



Comments of the Natural Gas Council PJM's Valuing Fuel Security Initiative

On April 30, 2018, PJM Interconnection, LLC (PJM) announced that it was embarking on an effort to ensure that PJM has sufficient levels of “fuel secure resources” in vulnerable locations of its system. PJM has made a meaningful effort to keep members of the Natural Gas Council (NGC) well-informed about the process, including engagement with the NGC during stakeholder discussions and seeking NGC input on specific risks to the delivery of natural gas that may impact its system. To that end, we wish to provide our perspective on important matters for PJM to consider as it undertakes its fuel security initiative.

(1) ***PJM's efforts to identify fuel security risks should not single out natural gas; other resources should be subjected to the same level of scrutiny.*** To date, PJM's documents and presentations suggest that this effort is focused on the risks associated with greater reliance on natural gas as a fuel for electric generation. We have not seen evidence of a serious effort to examine closely the types of scenarios that could pose risks to other fuel sources. The NGC recommends that PJM apply the same level of scrutiny in examining fuel availability risks associated with other fuels for electric generation that it has applied to natural gas thus far. For example, the inquiry should analyze, *inter alia*, potential issues with coal delivery and nuclear generator facility shutdowns due to inherent sensitivities to external stimuli despite having on-site fuel.¹ The PJM fuel security study should examine issues related to the availability of all fuels – and should not be confined to natural gas delivery and transportation. PJM's fuel security initiative should look at the whole system of how all generators acquire fuel, how and under what terms fuel is transported, how fuel is stored, and under what circumstances fuel is not available for use. Further, the threat scenarios developed by the U.S. Department of Energy should be used to evaluate all fuel sources, not just natural gas.

¹ “...the fuel security benefit of today's NPPs would be largely inaccessible precisely at the time society might benefit most from it.” P. 12. Sherrell R. Greene (2018) Are Current U.S. Nuclear Power Plants Grid Resilience Assets?, *Nuclear Technology*, 202:1, 1-14, DOI: 10.1080/00295450.2018.1432966. To link to this article: <https://doi.org/10.1080/00295450.2018.1432966>

- (2) **Fuel security should be considered as part of a system-wide evaluation of all risks that threaten electric grid stability.** Analyzing fuel security issues in isolation without evaluating them against the myriad of other risks that the electric grid faces incompletely measures the overall risk to the electric grid and should not be the primary driver for consideration of new reliability and resilience actions. For example, the likelihood and impact of a cyber attack against electric generators or *force majeure* and weather-related events that threaten electricity infrastructure must also be weighed against the evaluated threats to fuels for electric generators. Without consideration of these non-fuel security risks, PJM may incorrectly conclude a greater impact posed by inadequate fuels than the more likely scenarios, such as extreme weather events that take down electric infrastructure.
- (3) **PJM's modeling assumptions, inputs and outcomes should be fact-based, within a range of reasonableness, and should not be biased against any particular resource.** The modeling results from PJM's study are likely to form the basis for selecting certain generation units over others. PJM must take a reasonable approach to identifying its modeling inputs and methodology. Further, the scenarios must be fact-based and tied to realistic projections and scenarios, and should not be affected by pressure from outside sources that desire a particular outcome. In conducting this study, PJM should employ a probabilistic approach, bound by realistic and historical scenarios to ensure that the appropriate range of outcomes is analyzed.
- (4) **PJM should not rush the analysis and the adoption of market changes that may result from the analysis; there is no reason why this effort must be finished in time for the May 2019 Base Residual Auction.** PJM has acknowledged that "that there is no immediate threat to system reliability."² PJM is conducting a novel fuel security study, the results of which could significantly affect market design within its footprint. Given the comprehensive information collection and detailed analysis required to conduct and review PJM's study, it is unrealistic for PJM to expect that it will be in a position in early 2019 to make the Federal Power Act section 205 filing that would be required to modify its Reliability Pricing Model before the May 2019 Base Residual Auction. PJM should modify its study timeline to allow for a thorough analysis and a complete review by subject matter experts from the electric, natural gas and other sectors studied.
- (5) **PJM should ensure fuel neutrality when developing the attributes, criteria or quantitative measurements that will be used to define a fuel secure unit.** PJM has not yet explicitly announced how it will define "fuel secure" generation. However, slide 28 of PJM's June 28, 2018 presentation to stakeholders provides an example in which all technology types would be eligible to demonstrate that they could serve load at a specified output for a specified duration to mitigate specified risks. While this generic metric appears fuel-neutral on its face, this is dependent upon how PJM intends to measure a generator's ability to meet those specified targets. Therefore, PJM's methodology for measuring a generator's ability to serve load must also be fact-based, reasonable and fuel-neutral. To that end, PJM should

