

135 FERC ¶ 61,062
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

18 CFR Part 40

[Docket No. RM09-14-000; Order No. 752]

Version One Regional Reliability Standard for Transmission Operations

(Issued April 21, 2011)

AGENCY: Federal Energy Regulatory Commission.

ACTION: Final Rule.

SUMMARY: Under section 215(d)(2) of the Federal Power Act, the Federal Energy Regulatory Commission approves regional Reliability Standard TOP-007-WECC-1 (System Operating Limits) developed by the Western Electric Coordinating Council (WECC) and submitted to the Commission for approval by the North American Electric Reliability Corporation. The primary purpose of this regional Reliability Standard is to ensure that actual flows and associated scheduled flows on major WECC transfer paths do not exceed system operating limits for more than 30 minutes. The Commission also approves the retirement of WECC regional Reliability Standard TOP-STD-007-0, which is replaced by the regional Reliability Standard approved in this Final Rule. The Commission also directs WECC to modify the associated violation risk factors and violation severity levels.

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

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UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Jon Wellinghoff, Chairman;
Marc Spitzer, Philip D. Moeller,
John R. Norris, and Cheryl A. LaFleur.

Version One Regional Reliability Standard for
Transmission Operations

Docket No. RM09-14-000

ORDER NO. 752

FINAL RULE

(Issued April 21, 2011)

1. Under section 215(d)(2) of the Federal Power Act (FPA),¹ the Commission approves regional Reliability Standard TOP-007-WECC-1 (System Operating Limits) developed by the Western Electricity Coordinating Council (WECC) and submitted to the Commission for approval by the North American Electric Reliability Corporation (NERC).² The primary purpose of the approved regional Reliability Standard is to ensure that actual flows and associated scheduled flows on major WECC transfer paths do not exceed system operating limits (SOL) for more than 30 minutes. The Commission also approves the retirement of WECC regional Reliability Standard TOP-STD-007-0, which

¹ 16 U.S.C. 824o (2006).

² *North American Electric Reliability Corp.*, 116 FERC ¶ 61,062, *order on reh'g & compliance*, 117 FERC ¶ 61,126 (2006), *aff'd sub nom. Alcoa, Inc. v. FERC*, 564 F.3d 1342 (D.C. Cir. 2009).

is replaced by the regional Reliability Standard approved in this Final Rule. The Commission also directs WECC to modify the associated violation risk factors (VRF) and violation severity levels (VSL).

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, which are subject to Commission review and approval. Once approved, the Reliability Standards may be enforced by the ERO, subject to Commission oversight, or by the Commission independently.³

3. Reliability Standards that the ERO proposes to the Commission may include Reliability Standards that are proposed to the ERO by a Regional Entity to be effective in that region.⁴ In Order No. 672,⁵ the Commission noted 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

³ See 16 U.S.C. 824o(e).

⁴ A Regional Entity is an entity that has been 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).

⁵ *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶ 31,204 (2006), *order on reh'g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006).

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.⁶

When the ERO reviews a regional Reliability Standard that would be applicable on an interconnection-wide basis and that has been proposed by a Regional Entity organized on an Interconnection-wide basis, the ERO must rebuttably presume that the regional Reliability Standard is just, reasonable, not unduly discriminatory or preferential, and in the public interest.⁷ In turn, the Commission must give “due weight” to the technical expertise of the ERO and of a Regional Entity organized on an interconnection-wide basis.⁸

B. WECC Regional Reliability Standards

4. On April 19, 2007, the Commission accepted delegation agreements between NERC and each of eight Regional Entities.⁹ In the order, the Commission accepted WECC as a Regional Entity organized on an interconnection-wide basis. As a Regional Entity, WECC oversees Bulk-Power System reliability in the Western Interconnection. The WECC region encompasses nearly 1.8 million square miles, including 14 western

⁶ *Id.* P 291.

⁷ 16 U.S.C. 824o(d)(3).

⁸ *Id.* § 824o(d)(2).

⁹ *North American Electric Reliability Corp.*, 119 FERC ¶ 61,060 (2007).

U.S. states, the Canadian provinces of Alberta and British Columbia, and the northern portion of Baja California in Mexico.

5. In June 2007, the Commission approved eight regional Reliability Standards that apply in the Western Interconnection, including TOP-STD-007-0.¹⁰ Currently-effective TOP-STD-007-0 has the stated purpose of ensuring that the Western Interconnection's operating transfer capability (OTC) limits requirements are not exceeded. In approving the current regional Reliability Standard, the Commission found that it was more stringent than the corresponding continent-wide Reliability Standard TOP-007-0.

6. However, the Commission also directed WECC to develop modifications to TOP-STD-007-0 to address certain shortcomings identified by NERC with regard to such matters as format, aligning WECC regional definitions with the NERC Glossary of Terms used in Reliability Standards, and removing compliance and measure references.¹¹

C. WECC Regional Reliability Standard TOP-007-WECC-1

7. On March 25, 2009, NERC submitted a petition to the Commission seeking approval of TOP-007-WECC-1 and requesting the concurrent retirement of currently effective TOP-STD-007-0.¹² NERC requests an effective date for the proposed regional

¹⁰ *North American Electric Reliability Corp.*, 119 FERC ¶ 61,260 (2007) (June 2007 Order).

¹¹ *Id.* P 55, 110.

¹² *North American Reliability Corp.*, March 25, 2009 Petition for Approval of Proposed Western Electric Coordinating Council Regional Reliability Standard TOP-007-WECC-1 (NERC Petition).

Reliability Standard on the first day of the first quarter after applicable regulatory approval.

