

133 FERC ¶ 61,227  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

18 CFR Part 40

Docket No. RM09-14-000

Version One Regional Reliability Standard for Transmission Operations

(December 16, 2010)

AGENCY: Federal Energy Regulatory Commission.

ACTION: Notice of Proposed Rulemaking.

SUMMARY: Under section 215 of the Federal Power Act (FPA), the Federal Energy Regulatory Commission (Commission) proposes to approve 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 revised regional Reliability Standard would replace the approved WECC TOP-STD-007-0. While we propose to approve the regional Reliability Standard, as discussed in this Notice of Proposed Rulemaking, TOP-007-WECC-1 raises some concerns about which the Commission requests additional information. The Commission also proposes to direct WECC to develop certain limited modifications to the regional Reliability Standard and the associated violation risk factor and violation severity levels as discussed herein.

DATES: Comments are due [Insert date that is 60 days after publication in the **FEDERAL REGISTER**].

ADDRESSES: You may submit comments, identified by docket number and in accordance with the requirements posted on the Commission's website

<http://www.ferc.gov>. Comments may be submitted by any of the following methods:

- Agency Web Site: Documents created electronically using word processing software should be filed in native applications or print-to-PDF format and not in a scanned format, at <http://www.ferc.gov/docs-filing/efiling.asp>.
- Mail/Hand Delivery: Commenters unable to file comments electronically must mail or hand deliver an original copy of their comments to: Federal Energy Regulatory Commission, Secretary of the Commission, 888 First Street, NE, Washington, DC 20426. These requirements can be found on the Commission's website, see, e.g., the "Quick Reference Guide for Paper Submissions," available at <http://www.ferc.gov/docs-filing/efiling.asp> or via phone from FERC Online Support at 202-502-6652 or toll-free at 1-866-208-3676.

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SUPPLEMENTARY INFORMATION:

133 FERC ¶ 61,227  
UNITED STATES OF AMERICA  
FEDERAL ENERGY REGULATORY COMMISSION

Version One Regional Reliability Standard for  
Transmission Operations

Docket No. RM09-14-000

NOTICE OF PROPOSED RULEMAKING

(December 16, 2010)

1. Under section 215 of the Federal Power Act (FPA),<sup>1</sup> the Commission proposes to approve 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), which the Commission has certified as the Electric Reliability Organization (ERO) responsible for developing and enforcing mandatory Reliability Standards.<sup>2</sup> The revised regional Reliability Standard, designated by WECC as TOP-007-WECC-1,<sup>3</sup> would replace WECC TOP-STD-007-0. While we propose to approve the regional Reliability Standard, we are concerned about certain provisions of TOP-007-WECC-1, about which we request additional information in public comment. The Commission also proposes to direct

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

<sup>2</sup> *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).

<sup>3</sup> NERC designates the version number of a Reliability Standard as the last digit of the Reliability Standard number. Therefore, original Reliability Standards end with “-0” and modified version one Reliability Standards end with “-1.”

WECC to develop certain limited modifications to the regional Reliability Standard and the associated violation risk factor and violation severity levels as discussed herein.

**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.<sup>4</sup>

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.<sup>5</sup> In Order No. 672, 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 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.

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

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<sup>4</sup> See 16 U.S.C. 824o(e).

<sup>5</sup> 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).

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.<sup>6</sup> 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.<sup>7</sup>

**B. WECC Regional Reliability Standards**

4. On April 19, 2007, the Commission accepted delegation agreements between NERC and each of eight Regional Entities.<sup>8</sup> 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 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 WECC TOP-STD-007-0.<sup>9</sup> Currently effective WECC TOP-STD-007-0 has the stated purpose of ensuring that the Western Interconnection’s operating transfer capability limits requirements are not exceeded. In

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<sup>6</sup> 16 U.S.C. 824o(d)(3).

<sup>7</sup> 16 U.S.C. 824o(d)(2).

<sup>8</sup> *North American Electric Reliability Corp.*, 119 FERC ¶ 61,060 (2007).

<sup>9</sup> *North American Electric Reliability Corp.*, 119 FERC ¶ 61,260 (2007) (June 2007 Order).

approving the current regional Reliability Standard, the Commission found that it was more stringent than the corresponding NERC TOP-007-0. The Commission noted that, “[i]n particular, the imposition of a 20-minute limit [maximum for exceeding a stability-limited operating transfer capability] is more restrictive than NERC’s TOP-007-0 and is a prudent means of limiting the risk of blackouts, consistent with sound engineering principles.”<sup>10</sup>

6. In the June 2007 Order, the Commission also expressed concern that WECC-TOP-007-0 may be inconsistent with NERC IRO-005-1 depending upon the interpretation of IRO-005-1.<sup>11</sup> Previously, in Order No. 693, the Commission discussed the possibility that NERC IRO-005-1 could be interpreted as allowing a system operator to respect interconnection reliability operating limits in two different ways.<sup>12</sup> In the June 2007 Order, the Commission noted that the wording of WECC-TOP-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-

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<sup>10</sup> *Id.* P 104.

<sup>11</sup> *Id.* P 105-110.

