

UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

18 CFR Part 40

[Docket No. RM16-20-000; Order No. 837

Remedial Action Schemes Reliability Standard

(Issued September 20, 2017)

AGENCY: Federal Energy Regulatory Commission.

ACTION: Final rule.

SUMMARY: The Federal Energy Regulatory Commission approves Reliability Standard PRC-012-2 (Remedial Action Schemes) submitted by the North American Electric Reliability Corporation. The purpose of Reliability Standard PRC-012-2 is to ensure that remedial action schemes do not introduce unintentional or unacceptable reliability risks to the bulk electric system.

EFFECTIVE DATE: This rule will become effective [**60 days after publication in the FEDERAL REGISTER**].

FOR FURTHER INFORMATION CONTACT:

Syed Ahmad (Technical Information)  
Office of Electric Reliability  
Division of Reliability Standards and Security  
888 First Street, NE  
Washington, DC 20426  
Telephone: (202) 502-8718  
Syed.Ahmad@ferc.gov

Alan Rukin (Legal Information)  
Office of the General Counsel  
Federal Energy Regulatory Commission  
888 First Street, NE  
Washington, DC 20426  
Telephone: (202) 502-8502  
Alan.Rukin@ferc.gov

SUPPLEMENTARY INFORMATION:

160 FERC ¶ 61,071  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Neil Chatterjee, Chairman;  
Cheryl A. LaFleur, and Robert F. Powelson.

Remedial Action Schemes Reliability Standard

Docket No. RM16-20-000

ORDER NO. 837

FINAL RULE

(Issued September 20, 2017)

1. Pursuant to section 215 of the Federal Power Act (FPA), the Federal Energy Regulatory Commission (Commission) approves Reliability Standard PRC-012-2 (Remedial Action Schemes).<sup>1</sup> The North American Electric Reliability Corporation (NERC), the Commission-certified Electric Reliability Organization (ERO), submitted Reliability Standard PRC-012-2 for approval. The purpose of Reliability Standard PRC-012-2 is to ensure that remedial action schemes do not introduce unintentional or unacceptable reliability risks to the bulk electric system. In addition, the Commission approves the associated violation risk factors and violation severity levels, implementation plan, and effective date proposed by NERC. The Commission also approves the retirement of currently-effective Reliability Standards PRC-015-1 and

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<sup>1</sup> 16 U.S.C. 824o.

PRC-016-1 as well as NERC's request to withdraw proposed Reliability Standards PRC-012-1, PRC-013-1, and PRC-014-1, which are now pending before the Commission.

**I. Background**

**A. Section 215 and Mandatory Reliability Standards**

2. Section 215 of the FPA requires a Commission-certified ERO to develop mandatory and enforceable Reliability Standards, subject to Commission review and approval.<sup>2</sup> Once approved, the Reliability Standards may be enforced by the ERO subject to Commission oversight or by the Commission independently.<sup>3</sup> In 2006, the Commission certified NERC as the ERO pursuant to section 215 of the FPA.<sup>4</sup>

**B. Order No. 693**

3. On March 16, 2007, the Commission issued Order No. 693, approving 83 of the 107 Reliability Standards filed by NERC, including Reliability Standards PRC-015-1 (Remedial Action Scheme Data and Documentation) and PRC-016-1 (Remedial Action

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<sup>2</sup> *Id.* 824o(c), (d).

<sup>3</sup> *Id.* 824o(e).

<sup>4</sup> *North American Electric Reliability Corp.*, 116 FERC ¶ 61,062 (ERO Certification Order), *order on reh'g and compliance*, 117 FERC ¶ 61,126 (2006), *order on compliance*, 118 FERC ¶ 61,190, *order on reh'g*, 119 FERC ¶ 61,046 (2007), *aff'd sub nom. Alcoa Inc. v. FERC*, 564 F.3d 1342 (D.C. Cir. 2009).

Scheme Misoperation).<sup>5</sup> Reliability Standard PRC-015-1 requires transmission owners, generator owners, and distribution providers to maintain a listing; retain evidence of review; and provide documentation of existing, new or functionally modified special protection systems.<sup>6</sup> Reliability Standard PRC-016-1 requires transmission owners, generator owners, and distribution providers to provide the regional reliability organization with documentation, analyses and corrective action plans for misoperation of special protection systems.<sup>7</sup>

4. In Order No. 693, the Commission determined that then-proposed Reliability Standard PRC-012-0 was a “fill-in-the-blank” Reliability Standard because, while it would require regional reliability organizations to ensure that all special protection systems are properly designed, meet performance requirements, and are coordinated with other protection systems, NERC had not submitted any regional review procedures with the proposed Reliability Standard.<sup>8</sup> Similarly, the Commission determined that proposed Reliability Standard PRC-013-0 was a “fill-in-the-blank” Reliability Standard because,

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<sup>5</sup> *Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, FERC Stats. & Regs. ¶ 31,242, *order on reh’g*, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

<sup>6</sup> *Id.* PP 1529-1533.

<sup>7</sup> *Id.* PP 1534-1540.

<sup>8</sup> *Id.* PP 1517-18, 1520. The Commission used the term “fill-in-the-blank” standards to refer to proposed Reliability Standards that required the regional reliability organizations to develop at a later date criteria for use by users, owners or operators within each region. *Id.* P 297.

although it was intended to ensure that all special protection systems are properly designed, meet performance requirements, and are coordinated with other protection systems by requiring the regional reliability organization to maintain a database of information on special protection systems, NERC had not filed any regional procedures for maintaining the databases.<sup>9</sup> Further, the Commission determined that proposed Reliability Standard PRC-014-0 was a “fill-in-the-blank” Reliability Standard because, while it was proposed to ensure that special protection systems are properly designed, meet performance requirements, and are coordinated with other protection systems by requiring the regional reliability organization to assess and document the operation, coordination, and compliance with NERC Reliability Standards and effectiveness of special protection systems at least once every five years, NERC had not submitted any regional procedures for this assessment and documentation.<sup>10</sup> The Commission stated that it would not approve or remand proposed Reliability Standards PRC-012-0, PRC-013-0 or PRC-014-0 until NERC submitted the additional necessary information to the Commission.<sup>11</sup>

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<sup>9</sup> *Id.* PP 1521, 1522, 1524.