² PJM Statement on Potential Department of Energy Market Intervention, June 1, 2018.

recognize that fuel security is not a binary issue; it is best measured as a scale based on factors including likelihood and consequence of an outage.

(6) ***PJM should consider the incremental value versus the costs as it contemplates potential market structure changes associated with this effort.*** As PJM stated in its submission on resilience to FERC on March 9, 2018, an important consideration when establishing criteria is that it is not economically efficient to protect the Bulk Electric System (BES) from every conceivable risk.³ PJM also stated RTOs/ISOs should not be required to plan and design the BES to be invulnerable to a broad spectrum of hazards and corresponding impacts, without considering the cost to doing so or the incremental value that may be achieved in making such improvements--for a contingency that will rarely, if ever, occur.⁴

(7) ***PJM should clearly articulate why additional steps are warranted now, considering the improvements resulting from the recent implementation of PJM's capacity performance program and its effectiveness for providing fuel secure resources.*** PJM's reason for designing and implementing its capacity performance mechanism was to "address the risks of **fuel security** associated with individual generating plants by incenting the 'firming' of fuel supply through firm gas service contracts, or firm service contracts with greater flexibility, or the installation of dual fuel capability, which combines back-up oil fuel with primary natural gas fuel."⁵ Furthermore, PJM just came out of its first winter operating under its capacity performance program. According to its cold snap report, PJM already has seen substantial improvements in generator performance as compared to the Polar Vortex timeframe. There was a "significant reduction in forced outages" and "no reported firm capacity restrictions during this period."⁶ Therefore, it is unclear why PJM believes, notwithstanding its success in the first year of operating under capacity performance, it must consider further steps that would dictate how generators meet their commitments and plan for contingencies.

³ COMMENTS AND RESPONSES OF PJM INTERCONNECTION, L.L.C., Grid Resilience in Regional Transmission Organizations and Independent System Operators at p. 41, Docket No. AD18-7-000

⁴ See *Id.* at pp. 10 and 41

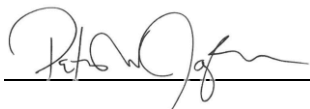
⁵ See p. 36 of PJM's Evolving Resource Mix and System Reliability (<http://pjm.com/-/media/library/reports-notices/special-reports/20170330-pjms-evolving-resource-mix-and-system-reliability.ashx?la=en>). Also see *PJM Interconnection, L.L.C.*, 151 FERC ¶ 61,208, at P 8 (2015). (PJM's capacity performance program was "designed to ensure that resources committed as capacity to meet PJM's reliability needs will deliver the promised energy and reserves when called upon in emergencies, and thus will provide the reliability that the region expects and requires.").

⁶ See pp. 1-2 and 17 of PJM Cold Snap Performance, Feb. 26, 2018. ("Many factors drove this improved performance. In addition to milder weather, these include enhancements PJM and its member companies have put in place in the years since the Polar Vortex, such as increased investment in existing resources, improved performance incentives, enhanced winterization measures and increased gas-electric coordination.") p. 2.

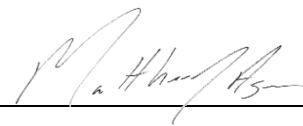
The NGC appreciates your consideration of the above comments and looks forward to continuing to work with PJM and its stakeholders as this process continues.

Dated: August 9, 2018

Respectfully submitted,



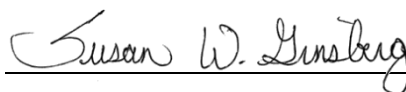
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