8. TOP-007-WECC-1 applies to transmission operators for the transmission paths in the most current table titled “Major WECC Transfer Paths in the Bulk Electric System” (WECC Transfer Path Table) located on the WECC website.¹³ The stated purpose of the regional Reliability Standard is to ensure that actual flows and associated scheduled flows on major WECC transfer paths do not exceed a SOL for more than 30 minutes.

9. NERC states that the regional Reliability Standard satisfies the factors, set forth in Order No. 672, that the Commission considers when determining whether a proposed Reliability Standard is just, reasonable, not unduly discriminatory or preferential and in the public interest.¹⁴ According to NERC, TOP-007-WECC-1 is clear and unambiguous regarding what and who is required to comply. NERC states that TOP-007-WECC-1 has clear and objective measures for compliance and achieves a reliability goal (namely, that operating power flows along major paths are within not only interconnection reliability operating limits (IROLs) but also SOLs) effectively and efficiently. NERC also states that the requirements in TOP-007-WECC-1 are intended to be more stringent than and cover areas not covered by the corresponding continent-wide Reliability Standard

¹³ See WECC Transfer Path Table, *available at*: www.wecc.biz/Docs/Documents/Table%20Major%20Paths%204-28-08.doc. The Transfer Path Table includes a footnote that provides, “[f]or an explanation of terms, path numbers, and definition for the paths refer to WECC’s Path Rating Catalog.”

¹⁴ Order No. 672, FERC Stats. & Regs. ¶ 31,204 at P 323-337.

TOP-007-0. NERC also notes that its public posting of the proposed regional Reliability Standard did not elicit any significant technical objection.¹⁵

10. TOP-007-WECC-1 contains two Requirements and one Sub-requirement, summarized as follows:

Requirement R1: requires a transmission operator of a major WECC transfer path to take immediate action to return actual flows that are in excess of the path's system operating limits to within the SOLs in no longer than 30 minutes.

Requirement R2: requires a transmission operator of a major WECC transfer path to ensure that the net scheduled interchange across the path does not exceed the path's SOLs, when the transmission operator implements its real-time schedules for the next hour.

Sub-requirement R2.1: requires a transmission operator of a major WECC transfer path to adjust the net scheduled interchange across the path within 30 minutes so that it does not exceed the path's new SOL value if the SOL decreases within 20 minutes before the start of the hour.

11. In the Petition, NERC asserts that the regional Reliability Standard covers matters not covered by a continent-wide Reliability Standard and is more stringent than the corresponding continent-wide Reliability Standard, TOP-007-0. NERC explains that the continent-wide Reliability Standard TOP-007-0, requires the transmission operator to return its transmission path flows to within interconnection reliability operating limits

¹⁵ NERC Petition at 9.

(IROLs) as soon as possible, but no longer than 30 minutes following a contingency or event, whereas the regional Reliability Standard, TOP-007-WECC-1, requires the transmission operator of a major WECC transfer path to take immediate action to return the actual power flow to within SOLs such that at no time shall the power flow exceed the SOLs for longer than 30 minutes. In sum, there is no continent-wide Reliability Standard requirement to return the transmission system to within SOL within a time certain, only a requirement to report to the Reliability Coordinator when a SOL has been exceeded. NERC notes that TOP-007-WECC-1 specifically applies to the major paths in the Western Interconnection regardless of whether the limit is defined as an IROL or a SOL. Further, the requirement in regional Reliability Standard TOP-007-WECC-1 for maintaining Net Scheduled Interchange within a path's SOL is also not covered in the continent-wide Reliability Standards.

12. NERC also provides, as Exhibit C to its Petition, a Record of Development of Proposed Reliability Standard. Included in the approximately 100-page development record is a "mapping document" prepared by the WECC standards drafting team that compares the related provisions of the currently-effective regional Reliability Standard, TOP-STD-007-0, to the modified regional Reliability Standard, TOP-007-WECC-1 and discusses the proposed change and impact.¹⁶

¹⁶ See NERC Petition, Exhibit C, Comparison of WECC Standard TOP-STD-007-0 to proposed WECC Standard TOP-007-WECC-1.

D. Notice of Proposed Rulemaking

13. On December 16, 2010, the Commission issued a Notice of Proposed Rulemaking (NOPR) proposing to approve TOP-007-WECC-1 as just, reasonable, not unduly discriminatory or preferential, and in the public interest.¹⁷ The Commission proposed to approve TOP-007-WECC-1 because regional Reliability Standard TOP-007-WECC-1 appears to cover topics not covered by the corresponding continent-wide Reliability Standard, TOP-007-0, thus meeting a criterion for approving a regional difference. Specifically, the NOPR stated that TOP-007-WECC-1 Requirement R1 would require the transmission operator of a major WECC transfer path to take immediate action to return the actual power flow to within SOLs such that at no time shall the power flow exceed the SOLs for longer than 30 minutes. While NERC's continent-wide Reliability Standards do have a requirement to report exceeding SOLs to the reliability coordinator, they do not have a requirement to return the transmission system to within SOLs within a time certain. The Commission also stated that Requirement R2 of the regional Reliability Standard would prohibit the transmission operator from having the net scheduled interchange for power flow over an interconnection or transmission path above the path's SOL when the transmission operator implements its real-time schedules for the next hour, while there currently is no such requirement in a NERC Reliability Standard. In addition

¹⁷ *Version One Regional Reliability Standard for Transmission Operations*, Notice of Proposed Rulemaking, 75 Fed. Reg. 81,157 (December 27, 2010), FERC Stats. & Regs. ¶ 32,668 (2010).

to these stringencies, the regional Reliability Standard addresses modifications directed by the Commission in the June 2007 Order.

