to a firm shipper and, if not possible, isolate most incidents to a localized area. Thus, in the natural gas industry, resiliency is not measured based on the time it takes to address a specific operational issue or restoration of one specific facility.

¹⁷ U.S. Energy Information Administration, “Natural Gas Explained, Natural Gas Pipelines – Basics” (last reviewed Nov. 30, 2015), https://www.eia.gov/energyexplained/print.cfm?page=natural_gas_pipelines. Generators typically, but not always, take service directly from a pipeline rather than an LDC.

Rather, natural gas resiliency is measured by the ability of the industry to contain and work around an issue using alternate routes and/or market options in order to continue to serve firm customers without disruption.

B. No Fuel Source Is Failsafe, As Demonstrated by Recent Events.

As recent events have demonstrated, every type of fuel source and technology used for power generation has vulnerabilities that can lead to disruptions of service. Consequently, there is simply no reason to single out specific resources as more reliable than others and to tamper with market outcomes. Rather, all resources should compete in a fuel-neutral manner based on their ability to provide the services that the market requires. The market is much better at making those determinations than market operators or policy makers.

The DOE NOPR is based on an assumption that on-site fuel (and a lot of it) equates to “fuel-secure generation resources” and, accordingly, that these units are much less vulnerable to disruptions relative to just-in-time fuels (which is code for natural gas).¹⁸ However, this is a very inaccurate assumption because, as detailed below, all forms of power, including those touted as “fuel-secure generation,” have vulnerabilities and attributes and there is no sound basis to provide advantages to coal and nuclear generators over natural gas generators.

For example, this past September, in the aftermath of Hurricane Harvey, NRG Energy, Inc. reported that two of its coal plants could not operate due to the inability to deliver rainfall-saturated coal into the silos, requiring them to switch to natural gas.¹⁹ Similarly, coal plants

¹⁸ See U.S. Department of Energy, *Staff Report to the Secretary on Electricity Markets and Reliability*, at 93-94 (Aug. 2017), https://www.eenews.net/assets/2017/08/24/document_gw_06.pdf.

¹⁹ See S&P Global, Platts, *Harvey’s Rain Caused Coal to Gas Switching: NRG Energy* (Sept. 27, 2017), <https://www.platts.com/latest-news/electric-power/houston/harveys-rain-caused-coal-to-gas-switching-nrg-21081527> (“The external coal pile at W.A. Parish became so saturated with rainwater that coal was unable to be delivered into the silos from the conveyer system. In response to that situation, we transferred W.A. Parish Unit 5 and Unit 6 to natural gas rather than coal as the fuel source. These units haven’t used natural gas for operational purposes since 2009.”).

experienced issues during the Polar Vortex from frozen coal piles as well as frozen coal in silos.²⁰ Additionally, coal pile management risks will be exacerbated if they begin to store a 90-day supply to seek full cost recovery as contemplated in DOE’s proposal. Such coal management risks include: spontaneous combustion and risk of fires; polluted water erosion issues; and interrupted flow of supply from blocked coal in silos to the plant, or other feed problems associated with pressure changes or altering the type of coal utilized by the plant. In fact, “coal can get compacted to the point it is harder than it would have been when in the mine,”²¹ requiring special expertise to dislodge the fuel for use by the plant. All of these conditions are vulnerabilities that can impact the ability of a coal plant to operate, despite the existence of on-site fuel.

In a FERC staff presentation to the Commission on December 18, 2014, entitled “Coal Delivery Issues for Electric Generation,” staff detailed significant issues that were resulting in coal inventory deficiencies that were leading to utility and Regional Transmission Organization (“RTO”) concerns about some coal plants’ ability to maintain and build coal stockpiles prior to the winter. Delivery problems included rail delivery issues and a finding that “some locations cannot count on deliveries at all once the water portion of their delivery route is frozen over.”²² According to the North American Electric Reliability Corporation (“NERC”), average forced outage rates for coal plants (7.71 percent) exceeded that of combined cycle natural gas plants (4.29 percent) during the period 2012-2016.²³ In addition, retiring units, which are

²⁰ See, e.g., Staff Weather Event Presentation at 5, 15.

²¹ Julianne Couch, *Coal Storage Hazards and Solutions*, Energy-Tech (Apr. 1, 2014), http://m.energy-tech.com/mobile/columns/regulations_compliance/article_4a726b54-3a23-5a64-a482-cbb84afbd9f7.html.

²² See, e.g., FERC Staff Presentation, *Coal Delivery Issues for Electric Generation*, at 4 (Dec. 18, 2014), <https://www.ferc.gov/media/headlines/2014/2014-4/A-3-presentation-staff.pdf> (“FERC Coal Delivery Presentation”).

