142 FERC ¶ 61,128
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

18 CFR Part 40

[Docket No. RM12-12-000; Order No. 775]

Regional Reliability Standard PRC-006-NPCC-1 — Automatic Underfrequency Load Shedding

(Issued February 21, 2013)

AGENCY: Federal Energy Regulatory Commission.

ACTION: Final Rule.

SUMMARY: Under section 215 of the Federal Power Act (FPA), the Federal Energy Regulatory Commission (Commission) approves regional Reliability Standard PRC-006-NPCC-1 (Automatic Underfrequency Load Shedding), submitted to the Commission for approval by the North American Electric Reliability Corporation (NERC). Regional Reliability Standard PRC-006-NPCC-1 applies to generator owners, planning coordinators, distribution providers, and transmission owners in the Northeast Power Coordinating Council Region. Regional Reliability Standard PRC-006-NPCC-1 is designed to ensure the development of an effective automatic underfrequency load shedding (UFLS) program to preserve the security and integrity of the Bulk-Power System during declining system frequency events, in coordination with the NERC continent-wide UFLS Reliability Standard PRC-006-1. The Commission approves the related violation risk factors, violation severity levels, implementation plan, and effective dates proposed by NERC.

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

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SUPPLEMENTARY INFORMATION:

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Before Commissioners: Jon Wellinghoff, Chairman;
Philip D. Moeller, John R. Norris,
Cheryl A. LaFleur, and Tony T. Clark.

Regional Reliability Standard PRC-006-NPCC-1 — Automatic Underfrequency Load Shedding

Docket No. RM12-12-000

ORDER NO. 775

FINAL RULE

(Issued February 21, 2013)

1. Under section 215 of the Federal Power Act (FPA),[1] the Commission approves regional Reliability Standard PRC-006-NPCC-1 (Automatic Underfrequency Load Shedding). The Commission also approves the related violation risk factors (VRFs), violation severity levels (VSLs), implementation plan, and effective dates proposed by the North American Electric Reliability Corporation (NERC). NERC submitted regional Reliability Standard PRC-006-NPCC-1 to the Commission for approval. The regional Reliability Standard applies to generator owners, planning coordinators, distribution providers, and transmission owners in the Northeast Power Coordinating Council (NPCC) Region and is designed to ensure the development of an effective automatic

[1] 16 U.S.C. 824o (2006).

underfrequency load shedding (UFLS) program to preserve the security and integrity of the Bulk-Power System during declining system frequency events, in coordination with NERC's continent-wide UFLS Reliability Standard PRC-006-1.

I. Background

A. Mandatory Reliability Standards

2. Section 215 of the FPA requires a Commission-certified Electric Reliability Organization (ERO) to develop mandatory and enforceable Reliability Standards that are subject to Commission review and approval. Once approved, the Reliability Standards may be enforced by NERC (the Commission-certified ERO), subject to Commission oversight, or by the Commission independently.[2]

3. A Regional Entity may develop a Reliability Standard for Commission approval to be effective in that region only.[3] In Order No. 672, the Commission stated that:

> As a general matter, we will accept the following two types of regional differences, provided they are otherwise just, reasonable, not unduly discriminatory or preferential and in the public interest, as required under the statute: (1) a regional difference that is more stringent than the continent-wide Reliability Standard, including a regional difference that addresses matters that the continent-wide Reliability Standard does not; and (2) a regional Reliability Standard that is necessitated by a physical difference in the Bulk-Power System.[4]

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[2] 16 U.S.C. § 824o(e) (2006).

[3] 16 U.S.C. § 824o(e)(4). A Regional Entity is an entity approved by the Commission to enforce Reliability Standards under delegated authority from the ERO. *See* 16 U.S.C. §§ 824o(a)(7) and (e)(4).

[4] *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability*

(continued…)

4. On April 19, 2007, the Commission accepted delegation agreements between NERC and each of the eight Regional Entities.[5] In the order, the Commission accepted NPCC as a Regional Entity.

5. NERC's Commission-approved and currently-effective Reliability Standard PRC-006-1 establishes continent-wide design and documentation requirements for UFLS programs that arrest declining frequency and assist recovery of frequency following system events leading to frequency degradation.

B. NERC Petition

6. On May 4, 2012, NERC petitioned the Commission to approve regional Reliability Standard PRC-006-NPCC-1 and the related violation risk factors, violation severity levels, effective dates, and implementation plan.[6] On August 3, 2012, NERC filed an errata regarding the proposed implementation plan. NERC stated that regional Reliability Standard PRC-006-NPCC-1 is based on the program characteristics defined within NPCC Directory #12 Underfrequency Load Shedding Program Requirements (NPCC Directory #12), which contains the criteria that govern the NPCC Automatic

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Standards, Order No. 672, FERC Stats. & Regs. ¶ 31,204, at P 291 (2006), *order on reh'g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006).

[5] *North American Electric Reliability Corp.*, 119 FERC ¶ 61,060 (2007), *order on reh'g*, 120 FERC ¶ 61,260 (2007).

[6] Regional Reliability Standard PRC-006-NPCC-1 is available on the Commission's eLibrary document retrieval system in Docket No. RM12-12-000 and on the NERC website, www.nerc.com.