<sup>12</sup> *Mandatory Reliability Standards for the Bulk-Power System*, Order No. 693, FERC Stats. & Regs. ¶ 31,242, at P 946 (2007), *order on reh’g*, Order No. 693-A, 120 FERC ¶ 61,053 (2007). The Commission explained, “IRO-005-1 could be interpreted as allowing a system operator to respect IROs in two possible ways: (1) allowing IRO to be exceeded during normal operations, i.e., prior to a contingency, provided that corrective actions are taken within 30 minutes or (2) exceeding IRO only after a contingency and subsequently returning the system to a secure condition as soon as possible, but no longer than 30 minutes. Thus, the system can be one contingency away from potential cascading failure if operated under the first interpretation and two contingencies away from cascading failure under the second interpretation.” *Id.* at n.303.

limited system operating limits 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 WECC-TOP-007-0 may not be consistent with Requirement WR1.b, since it states that “[a]ctual power flow on all transmission paths shall at no time exceed the [operating transfer capability] for more than 20 minutes for paths that are stability limited, or more than 30 minutes for paths that are thermally limited.”<sup>13</sup> The Commission further stated that the Measure appears more consistent with the less conservative interpretation of the NERC IRO-005-1 and could allow the power system to be operated one contingency away from a cascading outage. Thus, the Commission directed NERC and WECC to: (1) submit a filing within 30 days of the date of the order explaining whether Requirement WR1.b is consistent with the second interpretation of NERC IRO-005-1 (two contingencies away from cascading failure); (2) clarify any inconsistency between Requirement WR1.b and corresponding Measure WM1; and (3) ensure that the requirements currently set forth in Measures WM1 are set forth in the Standard’s Requirements and that corresponding Measures simply quantify the frequency, duration and magnitude of the violations as determined by the Requirements.<sup>14</sup>

7. The Commission also directed WECC to develop modifications to WECC-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

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<sup>13</sup> *North American Electric Reliability Corp.*, 119 FERC ¶ 61,260 at P 107.

<sup>14</sup> *Id.* P 108-109.

Terms Used in Reliability Standards, and removing compliance and measure references.<sup>15</sup>

8. In response, NERC submitted a compliance filing (Compliance Filing) on July 9, 2007.<sup>16</sup> NERC explained that “a WECC reliability coordinator must take immediate action, initially through the transmission operators, and then issues directives, to return the system to a secure condition as soon as possible after identification of a transfer path exceeding its SOL/IROL” in accordance with WECC procedure RC-003-1, entitled WECC Reliability Coordinator Monitoring and Directive Procedure.<sup>17</sup> NERC continued, stating that “WECC operates its system in such a manner that the system is at least two contingencies away from a cascading failure.” NERC further explained that,

there is no inconsistency between IRO-005-1 and WECC-TOP-STD-007-0. In order to support Requirement WR1.b in the WECC-TOP-STD-007-0 regional Reliability Standard, the system cannot be operated such that a single contingency will cause cascading of the system. This is implicit in the identification of the [operating transfer capability] limit derivation. If, however, there is a flow that exceeds the [operating transfer capability] limit, the transmission operator must take (proactive) immediate corrective action within 20 minutes for stability-limited paths and 30 minutes for thermally limited paths to return the system to below the [operating transfer capability] limit, thus protecting the system from potential cascading for a subsequent contingency.<sup>18</sup>

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<sup>15</sup> *Id.* P 55, 110.

<sup>16</sup> North American Electric Reliability Corp., Compliance Filing, Docket No. RR07-11-000 (filed July 9, 2007).

<sup>17</sup> *Id.* at 5.

<sup>18</sup> *Id.* at 8

**Proposed WECC Regional Reliability Standard TOP-007-WECC-1**

9. On March 25, 2009, NERC submitted a petition to the Commission seeking approval of proposed TOP-007-WECC-1 and requesting the concurrent retirement of the currently effective TOP-STD-007-0.<sup>19</sup> NERC requests an effective date for the proposed regional Reliability Standard of 90 calendar days after receipt of applicable regulatory approval.

10. Proposed TOP-007-WECC-1 would apply 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.<sup>20</sup> NERC states that the primary purpose of the 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.

11. NERC states that the proposed 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

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<sup>19</sup> *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). The proposed new Reliability Standards and other modified Reliability Standards are not codified in the CFR and are not attached to the NOPR. They are, however, available on the Commission’s eLibrary document retrieval system in Docket No. RM09-14-000 and are available on the ERO’s website, [www.nerc.com](http://www.nerc.com).

<sup>20</sup> See WECC Transfer Path Table, *available at*: [www.wecc.biz/Docs/Documents/Table%20Major%20Paths%204-28-08.doc](http://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.”

preferential and in the public interest.<sup>21</sup> According to NERC, proposed TOP-007-WECC-1 is clear and unambiguous regarding what is required and who is required to comply with the Standard. NERC states that proposed 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 but also system operating limits) effectively and efficiently. NERC also states that the requirements proposed in TOP-007-WECC-1 are not covered by a NERC Reliability Standard and are intended to be more stringent than or cover areas not covered by the continent-wide NERC Reliability Standard TOP-007-0. NERC also notes that its public posting of the proposed regional Reliability Standard did not elicit any significant technical objection.<sup>22</sup>

12. Proposed TOP-007-WECC-01 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 system operating limits 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

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<sup>21</sup> *Rules Concerning Certification of the Electric Reliability Organization; and Procedures for the Establishment, Approval, and Enforcement of Electric Reliability Standards*, Order No. 672, FERC Stats. & Regs. ¶ 31,204, at P 323-337 (2006), *order on reh'g*, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006).

