

FERC Approves New Reliability Standard to Protect Grid from GMD Events

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In a final rule issued on September 22, the Federal Energy Regulatory Commission (FERC) established requirements for certain entities to assess the vulnerability of their transmission systems to geomagnetic disturbance (GMD) events. Such events occur when the sun ejects charged particles that interact and cause changes in the earth's magnetic fields.

Reliability Standard TPL-007-1 (Transmission System Planned Performance for Geomagnetic Disturbance Events) sets requirements for certain transmission and generator owners, planning coordinators, and transmission planners to assess the vulnerability of their systems to a benchmark GMD event, described as a "one-in-100-year" event. Those entities are required to develop

- system models necessary to complete the vulnerability assessments at least once in every 60 calendar months and
- criteria for acceptable steady state voltage performance during a benchmark GMD event.

In the event that such entities do not meet performance requirements based on their vulnerability assessments, those entities must develop a corrective action plan to achieve the requirements.

In addition, FERC directed the North American Electric Reliability Corporation (NERC) to

- modify the benchmark GMD event definition applicable to TPL-007-1 as it pertains to the GMD vulnerability assessments and transformer thermal impact assessments;
- require the collection of necessary geomagnetically induced current monitoring and magnetometer data from registered entities for the period beginning May 2013 and onward, and make such data publicly available;
- include a one-year deadline for the development of corrective action plans and two- to four-year deadlines to complete mitigation actions involving nonhardware and hardware mitigation, respectively; and
- submit a work plan and, subsequently, at least one more informational filing that addresses specific GMD-related research areas.

FERC approved NERC's implementation plan, which contemplates a five-year phase-in period beginning with TPL-007-1 Requirement R1 taking effect on the first day of the first calendar quarter of March 2017.

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