UFLS program that have been in place since June 26, 2009.[7] According to NERC, regional Reliability Standard PRC-006-NPCC-1 will achieve a coordinated, comprehensive UFLS region-wide consistent program within the NPCC Region and provides the regional requirements necessary to achieve and facilitate the broader program characteristics contained in the requirements of the NERC Reliability Standard PRC-006-1.[8] NERC stated that the regional Reliability Standard adds specificity not contained in NERC Reliability Standard PRC-006-1 and is designed to work in conjunction with and augment Reliability Standard PRC-006-1 by mitigating the consequences of an underfrequency event, while accommodating differences in system transmission and distribution topology among NPCC planning coordinators due to historical design criteria, makeup of load demands, and generation resources.[9] NERC further stated that regional Reliability Standard PRC-006-NPCC-1 facilitates uniformity and compliance, and clearly delineates what the applicable entities' requirements are within the NPCC Region to achieve a robust, reliable and effective UFLS program.[10]

7. In the petition, NERC proposed violation risk factors and violation severity levels for each requirement of the regional Reliability Standard, an implementation plan, and effective dates. NERC stated that these proposals were developed and reviewed for

[7] NERC Petition at 11.

[8] *Id.* at 29-30.

[9] *Id.*

[10] *Id.* at 30.

consistency with NERC and Commission guidelines. NERC proposed two effective dates for the regional Reliability Standard. NERC stated that Requirements R1 through R7 would become effective on the first day of the first calendar quarter following applicable regulatory approval but no earlier than January 1, 2016. For Requirements R8 through R23, NERC stated that they will become effective the first day of the first calendar quarter two years following applicable regulatory approval.

C. Notice of Proposed Rulemaking

8. On September 20, 2012, the Commission issued a Notice of Proposed Rulemaking (NOPR) proposing to approve regional Reliability Standard PRC-006-NPCC-1 as just, reasonable, not unduly discriminatory or preferential, and in the public interest.[11] The Commission proposed to approve regional Reliability Standard PRC-006-NPCC-1 because it is designed to operate in conjunction with the NERC continent-wide UFLS Reliability Standard PRC-006-1 by mitigating the consequences of underfrequency events, while accommodating differences in system transmission and distribution topology among NPCC planning coordinators due to historical design criteria, makeup of load demands, and generation resources. The NOPR determined that the regional Reliability Standard includes requirements that are not found in the corresponding NERC

[11] *Regional Reliability Standard PRC-006-NPCC-1 — Automatic Underfrequency Load Shedding*, Notice of Proposed Rulemaking, 77 Fed. Reg. 59,151 (September 26, 2012), FERC Stats. & Regs. ¶ 32,691 (2012).

Reliability Standard PRC-006-1 and that are more stringent than Reliability Standard PRC-006-1.

9. While proposing to approve regional Reliability Standard PRC-006-NPCC-1, the NOPR sought comment on two issues: (1) the technical basis for the 57.8 Hz maximum tripping limit for existing nuclear units established in Requirement R19; and (2) the time-frame for actions that result in changes to the NPCC UFLS program.

10. In response to the NOPR, initial comments were filed by NERC, NPCC, New York Independent System Operator (NYISO), PSEG Companies (PSEG),[12] and Dominion Resources Services, Inc. (Dominion).[13] NERC and NPCC filed reply comments.

II. Discussion

11. Pursuant to FPA section 215(d)(2), we approve regional Reliability Standard PRC-006-NPCC-1 as just, reasonable, not unduly discriminatory or preferential, and in the public interest. Regional Reliability Standard PRC-006-NPCC-1 is designed to operate in conjunction with the NERC continent-wide UFLS Reliability Standard PRC-006-1 by mitigating the consequences of underfrequency events, while

[12] PSEG is comprised of PSEG Power LLC and PSEG Energy Resources & Trade LLC.

[13] Dominion filed comments on behalf of Virginia Electric and Power Company, Dominion Energy Kewaunee, Inc., Dominion Nuclear Connecticut, Inc., Dominion Energy Brayton Point, LLC, Dominion Energy Manchester Street, Inc., Elwood Energy, LLC, Kincaid Generation, LLC, and Fairless Energy, LLC.

accommodating differences in system transmission and distribution topology among NPCC planning coordinators. Regional Reliability Standard PRC-006-NPCC-1 includes requirements that are not found in the corresponding NERC Reliability Standard PRC-006-1 and that are more stringent than Reliability Standard PRC-006-1 while accommodating differences in system transmission and distribution topology among NPCC planning coordinators due to historical design criteria, makeup of load demands, and generation resources.

12. We address below the following issues raised in the NOPR and/or comments: (A) Requirement R19 – nuclear generating plants; (B) Time-frame for completion of actions; (C) Compensatory load shedding requirements; and (D) violation risk factors and violations severity levels.

A. PRC-006-NPCC-1, Requirement R19

13. In the NOPR, the Commission sought comments on the technical basis for the 57.8 Hz maximum tripping limit for existing nuclear units established in Requirement R19. The NOPR observed that Requirement R19 provides that:

> R19 Each Generator Owner of existing nuclear generating plants with units that have underfrequency relay threshold settings above the Eastern Interconnection generator tripping curve in Figure 1, based on their licensing design basis, shall: [Violation Risk Factor: High] [Time Horizon: Long Term Planning]
>
> 19.1 Set the underfrequency protection to operate at as low a frequency as possible in accordance with the plant design licensing limitations but not greater than 57.8Hz.
>
> 19.2 Set the frequency trip setting upper tolerance to no greater than + 0.1 Hz.

