Unofficial Comment Form

Project 2013-03 Geomagnetic Disturbance Mitigation

Please **DO NOT** use this form for submitting comments. Please use the [electronic form](https://www.nerc.net/nercsurvey/Survey.aspx?s=08d0f4edcf0a434b99997705eecea7e8) to submit comments on the Standard. The electronic comment form must be completed by **July 30, 2014**.

If you have questions please contact Mark Olson at mark.olson@nerc.net or by telephone at 404-446-9760.

All documents for this project are available on the [project page](http://www.nerc.com/pa/Stand/Pages/Project-2013-03-Geomagnetic-Disturbance-Mitigation.aspx).

## Background Information

On May 16, 2013 FERC issued [Order No. 779](http://elibrary.ferc.gov/idmws/common/OpenNat.asp?fileID=13260635), directing NERC to develop Standards that address risks to reliability caused by geomagnetic disturbances in two stages. Project 2013-03 responds to the FERC directives as follows:

* Stage 1. EOP-010-1 – Geomagnetic Disturbance Operations was filed in November, 2013.
* Stage 2. Proposed standard TPL-007-1 – Transmission System Planned Performance for Geomagnetic Disturbance Events requires applicable entities to conduct assessments of the potential impact of benchmark GMD events on their systems. If the assessments identify potential impacts, the proposed standard will require the applicable entity to develop and implement a plan to mitigate the risk of voltage collapse, uncontrolled separation, or Cascading. The Stage 2 standard must be filed with FERC by January 2015.

The initial draft of TPL-007-1 and supporting white papers were posted for informal comments from April 22 – May 21, 2014. The standard drafting team (SDT) has made several revisions based on stakeholder input.

You do not have to answer all questions. Enter comments in simple text format. Bullets, numbers, and special formatting will not be retained.

## Questions on Draft TPL-007-1

1. **Organization of the Requirements in TPL-007-1.** The SDT has reorganized the standard in response to stakeholder comments. The revised draft is more closely aligned with the steps in the GMD Vulnerability Assessment process. The SDT has also created a flow chart of the overall assessment process. Do these steps address the concerns about the organization of TPL-007-1? If you do not agree or want to provide other recommendations on the organization of the standard please provide specific suggestions in your comments.

[ ]  Yes

[ ]  No

Comments:

1. **Benchmark GMD Event**. The SDT has provided additional guidance in TPL-007-1 Attachment 1 (Calculating Geoelectric Fields for the Benchmark GMD Event). Changes include how a planning entity with a large geographic area can handle scaling factors in the planning area, and specific guidance on earth conductivity scaling when the planning entity does not have a ground conductivity model. During informal comments, many commenters indicated that they agreed with the proposed benchmark GMD event and no substantive changes have been made. Do you agree that the guidance in TPL-007-1 Attachment 1 provides the required details for applying the proposed benchmark GMD event? If you do not agree or have additional new comments on the proposed benchmark GMD event, please provide specific technically justified suggestions for the SDT to consider.

[ ]  Yes

[ ]  No

Comments:

1. **Transformer Thermal Impact Assessment.** The SDT revised the requirement for conducting transformer thermal impact assessments. In the revised draft TPL-007-1, only those applicable transformers have calculated GIC flow of 15 Amperes or greater per phase of effective geomagnetically-induced current (GIC) are required to conduct a transformer thermal impact assessment. A review of available transformer thermal models supports this as a conservative screening criteria. Do you agree with the proposed 15 Amperes threshold? If you do not agree or have recommended changes to the transformer thermal impact assessment requirement please provide your suggestion and technical justification, if applicable.

[ ]  Yes

[ ]  No

Comments:

1. **Implementation**. The SDT revised the proposed Implementation Plan based on stakeholder comments. The changes provide additional time for completing transformer thermal impact assessments. An overall timeline of four-years from the standard’s effective date until completion of all steps in the GMD Vulnerability Assessment process including development of a Corrective Action Plan, if required, has been maintained. Do you support the approach taken by the SDT in the proposed Implementation Plan? If you do not agree with the proposed Implementation Plan, please provide your recommended changes and justification.

[ ]  Yes

[ ]  No

Comments:

1. **Violation Risk Factors (VRF) and Violation Severity Levels (VSL)**. The SDT has made revisions to conform to changes in the proposed requirements. Do you agree with the VRFs and VSLs for TPL-007-1? If you do not agree, please explain why and provide recommended changes.

[ ]  Yes

[ ]  No

Comments:

1. **Mitigation Costs.** In directing the development of reliability standards, FERC stated their expectation for NERC and the industry to consider the costs and benefits of mitigation measures to address GMD impacts. Proposed standard TPL-007-1 provides performance requirements but is not prescriptive on mitigation strategies or technologies, if any are necessary. The SDT believes this approach, which is consistent with other planning standards, is the most cost effective means to accomplish the directives in FERC’s order. Do you agree with the SDT’s approach? If you have any recommendations or cost information that you would like the SDT to consider please provide it here.

[ ]  Yes

[ ]  No

Comments:

1. Are there any other concerns with the proposed standard or white papers that have not been covered by previous questions and comments? If so, please provide your feedback to the SDT.

[ ]  Yes

[ ]  No

Comments: