

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	NOTICES AND COMMUNICATIONS	3
III.	DISCUSSION	3
IV.	CONCLUSION	18

I. INTRODUCTION

The North American Electric Reliability Corporation (“NERC”)¹ hereby provides these comments in response to the Federal Energy Regulatory Commission’s (“FERC” or “Commission”) April 19, 2012 Notice of Proposed Rulemaking (“NOPR”)² regarding a proposed remand of TPL-001-2 — Transmission System Planning Performance Requirements. In the NOPR, the Commission proposed to remand the standard for not meeting the statutory criteria for approval. On April 19, 2012, FERC also issued Order No. 762 remanding NERC’s proposed Transmission Planning Reliability Standard TPL-002-2b.³ The TPL-002-2b standard includes a provision (footnote b) that allows for planned load shed in a single contingency provided that the plan is documented and alternatives are considered and vetted in an open and transparent stakeholder process. The Commission remanded the proposed footnote as vague, unenforceable, and not responsive to the Commission directives.

The proposed TPL-001-2 standard includes footnote b as note 12 to the proposed TPL-001-2 standard. For this reason, with the inclusion of note 12, the Commission proposed to remand the TPL-001-2 standard. However the Commission also found that the proposed TPL-001-2 “includes specific improvements ... and is responsive to certain Commission directives.”⁴ FERC is seeking comments from NERC and interested parties on these other issues it raises regarding the proposed TPL-001-2 NERC standard.

Regarding NERC’s efforts to revise footnote b, NERC understands the urgency in producing revisions to footnote b that address the use of planned or controlled load interruption

¹ The Federal Energy Regulatory Commission certified NERC as the electric reliability organization (“ERO”) in its order issued on July 20, 2006 in Docket No. RR06-1-000. *North American Electric Reliability Corporation*, “Order Certifying North American Electric Reliability Corporation as the Electric Reliability Organization and Ordering Compliance Filing,” 116 FERC ¶ 61,062 (July 20, 2006).

² *Transmission Planning Reliability Standards*, 139 FERC ¶ 61,059 (April 19, 2012) (“NOPR”).

³ *Transmission Planning Reliability Standards*, 139 FERC ¶ 61,060 (April 19, 2012) (Order No. 762).

⁴ NOPR at P 3.

for single contingency events in response to Order No. 762. For this reason, NERC is working to revise the footnote on an aggressive schedule with plans to deliver a revised footnote to the Board of Trustees for consideration at its February 2013 meeting.

In responding to Order No. 762, NERC plans to ballot footnote b in such a manner that it can be applied to both the existing TPL-002-0b standard as well as to the proposed TPL-001-2 standard pending in this docket and will present both options to the NERC Board of Trustees for approval at its February 2013 meeting.⁵ NERC will file the revised footnote b in response to the Commission's Order No. 762 along with an amended TPL-001-2 petition that modifies footnote 12 consistent with the changes made to footnote b by the end of February 2013.

By this filing, NERC submits its responses to the NOPR.

⁵ Petition of the North American Electric Reliability Corporation for Approval of a Revised Transmission Planning System Performance Requirements Reliability Standard and Five New Glossary Terms and for Retirement of Four Existing Reliability Standards, FERC Docket No. RM12-1-000, October 19, 2011.

II. NOTICES AND COMMUNICATIONS

Notices and communications with respect to this filing may be addressed to:⁶

Gerald W. Cauley
President and Chief Executive Officer
North American Electric Reliability
Corporation
3353 Peachtree Road NE
Suite 600, North Tower
Atlanta, GA 30326-1001

Charles A. Berardesco*
Senior Vice President and General
Counsel
North American Electric Reliability
Corporation
1120 G Street N.W., Suite 990
Washington, D.C. 20005-3801
charlie.berardesco@nerc.net

Holly A. Hawkins*
Assistant General Counsel for Standards
and Critical Infrastructure Protection
North American Electric Reliability
Corporation

Willie L. Phillips*
Attorney
North American Electric Reliability
Corporation
1120 G Street, N.W.
Suite 990
Washington, D.C. 20005-3801
(202) 400-3000
(202) 393-3955 – facsimile
holly.hawkins@nerc.net
willie.phillips@nerc.net

III. DISCUSSION

Provided below are NERC’s specific responses to the issues raised by the Commission in the NOPR.

