#### 121 FERC ¶ 61,179 UNITED STATES OF AMERICA FEDERAL ENERGY REGULATORY COMMISSION

Before Commissioners: Joseph T. Kelliher, Chairman; Suedeen G. Kelly, Marc Spitzer, Philip D. Moeller, and Jon Wellinghoff.

North American Electric Reliability Corporation Docket Nos. RR07-9-003 RR07-10-003

#### ORDER ON COMPLIANCE FILING

(Issued November 16, 2007)

1. In this order, the Commission addresses the North American Electric Reliability Corporation's (NERC's) compliance filing submitted pursuant to the Commission's May 2007 Order on Violation Risk Factors.<sup>1</sup> As discussed below, the Commission approves the Violation Risk Factors as modified and directs NERC to make a compliance filing within 30 days of the date of this order.

#### **Background**

2. In February 2007, NERC, the certified Electric Reliability Organization (ERO) responsible for developing and enforcing mandatory Reliability Standards, submitted for Commission approval Violation Risk Factors associated with the Requirements of the Reliability Standards. A Violation Risk Factor indicates the relative risk (lower, medium or high) to the Bulk-Power System associated with the violation of each Requirement.<sup>2</sup> Violation Risk Factors are not part of the Reliability Standard itself, but are treated as part of NERC's Rules of Procedure and used in administering a penalty scheme to ensure that a penalty for a violation of a Requirement of a Reliability Standard is proportionate to the reliability risk that is posed to the Bulk-Power System. In the May 2007 Order, the

<sup>2</sup> Appendix A contains the NERC definition of each level of Violation Risk Factor. See the May 2007 Order, 119 FERC ¶ 61,145 at P 9, for a fuller discussion.

<sup>&</sup>lt;sup>1</sup> North American Electric Reliability Corp., 119 FERC ¶ 61,145 (May 2007 Order), order on reh'g and compliance filing, 120 FERC ¶ 61,145 (2007) (VRF Rehearing Order).

Commission identified five guidelines to evaluate the validity of the assignment of each Violation Risk Factor.<sup>3</sup>

3. In its May 2007 Order, the Commission approved over 700 Violation Risk Factors but directed NERC to file a compliance filing to address Commission concerns with regard to 74 Violation Risk Factors and to provide the rationale for those assignments. The Commission identified the 74 Violation Risk Factor assignments in question in Appendix B to the May 2007 Order. The Commission's concerns were related to two of its five guidelines, Guideline 4 (consistency with NERC's proposed definition of the Violation Risk Factor level) and Guideline 5 (assignment of Violation Risk Factor levels to those Requirements in certain Reliability Standards that co-mingle a higher risk reliability objective and a lower risk reliability objective). In the May 2007 Order, the Commission accepted the assignment of Violation Risk Factors for the Requirements listed in Appendix B but noted that it might change its determination based on the explanation provided in the compliance filing.<sup>4</sup>

#### **Compliance Filing**

4. On August 16, 2007, NERC submitted a compliance filing in response to the Commission's directive in the May 2007 Order. NERC provides an explanation supporting the particular assignments as determined through the industry stakeholder process and as conveyed by the Reliability Standards drafting team assigned to the initial development. NERC adds that it has identified 13 Violation Risk Factor assignments that merit reconsideration and that it intends to use its Reliability Standards development process to process these proposals.<sup>5</sup>

5. NERC further states that it developed its initial Violation Risk Factor assignments using its Reliability Standards development process. It presented for industry consideration the entire body of Violation Risk Factors for all Requirements and sub-Requirements in NERC's Reliability Standards, and achieved industry consensus on the

<sup>4</sup> May 2007 Order, 119 FERC ¶ 16,145 at P 43.

<sup>&</sup>lt;sup>3</sup> The guidelines are: (1) Consistency with the conclusions of the Final Blackout Report; (2) Consistency within a Reliability Standard; (3) Consistency among Reliability Standards; (4) Consistency with NERC's Definition of the Violation Risk Factor Level; and (5) Treatment of Requirements that Co-mingle More Than One Obligation. The Commission also explained that this list was not necessarily all-inclusive and that it retained the flexibility to consider additional guidelines in the future. For a detailed explanation, see the VRF Rehearing Order, 120 FERC ¶ 61,145 at P 8–13.