²³ See NERC, *Generating Unit Statistical Brochure 4, Column AC, 2012-2016* (Aug. 17, 2017), <http://www.nerc.com/pa/RAPA/gads/Pages/Reports.aspx>.

predominantly coal, have an outage rate three times higher than that of newly added units that are primarily natural gas.²⁴

Nuclear plants also have vulnerabilities despite having the availability of on-site fuel. For instance, nuclear plants are susceptible to extreme weather events such as two of Florida Power & Light plants that shut down in advance of Hurricane Irma.²⁵ More generally, nuclear units are subject to unscheduled outages. This August, for example, a nuclear reactor owned by Exelon in New York unexpectedly shut down during testing of valves and only a month later, a different unit at the same location went offline due to equipment failure.²⁶ Even bird excrement on a transmission line has been known to take a nuclear reactor offline.²⁷ Further, 89 percent of the uranium used for nuclear fuel is produced outside of the United States; undercutting the proposal's argument that nuclear power is indispensable for national security purposes.²⁸ Given the risk of all fuel resources and generation types, the Commission should not create an economic benefit for certain generators based on arbitrary criteria that are not based in fact.

²⁴ See, e.g., PJM Interconnection, L.L.C., Markets & Reliability Committee Presentation 2017 IRM Study Preliminary Results, at 7 (Sept. 28, 2017), <http://pjm.com/-/media/committees-groups/committees/mrc/20170928/20170928-item-07-2017-irm-study-presentation.ashx>; PJM Interconnection, L.L.C., 2017 PJM Reserve Requirement Study, at 9 (Oct. 12, 2017), <http://www.pjm.com/-/media/committees-groups/committees/mrc/20171026/20171026-item-05-2017-irm-study.ashx>.

²⁵ Matt Egan and Cheri Mossburg, *Nuclear Plants in Hurricane Irma's Path are Shutting Down*, CNN Money (Sept. 7, 2017), <http://money.cnn.com/2017/09/07/investing/nuclear-plants-shutdown-florida-irma/>.

²⁶ Exelon, *Nine Mile Point Unit 2 Offline* (Aug. 6, 2017), <http://www.exeloncorp.com/newsroom/nine-mile-point-unit-2-offline>; and Exelon, *Nine Mile Point Unit 1 Offline* (Sept. 6, 2017), <http://www.exeloncorp.com/newsroom/nine-mile-point-unit-1-offline>.

²⁷ CBS News, *Bird Poop Apparently Caused New York Nuclear Reactor Outage* (Mar. 3, 2016), www.cbsnews.com/news/bird-poop-apparently-caused-new-york-nuclear-reactor-outage.

²⁸ See U.S. Energy Information Administration, *Nuclear Explained: Where our Uranium Comes From*, https://www.eia.gov/energyexplained/index.cfm?page=nuclear_where (last updated July 6, 2017).

C. DOE's Directive to FERC Is Not Supported by the Facts.

Despite the many ways natural gas has demonstrated itself to be both reliable and resilient, the Secretary's directive to FERC suggests that there are vulnerabilities associated with relying on increased levels of natural gas for power generation and that extraordinary measures must be taken to change competitive market outcomes to maintain the resiliency of the bulk power system. DOE supports its proposal by citing: (1) a concern that premature retirements of generation with on-site fuel is creating a lack of diversity in the fuel mix; (2) a recent IHS Markit report, on behalf of the Edison Electric Institute, the Nuclear Energy Institute, and the Global Energy Institute at the U.S. Chamber of Commerce,²⁹ that claims there are substantial costs associated with relying on increasing amounts of natural gas and renewables for power; and (3) the performance of natural gas during the Polar Vortex.³⁰ As detailed below, none of these three asserted rationales are supported by the facts.

1. The United States is expected to continue to have a high degree of fuel mix diversity that retains a significant level of coal and nuclear resources.

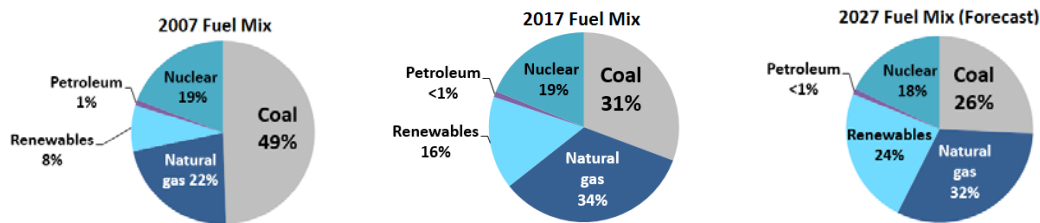
In his Letter, the Secretary states his concerns that the fuel mix is becoming less diverse with the premature retirement of coal and nuclear facilities that have on-site fuel; thereby threatening the resiliency of the grid.³¹ However, the nation's fuel mix is more diverse than it has ever been, and a high level of diversity is expected to remain for the foreseeable future. As shown in the chart below, coal and nuclear currently make up half of the overall fuel mix for

²⁹ IHS Markit, *Ensuring Resilient and Efficient Electricity Generation* (Sept. 2017), https://www.globalenergyinstitute.org/sites/default/files/Value%20of%20the%20Current%20Diverse%20US%20Power%20Supply%20Portfolio_V3-WB.PDF ("IHS Markit Report").