<sup>10</sup> *Id.* PP 1525, 1526, 1528.

<sup>11</sup> *Id.* PP 1520, 1524, 1528.

### C. Remedial Action Schemes

5. On June 23, 2016, the Commission approved NERC's revision to the NERC Glossary of Terms Used in NERC Reliability Standards (NERC Glossary) that redefines special protection system to have the same definition as remedial action scheme, effective April 1, 2017.<sup>12</sup> The NERC Glossary defines remedial action scheme to mean:

A scheme designed to detect predetermined System conditions and automatically take corrective actions that may include, but are not limited to, adjusting or tripping generation (MW and Mvar), tripping load, or reconfiguring a System(s). [Remedial Action Schemes (RAS)] accomplish objectives such as:

- Meet requirements identified in the NERC Reliability Standards;
- Maintain Bulk Electric System (BES) stability;
- Maintain acceptable BES voltages;
- Maintain acceptable BES power flows;
- Limit the impact of Cascading or extreme events.<sup>13</sup>

The revised remedial action scheme definition also identifies fourteen items that do not individually constitute a remedial action scheme.

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<sup>12</sup> *N. Am. Elec. Reliability Corp.*, Docket No. RD16-5-000 (June 23, 2016) (delegated letter order); NERC Glossary, [http://www.nerc.com/files/glossary\\_of\\_terms.pdf](http://www.nerc.com/files/glossary_of_terms.pdf).

<sup>13</sup> NERC Glossary, [http://www.nerc.com/files/glossary\\_of\\_terms.pdf](http://www.nerc.com/files/glossary_of_terms.pdf); *see also Revisions to Emergency Operations Reliability Standards; Revisions to Undervoltage Load Shedding Reliability Standards; Revisions to the Definition of "Remedial Action Scheme" and Related Reliability Standards*, Order No. 818, 153 FERC ¶ 61,228, at PP 24, 31 (2015).

**D. NERC Petition and Reliability Standard PRC-012-2**

6. On August 5, 2016, NERC submitted a petition seeking Commission approval of proposed Reliability Standard PRC-012-2.<sup>14</sup> NERC contended that Reliability Standard PRC-012-2 is just, reasonable, not unduly discriminatory or preferential, and in the public interest.<sup>15</sup> NERC explained that the intent of Reliability Standard PRC-012-2 is to supersede “pending” Reliability Standards PRC-012-1, PRC-013-1, and PRC-014-1 and to retire and replace currently-effective Reliability Standards PRC-015-1 and PRC-016-1.<sup>16</sup> NERC stated that Reliability Standard PRC-012-2 represents substantial improvements over these Reliability Standards because it streamlines and consolidates existing requirements; corrects the applicability of previously unapproved Reliability Standards; and implements a continent-wide remedial action scheme review program.<sup>17</sup>
7. NERC stated that, in the United States, Reliability Standard PRC-012-2 will apply to reliability coordinators, planning coordinators, and remedial action scheme-entities.

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<sup>14</sup> Reliability Standard PRC-012-2 is not attached to this Final Rule. The Reliability Standard is available on the Commission’s eLibrary document retrieval system in Docket No. RM16-20-000 and is posted on NERC’s website, <http://www.nerc.com>.

<sup>15</sup> NERC Petition at 2.

<sup>16</sup> NERC noted that it submitted “for completeness” revised versions of Reliability Standards PRC-012-1, PRC-013-1, and PRC-014-1 in its petition to revise the definition of remedial action scheme, but NERC did not request Commission approval of the revised Reliability Standards in that proceeding. *Id.* at 1 n.5.

<sup>17</sup> *Id.* at 12-13.



Reliability Standard PRC-012-2 defines remedial action scheme-entities to include each transmission owner, generation owner, or distribution provider that owns all or part of a remedial action scheme.

8. NERC stated that Reliability Standard PRC-012-2 includes nine requirements that combine all existing (both effective and “pending”) Reliability Standards mentioned above into a single, consolidated, continent-wide Reliability Standard to address all aspects of remedial action schemes.<sup>18</sup> NERC explained that all of the requirements in Reliability Standard PRC-012-1 except R2 are now covered in Requirements R1, R2, R3, R4, R5, R6, and R8 of Reliability Standard PRC-012-2.<sup>19</sup> NERC maintained that Reliability Standard PRC-012-1, Requirement R2 is “administrative in nature and does not contribute to reliability.”<sup>20</sup> NERC also stated that it established Reliability Standard PRC-012-2, Requirement R9 to replace the mandate in Reliability Standard PRC-013-1 that responsible entities maintain a remedial action scheme database with pertinent technical information for each remedial action scheme.<sup>21</sup> NERC explained that Reliability Standard PRC-012-2, Requirements R4 and R6 cover the review and the

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<sup>18</sup> *Id.* at 3.

<sup>19</sup> *Id.* at 40.

<sup>20</sup> *Id.* at 41.