19.3 Transmit the initial frequency trip setting and any changes to the setting and the technical basis for the settings to the Planning Coordinator.

14. The NOPR stated that the NERC petition did not explain the technical basis for establishing 57.8 Hz as the maximum frequency at which existing nuclear units may trip pursuant to Requirement R19.1, other than to state that the regional Reliability Standard was based on the work of an NPCC working group.[14] The NOPR stated that the NERC petition and its attachments did not provide any information as to how the 57.8 Hz limit was developed. The NOPR sought comment from NPCC, NERC, and other interested entities explaining the technical basis for the 57.8 Hz limit established in Requirement R19.1.

Comments

15. NPCC states that its UFLS program is designed to arrest frequency decline at or above 58.0 Hz while incorporating the performance characteristics of regional generation. In determining the 57.8 Hz limit for existing nuclear units within the NPCC Region, NPCC states that it "considered the minimum program frequency of 58.0 Hz, the existing maximum trip settings of the nuclear units (gathered through surveys) within NPCC's footprint, system response, and credible islands as determined by the NPCC Planning Coordinators."[15] NPCC states that a maximum frequency threshold trip setting of

[14] NERC Petition at 11.

[15] NPCC Initial Comments at 4.

57.8 Hz for existing nuclear units provides a "margin of 0.2 Hz above the highest frequency at which [the nuclear units in NPCC's footprint] are expected to be tripped by low coolant flow or under frequency protection and yields acceptable system performance with minimum changes required to the nuclear units."[16] NPCC adds that it considered 0.2 Hz to be a conservative margin and was developed in consideration of the typical relay drift tolerance of ± 0.1 Hz,[17] which ensures the units do not trip above 58.0 Hz. NPCC states that if existing nuclear units adhere to the 57.8 Hz maximum tripping limit requirement, "islands with a 25% generation deficiency are able to survive, maintain automatic UFLS program requirements, and the program will achieve satisfactory system performance."[18]

16. NERC states that it supports the comments submitted by NPCC regarding the technical basis for the 57.8 Hz limit. NERC also states that the requirements in regional Reliability Standard PRC-006-NPCC-1 are consistent with the continent-wide UFLS Reliability Standard PRC-006-1.[19]

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[16] *Id.* at 5.

[17] NPCC states that a relay setting of 57.8 Hz with a typical relay drift tolerance of ± 0.1 Hz would result in actual trip bandwidth of between 57.9 Hz and 57.7 Hz.

[18] *Id.*

[19] NYISO supports approval of regional Reliability Standard PRC-006-NPCC-1 without modification. NYISO Comments at 2.

Commission Determination

17. The Commission finds that NPCC has provided an adequate technical basis for the 57.8 Hz maximum frequency threshold trip setting for existing nuclear units, as set forth in Requirement R19. As explained by NPCC, a maximum frequency threshold trip setting of 57.8 Hz for existing nuclear units provides a margin of 0.2 Hz above the highest frequency at which the nuclear units in NPCC's footprint are expected to trip by low coolant flow or underfrequency protection. Adherence to the 57.8 Hz limit should also result in islands with a 25% generation deficiency being able to survive and maintain automatic UFLS program requirements.

B. Time-Frame for Completion of Actions

18. In the NOPR, the Commission sought comments on the time-frames for actions that result in changes to the NPCC UFLS program. The NOPR observed that NERC's Reliability Standard PRC-006-1, Requirement R3, requires the planning coordinator to set the schedule for distribution providers and transmission owners to implement the UFLS program and that regional Reliability Standard PRC-006-NPCC-1, Requirements R5, R16.2, and R19.3, require distribution providers, transmission owners, and generator owners to provide, inform, and transmit exceptions to the UFLS program and justifications for the exceptions to the planning coordinator. The NOPR stated that these Requirements in regional Reliability Standard PRC-006-NPCC-1 do not specify a time-frame for the completion of these actions. The NOPR indicated that Requirements R5, R16.2, and R19.3 address actions that can result in changes to the UFLS program and should occur before the UFLS program is implemented, thus making it necessary for

entities to provide the required information to the planning coordinator within a specified period of time. The NOPR further observed that other Requirements in regional Reliability Standard PRC-006-NPCC-1 require actions of distribution providers, transmission owners, and generator owners that should occur before the UFLS program is implemented and that those actions include specific time-frames for completion.[20] The NOPR sought comment on whether Requirements R5, R16.2, and R19.3 should also specify time-frames for completion of the required actions and, if so, the appropriate time-frames for each.

Comments

19. NPCC states that Requirement R5 addresses a limited set of non-conforming circumstances and places the burden on entities to demonstrate that such non-conforming circumstances do not degrade the overall performance of the UFLS program. NPCC states that the absence of time-frames for completion of the required actions in Requirement R5 means that responsible entities are required to notify the NPCC planning coordinator "upon identification of any non-conformance with Requirement R5."[21] NPCC states that this is the current practice with respect to applicable entities. NPCC states that providing a time-frame would "result in delays of the transmittal of critical

[20] *See, e.g.*, Requirements R11, R14, and R23 of proposed regional Reliability Standard PRC-006-NPCC-1.