1. Planned Outages

i. The Commission seeks comment from the ERO and interested persons whether the [proposed inclusion of] six month [or longer outage] threshold would materially change the number of planned outages as compared to the current standard.⁷

The proposed TPL-001-2 standard will not materially change the number of “planned outages” that must be reflected in initial system conditions as compared to the existing TPL standards. Proposed TPL-001-2, Requirement R1, Part 1.1.2 requires that any “[k]nown outage(s) of generation or Transmission Facility(ies) with a duration of at least six months” must

⁶ Persons to be included on FERC’s service list are indicated with an asterisk. NERC requests waiver of FERC’s rules and regulations to permit the inclusion of more than two people on the service list.

⁷ NOPR at P 19.

be reflected in the projected system conditions for the seasonal period studied. The requirement is one of six subparts to proposed TPL-001-2, Requirement R1, Part 1.1 that are aimed at establishing the category “P0 or N-0” normal system condition case.

The currently-effective TPL standard Requirement R1.3 establishes expectations regarding the initial system model. Requirement R1.3.12 (of TPL-002-0b and TPL-003-0a) requires that the planned (including maintenance) outage of any bulk electric equipment (including protection systems or their components) be included at those demand levels for which planned (including maintenance) outages are performed. This requirement leaves a great deal of discretion as to which “planned outages” must be included in the starting category “P0 or N-0” condition which are then subject to review with other potential contingency conditions. When applying existing Requirement R1.3.12, planners have traditionally only included those “planned outages” in their category “P0 or N-0” system condition that resulted from catastrophic equipment failures or extended outage conditions associated with construction or maintenance projects that place their system in an abnormal starting condition. Going beyond those scenarios would consider “hypothetical planned outages,” and doing so in a planning study horizon would introduce multiple contingency conditions within the existing TPL-002-0b (single contingency) standard.

The standards drafting team (“SDT”) determined that, in the planning horizon, a six-month or longer outage duration would necessarily extend over a seasonal peak load period and must be included in the planning models. Proposed TPL-001-2, Requirement R1, Part 1.1.2 clarifies the initial system (P0) “planned outages” now characterized as “known outages” that must be included in planning horizon models which require further scrutiny with other planning events as reflected in proposed TPL-001-2, Requirement R2, Part 2.1.3.

ii. The Commission also seeks comment on whether the threshold would exclude almost all planned outages from future planning assessments, such as nuclear plant refueling, large fossil and hydro generating station maintenance, spring and fall transmission construction projects and items identified in correction actions plans of planning assessments including neighboring corrective action plans.⁸

As stated above, proposed TPL-001-2, Requirement R1, Part 1.1.2 is intended to clarify the initial system (category P0). Proposed TPL-001-2, Requirement R1, Part 1.1.2 does not exclude almost all outages from future planning assessments. The reliability risk and concerns related to generation outages due to nuclear plant refueling, and large fossil or hydro generation maintenance are more thoroughly covered by the proposed TPL standard in the planning event category P3 requiring a generating unit outage followed by other single contingency events listed in planning event category P1, and the system performance expectations are the same as the single contingency category P1 planning event. Furthermore, planners will establish sensitivity cases around key generation unit outages, and when applying the category P3 planning event to those sensitivity cases, will further cover multiple generator unit outages.

Similarly, transmission maintenance outages are covered in the planning events. It is common practice for a Transmission Planner to utilize existing TPL category C3 outages (N-1-1) as a screening for potential problem areas related to planned maintenance of a facility followed by a single contingency of another transmission facility. The proposed TPL-001-2, Table 1, category P6 planning event would continue to be used in this manner. Sensitivity studies around duration and timing of known transmission outages subject to category P0 system conditions is also an expectation of the Transmission Planner which should further alleviate the Commission's concerns.

⁸ NOPR at P 19.