<sup>21</sup> *Id.* at 42.

mandate to take corrective action required by Reliability Standard PRC-014-1.<sup>22</sup> NERC stated that it integrated the performance requirements in Reliability Standard PRC-015-1 into Reliability Standard PRC-012-2, Requirements R1, R2, and R3.<sup>23</sup> NERC also asserted that it integrated the performance requirements in Reliability Standard PRC-016-1 into Reliability Standard PRC-012-2, Requirements R5, R6, and R7.<sup>24</sup>

9. NERC explained how the nine Requirements in Reliability Standard PRC- 012-2 work together and with other Reliability Standards. According to NERC, Requirements R1, R2, and R3, together, establish a process for the reliability coordinator to review new or modified remedial action schemes.<sup>25</sup> The reliability coordinator must complete the review before an entity places a new or functionally modified remedial action scheme into service.

10. Requirement R4 requires the planning coordinator to perform a periodic evaluation of each remedial action scheme within its planning area, at least once every five years.<sup>26</sup> The evaluation must determine, *inter alia*, whether each remedial action scheme: (1) mitigates the system conditions or contingencies for which it was designed;

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<sup>22</sup> *Id.* at 43.

<sup>23</sup> *Id.* at 43-44.

<sup>24</sup> *Id.* at 44-45.

<sup>25</sup> *Id.* at 15-18.

<sup>26</sup> *Id.* at 18-22.

and (2) avoids adverse interactions with other remedial action scheme and protection systems. Requirement R4, Part 4.1.3 footnote 1 defines a certain subset of remedial action schemes as “limited impact.” Requirement R4, Part 4.1.3 footnote 1 states: “A RAS designated as limited impact cannot, by inadvertent operation or failure to operate, cause or contribute to BES Cascading, uncontrolled separation, angular instability, voltage instability, voltage collapse, or unacceptably damped oscillations.”<sup>27</sup> Further, Requirement R4, Parts 4.1.3, 4.1.4, and 4.1.5 provide certain exceptions to “limited impact” remedial action schemes. For example, Part 4.1.5 states that:

Except for limited impact RAS, a single component failure in the RAS, when the RAS is intended to operate does not prevent the BES from meeting the same performance requirements (defined in Reliability Standard TPL-001-4 or its successor) as those required for the events and conditions for which the RAS is designed.<sup>28</sup>

NERC explained that Requirement R4 “does not supersede or modify [planning coordinator] responsibilities under Reliability Standard TPL-001-4.”<sup>29</sup> NERC continued that even though Part 4.1.5 exempts “limited impact” remedial action schemes from certain aspects of Reliability Standard PRC-012-2, Requirement R4 does not exempt

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<sup>27</sup> *Id.* at 19 & n.44.

<sup>28</sup> *Id.* at 19.

<sup>29</sup> *Id.* at 28.

“limited impact” remedial actions schemes from meeting each of the performance requirements in Reliability Standard TPL-001-4.<sup>30</sup>

11. NERC stated that prior to development of Reliability Standard PRC-012-2, two NERC Regions, the Northeast Power Coordinating Council (NPCC) and the Western Electric Coordinating Council (WECC), used their own remedial action scheme classification regimes to identify remedial action schemes that would meet criteria similar to those for remedial action schemes described as “limited impact” in Reliability Standard PRC-012-2.<sup>31</sup> NERC continued that the standard drafting team identified the Local Area Protection Scheme (LAPS) classification in WECC and the Type III classification in NPCC as consistent with the “limited impact” designation.<sup>32</sup> According to NERC, remedial action schemes implemented prior to the effective date of Reliability Standard PRC-012-2 that have gone through the regional review processes of WECC or NPCC and that are classified as either a LAPS by WECC or a Type III by NPCC would be considered a “limited impact” remedial action scheme for purposes of Reliability Standard PRC-012-2.<sup>33</sup>

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<sup>30</sup> *Id.* at 28-29.

<sup>31</sup> *Id.* at 25.

<sup>32</sup> *Id.* at 25-26.

<sup>33</sup> *Id.* at 26.

12. Requirements R5, R6, and R7 pertain to the analysis of each remedial action scheme operation or misoperation.<sup>34</sup> A remedial action scheme-entity must perform an analysis of each remedial action scheme operation or misoperation and provide the results to the reviewing reliability coordinator. Further, the remedial action scheme-entity must develop and submit a corrective action plan to the reviewing reliability coordinator after learning of a deficiency with its remedial action scheme, implement the corrective action plan, and update it as necessary. Requirement R8 requires periodic testing of remedial action scheme performance: every six years for normal remedial action schemes and every 12 years for “limited impact” remedial action schemes.<sup>35</sup> Requirement R9 requires the reliability coordinator to annually update its remedial action scheme database.<sup>36</sup>

13. NERC proposed an implementation plan that includes an effective date for Reliability Standard PRC-012-2 that is the first day of the first calendar quarter that is thirty-six months after the date that the Commission approves the Reliability Standard. Concurrent with the effective date, the implementation plan calls for the retirement of currently-effective Reliability Standards PRC-015-1 and PRC-016-1 and withdrawal of “pending” Reliability Standards PRC-012-1, PRC-013-1, and PRC-014-1.

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<sup>34</sup> *Id.* at 29-34.

<sup>35</sup> *Id.* at 34-36.

<sup>36</sup> *Id.* at 36-38.

**E. Notice of Proposed Rulemaking**

14. On January 19, 2017, the Commission issued a Notice of Proposed Rulemaking proposing to approve Reliability Standard PRC-012-2.<sup>37</sup> The NOPR also proposed to clarify that, consistent with NERC's representation in its petition, Reliability Standard PRC-012-2 will not modify or supersede any system performance obligations under Reliability Standard TPL-001-4.<sup>38</sup> In addition, the NOPR proposed to approve the associated violation risk factors and violation severity levels, implementation plan, and effective date proposed by NERC.<sup>39</sup> The NOPR further proposed to approve the withdrawal of "pending" Reliability Standards PRC-012-1, PRC-013-1, and PRC-014-1 and retirement of currently-effective Reliability Standards PRC-015-1 and PRC-016-1, as proposed by NERC.<sup>40</sup>

15. In response to the NOPR, entities filed seven sets of comments. We address below the issues raised in the NOPR and comments. The Appendix to this Final Rule lists the entities that filed comments in response to the NOPR.

