August 17, 2015

Mr. William R. (Bill) Harris
Mr. Thomas S. Popik
Foundation for Resilient Societies, Inc.
52 Technology Way
Nashua, New Hampshire 03060
via Federal Express
and via Email to wm.r.harris@gmail.com and
thomasp@resilientsocieties.org

Re: Level 2 Appeal, Proposed Reliability Standard TPL-007-1
(Project 2013-03 Geomagnetic Disturbance Mitigation)

Dear Messrs. Harris and Popik:

On June 29, 2015, a panel of five members appointed by the North American Electric Reliability Corporation ("NERC") Board of Trustees heard the Level 2 Appeal of the Foundation for Resilient Societies, Inc. regarding the development of proposed Reliability Standard TPL-007-1 (Transmission System Planned Performance for Geomagnetic Disturbances). This appeal was initiated pursuant to Section 8 of the NERC Standard Processes Manual.

For the reasons discussed more fully in the enclosed Decision, the Level 2 Appeal Panel finds against the Foundation for Resilient Societies, Inc. and finds that the Foundation and its objections were afforded fair and equitable treatment during the standard development process.

This Decision concludes the Foundation's Level 2 Appeal. This Decision, as well as the record of the Level 1 Appeal, will be made a part of the public record associated with the proposed TPL-007-1 Reliability Standard.

Sincerely,

/s/ Kenneth G. Peterson

Kenneth G. Peterson
Chair, Level 2 Appeal Panel

Enclosure

cc: John Kappenman, Storm Analysis, LLC
Curtis Birnbach, Advanced Fusion Systems, LLC
Howard Gugel, North American Electric Reliability Corporation
Frank Koza, PJM Interconnection

DECISION OF THE LEVEL 2 APPEAL PANEL
REGARDING THE LEVEL 2 APPEAL OF
THE FOUNDATION FOR RESILIENT SOCIETIES, INC.
TPL-007-1 – Transmission System Planned Performance for Geomagnetic Disturbance Events
(Project 2013-03 Geomagnetic Disturbance Mitigation)
ISSUED: AUGUST 17, 2015

Pursuant to Section 8 of the NERC Standard Processes Manual ("SPM"), the Level 2 Appeal Panel appointed to hear the Level 2 Appeal of the Foundation for Resilient Societies, Inc. (the "Foundation") finds that the Foundation and its objections, and the similar objections of the third party commenters in this proceeding, were afforded fair and equitable treatment during the standard development process for proposed Reliability Standard TPL-007-1 (Transmission System Planned Performance for Geomagnetic Disturbance Events).

As discussed more fully herein, the Level 2 Appeal Panel addressed the requirements for appeals and the standard for review set forth in Section 8 of the SPM in reaching this determination. The Level 2 Appeal Panel finds that the Foundation, as a participant in the standard development process for TPL-007-1, is an entity with "directly and materially affected interests" for purposes of pursuing an appeal pursuant to Section 8 of the SPM. However, the assertions of the Foundation that could reasonably construed as stating a procedural action or inaction associated with the Reliability Standards process were properly found by the NERC Director of Standards to have no basis in fact. Therefore, the Foundation failed to show that it has or will experience any adverse effect as a result of a procedural action or inaction associated with the Reliability Standards development process as required by Section 8 of the SPM.

The NERC Director of Standards properly identified the Foundation's remaining assertions as objections to the technical content of proposed Reliability Standard TPL-007-1, and not implicating an action or inaction involving a process described in the SPM. Such technical objections are outside the scope of the limited appeal right provided by Section 8 of the SPM and cannot be considered on appeal.

Therefore, in accordance with the permitted outcomes of Section 8.2 of the SPM, the Level 2 Appeal Panel finds against the Foundation, and finds that the facts support that the Foundation and its objections were afforded fair and equitable treatment during the standard development process for proposed Reliability Standard TPL-007-1.

I. Background

This section provides: (i) a brief discussion of the development and approval of proposed Reliability Standard TPL-007-1; and (ii) and the procedural history of the Foundation's appeal to date.