<sup>&</sup>lt;sup>5</sup> These requirements are identified in Appendix B to this order.

selection of each Violation Risk Factor through the collection of survey data and associated commentary.

6. NERC states that, based on the comments received from industry participants during the survey and balloting processes, it recognized the need for further clarity to the language of certain Requirements because of issues with interpretation, enforceability, and in some cases, duplication of Requirements that led to differing opinions of appropriate risk factor assignment. NERC states that these issues will be considered as part of the Reliability Standards review process in NERC's three-year standards work plan.

7. NERC adds that there were also differing interpretations of the Violation Risk Factor definitions themselves. For example, the term "administrative" used in the definition of a "lower" Violation Risk Factor does not apply only to documentation, but, according to NERC, could apply to tasks that are routine, repetitive, and part of a larger continuous process to meet long-term goals and objectives. These tasks may support important reliability objectives but may not be necessarily significant on their own, and not performing such tasks will not lead to conditions associated with the "medium" and "higher" Violation Risk Factor definitions.

8. NERC states that it fully understands that a more careful vetting of each Violation Risk Factor is needed and that it has added the careful review and analysis of individual Violation Risk Factor assignments as part of each project in its *Reliability Standards Work Plan: 2007-2009.* NERC also states that a significant number of the Reliability Standards that include Requirements corresponding to the 74 Violation Risk Factor assignments that concern the Commission are actively being re-examined as part of an existing Reliability Standards development project and the remainder will be reviewed in the near term. NERC, therefore, requests that the Commission allow these reviews to be completed and consider further guidance on Violation Risk Factor assignments when the revised Reliability Standards that result from these efforts are presented to the Commission for approval.

### **Procedural Matters**

9. Notice of NERC's August 16, 2007 filing was published in the *Federal Register*, 72 Fed. Reg. 48,629 (2007), with interventions and protests due on or before September 12, 2007. No motions to intervene were filed. The City of Santa Clara, California (Santa Clara) filed comments.

10. Santa Clara states that it re-emphasizes its support for NERC using the Reliability Standards development process to modify any Violation Risk Factor assignments. Santa Clara further states that it supports NERC's proposal to make future modifications to the Violation Risk Factor assignments only after a review and analysis of individual assignments as part of each project in its three-year work plan. Santa Clara agrees with NERC that the Reliability Standards Development Procedure should be used to process

any changes to Violation Risk Factor assignments that merit reconsideration. Santa Clara contends that NERC was certified as the ERO based on its establishing rules that "provide for reasonable notice and opportunity for public comment, due process, openness, and balance of interests in developing Reliability Standards and otherwise exercising its duties."<sup>6</sup>

### **Discussion**

11. NERC's compliance filing provides explanations for 74 Violation Risk Factor assignments in compliance with the Commission directive in the May 2007 Order. After reviewing those explanations, the Commission reaffirms its initial approval of 43 of the 74 Violation Risk Factor assignments submitted and directs modification of the remaining 31.

12. The Commission previously addressed the concerns raised by Santa Clara and NERC that the Reliability Standards development process should be used to revise Violation Risk Factor assignments. Santa Clara raised this argument in its request for rehearing of the May 2007 Order. The Commission denied rehearing, quoting from its January 2007 Order that "Violation Risk Factors may be appropriately treated as an appendix to NERC's Rules of Procedure," and stating that Violation Risk Factors are not part of the Reliability Standard itself but, rather, function as one tool in administering a penalty scheme to ensure that any penalty is proportionate to the reliability risk incurred.<sup>7</sup> Accordingly, the Commission's action in directing NERC to modify Violation Risk Factor assignments does not equate with changing Requirements in the Reliability Standards and thus, NERC is not required to employ the Reliability Standard development procedure in modifying Violation Risk Factor assignments.