<sup>22</sup> NERC Petition at 9.

path's system operating limits, 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 system operating limit value if the system operating limit decreases within 20 minutes before the start of the hour.

13. In the Petition, NERC asserts that the proposed regional Reliability Standard covers matters not covered by a NERC Reliability Standard and is more stringent than the corresponding continent-wide Reliability Standard, TOP-007-0. NERC explains:

Whereas, NERC Reliability Standard TOP-007-0 – *Reporting SOL and IROL Violations* Requirement R2 requires the Transmission Operator to return its transmission path flows to within Interconnection Reliability Operating Limits (“IROLs”) as soon as possible, but no longer than 30 minutes following a contingency or event, TOP-007-WECC-1 Requirement R1 requires the Transmission Operator of the major WECC transfer paths to take immediate action to return the actual power flow to within [system operating limits] such that at no time shall the power flow exceed the [system operating limits] for longer than 30 minutes. There is no NERC requirement to return the transmission system to within [system operating limits] within a time certain, only a requirement to report to the Reliability Coordinator (TOP-007-0 Requirement R1). Depending on the current system conditions, the limits for the paths identified in this TOP-007-WECC-1 standard are [system operating limits]s that would not result in cascading outages. 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 an [system operating limits]. TOP-007-WECC-1 Requirement R2 requires the Transmission Operator of the major WECC transfer paths to ensure that Net Scheduled Interchange for power flow over an interconnection or transmission path does not exceed the path's [system operating limits] when the Transmission Operator implements its real-time schedules for the next hour. The requirement for maintaining Net Scheduled Interchange within a path's [system operating limits] is also not covered in the NERC Reliability Standards. This requirement is important to the Western Interconnection because scheduling transmission paths

beyond their limits could adversely affect actual flows on parallel paths by creating unscheduled flow that may jeopardize system reliability.<sup>23</sup>

14. NERC also provides, as Exhibit C to the NERC 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 to the modified Standard and discusses the “proposed change and impact.”<sup>24</sup>

## II. Discussion

15. Pursuant to FPA section 215(d)(2), we propose to approve TOP-007-WECC-1 as just, reasonable, not unduly discriminatory or preferential, and in the public interest. As indicated above, the proposed TOP-007-WECC-1 appears to cover topics not covered by the corresponding NERC Reliability Standard, TOP-007-0, thus meeting a criterion for approving a regional difference. Specifically, 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 system operating limits such that at no time shall the power flow exceed the system operating limits for longer than 30 minutes. While the NERC Reliability Standards do have a requirement to report exceeding system operating limits to the reliability coordinator, they do not have a requirement to return the transmission system to within system operating limits within a time certain. Likewise, proposed Requirement R2 of the regional Reliability Standard would prohibit the

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<sup>23</sup> NERC Petition at 11-12 (footnote omitted).

<sup>24</sup> See NERC Petition, Exhibit C, Comparison of WECC Standard TOP-STD-007-0 to proposed WECC Standard TOP-007-WECC-1, beginning at page 86 of the NERC Petition as it appears in the Commission’s eLibrary pdf document.

transmission operator from having the net scheduled interchange for power flow over an interconnection or transmission path above the path's system operating limit when the transmission operator implements its real-time schedules for the next hour, while there currently is no such requirement in a NERC Standard. In addition to these stringencies, the proposed regional Reliability Standards addresses modifications directed by the Commission in the June 2007 Order. For these reasons, the Commission proposes to approve TOP-007-WECC-1.

16. However, below, we ask WECC, the ERO and other interested entities to provide further clarification regarding several aspects of the proposed regional Reliability Standard. Our intent in seeking comments is to better understand certain aspects of the proposed regional Reliability Standard that are not fully explained in the NERC Petition. Specifically, we request in comments additional information about the following concerns: (1) whether the proposed regional Reliability Standard 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 system operating limit 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 proposes to direct WECC to develop certain limited modifications to the regional Reliability Standard and the associated violation risk factor and violation severity levels as discussed herein.

**A. Operating One Contingency Away from a Cascading Outage**

17. As discussed above, when approving TOP-STD-007-0, the Commission noted its concern that Measure WM1 may be interpreted in a way that is less stringent than the NERC IRO-005-1, which, in turn, could allow the system to be operated one contingency away from a potential cascading failure.<sup>25</sup> NERC explained in its July 2007 Compliance Filing that, under Requirement WR1.b of TOP-STD-007-0, transmission operators must operate the system in a manner that it is at least two contingencies away from cascading at all times during steady state operating conditions.<sup>26</sup>

**Proposed Regional Reliability Standard**

18. Requirement R1 of TOP-007-WECC-1 states, “[w]hen the actual power flow exceeds an [system operating limit] for a Transmission path, the Transmission Operators shall take immediate action to reduce the actual power flow across the path such that at no time shall the power flow for the Transmission path exceed the [system operating limit] for more than 30 minutes.” NERC notes that the corresponding NERC Reliability Standard, TOP-007-0 does not currently cover this requirement, explaining that NERC TOP-007-0 does not require the transmission operators to return the transmission system to within system operating limits within a time certain. Therefore, the proposed TOP-007-WECC-1 appears to meet a criterion for approving a regional difference. The proposed TOP-007-WECC-1 does not include the provision of current Requirement WR1, which, in TOP-STD-007-0, requires that “[t]he interconnected power system shall

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<sup>25</sup> *North American Electric Reliability Corp.*, 119 FERC ¶ 61,260 at P 108.