[21] NPCC Initial Comments at 7.

information to the Planning Coordinator which could potentially impact UFLS system performance."[22]

20. NPCC states that Requirement R16 addresses an existing class of non-nuclear units that "trip above the threshold curve for setting underfrequency trip protection for generators and which already provide compensatory load shedding in accordance with existing procedures."[23] NPCC states that "Planning Coordinators within NPCC have information for the class of existing units for R16, with underfrequency protection set to trip above the curve in Figure 1, [and thus] assigning time-frames is of no benefit to the program."[24] NPCC states, however, that Requirement R16.2 also requires changes to underfrequency settings, along with the technical basis for those settings from generators in this class of units, to be transmitted to the planning coordinator. NPCC maintains that "[i]t is the expectation that in the absence of a time-frame," in Requirement R16.2 those entities, "immediately upon identification of such a change," would notify the Planning Coordinator.[25]

21. NPCC states that Requirement R19.3, similar to the requirements regarding non-nuclear units in Requirement R16.2, requires responsible entities to provide planning coordinators with the current operating parameters of an existing class of nuclear units

[22] *Id.*

[23] *Id.*

[24] *Id.* at 7-8.

[25] *Id.* at 8.

that trip above the threshold curve for setting underfrequency trip protection for generators units. NPCC further states that like Requirement R16.2, Requirement 19.3 requires responsible entities to transmit changes to the underfrequency settings to the planning coordinator. NPCC maintains that, in the absence of time-frames, responsible entities must notify the planning coordinator "immediately upon identification of such change."[26]

22. NPCC also states that there is a limited number of existing nuclear and non-nuclear units that trip above the curve in Figure 1. NPCC notes that Requirement R15 requires that all new units conform to the curve in Figure 1. According to NPCC, the number of units that must comply with Requirement R16 and Requirement R19 is limited to the existing set of units described above and thus the inclusions of time-frames is unnecessary.

23. NERC states that it supports the comments submitted by NPCC on this issue.

Commission Determination

24. The Commission finds that NPCC has provided adequate justification for not including specific time-frames in Requirements R5, R16.2, and R19.3. NPCC states that these Requirements apply to a limited number of existing nuclear and non-nuclear units whose performance characteristics are already incorporated in the regional UFLS program, and that planning coordinators within NPCC have the existing technical

[26] *Id.*

parameters necessary to incorporate existing unit attributes and compensatory load shedding information into their assessment. NPCC further states that the absence of specific time-frames in these Requirements means that responsible entities must immediately notify planning coordinators upon identification of any non-conformance or changes to underfrequency settings pursuant to these Requirements. The Commission determines that this satisfies the concern raised in the NOPR.

C. Compensatory Load Shedding Requirements

25. Reliability Standard PRC-006-NPCC-1, Requirements R3, R16 and R18, address compensatory load shedding.[27] In particular, Requirement R16.3 requires generator owners of existing non-nuclear units that have non-conforming underfrequency protection set points to, among other things, "[h]ave compensatory load shedding, as provided by a Distribution Provider or Transmission Owner that is adequate to compensate for the loss of their generator due to early tripping." Requirement R18 requires that "[e]ach Generator Owner, Distribution Provider or Transmission Owner within the Planning Coordinator area of ISO-NE or the New York ISO shall apply the criteria described in Attachment B to determine the compensatory load shedding that is required in Requirement R16.3 for generating units in its respective NPCC area." Attachment B, Section 2.5, provides that the "amount of compensatory load shedding

[27] Compensatory load shedding is automatic shedding of load adequate to compensate for the loss of a generator due to the generator tripping early (i.e., because the generator has underfrequency protection set to trip above the curve in Figure 1).

shall be equivalent (±5%) to the average net generator megawatt output for the prior two calendar years, as specified by the Planning Coordinator, plus expected station loads to be transferred to the system upon loss of the facility."

Comments

26. Dominion states that there are technical difficulties associated with Requirements R16.3 and R18. Dominion states that shedding additional load equivalent to a non-conforming generator would be extremely difficult to design and coordinate and that the design would have to account for the real-time status and output of the generator. Dominion also states that Requirements R16.3 and R18 are unreasonable because they require non-conforming generators to procure compensatory load shedding service for which Dominion has found no willing provider. Dominion maintains that, as a result, the regional Reliability Standard cannot be practically implemented and may have an adverse impact on the Bulk-Power System. Dominion further states that NPCC's assertion that generators in NPCC are already following these procedures as part of NPCC Directory #12 is misleading because only NPCC Full Members are required to follow the existing criteria. Dominion maintains that the regional Reliability Standard will impact a number of generators that are not NPCC Full Members. In addition, Dominion observes that several entities raised concerns with the compensatory load shedding provisions during the regional Reliability Standard drafting process. Dominion also maintains that Order

No. 763,[28] in which the Commission approved the continent-wide NERC UFLS Reliability Standard PRC-006-1, supports Dominion's position that it is inappropriate for the regional Reliability Standard "to require a non-conforming generator to obtain compensating load shedding as it is ultimately the planning coordinators responsibility to design the UFLS system to account for such generator."[29]

