

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

Transmission System Planning)	
Performance Requirements for)	
Extreme Weather)	Docket No. RM22-10-000
)	

COMMENTS OF THE ELECTRIC POWER SUPPLY ASSOCIATION

The Electric Power Supply Association (“EPSA”)¹ hereby submits these comments in response to the Notice of Proposed Rulemaking issued by the Federal Energy Regulatory Commission (“FERC” or “Commission”) on June 16, 2022,² which proposes to direct the North American Electric Reliability Corporation (“NERC”), the Commission-certified Electric Reliability Organization, to submit to the Commission modifications to Reliability Standard TPL-001-5.1 within one year of the effective date of a final rule in this proceeding to address reliability concerns pertaining to transmission system planning for extreme heat and cold weather events that impact the reliable operations of the Bulk-Power System (“BPS”).

As outlined in the EPSA comments following the Commission’s June 1 and 2, 2021 technical conference addressing issues surrounding the threat to electric system reliability posed by climate change and extreme weather events,³ EPSA strongly

¹ EPSA is the national trade association representing competitive power suppliers in the U.S. EPSA members provide reliable and competitively priced electricity from environmentally responsible facilities using a diverse mix of fuels and technologies. EPSA seeks to bring the benefits of competition to all power customers. This pleading represents the position of EPSA as an organization, but not necessarily the views of any particular member with respect to any issue.

² Notice of Proposed Rulemaking, *Transmission Planning Performance Requirements for Extreme Weather*, Docket RM22-10-000, (issued June 16, 2022) (“NOPR”).

³ *Climate Change, Extreme Weather, and Electric System Reliability*, Comments of the Electric Power Supply Association, Docket AD21-13-000, (September 27, 2021).

supports focus on the assessment of and tools to address reliability issues, which includes considerations related to extreme weather events and climate change. Because such events are happening with greater frequency and in a myriad of ways that impact the BPS (i.e., drought, wildfires, extended freeze events) the Commission and by extension NERC and all BPS participants must take real, demonstrable actions to ensure reliability and resilience. In order to meet this reliability goal, there must be realistic, data-driven analysis available to offer a realistic snapshot of where the system stands and what, if any, measures must be taken to gird the system against foreseeable threats. This is precisely the role that NERC can fill under the direction of, but independent from, the Commission.

As explained in the NOPR and highlighted in the NERC and FERC staff report on Winter Storm Uri,⁴ benchmark planning and transmission studies that take into account aspects of extreme weather events or patterns can assist system operators in their operational preparedness and awareness, including the development of corrective plans. Hence, as proposed, the direction to NERC to modify Reliability Standard TPL-001-5.1 is a reasonable next step to address reliability and resilience after the lessons of the last several years.

That noted, it is important that a reliability-focused directive related to transmission planning addresses only issues posed by the threats of extreme weather which should and can be addressed by NERC in the development of standard modifications. Such modifications should avoid policy-driven considerations or

⁴ Federal Energy Regulatory Commission, North American Electric Reliability Corporation, Regional Entities, *The February 2021 Cold Weather Outages in Texas and the South Central United States*, (November 2021).

proposals related to transmission system planning or infrastructure development which fall outside of NERC's purview and authority.

While changes to transmission standards and planning will likely be necessary as the economy continues to electrify and we increasingly experience changing weather patterns and events, leaning too much on transmission policy alone could overlook other system services and improvements that should be considered either through additional NERC extreme weather assessments or by competitive mechanisms responding to defined system needs. While the NOPR contemplates redefining transmission-related benchmark events,⁵ a holistic approach to mitigating the effects of extreme weather on the grid is needed to fully prepare the system for unexpected events. Thus, EPSA supports the instant NOPR and recommends that the Commission also consider directing NERC to examine how it defines and measures its resource adequacy benchmarks, including the impacts of non-dispatchable resources increasingly present on the system and the availability of dispatchable, flexible resources which are increasingly being replaced by new, less flexible resources or technologies. Further, in order to address tangible, reality-based reliability threats, the Commission must focus on market issues that impact system readiness – including the resources and services needed to maintain delivery of reliable, cost-effective power to consumers in all events and conditions.

⁵ NOPR, PP 52-53.

I. Comments

A. A Holistic Approach Is Needed to Address Extreme Weather and Requires Looking at NERC Benchmarks for Transmission and Generation

The instant NOPR reasonably proposes redefining transmission-related benchmark planning cases in order to include information on major prior extreme heat and cold weather events or future meteorological projections. Additionally, both steady state and transient stability analyses would be expanded to include the expected availability of the assumed resource mix during extreme weather conditions. These are important modifications to Reliability Standard TPL-001-5.1 in order to bring in data that reflects the current reality facing the BPS – a realistic, data-based view often missing from the broader reliability conversations. In fact, the addition of extreme weather benchmarks and data should extend to assessments of generation resource availability during such events. The reliability modifications made here should then better inform system planning to address changes in the system, the resource mix, and external factors like the weather. As proposed in the instant NOPR, this will also extend to the development of corrective action plans to address lack of performance or gaps created by planning shortfalls or missteps.