<sup>26</sup> Compliance Filing at 4.

remain stable upon loss of any one single element without system cascading that could result in the successive loss of additional elements.” The mapping document included within Exhibit C to the Petition explains that the provision was eliminated because “inclusion would be redundant with similar criteria in other NERC standards,” such as NERC FAC-011 (including Regional Differences 1.1 and 1.2), FAC-014, and TOP-004.

### **Commission Concerns**

19. 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 system operating limit 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. Although WECC clarified in its July 2007 Compliance Filing that the WECC transmission grid must be operated such that no cascading occurs following a single contingency, the proposed Reliability Standard does not re-affirm this understanding. Indeed, the proposed regional Reliability Standard could be interpreted as affirmatively permitting the power system to be operated one contingency away from a cascading outage, which is the same concern the Commission raised with respect to the current regional Reliability Standard. Our concern is heightened when Requirement R1 is considered in conjunction with the NERC TOP-004, Requirement R2, which states that “[e]ach Transmission Operator shall operate so that instability, uncontrolled separation, or cascading outages will not occur as a result of the most severe single contingency.” Read in this light, the proposed revision to the

language currently contained in Requirement WR1 of TOP-STD-007-0 could result in transmission operators having two apparently conflicting sets of operational requirements. Specifically, the national Reliability Standard prohibits operating a single contingency away from cascading outage while the proposed regional Reliability Standard seems to permit such operation. The Commission requests comments on this issue.

**B. Change in Response Time From 20 to 30 Minutes**

20. TOP-STD-007-0 provides that transmission operators shall return actual flows to within the path's operating transfer capability ratings in no more than 20 minutes on stability-limited paths, and within 30 minutes for thermally-limited paths. When NERC filed TOP-STD-007-0 for Commission approval, WECC explained that the 20 minute time limit for responding to stability-limited operating transfer capability exceedances was based on the lessons learned in the two major disturbances in 1996.<sup>27</sup> The Commission notes that in the Western Interconnection a significant number of transmission paths are voltage or frequency stability limited, in contrast to other regions of the Bulk-Power System where transmission paths more often are thermally limited.<sup>28</sup>

21. Transmission operators generally need to respond to disturbances that result in a

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<sup>27</sup> See *North American Electric Reliability Corp.*, 119 FERC ¶ 61,260 at P 102.

<sup>28</sup> A stability limit is determined by a voltage or frequency stability constraint, and loading the line above this limit for any amount of time could result in instability and cascading outages. A thermal limit is determined by how much a line can overheat without damaging equipment; lines that are thermally-limited can have short-term emergency limits that are higher than the normal line rating, since heating occurs over a period of time.

“stability-limited” transmission path overload in a shorter time frame than a disturbance that results in a “thermally-limited” transmission path overload because the stability-limited risk is more systemic in nature. The requirement to bring the power flow across a stability-limited transmission path to within the path’s operating transfer capability rating within 20 minutes following a disturbance improves reliability by decreasing the likelihood that the Bulk-Power System will be operated a single contingency away from a cascading outage, thus preventing adverse reliability impacts, as following a disturbance.

### **Proposed Regional Reliability Standard**

22. The proposed revised regional Reliability Standard would replace the 20-minute limit for returning actual flows on stability-limited paths to within system operating limit ratings with a 30-minute limit. In its Petition, NERC indicates that the first draft of the proposed regional Reliability Standard included the differing time limits (20/30 minutes) to return to within system operating limit, but that comments indicated that the 10 minute difference was not based on any technically sound reasoning and would create an additional operational step to determine the cause of the limit before taking corrective action. The Petition further indicates that, based on these comments, the drafting team modified the proposed regional Reliability Standard to have one consistent 30 minute limit for returning actual flows to within both thermally and stability-limited system operating limits.