27. PSEG states that it is inappropriate for planning coordinators to assign responsibility for compensatory load shedding, asserting that it is inconsistent with Order No. 763. PSEG also contends that the regional Reliability Standard contravenes the prohibition in FPA section 215 against setting standards for "adequacy or safety of electric facilities or services" because the regional Reliability Standard requires generator owners with existing non-conforming units to construct additional capacity or acquire off-setting UFLS at their expense.[30] PSEG also states that Requirement R16 imposes obligations upon generator owners that are absent from the NERC Reliability Functional Model.[31] PSEG states that one of the tasks of a generator owner is to "[p]rovide verified

[28] *Automatic Underfrequency Load Shedding and Load Shedding Plans Reliability Standards*, Order No. 763, 139 FERC ¶ 61,098, *clarified*, 140 FERC ¶ 61,164 (2012).

[29] Dominion Comments at 8.

[30] 16 U.S.C. § 824o(i)(2). PSEG also contends that the regional Reliability Standard contravenes the definition of "Reliability Standard" in FPA section 215, which excludes "any requirement to enlarge [Bulk-Power System] facilities or to construct new transmission capacity or generation capacity." 16 U.S.C. § 824o(a)(3).

[31] The NERC Reliability Functional Model provides the framework for the development and applicability of NERC's Reliability Standards. NERC, Reliability

(continued…)

generating facility performance characteristics/data," but that there is no obligation for generators to compensate other entities for performance that does not meet a specific level. PSEG further states that distribution providers and transmission owners in NPCC do not have tariffs in place that would permit them to charge and/or provide generator owners with compensatory load shedding.

28. In reply to Dominion's and PSEG's comments, NPCC states that the regional Reliability Standard drafting team considered comments regarding the difficulty of designing and coordinating the shedding of load equivalent to a non-conforming generator, but that the overarching reliability objective of re-establishing a balance between load and generation during possible islanding events made shedding additional load necessary. NPCC states that it is impractical to expect an exact match between compensatory load shedding and unit output but maintains that compensatory load shedding based on an average megawatt output, as provided in Attachment B, aligns the amount of compensatory load shedding with the unit output most likely to be lost when the unit trips prematurely. NPCC further states that requiring compensatory load shedding based on a two year average net generator megawatt output is an effective approach to integrating small non-conforming generators into the design of a UFLS program. In addition, NPCC observes that that Regional Criteria requiring non-conforming generation to secure compensatory load shedding preexist the development

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Functional Model, Version 5 at 7 (approved May 2010), *available at* http://www.nerc.com/files/Functional_Model_V5_Final_2009Dec1.pdf.

of the regional Reliability Standard and that it is a cost effective alternative for generators. With respect to Order No. 763, NPCC states that the regional Reliability Standard is consistent with the Commission's determination that it is appropriate for planning coordinators to consider generators that trip outside of the UFLS set points.

29. NPCC maintains that the regional Reliability Standard Requirements R1 and R3 are "only intended to communicate the results of locational assessments, and there is no obligation to obtain compensatory load shedding based solely on this information nor does the Planning Coordinator determine whether mitigation is necessary or who will be responsible for providing mitigation."[32] NPCC states that compensatory load shedding is merely an option to bring non-conforming generators into compliance. In response to comments regarding the absence of tariffs that permit for compensatory load shedding service, NPCC states that such concerns are tempered by the fact that all new generators, going forward, must conform with the underfrequency trip performance characteristics in the regional Reliability Standard and that compensatory load shedding only potentially impacts existing, non-conforming, non-nuclear units.

30. NPCC further notes that the existing compensatory load shedding requirements are presently contained in NPCC Directory #12 and "have been successfully implemented within the region . . . and non-conforming generators that are already interconnected either have existing contracts to provide compensatory load shedding or have mitigated

[32] NPCC Reply Comments at 5.

the conditions that would trip the unit above the performance curve in order to comply with the Regional Criteria."[33] NPCC states that the regional Reliability Standard achieved an 83.5 percent overall approval "with a majority of registered Generator Owners in the region voting to approve the standard."[34] With respect to FPA section 215, NPCC maintains that compensatory load shedding does not present a resource adequacy issue but, instead, addresses a generating unit's ability to perform, with the generator having the option of meeting the performance curve, mitigating the operating condition, or obtaining compensatory load shedding. With respect to the NERC Reliability Functional Model, NPCC states that the absence of a task within the functional model does not preclude assigning a new or existing task based on a new or revised Reliability Standard. NPCC states that the functional model only defines the functions that must be performed to ensure the reliability of the bulk electric system and should not be used to restrict a reliability-related activity or Reliability Standard requirements.

31. In reply to Dominion's and PSEG's comments, NERC states it never intended to suggest that it is inappropriate for planning coordinators to determine whether mitigation is necessary and who will provide mitigation with respect to generators that trip outside the UFLS set points in UFLS programs. NERC states that "[o]n the contrary, the Planning Coordinator is one of the functional entities with responsibility for maintaining

[33] *Id.* at 6-7.