A. The Development and Approval of Proposed Reliability Standard TPL-007-1

i. Standard Development Process and NERC Board of Trustees Approval

Proposed Reliability Standard TPL-007-1 was developed in response to a directive of the Federal Energy Regulatory Commission ("FERC") to address the potential effects of geomagnetic disturbances ("GMDs") on the bulk power system. The development of the proposed standard began in June 2013. One informal and three formal comment periods were held. Comments were received from a number of parties, including the Foundation. The final ballot was held from December 5, 2014 – December 16, 2014, during which the proposed standard reached a quorum and achieved sufficient votes for approval. The NERC Board of Trustees approved the proposed standard on December 17, 2014.[1]

ii. FERC Proceeding, Docket No. RM-15-11-000

In accordance with FERC's directive, proposed Reliability Standard TPL-007-1 was submitted for FERC approval on January 21, 2015.[2]

On May 14, 2015, the Commission issued a Notice of Proposed Rulemaking ("NOPR") proposing to approve Reliability Standard TPL-007-1.[3] Comments were due July 27, 2015.

B. Procedural History of the Foundation's SPM Appeal

On January 4, 2015 (amended January 5, 2015), the Foundation filed a complaint with the NERC Director of Standards initiating a Level 1 Appeal pursuant to Section 8 of the SPM (the "Complaint") (Record at 1-238).

In the Complaint, the Foundation asserted that the standard drafting team failed to address certain risks, include certain requirements, or perform certain analyses in developing proposed Reliability Standard TPL-007-1 and the accompanying benchmark GMD event. The Foundation

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[1] *See* Record of Appeal ("Record") at 243-244. The Record of Appeal is available in two parts at http://www.nerc.com/pa/Stand/Project201303GeomagneticDisturbanceMitigation/2013-03_GMD_Level_2_Appeal_Foundation_for_Resilient_Societies_TPL-007-1_05182015.pdf (Record of Appeal pages 1-265) and http://www.nerc.com/pa/Stand/Project201303GeomagneticDisturbanceMitigation/Record_of_Appeal_Pt_2_Comments_06122015.pdf (Record of Appeal pages 266-288). A complete record of the development history for proposed Reliability Standard TPL-007-1 is available at http://www.nerc.com/pa/Stand/Pages/Project-2013-03-Geomagnetic-Disturbance-Mitigation.aspx.

[2] *See Petition of the North American Electric Reliability Corporation for Approval of Proposed Reliability Standard TPL-007-1 Transmission System Planned Performance for Geomagnetic Disturbance Events*, Dkt. No. RM15-11-000 (Jan. 21, 2015) ("TPL-007-1 Petition").

[3] *See Reliability Standard for Transmission System Planned Performance for Geomagnetic Disturbance Events,* Notice of Proposed Rulemaking, 151 FERC ¶ 61,134 (2015), 80 Fed. Reg. 29990 (May 26, 2015).

also asserted that NERC failed to perform "essential quality control" with respect to the proposed standard, and that the standard drafting team did not fully address the Foundation's prior comments submitted during the standard development process (*see* Record at 6-18).

On February 18, 2015, the NERC Director of Standards, assisted by other NERC staff, timely responded to the Foundation's Complaint. In this response, the NERC Director of Standards found no basis in fact for the Foundation's assertions that NERC or the standard drafting team failed to follow the processes set forth in the SPM. Therefore, the NERC Director of Standards found that the Foundation failed to show that it has or will experience any adverse effect as a result of a procedural action or inaction associated with the Reliability Standards process, the showing required by Section 8 of the SPM (*see* Record at 239-261).

On February 26, 2015, the Foundation initiated a Level 2 Appeal by letter addressed to the NERC Director of Standards (Record at 262). On March 31, 2015, the NERC Board of Trustees appointed a Level 2 Appeal Panel to hear the Foundation's appeal (Record at 264). On May 18, 2015, NERC Reliability Standards staff posted notice that the Level 2 Appeal Panel would meet via teleconference to hear the Foundation's appeal on June 29, 2015.

Pursuant to Section 8.2 of the SPM, the Level 2 Appeal Panel invited entities with directly and materially affected interests that have been or will be adversely affected by any procedural action or inaction identified in the Foundation's Complaint to submit comments for the panel's consideration. Six sets of comments were received from the following persons and entities: Storm Analysis, LLC (John Kappenman) and Advanced Fusion Systems, LLC (Curtis Birnbach) (collectively, "Kappenman and Birnbach"); Center for Security Policy (Nicholas Hanlon) ("CSP"); Tennessee Valley Authority (Dennis Chastain) ("TVA"); EMP Task Force on National and Homeland Security (Peter Pry) ("Task Force"); Bonneville Power Administration (Cain Braveheart) ("BPA"); and James E. Ference, DMD.