In summary, multiple contingency planning events are useful screening tools used by the Transmission Planner to account for potential problem areas regarding potential maintenance conditions. Sensitivity studies built around key generation and transmission facilities are also now required by the proposed TPL-001-2 standard. Additionally, the TOP standards further address system maintenance conditions within the operations planning (less than one year) time horizon.

iii. The Commission also seeks comment on what alternative, whether based on outage duration shorter than six months or some other method, such as planners' accounting for planned maintenance outages of high capacity lines, critical transformers, or nuclear outages during non-peak load periods in their assessments, captures the appropriate number of planned outages and types of planned outages to ensure that the Bulk-Power System can be operated to meet system performance requirements during high maintenance periods like the spring and fall seasons.⁹

As stated above, Transmission Planners regularly utilize multiple contingency scenarios as a screening mechanism for identifying potential problems for maintenance conditions. The proposed TPL-001-2 standard will also drive more robust transmission planning through the use of sensitivity analysis. Additionally, the proposed TPL-001-2 standard requires a spare equipment strategy to address the stated concern with critical transformers. The proposed standard also requires both system peak (Requirement R2, Part 2.1.1) and Off-Peak (Requirement R2, Part 2.1.2) analysis. Therefore the high maintenance periods occurring in the shoulder months (spring and fall) are covered by the proposed standard. For these reasons, the proposed TPL-001-2 standard sufficiently addresses planned maintenance outages, and therefore, a reduction from the six month duration as stated in TPL-001-2 Requirement R1, Part 1.1.2 is not required.

⁹ NOPR at P 19.

Finally, the proposed TPL-001-2 Requirement R1, Part 1.1.2 is not intended to cover the ability to assess all planned system maintenance outages which are generally much shorter duration outages and appropriately assessed for viability within the TOP suite of standards. For example, TOP-001-1, Requirement R7 addresses both planned generation (Requirement R7, R7.1) and transmission (Requirement R7, R7.2) outages within the transmission operations environment. The proposed standard also makes clear that the removal of such facilities cannot burden neighboring systems and that coordination among various reliability functional entities regarding the impact of the facility being removed is required.

iv. In addition to seasonal peaks, there have been significant system incidents which occur because of unusual weather events during non-seasonal peak periods. The Commission seeks comment on whether a six month outage window would sufficiently capture these events or if they would not be addressed in the proposed planning process.¹⁰

See the responses to 1, 2, and 3 above. Additionally, the proposed TPL-001-2 Reliability Standard requires off-peak studies. In addition, unusual weather events would be one possible type of event to be studied as an extreme event 3.b – “Other events based upon operating experience that may result in wide area disturbances.”

v. In addition, with respect to protection system maintenance, currently-effective Reliability Standard TPL-002-0, Requirement R1.3.12 requires the planner to “[i]nclude the planned (including maintenance) outage of any bulk electric equipment (including protection systems or their components) at those demand levels for which planned (including maintenance) outages are performed.” NERC did not carry over this language because protection system maintenance or other outages are not anticipated to last six months. The Commission, however, believes that it is critical to plan the system so that a protection system can be removed for maintenance and still be operated reliably. Therefore, the Commission seeks comment on its belief that protection systems are necessary to be included as a type of planned outage.¹¹

¹⁰ NOPR at P 19.

¹¹ NOPR at P 19.

Currently-effective TPL-002-0, Requirement R1, R1.3.12 does not require the assessment of the removal of protection systems but only requires that known planned outages of protection systems be reflected in the initial system model as warranted. Therefore, because protection system outages generally have short time durations (typically hours), they are appropriately covered in the transmission operations timeframe.

2. **VRFs**

i. The Commission seeks comment on why Requirement R1 of proposed Reliability Standard TPL-001-2 carries a VRF of “Medium” while Requirement R1 of the currently-effective Reliability Standard TPL-001-0 carries a VRF of “High.”¹²

Requirement R1 of the currently effective TPL-001-0.1 standard directly relates to Requirement R2 of the proposed TPL-001-2 standard, which has a High VRF. Requirement R1 of the proposed TPL-001-2 is a new requirement that addresses the models needed for planning assessments and therefore can have a different VRF.

The guidelines for a High VRF in part state “...a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to bulk electric system instability, separation, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.”

