

174 FERC ¶ 61,111
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Richard Glick, Chairman;
Neil Chatterjee, James P. Danly,
Allison Clements, and Mark C. Christie.

Grid Resilience in Regional Transmission Organizations and Independent System Operators Docket No. AD18-7-000

ORDER TERMINATING PROCEEDING

(Issued February 18, 2021)

1. On January 8, 2018, the Commission issued an order in the above-captioned proceeding to evaluate the resilience of the bulk power system in the regions operated by regional transmission organizations (RTO) and independent system operators (ISO).¹ The January 2018 Order directed each RTO and ISO to submit information to the Commission on certain resilience issues and concerns identified therein. As discussed below, we terminate the proceeding established in the January 2018 Order in Docket No. AD18-7-000.

I. January 2018 Order

2. In the January 2018 Order, the Commission terminated a rulemaking proceeding established in Docket No. RM18-1-000 to consider a proposed rule (Proposed Rule) submitted by the Secretary of Energy pursuant to section 403 of the Department of Energy Organization Act. The Proposed Rule directed the Commission to consider requiring certain RTOs and ISOs to establish a tariff mechanism providing for: (1) the purchase of energy from an eligible “reliability and resilience resource;” and (2) the recovery of costs and a return on equity for such resources (i.e., a “resilience rate”). The Proposed Rule stated that eligible reliability and resilience resources must: (1) be located in an RTO/ISO with an energy and capacity market; (2) be able to provide certain essential reliability services; and (3) have a 90-day fuel supply on-site. After reviewing the record, the Commission terminated the proceeding in Docket No. RM18-1-000,

¹ *Grid Reliability and Resilience Pricing*, 162 FERC ¶ 61,012, at P 12 (2018) (January 2018 Order).

concluding that the Proposed Rule did not satisfy the requirements of section 206 of the Federal Power Act (FPA).²

3. At the same time, the Commission initiated a new proceeding in Docket No. AD18-7-000 to: (1) develop a common understanding among the Commission, industry, and others of what resilience of the bulk power system means and requires; (2) understand how each RTO and ISO assesses resilience in its geographic footprint; and (3) consider whether additional Commission action regarding resilience is appropriate.³ The Commission required each RTO and ISO to submit specific information regarding how each RTO and ISO assessed and mitigated threats to the resilience of the bulk power system in their regions.⁴ Each RTO and ISO submitted the information directed by the Commission in the January 2018 Order and numerous interested persons filed comments on those submissions.⁵

II. Commission Determination

4. We terminate the proceeding established in Docket No. AD18-7-000. Based on our review of the record compiled over the last three years, we do not believe that any generic action is appropriate. That is not to suggest that resilience concerns are no longer an issue or that RTOs and ISOs have addressed all threats to the resilience of the bulk power system. To the contrary, the resilience and reliability of the bulk power system must—and will—remain one of the Commission’s paramount responsibilities and concerns.

5. Instead, we believe that concerns about the resilience of the bulk power system are best addressed on a case-by-case and region-by-region basis. Be it wildfires in the West, hurricanes in the Southeast, or even the extreme cold weather experienced this week in Texas and the Great Plains, these threats present stark, but different challenges to the reliability of the electric grid. Addressing those individual challenges in a manner that is both effective—for the grid and the region—and consistent with our statutory authority under the FPA requires an approach that is tailored to the specific threats and circumstances in a particular region, not a one-size-fits-all solution. To that end, we will

² *Id.* PP 14-16.

³ *Id.* PP 17-20.

⁴ *Id.* PP 25-27.

⁵ In addition, the Commission received one request for rehearing of the January 2018 Order. In a concurrently issued order, the Commission addresses the arguments raised on rehearing and sustains the result of the January 2018 Order. *Grid Reliability and Resilience Pricing*, 174 FERC ¶ 61,112 (2021).

continue working closely with RTOs, ISOs, and other public utilities to address grid resilience and take all appropriate actions to ensure that the electric grid remains reliable. Although today's order marks the end of this proceeding, it is not the end of the Commission's ongoing efforts to ensure the resilience and reliability of the bulk power system.

The Commission orders:

The proceeding established in Docket No. AD18-7-000 is hereby terminated, as discussed in the body of this order.

By the Commission. Commissioner Chatterjee is dissenting with a separate statement attached.

Commissioner Danly is concurring with a separate statement attached.

Commissioners Christie and Clements are concurring with a joint separate statement attached.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.