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<sup>37</sup> *Remedial Action Schemes Reliability Standard*, Notice of Proposed Rulemaking, 82 FR 9702 (Jan. 19, 2017), 158 FERC ¶ 61,042 (2017) (NOPR).

<sup>38</sup> NOPR, 158 FERC ¶ 61,042 at P 16.

<sup>39</sup> *Id.* P 14.

<sup>40</sup> *Id.*

## II. Discussion

16. Pursuant to section 215(d)(2) of the FPA, we hereby approve Reliability Standard PRC-012-2.<sup>41</sup> Reliability Standard PRC-012-2 promotes efficiency and clarity by addressing all aspects of remedial action schemes in a single, continent-wide Reliability Standard. Reliability Standard PRC-012-2 enhances reliability by assigning specific remedial action scheme responsibilities to appropriate functional entities. Further, Reliability Standard PRC-012-2 improves reliability by establishing a centralized process to review new or modified remedial action schemes prior to implementation, by requiring periodic evaluations, tests, and operational analyses of each remedial action scheme, and by requiring an annual update of an area-wide remedial action scheme database. We determine that Reliability Standard PRC-012-2 satisfies the relevant directives in Order No. 693 for the ERO to provide additional information regarding review procedures for remedial action schemes (then called special protection systems) and to establish continent-wide uniformity.<sup>42</sup>

17. We also approve the associated violation risk factors and violation severity levels, implementation plan, and effective date proposed by NERC. In addition, we approve, upon the effective date of Reliability Standard PRC-012-2, the withdrawal of pending Reliability Standards PRC-012-1, PRC-013-1, and PRC-014-1 and the retirement of

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<sup>41</sup> 16 U.S.C. 824o(d)(2).

<sup>42</sup> Order No. 693, FERC Stats. & Regs. ¶ 31,242 at PP 297-298, 1517-1520.

currently-effective Reliability Standards PRC-015-1 and PRC-016-1 due to their consolidation with proposed Reliability Standard PRC-012-2.

**A. Impact of Reliability Standard PRC-012-2 on Compliance with Reliability Standard TPL-001-4**

**NOPR**

18. The NOPR sought comments on its proposal to clarify that Reliability Standard PRC-012-2 will not modify or supersede any system performance obligation under Reliability Standard TPL-001-4. The NOPR also sought comments on the processes used to ensure LAPS or Type III remedial action schemes' compliance with Reliability Standard TPL-001-4 prior to the effective date of Reliability Standard PRC-012-2.

**Comments**

19. NERC, Joint ISOs, and the EEI support the Commission's proposal to approve Reliability Standard PRC-012-2 with a clarification that it does not modify or supersede any system performance obligations under Reliability Standard TPL-001-4.<sup>43</sup> NERC states that Reliability Standard PRC-012-2 merely adds design, implementation, and review requirements ensuring that remedial action schemes enhance reliability and do not introduce unintentional or unacceptable reliability risks.<sup>44</sup> NERC and Joint ISOs state that Reliability Standard PRC-012-2 does not supersede or modify the system performance requirements of Reliability Standard TPL-001-4 because responsible

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<sup>43</sup> NERC Comments at 4; Joint ISO Comments at 2; EEI Comments at 4.

<sup>44</sup> NERC Comments at 5.



entities must still assume that all remedial action schemes operate correctly, guaranteeing a non-consequential load loss by less than 75 MW.<sup>45</sup> Joint ISOs believe that no clarification to Reliability Standard PRC-012-2 is necessary; but if the Commission determines that some clarification is necessary, the Commission may confirm that under Reliability Standard TPL-001-4, responsible entities can assume that all remedial action schemes operate as designed.<sup>46</sup> EEI states that while it is unlikely that the exceptions in Reliability Standard PRC-012-2 would be interpreted by industry as exempting any of the performance requirements in Reliability Standard TPL-001-4, EEI is supportive of the proposed clarification since such clarification would remove any ambiguity.<sup>47</sup>

20. NESCOE contends that, absent confirmation that Reliability Standard TPL-001-4 allows responsible entities to assume that all remedial action schemes operate properly, a clarification that Reliability Standard PRC-012-2 does not modify or supersede any system performance obligations under Reliability Standard TPL-001-4 may be misinterpreted by entities, requiring actions that would increase material costs without

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<sup>45</sup> *Id.* at 5; Joint ISO Comments at 2.

<sup>46</sup> Joint ISO Comments at 2.

<sup>47</sup> EEI Comments at 4.

benefit.<sup>48</sup> NESCO states that reliability gains must be measured against the risk and cost associated with any standard.<sup>49</sup>

21. NERC states that LAPS in WECC and Type III remedial actions schemes in NPCC must be compliant with Reliability Standard TPL-001-4 before and after the effective date of proposed Reliability Standard PRC-012-2.<sup>50</sup> According to NERC, Reliability Standard TPL-001-4 does not distinguish between different types of remedial action schemes or exempt LAPS or Type III remedial action schemes from any of the performance requirements.<sup>51</sup> NERC and Joint ISOs state that additional regional controls that maintain remedial action scheme compliance with the performance requirements of Reliability Standard TPL-001-4 are in place.<sup>52</sup>

22. EEI questions the relevancy of asking the industry to comment on WECC LAPS or NPCC Type III remedial action schemes reclassification as “limited impact” remedial action schemes.<sup>53</sup> EEI contends that once the Commission approves Reliability Standard

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<sup>48</sup> NESCO Comments at 2.