While it is noted that the accuracy of the transmission system model plays a key role in the TPL standards, it is in fact just that – a model, an approximation – constructed and built with multiple entity inputs within a controlled process (*e.g.*, Multiregional Model Working Group). The “base model” built in proposed TPL-001-2 Requirement R1, while important, must be modified by adjusting load forecasts, generation dispatch, *etc.*, to better assess the range of probable outcomes that the transmission system may experience for various contingency scenarios. It is

¹² NOPR at P 23.

for this reason that the planning assessment in proposed TPL-001-2, Requirement R2 warrants the High VRF and Requirement R1 is considered a Medium VRF.

ii. The Commission seeks clarification from the ERO why the VRF level assigned to Requirement R6 is “Low” since it appears that Requirement R6 requires more than a purely administrative task.¹³

The SDT agrees that proposed TPL-001-2 Requirement R6 is not strictly an administrative task, and therefore the VRF should be adjusted to Medium.

3. **Protection System Failures versus Relay Failures (paragraph 33)**

i. The Commission seeks comments on whether the proposed TPL Reliability Standard, in the provisions pertaining to study of multiple contingencies, limits the planners’ assessment of a protection system failure because it only includes the contingency of a faulty relay component.

An objective of the proposed TPL-001-2 standard is to clarify the meaning of the currently-effective TPL-001-0.1, -002-0b, -003-0a, and -004-0 standards. Ambiguity exists around the requirement to study a “stuck breaker or protection system failure” causing a potential reliability gap. Proposed TPL-001-2 addresses this ambiguity by specifying that both a stuck breaker and protection system failure must be evaluated under the Table 1 category P4 and P5 planning events, respectively. The elimination of the ambiguity ensures that simulations of both categories are performed, reducing the probability of multiple contingency events leading to cascading and uncontrolled islanding. Specifying the relays that must be assumed to fail brings clarity to what is required in the simulation broadly covering the most likely causes of delayed fault clearing.

ii. The Commission also seeks comments on whether, based on protection system as-built designs, the relay may not always be the larger contingency, and how the loss of protection system components that may be integral to multiple protection systems impacts reliability.

¹³ NOPR at P 26.

The proposed TPL-001-2 Table 1, Category P5 (Fault plus relay failure to operate) planning event requires evaluation of the failure of the protection system relays whose failure is most likely to cause cascading or uncontrolled islanding of the BES.

The current TPL-series of NERC Reliability Standards generally addresses system design considerations related to system contingencies. Those considerations are not adequate to address the complexities of protection system performance for equipment failures within the protection system itself. The proposed TPL-001-2 standard requires facility owners to have protection system equipment installed such that, if there were a failure to a specified non-redundant relay of that protection system, the failure would not prevent meeting the Bulk Electric System performance identified in the proposed TPL-001-2 standard.

The loss of a relay that is integral to multiple protection systems would require simulation of the full impact of that relay's failure on the system for the event being studied under the category P5 planning event.

With respect to whether there is a reliability concern regarding single points of failure on protection systems, NERC has an ongoing project underway to assess that question. On September 15, 2011, FERC issued Order No. 754¹⁴ *Interpretation of Transmission Planning Reliability Standard* in which it stated that “there is an issue concerning the study of the non-operation of non-redundant primary protection systems, e.g., the study of a single point of failure on protection systems.”¹⁵ FERC directed NERC to initiate a process “to explore this reliability concern, including where it can best be addressed, and identify any additional actions necessary to address the matter.”¹⁶ NERC has developed a data request, pursuant to Section 1600 of the

¹⁴ *Interpretation of Transmission Planning Reliability Standard*, 136 FERC ¶ 61,186, (September 15, 2011).

¹⁵ *Id.*, at P 19 (2011). (“Order No. 754”)

¹⁶ *Id.*, at P 20 (2011). (“Order No. 754”)

NERC Rules of Procedure, soliciting data and information from each Transmission Planner in the United States and Canada, in coordination with Generator Owners, Transmission Owners, and Distribution Providers in its transmission planning area, to identify specific information regarding potential single points of failure on their protection systems in order to determine whether there is a risk to Bulk Power System (BPS) reliability. NERC will report on the results of that data request, and specifically on the single point of failure question, in that proceeding.

