STATEMENT

Statement of
Commissioner Richard Glick on
Grid Reliability and Resilience Pricing

Date: January 8, 2018

Docket Nos.: RM18-1-000, AD18-7-000

"I fully support the Commission's action today to initiate a new proceeding examining the resilience of the bulk power system. I commend the Chairman for his leadership in guiding the Commission as it addresses this difficult, but important issue. I also support the Commission's decision to terminate Docket No. RM18-1-000, which addressed the Proposed Rule on Grid Reliability and Resilience Pricing (Proposed Rule) submitted to the Commission by the Secretary of the Department of Energy. The Proposed Rule had little, if anything, to do with resilience, and was instead aimed at subsidizing certain uncompetitive electric generation technologies. As my colleague Commissioner LaFleur explains, it is important to consider the resilience of the bulk power system in a larger context that accounts for the changing electricity industry rather than seeking to preserve the *status quo*.

"I write separately to explain my rationale for concluding that the Proposed Rule is inconsistent with the Commission's statutory responsibilities. Although the Department had the authority under Section 403 of the Department of Energy Organization Act[1] to submit the Proposed Rule, the Commission could adopt the proposal only if it met the requirements of section 206[2] of the Federal Power Act. The Proposed Rule fails to meet that standard.

"As today's order recognizes, the record in this proceeding—as well as the other proceedings referenced by the Department[3]—does not support the Department's contention that the tariffs of certain RTOs and ISOs are unjust and unreasonable or unduly discriminatory or preferential. The Department's own staff Grid Study concluded that changes in the generation mix, including the retirement of coal and nuclear generators, have not diminished the grid's reliability or otherwise posed a significant and immediate threat to the resilience of the electric grid.[4] To the contrary, the addition of a diverse array of generation resources, including natural gas, solar, wind, and geothermal, as well as maturing technologies, such as energy storage, distributed generation, and demand response, have in many respects contributed to the resilience of the bulk power system. The record in this proceeding does not demonstrate any need for the Commission to interfere with the continued evolution of the bulk power system.

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[1] 42 U.S.C. § 7173 (2012).

[2] 16 U.S.C. § 824e (2012).

[3] *Grid Resiliency Pricing Rule*, 82 Fed. Reg. 46,940, 46,944-45 (2017).

[4] *Staff Report to the Secretary on Electricity Markets and Reliability*, United States Department of Energy at 63, 100 (Aug. 2017), *available at* https://energy.gov/sites/prod/files/2017/08/f36/Staff%20Report%20on%20Electricity%20Markets%20and%20Reliability_0.pdf (Department of Energy Grid Study).

"Nor does the record support the Department's proposed remedy: A multi-billion dollar bailout targeted at coal and nuclear generating facilities.[5] There is no evidence in the record to suggest that temporarily delaying the retirement of uncompetitive coal and nuclear generators would meaningfully improve the resilience of the grid. Rather, the record demonstrates that, if a threat to grid resilience exists, the threat lies mostly with the transmission and distribution systems, where virtually all significant disruptions occur.[6] It is, after all, those systems that have faced the most significant challenges during extreme weather events.

"In addition, coal and nuclear generators face resilience challenges of their own. As has been well-documented, many coal and nuclear plants with significant on-site fuel supplies have failed to function during extreme weather events because those fuel supplies froze, flooded, or were otherwise unavailable.[7] In fact, initial reports indicate that coal-fired facilities accounted for nearly half of all forced outages in PJM during last week's period of extreme temperatures. Similarly, during the same period, the Pilgrim Nuclear Power Station was manually removed from service complicating efforts to serve load within ISO-NE. And, even when fully operational, many coal and nuclear generators are incapable of providing all the NERC-defined essential reliability services.[8] It is perhaps for that

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[5] See, e.g., PJM Independent Market Monitor Comments at 5 (estimating that the Proposed Rule would have cost consumers in PJM an additional $30 billion in 2015 and $32 billion in 2016); Joint Industry Commenters, Attachment A at 2, 32 (Battle Group report estimating that the Proposed Rule would result in $3.7 billion to $11.2 billion in out-of-market payments annually in PJM, ISO-NE, and NYISO); see also Electricity Consumers Resource Council Reply Comments at 11-15 (summarizing cost estimates submitted to the record, all of which estimated that the Proposed Rule would cost consumers billions of dollars).