At the hearing on June 29, 2015, the Level 2 Appeal Panel heard presentations from the parties. William Harris and Thomas Popik represented the Foundation, sharing presentation time with commenter John Kappenman of Storm Analysis, LLC. Representing the TPL-007-1 standard drafting team was its Chair, Frank Koza of PJM Interconnection. Howard Gugel, the NERC Director of Standards, presented the findings contained in the February 18, 2015 response to the Foundation's Level 1 Appeal.

II. Authority and Standard of Review

Section 8 of the SPM provides that "[a]ny entity that has directly and materially affected interests and that has been or will be adversely affected by any procedural action or inaction related to the development [or] approval . . . of a Reliability Standard" shall have a right to appeal. The appeals process is initiated by the filing of a complaint. This complaint must: (i) describe the procedural action or inaction the appellant complains of; and (ii) satisfy the appellant's burden of demonstrating actual or potential adverse effect (SPM § 8.0, 8.1).

The appeal right described in Section 8 of the SPM is limited to a consideration of whether the FERC-approved standards development process was followed. Objections that do not implicate a procedural issue but instead relate to the substantive, technical content of a Reliability Standard fall outside the scope of issues that may be considered on appeal. *See* SPM § 8.0 ("This appeals process applies only to the NERC Reliability Standards processes as defined in [the SPM], not to the technical content of the Reliability Standards action.")

The appeals process consists of two levels: a Level 1 Appeal, to the NERC Director of Standards, and a Level 2 Appeal, to a panel of five members appointed by the Board of Trustees. The Level 2 Appeal Panel shall hear from the appellant and any other entity directly and materially affected by the same procedural actions or inactions referenced in the appellant's complaint, but it shall not consider any expansion of the scope of the appeal that was not presented in the Level 1 Appeal (SPM § 8.2).

In its written decision, the Level 2 Appeal Panel is bound to one of the following two outcomes. It may: (i) find for the appellant and remand the issue to the Standards Committee, with a statement of the issues and facts in regard to which fair and equitable action was not taken; or (ii) find against the appellant, with a specific statement of the facts that demonstrate fair and equitable treatment of the appellant and the appellant's objections. The Level 2 Appeal Panel may not revise, approve, disapprove, or adopt a Reliability Standard, as those responsibilities remain with the ballot pool and the Board of Trustees (SPM § 8.2).

III. Discussion

In a Level 2 Appeal, the Level 2 Appeal Panel is tasked, as an initial matter, with determining whether the Foundation is an "entity with directly and materially affected interests and that has been or will be adversely affected by any procedural action or inaction" related to the development or approval of TPL-007-1 (SPM § 8.0). Assuming the Foundation does meet that requirement, the Panel must then determine whether the Foundation and its objections were afforded fair and equitable treatment, from a procedural perspective, during the development and approval of proposed Reliability Standard TPL-007-1. These inquiries consist of several distinct components; namely, whether the Foundation is an entity with "directly and materially affected interests," whether it has stated, in its Complaint, a procedural action or inaction, and whether it has adequately demonstrated that it has been or will be adversely affected by this procedural action. In accordance with Section 8.2 of the SPM, the Level 2 Appeal Panel shall also consider comments from other entities with directly and materially affected interests that have been or will be adversely affected by a procedural action or inaction described in the Foundation's Complaint.

For the reasons described below, the Level 2 Appeal Panel finds that the Foundation is an entity with "directly and materially affected" interests, but that the Foundation has not stated a procedural action or inaction that has or will cause it adverse effect. The Level 2 Appeal Panel concludes that the Foundation and its objections (and the similar objections raised by the

commenters) have been afforded fair and equitable treatment during the standard development process.

A. The Foundation Has "Directly and Materially Affected Interests" for Purposes of Section 8 of the SPM

Section 8 of the SPM limits the right to appeal to those entities that have "directly and materially affected interests." The requirement speaks to the standing of an entity to bring an appeal and must be addressed prior to addressing the merits.

