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FERC Acts to Bolster Electric Grid Reliability During Extreme Weather Events

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The Federal Energy Regulatory Commission (FERC or the "Commission") recently issued Order Nos. 896 and 897 (collectively, the "Reliability Orders"),[1] which are two final rules designed to bolster electric grid reliability during extreme heat and cold weather events that "may cause unacceptable risk to life and economic harm," especially during periods of unexpectedly high demand on the Bulk-Power System.[2]

Order No. 896 directs the North American Electric Reliability Corporation (NERC) to develop a new or modified reliability standard to require transmission system planning for extreme heat and cold weather conditions over wide geographical areas, including studying the impact of concurrent failures of generation and transmission facilities and implementing corrective actions as needed.[3] Order No. 897 directs transmission providers to submit one-time reports describing their policies and processes for conducting extreme weather vulnerability assessments and identifying mitigation strategies.[4] In announcing the new rules, FERC observed that "region-wide heat waves, cold snaps, hurricanes, and wildfires have resulted in outages [and] other significant reliability impacts, often while contributing to substantial consumer costs,"[5] pointing to at least seven major extreme weather events that have stressed electric grid operations since 2011, including Winter Storm Elliot in December 2022, which brought record cold temperatures and blizzard conditions to some areas, causing 1.6 million customers to lose power[6] and Hurricane Ian in September 2022, which left 2.6 million customers without power and caused an estimated $113 billion in damage.[7]

The Reliability Orders also flow, in part, from FERC's June 2021 technical conference on "Climate Change, Extreme Weather, and Electric System Reliability," during which FERC sought to understand whether and what additional steps might be needed to "achieve an electric system that can withstand, respond to, and recover from extreme weather events."[8] A brief summary of the Reliability Orders follows:

Order No. 896: Transmission System Planning Performance Requirements for Extreme Weather

In Order No. 896, FERC directed NERC to develop a new or modified Reliability Standard to address reliability concerns pertaining to transmission system planning for extreme heat and cold weather events that impact the Reliable Operation of the Bulk-Power System.[9] This standard will be in addition to existing Reliability Standards, such as TPL-001-5.1 (Transmission System Planning Performance Requirements), that include requirements designed to ensure that the Bulk-Power System operates reliably over a broad spectrum of conditions and following a wide range of contingencies,[10] as well as provisions for transmission planners and planning coordinators to study system performance in extreme conditions based on their experience.[11] The new or modified Reliability Standard will require:

1. Development of "benchmark planning cases" by registered entities such as large planning coordinators, or groups of planning coordinators, with the capability of planning on a regional scope and based on information such as major prior extreme heat and cold weather events and/or future meteorological projections, which cases must account for regional differences in climate and weather patterns.[12]
2. Planning for extreme heat and cold weather events using steady state and transient stability (dynamic) analyses expanded to cover a range of extreme weather scenarios, including expected availability of the generation resource mix during extreme heat and cold weather conditions, and the broad area impacts of extreme heat and cold weather, plus sensitivity cases to demonstrate the impact of changes to the assumptions used in the benchmark planning cases.[13]
3. Development of corrective action plans that mitigate specified instances where performance requirements during extreme heat and cold weather events are not met, as well as processes to facilitate interaction and coordination with applicable

regulatory authorities or governing bodies responsible for retail electric service as appropriate in implementing a corrective action plan.[14]

FERC stated that these requirements are designed to work with and build on previously approved "Cold Weather Reliability Standards" that require generators to implement plans for cold weather preparedness and freeze protection measures to mitigate the reliability impacts of extreme cold weather and require the balancing authority, transmission operator and reliability coordinator to plan and operate the grid reliably during cold weather conditions by requiring the exchange of certain information related to generators' capability to operate under such conditions.[15] Importantly, FERC does not propose specific requirements that must be included in the new or modified Reliability Standard, but rather identifies concerns that NERC should address in an "equally efficient and effective manner."[16]

Order No. 896 will become effective September 21, 2023, and NERC's compliance filing is due December 23, 2024, 18 months after publication of the Final Rule in the Federal Register. The new or modified Reliability Standard must become mandatory and enforceable no later than twelve months from the effective date of FERC approval, beginning with a "phased-in implementation timeline," at NERC's discretion.[17]

Order No. 897: One-Time Informational Reports on Extreme Weather Vulnerability Assessments

In Order No. 897, FERC directed transmission providers, including Regional Transmission Organizations (RTOs) and Independent System Operators (ISOs) and their transmission-owning members,[18] to file one-time informational reports describing their current or planned policies and processes for conducting extreme weather vulnerability assessments for their FERC-jurisdictional assets and operations.[19]