[6] *See* Joint Industry Commenters at 3 (citing a Rhodium Group study showing that "0.00007% of customer-hours lost to outage were caused by fuel supply emergencies between 2012-2016," a period that included the 2014 Polar Vortex); Department of Energy, Quadrennial Energy Review, Second Installment at 4-2 (2017) *available at* https://energy.gov/sites/prod/files/2017/02/f34/Chapter%20IV--Ensuring%20Electricity%20System%20Reliability%2C%20Security%2C%20and%20Resilience.pdf ("Electricity outages disproportionately stem from disruptions on the distribution system (over 90 percent of electric power interruptions), both in terms of the duration and frequency of outages. . . . Damage to the transmission system, while infrequent, can result in more widespread major power outages that affect large numbers of customers with significant economic consequences.").

[7] For example, more than 15 gigawatts of coal and nuclear capacity were forced offline during the 2014 Polar Vortex as temperatures fell below those plants' operating thresholds. Electric Power Supply Association Comments, Attachment A at 17. Similarly, nuclear facilities lying in the path of hurricanes are routinely taken offline as a precaution and not returned to service until after the threat has passed.

[8] Department of Energy Grid Study at 71-72 (citing Joseph H. Eto *et al.*, Lawrence Berkeley National Laboratory, Use of Frequency Response Metrics to Assess the Planning and Operating Requirements for Reliable Integration of Variable Renewable Generation (2010), *available at* https://www.ferc.gov/industries/electric/indus-act/reliability/ frequencyresponsemetrics-report.pdf). The cited report explains that when nuclear plants and large coal plants are operated at maximum output, as they frequently are, they will be incapable of providing primary frequency response, one of the essential reliability services identified by NERC.

reason that the Department's Grid Study recommended pursuing "wholesale market and product designs that recognize and complement resource diversity by compensating providers for the value of [essential reliability services] on a *technology-neutral* basis."[9]

"Finally, I am sympathetic to the plight of coal miners, who have been disproportionately affected as coal's share of the generation mix has declined. These men and women went to work every day, at considerable risk to their health and safety, to supply coal when it was needed most. Many of those same considerations extend to individuals employed at recently or soon-to-be decommissioned nuclear power plants. We have a history in this country of helping those who, through no fault of their own, have been adversely affected by technological and market change. But that is the responsibility of Congress and the state legislatures. It is not a role that the Federal Power Act provides to the Commission.

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"I agree with the Commission's decision to initiate a comprehensive examination of the resilience of the bulk power system in the form of today's order. Utilities face diverse challenges, including the threat of cyber or physical attacks and natural disasters, such as the extreme weather events that are occurring more frequently as a result of climate change. It is not without irony that the Department's Proposed Rule would exacerbate the intensity and frequency of these extreme weather events by helping to forestall the retirement of coal-fired generators, which emit significant quantities of greenhouse gases that contribute to anthropogenic climate change.[10] I encourage the RTOs and ISOs to use this opportunity to undertake a serious review of these challenges along with other concerns regarding the resilience of their system.

"In addition, RTOs and ISOs should consider how best to mitigate these challenges *within* their markets and *without* prejudging what technology or fuel-type provides the best solution. In particular, I urge them to consider carefully the Commission's questions regarding how different generation technologies—both traditional technologies and newer, less widespread technologies—perform when faced with extreme weather, including droughts. I also believe that it is important to consider the advantages that newer technologies, such as distributed energy resources, energy storage, and micro-grids, may offer in addressing resilience challenges to the bulk power system. Similarly, I urge the RTOs and ISOs to consider carefully the Commission's question regarding the extent to which resilience challenges are associated with the transmission system or distribution systems, rather than electric generation. As I noted, the transmission and distribution systems have historically been the principal cause of virtually all significant disruptions and are, therefore, an important element of any examination into the resilience of the bulk power system. Finally, I agree with the Commission that is important to explore the concept of correlated outages and, in particular, the extent to which the cyber and physical security of natural gas pipelines threatens the resilience of the bulk power system and how the Commission should address this issue.

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[9] Department of Energy Grid Study at 100 (emphasis added).

[10] A research paper submitted to the record by Resources for the Future estimates that adopting the Proposed Rule would result in an additional 53 million tons of CO_2 emissions by 2045. Resources for the Future also estimates that the Proposed Rule would cause 27,000 premature deaths by 2045 by increasing the emissions of other air pollutants (NO_x and SO_x). *See* Daniel Shawhan and Paul Picciano, Resources for the Future, Costs and Benefits of Saving Unprofitable Generators: A Simulation Case Study for US Coal and Nuclear Power Plants at 11 (Nov. 2017).

"In conclusion, I am confident that the Commission will approach this new examination into the resilience of the bulk power system in the same manner it considers all other matters—with a non-partisan perspective and with a view solely on what the facts provide and the law requires. If the RTOs and ISOs demonstrate that the resilience of the bulk power system is threatened we should act. If not, we should move on.

"For these reasons, I respectfully concur."