
UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

North American Electric Reliability)
Corporation)

Docket No. RD15-3-000

SUPPLEMENTAL PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF PROPOSED RELIABILITY STANDARDS
PRC-001-1.1(ii), PRC-019-2, AND PRC-024-2

Gerald W. Cauley
President and Chief Executive Officer
North American Electric Reliability Corporation
3353 Peachtree Road, N.E.
Suite 600, North Tower
Atlanta, GA 30326
(404) 446-2560
(404) 446-2595– facsimile

Charles A. Berardesco
Senior Vice President and General Counsel
Holly A. Hawkins
Associate General Counsel
Milena Yordanova
Associate Counsel
North American Electric Reliability Corporation
1325 G Street, N.W., Suite 600
Washington, D.C. 20005
(202) 400-3000
(202) 644-8099– facsimile
charles.berardesco@nerc.net
holly.hawkins@nerc.net
milena.yordanova@nerc.net

*Counsel for the North American Electric
Reliability Corporation*

March 13, 2015

TABLE OF CONTENTS

I. EXECUTIVE SUMMARY 4

II. NOTICES AND COMMUNICATIONS..... 6

III. BACKGROUND 6

 A. Regulatory Framework..... 6

 B. NERC Reliability Standards Development Procedure..... 7

 C. History of Project 2014-01 8

 D. History of the Proposed Reliability Standards 10

 1. PRC-001-1.1(ii) 10

 2. PRC-019-2 and PRC-024-2 10

IV. JUSTIFICATION FOR APPROVAL..... 10

 A. Proposed Reliability Standards 11

 1. Purpose of PRC-001-1.1(ii)..... 11

 2. Purpose of PRC-019-2..... 11

 3. Purpose of PRC-024-2..... 11

 4. Justification for Proposed Revisions 12

V. ENFORCEABILITY OF PROPOSED RELIABILITY STANDARDS 17

VI. CONCLUSION..... 18

- Exhibit A** Proposed Reliability Standards
- Exhibit B** Implementation Plans
- Exhibit C** Order No. 672 Criteria
- Exhibit D** Summary of Development History and Complete Record of Development of Proposed Reliability Standards

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

North American Electric Reliability Corporation)
)

Docket No. RD15-3-000

**SUPPLEMENTAL PETITION OF THE
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION
FOR APPROVAL OF PROPOSED RELIABILITY STANDARDS
PRC-001-1.1(ii), PRC-019-2, AND PRC-024-2**

Pursuant to Section 215(d)(1) of the Federal Power Act (“FPA”)¹ and Section 39.5² of the Federal Energy Regulatory Commission’s (“FERC” or “Commission”) regulations, the North American Electric Reliability Corporation (“NERC”)³ hereby submits for Commission approval the following proposed Reliability Standards (Exhibit A), which have been modified to adjust the applicability of the proposed Reliability Standards to dispersed generation resources:⁴

- PRC-001-1.1(ii) (System Protection Coordination);⁵
- PRC-019-2 (Coordination of Generating Unit or Plant Capabilities, Voltage Regulating Controls, and Protection); and
- PRC-024-2 (Generator Frequency and Voltage Protective Relay Settings).

NERC requests that the Commission approve the proposed Reliability Standards and find that each is just, reasonable, not unduly discriminatory or preferential, and in the public interest.⁶

¹ 16 U.S.C. § 824o (2012).

² 18 C.F.R. § 39.5 (2014).

³ The Commission certified NERC as the electric reliability organization (“ERO”) in accordance with Section 215 of the FPA on July 20, 2006. *N. Amer. Elec. Reliability Corp.*, 116 FERC ¶ 61,062 (2006).

⁴ Dispersed generation resources as used in this petition refers to variable generation that depends on a primary fuel source which varies over time and cannot be stored. *See* Ex. C to the related February 6 Petition.

⁵ An explanation of the NERC numbering convention for Reliability Standards is available on the NERC web site at: http://www.nerc.com/pa/Stand/Resources/Documents/NERC_standards_numbering_system_V2.pdf.

⁶ Unless otherwise designated, capitalized terms shall have the meaning set forth in the *Glossary of Terms Used in NERC Reliability Standards* (“NERC Glossary of Terms”), available at http://www.nerc.com/files/Glossary_of_Terms.pdf.