An "extreme weather vulnerability assessment" is defined as "any analysis that identifies where and under what conditions jurisdictional transmission assets and operations are at risk from the impacts of extreme weather events, how those risks will manifest themselves, and what the consequences will be for system operations."[20] FERC declined, however, to define "extreme weather" for purposes of these reports, instead requiring each transmission provider to explain whether, and if so how, it defines extreme weather events in relation to ordinary or

historical weather events or patterns for the purposes of their extreme weather vulnerability assessments.[21] Transmission providers' reports must also address whether and, if so, how they: 1) establish a scope; 2) develop inputs; 3) identify vulnerabilities and exposure to extreme weather hazards; 4) estimate the costs of impacts in their extreme weather vulnerability assessments; and 5) use the results of those assessments to develop risk mitigation measures.[22] Appendix A to the Final Rule includes 21 specific questions for transmission providers to answer in their reports.

With this new reporting requirement, FERC seeks to understand whether and how transmission providers assess their vulnerabilities to extreme weather events, as well as to enhance its ability to (1) ensure system reliability and just and reasonable rates and (2) facilitate coordination and information sharing among transmission providers.[23]

FERC also made clear that Order No. 897 only seeks to gather information on current and planned policies and processes, not establish new requirements.[24] Specifically, while FERC expects that the required reports will promote information sharing about how transmission providers conduct extreme weather vulnerability assessments, the Final Rule does not require transmission providers to conduct extreme weather vulnerability assessments that they do not already conduct or require transmission providers to change how they conduct or plan to conduct such assessments.[25] In addition, FERC does not specify what, if any additional steps it might take in response to the informational reports, but notes that it may consider further action after reviewing the reports and any comments on them.[26]

Order No. 897 will become effective September 25, 2023, and transmission providers' reports are due October 25, 2023, 120 days after publication of the Final Rule in the Federal Register.[27] Any public comments on the reports are due December 26, 2023.[28]

Please contact us if you have questions about the Reliability Orders or their implications.

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[1] *Transmission Sys. Planning Performance Requirements for Extreme Weather*, Order No. 896, 183 FERC ¶ 61,191 (2023) ("Order No. 896"); *One-Time Informational Reports on Extreme Weather Vulnerability Assessments*, Order No. 897, 183 FERC ¶ 61,192 (2023) ("Order No. 897").

[2] The "Bulk-Power System" includes "facilities and control systems necessary for operating an interconnected electric energy transmission network (or any portion thereof), and electric energy from generating facilities needed to maintain transmission system reliability" but not "facilities used in the local distribution of electric energy." 16 U.S.C. § 824o(a)(1) (2018).

[3] *See* FERC, News Release, FERC Finalizes Plans to Boost Grid Reliability in Extreme Weather Conditions (June 15, 2023), *available at* https://ferc.gov/news-events/news/ferc-finalizes-plans-boost-grid-reliability-extreme-weather-conditions (last visited Aug. 10, 2023) ("FERC News Release").

[4] *Id.*

[5] Order No. 897 at P 8.

[6] *Id.* at P 9.

[7] *Id.* at P 10.

[8] Order No. 896 at P 14 (citing *Climate Change, Extreme Weather, & Electric Sys. Reliability*, Notice of Technical Conference, Docket No. AD21-13-000, at 1 (Mar. 5, 2021)).

[9] *Id.* at P 1.

[10] *Id.* at PP 5, 11, 195.

[11] *Id.* at P 5.

[12] *Id.* at PP 6, 27, 38, 60.

[13] *Id.* at PP 6, 124.

[14] *Id.* at PP 6, 152.

[15] *Id.* at PP 16, 24.

[16] *Id.* at P 6.

[17] *Id.* at PP 28, 193.

[18] Order No. 897 at P 47 & n.5. Each transmission owner that is a member of an RTO/ISO may either file its one-time informational report individually or jointly with its RTO/ISO. *Id.* at P 48. And FERC estimates that "there are 128 total transmission providers and owners that (including the six RTOs/ISOs) are affected by the final rule." *Id.* at P 119.

[19] *Id.* at P 58.

[20] *Id.* at PP 1, 52.

[21] *Id.* at P 55.

[22] *Id.* at P 3.

[23] *Id.* at PP 25-26. *See also id.* at P 47.

[24] *Id.* at P 3.

[25] *Id.* at PP 27, 51.

[26] *Id.* at P 28. *See also id.* at P 60.

[27] *Id.* at PP 3, 100.

[28] *Id.* at P 104.

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