<sup>49</sup> *Id.*

<sup>50</sup> NERC Comments at 5.

<sup>51</sup> *Id.* at 6.

<sup>52</sup> *Id.*; Joint ISO Comments at 3.

<sup>53</sup> EEI Comments at 5.

PRC-012-2, WECC and NPCC must be compliant regardless. EEI believes that insights into processes ensuring compliance with Reliability Standard PRC-012-2 are irrelevant.<sup>54</sup>

### **Commission Determination**

23. We adopt our NOPR proposal and clarify that Reliability Standard PRC-012-2 does not modify or supersede any system performance obligations under Reliability Standard TPL-001-4. We agree with and, thus, adopt NERC's explanation:

Nothing in proposed Reliability Standard PRC-012-2 or the designation of a RAS as "limited impact" exempts an entity from meeting its performance requirements under [Reliability Standard] TPL-001-4, including the requirement that Non-Consequential Load Loss may not exceed 75 MW for certain Category P1, P2, or P3 contingencies, as provided in Table 1 and footnote 12 of TPL-001-4.

In performing the assessments required pursuant to Reliability Standard TPL-001-4, an entity must consider all RAS, whether designated as "limited impact" or not. While Reliability Standard TPL-001-4, Requirement R2, Part 2.7.1 recognizes that entities may use a RAS as a method for meeting the performance obligations of Table 1, TPL-001-4 does not distinguish between different types of RAS. As such, entities must satisfy the performance requirements of TPL-001-4 considering the actions of "limited impact" RAS and non-limited impact RAS alike.<sup>55</sup>

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<sup>54</sup> *Id.*

<sup>55</sup> NERC Comments at 5. In response to the requests by Joint ISOs and NESCOE for confirmation that Reliability Standard TPL-001-4 allows responsible entities to assume that all remedial action schemes operate properly, the Commission declines to interpret Reliability Standard TPL-001-4 in this proceeding. However, this Final Rule approving Reliability Standard PRC-012-2 in no way modifies the requirements of Reliability Standard TPL-001-4 or the compliance obligations associated with Reliability Standard TPL-001-4.

This clarification should help entities avoid confusion regarding compliance obligations when implementing PRC-012-2.

24. In addition, we accept NERC's assurance that LAPS in WECC and Type III remedial actions schemes in NPCC must be compliant with Reliability Standard TPL-001-4 before and after the effective date of proposed Reliability Standard PRC-012-2.<sup>56</sup>

**B. Definition of "Limited Impact" Remedial Action Schemes**

**NOPR**

25. The NOPR sought comment on whether NERC should define the term "limited impact" remedial action schemes in the NERC Glossary.

**Comments**

26. NERC, Joint ISOs, and EEI contend that NERC should not define the term "limited impact" remedial action scheme in the NERC Glossary.<sup>57</sup> NERC states that it typically develops terms in the NERC Glossary for one of two reasons: "(1) to establish a single meaning for a term or concept used across several different Reliability Standards or multiple times within a single Reliability Standard, or (2) to provide for a more

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<sup>56</sup> We note that WECC's and NPCC's remedial action scheme criteria and associated regional terms found in the "Technical Justification" section of Reliability Standard PRC-012-2 were not submitted for approval by NERC and as such are not part of this proceeding.

<sup>57</sup> NERC Comments at 8; Joint ISO Comments at 3; EEI at 5.

readable standard by creating a shorthand reference to avoid unnecessary repetition.”<sup>58</sup>

NERC contends that neither reason exists for “limited impact” remedial action schemes.<sup>59</sup>

27. NERC and EEI maintain that remedial action schemes vary widely in complexity and impact on the bulk electric system.<sup>60</sup> NERC and EEI explain that NERC should not define “limited impact” remedial action schemes because not all remedial action schemes impact the bulk electric system similarly and the diversity of remedial action schemes makes it difficult to establish a common definition for North America.<sup>61</sup>

28. NERC, Joint ISOs, and EEI assert that other comprehensive lists may establish a baseline definition for “limited impact” remedial action schemes.<sup>62</sup> Joint ISOs note that the performance criteria described in Reliability Standard PRC-012-2, Requirement 4.1.3, footnote 1 provide an adequate level of guidance.<sup>63</sup> MISO contends that NERC need not define “limited impact” remedial action scheme in the NERC Glossary.<sup>64</sup>

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<sup>58</sup> NERC Comments at 8.

<sup>59</sup> *Id.*

<sup>60</sup> NERC Comments at 9; EEI Comments at 5.

<sup>61</sup> *Id.*

<sup>62</sup> NERC Comments at 9; Joint ISO Comments at 3; EEI Comments at 6.

<sup>63</sup> Joint ISO Comments at 3-4.

<sup>64</sup> MISO Comments at 6.

29. Bonneville and ITC contend that NERC should define the term “limited impact” remedial action schemes in the NERC Glossary.<sup>65</sup> Bonneville states that the footnote in Reliability Standard PRC-012-2 only reiterates the substantive requirements of “limited impact” remedial action schemes under Requirement R4.3.1 and does not clarify how “limited impact” remedial action schemes differ from normal remedial action schemes.<sup>66</sup> Bonneville proposes the following definition for “limited impact” remedial action schemes:

A remedial action scheme whose operation or misoperation only affects the local area defined by the RAS-entity that owns all of part of the remedial action scheme and does not affect the BES of any adjacent Transmission Owners, Transmission Operators, Generation Owners, or Generation Operators.<sup>67</sup>

ITC also states that the Commission should issue a directive to NERC to define “limited impact” remedial action schemes in the NERC Glossary.<sup>68</sup> ITC states that doing so avoids confusion while ensuring consistency, facilitates the use of the term in other Reliability Standards, and enhances the overall usefulness of the NERC Glossary.<sup>69</sup>

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<sup>65</sup> Bonneville Comments at 2; ITC Comments at 1.