[34] *Id.* at 9.

the reliability of the Bulk-Power System."[35] NERC maintains that it has stated that it is inappropriate for a Reliability Standard to supplant the planning coordinator's role in establishing UFLS program requirements. However, NERC states that regional Reliability Standard PRC-006-NPCC-1 "reflects the NPCC Planning Coordinators' collective assessment of how to address this concern."[36]

32. Further, NERC claims that the technical concerns raised in the comments are overstated. NERC states that concerns "regarding potential overfrequency excursions due to overcompensating when a generating unit with non-conforming trip setting is off-line would be appropriate if compensatory loadshedding was applied to large generating units or if the provision was open-ended with applicability to future generating units not studied by the Planning Coordinator."[37] NERC observes that the compensatory load shedding provisions in the regional Reliability Standard, by contrast, are limited to a "defined amount of generating capacity that is included in Planning Coordinator assessments, [and] does not jeopardize reliability of the Bulk-Power System."[38]

Commission Determination

33. The Commission rejects the protests made by Dominion and PSEG regarding the compensatory load shedding provisions of regional Reliability Standard PRC-006-

[35] NERC Reply Comments at 2.

[36] *Id.* at 3.

[37] *Id.* at 4.

[38] *Id.*

NPCC-1. Based on the record before us, we are not persuaded that the compensatory load shedding option for existing, non-conforming units in Requirement R16 presents a technical barrier to implementation of the regional Reliability Standard. NPCC states that generators already comply with the compensatory load shedding requirements in NPCC Directory #12, which is not disputed by Dominion and PSEG. While Dominion maintains that the regional Reliability Standard will require more generators (i.e., non-NPCC Full Members) to comply with the compensatory load shedding requirement, the fact that there are generators who do so now refutes the assertion that the requirement is technically or practically infeasible.[39] Moreover, we agree with NERC that the concerns regarding overfrequency excursions due to overcompensating for loss of off-line units might be valid if compensatory load shedding was applied to large generating units or to new generating units, but that is not the case here since compensatory load shedding only applies to existing, non-conforming, non-nuclear units. We also observe that, according to the implementation plan, compliance with Requirements R16.3 and R18 will become effective the first day of the first calendar quarter two years following applicable regulatory approval. Thus, the implementation plan provides existing, non-conforming generators a significant amount of time to prepare for compliance with the regional Reliability Standard.

[39] We also note NPCC's statement that the regional Reliability Standard achieved an 83.5 percent overall approval "with a majority of registered Generator Owners in the region voting to approve the standard." *See* NPCC Reply Comments at 9.

34. We agree with NPCC that the NERC Reliability Functional Model does not preclude the assignment of a new or revised task in a Reliability Standard, such as to generator owners. The NERC Reliability Functional Model provides that:

> The Model is a guideline for the development of standards and their applicability. The Model it [sic] is not a Standard and does not have compliance requirements. Standards developers are not required to include all tasks envisioned in the model, nor are the developers precluded from developing Reliability Standards that address functions not described in the model. Where conflicts or inconsistency exist, the Reliability Standards requirements take precedence over the Model.[40]

35. We disagree with Dominion and PSEG that the regional Reliability Standard is inconsistent with Order No. 763. In the context of the rulemaking addressing the continent-wide UFLS Reliability Standard PRC-006-1, Order No. 763 explained that it would be inappropriate to include in Reliability Standard PRC-006-1 specific requirements as to how to mitigate generators that tripped outside of the UFLS program (e.g., by procuring load to shed).[41] We agree with NERC that, while it is inappropriate for a continent-wide Reliability Standard to supplant the planning coordinator's role in establishing UFLS program requirements, the regional Reliability Standard PRC-006-NPCC-1 incorporates the NPCC's planning coordinators' views and experience.[42]

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[40] NERC Reliability Functional Model, Version 5 at 7.

[41] Order No. 763, 139 FERC ¶ 61,098 at P 58.

[42] We also note that the Commission granted clarification of Order No. 763, regarding NERC's NOPR comments on compensatory load shedding, and found that

(continued…)

Accordingly, we see no inconsistency between Order No. 763 and our determination in this Final Rule.

36. Finally, we reject the claim that the compensatory load shedding provisions in regional Reliability Standard PRC-006-NPCC-1 contravene FPA section 215. As discussed above, the compensatory load shedding option for existing, non-conforming, non-nuclear units is one option for such generators. Generator owners may instead choose to bring their units into compliance rather than secure compensatory load shedding. We do not find that the regional Reliability Standard implicates the proscription in FPA section 215 against ordering the "construction of additional generation or transmission capacity or to set and enforce compliance with standards for adequacy or safety of electric facilities or services." The regional Reliability Standard does not require responsible entities to construct additional generation capacity or address the adequacy of electric facilities services. Instead, it merely requires generator owners, if they choose to, to secure compensatory load shedding to balance the performance characteristics of their existing, non-conforming units.

NERC stated that "it is not appropriate for the Reliability Standards to prescribe *how* a planning coordinator determines whether mitigation is necessary or who is responsible for providing mitigation." *Automatic Underfrequency Load Shedding and Load Shedding Plans Reliability Standards*, Order No. 763, 139 FERC ¶ 61,098, *clarified*, 140 FERC ¶ 61,164, at P 12 (2012).