14. However, the Commission requested further clarification in the NOPR regarding several aspects of the regional Reliability Standard in order to better understand certain concerns not fully explained in the NERC Petition. Specifically, the Commission asked for comments and additional information about the following concerns: (1) whether TOP-007-WECC-1 would allow transmission operators to operate the system at a single contingency away from cascading failure for up to 30 minutes; (2) the change in the time allowed to respond to a stability-limited SOL violation from 20 to 30 minutes; (3) the substitution of the term “system operating limit” for the term “operating transfer capability”; and (4) replacement of the WECC Transfer Path Table attachment to the regional Reliability Standard with an internet link. The Commission also proposed to direct WECC to develop a modification to the regional Reliability Standard to address a Commission concern regarding the WECC Transfer Path Table and to revise the VRF and VSL assignments as described and addressed below.

15. In response to the NOPR, comments were filed by four interested parties.¹⁸ The comments generally support the approval of TOP-007-WECC-1. The comments also offered additional clarification and data that assisted the Commission in the evaluation of

¹⁸ Comments were submitted by PacifiCorp, Bonneville Power Administration (BPA), WECC, and San Diego Gas & Electric Company (SDG&E).

TOP-007-WECC-1. In the discussion below, we address the issues raised by these comments.

II. Discussion

16. The Commission approves TOP-007-WECC-1 as just, reasonable, not unduly discriminatory or preferential, and in the public interest. TOP-007-WECC-1 covers topics not covered by the corresponding continent-wide Reliability Standard, TOP-007-0, thus meeting a criterion for approving a regional difference. Specifically, Requirement R1 requires the transmission operator of a major WECC transfer path to take immediate action to return the actual power flow to within SOLs such that at no time shall the power flow exceed the SOLs for longer than 30 minutes. While there is a requirement in the continent-wide Reliability Standards to report exceeding SOLs to the reliability coordinator, specifically Reliability Standard TOP-007-1, the continent-wide Reliability Standards do not have a requirement to return the transmission system to within SOLs within a time certain and thus the addition of this time limitation makes the regional standard more stringent than the continental standards. Additionally, TOP-007-WECC-1 Requirement R2 prohibits the transmission operator from having the net scheduled interchange for power flow over an interconnection or transmission path above the path's SOL when the transmission operator implements its real-time schedules for the next hour. There is no such requirement in the continent-wide Reliability Standards. In addition to these added stringencies, the regional Reliability Standard addresses modifications directed by the Commission in the June 2007 Order. In addition, the Commission finds that the regional Reliability Standard is just and reasonable in that it is clear and

unambiguous regarding what is required and who is required to comply and that it has clear and objective measures for compliances. Further, the regional Reliability Standard is in the public interest as it will serve to achieve a reliability goal, namely, that operating power flows along major paths are within not only interconnection reliability operating limits but also SOLs. For these reasons, the Commission approves TOP-007-WECC-1.

17. Below, we address the four specific issues regarding TOP-007-WECC-1 that were raised in the NOPR and addressed by commenters: (1) whether TOP-007-WECC-1 would allow transmission operators to operate the system at a single contingency away from cascading failure for up to 30 minutes; (2) the appropriateness of a 30 minute time limit for responding to a stability-limited SOL violation; (3) the substitution of the term “system operating limit” for the term “operating transfer capability”; and (4) removal of the WECC Transfer Path Table from the regional Reliability Standard. Regarding the fourth issue, the WECC Transfer Path Table, the Commission directs WECC to address the concern regarding the need for WECC to develop a means to provide consistency and transparency when making revisions to the list of major transmission paths. Last, the Commission directs WECC to modify the associated VRFs and VSLs.

A. Operating One Contingency Away from a Cascading Outage

18. In the NOPR, the Commission expressed concern that a plain reading of the proposed regional Reliability Standard’s Requirement R1 does not explicitly require a transmission operator to operate the system in a manner that is two contingencies from a cascading outage. Specifically, Requirement R1 appears to allow the power flow, during steady state conditions, to exceed a stability-limited SOL for up to 30 minutes, which

could mean that the system would be one contingency away from a cascading failure for that period of time. The Commission's concern arose from the fact that this requirement did not carry over from TOP-STD-007-0, which is being replaced by TOP-007-WECC-1.

19. As previously noted above, in the June 2007 Order, the Commission approved TOP-STD-007-0 as a WECC regional Reliability Standard. In the June 2007 Order, the Commission noted that the wording of TOP-STD-007-0 Requirement WR1.b, which provides that “[t]he interconnected power system shall remain stable upon loss of any one single element without system cascading that could result in the successive loss of additional elements,” suggests that WECC expects that stability-limited SOLs will be addressed in such a manner that the system is two contingencies away from a cascading failure. The Commission noted, however, that Measure WM1 of TOP-STD-007-0 may not be consistent with Requirement WR1.b, and that the Measure could allow the power system to be operated one contingency away from a cascading outage. The Commission directed NERC and WECC to submit a filing within 30 days of the date of the order explaining whether Requirement WR1.b is consistent with an interpretation to operate two contingencies away from cascading failure and to clarify any inconsistency between Requirement WR1.b and corresponding Measure WM1.¹⁹ WECC clarified in its

¹⁹ June 2007 Order, 119 FERC ¶ 61,260 at P 108-109.

compliance filing that “[t]he WECC transmission grid must be operated such that no cascading occurs following a single contingency.”²⁰

20. In the NOPR, the Commission noted that TOP-007-WECC-1 does not explicitly incorporate this clarification in its Requirements. The Commission further indicated that TOP-007-WECC-1 could be interpreted as affirmatively permitting the power system to be operated one contingency away from a cascading outage, the same concern the Commission raised with respect to TOP-STD-007-0. The Commission further noted that NERC’s continent-wide Reliability Standard TOP-004-2, Requirement R2, which prohibits operating a single contingency away from cascading outage, appears to conflict with TOP-007-WECC-1. The Commission sought comment on this issue.

