



SABIN CENTER FOR CLIMATE CHANGE LAW

October 18, 2017

VIA ELECTRONIC SUBMISSION

The Honorable Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

**RE: Docket No. RM18-1-000, Grid Reliability and Resilience Pricing
Comments on Secretary of Energy's proposal for final action**

Dear Secretary Bose,

The Sabin Center for Climate Change Law at Columbia Law School submits the following comments on the Secretary of Energy's proposal for final action (the "Proposal") by the Federal Energy Regulatory Commission ("FERC" or the "Commission"). Our comments elaborate on the following three points:

1. The Proposal provides the Commission with no legal basis to act because it does not establish that existing rates are unjust, unreasonable, or unduly discriminatory or preferential.
2. The Proposal is not a means of better compensating resources that furnish the bulk power system with reliability or resilience; it is not fuel-neutral; and the Commission should recognize it as a politically motivated gambit to allocate resources to the support of coal- and nuclear-fired generating capacity.
3. Because the Proposal calls for the compensation of particular fuel types rather than the adoption of rates that are just, reasonable, and not unduly discriminatory or preferential, the National Environmental Policy Act ("NEPA") requires that the Commission conduct an environmental review of the Proposal.

1. The Proposal does not establish that existing rates are unjust, unreasonable, or unduly discriminatory or preferential, and so provides the Commission with no legal basis to act.

As the Commission is well aware, it has authority to review proposed tariffs under § 205 of the Federal Power Act, and to determine pursuant to a complaint or on its own initiative that an existing tariff under § 206 of the Act should be amended. Whichever pathway is taken to a new tariff, the standard is the same: rates resulting from a tariff must be just and reasonable and not unduly discriminatory or preferential, and tariffs adopted as satisfying this standard may not be displaced without evidence demonstrating that some change in circumstances has caused them to become unjust and unreasonable. The Proposal contains no statement, much less a well-supported statement, that the closure of some coal-fired and nuclear generating capacity in competitive markets is the cause of rates that are or imminently shall become unjust, unreasonable, or unduly discriminatory or preferential. This deficiency is fatal to the Proposal’s instruction that tariffs should be revised to allow full cost recovery by so-called “reliability and resilience resources.”

The subsequent sections of these comments assume, *arguendo*, that this fatal deficiency does not wholly impede the Commission’s final action on the Proposal.

2. The Proposal’s actual purpose is not to foster reliability and resilience but to prop up coal-fired and nuclear power plants financially.

Neither the Proposal itself nor the materials to which it refers provide evidentiary support for its two central claims: first, that the electricity sector faces an imminent reliability and resilience “crisis” due to coal-fired and nuclear plant closures,¹ and second, that granting full cost recovery to generation facilities with 90-day fuel supplies on site would address that crisis. It also ignores important evidence regarding actual threats to the bulk power system’s reliability and resilience, such as extreme heat, drought, and the damage done by storms to transmission and distribution infrastructure.² And it ignores sources of reliability and resilience responsive to these threats, such as new transmission and grid management technologies, and demand response resources. Its prominent mention of the Polar Vortex of 2014 as well as its reference to recent hurricanes only serves to highlight the discrepancy between its claims and what the available evidence indicates.

The Proposal, in short, offers a thin and faulty pretext for its actual purpose, which is to provide financial protection for coal and nuclear facilities that face wholesale competition and to boost purchases of coal in the short-term. It directs FERC to instruct RTO/ISOs to submit tariffs that comply with its actual instruction, i.e., buy more coal and pay coal and nuclear whatever it costs them to run, rather than its pretextual instruction, i.e., incorporate payments for reliability and resilience into tariffs so that existing rates are made just and reasonable. In so doing, the

¹ Proposal at 11.

² Jan Dell, Susan Tierney, et al., *Ch. 4: Energy Supply and Use*, in *CLIMATE CHANGE IMPACTS IN THE UNITED STATES: THE THIRD NATIONAL CLIMATE ASSESSMENT* 113, 114–22 (J.M. Melillo et al. eds. 2014).

Proposal directs FERC to favor fuel types for political reasons and not for reasons recognized as valid under the Federal Power Act.