³⁰ Secretary Letter at 2-4; DOE NOPR at 46,942-43.

³¹ Secretary Letter at 2-3; *see also* DOE NOPR at 46,942.

power generation and, according to EIA estimates, will continue to be 44 percent of the fuel mix a decade from now:³²



The Secretary’s underlying assumptions do not appear to take these projections into account. The DOE NOPR resulting from these assumptions, therefore, is not fully informed. The Commission should review the totality of the circumstances and data available on projected retirements and fuel use from all sources before taking any action on changes that impact the economics of the energy markets.

2. IHS Markit Report findings are flawed and based on unrealistic assumptions.

The IHS Markit Report attempts to make the case that greater use of natural gas and renewables will create a less diverse and less resilient grid that is more prone to supply interruptions; thus, putting added costs on consumers. The underlying premise of this study is wrong, however, as are its resulting conclusions. As discussed above, natural gas has proven to be just as reliable as other generation resources and unlike coal and nuclear facilities, provides flexibility and fast-start capabilities that strengthen the reliability of the modern grid. Therefore, unlike the flawed conclusions drawn by IHS Markit, greater use of natural gas based on

³² See U.S. Energy Information Administration, *Annual Energy Outlook 2017: with Projections to 2050*, at 69, 67-88 (Jan. 5, 2017), [https://www.eia.gov/outlooks/aeo/pdf/0383\(2017\).pdf](https://www.eia.gov/outlooks/aeo/pdf/0383(2017).pdf).

competitive market outcomes will lead to the use of the lowest-cost generation and subsequently, lower costs for consumers.³³

Also, the “less efficient diversity” case utilized by IHS Markit to make its comparison with the performance of today’s fuel mix today is unrealistic. The “less efficient diversity” case completely eliminates the use of oil, coal and nuclear for power generation, stating that this could be the case in “some US power systems” within the next decade.³⁴ While this might occur in certain markets, this is not accurate on a nation-wide basis. As shown in the chart above, EIA estimates for 2027 shows coal, nuclear and oil still retaining 44 percent of the overall fuel mix for power generation. This alone clearly shows that IHS Markit’s assumption is not realistic. Further, even in those markets (such as California) that currently operate with very low participation of nuclear- and coal-sourced generation, there is no record evidence to show observable resiliency problems from lack of on-site fuel.

Another flaw in the IHS Markit Report study is that it makes the claim that costs associated with the less-diverse scenario can be avoided by providing subsidies to coal and nuclear plants. Like the DOE NOPR, the IHS Markit Report claims that such subsidies are justified because market distortions already exist - such as renewable subsidies - and introducing an additional market distortion for coal and nuclear will help level the playing field. Certainly, in terms of competitive market structures, correcting one market distortion by adding another is counterproductive. Two wrongs do not make a right. Instead, such a “fix” results in greater market disruptions that only serve to compound unintended consequences and ultimately, reduce investor confidence in the market, which adversely impacts future investment and electric

³³ Additionally, given that all fuel supply disruptions from 2012 to 2016 made up less than 0.00007 percent of power outages, it is inconceivable that the costs and economic implications presented in this study are valid. See Trevor Houser, John Larsen and Peter Marsten, “The Real Electricity Reliability Crisis,” Rhodium Group (Oct. 3, 2017), <http://rhg.com/notes/the-real-electricity-reliability-crisis>.

³⁴ IHS Markit Report at 4.

reliability. We have to ask ourselves, who will make investments to participate in such a distorted market?

The Secretary has supported DOE's proposal as being justified because competitive electric markets are a "fallacy" anyway.³⁵ While there is no such thing as a perfect market, regulatory mandates are not better than market solutions. Instead, steps should be taken to make improvements that encourage greater competition in markets, not further distort them.

3. The natural gas industry performed remarkably during the Polar Vortex.

The historically cold winter of 2013-2014 caused by widespread low temperatures across the country created an all-time high in natural gas demand that was nine percent over the previous winter, stressing the capabilities of the market. Record amounts of natural gas were withdrawn from storage with storage withdrawals averaging 138 Bcf/day to assist in meeting the increased demand.