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CHATTERJEE, Commissioner, *dissenting*:

1. I oppose today's order terminating the Commission's proceeding to evaluate the resilience of the bulk power system.
2. I acknowledge that the issues teed-up in this proceeding are multi-layered and complex. I also acknowledge that this proceeding has politically charged origins beginning with the Department of Energy's (DOE) initial proposed rulemaking to compensate certain categories of generators with on-site fuel. However, a unanimous, bi-partisan Commission rejected DOE's proposal and, in its stead, posed fuel-neutral, critical questions about what it means to have a resilient grid and what steps the Commission can take to foster it.¹ Those questions and their answers remain as critical today as they were three years ago.
3. Despite thorough examinations of previous cold weather events,² we find ourselves wondering what went wrong this week when much of the nation encountered extreme cold weather that led to load shed in ERCOT, MISO, and SPP. Initial reports suggest that, as with previous cold weather events, these regions experienced unusually high demands, inadequate natural gas supplies, frozen infrastructure, correlated generation resource outages, and varying levels of load shed.
4. The severity of this week's event – measured in duration, geographic scope, amount of load shed, customers affected, and amount of unplanned generation outage –

¹ *Grid Reliability and Resilience Pricing*, 162 FERC ¶ 61,012 (2018), *order on reh'g*, 174 FERC ¶ 61,012 (2021).

² See, e.g., FERC and NERC Staff, *Report on Outages and Curtailments During the Southwest Cold Weather Event of February 1-5, 2011* (2011), <https://www.ferc.gov/sites/default/files/2020-04/08-16-11-report.pdf>; NERC, *Polar Vortex Review* (2014), https://www.nerc.com/pa/rrm/January%202014%20Polar%20Vortex%20Review/Polar_Vortex_Review_29_Sept_2014_Final.pdf; FERC and NERC Staff, *The South Central United States Cold Weather Bulk Electric System Event of January 17, 2018* (2019), <https://cms.ferc.gov/sites/default/files/legal/staff-reports/2019/07-18-19-ferc-nerc-report.pdf>.

suggests that, despite the lessons learned and actions taken in the past to improve winterization and gas-electric coordination, the bulk power system may not be able to adequately withstand extreme cold weather events.

5. I am concerned that extreme weather events will continue to increase in frequency and severity, and present serious risks to the resilience of the bulk power system. The majority casts resilience as a question best addressed on a region-by-region basis by emphasizing that wildfires, hurricanes and cold snaps are threats that “present stark, but different challenges to the reliability of the electric grid.”³ That goes without saying, but the majority ignores the fact that these threats – as illustrated by this week’s event – do not respect regional boundaries. As such, I believe that terminating this resilience proceeding, in the face of clear and continuing weather-related resilience concerns that affect multiple regions, is ill advised.

6. I would prefer that the Commission grapple with the resilience concerns raised in this proceeding in a more comprehensive way. The Commission is well positioned to, for instance, adopt a definition of resilience that could be implemented in all regions, describe categories of resilience concerns that would include extreme weather events and common-mode failures, and then take additional steps to ensure that the Commission, RTOs/ISOs, and stakeholders can understand how each RTO/ISO assesses the resilience of its region. Such assessments would enable a comparative, cross-market view of how each RTO/ISO identifies and addresses resilience needs and would enhance coordination across regions. Such a holistic review would not only assist RTOs/ISOs and their stakeholders in considering different approaches to these efforts, but also help the Commission understand how to best assess and address bulk power system resilience.

7. I emphatically support accelerating our nation’s transition to a cleaner, more flexible grid. That is why I am not satisfied with a piecemeal, passive approach to ensuring its resilience, especially in the face of anticipated load increases due to economy-wide electrification goals. Rather, I have long supported pressing forward with the fuel-neutral, bi-partisan review that the Commission began three years ago.

For these reasons, I respectfully dissent.

Neil Chatterjee
Commissioner

³ *Grid Resilience in Regional Transmission Organizations and Independent System Operators*, 174 FERC ¶ 61,111 at P 5 (2021).

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DANLY, Commissioner, *concurring in the result*:

1. I concur in the result of this order insofar as it is the privilege of the majority to terminate a discretionary inquiry. I write separately, however, to highlight my concern that the resilience issues raised in this proceeding have not been solved—indeed, in most cases they have not even been addressed.
2. Despite the fact that the Commission has been unable for the last several years to command a majority for specific, comprehensive action in this proceeding, we should heed the urgent need for reform that has been exposed by the extensive blackouts this week in the Electric Reliability Council of Texas (ERCOT)—where the Commission lacks jurisdiction—as well as by the strained conditions in the Southwest Power Pool (SPP) and the Midcontinent Independent System Operator (MISO). This is the second supposed “perfect storm” of bad events in the past six months, the first being last summer when the California Independent System Operator (CAISO) was forced to implement rolling blackouts in response to heat and wildfires.¹
3. I reject the perfect storm excuse. There are any number of problems that lead to reliability failures, but I want to focus on one in particular: market failure. The bulk power markets provide inadequate cost recovery, and thus investment, to ensure reliability. There are several key failures that should immediately be remedied. Existing dispatchable generation resources often do not have the opportunity to recover adequate revenues to continue operating or to invest in necessary equipment and upgrades. Longstanding price-formation issues (i.e., artificially low prices) persist in most RTO markets, and proffered solutions have failed to achieve the fundamental objectives: ensuring reliability through rates that allow a just and reasonable return. Many regions lack meaningful capacity markets, and the regions that do have capacity markets often allow state-subsidized resources to suppress prices such that the capacity markets cannot

¹ Cheri Mossburg, *More than 3 million California homes may lose power in record heat wave due to rolling blackouts*, CNN (Aug. 17, 2020), <https://www.cnn.com/2020/08/17/us/california-blackouts-investigation/index.html> (quoting Steve Berberich, Chief Executive Officer of CAISO).

achieve one of the goals they were designed to achieve, which is to provide for revenues adequate to create incentives for the construction and operation of sufficient generation capacity to ensure reliability.