The bulk power system does not face an imminent crisis. Authorities charged with monitoring, evaluating, and maintaining the stable operation of the bulk power system over the short- and long-term have recently described the status of reliability and resilience in that system as adequate, but also subject to changing circumstances, and thus in need of coordinated research toward the development and implementation of updated standards and operational protocols. None of the following documents characterizes the system as confronting an immanent crisis with respect to reliability and resilience due to the closure of coal-fired and nuclear generating capacity:

- The North American Electricity Reliability Council (NERC)'s *State of Reliability 2017* report,³ and *2016 Long-Term Reliability Assessment*;⁴
- The National Academies of Sciences April 2017 report, *Enhancing the Resilience of the Nation's Electricity System*;⁵
- The first and second installments of the Department of Energy's Quadrennial Energy Review: *Energy Transmission, Storage, and Distribution Infrastructure* (April 2015), and *Transforming the Nation's Electricity System* (January 2017);⁶
- The Department of Energy's own August 2017 *Staff Report to the Secretary on Electrical Markets and Reliability*.⁷

Of course these authorities identify risks and offer recommendations for addressing them—as NERC's May 2017 letter to Secretary Perry says, “[t]he changing resource mix is altering the operating characteristics of the bulk power system (BPS). These changing characteristics must be well understood and properly managed in order to assure continued reliability and ensure resilience.”⁸ But the Proposal strains when it attempts to construe any of these authorities as calling for the sort of emergency action it directs the Commission to take. Consider that NERC's suggested “near-term (1–2 year timeframe)” response to the “high risk” situation presented by

³ NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION (NERC), *STATE OF RELIABILITY 2017* (June 2017).

⁴ NERC, *2016 LONG-TERM RELIABILITY ASSESSMENT 2* (Dec. 2016), (“all assessment areas’ Anticipated Reserve Margins that [sic] meet or exceed their Reference Margin Levels” for resource adequacy).

⁵ NATIONAL ACADEMIES OF SCIENCES, *ENHANCING THE RESILIENCE OF THE NATION'S ELECTRICITY SYSTEM* (2017) [hereinafter *NAS Report*].

⁶ Both are available at Department of Energy, *The Quadrennial Energy Review (QER)*, <https://energy.gov/epssa/initiatives/quadrennial-energy-review-qer> (accessed Oct. 10, 2017).

⁷ DEPARTMENT OF ENERGY, *STAFF REPORT TO THE SECRETARY ON ELECTRIC MARKETS AND RELIABILITY 63* (Aug. 2017) (citing NERC, *State of Reliability 2017*, and finding that “[bulk power system] reliability is adequate despite the retirement of 11 percent of the generating capacity available in 2002”).

⁸ NERC letter to Secretary of Energy, May 16, 2017.

the grid’s changing resource mix is to conduct technical studies and to collaborate with other entities to further develop specifications for essential reliability services.⁹

No authority has identified 90-day on-site fuel supplies as a priority for achieving reliability or resilience. The Proposal asserts in conclusory fashion that “[t]he continued loss of fuel-secure generation must be stopped. These generation resources are necessary to maintain the resilience of the electric grid.”¹⁰ Recent analyses of risks to the bulk power system do not support either this general assertion or the Proposal’s more specific claim that paying generators that keep 90 days of fuel on site would provide for reliability and resilience. Take the National Academies of Sciences report on resilience, which ends with seven “overarching recommendations” as well as a long list of more particular recommendations for the Department of Energy, FERC, NERC, and other actors,¹¹ but makes no mention of on-site fuel supplies. Instead of identifying sources of actual support for its argument, the Proposal claims support from sources that, in fact, offer little or none. For instance, it quotes from QER 2017 but *omits words* in a way that obscures the stated concern about underinvestment in more resilient “wires,” i.e., transmission and distribution lines and facilities as well as generation resources.¹²

Thus, the Proposal elevates a “solution” of dubious value for reliability and resilience—one that no relevant authority has proposed—and ignores myriad other solutions that would likely support resilience but would not provide a financial benefit to coal-fired and nuclear power plants confronted with competition.

The Proposal’s references to extreme weather events confirm that its framing is pretextual. The Proposal says that the experience of several recent extreme weather events—the Polar Vortex of 2014 and several hurricanes—“reinforces the urgency that the Commission must act now.”¹³ But analyses of outages during these events do not align with the Proposal’s proffered solution of 90 days of on-site fuel supplies. Consider the following three examples:

- Polar Vortex. Coal generation accounted for 34% of the forced outages in PJM Interconnect during the Polar Vortex,¹⁴ some of it due to frozen coal piles.¹⁵ The chief reason for outages among all types of generators, including gas-fired, coal-fired and nuclear,¹⁶ was equipment made inoperable by cold temperatures, not a lack of on-site

⁹ NERC, *Risk Profile #1, Changing Resource Mix*, <https://perma.cc/UP9Q-7WGQ> (accessed Oct. 11, 2017).