4. **Assessment of Backup or Redundant Protection Systems (paragraph 36)**
NERC states that Reliability Standard TPL-001-2, Requirement R3, Part 3.3.1 and Requirement R4, Part 4.3.1 requires the planner to “[s]imulate the removal of all elements that the Protection System and other automatic controls are expected to disconnect for each Contingency without operator intervention.” The proposed NERC provision, however, does not explicitly refer to “backup or redundant systems” as in the currently effective TPL standards. The Commission seeks clarification from the ERO whether the proposed Requirements address all protection systems, including backup and redundant protection systems that can have an impact on the performance of the bulk electric system.

The proposed TPL-001-2 Requirement R3, Part 3.3.1 and Requirement R4, Part 4.3.1 requires the consideration of all Protection Systems that are relevant to the contingency studied. This would include backup and redundant systems consistent with the Commission’s recent order approving an interpretation of Requirement R1.3.10 in the existing TPL-002-0 standard.¹⁷

5. **P5 Single Line to Ground Faults (paragraph 38)**
The Commission seeks clarification from the ERO whether “fault types” in Table 1 of the proposed Reliability Standard refers to the initiating event or initiating fault for the contingency rather than the type of fault in to which the initiating fault may evolve and how the clarification is consistent with the simulations being representative of what will occur in real-time.

¹⁷ *Interpretation of Transmission Planning Reliability Standard*, 136 FERC ¶61,186 (September 15, 2011).

“Fault types” in proposed TPL-001-2, Table 1 refers to the initiating fault to be studied, not to what the fault may evolve into. The possibility of a single-line-to-ground (“SLG”) fault evolving into a three-phase fault is addressed by requiring the study of a three-phase fault as the initial fault. For example, planning events P1 and P3 require the study of a three-phase fault. This would give worse results than studying an SLG fault evolving into a three-phase fault. Also, the proposed TPL-001-2 standard requires the study of an SLG fault with delayed clearing due to a stuck breaker or a non-redundant relay failure as a planning event (category P4 or P5). An SLG fault evolving into a three-phase fault coupled with a relay failure or a stuck breaker is studied as an extreme event (Stability #2) with the fault being three-phase to start with. These results will be worse than what would be obtained from a simulation of an evolving SLG fault. Therefore, the standard requires simulations which appropriately bound what may happen in real-time.

Order No. 693 Directives Clarifications and Comments

6. **Peer Review of Planning Assessments (paragraph 42)**
 - i. **The Commission seeks clarification on how the NERC proposal ensures the early input of peers into the planning assessments or any type of coordination amongst peers will occur.**

Prior to assessment results being shared in proposed TPL-001-2, Requirement R8, proposed TPL-001-2, Requirement R3, Part 3.4.1 and Requirement R4, Part 4.4.1 require adjacent planners to coordinate in the development of each other’s contingency lists for steady state and stability analysis. This coordination requires the planners to work together to ensure the required studies are performed and that those contingencies on adjacent systems that impact their system are included in their contingency list. The contingency lists developed during this process are utilized in proposed TPL-001-2, Requirements R3 and R4 to perform the necessary

studies required to develop the planning assessment and will also help to ensure early coordination amongst peers.

ii. The Commission seeks comment on whether and how there is a sufficient level of evaluation and ability to provide feedback to the planners on the development and result of assessments. In addition, NERC states that that Requirement R8 “ensures that information is shared with ... adjacent entities” which “ensures ... input received from adjacent entities.”

The proposed TPL-001-2 standard requires extensive documentation of the information relevant to how the assessment was performed as well as the results themselves.

Proposed TPL-001-2, Requirement R2 and its parts require the planner to document its assumptions, summarize results, provide the technical rationale for determining material changes, and document the corrective action plans to meet performance requirements and the use of non-consequential load loss and curtailment of firm transmission service. Proposed TPL-001-2, Requirements R3 – R6 require the planners to document the contingency lists, the rationale for the selection of those contingencies, the criteria for acceptable steady state voltage, post-Contingency voltage deviations, and transient voltage response and the criteria used to identify System instability.

This information provides adjacent entities sufficient information on how the assessment was performed and expected system performance to effectively evaluate the assessment results and to provide feedback. These requirements, along with proposed TPL-001-2, Requirement R8, provide the basis for an on-going dialogue between interested parties.

iii. The Commission also seeks comment on whether Requirement R8 requires input on the comments to be included in the results or the development of the Planning Assessments.