On February 6, 2015, NERC filed a petition (“February 6 Petition”)⁷ for the approval of five proposed Reliability Standards, which were modified to adjust their applicability to dispersed generation resources. Similarly, in this Supplemental Petition, NERC proposes changes to PRC-001, PRC-019, and PRC-024 to clarify their applicability to dispersed generation resources.

NERC requests that the Commissions consider the proposed standards in this Supplemental Petition as part of the proceeding for approval of the February 6 Petition. NERC also requests approval of the Implementation Plan for each proposed Reliability Standard (Exhibit B).

The proposed changes do not affect the Violation Risk Factors (“VRFs”), Violation Severity Levels (“VSLs”), or the Measures associated with the proposed Reliability Standards subject to this Supplemental Petition.

As required by Section 39.5(a)⁸ of the Commission’s regulations, this Supplemental Petition presents the technical basis and purpose of the proposed Reliability Standards, a summary of the development history (Exhibit D), and a demonstration that the proposed Reliability Standards meet the criteria identified by the Commission in Order No. 672⁹ (Exhibit C). This Supplemental Petition incorporates by reference Exhibit C (Draft Technical White Paper), Exhibit E (Summary of Development History and Complete Record of Development of Proposed Reliability Standards), and Exhibit F (Standard Drafting Team Roster for NERC

⁷ See *NERC Petition for approval of PRC-004-2.1(i)a; PRC-004-4; PRC-005-2(i); PRC-005-3(i) and VAR-002-4*, Docket: RD15-3-000.

⁸ 18 C.F.R. § 39.5(a) (2012).

⁹ The Commission specified in Order No. 672 certain general factors it would consider when assessing whether a particular Reliability Standard is just and reasonable. See *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, at P 262, 321-37, *order on reh’g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006).

Standards Development Project 2014-01) of the February 6 Petition. Section C (Definition of Bulk Electric System) and Section F (Design and Operational Characteristics of Dispersed Power Producing Resources) of the February 6 Petition are also incorporated by reference.¹⁰

I. EXECUTIVE SUMMARY

The proposed revisions clarify how the unique operating characteristics of dispersed power producing resources impact the applicability of NERC Reliability Standards. As NERC has previously asserted, in order to ensure that Reliability Standards are applied in a cost-effective manner and that the applicability of Reliability Standards is focused on entities having a material impact on reliability of the Bulk-Power System, it is necessary to provide greater specificity in the applicability section of the Reliability Standards.¹¹ The Commission acknowledged the need for such clarity and prioritization in Order No. 693,¹² and has, in the past, approved Reliability Standards with applicability based on electric facility characteristics.¹³

Dispersed power producing resources, such as wind and solar, are generally considered to be variable energy resources. As explained below and in the February 6 Petition, the design and operating characteristics of these resources are different than traditional generation and Reliability Standards should account for these differences.

The proposed Reliability Standards reflect in-depth technical analysis by the NERC Dispersed Generation Resources Standard Drafting Team, which considered the technical characteristics of dispersed generation and the risk to the Bulk-Power System associated with

¹⁰ If the Commission decides to separately docket this Supplemental Petition, NERC requests that a copy of the February 6 Petition be included with this Supplemental Petition in the new docket to ensure a complete record for consideration.

¹¹ See *Mandatory Reliability Standards for the Bulk-Power System*, Notice of Proposed Rulemaking, 117 FERC ¶ 61,084 (2006) at P 49.

¹² *Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 98, *order on reh'g*, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

¹³ See also, EOP-010-1, FAC-003-3, PRC-005-2, and PRC-022-1.

this type of generation facilities. The standard drafting team reviewed several groups of Reliability Standards applicable to dispersed generation prior to recommending the proposed changes to the three Reliability Standards listed above.

The standard drafting team determined that when evaluated individually, the components of dispersed power generation, such as individual wind or solar units, often do not pose a significant risk to the reliability of the Bulk-Power System. However, reliability could be improved by ensuring the equipment utilized to aggregate these individual units to a common point of interconnection with the Bulk-Power System is operated and maintained as required by the NERC Reliability Standards. As a result, NERC is proposing the changes to the three Reliability Standards included in this Supplemental Petition in addition to those submitted in the February 6 Petition.