13. NERC agrees that 13 of the 31 Violation Risk Factor assignments that the Commission, in this order, is directing NERC to modify merit reconsideration. However, NERC proposes processing those changes through its Reliability Standards development process. The Commission recognizes that the review and refinement of the Requirements and their associated Violation Risk Factors is an ongoing part of the Reliability Standards development process and is incorporated into the *Reliability Standards Work Plan: 2007-2009*. However, that process takes time and should not preclude the Commission taking immediate action to modify what it finds to be inaccuracies or inconsistencies in the current assignment of Violation Risk Factors. As the Commission stated in an April 2007 Order addressing a NERC compliance filing, it does not object to use of the Reliability

<sup>&</sup>lt;sup>6</sup> Santa Clara, September 12, 2007 Comments at 11, *citing* 16 U.S.C. § 8240(c)(2)(D) (2000).

<sup>&</sup>lt;sup>7</sup> VRF Rehearing Order, 120 FERC ¶ 61,145 at P 11–13 (*citing North American Reliability Corp.*, 118 FERC ¶ 61,030 at P 91, *order on clarification and reh'g*, 119 FERC ¶ 61,046 (2007).

Standards development process to develop Violation Risk Factors *so long as it produces timely results.*<sup>8</sup> But also, as stated above, use of the Reliability Standards development process is not required for revision of Violation Risk Factors. The Commission stated in the April 2007 Order<sup>9</sup> and the VRF Rehearing Order<sup>10</sup> that it is vital to have the Violation Risk Factors in place to ensure that the penalty-setting process is operative. Accordingly, without prejudice to future NERC filings, the Commission in this order directs NERC to revise those 13 Violation Risk Factor assignments as denoted in Appendix B.

14. In addition to these 13 modifications, the Commission directs NERC to revise an additional 18 Violation Risk Factors assignments as listed in Appendix B of this order and as explained below. The Commission reserved the option in its May 2007 Order to change its determination on any of the 74 Violation Risk Factor assignments identified in Appendix B of the May 2007 Order after consideration of NERC's explanation. In these instances, the Commission has reviewed NERC's explanation and does not find NERC's justification persuasive. As the Commission stated in its May 2007 Order, Violation Risk Factor assignments should be consistent within a Reliability Standard, among similar Requirements of Reliability Standards, and with the findings of the Final Blackout Report.<sup>11</sup> The directed revisions are based on the consistency guidelines the Commission previously developed to evaluate the Violation Risk Factors.

15. The Commission notes that for some of the directed revisions, NERC explained in its compliance filing that an assigned "lower" Violation Risk Factor is appropriate because the corresponding Requirement merely provides an explanation of how to achieve compliance with other Requirements within the Reliability Standard. This is not dispositive. The Commission has previously addressed the inclusion of implementation practices (the "how" of reliability) within the requirement of a Reliability Standard to reduce uncertainty and to further other objectives that foster reliability which, if violated, would pose increased risk to the Bulk-Power System. In Order No. 672, the Commission recognized that there may be some Reliability Standards where the "how" is:

<sup>8</sup> North American Electric Reliability Corp., 119 FERC ¶ 61,046 at P 33 (2007) (April 2007 Order).

<sup>9</sup> *Id.* P 31.

<sup>10</sup> VRF Rehearing Order, 120 FERC ¶ 61,145 at P 13.

<sup>11</sup> U.S.-Canada Power System Outage Task Force, Final Report on the August 14, 2003 Blackout in the United States and Canada: Causes and Recommendations (April 2004) (Final Blackout Report). The Final Blackout Report is available on the Internet at http://www.ferc.gov/industries/electric/indus-act/blackout.asp.

inextricably linked to the Reliability Standard and may need to be specified by the Electric Reliability Organization to ensure the enforcement of the Reliability Standard. For some Reliability Standards, leaving out implementation features could: (1) sacrifice necessary uniformity in implementation of the Reliability Standard; (2) create uncertainty for the entity that has to follow the Reliability Standard; (3) make enforcement difficult; and (4) increase the complexity of the Commission's oversight and review process.<sup>12</sup>

16. The Commission also notes that for some of the directed revisions, NERC explained that the assignment of a "lower" Violation Risk Factor was appropriate because the Requirement overlapped other Requirements, could be implemented by alternate means, or the Requirement could be improved. The Commission is not persuaded that such conditions justify the assignment of a "lower" Violation Risk Factor. The purpose of the Violation Risk Factor assignment is to accurately portray the risk a violation poses to the Bulk-Power System, not to mitigate perceived content issues within the Requirements. Rather, NERC should address those issues through the Reliability Standards development process.