Comments

21. WECC agrees with the Commission that TOP-007-WECC-1 does not explicitly require a transmission operator to operate the system in a manner that is at least two contingencies away from cascading outages. However, WECC states that it is not necessary to include such a requirement in TOP-007-WECC-1 because WECC upholds and enforces that requirement through other means, *e.g.* in its derivation of SOLs, which WECC states has not changed. Specifically, WECC reiterates its past statements that “[t]he WECC transmission grid must be operated such that no cascading occurs following

²⁰ *North American Electric Reliability Corp.*, Compliance Filing, Docket No. RR07-11-000, at 7 (filed July 9, 2007).

a single contingency.”²¹ Additionally, WECC states that all transmission operators in the Western Interconnection must comply with the continent-wide NERC Reliability Standard TOP-004-2 Requirement R2, which states that the system must be operated such that the most severe single contingency that could occur on a system will not cause separation, instability, or cascading outages.

22. PacifiCorp states that the decision to not carry over to TOP-007-WECC-1 Requirement WR1 from the TOP-STD-007-0 is appropriate because the Requirement WR1 is redundant with other mandatory and enforceable Reliability Standards, including TOP-004-2 Requirement R2. TOP-004-2 Requirement R4 states that if a transmission operator enters an unknown operating state (i.e., any state for which valid operating limits have not been determined), it will be considered to be in an emergency and the transmission operator shall restore operations to respect proven reliable power system limits within 30 minutes. PacifiCorp asserts that under this framework, a transmission operator operates its system, under steady state conditions, so that cascading outages will not occur as a result of the most severe single contingency. However, if a transmission operator enters an unknown operating state (where it is possible that the transmission operator is operating a single contingency away from a cascading outage) it has 30 minutes to restore operations to within proven system limits. PacifiCorp states that TOP-007-WECC-1 mirrors the operating framework required in TOP-004-2 except that

²¹ WECC Comments at 4 (citing North American Electric Reliability Corp., Compliance Filing, Docket No. RR07-11-001, at 7-8 (filed July 9, 2007)).

the 30-minute recovery period is triggered by exceeding a path limit rather than entering an unknown operating state.

23. Similarly, BPA states that it is unnecessary to carry over from TOP-STD-007-0, Requirement WR1, which requires transmission operators to operate the system in a manner that is two contingencies from a cascading outage, because that requirement is covered by other Reliability Standards, such as TOP-004-2. BPA also notes that the continent-wide Reliability Standard, TOP-007-0, does not contain a requirement like TOP-STD-007-0, Requirement WR1.b.

Commission Determination

24. The Commission accepts WECC's representations that although a plain reading of the regional Reliability Standard's Requirement R1 does not explicitly require a transmission operator to operate the system in a manner that is at least two contingencies from a cascading outage, WECC nonetheless upholds and enforces the requirement to operate at least two contingencies away from a cascading outage by other means. The Commission agrees with WECC that transmission operators in the Western Interconnection must comply with continent-wide Reliability Standard TOP-004-2, which requires a transmission operator to operate so that instability, uncontrolled separation, or cascading outages will not occur as a result of the most severe single contingency. Therefore, the Commission agrees with commenters that adding Requirement WR1.b of TOP-STD-007-0 to TOP-007-WECC-1 would be largely duplicative of TOP-004-2 Requirement R2. The Commission reiterates that the lack of such a requirement in TOP-007-WECC-1 does not absolve a transmission operator from

the requirement to operate the system in a manner that it is at least two contingencies away from cascading at all times during steady state operating conditions. Based on the above discussion, the Commission finds that it is unnecessary to modify TOP-007-WECC-1 with respect to this issue.

B. Change in Response Time from 20 to 30 Minutes

25. In the NOPR, the Commission noted that the modified regional Reliability Standard TOP-007-WECC-1 sets a 30-minute limit for returning actual flows on stability-limited paths to within the SOL ratings. The currently-effective regional Reliability Standard, TOP-STD-007-0, which is being replaced by TOP-007-WECC-1, has a 20-minute limit. Specifically, TOP-STD-007-0, WM1, requires transmission operators to return actual flows to within the path's OTC ratings in no more than 20 minutes on stability-limited paths, and within 30 minutes for thermally-limited paths.²² Conversely TOP-007-WECC-1, which will replace TOP-STD-007-0, sets a uniform 30-minute time limit for both stability-limited and thermally-limited paths.

26. In the NOPR, the Commission noted that it would evaluate the proposed 10-minute decrease in the time limit for returning actual flows on stability-limited paths to within SOL ratings on its merit so long as adequate reliability is maintained.²³

²² Currently effective regional Reliability Standard TOP-STD-007-0 uses the term "operating transfer capability" with respect to this requirement, whereas, in TOP-007-WECC-1, the term "system operating limit" is used in lieu of operating transfer capability.

²³ *Version One Regional Reliability Standard for Resource and Demand Balancing*, 133 FERC ¶ 61,063, at P 30 (2010).