<sup>66</sup> Bonneville Comments at 2.

<sup>67</sup> *Id.*

<sup>68</sup> ITC Comments at 1.

<sup>69</sup> *Id.* at 2.

### **Commission Determination**

30. We determine not to require NERC to define “limited impact” remedial action schemes in the NERC Glossary. We agree with NERC, Joint ISOs, and EEI that a definition of “limited impact” remedial action schemes is unnecessary at this time given the diversity among the different types, functions, and placements of remedial action schemes across North America. In addition, only Reliability Standard PRC-012-2 uses the term “limited impact” remedial action schemes, thus eliminating one of the principal reasons for normally including terms in the NERC Glossary (i.e., to establish a single meaning for a term or concept used across several different Reliability Standards). Should this situation change, the Commission may reconsider this determination.

### **C. Other Issues**

#### **Comments**

31. MISO contends that the Commission should not approve Reliability Standard PRC-012-2 as proposed.<sup>70</sup> MISO contends that oversight of remedial action schemes would be difficult for reliability coordinators and planning coordinators when remedial action schemes span multiple footprints.<sup>71</sup> MISO also contends that Reliability Standard PRC-012-2 creates a geographical variation in transmission system characteristics which result in uneven distribution of coordination burden and duplicative work on remedial

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<sup>70</sup> MISO Comments at 2.

<sup>71</sup> *Id.*

action schemes.<sup>72</sup> MISO contends that the planning assessment performance requirements in Reliability Standard PRC-012-2 are better placed in Reliability Standard TPL-001-4 to avoid redundancies.<sup>73</sup> Finally, MISO proposes a five-year evaluation of remedial action schemes, which includes a renewal requirement to benefit efficient operations.<sup>74</sup>

32. Bonneville contends that Reliability Standard PRC-012-2, Requirement R2 gives reliability coordinators too much time to complete reviews of remedial action schemes.<sup>75</sup> Bonneville states that Reliability Standard PRC-012-2, Requirement R2 provides reliability coordinators four calendar months to review a remedial action scheme.<sup>76</sup> Bonneville states that in the Western Interconnection, these reviews are currently completed in two weeks. Bonneville continues that Reliability Standard PRC-012-2 allows an additional fourteen weeks for review, which would prevent Bonneville from completing remedial action scheme projects in a timely manner.<sup>77</sup> Bonneville proposes

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<sup>72</sup> *Id.* at 3.

<sup>73</sup> *Id.* at 4-5.

<sup>74</sup> *Id.* 6-7.

<sup>75</sup> Bonneville Comments at 2.

<sup>76</sup> *Id.*

<sup>77</sup> *Id.* at 3.



that Reliability Standard PRC-012-2, Requirement R2 should require reliability coordinators to complete their reviews within four weeks.<sup>78</sup>

### **Commission Determination**

33. MISO's opposition to Reliability Standard PRC-012-2 is largely based on perceived "inefficiencies" created by the Reliability Standard because it allegedly lacks regional coordination between reliability coordinators and planning coordinators and because of "redundancies" between PRC-012-2 and Reliability Standard TPL-001-4. We are not persuaded that MISO's concerns justify remanding Reliability Standard PRC-012-2. As discussed above, we determine that the Reliability Standard PRC-012-2 satisfies section 215(d)(2) of the FPA in that it is just, reasonable, not unduly discriminatory or preferential, and in the public interest. MISO accepts that Reliability Standard PRC-012-2 "shifts responsibility from the eight Regional Reliability Organizations (RROs) to Reliability Coordinators and Planning Coordinators" and MISO "agrees that the Reliability Coordinators and Planning Coordinators are best positioned to perform review and evaluation tasks associated with RAS."<sup>79</sup> We also note that other commenters, including Joint ISOs, do not share MISO's concerns and support approval of Reliability Standard PRC-012-2 as drafted.<sup>80</sup> To the extent that MISO continues to

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<sup>78</sup> *Id.*

<sup>79</sup> MISO Comments at 2.

<sup>80</sup> Joint ISOs Comments at 1.

believe that improvements should be made to Reliability Standard PRC-012-2, MISO may pursue any modifications through the NERC standards development process.<sup>81</sup>

34. We are not persuaded by Bonneville's comments regarding the period that reliability coordinators have to review remedial action schemes. NERC stated that Reliability Standard PRC-012-2, Requirement R2 establishes a comprehensive, consistent review process that includes a detailed checklist that reliability coordinators must use to identify design and implementation aspects of the remedial action schemes that are critical to an effective framework.<sup>82</sup> NERC also stated that allowing four months to complete this detailed review is consistent with industry practice, provides adequate time for a complete review, and includes additional flexibility for unique or unforeseen circumstances.<sup>83</sup> While four calendar months may be longer than what is typical in the Western Interconnection, we determine that NERC's proposal is reasonable because it provides a single, consistent, continent-wide timeframe for reviews. Moreover, as

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<sup>81</sup> With respect to MISO's proposal that each remedial action scheme be renewed every five years, NERC explained that Reliability Standard PRC-012-2, Requirement R4 provides for periodic remedial action scheme evaluations (i.e., at least every five years) by planning coordinators that will result in one of three determinations: (1) affirmation that the existing remedial action scheme is effective; (2) identification of changes needed to the existing remedial action scheme; or (3) justification for remedial action scheme retirement. NERC Petition at 21. Provided that the remedial action scheme is determined to be effective, is made effective, or retired, we see no reliability reason to direct inclusion of an additional renewal sub-requirement.