## Reliability Standard BAL-001-0, Requirements R1 and R2

17. In general, the balancing authorities within an Interconnection have an obligation to maintain the desired 60 Hertz frequency at which the Bulk-Power System functions most efficiently and reliably. To achieve this, each balancing authority must keep its generation output (including net imports from neighboring balancing authorities) and load in balance within its footprint. A deviation from the 60 Hertz optimum signals an imbalance in supply and demand. To prevent this imbalance from propagating throughout the Interconnection, steps are taken to adjust regulating reserves (generation output and demand-side management)<sup>13</sup> in response to deviations from the 60 Hertz optimum.

18. To further this end, BAL-001-0, Requirements R1 and R2 measure whether a balancing authority has adequate regulating reserves as required in BAL-005-0, Requirement R2. NERC states that these Requirements are a long-term measure of

<sup>&</sup>lt;sup>12</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 260, order on reh'g, Order No. 672-A, FERC Stats. & Regs. ¶ 31,212 (2006).

<sup>&</sup>lt;sup>13</sup> See Mandatory Reliability Standards for the Bulk-Power System, Order No. 693, FERC Stats. & Regs. ¶ 31,242, at P 333–35, order on reh'g, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

average performance, not an indication of an immediate real-time impact. In the case of Requirement R1, because it is based on a rolling 12-month average, NERC explains that once it becomes evident under this metric that a balancing authority is non-compliant, it will remain so for several months, even though its real-time performance may have returned to an acceptable level. Thus, according to NERC, an "immediate, real-time impact" as a result of violating this Requirement is not expected under the emergency, abnormal, or restorative conditions. Paraphrasing the definition of a "medium" Violation Risk Factor, NERC states that a violation is not expected to affect the electrical state of, capability of, or the ability to effectively monitor and control the Bulk-Power System. NERC adds that there is no question that this is an important measure, but importance does not equate to risk. Therefore, NERC assigns a "lower" Violation Risk Factor.

19. The Commission disagrees and directs NERC to change the Violation Risk Factor to "medium" to reflect the extent to which the Bulk-Power System is put at risk in realtime if violations of Requirements R1 and R2 occur. The Requirements in this Reliability Standard support the stated purpose of this Reliability Standard, which is "[t]o maintain Interconnection steady-state frequency within defined limits by balancing real power demand and supply in real-time." Requirements R1 and R2 measure how well an entity deploys the regulating reserves that are required by BAL-005-0, Requirement R2. Regulating reserve is the amount of reserve responsive to automatic generation control (AGC) that is sufficient to provide a margin for instantaneous changes within a balancing authority.<sup>14</sup> No other Requirement requires continuous balancing of supply and demand in real-time. While it is true that BAL-005-0, Requirement R2 states that each balancing authority shall maintain regulating reserves, BAL-001-0, Requirements R1 and R2 also require the actual balancing of supply and demand in real-time necessary for reliable operation of the Bulk-Power System.

20. To avoid a violation of these requirements, each balancing authority monitors the extent of its Area Control Error (ACE) in real-time and takes appropriate action also in real-time to rebalance supply and demand such that the compliance metric (the 12-month rolling average) will indicate compliance. The deployment of regulating reserves to meet this 12-month metric has an "immediate, real-time impact" on the Bulk-Power System. For example, deployment of regulating reserves during ramping of transactions can have impacts on the frequency of the Interconnection (albeit positive impacts) similar to those negative impacts experienced with the loss of generation.<sup>15</sup> Thus, these Requirements are

<sup>&</sup>lt;sup>14</sup> AGC refers to an automatic process whereby a balancing authority's mix and output of its generation and demand-side management is varied to offset the extent of supply and demand imbalance reflected in its area control error.