¹⁰ Proposal at 10.

¹¹ NAS report, *supra* note 5, at 134–40.

¹² Compare Proposal at 5 with QER 2017 at 4-41.

¹³ Proposal at 11.

¹⁴ PJM Interconnection, *Analysis of Operational Events and Market Impacts During the January 2014 Cold Weather Events* 26 (May 2014), <https://perma.cc/9SU3-M7XJ>.

¹⁵ NERC, *Polar Vortex Review* 3 (Sept. 2014), <https://perma.cc/U3GD-WFGQ>; DOE STAFF REPORT, *supra* note 7, at 98.

¹⁶ The Proposal cites the DOE Staff Report as supporting the premise that nuclear plants performed well during the Polar Vortex, but it omits mention of this line from the Staff Report: “During the Polar Vortex, some coal and nuclear plans had fuel onsite but failed to perform nonetheless.” DOE STAFF REPORT, *supra* note 7, at 95.

fuel.¹⁷ This is likely why NERC’s 10 recommendations about how best to avert generator outages in its *Polar Vortex Review* did not include simply increasing on-site supplies of fuel for thermal generation sources.¹⁸ Furthermore, in ISO-New England’s service territory, where fuel availability for gas-fired generation *was* a cause of outages, a tariff revision approved by FERC in 2015 has already made adjustments to ensure winter reliability.¹⁹ Notably, those adjustments “abide by [ISO-New England’s] commitment to develop a long-term, market-based solution to address winter reliability issues.”²⁰

- Hurricane Sandy. The majority of electricity outages experienced during Hurricane Sandy owed to damage done to transmission and distribution facilities rather than generation capacity being knocked offline, though Salem Nuclear Generating Station shut down amid flooding and other nuclear plants in the region reduced their output.²¹ In most if not all instances where generation facilities’ operations were interrupted, the Proposal’s “solution” would not have helped: several coal-fired facilities, for instance, experienced “[c]urtailments due to wet coal, which is normal with any significant precipitation.”²²
- Hurricane Harvey. The bulk power system facilities affected by Hurricane Harvey’s wind and rain would not have been made more reliable or resilient by the Proposal. The U.S. Energy Information Administration reports that outages amid the storm owed to “rain or flooding affecting generator fuel supplies, outages of transmission infrastructure connecting generators to the grid, and personnel not being able to reach generating facilities.”²³ In this context, coal piles were a *problem*, not a solution: among the power plants that continued operating, two coal-fired plants switched to gas after their coal stocks were saturated.²⁴

Each of these events highlights the substantial irrelevance of the Proposal to its purported goal of improving reliability and resilience. Ample further evidence highlights that coal-fired and nuclear power plants are vulnerable not only to extreme weather events like coastal storms but

¹⁷ *Id.* at 19–20.

¹⁸ *Id.*

¹⁹ *ISO New England Inc. and New England Power Pool Participants Committee*, 152 FERC ¶ 61,190 P 3 (Sept. 11, 2015).

²⁰ *Id.*

²¹ NERC, HURRICANE SANDY EVENT ANALYSIS REPORT 21–22 (Jan. 2014), <https://perma.cc/FS9Y-V4K6>; PAUL HUBBARD ET AL., ELECTRICITY MARKETS, RELIABILITY AND THE EVOLVING U.S. POWER SYSTEM 73 (June 2017), <https://perma.cc/J95X-Z662> (noting that Sandy’s “high winds and flooding forced load reductions of nuclear plants in the area”); Thomas W. Overton, *Maximizing Coastal Power Plant Resilience*, POWER MAG., Apr. 1, 2016, <https://perma.cc/UW8P-KLDK> (reporting Salem’s shut down during Sandy).

²² *Id.* at 23.

²³ U.S. EIA, *Today in Energy: Hurricane Harvey caused electric system outages and affected wind generation in Texas*, Sept. 13, 2017, <https://perma.cc/UBV5-8DDT>.