23. In its evaluation of the proposed regional Reliability Standard, NERC’s general observation was that proposed TOP-007-WECC-1 was significantly modified from TOP-STD-007-0. Specifically, NERC commented to WECC on the technical modification of

the requirement that the actual power flow on all transmission paths shall at no time exceed the operating transfer capability for more than 20 minutes for paths that are stability limited or for more than 30 minutes for paths that are thermally limited.<sup>29</sup>

NERC stated that it was unclear whether the proposed requirement was more stringent than the NERC requirements.<sup>30</sup>

24. In response to NERC's evaluation, WECC stated that the currently-effective regional Reliability Standard creates confusion because system conditions may change the limiting conditions on a path, and this resulted in path operators taking "more drastic actions" to respond to a contingency within 20 minutes, which may put the system at greater risk. WECC indicated that the standard drafting team determined that changing the Standard from a 20 to 30 minute response time is "insignificant in terms of the probability of the next contingency occurring."<sup>31</sup>

25. NERC's Petition states that NERC TOP-007-0 does not contain a requirement that transmission operators reduce actual flows to within thermally-limited system operating limits within 30 minutes. Thus, according to NERC, the change from 20 to 30 minutes does not constitute a lowest common denominator approach, but rather provides clarity and eliminates the need to determine the limiting condition when a contingency occurs, thereby allowing transmission operators to concentrate on resolving the overload condition.

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<sup>29</sup> NERC Petition at 27-28.

<sup>30</sup> *Id.*

<sup>31</sup> *Id.* at 28.

### **Commission Concerns**

26. The Commission seeks additional information to assess whether increasing the time to respond to stability-limited system operating limit violations will affect the reliable operation of the Western Interconnection. As the Commission previously has noted, we will evaluate such proposed changes, including those that may make a standard less stringent, on their merit so long as adequate reliability is maintained.<sup>32</sup> In this case, the Commission is proposing to approve TOP-007-WECC-1; however, the technical information provided in the record to date does not demonstrate to our satisfaction that the proposed regional Reliability Standard is sufficient to ensure reliability in the WECC region.

27. Therefore, we request that WECC, NERC and other interested entities provide in their comments 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.”<sup>33</sup> For example, WECC could provide historical outage data showing instances where an event caused a stability-limited operating transfer limit to be exceeded, the amount of time it took the transmission operator to reduce flows and, if the transmission operator did not reduce flows within 20 minutes, whether a second contingency occurred after the 20 minutes. WECC also could provide information or data demonstrating that the WECC region has added facilities to reduce the number of

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<sup>32</sup> *Version One Regional Reliability Standard for Resource and Demand Balancing*, 133 FERC ¶ 61,063 at P 30 (2010).

<sup>33</sup> NERC Petition at 28.

stability- limited “rated transfer paths;” the WECC region has adopted new operational procedures or new protection schemes; or statistical operating data showing that the 20 minute response time was excessive for the Bulk-Power System in the West.

28. Additionally, based on the current record provided by NERC, we are not persuaded by the explanation that the current Reliability Standard’s bifurcated response times cause confusion. We understand that, in practice, a transmission operator in the Western Interconnection can use the WECC Path Rating Catalog<sup>34</sup> to determine if a rated system path is either thermally or stability limited for baseline system configurations shown in the Catalog, and will have previously determined operating limitations based on previously conducted contingency studies. The “WECC Philosophy of SOL and IROL Conditions” states that WECC’s operating philosophy is to only operate in conditions that have been studied.<sup>35</sup> In fact, during the Reliability Standard development process, one commenter stated that: “[t]oday, we can tell if the 20 or 30 minutes applies based on the statements in the Path Rating Catalog, which classify each of the Paths as either stability limited or thermally limited.”<sup>36</sup>

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<sup>34</sup> As mentioned previously, the WECC Path Rating Catalog is referenced in a footnote in Table 1 of the currently-effective regional Reliability Standard.

<sup>35</sup> WECC Philosophy of SOL & IROL Conditions, *available at* <http://www.wecc.biz/committees/StandingCommittees/OC/OPS/Lists/Calendar/Attachments/8/WECC%20Philosophy%20of%20SOL-IROL.pdf>.

<sup>36</sup> NERC Petition, Exhibit C at page 50 of the NERC Petition as it appears in the Commission’s eLibrary pdf document (Sierra Pacific Resources Transmission comments to WECC).

**C. System Operating Limit versus Operating Transfer Capability**

29. TOP-STD-007-0 has the stated purpose of ensuring that “the Operating Transfer Capability limits requirements of the Western Interconnection are not exceeded.” The regional Reliability Standard defines operating transfer capability as “the maximum value of the most critical system operating parameter(s) which meets: (a) precontingency criteria as determined by equipment loading capability and acceptable voltage conditions, (b) transient criteria as determined by equipment loading capability and acceptable voltage conditions, (c) transient performance criteria, and (d) post-contingency loading and voltage criteria.”

30. The single requirement of TOP-STD-007-0 provides in part:

Actual power flow and net scheduled power flow over an interconnection or transfer path shall be maintained within Operating Transfer Capability Limits (“OTC”). The OTC is the maximum amount of actual power that can be transferred over direct or parallel transmission elements comprising:

- An interconnection from one Transmission Operator area to another Transmission Operator area; or
- A transfer path within a Transmission Operator area.

The net schedule over an interconnection or transfer path within a Transmission Operator area shall not exceed the OTC, regardless of the prevailing actual power flow on the interconnection or transfer path.

31. The NERC Glossary defines “System Operating Limit” as “the value (such as MW, MVar, Amperes, Frequency or Volts) that satisfies the most limiting of the prescribed operating criteria for a specified system configuration to ensure operation within acceptable reliability criteria. System Operating Limits are based upon certain operating criteria. These include, but are not limited to:

- Facility Ratings (Applicable pre- and post-Contingency equipment or facility ratings)
- Transient Stability Ratings (Applicable pre- and post-Contingency Stability Limits)
- Voltage Stability Ratings (Applicable pre- and post-Contingency Voltage Stability)
- System Voltage Limits (Applicable pre- and post-Contingency Voltage Limits).”