Despite these extreme conditions and only a few days' notice, the natural gas industry was still able to honor its firm fuel supply and transportation contracts.³⁶ Reflecting the strong market resilience, weekly storage injections consistently exceeding the five-year average were made in preparation of the 2014-2015 heating season. Freeze-offs occurred due to the severe

³⁵ At a Congressional hearing held October 12, 2017, the Secretary dismissed competition in the electric markets, stating "I think the idea that there is a free market in electrical generation is a fallacy." See Timothy Cama, *Lawmakers slam DOE's proposal to help coal, nuclear power*, The Hill, Oct. 12, 2017, <http://thehill.com/policy/energy-environment/355136-lawmakers-slam-does-proposal-to-help-coal-nuclear>. See Department of Energy Missions and Priorities, Preliminary Transcript at 51, 52, H. Comm. on Energy and Commerce (Oct. 12, 2017), <http://docs.house.gov/meetings/IF/IF03/20171012/106506/HHRG-115-IF03-Transcript-20171012.pdf>.

³⁶ See supra note 9. See also Statement of Donald F. Santa, President and CEO, Interstate Natural Gas Association of America, before the House Subcommittee on Energy and Power, Committee on Energy and Commerce (Mar. 6, 2014) ("With but extremely few exceptions, there have been no service disruptions or curtailments for natural gas pipeline customers that contracted for reliable, firm service. The rare disruptions were caused by mechanical difficulties and were limited to only a day or so. Given the magnitude of demand across much of the country, the extreme operating conditions and the resulting stress placed on the overall system, the natural gas transmission pipeline industry's performance has been remarkable"), <http://docs.house.gov/meetings/IF/IF03/20140306/101847/HHRG-113-IF03-Wstate-SantaD-20140306.pdf>.

weather yet the overall impact on supply was minimal with most freeze-offs lasting less than one day with daily winter gas production actually exceeding the prior winter by more than two percent.³⁷ Certainly, the ability to work through such extreme conditions is a testament to the flexibility and efficiency of the integrated natural gas system.

During peak periods of the Polar Vortex, customers that opted to rely on interruptible pipeline transportation services were not always able to secure service because the pipelines simply did not have spare capacity (interruptible transportation service) to offer after serving their firm commitments.³⁸

When a customer signs a contract for interruptible transportation with a pipeline company, they are agreeing to only be served when the pipeline has spare capacity available after meeting all firm commitments. In fact, interruptible service can be bumped during the nomination process by a firm shipper nomination until the third and final intraday cycle. Thus, relying on interruptible service is a risky proposition for anyone that must have natural gas during peak periods and is in no way a reflection on the gas industry's ability to perform. Generators who relied on interruptible service made a conscious decision to accept the risk of not getting gas in return for not paying for firm reservation charges. You would not say an airline is unreliable simply because all seats were sold on a holiday weekend and a person going stand-by was not able to make the flight. The stand-by flyer's situation has nothing to do with the airplane's ability to get to the destination.

³⁷ See NGSAs, Winter 2013-2014 Market Conditions Frequently Asked Questions: Twenty Questions about Natural Gas Performance During Winter 2013-2014, <http://www.ngsa.org/winter-2013-14-market-conditions-frequently-asked-questions/>. Natural gas wellhead freeze-off happens when outside temperatures drop below freezing in producing fields. If the wellhead is not protected, water and other liquids in the gas can freeze and block the flow of gas.

³⁸ Interruptible contracts are most suited for companies that can accommodate occasional disruption because of their ability to rely on alternate fuels or to temporarily halt their operations. In exchange, these pipeline customers are able to pay as they go rather than pay a firm monthly fee to reserve firm capacity.

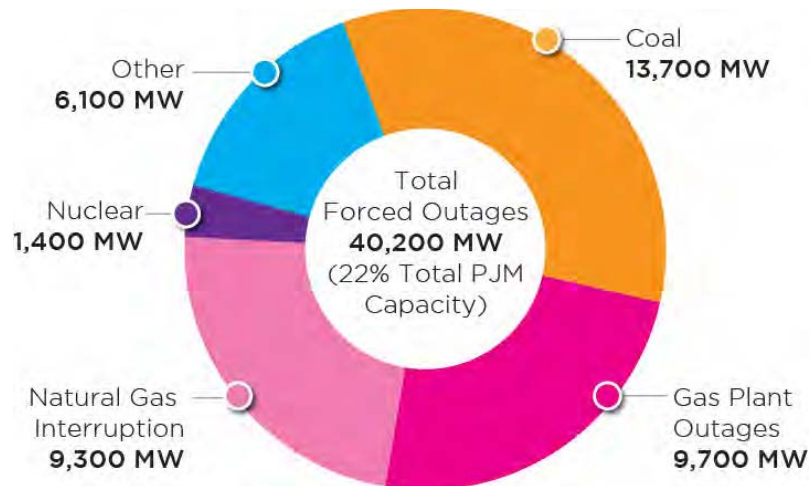
Sufficient infrastructure is critical to serving firm natural gas demand. A willingness to financially support the building of new pipeline capacity to serve a customer's requirements should be a priority for those that depend on natural gas for reliability.³⁹ However, a lack of infrastructure in some regions is not a measure of the natural gas industry's operational performance, which is solely based on the infrastructure that is in place.