As the NOPR notes, with respect to TPL-001-5.1, NERC utilizes a deterministic approach, which uses planned contingencies and definite performance criteria to study system response to various conditions.⁶ The NOPR further provides that, “[t]his approach yields accurate planning when the power supply is highly dispatchable, weather is predictable, and near-record peak demand is reached only a few days a year...[which is] likely is not sufficient to accurately characterize the reliability risk from

⁶ NOPR, P 75.

extreme heat and cold weather given the high degree of uncertainty inherent in predicting severe weather and its impact on generation resources, transmission, and load.”⁷

While the nation’s generation mix continues to increase the portion of non-dispatchable, intermittent resources, the importance of having dispatchable resources as a backstop is critical in normal times, but of heightened importance in times of extreme weather. If the existing approach to measuring the impacts of extreme weather are insufficient due to a lack of attention to severe weather, modification is necessary as proposed in the NOPR. Further, however, it may be similarly necessary to modify standards which address the assessment and planning related to generation resources and availability. As weather patterns become more severe and the grid is faced with extreme events that are increasing in duration and number, system planners may need to utilize revised planning criteria to ensure that the lights remain on during these challenging periods. To do so using data from recent actual events is critical as it is the most efficient way to ground planning in what is likely and possible rather than what is imagined or assumed.

As the present and future grid becomes more intermittent in its composition and the impacts of changing weather patterns become more severe and produce longer events, system planners should be procuring resources with an eye towards maintaining reliable reserves of dispatchable power, including resources that can be called upon to fill long duration gaps that may arise from intermittent resources going offline, or from other impacts of extreme weather, such as hydropower or nuclear-

⁷ *Id.*

powered resources that may be effected by drought.⁸ Depending on the type of weather event challenging the grid, these resources could include natural gas generation, hydropower, long duration battery storage, or any other resource that could provide this service. While NERC should modify standards for planning and system operation to include more data based on weather events, the wholesale market can and will respond with resources that offer the products and services which the grid needs. To assist further, FERC should consider directing NERC to examine modifying how it takes into account the increasing effects of climate change and extreme weather in its resource adequacy assessments.

B. Competitive Markets Remain the Best Tool to Ensure Reliability

While the instant docket is focused on addressing the challenges posed to the transmission system by extreme weather events and climate change, it is critical to recognize that reforming transmission policies and standards cannot solve the reliability issues that threaten the grid. Given the costs and logistical challenges of building new transmission, optimizing the existing network is also an essential part of the solution. This includes assessing generation as an alternative to transmission or as a way to enhance transmission performance or capability in tight or extreme conditions. Regardless of the ultimate remedy, any reliability need that is identified, should be addressed in a transparent manner in order to appropriately consider all possible solutions to that need.

⁸ Ufair, Umain, *How the Western drought is pushing the power grid to the brink*, Vox, August 16, 2022. Available at: <https://www.vox.com/23292669/drought-2022-power-energy-grid-lake-mead-climate-heat-hoover-dam>.

Additionally, organized wholesale markets remain a valuable tool in preserving reliability and resilience due to their very nature. A single market which spans a broad region gives that grid operator the ability to access resources over a larger geographic area, *i.e.*, broad footprint diversity,⁹ which allows them to rely on a more technologically and geographically diverse set of generation resources. This is valuable during normal periods, but especially so should certain resources be impacted by a local weather event. The ISO/RTO grid operators may have the ability to source and send power to impacted areas from those that may not be as affected by the event either geographically or due to technological differences.

In addition to cost effectively adding new resources, competitive wholesale markets also remain the best tool to value and measure the capacity value of existing resources. The adoption and implementation of capacity accreditation mechanisms – such as the Effective Load Carrying Capability (“ELCC”) – should continue to be properly calibrated and adopted by the Commission on a nationwide basis, as PJM has outlined in the past.¹⁰ As different types of resources are increasingly added across the grid, ELCC levels reflect the impacts of those changes to system operations and capabilities. In order to preserve reliability, particularly in light of increasing concerns regarding extreme weather events, it is imperative that grid operators have an accurate

⁹ MISO 2020 Value Proposition, (Published Feb 16, 2021), slide 11, “Regional rather than localized use of the electrical system allows more efficient and effective operation of generation assets while reducing the planning reserve margin needed for reliability.”

¹⁰ *Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection*, Comments of PJM Interconnection, L.L.C., RM21-17-000, (October 12, 2021), p. 25. “PJM proposes that the Commission and NERC consider the usefulness of expanding the ELCC methodology on a nationwide basis. Specifically, PJM would support a Commission policy that encourages the adoption of an ELCC-based methodology for variable and limited duration resources, particularly in regions with a high penetration level of such resources. This approach would ensure that the capacity value of each resource is accurately measured so that load is reliably served over all hours of the year.”

valuation of the deliverable energy that each resource – and its overall system – can provide.

The harmonization of accreditation mechanisms across regions can also play a critical role in planning to preserve reliability. If all ISOs/RTOs use similar ELCC methods, resources will more likely sell capacity in the region where the resource adequacy value is highest. If the ISOs/RTOs use significantly different ELCC values, it is more likely that resources sell capacity based on differences in ELCC methods rather than actual resource adequacy value. Accordingly, in order to further fortify the system against extreme weather events and give system planners additional data by which to accurately and efficiently account for the actual capacity that may be available on the grid, the Commission should continue to encourage the adoption and expedite the approval of capacity accreditation mechanisms like ELCC.

II. Conclusion

EPSA reiterates its support for the NOPR and respectfully requests that FERC should direct NERC to examine assessing system needs based upon increasingly severe climate and weather impacts as the electric system integrates a larger share of non-dispatchable resources as discussed in more detail in the EPSA comments.

Respectfully submitted,

Nancy Bagot

Nancy Bagot
Senior Vice President
Bill Zuretti
Director, Regulatory Affairs & Counsel
Electric Power Supply Association
1401 New York Avenue, NW, Suite 950
Washington, DC 20005
(202) 628-8200
nancyb@epsa.org

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