II. NOTICES AND COMMUNICATIONS

Notices and communications with respect to this filing may be addressed to the following:¹⁴

Charles A. Berardesco*
Senior Vice President and General Counsel
Holly A. Hawkins*
Associate General Counsel
Milena Yordanova*
Associate Counsel
North American Electric Reliability Corporation
1325 G Street, N.W., Suite 600
Washington, D.C. 20005
(202) 400-3000
(202) 644-8099– facsimile
charles.berardesco@nerc.net
holly.hawkins@nerc.net
milena.yordanova@nerc.net

Valerie Agnew
Director of Standards
North American Electric Reliability Corporation
3353 Peachtree Road, N.E.
Suite 600, North Tower
Atlanta, GA 30326
(404) 446-2560
(404) 446-2595 – facsimile
valerie.agnew@nerc.net

III. BACKGROUND

A. Regulatory Framework

By enacting the Energy Policy Act of 2005,¹⁵ Congress entrusted the Commission with the duties of approving and enforcing rules to ensure the reliability of the Bulk-Power System, and with the duties of certifying an ERO that would be charged with developing and enforcing mandatory Reliability Standards, subject to Commission approval. Section 215(b)(1)¹⁶ of the FPA states that all users, owners, and operators of the Bulk-Power System in the United States will be subject to Commission-approved Reliability Standards. Section 215(d)(5)¹⁷ of the FPA authorizes the Commission to order the ERO to submit a new or modified Reliability Standard.

¹⁴ Persons to be included on the Commission’s service list are identified by an asterisk. NERC respectfully requests a waiver of Rule 203 of the Commission’s regulations, 18 C.F.R. § 385.203 (2012), to allow the inclusion of more than two persons on the service list in this proceeding.

¹⁵ 16 U.S.C. § 824o (2012).

¹⁶ *Id.* § 824(b)(1).

¹⁷ *Id.* § 824o(d)(5).

Section 39.5(a)¹⁸ of the Commission’s regulations requires the ERO to file with the Commission for its approval each Reliability Standard that the ERO proposes should become mandatory and enforceable in the United States, and each modification to a Reliability Standard that the ERO proposes should be made effective.

The Commission is vested with the regulatory responsibility to approve Reliability Standards that protect the reliability of the Bulk-Power System and to ensure that Reliability Standards are just, reasonable, not unduly discriminatory or preferential, and in the public interest. Pursuant to Section 215(d)(2) of the FPA¹⁹ and Section 39.5(c)²⁰ of the Commission’s regulations, the Commission will give due weight to the technical expertise of the ERO with respect to the content of a Reliability Standard.

B. NERC Reliability Standards Development Procedure

The proposed Reliability Standards were developed in an open and fair manner and in accordance with the Commission-approved Reliability Standard development process.²¹ NERC develops Reliability Standards in accordance with Section 300 (Reliability Standards Development) of its Rules of Procedure and the NERC Standard Processes Manual.²²

¹⁸ 18 C.F.R. § 39.5(a) (2014).

¹⁹ 16 U.S.C. § 824o(d)(2).

²⁰ 18 C.F.R. § 39.5(c)(1).

²¹ *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672 at P 334, FERC Stats. & Regs. ¶ 31,204, *order on reh’g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006) (“Further, in considering whether a proposed Reliability Standard meets the legal standard of review, we will entertain comments about whether the ERO implemented its Commission-approved Reliability Standard development process for the development of the particular proposed Reliability Standard in a proper manner, especially whether the process was open and fair. However, we caution that we will not be sympathetic to arguments by interested parties that choose, for whatever reason, not to participate in the ERO’s Reliability Standard development process if it is conducted in good faith in accordance with the procedures approved by FERC.”).

²² The NERC Rules of Procedure are available at <http://www.nerc.com/AboutNERC/Pages/Rules-of-Procedure.aspx>. The NERC Standard Processes Manual is available at http://www.nerc.com/comm/SC/Documents/Appendix_3A_StandardsProcessesManual.pdf.

In its order certifying NERC as the Commission's ERO, the Commission found that NERC's proposed rules provide for reasonable notice and opportunity for public comment, due process, openness, and a balance of interests in developing Reliability Standards and thus satisfies the criteria for approving Reliability Standards.²³ The development process is open to any person or entity with a legitimate interest in the reliability of the Bulk-Power System. NERC considers the comments of all stakeholders, and a vote of stakeholders and the NERC Board of Trustees is required to approve a Reliability Standard before the Reliability Standard is submitted to the Commission for approval.