Given the high level of performance of the gas industry during the Polar Vortex, it is perplexing why officials point to this event as an example of the natural gas industry's failure to perform. It appears that there has been a long-held misunderstanding of the facts, particularly in the PJM market.

Below is a pie chart that has been presented by PJM on numerous occasions,⁴⁰ as well as appearing in several of its market assessment reports:

³⁹ NGSAs has previously supported proposed actions to incent such actions in ISO-NE and PJM. *See* Motion to Intervene and Comments of the Natural Gas Supply Association in Support of ISO New England's Pay for Performance Proposal, *ISO New England Inc.*, Docket Nos. ER14-1050-000, 001 (filed Feb. 12, 2014); Motion to Intervene and Comments of the Natural Gas Supply Association in Support of PJM's Proposed Capacity Performance Resource Provision, *PJM Interconnection, L.L.C.*, Docket No. ER15-623-000 (filed Jan. 20, 2015).

⁴⁰ For example, *see* PJM Interconnection, Analysis of Operational Events and Market Impacts During the January 2014 Cold Weather Events at 26, (May 8, 2014) <http://www.pjm.com/~media/library/reports-notices/weather-related/20140509-analysis-of-operational-events-and-market-impacts-during-the-jan-2014-cold-weather-events.ashx>; and PJM Interconnection, Appendix to PJM's Evolving Resource Mix and System Reliability, PJM Interconnection at 5 (Mar. 30, 2017) <http://www.pjm.com/~media/library/reports-notices/special-reports/20170330-appendix-to-pjms-evolving-resource-mix-and-system-reliability.ashx>.



This chart and accompanying analysis is often misinterpreted. Many are quick to conclude that the light pink area entitled “natural gas interruption” represents a failure of the natural gas industry to perform reliably during the Polar Vortex. However, as detailed below, that is not the case.

Due to the manner in which generators report outages, this category of “natural gas interruptions” can be attributable to variety of reasons a generator may not have secured fuel, such as non-firm contracting practices by the generator, economic decisions made by the generator and, finally, a failure of the pipeline to deliver a generator’s contracted level of gas. NERC’s Generating Availability Data System (GADS) does not provide sufficient detail to determine what reason caused the “lack of fuel.” However, given that FERC staff found that the natural gas industry met its firm entitlements during the Polar Vortex, the most likely conclusion is that PJM’s category of “gas interruptions” is primarily associated with generator contracting practices that rely on the availability of interruptible (spare) transportation pipeline capacity at peak rather than a reflection of the gas industry’s ability to perform.⁴¹ Contract and price issues

⁴¹ NGSAs has previously filed comments urging FERC and NERC to work on improvements to GADS reporting so that market participants and policymakers have a clearer understanding of the actual issues that cause generator outages. See Comments of the Natural Gas Supply Association on RTO and ISO Fuel Assurance Reports, Docket Nos. AD13-7-000 and AD14-8-000 (Mar. 20, 2015).

can be mitigated by securing firm supply and transportation services in advance. In fact, with PJM's implementation of capacity performance, NGSAs expect that many of the contract issues may have already been addressed by generators securing firm contractual arrangements with pipelines or marketers or ensuring the availability of back-up fuel so that they are prepared to run during severe and extended cold snaps.

Similarly, another false conclusion discussed in conjunction with the Polar Vortex is that this event created a temporary spike in prices for all customers using natural gas during the Polar Vortex. While there were volatile prices in a number of regions in which the supply and demand balance was tight, this price increase was only borne by those gas purchasers that relied on the daily spot market for purchasing natural gas. As the Commission knows, customers have the option to make advance supply arrangements that do not leave them vulnerable to daily market volatility. As stated in an Energy Law Journal article on contracting over a decade ago, “[g]iven that reliability is the cornerstone of the natural gas industry, the tendency will be to cover much, if not all, of the anticipated needs with forward gas-purchase contracts, leaving perhaps only a relatively small portion to be met in the market on a current basis.”⁴² A failure by a customer to insure itself against price spikes in an active competitive gas spot market is not a reason to bias the power markets against natural gas generation.