However, the Commission found that the technical information provided in NERC's Petition and in the standard development record for TOP-007-WECC-1 is insufficient to ensure that with the 20 to 30 minute time limit change, adequate reliability is maintained. Thus, the Commission requested that WECC, NERC and other interested entities provide an explanation and supporting technical data demonstrating that changing from a 20 to 30 minute response time is "insignificant in terms of the probability of the next contingency occurring."²⁴

Comments

27. WECC responds that experience has shown that 20 minutes is not enough time to make an informed decision and implement that decision to return to within the applicable SOL rating. WECC explains that the original 20-minute limit for returning to within SOLs was developed when the NERC Disturbance Control Standard (DCS) recovery period was 10 minutes rather than the current 15 minutes. When NERC adopted a 15-minute DCS recovery period, no adjustment was made to the 20-minute limit for returning to within SOLs. WECC also states that because it takes time to assess the conditions that caused the SOL violation and identify corrective actions, the 20-minute time limit may result in potentially excessive actions to reduce the flows back to within the SOL, which may place the system at a greater risk than is necessary to mitigate the SOL violation. WECC notes that experts in the Western Interconnection agree that this risk exceeds any perceived risk of extending the time limit from 20 to 30 minutes.

²⁴ NERC Petition at 28.

WECC also states that because major paths in the Western Interconnection may change from being stability-limited to thermally-limited from time-to-time, a uniform 30-minute window for returning a path to within the SOL eliminates potential confusion stemming from the dual time limits used in TOP-STD-007-1.²⁵

28. WECC also argues that the corresponding continent-wide Reliability Standard, TOP-007-0, sets a 30-minute time limit for returning the system to within an IROL,²⁶ and notes that an IROL violation is, by definition, more severe than a SOL violation.

Therefore, WECC states that the 30-minute time limit provided in TOP-007-WECC-1 to correct a SOL violation is reasonable.

29. BPA states that increasing the response time from 20 minutes to 30 minutes does not significantly increase the exposure to a next contingency. Rather, a 20 minute response time reduces the reliability of operation and exposes the system to greater possibility of human-error. Specifically, BPA states that a 30-minute response time is necessary to allow a transmission operator to take the steps necessary to return a stability-limited path to within SOL. BPA asserts that there is no technical basis for setting a

²⁵ WECC suggests that when considering risk to the bulk electric system, there is no substantial difference between thermally-limited and stability-limited paths. WECC Comments at 9.

²⁶ IROL is defined in the NERC Glossary of Terms as: “A System Operating Limit that, if violated, could lead to instability, uncontrolled separation, or Cascading Outages that adversely impact the reliability of the Bulk Electric System.” See NERC Glossary of Terms at 23, *available at* http://www.nerc.com/files/Glossary_of_Terms_2011Mar15.pdf.

shorter timeframe for returning a stability-limited path to within SOL than a thermally-limited path. BPA states that the shorter (20 minute) time limit for stability limited paths was originally adopted by WECC based on an assumption that a shorter response time reduces the probability of incurring the next contingency and therefore the risk of cascading outage. However, because the complexity of system operations has increased, 20 minutes is no longer enough time for adequate coordination. Like WECC, BPA also notes that some paths will change from stability-limited ratings to thermally-limited ratings for specific outages, and the variation in time limits has caused confusion even at the reliability coordinator level.

30. BPA also submitted an Outage Probability Analysis that shows that for a 10 minute time period: (i) for lines operated at 230kV and above, the increased risk of an additional contingency occurring is 0.0008 percent; and (ii) for lines operated at 230 kV and below, the increased risk of an additional contingency occurring is 0.0003 percent. BPA concludes from this data that increasing the response time from 20 minutes to 30 minutes does not significantly increase the risk of exposure to an additional contingency during the response period.

Commission Determination

31. The Commission finds that WECC and BPA have adequately supported the change from a dual 20/30 minute time limit to a uniform 30 minute time limit for correcting SOL violations. The change eliminates possible confusion among operators. Further, the requirements of the regional Reliability Standard are consistent with the 30 minute timeframe for the transmission operator to implement corrective actions to bring

the system back within IROL limits provided for in the corresponding continent-wide Reliability Standard, TOP-007-0. We also note that the corresponding continent-wide Reliability Standard, TOP-007-0, also requires that actions to mitigate the overload begin as soon as possible. Finally, no comments were received opposing the increase in response time. Accordingly, the Commission finds the revised regional Reliability Standard will not threaten reliability and can be approved as reasonable.

C. Terminology

32. In the NOPR, the Commission questioned the appropriateness of replacing the term “operating transfer capability” limit as used in the currently-effective Reliability Standard TOP-STD-007-0, with the term “SOL,” as used in TOP-007-WECC-1.²⁷ The Commission stated that the term “SOL” is used within the Western Interconnection to refer to the facility or element that presents the most limiting of the prescribed operating criteria for the rated system path.²⁸ Whereas, the OTC limit corresponds to the “maximum amount of actual power transferred over direct or parallel transmission elements from one transmission operator to another transmission operator.”²⁹ The

²⁷ TOP-STD-007-0 has the stated purpose of ensuring that the OTC limits requirements of the Western Interconnection are not exceeded. The stated purpose of TOP-007-WECC-1 is to ensure that actual flows and associated scheduled flows on Major WECC Transfer Paths do not exceed SOLs for more than 30 minutes.

²⁸ The most limiting facility or element may be either thermally or stability limited.

²⁹ See currently-effective regional Reliability Standard TOP-STD-007-0, Requirement WR1.