C. History of Project 2014-01

Project 2014-01, Standards Applicability for Dispersed Generation Resources, was initiated in response to industry request and designed to ensure that the Generator Owners and Generator Operators of dispersed generation resources are appropriately assigned responsibility for performance in NERC Reliability Standard requirements that impact the reliability of the Bulk-Power System, given the unique operating characteristics of these resources.

The goal of Project 2014-01 was to review and revise the applicability of all of the Generator Owner- and Generator Operator-related Reliability Standards and ensure that only those dispersed generation resources that could affect the reliability of the Bulk-Power System are subject to applicable Reliability Standards. The standard drafting team identified PRC-005, FAC-008, PRC-023, PRC-025, PRC-004, and VAR-002 for further in-depth review. In addition, the standard drafting team considered the group of IRO, MOD, PRC and TOP Reliability Standards, which require outage and protection, control coordination, planning and data reporting, among other reliability concerns.²⁴

²³ Order No. 672 at PP 268, 270.

²⁴ For a list of all Reliability Standards considered, *see* App. A to Ex. C to the February 6 Petition.

The standard drafting team established prioritization criteria for the review and modification of applicability changes recommended to the NERC Reliability Standards listed above. The team evaluated each requirement to identify the appropriate applicability that best supports the reliable operation of the Bulk-Power System. After the standard drafting team identified a standard or requirement where changes to the applicability were warranted, it performed a prioritization. Any standard or requirement which required modifications were assigned a high, medium, or low priority.²⁵ Following a technical review, the standard drafting team identified five high-priority standards and drafted revisions to these standards. The proposed revisions were included in the February 6 Petition and are pending Commission approval.

The standard drafting team also identified medium-priority Reliability Standards, which included PRC-001-1.1, PRC-019 and PRC-024. The standards drafting team prepared revisions to these three Reliability Standards. The standards drafting team did not make any technical content changes beyond the changes necessary to revise the applicability of the three medium-priority Reliability Standards. The proposed changes are designed to ensure consistent application of the NERC Reliability Standards to dispersed power producing resources.

In addition, the standards drafting team identified four regional Reliability Standards as low priority. A list of the Reliability Standards considered and their prioritization order is included in Appendix B to Exhibit C to the February 6 Petition. Further proposed Reliability

²⁵ The standards and requirements priorities were established as follows: 1) high priority was assigned if compliance-related efforts with no appreciable reliability benefit would require not only significant resources but also would require efforts to be initiated by an entity well in advance of the implementation date; 2) medium priority was assigned if significant effort and resources with no appreciable reliability benefit would be required by an entity to be compliant; and 3) low priority was assigned to other changes that may need to be made to further ensure requirements add to reliability, but are not perceived as a significant compliance burden. Reliability Standards PRC-004-2.1a, PRC-005-1.1b, PRC-005-2, VAR-002-2b and VAR-002-2b were identified as “high priority.” See App. B to Ex. C to the February 6 Petition.

Standards from this Project will be the subject of a future separate petition if the NERC Board adopts additional proposed Reliability Standards.

A detailed description of the standard drafting team considerations for each reviewed Reliability Standard is included in the Draft Technical White Paper (“Technical White Paper”) (Exhibit C to the February 6 Petition).

D. History of the Proposed Reliability Standards

1. PRC-001-1.1(ii)

Reliability Standard PRC-001-1 was approved by the Commission in Order No. 693.²⁶ On February 3, 2015, NERC filed a petition for the approval of PRC-001-1.1(i), which will replace PRC-001-1.1. The petition is pending Commission approval.²⁷

2. PRC-019-2 and PRC-024-2

Reliability Standards PRC-019-1 and PRC-024-1 were approved by the Commission in Order No. 796 on March 20, 2014 as new Reliability Standards.²⁸

IV. JUSTIFICATION FOR APPROVAL

As discussed in Exhibit C and below, the standard drafting team determined the proposed changes to the Reliability Standards satisfy the Commission’s criteria in Order No. 672, and are just, reasonable, not unduly discriminatory or preferential, and in the public interest. Provided below is the following: 1) a description of each proposed Reliability Standard and its reliability

²⁶ Order No. 693 at P 1467. An errata change was approved by the Standards Committee on April 11, 2012 to capitalize “Protection System” in accordance with the implementation plan for Project 2007-17, which developed a revised definition of “Protection System.” The Commission approved the revised definition of “Protection System” and the associated implementation plan on February 3, 2012. *See N. Am. Elec. Reliability Corp.*, 138 FERC ¶ 61,095 (2012).