²⁴ *Harvey's rain caused coal-to-gas switching: NRG Energy*, PLATTS, Sept. 27, 2017, <https://perma.cc/3QA2-54SK>.

also to heat waves and droughts,²⁵ which can be expected to increase in frequency and severity as the climate changes,²⁶ but would not be addressed by the Proposal.

3. NEPA requires that the Commission assess the environmental impacts of the Proposal.

The Proposal asserts that the National Environmental Policy Act's requirements do not apply to the actions it calls for FERC to undertake, namely instructing Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs) to establish a tariff to compensate so-called "reliability and resilience resources" for their cost of service. The Proposal seeks to justify this assertion by invoking the categorical exclusion codified at 18 CFR § 380.4(15), which reads as follows:

Electric rate filings submitted by public utilities under sections 205 and 206 of the Federal Power Act, the establishment of just and reasonable rates, and confirmation, approval, and disapproval of rate filings submitted by Federal power marketing agencies under the Pacific Northwest Electric Power Planning and Conservation Act, the Department of Energy Organization Act, and DOE Delegation Order No. 0204-108.

FERC has regularly invoked this exclusion as encompassing decisions to establish or revise a tariff for the purpose of ensuring that wholesale electricity rates are just and reasonable and not unduly discriminatory or preferential. FERC explained its initial adoption of the exclusion as "merely codif[ying] the *Monongahela* decision."²⁷ In *Monongahela*, FERC determined that it could approve contracts between a distribution utility and coal-fired generators without first conducting an EIS because its authority was limited to examining the justness and reasonableness of the resulting rates.²⁸ As FERC explained, it has no jurisdiction over what the petitioners in that case found objectionable, namely "the siting, construction, licensing and operations of the [generator's] system plants, as well as jurisdiction to order [the utility] to adopt conservation measures, to build new capacity, or to purchase power from other suppliers."²⁹

However, as noted in part 1 of these comments, the Proposal gives no indication of how existing rates are unjust and unreasonable or unduly discriminatory or preferential, nor how its provisions would lead to rates that meet the Federal Power Act's standard. Instead, as explained in part 2 of these comments, the Proposal's evident purpose is to prop up uncompetitive coal and nuclear generation. Indeed, the Proposal's operative language—the "reliability and resilience

²⁵ Dell, Tierney, et al., *supra* note 2, at 118–19.

²⁶ John Walsh & Donald Wuebbles et al., *Ch. 2: Our Changing Climate*, in CLIMATE CHANGE IMPACTS IN THE UNITED STATES: THE THIRD NATIONAL CLIMATE ASSESSMENT 19, 28–30, 38–42 (J.M. Melillo et al. 2014).

²⁷ Order 486, *Regulations Implementing National Environmental Policy Act of 1969*, 52 Fed. Reg. 47897, 47900 (Dec. 17, 1987).

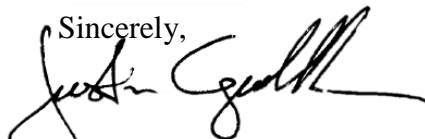
²⁸ *Monongahela Power Co. v. FERC*, 39 FERC ¶ 61,350 (1987), *reh'g denied*, 40 FERC ¶ 61,256 (1987).

²⁹ *Id.*; see also 40 FERC ¶ 61,256, 61,861 ("Congress . . . limited the Commission's authority to reviewing the rates and the terms and conditions of power sales agreements to assure that the price charged for wholesale power is not unjust, unreasonable, unduly discriminatory or preferential . . .").

rate” shall ensure “that each eligible resource recovers its fully allocated costs and a fair return on equity”³⁰—would clearly *cause* RTO/ISOs to establish unduly discriminatory and preferential rates. Thus the Proposal falls well outside the scope of the categorical exclusion codified at 18 CFR § 380.4(15).

It follows that FERC must, in accordance with NEPA, develop an Environmental Impact Statement for the Proposal. Such an assessment must examine the direct, indirect, and cumulative impacts of expected increases in the operations of affected coal-fired and nuclear power plants, including impacts on the global climate as well as local air pollution levels. It must also examine the various impacts of storage of 90-day supplies of coal and nuclear fuel on site at generation facilities, such as increases in coal dust and risks to the physical security of the fuel.

Sincerely,

A handwritten signature in black ink, appearing to read "Justin Gundlach", written over a horizontal line.

Justin Gundlach,

Staff Attorney

Sabin Center for Climate Change Law

³⁰ Proposal at 19.

Document Content(s)

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