Proposed TPL-001-2, Requirement R8 requires that each Planning Coordinator and Transmission Planner must distribute its planning assessment results to adjacent Planning

Coordinators and Transmission Planners within 90 calendar days of completing its planning assessment. In addition, proposed TPL-001-2, Requirement R8, Part 8.1 requires that the planner provide a written response in a timely manner to each documented comment submitted to the planner.

7. **Spare Equipment Strategy (paragraph 44)**
NERC's spare equipment strategy appears to have limited the strategy to steady state analysis (excluded stability analysis). While including a spare equipment strategy in the proposed Reliability Standard is an improvement, the Commission seeks clarification as to why stability analysis conditions were excluded from the spare equipment strategy.

The SDT did not require the analysis of outages for long lead-time equipment in a separate requirement comparable to proposed TPL-001-2 Requirement R2, Part 2.1.5 for stability because the burden of additional stability analyses would not provide significant reliability benefits. Any potential stability impacts related to an entity's spare equipment strategy will be observed in the normal planning process driven by other requirements. For example, in the stability evaluation of multiple contingency events, such as Category P6 planning events, system deficiencies stemming from the long term unavailability of long lead time equipment like a transformer followed by a second contingency would identify any system performance issues. Furthermore, the steady state analysis under proposed TPL-001-2 Requirement R2, Part 2.1.5 will identify system deficiencies associated with an inadequate spare equipment strategy.

8. **Controlled Load Interruption (paragraph 46)**
The Commission seeks clarification from the ERO if third-parties have access to the same options that the transmission owner has to alleviate reliability constraints including load shedding options for "Controllable Loads" in Requirement 2.1.4 and "Non-Consequential Load Loss Allowed" in Table 1 of the proposed Reliability Standard TPL-001-2.

Typically third parties do not have the ability to shed load. But where non-consequential load loss is an option available to be used by a planner, it may be used on behalf of themselves and third parties.

9. **Range of Extreme Events (paragraph 48)**

i. The Commission seeks clarification from the ERO on conditioning extreme events on the loss of two generating stations. The Commission understands that there are scenarios where an extreme event can impact more than two generation stations that might not be captured due to the “two generation stations” restriction in Item No. 3a. For example, within the Florida peninsula, depending on the location within the state, either two or three main gas pipelines supply the majority of the generation for the area. In this scenario, the loss of one of the gas pipelines would result in the loss of more than two generation stations.

The existing TPL-004-0 standard considers the loss of all generating units at a station as a category D-10 event. The proposed TPL-001-2 standard addresses this requirement in the local area events (extreme event 2.d) as “Loss of all generating units at a generating station”. The SDT addressed the Commission’s directive to expand the range of events considered in the planning assessment by adding a new category “wide area events” as extreme events. The SDT believes that it is appropriately “raising the bar” concerning extreme events by requiring the planners to evaluate the loss of two generating stations for a wide range of external events that could cause the loss of all generating units at two generating stations.

ii. The Commission seeks clarification regarding whether this scenario is otherwise covered under the catch-all provision in Item No. 3b which states “[o]ther events based upon operating experience that may result in wide area disturbances.”

Extreme event, item 3.b “Other events based on operating experience that may result in wide area disturbances” means that the planner will consider even more extreme events (*i.e.*, the loss of more facilities than the loss of two generating stations) based upon operating experience and knowledge of its system.

10. **Assessments and Documentation**

a. **Dynamic Load Models (paragraph 50)**

The Commission seeks clarification on whether the documentation of the dynamic load models used in system studies and the supporting rationale for their use under Requirement 2.4, Part 2.4.1 will be included in the documented assumptions under Requirement R2.

Proposed TPL-001-2, Requirement R2 requires the planners to document its assumptions. Part 2.4.1 is a nested requirement under Part 2.4 and Requirement R2. Therefore, an entity cannot have properly documented its Planning Assessment unless and until it has documented its dynamic load model assumptions as required under Part 2.4.1. Auditors should follow down the entire contents of R2 and all of its nested sub requirements when auditing the entity for compliance.

b. **Proxies to Simulate Cascade (paragraph 52)**

The Commission seeks clarification on whether Requirement R6 includes the documentation of proxies and that Requirement R8 includes the sharing of the documented proxies in the planning assessments.

