

FERC Notice of Proposed Rulemaking (NOPR) **Transmission System Planning Performance Requirements for Extreme Weather**

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Planning Committee
July 12th 2022

- FERC proposed to direct NERC to submit modifications to TPL-001-5.1 (Transmission System Planning Performance Requirements) within one year of the effective date of a final rule, 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.
- The revised TPL-001-5.1 standard would have compliance obligations beginning **no later than 12 months from the date of Commission approval** of the modified Reliability Standard.

The proposed modifications to TPL-001-5.1 would require:

- Development of benchmark planning cases based on information such as major prior extreme heat and cold weather events or future meteorological projections
- Planning for extreme heat and cold events using steady-state and transient stability analyses expanded to cover a range of extreme weather scenarios, including the expected resource mix's availability during extreme weather conditions and the broad-area impacts of extreme weather
- Corrective action plans that include mitigation for any instances where performance requirements for extreme heat and cold events are not met

ERCOT Cold Weather Event – February 2021

- 23,418 MW of manual firm load shed
- 65,622 MW of unplanned generation outages
- 210 deaths

FERC-Led Technical Conference on Climate Change, Extreme Weather, and Electric System Reliability (AD21-13) – June 2021

Mike Bryson provided testimony on behalf of PJM.

FERC Resilience Dockets (PJM provided comments):

- Docket No. AD18-7
(now closed Resilience
Docket)
- Docket No. RM21-17
(Transmission Planning
ANOPR)
- AD21-13
(Post Technical Conference
Comments in Climate Change Docket)

- Currently, PJM is working internally to develop draft response to the RM 22-10-000 Extreme Weather Planning NOPR
- Two Workshops Scheduled:
 - July 21st:
 - Provide update on preliminary PJM response plan to the NOPR and solicit input from Stakeholders
 - Aug 12th:
 - Final draft response update and discussion.

Through a number of filings and presentations to the Commission (both formally and informally) prior to the issuance of these NOPRs, PJM urged the Commission to tackle the resilience issue holistically by requiring development of a new transmission driver that would address a host of resilience issues, including:

- 1) gas/electric vulnerabilities;
- 2) reducing the list of critical grid facilities; and
- 3) targeting infrastructure strengthening through:
 - storm hardening;
 - winterization of generation resources;
 - infrastructure redundancy where appropriate; and
 - Inter-regional reinforcements.

- (i) development of benchmark planning cases based on information such as major prior extreme heat and cold weather events or future meteorological projections;
 - Focus on established “stressed events” as a result of overall system condition (Load, Generation/Fuel availability, Outage conditions) rather than load profile alone.
 - Wide-Area extreme events: should help with establishing One in XX Years Event design threshold/target (for example One in 50 Years)

- (i) planning for extreme heat and cold events using steady-state and transient stability analyses expanded to cover a range of extreme weather scenarios;
 - Allow load drop, reconfiguration and adjustments
 - Do not allow, uncontrolled separation, cascading and instability

- (ii) corrective action plans that include mitigation for any instances where performance requirements for extreme heat and cold events are not met.
 - Consideration of new or enhanced safety net designs (load shed schemes)
 - Establishing transmission (interregional) capacity reinforcements if effective in mitigating unacceptable performance in (ii above)

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