The Foundation offered several reasons for why it is an "aggrieved party" (*see* Record at 6-7; Transcript[4] at 3:21 – 5:12). The NERC Director of Standards did not specifically address the Foundation's assertions with respect to this issue in the Level 1 Appeal.

The Level 2 Appeal Panel finds that the Foundation has "directly and materially affected interests" for the purposes of bringing an appeal under Section 8 of the SPM, but not for the reasons stated by Foundation. The Foundation is a member of Segment 8 of the Registered Ballot Body, participated in the ballot pool for proposed Reliability Standard TPL-007-1, and submitted comments during the comment periods. As a participant in the process, a procedural action or inaction related to the development of the standard would have the potential to directly and materially affect the Foundation's interests. This is especially true where, as here, the Foundation asserted actions and inactions that purportedly relate to the objections it raised during the process.

For similar reasons, the Level 2 Appeal Panel also finds that third-party commenters Kappenman and Birnbach have "directly and materially affected interests" for the purposes of presenting to the panel as participants in the Foundation's Level 2 Appeal, as they also submitted comments during the development of TPL-007-1.[5]

In reaching this decision, the Level 2 Appeal Panel does not now hold that only active participants in the development of a Reliability Standard could have "directly and materially affected interests" for the purposes of bringing an appeal or joining an existing appeal. However, this Panel does find that a party which has not participated in any way in the standards development process at issue, such as a party whose only articulated interest is as an electricity customer or commercial provider of services that would benefit from a particular approach to

[4] Transcript of the June 29, 2015 Meeting of the Level 2 Appeals Panel, *available at* http://www.nerc.com/pa/Stand/Pages/Project-2013-03-Geomagnetic-Disturbance-Mitigation.aspx.

[5] The submissions of all third-party commenters were considered in rendering this decision. Therefore, the Level 2 Appeals Panel does not find it necessary to specifically address whether each of these commenters has "directly and materially affected interests."

the reliability standard at issue, would not be a party that has a direct and materially affected interest entitled to pursue an appeal under Section 8 of the SPM.

B. The Foundation Has Not Demonstrated that a Procedural Action or Inaction Related to the Development or Approval of TPL-007-1 Has Caused or Will Cause Adverse Effect

In its Complaint, the Foundation asserted that there were a number of inactions or omissions in the development of proposed Reliability Standard TPL-007-1 that have resulted in numerous deficiencies in the standard (*see* Record at 2 and 18).

With the exception of one issue noted below, the Foundation has not cited any specific section of the SPM in support of any of the assertions contained in its Complaint. In the Level 1 Appeal, the NERC Director of Standards addressed those assertions that could reasonably be construed as implicating procedural action or inaction on the merits in order to "effectuate a complete resolution of the issues" (Record at 244). The NERC Director of Standards construed the Foundation's procedural assertions as falling within three distinct categories: (a) assertions that NERC Reliability Standards staff failed to perform "essential 'quality control'" (Record at 246-248); (b) assertions implicating potential anticompetitive effects (Record at 248-249); and (c) assertions regarding the failure to respond to comments submitted during the standard development process, where a response is required by the SPM (Record at 249-260). Addressing each category, the NERC Director of Standards found that there was no factual basis to support any of the Foundation's assertions. The NERC Director of Standards also identified a separate category of assertions, objections to the technical content of proposed Reliability Standard TPL-007-1, which it declined to address in its Level 1 Appeal response as being outside the permitted scope of an SPM appeal (Record at 244-245).

The Level 2 Appeal Panel adopts the NERC Director of Standards' categorization of the Foundation's assertions, in light of the lack of citations to the SPM and the Foundation's commingling of ostensibly procedural issues with objections to the technical content of the standard requirements themselves.

Each category is addressed in turn.

i. Failure to Perform Essential "Quality Control"

First, the Foundation asserted that the Office of Standards and the Director of Standards failed to perform "essential 'quality control' to assure that the essential goals and mandates of Order No. 779 are met by the proposed NERC Standard TPL-007-1" (Record at 3, 11, 16-17, and 18). Second, the Foundation asserted that it was a failure of "essential 'quality control'" to allow "Standard Drafting Team use of a modeled GIC limit of 75 amps per phase for thermal assessment

of transformers when the source for this 75 amp limit is an unapproved IEEE standard still in progress" (Record at 3, 17).