<sup>82</sup> NERC Petition at 17.

<sup>83</sup> *Id.*

Bonneville recognizes, Reliability Standard PRC-012-2, Requirement R2 permits entities to use a mutually agreed upon schedule instead of the four-month default timeline provided for in Requirement R2. Accordingly, Bonneville's request is denied on this issue.

### **III. Information Collection Statement**

35. The collection of information addressed in this final rule is subject to review by the Office of Management and Budget (OMB) under section 3507(d) of the Paperwork Reduction Act of 1995.<sup>84</sup> OMB's regulations require approval of certain information collection requirements imposed by agency rules.<sup>85</sup> Upon approval of a collection(s) of information, OMB will assign an OMB control number and an expiration date. Respondents subject to the filing requirements of a rule will not be penalized for failing to respond to these collections of information unless the collections of information display a valid OMB control number.

36. Public Reporting Burden: The number of respondents below is based on an examination of the NERC compliance registry for reliability coordinators, planning coordinators, transmission owners, generation owners, and distribution providers and an estimation of how many entities from that registry will be affected by the proposed Reliability Standard. At the time of Commission review of Reliability Standard PRC-012-2, 15 reliability coordinators, 71 planning coordinators, 328 transmission

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<sup>84</sup> 44 U.S.C. 3507(d).

<sup>85</sup> 5 CFR 1320.11.

owners, 930 generation owners, and 367 distribution providers in the United States were registered in the NERC compliance registry. However, under NERC's compliance registration program, entities may be registered for multiple functions, so these numbers incorporate some double counting. The Commission notes that many generation sites share a common generation owner.

37. Reliability Standards PRC-015-1 and PRC-016-1 are in the Reliability Standards approved in FERC-725A, (OMB Control No. 1902-0244). Reliability Standards PRC-015-1 and PRC-016-1 will be retired when Reliability Standard PRC-012-2 becomes effective, which will reduce the burden in FERC-725A.<sup>86</sup>

38. Reliability Standard PRC-012-2 sets forth Requirements for remedial action schemes to ensure that remedial action schemes do not introduce unintentional or unacceptable reliability risks to the bulk electric system and are coordinated to provide the service to the system as intended. Reliability Standard PRC-012-2 improves upon the existing Reliability Standards because it removes ambiguity in NERC's original "fill-in-the-blank" Reliability Standards by assigning responsibility to appropriate functional entities. Reliability Standard PRC-012-2 also streamlines and consolidates the remedial action scheme Reliability Standards into one clear, effective Reliability Standard under Information Collection FERC-725G.

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<sup>86</sup> The Commission is being conservative and not subtracting hours at this time from FERC-725A.

39. The following table illustrates the estimated burden to be applied to FERC-725G information collection.<sup>87</sup>

<b>FERC-725G in RM16-20-000 (Mandatory Reliability Standards: Reliability Standard PRC-012-2)</b>					
<b>Requirement and Respondent Category for PRC-012-2</b>	<b>Number of Respondents (1)</b>	<b>Number of Responses per Respondent (2)</b>	<b>Total Number of Responses (1)*(2)=(3)</b>	<b>Average Burden Hours &amp; Cost per Response<sup>88</sup> (4)</b>	<b>Annual Burden Hours &amp; Total Annual Cost (3)*(4)=(5)</b>
R1. Each RAS-entity (TO, GO, DP)	1,595	1	1,595	(Eng.) 24 hrs. (\$1,543); (R.K.) 12 hrs. (\$453)	57,420 hrs. (38,280 Eng., 19,140 R.K.); \$3,183,556 (\$2,461,021 Eng., \$722,535 R.K.)
R2. Each Reliability Coordinator	15	1	15	(Eng.) 16 hrs. (\$1,029); (R.K.) 4 hrs. (\$151)	300 hrs. (240 Eng., 60 R.K.); \$17,695 (\$15,430 Eng., \$2,265 R.K.)
R4. Each Planning Coordinator	71	1	71	(Eng.) 16 hrs. (\$1,029); (R.K.) 4 hrs. (\$151)	1,420 hrs. (1,136 Eng., 284 R.K.); \$85,754 (\$73,033 Eng., \$10,721 R.K.)
R5, R6, R7, and R8. Each RAS-entity (TO, GO, DP)	1,595	1	1,595	(Eng.) 24 hrs. (\$1,543); (R.K.) 12 hrs. (\$453)	57,420 hrs. (38,280 Eng., 19,140 R.K.); \$3,183,556 (\$2,461,021 Eng., \$722,535 R.K.)
R9. Each Reliability Coordinator	15	1	15	(Eng.) 10 hrs. (\$653); (R.K.) 4 hrs. (\$151)	210 hrs. (150 Eng., 60 R.K.); \$11,909 (\$9,644 Eng., \$2,265 R.K.)
<b>TOTAL</b>			<b>3,291</b>		<b>116,770 hrs. (78,086 Eng., 38,684 R.K.); \$6,480,470 (\$5,020,149 Eng.; \$1,460,321 R.K.)</b>

<sup>87</sup> In the burden table, engineering is abbreviated as “Eng.” and record keeping is abbreviated as “R.K.”

<sup>88</sup> The estimates for cost per response are derived using the following formula: Burden Hours per Response \* \$/hour = Cost per Response. The \$64.29/hour figure for an engineer and the \$37.75/hour figure for a record clerk are based on the average salary plus benefits data from the Bureau of Labor Statistics.

Title: FERC-725A (Mandatory Reliability Standards); FERC-725G (Mandatory Reliability Standards: PRC-012-2)

Action: Revision to existing collections.