²⁷ *See NERC Petition for Approval of Revisions to the Definition of “Remedial Action Scheme” and Proposed Reliability Standards*, Docket: RM15-13-000.

²⁸ *Generator Verification Reliability Standards*, Order No. 796, 146 FERC ¶ 61,213 at P 63 (2014).

purpose; and 2) justification for each of the proposed Reliability Standards on a requirement-by-requirement basis.

A. Proposed Reliability Standards

1. Purpose of PRC-001-1.1(ii)

Reliability Standard PRC-001-1.1 is designed to ensure that system protection is coordinated among operating entities. Reliability Standard PRC-001-1.1(i), which is currently pending regulatory approval, modified PRC-001-1 to incorporate the proposed definition of “Remedial Action Scheme” and eliminate the use of the term “Special Protection System.” The proposed PRC-001-1.1(ii) reflects changes made to the currently-effective PRC-001-1.1.²⁹

2. Purpose of PRC-019-2

Reliability Standard PRC-019-1 is designed to verify coordination of generating unit Facility or synchronous condenser voltage regulating controls, limit functions, equipment capabilities and Protection System settings. The revisions included in the proposed PRC-019-2 are necessary to align the applicability section of this Reliability Standard with the treatment of dispersed power producing resources within the revised definition of the Bulk Electric System.

3. Purpose of PRC-024-2

Reliability Standard PRC-024-1 is designed to ensure Generator Owners set their generator protective relays such that generating units remain connected during defined frequency and voltage excursions. The revisions included in the proposed PRC-024-2 are necessary to align the applicability section of this Reliability Standard with the treatment of dispersed power producing resources within the revised definition of the Bulk Electric System.

²⁹ If the Commission approves PRC-001-1(ii) prior to approval of PRC-001-1(i), NERC will reorder the numbering to appropriately reflect the timing.

4. Justification for Proposed Revisions

a) *PRC-001-1.1(ii)*

Based on the findings of the Technical White Paper, the standard drafting team made one revision of PRC-001-1.1. Requirement R3, Part 3.1 was modified to clarify that it is not applicable to individual generating units of dispersed power producing resources identified through Inclusion I4 of the Bulk Electric System definition.³⁰ The applicable language of the proposed PRC-001-1.1(ii) reads as follows:

R3. A Generator Operator or Transmission Operator shall coordinate new protective systems and changes as follows.

R3.1. Each Generator Operator shall coordinate all new protective systems and all protective system changes with its Transmission Operator and Host Balancing Authority.

- Requirement R3.1 is not applicable to the individual generating units of dispersed power producing resources identified through Inclusion I4 of the Bulk Electric System definition.

As explained in the Technical White Paper,³¹ Requirement R3 requires Generator Operators to coordinate new protective systems and changes to existing protective systems with their Transmission Operators. Under the existing industry practice, Generator Operators share and coordinate the protective relay settings at the point of interconnection (e.g. generator leads, radial generator tie-line, etc.) and potentially the main step-up transformer, but not the protective setting on operating (collection) buses, collection feeder, or individual generator protection schemes, as these protection systems do not directly coordinate with an interconnected utility's own protection systems. Relay protection functions such as underfrequency and overfrequency

³⁰ For a full discussion of Inclusion I4 of the revised Bulk Electric System and its effect on dispersed power resources, see Section C of the February 6 Petition.

³¹ *Technical White Paper* at 16-17.

and undervoltage and overvoltage changes are independent of the interconnected utility's protective relay settings.³²

In response to the findings of the Technical White Paper, the standard drafting team determined that coordination of new or changes to protective systems associated with dispersed power producing resources identified through Inclusion I4 of the Bulk Electric System definition are typically performed on the interconnecting facilities. New protective systems or changes to protective systems associated with these facilities should be coordinated with the Transmission Operators to ensure close coordination with the transmission protective systems. This type of coordination guarantees the overall protection systems operates as designed.

