

NERC

NORTH AMERICAN ELECTRIC
RELIABILITY CORPORATION

Perspective on Resilience

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- Notice of Proposed Rulemaking
 - On January 8, 2018, the Federal Energy Regulatory Commission :
 - Terminated Department of Energy's proposed Grid Resilience Pricing Rule for cost-of-service compensation for certain resources in Regional Transmission Organization/Independent System Operator markets; and
 - Initiated a new proceeding to examine resilience of the Bulk Power System (BPS). *Grid Resilience in Regional Transmission Organizations and Independent System Operators*, 162 FERC ¶ 61,012 (2018) (Order).
 - FERC proposed definition of resilience, based on concepts in National Infrastructure Advisory Council framework.
- FERC's Proposed Definition:
 - "The ability to withstand and reduce the magnitude and/or duration of disruptive events, which includes the capability to anticipate, absorb, adapt to, and/or rapidly recover from such an event."

- **Comments Filed**
 - RTO/ISO comments were filed March 9, 2018.
 - Reply comments were filed May 9, 2018.
- **NERC's Focus**
 - NERC's comments focused on resilience as an element of reliable operation of the Bulk Power System and
 - as related to the adequate level of reliability of the Bulk Electric System.

- Statute
 - Reliability encompasses aspects of resilience of the BPS, consistent with section 215 of the Federal Power Act and NERC's obligation to develop Reliability Standards supporting Reliable Operation of the BPS.
- Definition of the ALR:
 - Elements of resilience are incorporated into NERC's, FERC-filed, definition of the ALR.
 - See Definition: [Adequate Level of Reliability for the Bulk Electric System](#).

- NERC's comments highlighted NERC activities
 - Reliability Standards,
 - Reliability Assessments,
 - Event Analysis,
 - Situational Awareness, and
 - Electric Information Sharing Analysis Center (E-ISAC).

- **Sample Reliability Standards**

- Reliability Standard TPL-001-4 (Transmission System Planning Performance Requirements): providing planning performance requirements in anticipation of potential events;
- Reliability Standard EOP-004-3 (Event Reporting): requiring that entities report disturbances and events threatening reliability;
- Reliability Standard CIP-008-5 (Cyber Security - Incident Reporting and Response Planning): requiring plans to address reportable cyber security incidents; and
- Reliability Standard TPL-007-1 (Transmission System Planned Performance for Geomagnetic Disturbance Events): requiring corrective action plans if a geomagnetic disturbance vulnerability assessment concludes that the system does not meet certain performance requirements.

- E-ISAC
 - GridEx exercise by E-ISAC; and
 - Cybersecurity Risk Information Sharing Program.
- Assessments
 - NERC's 2017 Special Reliability Assessment: Potential Bulk Power System Impacts Due to Severe Disruptions on the Natural Gas System; and
 - State of Reliability 2017 Report (2017 SOR) provides additional detail on how NERC uses reliability indicators to tie the performance of the BES to the reliability performance objectives in the ALR.

- Events Analysis
 - NERC's *August 2017 Hurricane Harvey Event Analysis Report*; and
 - *Alert 1200 MW Fault Induced Solar Photovoltaic Resource Interruption Disturbance Report*, issuing recommendations for reliability after NERC observed loss of solar resources during transmission disturbances due to low-voltage ride through settings of photovoltaic inverters.
- Bulk Power System Awareness

- Reliability Issues Steering Committee (RISC)
 - Reevaluating resilience as reflected in the ALR and NIAC framework; and
 - Reviewing activities in support of resilience and potential further action.
- Next steps on RISC resilience framework
 - RISC Resilience Report to be presented to the NERC Board of Trustees in November.

- Recognition
 - Comments widely recognized NERC activities in support of resilience, even though some groups might desire more action.
- Process available if stakeholders seek modifications to Reliability Standards
 - Standard Authorization Requests may be submitted in accordance with Appendix 3A of the NERC Rules of Procedure for any party who desires revisions to NERC Reliability Standards.

- Recognition for elements of resilience and reliability of the BPS
 - Building on prior comments, NERC encourages further Commission policy recognizing the value of essential reliability services; and
 - The value of fuel assurance and security as critical elements of a reliable and resilient BPS.
 - See e.g., Order No. 842 regarding primary frequency response capability.



Questions and Answers