V. The DOE NOPR Does Not Meet the Legal Requirements for a Section 206 Rulemaking.

The Commission has limited authority to establish a rule under section 206 of the FPA.⁴³ Under section 206, the Commission must establish that the existing RTO/ISO tariffs are unjust and unreasonable requiring changes to these tariffs. The discussion in the DOE NOPR does not

⁴² Jeffrey Petrash, *Long-Term Natural Gas Contracts: Dead, Dying, or Merely Resting*, 27 Energy L.J. 545, 561 (2006).

⁴³ 16 U.S.C. § 824e.

support such a finding. In fact, as discussed in section IV above, there is no evidence that the nation's electricity system is facing a threat to its reliability or resiliency that is due to the retirement of some coal and nuclear generation units. In fact, there is substantial evidence that the nation has a flexible, reliable and resilient grid supported by generators with a diversity of fuel sources now, and will continue to have such a grid well into the future.⁴⁴ Therefore, the Secretary's proposal to adopt, on an expedited basis, a rule that would substantially disrupt the economics of the existing markets seems to be more about politics than a well-founded use of regulatory authority to identify and address real problems.

The legal basis required for section 206 action is twofold. First, the Commission must find that the existing rate, tariff, contract or practice of a public utility (in this case, an RTO or ISO) is, in fact, "unjust, unreasonable, unduly discriminatory or preferential."⁴⁵ Second, the Commission then must establish that its remedy is just and reasonable and not unduly discriminatory.⁴⁶ In addition to meeting the standards of section 206, the APA requires that the Commission's determinations not be "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law" and that its findings be supported by "substantial evidence."⁴⁷

Critically, the DOE NOPR fails both prongs of the requirements for FERC action under section 206. First, the DOE NOPR provides no factual basis for finding that the existing rates are unjust and unreasonable. As shown above, the underlying assumption that natural gas-fired units are a detriment to resiliency of the grid is patently false.

⁴⁴ As discussed above, EIA estimates that coal and nuclear will continue to be 44 percent of the fuel mix in 2027. *See supra* note 32.

⁴⁵ 16 U.S.C. § 824e.

⁴⁶ *See Algonquin Gas Transmission Co. v. FERC*, 948 F.2d 1305, 1308 (D.C. Cir. 1991) (articulating FERC's two-part burden); *see also Cal. Indep. Sys. Operator Corp. v. FERC*, 372 F.3d 395, 398-99 (D.C. Cir. 2004); *Atl. City Elec. Co. v. FERC*, 295 F.3d 1, 10 (D.C. Cir. 2002).

⁴⁷ 5 U.S.C. §706(2). *See also Nat'l Fuel Gas Supply Corp. v. FERC*, 468 F. 3d 831, 839 (D.C. Cir. 2006).

Further, the availability of on-site fuel storage does not guarantee availability of the generator as shown by the studies following the Polar Vortex and the outages faced during the recent hurricanes.⁴⁸ Coal-fired generation cannot be seen as a guaranteed source of power, given the flooding and freezing of coal piles in the recent natural disasters.⁴⁹ In fact, no generator is immune from disruption.

In any event, a simple assertion that “resiliency”⁵⁰ (a term undefined in the NOPR) is threatened by the retirement of specific resources cannot meet the requirement to show that existing RTO and ISO tariffs are unjust and unreasonable. Speculation alone is not available as a basis for regulatory action.⁵¹ The fact is that there is no evidence supporting the need for this rule and has been no showing that the existing rules are not just and reasonable.

Moreover, the DOE NOPR and the Commission’s October 2 Notice do not meet the statutory requirements for notice and comment procedures under the APA. The APA requires that an agency must “provide notice of its proposed rulemaking adequate to afford ‘interested parties a reasonable opportunity to participate in the rulemaking process.’ Such notice must not only give adequate time for comments, but also must provide sufficient factual detail and rationale for the rule to permit interested parties to comment meaningfully.”⁵² Instead, the DOE NOPR makes very little effort to connect the proffered policy rationale to the statutory standard for action under section 206 of the FPA. Moreover, the DOE NOPR provides precious little detail about what is actually proposed. Fundamentally, for instance, it is not clear whether the

⁴⁸ See *supra* notes 9, 19, 20.

⁴⁹ *Id.*

⁵⁰ DOE NOPR at 46,941.

⁵¹ *Fla. Gas Transmission Co. v. FERC*, 604 F.3d 636, 641 (D.C. Cir. 2010) (agency cannot act “based on speculation, conjecture, divination, or anything short of factual findings based on substantial evidence.”).