In some situations, the protective systems implemented on the individual generating units of dispersed power producing resources (i.e. individual wind turbines or solar panels/inverters) may need to be coordinated with other protective systems within the same dispersed power producing facility. However, the standards drafting team concluded that new protective systems or changes to these protective systems do not need to be coordinated with the transmission protective systems, as this coordination would not enhance the reliability of the Bulk-Power System.

Based on these findings, Requirement R3 was modified to reflect that coordination by a Generator Operator with its Transmission Operator of new or changes to existing protection systems on individual generating units of dispersed power producing resources is not required. The proposed revision is consistent with the Commission-approved revised Bulk Electric System definition.

³² *Id.*

b) PRC-019-2

Based on the findings of the Technical White Paper, the standard drafting team made one revision of Requirement R4, Part 4.2 of PRC-019-1. Subrequirement 4.2.3.1 was added to Requirement 4.2 to clarify that the Facilities listed in Requirement 4.2 include the aggregate dispersed generating facilities and not the individual units. The proposed revision is intended to provide for consistent application of the Requirement to generator Facilities included in the Bulk Electric System definition through Inclusion I4. The language of the proposed Part 4.2.3.1 reads as follows:

4.2.3 Generating plant/ Facility consisting of one or more units that are connected to the Bulk Electric System at a common bus with total generation greater than 75 MVA (gross aggregate nameplate rating).

4.2.3.1 This includes individual generating units of the dispersed power producing resources identified through Inclusion I4 of the Bulk Electric System definition where voltage regulating control for the facility is performed solely at the individual generating unit of the dispersed power producing resources.

As explained in the Technical White Paper,³³ dispersed power producing resources typically utilize a site level voltage control scheme that directs the individual generating units to adjust their output to meet the voltage requirements at an aggregate Facility level. In these cases the individual generating units no longer respond once they reach their maximum capability in providing voltage or reactive changes. However, the individual generating units also need to be properly coordinated with protection trip settings on the aggregating equipment to mitigate risk of tripping under this scenario. Therefore, facilities that solely regulate voltage at the individual

³³ *Id.* at 21.

unit need to consider the Protection Systems at these individual units and their compatibility with the reactive and voltage limitations of the units.

Based on these findings, the standard drafting team determined that for those dispersed power producing facilities that only perform voltage regulating control at the individual generating unit level, coordination should take place at the individual generating unit level of the dispersed power producing resource. These facilities need to consider the Protection Systems at the individual units and their compatibility with the reactive and voltage limitations of the units. Where voltage regulating control is done at an aggregate level, applicability is already included under PRC-019 Requirement R4, Part 4.2.3. This revision is consistent with the Commission-approved revised Bulk Electric System definition.

c) PRC-024-2

Based on the findings of the Technical White Paper, the standard drafting team made two revisions to PRC-024-2. The standard drafting team determined that protective relay settings applied on both the individual generating units and on the aggregating equipment should be included in the language of the Reliability Standard. To reflect this change, the standards drafting team included footnote 4 to PRC-024-2 Requirement R1, and footnote 6 to Requirement R2. The applicable language of the proposed PRC-024-2 reads as follows:³⁴

R1. Each Generator Owner that has generator frequency protective relaying³ activated to trip its applicable generating unit(s) shall set its protective relaying such that the generator frequency protective relaying does not trip the applicable generating unit(s) within the “no trip zone” of PRC-024 Attachment 1, subject to the following exceptions:⁴ [*Violation Risk Factor: Medium*] [*Time Horizon: Long-term Planning*]

Footnote 4: For frequency protective relays associated with dispersed power producing resources identified

³⁴ Footnotes 3 and 5 remain unchanged and are omitted. For the full language of the proposed Reliability Standard, please see Exhibit A.

through Inclusion I4 of the Bulk Electric System definition, this requirement applies to frequency protective relays applied on the individual generating unit of the dispersed power producing resources, as well as frequency protective relays applied on equipment from the individual generating unit of the dispersed power producing resource up to the point of interconnection.