Commission expressed concern that the terms SOL and OTC appear to measure different things. Specifically, the Commission noted that the facilities that make up the SOL may not be part of those facilities that make up the rated system path, i.e., direct or parallel transmission elements comprising: (1) an interconnection from one transmission operator area to another transmission operator area; or (2) a transfer path within a transmission operator area. When the term “OTC” is replaced by “SOL,” this requirement could result in a transmission operator being responsible for monitoring the flows on transmission system operating limit facilities that may not be on its “rated system path.” This creates the possibility that an entity could be responsible for operating facilities that are not part of the rated path system shown in the WECC Transfer Path Table and Catalog. The Commission sought comment regarding: (i) the manner in which a transmission operator would address SOL facilities that are not part of the rated system path; (ii) the possibility that transmission operators may, under TOP-007-WECC-1, be responsible for facilities that they do not own and which are not on the rated system path but comprise the SOL; and (iii) whether the use of the term SOL rather than the term OTC is inconsistent with the WECC Path Rating Catalog and would cause confusion. Thus, we requested commenters to clarify the proper understanding of the two terms.

Comments

33. WECC states that in light of the Commission’s concerns regarding the proliferation of regional terms, WECC retired the regional term, “OTC,” and substituted the continent-wide NERC term, “SOL.” WECC comments that there are slight differences in the language of the definitions of OTC limits and SOLs but the intent and

the effect on the limits developed is the same. BPA and WECC state that both terms (SOL and OTC) are calculated using the same methodologies and result in the same values. Thus by using the term SOL, WECC states that it has not changed how the requirements of TOP-007-WECC-1 will be enforced. Specifically, WECC notes that as is the case under currently-effective TOP-STD-007-0, the new Reliability Standard, TOP-007-WECC-1 identifies transmission operators as the applicable entity for returning the system to within an SOL. BPA and WECC state that WECC simply has interchanged the terms OTC and SOL in response to the Commission's concerns related to the proliferation of regional terms and has not changed the definition or the process by which the limits are developed.

34. With respect to the Commission's concern that replacing "OTC," with "SOL" could result in a transmission operator being responsible for monitoring the flows on transmission system operating limit facilities that may not be on its "rated system path" as shown in the WECC Transfer Path Table and the referenced Path Rating Catalog, WECC states it is not changing how that value is derived or how the requirements of the proposed regional Reliability Standard will be enforced. Further, WECC states that the responsibilities of transmission operators will not change and that the Commission should not be concerned with this change.

Commission Determination

35. The Commission finds that WECC has adequately explained its intended use of "SOL" in TOP-007-WECC-1 as a replacement for the term "OTC" as used in TOP-STD-007-0. We accept WECC's explanation that all it has done is to replace

references to “OTC” with “SOL” in order to address the Commission’s concern regarding the proliferation of regional terms. In response to our concern that use of the term “SOL” could result in a transmission operator being responsible for monitoring the flows on transmission system operating limit facilities that may not be on its “rated system path,” we accept WECC’s explanation that the applicability of the regional Reliability Standard is clear and remains unchanged.

D. Applicability

36. Currently-effective Reliability Standard TOP-STD-007-0 is applicable to transmission owners or operators that maintain transmission paths listed in the WECC Transfer Path Table, which is included as Attachment A to the Reliability Standard. The attachment identifies 40 major transmission paths in the Western Interconnection. TOP-007-WECC-1 does not include the WECC Transfer Path Table as an attachment; instead, a link to the internet website where WECC posts the Transfer Path Table is provided.

37. In the NOPR, the Commission expressed concern that by referencing the WECC Transfer Path Table hosted on the WECC website, the applicability of TOP-007-WECC-1 could change without Commission and industry notice and opportunity to respond. The Commission sought comment on this issue as well as how NERC and WECC will ensure that any resulting changes to the applicability of the regional Reliability Standard will not reduce its effectiveness. The Commission further requested comment regarding the location, scope, and application of the criterion that governs when paths are added or removed from the WECC Transfer Path Table.

38. Additionally, the Commission proposed to direct WECC to develop a modification to the Reliability Standard to address our concern. The Commission suggested three possible modifications: (1) add to TOP-007-WECC-1 the criterion for identifying and modifying major transmission paths listed in the WECC Transfer Path Table and make an informational filing with the Commission and NERC each time it makes a modification to the table or referenced catalog; (2) file the criterion with the Commission and post revised transfer path tables and referenced catalogs on its website before they become effective with concurrent notification to NERC and the Commission; or (3) include the WECC Transfer Path Table as an attachment to the modified Reliability Standard.

Comments

39. WECC recognizes the Commission's concerns regarding the applicability of TOP-007-WECC-1 with respect to the location of the WECC transfer path table and supports modification of TOP-007-WECC-1 as outlined in the Commission's second suggestion in the NOPR. Specifically, WECC proposes to file its criteria for identifying and modifying major transmission paths listed in the WECC Transfer Path Table. WECC will publicly post any revisions to the WECC Transfer Path Table on its website and concurrently notify the Commission, NERC, and the industry of the change.

40. PacifiCorp notes that WECC does not have an established process for notifying affected functional entities of any additions to or deletions from the WECC Transfer Path Table. PacifiCorp is concerned that WECC could change the WECC Transfer Path Table and, therefore, the applicability of TOP-007-WECC-1 without proper notification to affected transmission operators. Thus, PacifiCorp urges WECC to: (i) file its criteria for

identifying and modifying major transmission paths listed in the WECC Transfer Path Table with the Commission; and (ii) post revised tables and referenced catalogs on its website before they become effective, with concurrent notification to NERC and the Commission.

41. BPA also supports the Commission's proposal to require WECC to develop criteria making it clear how major transmission paths are included or excluded from the WECC Transfer Path Table.