In the Level 1 Appeal response, the NERC Director of Standards construed the Foundation's arguments regarding failure of "quality control" as asserting actions or inactions related to SPM Section 4.6, which pertains to "quality reviews" (Record at 246). The NERC Director of Standards stated that a quality review that met the SPM requirements was in fact performed. Specifically, with respect to the Foundation's assertion regarding the Order No. 779 directives, the NERC Director of Standards stated, in summary, that: (i) the standard was reviewed to determine whether it was in scope of the Standard Authorization Request, which stated that any resulting standard would meet the Order No. 779 directives, and that (ii) the standard drafting team maintained a document that demonstrated how each directive in Order No. 779 was addressed (Record at 247). With respect to the 75 amp limit, the NERC Director of Standards stated that this review included an assessment of whether the standard meets NERC's Benchmarks for Excellent Standards and the criteria for FERC approval and concluded that: (i) the standard drafting team was comprised of leading industry experts; and (ii) ample support for the 75 amp limit was provided in the white paper posted with the proposed standard (Record at 247).

The "quality review" process contemplated by Section 4.6 of the NERC Standard Processes Manual provides as follows:

> The NERC Reliability Standards Staff shall coordinate a quality review of the Reliability Standard, implementation plan, and VRFs and VSLs in parallel with the development of the Reliability Standard and implementation plan, to assess whether the documents are within the scope of the associated SAR, whether the Reliability Standard is clear and enforceable as written, and whether the Reliability Standard meets the criteria specified in NERC's Benchmarks for Excellent Standards and criteria for governmental approval of Reliability Standards. The drafting team shall consider the results of the quality review, decide upon appropriate changes, and recommend to the Standards Committee whether the documents are ready for formal posting and balloting.

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NERC's Benchmarks for Excellent Standards provide that each Reliability Standard shall: (i) clearly identify the entities responsible for complying with the standard; (ii) state a clear statement of the purpose of the standard and how it contributes to reliability; (iii) state one or more performance requirements which will provide for a reliable bulk power system, consistent with good utility practice and in the public interest; (iv) provide objectively measurable requirements; (v) be "based upon sound engineering and operating judgment, analysis, or experience, as determined by expert practitioners in the particular field"; (vi) be complete and

self-contained; (vii) clearly provide consequences for noncompliance; (viii) be stated using clear and unambiguous language; (ix) contain requirements that can be practically implemented by the specified effective date; and (x) use consistent terms and definitions approved through the standards development process.[6]

The criteria for governmental approval are described in Order No. 672[7] and provide, among other things, that a proposed Reliability Standard must be designed to achieve a specified reliability goal and provide a technically sound means of achieving that goal, must be clear and unambiguous with respect to compliance and penalties, should achieve its reliability goals effectively and efficiently, and should cause no undue effect on competition or restriction of the grid beyond any restriction necessary for reliability.

In summary, NERC staff are required to perform a "quality review" to ensure that each Reliability Standard is within the scope of the authorizing document, is clear with respect to applicability and compliance obligations, is practical, uses consistent terminology, is written in a way that will achieve stated reliability goals, does not unnecessarily restrict competition, and is technically sound, "as determined by expert practitioners in the particular field." NERC staff do not develop the technical content of Reliability Standards; this content is developed through an open and consensus-driven process involving a variety of stakeholders. Similarly, NERC staff do not, as part of the "quality review" process, evaluate whether the technical content of the Reliability Standard represents the best or most desirable approach. This determination belongs to the ballot pool and the Board of Trustees.

We are not persuaded that there has been a failure of "quality control" or "quality review" in the development of proposed Reliability Standard TPL-007-1 as that process is described above. The Foundation's assertions regarding "quality control" are not based on a specific failure to ensure clarity, consistency with Commission directives or the Standard Authorization Request, or any of the other review criteria required of the Section 4.6 "quality review" process. The "common sense examples of past events and deficiencies in the NERC process" cited by Foundation (*see* Transcript at 7:23-8:1) do not demonstrate deficiencies in NERC's processes, nor do these examples demonstrate that the standard drafting team failed to follow the scientific method (*see* Transcript at 9:17-19). The standard drafting team's purported failure to adhere to, or place the same emphasis on, the data, papers, and observations that the Foundation has cited

[6] The Ten Benchmarks of an Excellent Reliability Standard are available at http://www.nerc.com/files/10_Benchmarks_of_Excellent_Reliability_Standards.pdf.

