

June 29, 2016

**VIA ELECTRONIC FILING**

David Erickson  
President and Chief Executive Officer  
Alberta Electric System Operator  
2500, 330 - 5 Avenue SW  
Calgary, Alberta  
T2P 0L4

**RE: Proposed Reliability Standard TPL-007-1 (Transmission System Planned Performance for Geomagnetic Disturbance Events)**

Dear Mr. Erickson:

On March 3, 2015, the North American Electric Reliability Corporation (“NERC”) filed a filing of proposed Reliability Standard TPL-007-1 (Transmission System Planned Performance for Geomagnetic Disturbance Events). As described in detail in NERC’s filing and subsequent related filings, NERC’s proposed Reliability Standard TPL-007-1 represents a state of the art approach to addressing the reliability risks posed by geomagnetic disturbances (or “GMDs”) to the Bulk-Power System, a highly complex area in which industry and scientific understanding continues to evolve.

As noted in its May 3, 2016 filing, NERC recently identified the need for a minor revision to a figure in one of the technical white papers supporting the proposed Reliability Standard. Specifically, NERC identified an error in Figure 1 of the *Screening Criterion for Transformer Thermal Impact Assessment* white paper that resulted in incorrect plotting of simulated power transformer peak hot-spot heating from the Benchmark GMD Event.

Based on its analysis of the corrected Figure 1, the TPL-007-1 standard drafting team determined that the 75 A per phase threshold for transformer thermal impact assessment remains a valid criterion. Therefore, it is not necessary to revise any Requirements of the proposed Reliability Standard.

Nevertheless, to maintain a complete and accurate record, NERC revised the *Screening Criterion for Transformer Thermal Impact Assessment* white paper to incorporate the revised Figure 1. NERC also made corresponding revisions to related text, figures, and tables throughout the technical white papers supporting the proposed standard.

The revisions, which were posted for stakeholder comment from May 12, 2016 through June 13, 2016, are summarized below:

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- *Screening Criterion for Transformer Thermal Impact Assessment* white paper: (i) revisions to correct Figure 1: Metallic hot spot temperatures calculated using the benchmark GMD event; and (ii) corresponding revisions, including those to the related text and to Table 2: Upper Bound of Peak Metallic Hot Spot Temperatures Calculated Using the Benchmark GMD Event.
- *Benchmark Geomagnetic Disturbance Event Description* white paper: corresponding revision to Figure I-9: Calculated Peak Metallic Hot Spot Temperature for all possible circuit orientations and effective GIC.
- *Transformer Thermal Impact Assessment White Paper*: corresponding revisions to Table 1: Upper Bound of Peak Metallic Hot Spot Temperatures Calculated Using the Benchmark GMD Event.

The revised technical white papers and related development information, which includes the standard drafting team's consideration of stakeholder comments, are attached hereto as **Attachment 1**.

Respectfully submitted,

/s/ Lauren A. Perotti

Lauren A. Perotti  
Counsel for North American Electric  
Reliability Corporation

## **ATTACHMENT 1**

(Available on the NERC Website at

[http://www.nerc.com/FilingsOrders/ca/Canadian%20Filings%20and%20Orders%20DL/GMD%20Supplemental%20Filing\\_EXHIBITS.pdf](http://www.nerc.com/FilingsOrders/ca/Canadian%20Filings%20and%20Orders%20DL/GMD%20Supplemental%20Filing_EXHIBITS.pdf))