

**Supplemental Comments of the Foundation for Resilient Societies
on NERC Standard TPL-007-1
Transmission System Planned Performance for Geomagnetic Disturbance Events
November 21, 2014**

The Foundation for Resilient Societies, Inc. [hereinafter “Resilient Societies”] separately files today, November 21, 2014 Group Comments that assert multiple failures, both procedural and substantive, that result in material noncompliance with ANSI Procedural Due Process, and with NERC’s Standard Processes Manual Version 3, effective on June 26, 2013.

In this separate Supplemental Comment, Resilient Societies incorporates as its concerns the material in comments on NERC Standard TPL-007-1 submitted by John Kappenman and William Radasky (July 30, 2014); John Kappenman and Curtis Birnbach (October 10, 2014); John Kappenman (2 comments dated November 21, 2014); and EMPrimus (November 21, 2014).

We reserve the right to utilize all other comments filed in the development of this standard in a Stage 1 Appeal under NERC’s Standard Processes Manual Version 3. In particular but not in limitation, we assert that NERC fails to collect and make available to all GMD Task Force participants and to utilize essential relevant data, thereby causing an unscientific, systemically biased benchmark model that will discourage cost-effective hardware protection of the Bulk Power System; that NERC fails to fulfill the obligations under ANSI standards and under the Standard Processes Manual to address and where possible to resolve on their merits criticisms of the NERC Benchmark GMD Event model. Moreover, if the NERC Director of Standards and Standards Department fail to exercise the “quality control” demanded by the Standard Processes Manual, this will also become an appealable error if the standard submitted on October 27 and released on October 29, 2014 becomes the final standard for the NERC ballot body.

Moreover, an essential element of quality control for NERC standard development and standard promulgation is that the Standard comply with the lawful Order or Orders of the Federal Energy Regulatory Commission. To date, no element of the standard performs the cost-benefit mandate of FERC Order. No. 779.

Resilient Societies hereby refers the Standards Drafting Team and the NERC Standards Department to the filing today, November 21, 2014 of Item 31 in Maine Public Utilities Commission Docket 2013-00415. This filing is publicly downloadable. Appendix A to this filing of as Draft Report to the Maine PUC on geomagnetic disturbance and EMP mitigation includes an assessment of avoided costs, hence financial benefits of installing neutral ground blocking devices, including a range of several devices (Central Maine Power) to as many as 18 neutral ground blocking, and GIC monitors (EMPrimus Report, November 12, 2014, Appendix A in the Maine PUC filing of November 21, 2014). Cost-benefit analysis could and should be applied on a regional basis, in the NERC model and with criteria for application by NERC registered entities. NERC has failed to fulfill its mandate, with the foreseeable effect of suppressing public awareness of the benefits resulting from blockage of GICs to entry through high voltage transmission lines into the Bulk Power System. Another foreseeable result is economic harm to those companies that have invested capital in the development of GMD hardware protection devices and GIC monitors. We incorporate by reference the materials in Maine PUC Docket 2013-00415, Items 30 and 31, filed and publicly retrievable online in November 2014.

Finally, we express concern that the combination of NERC Standards in Phase 1 and in Phase 2, providing no mandatory GIC monitor installations and data sharing with Regional Coordinators, and with state and federal operations centers, effectively precludes time-urgent mitigation during severe solar storms despite timely reports to the White House Situation Room.

NERC has effectively created insuperable barriers to fulfill the purposes of FERC Order No. 779. Without significant improvements that encourage situational awareness by Generator Operators and near-real-time data to mitigate the impacts of solar geomagnetic storms, the only extra high voltage transformers that can be reliably protected will be those with installed hardware protection. Yet this defective standard will provide false reassurance that no hardware protection is required. Also, the scientifically defective NERC model may also preclude regional cost recoveries for protective equipment, by falsely claiming that no protective equipment is required under the assessment methodologies in the standard.

Hence irreparable harm to the reliability of the Bulk Power System, and to the residents of North America, is a foreseeable result of the process and substantive result of this standard.

Respectfully submitted by:

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