D. Violation Risk Factors, Violation Severity Levels, Implementation Plan, and Effective Dates

37. In the NOPR, the Commission proposed to approve NERC's proposed violation risk factors and violation severity levels for regional Reliability Standard PRC-006-NPCC-1 as consistent with the Commission's established guidelines.[43] In addition, the Commission proposed to accept the implementation plan and effective dates proposed by NERC for regional Reliability Standard PRC-006-NPCC-1.

Comments

38. No comments were received that specifically addressed the violation risk factors, violation severity levels, implementation plan, and effective dates proposed by NERC.[44]

Commission Determination

39. The Commission approves the violation risk factors, violation severity levels, implementation plan, and effective dates proposed by NERC.

III. Information Collection Statement

40. The Office of Management and Budget (OMB) regulations require that OMB approve certain reporting and recordkeeping (collections of information) imposed by an agency.[45] Upon approval of a collection(s) of information, OMB will assign an OMB

[43] *See North American Electric Reliability Corp.*, 135 FERC ¶ 61,166 (2011).

[44] Dominion's comments regarding the technical and practical feasibility of implementing regional Reliability Standard PRC-006-NPCC-1 were addressed in the previous section.

[45] 5 CFR 1320.11.

control number and expiration date. Respondents subject to the filing requirements of this 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.

41. The Commission is submitting these reporting and recordkeeping requirements to OMB for its review and approval under section 3507(d) of Paperwork Reduction Act of 1995. The Commission solicited comments on the need for and the purpose of the information contained in regional Reliability Standard PRC-006-NPCC-1 and the corresponding burden to implement the regional Reliability Standard. The Commission received comments on specific requirements in the regional Reliability Standard, which we address in this Final Rule. However, the Commission did not receive any comments on our reporting burden estimates. The Final Rule approves regional Reliability Standard PRC-006-NPCC-1. As noted previously, this is the first time NERC has requested Commission approval of regional Reliability Standard PRC-006-NPCC-1. Regional Reliability Standard PRC-006-NPCC-1 is designed to work with and augment the NERC continent-wide UFLS Reliability Standard PRC-006-1 by mitigating the consequences of underfrequency events, while accommodating differences in system transmission and distribution topology among NPCC planning coordinators due to historical design criteria, makeup of load demands, and generation resources. Regional Reliability Standard PRC-006-NPCC-1 is only applicable to generator owners, planning coordinators, distribution providers, and transmission owners in the NPCC Region. To properly account for the burden on respondents, the Commission will treat the burden

resulting from NERC-approved Reliability Standard PRC-006-NPCC-1 as pertaining to entities within the NPCC Region.

42. Public Reporting Burden: Our estimate below regarding the number of respondents is based on the NERC Compliance Registry as of July 24, 2012. According to the NERC Compliance Registry, there are 2 planning coordinators and 135 generator owners within the United States portion of the NPCC Region. The individual burden estimates are based on the time needed for planning coordinators to incrementally gather data, run studies, and analyze study results to design or update the UFLS programs that are required in the regional Reliability Standard in addition to the requirements of the NERC Reliability Standard PRC-006-1.[46] Additionally, generator owners must set each underfrequency trip relay below the appropriate generator underfrequency trip protection settings threshold curve in regional Reliability Standard PRC-006-NPCC-1, Figure 1 and provide the generator underfrequency trip setting and time delay to its planning coordinator within 45 days of the planning coordinator's request. These burden estimates are consistent with estimates for similar tasks in other Commission-approved Reliability Standards. The following burden estimates relate to the requirements for this Final Rule in Docket No. RM12-12-000 (For Planning Coordinators) and are in addition to the burden estimates for the continent-wide Reliability Standard PRC-006-1, which was approved in Order No. 763 (approved by OMB Control No. 1902-0244 on 7/9/2012).

[46] The burden estimates for Reliability Standard PRC-006-1 are included in Order No. 763 and are not repeated here.

PRC-006-NPCC-1 (FERC-725L) (Automatic Underfrequency Load Shedding)[47]	Number of Respondents Annually (1)	Number of Responses per Respondent (2)	Average Burden Hours Per Response (3)	Total Annual Burden Hours (1)x(2)x(3)
PCs*: Design and document Automatic UFLS Program	2	1	8	16
PCs: Update and Maintain UFLS Program Database			16	32
GOs*: Provide Documentation and Data to the Planning Coordinator	135	1	16	2160
GOs: Record Retention			4	540
Total				2748

*PC=planning coordinator; GO=generator owner

Total Annual Hours for Collection: (Compliance/Documentation) = 2,748 hours.

Total Reporting Cost for planning coordinators: = 48 hours @ $120/hour = $5,760.

Total Reporting Cost for generator owners: = 2,160 hours @ $120/hour = $259,200.

Total Record Retention Cost for generator owners: 540 hours @ $28/hour = $15,120.

Total Annual Cost (Reporting + Record Retention)[48]: = $5,760 + $259,200 +$15,120 = $280,080.

[47] Reliability Standard PRC-006-NPCC-1 applies to planning coordinators, transmission owners, distribution providers and generator owners. However, the burden associated with the transmission owners and distribution providers is not included within this table because the Commission accounted for it under Commission-approved Reliability Standards PRC-006-1, PRC-007-0 and PRC-009-0.