Proposed TPL-001-2, Requirement R6 requires the planner to “define and document” within the planning assessment, their criteria or methodology (“proxies”) to evaluate whether system instability would occur. The sharing of planning assessment results, as required in proposed TPL-001-2, Requirement R8, includes all documentation requirements contained within the standard, including those in proposed TPL-001-2, Requirement R6.

c. **Footnote ‘a’ (paragraph 54)**

i. The Commission seeks clarification from the ERO regarding the rationale for excluding header note ‘f’ from “Stability” studies.

Header note “f” was purposefully excluded from stability studies because facility ratings are defined for a finite period which may be between a few minutes and several hours, or even longer. In stability studies, the analysis is conducted over a few seconds. Because facility

ratings are established based on the overheating of elements, the few seconds in the stability timeframe is not significant to the overheating of elements.

Furthermore, the same contingencies that are required to be studied in a stability analysis are required to be studied from a steady state standpoint. The steady state study is where the facility ratings are properly taken into account. It would be a duplication of effort, without additional reliability benefit, to place the facility rating requirement on the planners when they conduct stability studies.

As noted, header note 'e' applies to both steady state and stability studies. However, header note 'e' applies to stability studies only to the extent that it clarifies that system adjustments are allowed to be made. The portion of this footnote which states that adjustments can be made if executed within the time duration of facility ratings is automatically met in the timeframe for stability studies because, in stability studies, the system adjustments must be made by some kind of automated scheme.

ii. Additionally, the Commission seeks clarification on which Reliability Standards the entities should utilize when obtaining the values to be use in their Planning Assessments.

The values used for Facility Ratings within transmission planning models are developed in accordance with standard FAC-008-1 "Facility Ratings Methodology" and communicated to other functional entities as required by FAC-009-1 "Establish and Communicate Facility Ratings".

iii. In addition, for Table 1, header notes 'e' and 'f,' the Commission seeks comment on whether the normal facility ratings align with, for example, FAC-008-1 and normal voltage ratings align with VAR-001-1.

The normal facility equipment ratings would align with the FAC-008-1 standard. Additionally, system normal and emergency limits would be stated in the Transmission Owners

facility connection requirements documentation as required by FAC-001-1. VAR-001-2 establishes voltage schedules within the operating horizon (real time) intended to maintain a nominal system voltage.

iv. Furthermore, the Commission seeks clarification from the ERO whether facility ratings used in planning assessments align with other reliability standards such as NUC-001-2, BAL-001-0.1a and PRC Standards for UFLS and UVLS.

Yes, the facility ratings used in proposed TPL-001-2 are consistent throughout the NERC Reliability Standards and refer back to those developed in accordance with FAC-008-1 “Facility Ratings Methodology.” A system that meets the requirements in proposed TPL-001-2 can be operated consistent with the limits prescribed by other NERC Reliability Standards.

IV. CONCLUSION

For the reasons stated above, NERC respectfully requests that the Commission take action consistent with these comments when it issues its Final Rule and approve the proposed TPL-001-2– Transmission System Planning Performance Requirements Reliability Standard.

Respectfully submitted,

/s/ Holly A. Hawkins

Gerald W. Cauley
President and Chief Executive Officer
3353 Peachtree Road NE
Suite 600, North Tower
Atlanta, GA 30326-1001

Holly A. Hawkins
Assistant General Counsel for Standards and
Critical Infrastructure Protection
North American Electric Reliability
Corporation

Charles A. Berardesco
Senior Vice President and General Counsel
North American Electric Reliability
Corporation
1325 G Street N.W., Suite 600
Washington, D.C. 20005
charlie.berardesco@nerc.net

Willie L. Phillips
Attorney
North American Electric Reliability
Corporation
1325 G Street, N.W., Suite 600
Washington, D.C. 20005
(202) 400-3000
holly.hawkins@nerc.net
willie.phillips@nerc.net

CERTIFICATE OF SERVICE

I hereby certify that I have served a copy of the foregoing document upon all parties listed on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C. this 20th day of July, 2012.

/s/ Holly A. Hawkins
Holly A. Hawkins
*Attorney for North American Electric
Reliability Corporation*