<sup>&</sup>lt;sup>15</sup> See PJM RTO White Paper, Frequency Excursions, by Koza, Williams, and Herbsleb.

both important (as acknowledged by NERC) and can directly affect the real-time electrical state of the Bulk-Power System.

21. The Commission understands that Requirement R1 is characterized as a long-term measure of average performance and that once a balancing authority becomes noncompliant, it may remain non-compliant for several months, even though the balancing authority's real-time performance may be acceptable at times during the period over which its overall performance is averaged.<sup>16</sup> Likewise, a single instance of a mildly inadequate performance will be offset by adequate real-time performance during the remainder of the month and will incur no violation. These are the consequences of measuring compliance by using an average over the course of a year. An alternative method is used in Requirement R2, wherein compliance is measured in ten minute intervals and the expected performance is to comply for at least 90 percent of all of the 10-minute ACE intervals within the month. Both of these methods of measuring compliance recognize that a balancing authority will occasionally fall short, and both attempt to specify the level at which that shortage has a serious impact on the Bulk-Power System. While the measurement in either case may lack a one-to-one correspondence with the real-time impact on the Bulk-Power System, both accurately reflect the risk to the Bulk-Power System over the measurement period.

22. For Requirement R1, if the average level of performance is unacceptable, the reliability of the Bulk-Power System is also put at risk, *on average*, over the same 12-month rolling average measurement period. While it may be the case that, in a particular instance, adequate real-time performance for most of the measurement period could be more than offset (through the averaging process) by a single instance of very inadequate performance, nonetheless, during that instance, the balancing authority was forced to deploy its costly regulating reserves, due to the immediate, real-time risk to the reliable operation of the Bulk-Power System that results from an imbalance of supply and demand.

23. As a practical matter, some measurement period must be selected, and in this case a rolling 12-month period was the choice that emerged from the Reliability Standards development process.

24. BAL-001-0, Requirements R1 and R2 accurately measure the risk to the Bulk-Power System over the measurement period. Thus, these Requirements are not merely important, as NERC acknowledges, but a violation of either of these requirements in the form of a real-time imbalance between supply and demand can directly affect the electrical

<sup>&</sup>lt;sup>16</sup> While this is theoretically possible, a review of the actual compliance data shows that while balancing authorities may become non-compliant on a monthly basis, they always correct their operations so as to return the average to the compliant range by the next month. *See* <u>http://www.nerc.com/~filez/cps.html</u>.

state of the Bulk-Power System so as to require a real-time response by the balancing authority, a situation that meets the definition of a "medium" level Violation Risk Factor.

25. Accordingly, the Commission, consistent with NERC's definition of Violation Risk Factor levels, directs NERC to revise the Violation Risk Factor assignment for BAL-001-0, Requirements R1 and R2 to "medium."

#### Reliability Standard BAL-002-0, Requirements R2 and R4

26. The primary reliability objective in BAL-002-0 is to measure whether a balancing authority or Reserve Sharing Group meets the Disturbance Control Standard (DCS) criteria.<sup>17</sup> NERC explains that this is contained in Requirements R1 and R3 of the Reliability Standard and that the remaining Requirements provide useful guidance on how to achieve Requirements R1 and R3 or describe how to measure the criteria. Thus, according to NERC, Requirements R2 and R4 are administrative in nature. NERC further explains that the Requirements call for the specification of policy and therefore are explanatory or procedural in nature. NERC maintains that a violation is not expected to affect the electrical state of, capability of, or the ability to effectively monitor and control the Bulk-Power System. Therefore, NERC assigns a Violation Risk Factor of "lower" to these Requirements.