### **NERC Petition**

32. As mentioned above, proposed TOP-007-WECC-1 has the stated purpose of ensuring that “when actual flows on Major WECC Transfer Paths exceed system operating limits (SOLs), their associated schedules and actual flows are not exceeded for longer than a specified time.” Requirement R1 of the proposed regional Reliability Standard requires that, “when the actual power flow exceeds a [system operating limit] for a Transmission path, the transmission operator shall take immediate action to reduce the actual power flow across the path....”

33. As noted above, the NERC Petition includes, as Exhibit C, a Record of Development of Proposed Reliability Standard, which includes a mapping document comparing the current regional Standard to the proposed Standard. The mapping document explains the drafting team’s actions and rationale for replacing the term “operating transfer capability limit” with the term “system operating limit:”

Removed definition of OTC and replaced OTC with SOL throughout the standard.  
Reasons included:

1. Consistency with NERC standards, definitions and language.
2. WECC Operating Committee adopted the document “WECC Philosophy of SOL & IROL Conditions” which states that a [sic] WECC operates only under SOL conditions. This statement is interpreted as declaring that a WECC OTC is an SOL.
3. Removes ambiguity regarding applicability of other NERC standards.<sup>37</sup>

34. The WECC Philosophy of SOL and IROL Conditions, adopted by the WECC Operating Committee, states that “the WECC operating philosophy is to operate only in conditions that have been studied. Therefore, under these normal operating conditions, there are never IROL conditions (only SOL).”<sup>38</sup>

### **Commission Concerns**

35. NERC states that, in addition to addressing the Commission’s concerns noted in the June 2007 Order, “WECC made substantial technical modifications to the proposed standard TOP-007-WECC-1 on its own accord.”<sup>39</sup> However, NERC does not effectively discuss the scope and substance of these substantial technical modifications. Rather, the NERC Petition explains that “because WECC followed its approved process in developing these modifications NERC continues to rebuttably presume this standard is

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<sup>37</sup> See NERC Petition, Exhibit C, Comparison of WECC Standard TOP-STD-007-0 to proposed WECC Standard TOP-007-WECC-1, beginning at page 86 of the NERC Petition as it appears in the Commission’s eLibrary pdf document.

<sup>38</sup> WECC Philosophy of SOL & IROL Conditions, *available at* <http://www.wecc.biz/committees/StandingCommittees/OC/OPS/Lists/Calendar/Attachments/8/WECC%20Philosophy%20of%20SOL-IROL.pdf>.

<sup>39</sup> NERC Petition at 8.

just, reasonable, and not unduly discriminatory or preferential, and in the public interest.”<sup>40</sup> The NERC Petition does not explain the shift from ensuring that operating transfer capability limits are not exceeded to ensuring that system operating limits are not exceeded for longer than a specified time. It appears that the mapping document discussed above provides the only insight in the record into the shift in focus of the proposed regional Reliability Standard from operating transfer capability limits to system operating limits.

36. We have concerns regarding whether it is accurate to equate operating transfer capability limits and system operating limits. The term system operating limit is used in reference to a rated system path within the Western Interconnection and refers to the facility or element that presents the most limiting of the prescribed operating criteria for the rated system path. The most limiting facility or element may be either thermally or stability limited. The operating transfer capability limit corresponds to the “maximum amount of actual power transferred over direct or parallel transmission elements from one transmission operator to another transmission operator.” While these two terms relate to the same amount of power that may be transferred from one end of the rated system path to the other, the terms measure different things. When power flow on the facilities or elements that constitute a system operating limit reaches the system operating limit’s rating, the amount of power being transmitted across the facilities that constitute the rated system path becomes the operating transfer capability. This becomes problematic when

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

the most limiting operating criteria, i.e., that creates the system operating limit, is not located on the rated system path, but rather is located on a neighboring non-rated system path facility or element.

37. Based on the Commission's understanding that there is a difference in these terms, we are concerned that the facilities that make up the system operating limit 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 operating transfer capability is replaced by system operating limit, 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" as shown in the WECC Transfer Path Table and the referenced Path Rating Catalog. The Commission is further concerned that this scenario creates the possibility that an entity to which the regional Reliability Standard applies would be responsible for operating facilities that are not part of the rated path system shown in the WECC Transfer Path Table and Catalog. We request comments from NERC, WECC and other interested parties regarding these concerns.

38. Similarly, we seek comment from NERC, WECC and others regarding the manner in which a transmission operator would address system operating limit facilities that are not part of the rated system path. We also request comments regarding the possibility that transmission operators may, under the proposed regional Reliability Standard, be responsible for facilities that they do not own and which are not on the rated system path

but comprise the system operating limit. For commenters who believe that this is a problem, we also request comments regarding how to resolve this potential dilemma.