4. Natural gas resources largely do not have firm fuel contracts. In cases where there is sufficient pipeline infrastructure, those resources could obtain firm fuel contracts, but such contracts often are prohibitively expensive. Any generator responsible enough to obtain firm fuel easily could find itself priced out of the market and on a quick path toward bankruptcy. Other incentives to obtain firm fuel have proven inadequate. For example, increasing penalties when generators fail to obtain natural gas is a poor substitute for a market structure that compensates them for ensuring adequate fuel supplies in the first place.

5. Another increasingly serious problem is that intermittent resources largely are planned for, operated, and compensated as if they provide reliability benefits that they, in fact, are incapable of providing. Thus the term “intermittent.” The bulk power markets should treat intermittent resources as they actually perform, not as we hope them to.

6. These represent but a handful of examples—there are many others. Some are unique to particular regions, but others are pervasive. I have worked to convince my colleagues to take the steps necessary to remedy these problems and will continue to do so.² As long as we employ markets, they must be designed to—and actually succeed at—producing just and reasonable rates and ensuring reliability.

7. Doubtless there are technical issues at play in the recent events that will be investigated and perhaps mitigated. I will carefully review the facts as they come out, including the details of system planning, market prices, generator performance (of every type of resource), natural gas pipeline performance, and root causes.

8. However, one of the fundamental problems we must face is that we have tended to focus too much on low, short-term prices and development of new, clean power sources to the detriment of reliability. I do not believe these latest power crises to be yet another perfect storm, but a case of reaping what we have sown.

9. The bottom line is this: as long as we have markets that procure the wrong types of generation and in the wrong quantities because the resources providing the greatest reliability benefits are insufficiently compensated, we will continue to see events like those in California and Texas.

² See *Staff Presentation on California Independent System Operator (EL21-19-000)*, FERC (Dec. 17, 2020), <https://www.ferc.gov/news-events/news/staff-presentation-california-independent-system-operator-el21-19-000>.

For these reasons, I respectfully concur in the result.

James P. Danly
Commissioner

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CHRISTIE, Commissioner, and CLEMENTS, Commissioner, *concurring*:

1. We write separately to emphasize that our agreement to terminate this specific proceeding is purely procedural, not substantive. The issues attendant to grid resilience and reliability that this particular proceeding raised are compelling and must command this Commission's future attention. Procedurally, this matter has languished for more than three years with no action, so the unavoidable conclusion is that these issues need to be shifted to other procedural vehicles to make progress. On that basis, we concur.
2. As the widespread power outages this very week in Texas – as well as the outages in California last summer – graphically demonstrate, the challenges of ensuring a reliable supply of power to American consumers as the generation mix changes, remain as relevant and compelling as ever. Reliability to most Americans means power available 24/7; not just during good weather, but during bad weather, when they need it most to heat or cool their homes, operate their businesses, and to some consumers, even to maintain their very health.
3. We also agree that while there are general issues attendant to reliability and resilience, each RTO/ISO is different and faces different challenges from its generation mix and weather patterns. FERC's job is to ensure that each RTO/ISO is meeting its individual operational responsibilities to ensure a 24/7 supply of power.
4. To meet that reliability challenge, the RTOs and ISOs must be willing to face and speak inconvenient truths about what is – and is not – feasible from an engineering standpoint, given the state of technology. They must also tell the public and the elected political leaders at both the state and federal levels about the realistic impacts on the bills consumers will have to pay for reliability. Politically driven mandates and deadlines may not be grounded in engineering reality and we depend on the leadership of each RTO and ISO to provide forthright information about what is needed to ensure the 24/7 power supply Americans expect.
5. Decarbonization is a necessary policy goal and preliminary reports from ERCOT, for example, indicate supply problems not only with wind resources, but also with gas and other forms of dispatchable generation as well. We should avoid drawing final conclusions about the events in these various RTOs/ISOs before complete investigations

and reports are available. Common sense tells us, however, that as what is called the “energy transition” takes place, it must be grounded in the scientific facts of electrical engineering and physics, if Americans are to receive the reliable supply of power they need at the least cost to them.

6. Finally, we do not take issue with the sentiments contained in Commissioner Chatterjee’s dissent; indeed, we share them. Resilience and reliability issues remain compelling and unavoidable. Unfortunately this specific proceeding, which began long before we came to this Commission and is rooted in another proposal that was unanimously rejected, no longer appears to be the right vehicle. In that regard, we agree with Commissioner Chatterjee’s statement that he “. . . would prefer that the Commission grapple with the resilience concerns raised in this proceeding in a more comprehensive way.” It is our hope that this Commission will do exactly that – and soon.

For these reasons, we respectfully concur.

Mark C. Christie
Commissioner

Allison Clements
Commissioner