27. The Commission believes that Requirement R1 (the access and operation of Contingency Reserves to respond to disturbances), Requirement R2 (the specification of Contingency Reserve policy), and Requirements R2.1 (the minimum amount of reserve required)<sup>18</sup> and R3 (the activation of sufficient Contingency Reserve) are complementary. Requirement R2, in conjunction with R1 and R3, ensures that each balancing authority or reserve sharing group will have access to reserves appropriate for its specific system topology, load, and generation characteristics to ensure the continued reliable operation of the Bulk-Power System following system disturbances. While the Commission agrees with NERC that Requirements R1 and R3 are the primary Requirements, and, thus, merit a "high" Violation Risk Factor, the Commission disagrees with NERC's characterization of the remaining Requirements as providing "useful guidance on how to achieve Requirements R1 and R3." With respect to Requirement R2, the specification of a contingency reserve policy, sub-Requirement R2.1 establishes the minimum amount and type of contingency reserve that must be available to respond to a system disturbance.

<sup>&</sup>lt;sup>17</sup> The DCS is defined as the Reliability Standard that sets the time limit following a disturbance within which a balancing authority must return its area control error (ACE) to within a specified range.

<sup>&</sup>lt;sup>18</sup> A "high" Violation Risk Factor for BAL-002-0 Requirement R2.1 was approved by the Commission in the May 2007 Order, effective June 1, 2007.

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28. The Commission directed NERC to revise sub-Requirement R2.1, the minimum amount of contingency reserve, from "lower" to "high" in the May 2007 Order.<sup>19</sup> The Commission also asked for justification for main Requirement R2, the specification of contingency reserve policy, to which NERC had also assigned a "lower" Violation Risk Factor. The Commission believes that the sub-Requirements are essential for compliance with the primary Requirements of the Reliability Standard. In this case, contingency reserves must be sufficient and readily available to supplement insufficient or lost generation in a balancing authority's area following a system disturbance. The ability to constantly, within a certain tolerance, match load and generation and load is not matched within a balancing authority's area, the resulting imbalance could result in an undue burden on adjacent balancing authorities, and, if additional contingencies from disturbances.

29. Given this potential impact on the electrical state and control of the Bulk-Power System, the Commission does not believe the specification of policy is, in this instance, purely administrative in nature as NERC suggests. In addition, in the May 2007 Order, the Commission applied Guideline 2 to ensure a rational connection among the Violation Risk Factors assigned to related Requirements of the same Reliability Standard. In accord with this guideline, here, the Commission does not believe a "lower" Violation Risk Factor assigned to Requirement R2 is appropriate given that Requirement R2 is necessary for compliance with the related Requirements of BAL-002-0 that are properly assigned a "high" Violation Risk Factor. Thus, the Commission directs NERC to revise the Violation Risk Factor for BAL-002-0, Requirement BAL-002-0, Requirement R2 to "medium."

30. Requirement R4 establishes that a balancing authority must meet the Disturbance Recovery criteria for all of its reportable disturbances. The Commission does not agree that Requirement R4 is explanatory text or procedural in nature as NERC contends. Requirement R4 explicitly requires that the criterion, as stated in Requirement R4.1, must be met. The Disturbance Recovery Criterion ensures that the instantaneous difference between scheduled and actual interchange and ACE is returned to normal following every disturbance. While a failure to meet the Disturbance Recovery Criterion as required by Requirement R4 may not immediately result in cascading outages, the electrical state and the ability to effectively control the Bulk-Power System are compromised at that time for additional contingencies. Thus, Requirement R4 is not explanatory text or procedural in nature. Therefore, to ensure consistency within a Reliability Standard and given the potential reliability risk a violation of Requirement R4 would present to the Bulk-Power System, the Commission directs NERC to assign a Violation Risk Factor of "medium" to BAL-002-0, Requirement R4.

<sup>&</sup>lt;sup>19</sup> 119 FERC ¶ 61,145 at Appendix A.

#### Reliability Standard BAL-003-0, Requirements R2 and R3

31. A supply/demand imbalance between the Interconnection's generation output (including net imports) and load on a real-time basis will result in a deviation from the desired 60 Hertz optimum operating frequency of the Interconnection. All of the balancing authorities within an Interconnection must work together to correct a deviation. Because the ability of a given balancing authority to offset a frequency variation varies over time due to its operating conditions (i.e., its frequency response), a preset frequency bias setting is used as an estimate of its ability to react. The estimated amount of generation that each balancing authority must contribute for a 0.1 Hz deviation is its frequency bias setting.<sup>20</sup>