42. No commenter opposed the Commission's proposed directive on this issue.

Commission Determination

43. Consistent with our NOPR proposal, WECC's and other parties' comments, the Commission directs WECC to file, within 60 days from the issuance of this Final Rule, WECC's criteria for identifying and modifying major transmission paths listed in the WECC Transfer Path Table. Moreover, the Commission accepts WECC's commitment to publicly post any revisions to the WECC Transfer Path Table on the WECC website with concurrent notification to the Commission, NERC, and industry. We believe that this process balances the interests of WECC in developing timely revisions to the WECC Transfer Path Table with the need for adequate transparency for transmission owners that are affected by changes to the WECC Transfer Path Table.

E. Violation Risk Factors and Violation Severity Levels

44. In the NOPR, the Commission noted that TOP-007-WECC-1 and the corresponding continent-wide Reliability Standard TOP-007-0, share the same general reliability objective: to require transmission operators to take corrective action to reduce

the amount of power flowing on a transmission path when it exceeds system operating limits or interconnection reliability operating limit to below the system operating limit or interconnection reliability operating limit and thereby minimize the amount of time the Bulk-Power System is operating one contingency away from a cascading outage. The Commission sought comment from NERC and WECC regarding why the TOP-007-WECC-1 violation risk factor (VRF) assignments are not aligned with the continent-wide Reliability Standard. The Commission proposed to direct WECC to modify the assigned VRFs for TOP-007-WECC-1, Requirements R1 and R2 from “medium” and “low,” respectively, to “high” and requested comment on this proposal. The Commission also noted that WECC did not assign a VRF to the Sub-requirement.

45. In the NOPR, the Commission noted that violation severity level (VSL) assignments do not conform to the NERC format, which both WECC and NERC acknowledge in the NERC Petition. The NERC Petition notes that WECC will address the formatting issue during the next revision of the regional Reliability Standard. In the NOPR, the Commission proposed to direct WECC to modify the VSL assignments associated with each Requirement and Sub-requirement of TOP-007-WECC-1, and submit them in the approved table format.

Comments

46. With respect to the VRF assignments, WECC states that the two Reliability Standards, TOP-007-0 and TOP-007-WECC-1, do not share the same reliability objective. WECC asserts that continent-wide Reliability Standard TOP-007-0 addresses both IROLs and SOLs, but only requires transmission operator action, other than

reporting, for the violation of an IROL. WECC states that, on the other hand, the regional Reliability Standard requires transmission operators to take actions for violations of SOLs, which pose a lower risk to the Bulk-Power System than IROL violations. Therefore, WECC believes that a “medium” VRF for Requirement R1 is appropriate. WECC does agree, however, that Requirement R2 is incorrectly labeled as a “low” VRF and should be assigned a “medium” VRF. No comments were filed regarding the Commission’s proposed directive regarding the VSL assignments.

Commission Determination

47. A VRF is assigned to each Requirement of a Reliability Standard that relates to the expected or potential impact of a violation of the requirement on the reliability of the Bulk-Power System. VRFs are either: lower, medium or high.³⁰ The Commission has established guidelines for evaluating the validity of each VRF assignment.³¹

48. NERC will also define up to four VSLs (low, moderate, high, and severe) as measurements for the degree to which the requirement was violated in a specific circumstance. For a specific violation of a particular Requirement, NERC or the Regional Entity will establish the initial value range for the base penalty amount by

³⁰ The specific definitions of high, medium and lower are provided in *North American Electric Reliability Corp.*, 119 FERC ¶ 61,145, at P 9 (VRF Order), *order on reh’g*, 120 FERC ¶ 61,145 (2007) (VRF Rehearing Order).

³¹ The guidelines are: (1) consistency with the conclusions of the Blackout Report; (2) consistency within a Reliability Standard; (3) consistency among Reliability Standards; (4) consistency with NERC’s definition of the VRF level; and (5) treatment of requirements that commingle more than one obligation. *See* VRF Rehearing Order, 120 FERC ¶ 61,145 at P 8-13.

finding the intersection of the applicable VRF and VSL in the base penalty amount table in Appendix A of its sanction guidelines. On June 19, 2008, the Commission issued an order establishing four guidelines for the development of VSLs.³²

49. The Commission has reviewed the VRF assignments for TOP-007-WECC-1 and it is our view that the VRFs assigned to Requirements R1 and R2 are not consistent with the above-described Commission guidance. The Commission does not agree with WECC that Requirement R1 should be assigned a “medium” VRF instead of “high.” The VRF Order guidance emphasizes consistency with NERC’s definition of the VRF level. NERC defines a “high” risk requirement as follows: “A requirement that, if violated, *could directly cause or contribute to* bulk electric system instability, *separation*, or a cascading sequence of failures, or could place the bulk electric system at an unacceptable risk of instability, separation, or cascading failures. . . .”³³

50. Requirement R1 applies to both stability and thermally constrained SOLs. Stability constrained SOLs by their nature can potentially have widespread system impacts such as instability, uncontrolled separation and voltage collapse. While WECC

³² *North American Electric Reliability Corp.*, 123 FERC ¶ 61,284, at P 20-35 (VSL Order), *order on reh’g & compliance*, 125 FERC ¶ 61,212 (2008). The VSL guidelines are: (1) VSL assignments should not have the unintended consequence of lowering the current level of compliance; (2) the VSL should ensure uniformity and consistency in the determination of penalties; (3) a VSL assignment should be consistent with the corresponding requirement; and (4) a VSL assignment should be based on a single violation, not on a cumulative number of violations.