[7] *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶ 31,204, order on reh'g, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006). NERC's description of how proposed Reliability Standard TPL-007-1 meets each of the criteria for U.S. governmental approval is attached as Exhibit C to NERC's TPL-007-1 Petition.

does not reflect a failure of process. Rather, it reflects a disagreement by the standard drafting team (and also the ballot pool) regarding the merits of the Foundation's proposed approach.

The NERC Director of Standards found that the Section 4.6 "quality review" criteria were properly evaluated during the standard development process. We see no reason to disagree with this finding. The technical content of the proposed standard was developed by a standard drafting team with substantial subject matter expertise and was approved by the ballot pool and the NERC Board of Trustees.

For these reasons, the Level 2 Appeal Panel finds that the Foundation has stated no basis in fact for its assertions regarding failure of "quality control." Therefore, the Level 2 Appeal Panel finds that the Foundation has not been, nor will it be, adversely affected by any procedural action or inaction related to "quality control" or "quality review."

ii. Failure to Require Public Release of GIC Monitor Levels, so as to Preclude Anti-Competitive Conduct in the Electric Markets

In its Complaint, the Foundation asserted that it was error to fail "to require public release of [geomagnetically-induced current (GIC)] monitor levels, or designated GIC warning threshold levels, so as to preclude market manipulation and potential antitrust violations resulting from NERC Reliability Standard-setting" (Record at 3, 11-13). The NERC Director of Standards responded that the quality review, completed pursuant to SPM Section 4.6, included a review of the criteria for governmental approval of Reliability Standards and indicated no undue negative effect on competition or restriction of the grid beyond any restriction necessary for reliability (Record at 248). Specifically, this review found that the standard treats all responsible entities equally and does not require participation in any GIC monitoring network for compliance (*Id.*). The NERC Director of Standards found no factual basis for the Foundation's assertions that a failure to require public release of GIC data could lead to market manipulation.

The Foundation has cited no paper or theory in support of its assertion that the failure to require the release of private, voluntary research data in a Reliability Standard could lead to market manipulation. Further, the Foundation has failed to state how this purported failure ran afoul of the SPM's requirements to review Reliability Standards obligations for undue negative effects on competition. Therefore, the Level 2 Appeal Panel finds that the Foundation has not been, nor will it be, adversely affected by any procedural action or inaction related to competition issues in the development of proposed Reliability Standard TPL-007-1.

iii. Failure to Consider Comments in Submitted During the Standard Development Process

In its Complaint, the Foundation asserted that the standard drafting team failed to address its prior comments during the standard development process for TPL-007-1 (Record at 3; 17). In its response, the NERC Director of Standards construed this assertion as stating a procedural

action or inaction involving Sections 4.12 and 4.13 of the SPM. Collectively, these sections provide that the standard drafting team must respond, in writing, to every stakeholder written comment submitted in response to a ballot prior to a final ballot, unless the standard drafting team has identified that significant revisions to the Reliability Standard are necessary and the revised standard will be posted for another public comment period and ballot (Record at 249).

In its Complaint, the Foundation cited only one specific comment to which it believed the standard drafting team did not properly respond (Record at 17; *see also* Record at 249). In its response, the NERC Director of Standards found that, based on a review of the complete record of development for proposed Reliability Standard TPL-007-1, the standard drafting team made a good faith effort to resolve all objections to the proposed standard and responded in writing to the comments of the Foundation where required by the SPM (Record at 249).