32. BAL-003-0, Requirement R2 requires each balancing authority to establish and maintain its preset estimated frequency bias setting as close as practical to, or greater than, the balancing authority's actual frequency response, i.e. its expected actual generation contribution. NERC states that, while Requirement R2 specifies a desired threshold for frequency bias settings, the bias calculation methodology selected is a procedural choice. For this purpose, the control performance standard  $(CPS)^{21}$  allows a balancing authority some flexibility in choosing its frequency bias setting to best match its load and generation frequency support obligations. NERC contends that the importance of this Requirement R2 is lessened when one considers the routine practice of utilizing the one percent bias setting as required by BAL-003-0, Requirement R5. Typically, the natural frequency response that is required of a balancing authority to deal with a supply/demand imbalance is even less than one percent of its peak load or generation. Therefore, NERC assigns Requirement R2 a "lower" Violation Risk Factor.

33. Requirement R3 requires each balancing authority to operate its AGC in the tie-line frequency bias mode, unless such operation is adverse to system or Interconnection reliability. The tie-line frequency bias mode of AGC obligates a balancing authority to meet its interchange schedules by adjusting generation as necessary to respond to the

<sup>21</sup> The control performance standard is the Reliability Standard that sets the limits of a balancing authority's ACE over a specified time period.

<sup>&</sup>lt;sup>20</sup> Hence for each 0.1 Hz deviation a balancing authority must be prepared to contribute at least an amount of generation equivalent to one percent of its peak load or, in the case of a generation-only balancing authority with only interchange obligations, one percent of its peak generation. Although, a generation-only balancing authority does not have any load, it still must balance its generation with its interchange with other balancing authorities.

above mentioned frequency deviations.<sup>22</sup> This Requirement also integrates the frequency bias into the actual control used to balance supply and demand.

34. In regard to Requirement R3, NERC states that CPS Requirements are covered by other Reliability Standards and concludes that as long as the CPS requirements are met there is no increased risk to the Bulk-Power System. Thus, NERC concludes that Requirement R3 is merely an explanatory statement on good control practices that supports meeting the CPS requirements. NERC states that CPS can be met through manual control or through an alternate AGC control mode. NERC adds that a balancing authority may have legitimate reasons for taking its AGC out of tie-line frequency bias mode or out of automatic control altogether, other than for Interconnection or system reliability problems. For example, a balancing authority may be aware of a temporary problem with an AGC-regulated generating unit that would not be automatically offset by other units under AGC control. In lieu of adjusting set points that establish output for the other AGC units for this short duration, the operator may elect to simply turn AGC off to all units and run them manually. Additionally, if an operator questions the accuracy of tieline readings, it may turn AGC off to investigate the matter. Accordingly, NERC assigns a Violation Risk Factor of "lower" to Requirement R3.

35. Requirement R5 defines the minimum frequency bias for a balancing authority that serves native load and Requirement R5.1 defines the minimum for a balancing authority that does not serve native load. NERC comments that the Violation Risk Factor assignments for Requirements R5 and R5.1 merit reconsideration to "medium" because a violation does affect the state or control of the system.

36. The Commission believes BAL-003-0, Requirements R2, R3, and the R5 series of Requirements complement each other and reflect the same potential "medium" risk to the Bulk-Power System.

37. The Commission notes that the stated purpose of Reliability Standard BAL-003-0 is to provide "a consistent method for calculating the frequency bias component of ACE." It is intended to inform the balancing authorities of what action they should take in balancing their demand and supply while interconnected. Accordingly, the Reliability Standard relates to differences in scheduled and actual tie-line flows as well as the relationship between frequency changes and power changes (the balancing authorities' frequency response).