⁵² See *Fla. Power & Light Co. v. United States*, 846 F.2d 765, 771 (D.C. Cir. 1988) (internal quotation omitted) (citing *Conn. Light & Power Co. v. NRC*, 673 F.2d 525, 530-31 (D.C. Cir.), *cert. denied*, 459 U.S. 835 (1982); *Home Box Office, Inc. v. FCC*, 567 F.2d 9, 35 (D.C. Cir.), *cert. denied*, 434 U.S. 829 (1977)).

proposed remedy is an adjustment to the RTO/ISO energy markets, capacity markets, or ancillary services markets, or an out-of-market payment akin to a reliability-must-run agreement.

The insufficiency of the notice provided by the DOE NOPR is compounded by the extraordinarily short timeframe provided by DOE. The DOE NOPR directs the Commission to “take final action” within 60 days of the Federal Register publication of the NOPR. To meet this directive, the Commission permitted parties less than two weeks from the date of publication to submit comments on the DOE NOPR.⁵³ In contrast, most rulemaking proceedings at the Commission allow for a 60-90 day initial comment period, and rulemaking proceedings with substantial impact on the regulated industries take multiple years, not two months to complete. For example, the rulemaking process that led to Order No. 636 was initiated under a Policy Statement in May 1989.⁵⁴ After issuing an order on rehearing and clarification of that Policy Statement later that same year, the Commission held a technical conference and invited comments before establishing a rulemaking proceeding on the issues in 1991.⁵⁵ A final rule was not issued in that proceeding until April 1992, with subsequent rehearing and clarification orders continuing until 1998.⁵⁶ While the Secretary’s proposal is unjustified by the facts, any attempt to reorganize markets is never a simple task, as evidenced by that landmark rule. The Commission

⁵³ FERC’s October 2 Notice predated the publication of the DOE NOPR. The DOE NOPR publication date was October 10, 2017. The October 2 Notice required initial comments by October 23, 2017. A subsequent notice denied the request for extension filed by a substantial number of industry stakeholders.

⁵⁴ *Interstate Natural Gas Rate Design*, 47 FERC ¶ 61,295 (1989), *order on reh’g*, 48 FERC ¶ 61,122 (1989).

⁵⁵ Notice of Public Conference, Docket No. PL89-2-000 (Nov. 28, 1990); Notice of Extension of Time, Docket No. PL89-2-000 (Dec. 13, 1990). The initial conference was rescheduled from January 8, 1991 to January 25, 1991, with written comments due on January 18, 1991.

⁵⁶ *Pipeline Service Obligations and Revisions to Regulations Governing Self-Implementing Transportation; and Regulation of Natural Gas Pipelines After Partial Wellhead Decontrol*, Order No. 636, FERC Stats. & Regs., Regs. Preambles 1991-1996 ¶ 30,939 (1992), *order on reh’g*, Order No. 636-A, FERC Stats. & Regs., Regs. Preambles 1991-1996 ¶ 30,950 (1992), *reh’g denied*, Order No. 636-B, 61 FERC ¶ 61,272 (1992), *reh’g denied*, 62 FERC ¶ 61,007 (1993), *aff’d in part and remanded in part sub. nom.*, *United Distribution Cos. v. FERC*, 88 F.3d 1105 (D.C. Cir. 1996), *cert. denied sub nom.*, *Assoc. Gas Distribs. v. FERC*, 520 U.S. 1224 (1997), *order on remand*, Order No. 636-C, 78 FERC ¶ 61,186 (1997), *order on reh’g*, Order No. 636-D, 83 FERC ¶ 61,210 (1998).

is not permitted under administrative law principles to require a market modification subject to its statutory authority without adequate specificity and time for consideration. The APA requirements must be met to avoid making structural market changes with long-term consequences to the markets and customers without full and fair consideration.

The Commission, of course, has the statutory authority to reject the directive from the Secretary when the rulemaking does not meet the necessary legal requirements.⁵⁷ Rushing to enact a faulty and counter-productive market intervention is simply not supported by the law or the facts here.

VI. The DOE NOPR Will Have Detrimental Impacts on the Power Markets.

Finally, the Commission should reject the subsidy proposed for generators with 90-day on-site fuel storage because this proposal departs from long-standing FERC policy and precedent supporting reliance on competitive market forces. The creation of regional organized markets - and the continual efforts to enhance competition in those markets - has been the centerpiece of the Commission's electricity policy over the past two decades. Facing numerous hurdles, the Commission has pushed forward to create the competitive electric markets which are among the landmark achievements in the Commission's history. The DOE NOPR flies in the face of the market structure the Commission has fought so hard to create.