The Level 2 Appeal Panel has considered the record and presentations and finds that the Foundation's assertions with respect to consideration of comments have no basis in fact. Although the Foundation appears to be unsatisfied with *how* its comments were considered during the standard development process, the complete record of development demonstrates that the standard drafting team did consider and respond to those comments submitted by the Foundation during the standard development process (*see generally* Record at 249-260). In several instances, the Foundation raised an issue for the first time in its Complaint (*see, e.g.*, Record at 250, 253, and 258); it is not proper for the panel to consider new comments such as these on appeal. Therefore, the Level 2 Appeal Panel finds that the Foundation has not been, nor will it be, adversely affected by any procedural action or inaction related to a failure to consider or respond in writing to comments submitted during the standard development process for TPL-007-1.

iv. *Objections to the Technical Content of Proposed Reliability Standard TPL-007-1*

In its Complaint, the Foundation asserted a number of "inactions or omissions" that actually sought to address the merits of the technical content of the proposed standard. Among other things, the Foundation asserted that the standard development process: (i) failed to include risks posed by harmonic production in transformers and impacts to other grid equipment in the Benchmark GMD Event model (Record at 8); (ii) failed to include magnetostriction and other vibrational hazards in its benchmark modeling (Record at 8-9); and (iii) failed to validate the benchmark model against historical GIC data in the United States (Record at 13-16). The Foundation submitted and cited various technical papers and other documents that it claimed support its arguments for why the proposed standard is technically deficient (*see* Record at 16, 18; *see generally* Record at 27-238). The Foundation also requested, as relief, that NERC "correct deficiencies that [Foundation has] cited or enumerated" in the proposed standard (Record at 18).

In its response, the NERC Director of Standards stated that it "does not address the merits of the technical arguments presented by the Foundation herein, because such consideration is not permitted under the limited appeal right provided by Section 8 of the SPM" (Record at 245).

During the Level 2 Appeal comment period, comments were received on several of these technical points. Commenter Center for Security Policy submitted comments echoing the Foundation's assertion that the standard drafting team failed to collect available data on GIC and transformer failures, concluding that "effective quality control was impossible" (Record at 275; *see also* Foundation Complaint, Record at 13). Commenters Kappenman and Birnbach submitted similar comments asserting a failure to collect data and validate models (Record at 268-269 and 270-273). CSP stated that the failure to collect relevant data to validate the benchmark GMD event model implicated Section 6.0 of the SPM (Processes for Conducting Field Tests and Collecting and Analyzing Data) (Record at 275).

Commenters Kappenman and Birnbach also submitted comments stating that there have been "a large number of significant procedural errors on the part of NERC in the development of this standard" (Record at 273). Kappenman and Birnbach asserted that important details used to substantiate the benchmark GMD event model have been withheld from public scrutiny, and that this represents a procedural error (Record at 272-273). Kappenman and Birnbach also provided comments similar to Foundation's assertions regarding the purported deficiencies in the proposed standard (e.g., failure to consider impacts of vibration on transformers, failure to consider impacts of harmonics on grid equipment, inaccurate transformer thermal limits, inaccurate characterization of the benchmark as a "1-in-100 year event," and inadequate benchmark GMD event parameters generally) (*see* Record at 266-274).

The Level 2 Appeal Panel did not evaluate the merits of the technical arguments that have been presented. The scientific understanding of GMD events and their potential impacts on reliability is evolving, and it is not surprising that reasonable minds could differ when it comes to identifying the best approach to mitigate the potential risks. However, the Section 8 appeals process is an inappropriate forum to advance additional debate regarding the technical merits of the standard. The SPM contains procedures that are designed to provide for open participation, balance, transparency, consideration of views and objections, and consensus building in the development of Reliability Standards. The appeal right in Section 8 of the SPM is a procedural safeguard, designed to ensure that these SPM processes are followed and that the process remains open, balanced, transparent, and fair. The Section 8 appeal right is not intended to ensure that all participants are satisfied with the outcome of the standard development process, nor is it intended to provide an additional forum for one entity or one side to continue to debate the merits of the technical content of a Reliability Standard.