³³ NERC Violation Risk Factor, *available at* http://www.nerc.com/files/Violation_Risk_Factors.pdf (emphasis added).

uses remedial action schemes (RAS) to control these dynamic challenges, the RAS can, in some cases, lead to controlled separation and controlled variations of stability impacts. Given the exposure to potential controlled separations, the Commission finds that the appropriate VRF for Requirement R1 is “high.” Accordingly, the Commission directs WECC to modify the VRF assignment to “high” and submit the modification in a compliance filing to be submitted within 120 days from the date this Final Rule issues.

51. With respect to Requirement R2, as WECC acknowledges in its comments, Requirement R2 should be assigned a “medium” VRF. The Commission finds that Requirement R2 is not administrative in nature as it prohibits a transmission operator from allowing the net scheduled interchange across a path from exceeding the path’s SOLs. Violations of Requirement R2 could directly affect the electrical state of the Bulk-Power System. Thus, the nature of Requirement R2 is consistent with NERC’s definition of a “medium” VRF assignment level rather than the “lower” level.

Accordingly, we direct WECC to modify the VRF assignment for Requirement R2 to “medium” and submit the modification in a compliance filing to be submitted within 120 days from the date this Final Rule issues.

52. We note that WECC did not assign a VRF to Sub-requirement R2.1. Because a determination has not yet been made regarding NERC’s pending petition in Docket No. RR08-4-005, in which NERC proposes a “roll-up” approach for VRF and VSL assignments by which VRFs and VSLs would only be assigned to the main requirements and not to the sub-requirements, the Commission will defer discussion on the

appropriateness of this exclusion following Commission action on NERC's proposed "roll-up" approach.

53. The Commission accepts WECC's commitment to revise the VSL assignments to conform to the NERC table format. Accordingly, we direct WECC to modify the VSL assignments for TOP-007-WECC-1, to reflect NERC's approved table format and include the revision as part of its compliance filing to be submitted within 120 days from the date this Final Rule issues.

III. Information Collection Statement

54. The following collections of information contained in this proposed rule have been submitted to the Office of Management and Budget (OMB) for review under section 3507(d) of the Paperwork Reduction Act of 1995.³⁴ OMB's regulations require OMB to approve certain information collection requirements imposed by agency rule.³⁵ 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 an agency 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.

55. The Commission solicited comments on the need for and the purpose of the information contained in regional Reliability Standard TOP-007-WECC-1 and the corresponding burden to implement it. The Commission received comments on specific

³⁴ 44 U.S.C. 3507(d).

³⁵ 5 C.F.R. 1320.11.

Requirements in the regional Reliability Standard, which we address in this Final Rule. However, we did not receive any comments on our reporting burden estimates. The Commission has directed certain modifications to the Requirements in the regional Reliability Standard being approved. However, the modifications do not affect the burden estimate provided in the NOPR.

56. As provided in the NOPR, TOP-007-WECC-1, which would replace TOP-STD-007-0, does not modify or otherwise affect the burden related to the collection of information already in place. Thus, the replacement of the currently-effective regional Reliability Standard with TOP-007-WECC-1, including the limited modifications directed in this Final Rule, will neither increase the reporting burden nor impose any additional information collection requirements.

Title: Mandatory Reliability Standards for the Western Electric Coordinating Council.

Action: Proposed Collection FERC-725E.

OMB Control No.: 1902-0246.

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

Frequency of Responses: On Occasion.

Necessity of the Information: This Final Rule approves a regional Reliability Standard pertaining to System Operating Limits. The regional Reliability Standard is one of the standards that helps ensure the reliable operation of the electrical system in the Western Interconnection.

Internal Review: The Commission has reviewed the regional Reliability Standard TOP-007-WECC-1 and determined that the standard's Requirements are necessary to

meet the statutory provisions of the Energy Policy Act of 2005. The Commission has assured itself, by means of internal review, that there is specific, objective support for the burden estimates associated with the information requirements.

57. Interested persons may obtain information on the reporting requirements by contacting: 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]. Comments on the requirements of this Final Rule may also be sent to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503 [Attention: Desk Officer for the Federal Energy Regulatory Commission]. For security reasons, comments should be sent by e-mail to OMB at oir_submission@omb.eop.gov. Please reference FERC-725E and the docket number of this final rule in your submission.

IV. Environmental Analysis

58. 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.³⁶ 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

³⁶ Order No. 486, *Regulations Implementing the National Environmental Policy Act of 1969*, FERC Stats. & Regs., Regulations Preambles 1986-1990 ¶ 30,783 (1987).

not substantially change the effect of the regulations being amended.³⁷ The actions taken in this Final Rule fall within this categorical exclusion in the Commission's regulations. Accordingly, neither an environmental impact statement nor environmental assessment is required.

V. **Regulatory Flexibility Act**

59. The Regulatory Flexibility Act of 1980 (RFA)³⁸ 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 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.³⁹ 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.⁴⁰ The RFA is not implicated by this proposed rule because the modification discussed herein will not have a significant economic impact on a substantial number of small entities. Moreover,

³⁷ 18 C.F.R. 380.4(a)(2)(ii).

³⁸ 5 U.S.C. 601-612.

³⁹ 13 C.F.R. 121.101

⁴⁰ 13 C.F.R. 121.201, Sector 22, Utilities & n.1.

the regional Reliability Standard reflects a continuation of existing requirements for these reliability entities. Accordingly, no regulatory flexibility analysis is required.

VI. Document Availability

60. 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 a.m. to 5:00 p.m. Eastern time) at 888 First Street, N.E., Room 2A, Washington DC 20426.

61. 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.

62. 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

63. These regulations are 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.

List of subjects in 18 C.F.R. Part 40

Electric power, Electric utilities, Reporting and recordkeeping requirements.

By the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.