39. Additionally, we are concerned that the use of the term system operating limit rather than the term operating transfer capability is inconsistent with the WECC Path Rating Catalog and would cause confusion. Historically, WECC has used the term operating transfer capability, and not system operating limit, to describe transmission limitations. Here, it appears that NERC and WECC are using the two terms interchangeably as equivalents. Thus, we request that WECC, NERC and other interested entities provide clarification regarding the proper understanding of the two terms

**D. Applicability**

40. 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.

**Proposed Regional Reliability Standard**

41. Proposed TOP-WECC-007-1 removes Attachment A and, instead, directs transmission owners to the most current WECC Transfer Path Table, which is available on the WECC website. The table currently posted on the WECC website identifies the same 40 major paths as Attachment A to the approved regional Reliability Standard.

42. The Petition does not explain why WECC moved the WECC Transfer Path Table from an attachment to a reference accessed through the WECC website. However, the

mapping document discussed above states that: “[a]s an attachment to the standard, revisions to [the WECC Transfer Path Table] must be made through the standards process. By making [the WECC Transfer Path Table] a changing the [sic] referenced document in the WECC library, it opens the possibility of the table being changed through a WECC process without the need for changing the standard itself (for example, by recommendation of the OTCPC and approval by the Board).” In response to a stakeholder question during the development process, WECC indicated its belief that, under the proposed Standard, WECC Board approval would be required for changes to the Table, but NERC and Commission approvals would not be required.<sup>41</sup>

### **Commission Concerns**

43. The Commission is concerned 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. Under the currently-effective regional Reliability Standard, modifications to the WECC Transfer Path Table must be approved by the Commission. Accordingly, the Commission seeks comment on how NERC and WECC intend to develop and provide notice of proposed changes to the WECC Transfer Path Table. We also seek comment on how NERC and WECC will ensure that any resulting changes to the applicability of the Reliability Standard will not reduce its effectiveness. The Commission also requests comment

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<sup>41</sup> NERC Petition, Exhibit C, at page 51, 53 of the NERC Petition as it appears in the Commission’s eLibrary pdf document (reply to questions from Sierra Pacific Resources Transmission and Bonneville Power Administration).

regarding whether the current WECC regional Reliability Standards or related documents include the criterion that governs when paths are added or removed from the WECC Transfer Path Table and requests further information on the scope and application of the criterion.

44. Additionally, under section 215(d)(5) of the FPA, we propose to direct WECC to develop a modification to the Reliability Standard to address our concern. For example, WECC could include its criterion for identifying and modifying major transmission paths listed in the WECC Transfer Path Table and referenced Path Rating Catalog in the Reliability Standard, and make an informational filing with the Commission and NERC each time it makes a modification to the table or referenced catalog. Another option would be for WECC to file its 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. Alternatively, WECC could include the WECC Transfer Path Table as an attachment to the modified Reliability Standard. In this way, the Commission would be able to verify that the Regional Entity is applying the requirements of the regional Reliability Standard in a just and reasonable manner.

**E. Violation Risk Factors**

45. As part of its compliance and enforcement program, NERC must assign a “lower,” “medium,” or “high” violation risk factor to each requirement of each mandatory Reliability Standard to associate a violation of the Requirement with its potential impact on the reliability of the Bulk-Power System. In the June 2007 Order approving TOP-

STD-007-0, the Commission noted that WECC's existing sanctions table was inconsistent with NERC's Sanction Guidelines, and directed WECC to develop violation risk factors that conform to corresponding NERC Reliability Standards.<sup>42</sup>

### **Proposed Regional Reliability Standard**

46. TOP-007-WECC-1 includes violation risk factors for both of the requirements, without a separate violation risk factor for sub-requirement R2.1.

### **Commission Concerns**

47. TOP-007-WECC-1 and its continent-wide counterpart, NERC TOP-007-0, share the same 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. In its Petition, NERC does not explain why WECC assigned violation risk factors to the proposed Reliability Standard that differ from the corresponding continent-wide Reliability Standard's violation risk factors.<sup>43</sup>

48. We have noted previously that we expect consistency among violation risk factor assignments of Requirements that share the same reliability objective.<sup>44</sup> Therefore, the Commission seeks comment from NERC and WECC regarding why the proposed

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<sup>42</sup> *North American Electric Reliability Corp.*, 119 FERC ¶ 61,260 at P 54.

<sup>43</sup> See violation risk factors for TOP-007-0.

<sup>44</sup> *North American Electric Reliability Corp.*, 119 FERC ¶ 61,145, at P 16, 25 (2007).

regional Reliability Standard contains violation risk factors that are not aligned with those of the continent-wide Reliability Standard. The Commission proposes to direct WECC to modify the assigned violation risk factor for TOP-007-WECC-01, Requirements R1 and R2 from “medium” and “low,” respectively, to “high” and requests comment on this proposal.

**F. Violation Severity Levels**

49. NERC, in its July 30, 2008 evaluation of WECC’s proposed Reliability Standard, noted that the violation severity levels in the proposed Reliability Standard do not conform to NERC’s format.<sup>45</sup>

**Proposed Regional Reliability Standard**

50. NERC has adopted a standard violation severity level table format that is used in its Reliability Standards, which also should be used in all regional Reliability Standards. In its evaluation of the proposed regional Reliability Standard, NERC noted that violation severity levels do not conform to the NERC format. The NERC Petition notes that WECC agreed to address the formatting issue during the next revision of the regional Reliability Standard.