During the Foundation's Level 2 Appeal hearing presentation, the Foundation asserted that the failure to collect and consider certain data implicated Section 6.0 of the SPM (*see* Transcript at 13:8-11). With respect to the Section 6.0 assertion of the Foundation and commenter CSP, the Level 2 Appeal Panel finds as follows. Section 6.0 of the SPM provides that "most drafting teams

can develop their Reliability Standards without the need to conduct any field tests and without the need to collect and analyze data" and that "*some* Reliability Standard development efforts *may* require field tests to analyze data and validate concepts" (emphasis added). Section 6.0 of the SPM does not require field tests for all Reliability Standard development efforts. Further, the standard drafting team addressed the need for collecting data when this issue was raised in the record below. The standard drafting team stated that it relied upon an extensive data set of observational data for years 1993-2013 in formulating the standard.[8] The standard drafting team had the necessary technical expertise to identify available data sets and select the most relevant and useful data for application to the standard. Objections to the use of the selected data (or, conversely, the non-use of other sets of data) are more properly classified as objections to the technical content of the Reliability Standard and not a procedural action or inaction involving Section 6.0 of the SPM. Therefore, the Level 2 Appeal Panel finds that this assertion does not present an appealable "procedural action or inaction."

C. Actual or Potential Adverse Effect

The Foundation asserted that it is an "aggrieved party," as noted above (Record at 6-7; Transcript at 3:14-5:12).

BPA, in its comments, states that it does not believe the Foundation can be aggrieved simply because the Standard does not require Registered Entities to purchase protection equipment. BPA further suggests that there may be a conflict of interest, due to the Foundation's "close relationship with the manufacturer of [the] proposed device solution" (Record at 287).

Because the Level 2 Appeal Panel finds that Foundation's assertions regarding procedural action or inaction are either without basis in fact or are not procedural in nature for the reasons described above, it is not necessary to determine whether Foundation has met its burden of proof with respect to whether the purported procedural actions or inactions have caused or will cause the Foundation adverse effect.[9]

Nevertheless, the Level 2 Appeal Panel finds that the Foundation has not met its burden. The Foundation has not drawn a clear or convincing line between: (i) a procedural action or inaction in the standard development process; (ii) the resulting failure to include ground blockers in the proposed TPL-007-1 Reliability Standard; (iii) how this failure will make it "impossible" to protect against man-made electromagnetic pulses; and (iv) how this projected outcome will increase the risk to the grid and "of necessity [cause the Foundation to] fail in its stated mission to enhance the resiliency of critical infrastructures in 21st century societies" (*see* Record at 6). Moreover,

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[8] *See* Consideration of Comments Posted December 5, 2014 at 19-27, *available at* http://www.nerc.com/pa/Stand/Project201303GeomagneticDisturbanceMitigation/Comment%20Report%20_2013-03_GMD_12052014.pdf

[9] Similarly, it is not necessary to determine whether the third-party commenters submitting comments in support of Foundation have met their burden to demonstrate adverse effect.

even if the Foundation had satisfied its burden of proof, the harm asserted by the Foundation is not a harm the SPM Section 8 appeal right was intended to address. The SPM Section 8 appeal right is intended to ensure the integrity of the standards development processes as they are defined in the SPM, not ensure favorable results for a specific entity's research or commercial activities.

IV. The Foundation's Requested Relief is Not Permitted by Section 8 of the SPM

In its Complaint, the Foundation asked NERC to review proposed Reliability Standard TPL-007-1, "correct deficiencies that we have cited or enumerated," and "better reconcile" the standard with the directives of Order No. 779. Similarly, commenter Kappenman requested that the Level 2 Appeal Panel consider six "remedies," all involving reexamination or rework of certain aspects of the proposed Reliability Standard (*see* Transcript at 16:13-17:1).

In this appeal, the Level 2 Appeal Panel is limited to one of the following two outcomes. It may: (i) find for the appellant and remand the issue to the Standards Committee, with a statement of the issues and facts in regard to which fair and equitable action was not taken; or (ii) find against the appellant, with a specific statement of the facts that demonstrate fair and equitable treatment of the appellant and the appellant's objections. Section 8.2 of the SPM expressly provides that this Level 2 Appeal Panel may not revise, approve, disapprove, or adopt a Reliability Standard, as those responsibilities remain with the ballot pool and the Board of Trustees. Thus, even if this Panel had determined that Foundation had or will experience adverse effect as a result of a procedural action or inaction related to the development of proposed Reliability Standard TPL-007-1, the Panel would decline to grant such relief.

V. Conclusion

For the reasons stated above, the Level 2 Appeal Panel hereby finds that the Foundation and its objections, and the similar objections submitted by the third party commenters, were afforded fair and equitable treatment during the development of proposed Reliability Standard TPL-007-1.

This Decision concludes the SPM Section 8 appeals process.