R2. Each Generator Owner that has generator voltage protective relaying activated to trip its applicable generating unit(s) shall set its protective relaying such that the generator voltage protective relaying does not trip the applicable generating unit(s) as a result of a voltage excursion (at the point of interconnection) caused by an event on the transmission system external to the generating plant that remains within the “no trip zone” of PRC-024 Attachment 2.⁶ If the Transmission Planner allows less stringent voltage relay settings than those required to meet PRC-024 Attachment 2, then the Generator Owner shall set its protective relaying within the voltage recovery characteristics of a location-specific Transmission Planner’s study. Requirement R2 is subject to the following exceptions: *[Violation Risk Factor: Medium] [Time Horizon: Long-term Planning]*

Footnote 6: For voltage protective relays associated with dispersed power producing resources identified through Inclusion I4 of the Bulk Electric System definition, this requirement applies to voltage protective relays applied on the individual generating unit of the dispersed power producing resources, as well as voltage protective relays applied on equipment from the individual generating unit of the dispersed power producing resource up to the point of interconnection.

As explained in the Technical White Paper,³⁵ if the individual generating units at a dispersed power producing resource were excluded from this Reliability Standard, it is possible that large portions or perhaps the entire output of a dispersed power producing resource site could be lost during certain system disturbances. To address this reliability concern, the standard drafting team determined that Protection System settings should be applied on both the

³⁵ *Technical White Paper* at 22.

individual generating units and on the aggregate equipment, including on any Protection Systems applied on non-Bulk Electric System portions of the aggregating equipment.

The Technical White Paper further explains that for the purpose of compliance evidence, an entity should provide evidence for a single sample generating unit within a dispersed generation site. Registered entities would not be required to provide documentation for each individual unit if a single methodology was applied to set the Protection Systems for all units comprising the facility. The evidence related to a single sample generating unit would be in addition to the evidence required for any Protection System settings for the aggregating equipment.

Based on these technical findings, the standard drafting team made changes to the standard requirements to ensure these requirements are applied to the individual power producing resource up to the point of interconnection with the Bulk-Power System. The proposed changes to PRC-024-2 are consistent with the Commission-approved revised Bulk Electric System definition.

V. ENFORCEABILITY OF PROPOSED RELIABILITY STANDARDS

The proposed Reliability Standards include VRFs and VSLs. Because the Requirements contained in proposed Reliability Standards track with those contained in the already approved or proposed versions of the Reliability Standards, the standard drafting team determined that no revisions were necessary to the VSLs and VRFs for the proposed Reliability Standards.

The VSLs provide guidance on the way that NERC will enforce the Requirements of the proposed Reliability Standards. The VRFs are one of several elements used to determine an appropriate sanction when the associated Requirement is violated. The VRFs assess the impact to reliability of violating a specific Requirement. The VRFs and VSLs for the proposed

Reliability Standards comport with NERC and Commission guidelines related to their assignment. For a detailed review of the VRFs, the VSLs, and analysis of how the VRFs and VSLs were determined using these guidelines, please see Exhibit D.

The proposed Reliability Standards also include Measures that support each Requirement by clearly identifying what is required and how the Requirement will be enforced. These Measures help ensure that the Requirements will be enforced in a clear, consistent, and non-preferential manner and without prejudice to any party.³⁶ The Measures for the proposed Reliability Standards also remain unchanged from previous versions.

VI. CONCLUSION

For the reasons set forth above, NERC respectfully requests that the Commission:

- approve the proposed Reliability Standards included in Exhibit A; and
- approve the implementation plans included in Exhibit B.

³⁶ Order No. 672 at P 327 (“There should be a clear criterion or measure of whether an entity is in compliance with a proposed Reliability Standard. It should contain or be accompanied by an objective measure of compliance so that it can be enforced and so that enforcement can be applied in a consistent and non-preferential manner.”).

Respectfully submitted,

/s/Milena Yordanova

Charles A. Berardesco
Senior Vice President and General Counsel
Holly A. Hawkins
Associate General Counsel
Milena Yordanova
Associate Counsel
North American Electric Reliability Corporation
1325 G Street, N.W., Suite 600
Washington, D.C. 20005
(202) 400-3000
(202) 644-8099– facsimile
charles.berardesco@nerc.net
holly.hawkins@nerc.net
milena.yordanova@nerc.net

*Counsel for the North American Electric
Reliability Corporation*

March 13, 2015