Over the past several years, NGSAs have supported numerous competitive market solutions in the RTO/ISO markets. In these cases, the solutions for capacity and energy markets were tailored to provide a greater opportunity for generators to be compensated for actions they take to ensure they can meet their power market obligations, such as new investment in generation or

⁵⁷ Section 403(a) of the DOE Organization Act authorizes the Secretary of Energy to propose rules within the jurisdiction of FERC, but section 403(b) is clear that "[t]he Commission shall have exclusive jurisdiction with respect to any proposal made under subsection (a), and shall consider and take final action on any proposal made by the Secretary." 42 U.S.C. § 7173(b).

contractually firming up their fuel deliveries. Most recently, NGSA supported the Commission's energy price formation reforms implemented in Order No. 825 that better align dispatch and settlement intervals and remove restrictions on shortage pricing.⁵⁸ Price reforms, such as those proposed by the Commission in Order No. 825, enhance the ability of generators to bolster fuel assurance in the regional electricity markets they serve. Additionally, NGSA supported ISO-NE's and PJM's pay-for-performance programs that provide incentives for improved generator performance, which are positive steps toward more accurate market price signals that bolster fuel assurance and grid reliability.⁵⁹ NGSA, however, cannot support this anti-competitive proposal that backtracks from the last two decades of work by the Commission as well as its recent strides to continue to improve competitive markets.

As the Commission stated in its latest strategic plan, the Commission's primary strategy for establishing jurisdictional rates that are just, reasonable, and not unduly discriminatory or preferential is to "[e]mploy competitive forces" because:

[m]arketplace competition benefits energy consumers by encouraging diverse resources, spurring innovation and deployment of new technologies, improving operating performance, and exerting downward pressure on costs. . . . Building on its past efforts to enhance competition in regional organized wholesale electricity markets, FERC will engage regional transmission organizations (RTO) and independent system operators (ISO), as well as other regulated entities and interested stakeholders, to ensure that energy, capacity, and ancillary services markets provide appropriate price signals, support market evolution, and provide appropriate opportunities for all eligible resources, including emerging technologies.⁶⁰

⁵⁸ *Settlement Intervals and Shortage Pricing in Markets Operated by Regional Transmission Organizations And Independent System Operators*, Order No. 825, FERC Stats. & Regs. ¶ 31,384 (2016). See Comments of the Natural Gas Supply Association In Support of Energy Price Formation Reforms, *Settlement Intervals and Shortage Pricing in Markets Operated by Regional Transmission Organizations And Independent System Operators*, Docket No. RM15-24-000, (filed Nov. 30, 2015).

⁵⁹ See *PJM Interconnection, L.L.C.*, 151 FERC ¶ 61,208 (2015), *order on reh'g*, 155 FERC ¶ 61,157 (2016). *ISO New England Inc.*, 147 FERC ¶ 61,172 (2014), *reh'g denied*, 153 FERC ¶ 61,223 (2015).

⁶⁰ FERC, Strategic Plan FY 2014-2018 at 8 (March 2014), <https://www.ferc.gov/about/strat-docs/FY-2014-FY-2018-strat-plan.pdf>.

NGSA believes that this strategy has served energy markets and consumers well with lower prices to consumers for reliable electricity service. However, the DOE NOPR is the antithesis of this strategy and should be outright rejected.

In addition, the Commission must consider the long-term implications on investment in new generation created by market uncertainty and distortions in the organized markets. Suppression of energy prices, through subsidies or other non-competitive structures, disrupt the pricing signals that encourage new infrastructure investments. If energy prices are free from market distortions, consideration of attributes other than actual generator performance are unnecessary to encourage new investment, enhance performance and maintain system reliability. It is only when energy prices are suppressed through market intrusions that additional regulatory-directed payments on top of the market clearing price are seemingly needed to compensate for those market distortions. Creating additional market distortions, with no sound justification, disrupts the function of the markets and ultimately increases the costs to customers. Inefficient and distorted market signals impact a wide array of decisions in the industry, including infrastructure investment, siting, fuel selection and contracting, and fuel transportation and storage. The Commission should continue to support competitive regional electricity markets, allowing the markets to select the most economically efficient results for fuel mix. Unjustified market intrusions dilute market signals and result in the regulators picking winners and losers based on political motivations, rather than consumer interests.

VII. Conclusion

For the reasons stated above, NGSA respectfully requests that the Commission decide not to adopt the proposal made by Secretary Perry. The DOE NOPR's recommendations are not

supported by the facts, would disrupt market signals already in place for reliability and resource adequacy in the regional organized markets, and would be costly to consumers.

Respectfully submitted,

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