**Commission Proposal**

51. The Commission agrees with NERC’s comments, and proposes to direct WECC to modify the violation severity levels associated with each requirement and sub-requirement of TOP-007-WECC-1, and submit them in the approved table format.

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<sup>45</sup> NERC Petition at 29.

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

52. The Office of Management and Budget (OMB) regulations require that OMB approve certain reporting and recordkeeping (collections of information) imposed by an agency.<sup>46</sup> The information contained here is also subject to review under section 3507(d) of the Paperwork Reduction Act of 1995.<sup>47</sup> As stated above, the Commission previously approved the regional Reliability Standard that is the subject of the current rulemaking. In the event that the Commission, after receiving comments, determines to adopt the proposed revisions to the Reliability Standard, they would not substantially change the entities' current reporting burden. Thus, the current proposal would not substantively affect the burden estimates relating to the currently effective version of the Reliability Standard previously approved.<sup>48</sup>

53. The proposed 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 proposed modifications to the current Reliability Standard will neither increase the reporting burden nor impose any additional information collection requirements.

54. The Commission does not foresee any additional impact on the reporting burden for small businesses, because the proposed modifications do not increase the existing burden. However, we will submit this proposed rule to OMB for review.

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<sup>46</sup> 5 CFR 1320.11.

<sup>47</sup> 44 U.S.C. 3507(d).

<sup>48</sup> *North American Electric Reliability Corp.*, 119 FERC ¶ 61,260 at P 125-131.

Title: Version One Regional Reliability Standard for Transmission Operations.

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 proposed rule proposes to approve the requested modifications to a regional Reliability Standard pertaining to System Operating Limits. The proposed Reliability Standard is one of the standards that helps ensure the reliable operation of the Western Interconnection.

Internal Review: The Commission has reviewed the proposed 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 System Operating Limits as well as procedures within the energy industry.

55. 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](mailto:DataClearance@ferc.gov), phone: (202) 502-8663, fax: (202) 273-0873].

56. 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 Docket Number RM09-14 and OMB Control Number 1902-0246.

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

57. The Commission is required to prepare an Environmental Assessment or an Environmental Impact Statement for any action that may have a significant adverse effect on the human environment.<sup>49</sup> 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.<sup>50</sup> The actions proposed here fall within this categorical exclusion in the Commission's regulations.

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

58. The Regulatory Flexibility Act of 1980 (RFA)<sup>51</sup> 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

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<sup>49</sup> Order No. 486, *Regulations Implementing the National Environmental Policy Act of 1969*, FERC Stats. & Regs., Regulations Preambles 1986-1990 ¶ 30,783 (1987).

<sup>50</sup> 18 CFR 380.4(a)(2)(ii).

<sup>51</sup> 5 U.S.C. 601-612.

small business.<sup>52</sup> 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.<sup>53</sup> 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, the proposed Reliability Standards reflect a continuation of existing requirements for these reliability entities. Accordingly, no regulatory flexibility analysis is required.

## **VI. Comment Procedures**

59. The Commission invites interested persons to submit comments on the matters and issues proposed in this notice to be adopted, including any related matters or alternative proposals that commenters may wish to discuss. Comments are due [Insert date that is [60] days from publication in the **FEDERAL REGISTER**]. Comments must refer to Docket No. RM09-14-000, and must include the commenter's name, the organization they represent, if applicable, and their address in their comments.

60. The Commission encourages comments to be filed electronically via the eFiling link on the Commission's web site at <http://www.ferc.gov>. The Commission accepts most standard word processing formats. Documents created electronically using word processing software should be filed in native applications or print-to-PDF format and not

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<sup>52</sup> 13 CFR 121.101

<sup>53</sup> 13 CFR 121.201, Sector 22, Utilities & n. 1.

in a scanned format. Commenters filing electronically do not need to make a paper filing.

61. Commenters unable to file comments electronically must mail or hand deliver an original copy of their comments to: Federal Energy Regulatory Commission, Secretary of the Commission, 888 First Street NE, Washington, DC 20426.

62. All comments will be placed in the Commission's public files and may be viewed, printed, or downloaded remotely as described in the Document Availability section below. Commenters on this proposal are not required to serve copies of their comments on other commenters.

## **VII. Document Availability**

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

64. From the Commission's Home Page on the Internet, this information is available on eLibrary. The full text of this document is available on eLibrary in PDF and Microsoft Word format for viewing, printing, and/or downloading. To access this document in eLibrary, type the docket number excluding the last three digits of this document in the docket number field.

65. User assistance is available for eLibrary and the Commission's web site 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](mailto:ferconlinesupport@ferc.gov), or the Public Reference Room at (202) 502-8371, TTY (202) 502-8659. E-mail the Public Reference Room at [public.referenceroom@ferc.gov](mailto:public.referenceroom@ferc.gov).

List of subjects in 18 CFR Part 40

Electric power; Electric utilities; Reporting and record keeping requirements.

By direction of the Commission.

Kimberly D. Bose,  
Secretary.