OMB Control No: 1902-0244 (FERC-725A); 1902-0252 (FERC-725G)

Respondents: Business or other for profit, and not for profit institutions.

Frequency of Responses: Annually

Necessity of the Information: Reliability Standard PRC-012-2 sets forth Requirements for remedial action schemes to ensure that remedial action schemes do not introduce unintentional or unacceptable reliability risks to the bulk electric system and are coordinated to provide the service to the system as intended.

Internal review: The Commission has assured itself, by means of its internal review, that there is specific, objective support for the burden estimates associated with the information requirements.

40. Interested persons may obtain information on the reporting requirements by contacting the Federal Energy Regulatory Commission, Office of the Executive Director, 888 First Street, NE, Washington, DC 20426 [Attention: Ellen Brown, e-mail: DataClearance@ferc.gov, phone: (202) 502-8663, fax: (202) 273-0873].

41. Comments concerning the information collection in this Final Rule and the associated burden estimates should be sent to the Office of Management and Budget, Office of Information and Regulatory Affairs [Attention: Desk Officer for the Federal Energy Regulatory Commission]. For security reasons, comments should be sent by e-mail to OMB at the following e-mail address: oira\_submission@omb.eop.gov. Please

reference FERC-725A and FERC-725G and the docket number of this Final Rule, Docket No. RM16-20-000, in your submission.

#### **IV. Environmental Analysis**

42. The Commission is required to prepare an Environmental Assessment or an Environmental Impact Statement for any action that may have a significant adverse effect on the human environment.<sup>89</sup> The action proposed here falls within the categorical exclusion in the Commission's regulations for rules that are clarifying, corrective or procedural, for information gathering, analysis, and dissemination.<sup>90</sup>

#### **V. Regulatory Flexibility Act**

43. The Regulatory Flexibility Act of 1980 (RFA) generally requires a description and analysis of proposed rules that will have significant economic impact on a substantial number of small entities.<sup>91</sup>

44. In the NOPR, the Commission proposed that Reliability Standard PRC-012-2 will apply to approximately 1681 entities in the United States.<sup>92</sup> The Commission did not receive any comments on the impact on small entities. Comparison of the applicable entities with the Commission's small business data indicates that approximately 1,025 are

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<sup>89</sup> *Regulations Implementing the National Environmental Policy Act of 1969*, Order No. 486, 52 FR 47897 (Dec. 17, 1987), FERC Stats. & Regs. Preambles 1986-1990 ¶ 30,783 (1987).

<sup>90</sup> 18 CFR 380.4(a)(2)(ii).

<sup>91</sup> 5 U.S.C. 601-612.

<sup>92</sup> NOPR, 158 FERC ¶ 61,042 at P 26.

small entities or 61 percent of the respondents affected by proposed Reliability Standard PRC-012-2.<sup>93</sup> The Commission estimates for these small entities, Reliability Standard PRC-012-2 may need to be evaluated and documented every five years with a cost of \$6,322 for each evaluation. The Commission views this as a minimal economic impact for each entity. Accordingly, the Commission certifies that Reliability Standard PRC-012-2 will not have a significant economic impact on a substantial number of small entities.

## **VI. Document Availability**

45. In addition to publishing the full text of this document in the Federal Register, the Commission provides all interested persons an opportunity to view and/or print the contents of this document via the Internet through the Commission's Home Page (<http://www.ferc.gov>) and in the Commission's Public Reference Room during normal business hours (8:30 a.m. to 5:00 p.m. Eastern time) at 888 First Street, NE, Room 2A, Washington DC 20426.

46. From the Commission's Home Page on the Internet, this information is available on eLibrary. The full text of this document is available on eLibrary in PDF and Microsoft Word format for viewing, printing, and/or downloading. To access this

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<sup>93</sup> The Small Business Administration sets the threshold for what constitutes a small business. Public utilities may fall under one of several different categories, each with a size threshold based on the company's number of employees, including affiliates, the parent company, and subsidiaries. For the analysis in this rulemaking, we apply a 500 employee threshold for each affected entity. Each entity is classified as Electric Bulk Power Transmission and Control (NAICS code 221121).



document in eLibrary, type the docket number excluding the last three digits of this document in the docket number field.

47. User assistance is available for eLibrary and the Commission's website during normal business hours from FERC Online Support at 202-502-6652 (toll free at 1-866-208-3676) or e-mail at [ferconlinesupport@ferc.gov](mailto:ferconlinesupport@ferc.gov), or the Public Reference Room at (202) 502-8371, TTY (202)502-8659. E-mail the Public Reference Room at [public.referenceroom@ferc.gov](mailto:public.referenceroom@ferc.gov).

#### **VII. Effective Date and Congressional Notification**

48. The final rule is effective [**INSERT DATE 60 days from publication in FEDERAL REGISTER**]. The Commission has determined, with the concurrence of the Administrator of the Office of Information and Regulatory Affairs of OMB, that this rule is not a "major rule" as defined in section 351 of the Small Business Regulatory Enforcement Fairness Act of 1996. This final rule is being submitted to the Senate, House, and Government Accountability Office.

By the Commission.

( S E A L )

Nathaniel J. Davis, Sr.,  
Deputy Secretary.

## **Appendix**

Bonneville Power Administration (Bonneville)

Edison Electric Institute (EEI)

International Transmission Company d/b/a ITC Transmission, Michigan Electric Transmission Company, LLC, ITC Midwest LLC and ITC Great Plains, LLC (together, ITC)

Midcontinent Independent System Operator, Inc. (MISO)

New England States Committee on Electricity (NESCOE)

New York Independent System Operator, Independent Electricity System Operator, ISO New England, Inc. and Electric Reliability Council of Texas, Inc. (together, Joint ISOs)

North American Electric Reliability Corporation (NERC)