[48] The Commission bases the hourly reporting cost on the cost of an engineer to implement the requirements of the rule. The record retention cost comes from Commission staff research on record retention requirements.

Title: Mandatory Reliability Standards for the NPCC Region.

Action: Proposed Collection FERC-725L.

OMB Control No.: 1902-0261.

Respondents: Businesses or other for-profit institutions; not-for-profit institutions.

Frequency of Responses: On Occasion.

Necessity of the Information: This Final Rule approves regional Reliability Standard PRC-006-NPCC-1 pertaining to automatic underfrequency load shedding. The regional Reliability Standard helps ensure the development of an effective UFLS program that preserves the security and integrity of the Bulk-Power System during declining system frequency events in coordination with the continent-wide Reliability Standard PRC-006-1 requirements.

Internal Review: The Commission has reviewed the regional Reliability Standard and made a determination that its action is necessary to implement section 215 of the FPA. These requirements, if accepted, should conform to the Commission's expectation for UFLS programs as well as procedures within the NPCC Region.

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

For submitting comments concerning the collection(s) of information and the associated burden estimate(s), please send your comments to the Commission and to the Office of Management and Budget, Office of Information and Regulatory Affairs, Washington,

DC 20503 [Attention: Desk Officer for the Federal Energy Regulatory Commission, phone: 202-395-4638, fax: 202-395-7285]. For security reasons, comments to OMB should be submitted by e-mail to: oira_submission@omb.eop.gov. Comments submitted to OMB should include FERC-725L and Docket Number RM12- 12-000.

IV. Environmental Analysis

44. 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.[49] The Commission has categorically excluded certain actions from this requirement as not having a significant effect on the human environment. Included in the exclusion are rules that are clarifying, corrective, or procedural or that do not substantially change the effect of the regulations being amended.[50] The actions proposed here fall within this categorical exclusion in the Commission's regulations.

V. Regulatory Flexibility Act Certification

45. The Regulatory Flexibility Act of 1980 (RFA)[51] generally requires a description and analysis of final rules that will have significant economic impact on a substantial number of small entities. The RFA mandates consideration of regulatory alternatives that accomplish the stated objectives of a proposed rule and that minimize any significant

[49] *Regulations Implementing National Environmental Policy Act of 1969*, Order No. 486, 52 FR 47897 (Dec. 17, 1987), FERC Stats. & Regs., Regulations Preambles 1986-1990 ¶ 30,783 (1987).

[50] 18 CFR 380.4(a)(2)(ii).

[51] 5 U.S.C. §§ 601-612.

economic impact on a substantial number of small entities. The Small Business Administration's (SBA) Office of Size Standards develops the numerical definition of a small business.[52] The SBA has established a size standard for electric utilities, stating that a firm is small if, including its affiliates, it is primarily engaged in the transmission, generation and/or distribution of electric energy for sale and its total electric output for the preceding twelve months did not exceed four million megawatt hours.[53]

46. Regional Reliability Standard PRC-006-NPCC-1 establishes a coordinated, comprehensive UFLS region-wide consistent program with the NPCC region to achieve and facilitate the broader program characteristics contained in the requirements of the continent-wide PRC-006-1.[54] It will be applicable to planning coordinators, generator owners, transmission owners and distribution providers. Comparison of the NERC Compliance Registry with data submitted to the Energy Information Administration on Form EIA-861 indicates that 5 small entities are registered as generator owners in the United States portion of the NPCC Region.[55] The Commission estimates that the small generator owners to whom the proposed regional Reliability Standard applies will incur compliance and record keeping costs of $10,160 ($2,032 per generator owner).

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[52] 13 CFR 121.101.

[53] 13 CFR 121.201, Sector 22, Utilities & n.1.

[54] NERC Petition at 29-30

[55] The two planning coordinators in the United States portion of the NPCC Region are not considered small entities.

Accordingly, regional Reliability Standard PRC-006-NPCC-1 should not impose a significant operating cost increase or decrease on the affected small entities.

47. Further, NERC explains that the cost for smaller entities to implement regional Reliability Standard PRC-006-NPCC-1 was considered during the development process. NERC states that regional Reliability Standard PRC-006-NPCC-1 provides an opportunity for smaller entities to aggregate their load with other such entities in the same electrical island. This allows each smaller entity's respective planning coordinator to achieve the desired aggregate outcome within that island according to program characteristics.[56]

48. Based on this understanding, the Commission certifies that the regional Reliability Standard will not have a significant economic impact on a substantial number of small entities. Accordingly, no regulatory flexibility analysis is required.

VI. Document Availability

49. 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 FERC's Home Page (http://www.ferc.gov) and in FERC's Public Reference Room during normal business hours (8:30 am to 5:00 pm Eastern time) at 888 First Street, NE, Room 2A, Washington DC 20426.

[56] NERC Petition at 25.

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

51. User assistance is available for eLibrary and the FERC's website during normal business hours from FERC Online Support at 202-502-6652 (toll free at 1-866-208-3676) or email at 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.

VII. Effective Date and Congressional Notification

52. These regulations are effective [insert date 60 days from the date the rule is published in the 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.

By the Commission.

(S E A L)

Nathaniel J. Davis, Sr.,
Deputy Secretary.