38. In particular, the Commission believes that Requirement R2 completes the complementary nature of the subject Requirements by providing the relationship between the frequency bias (the number used in the ACE equation to control AGC) and frequency

<sup>&</sup>lt;sup>22</sup> The difference between actual interchange and scheduled interchange is addressed in BAL-006, Inadvertent Interchange.

response (the actual response of the Interconnection to a change in frequency). As noted above, Requirement R2 establishes that the frequency response shall be "as close as practical to" the frequency bias, which has a one percent of peak load, or for generationonly balancing authorities, a one percent of peak generation minimum MW value for each 0.1 Hz frequency deviation. Even if the balancing authority is routinely required to adjust its generation by a minimal amount that falls below the one percent threshold, the significance of this Requirement is not lessened. The Violation Risk Factor assignment represents the potential risk that the violation of a Requirement presents to the Bulk-Power System, not the potential of the Requirement to be violated. Thus, the ease with which the balancing authority may meet this threshold is not the issue. What is important is that balance is maintained and the impact on the Bulk-Power System if it is not. Not only does Requirement R2 require that the balancing authority establish a frequency bias setting. Requirement R2 requires action by the balancing authority to maintain it. This is not just a procedural choice. Failure to maintain a frequency bias setting has the potential to directly affect the electrical state or the capability of the Bulk-Power System in an adverse manner since the setting is used in the ACE equation to control AGC, which facilitates the matching of generation output to load within a balancing authority's area.<sup>23</sup>

39. With respect to Requirement R3, the Commission believes that a violation of R3 would not provide the timely and measured control necessary to balance supply and demand, thereby affecting the state or control of the system. The Commission agrees with NERC that Requirement R3 allows a balancing authority, for reliability reasons, to take its AGC out of tie-line frequency bias. However, while there may occasionally be legitimate reasons why a balancing authority would take its AGC out of tie-line frequency bias or out of automatic control other than for Interconnection reasons, those factors come into separate consideration during the violation severity determination that pertains to the extent to which a Requirement of a Reliability Standard is violated. And, as stated earlier, if NERC believes there could be alternate means of compliance, or legitimate reasons for non-compliance with this Requirement, NERC should use the Reliability Standards development process to address and implement the improvement to the applicable Requirement. The Commission does not believe it is appropriate to address an identified inadequacy or alternate means of compliance by assigning a "lower" Violation Risk Factor.

40. Accordingly, the Commission directs NERC to revise the Violation Risk Factor assignments of Requirements R2 and R3 to "medium."

<sup>&</sup>lt;sup>23</sup> The effect was quantified at the June 28, 2007 IEEE Power Engineering Society General Meeting in the form of a presentation that predicts firm load loss due to insufficient Frequency Response by 2015. The presentation is available at <u>http://www.ieee.org/power/</u>.

## **Reliability Standard BAL-004-0, Requirement R3**

When the actual system frequency drifts from the 60 Hertz optimum, the actual 41. amount of energy delivered will differ from the amount delivered if the frequency were continually maintained at exactly 60 Hertz. This energy difference is accommodated through time error correction procedures. BAL-004-0, Requirement R3 states that "each balancing authority, when requested, shall participate in a time error correction by one of the following methods." NERC has assigned a "lower" Violation Risk Factor to this Requirement, arguing that it is procedural in nature and does not represent an immediate threat to the integrity of the electric system. NERC states that balancing authorities are obligated to comply with a reliability coordinator directive per IRO-001-1 Requirement R8, which is assigned a "high" Violation Risk Factor, and that the Requirement R3 of BAL-004-0 is procedural with respect to *how* a balancing authority can comply with such a request. NERC further states that a violation by an entity would not present an immediate threat to reliability, as it would mean the time error correction would be in effect for a longer period of time but not necessarily at an increased risk to the Bulk-Power System.

42. The Commission does not find NERC's justification persuasive. First, the failure to participate in a time error correction is not necessarily captured by IRO-001-1, Requirement R8. While a balancing authority is obligated by IRO-001-1, Requirement R8 to comply with its reliability coordinator's directives in this regard, BAL-003, Requirement R3 obligates each balancing authority to comply with the directives of a specific reliability coordinator. Thus, the Requirement to participate in time error correction is not entirely covered by IRO-001, Requirement R8 as NERC contends.

43. Second, as the Commission points out in Order No. 693, "Requirement R3 states that each balancing authority, when requested, shall participate in a time error correction. The Commission believes that this is a critical requirement."<sup>24</sup> If a balancing authority does not participate in time error correction when called upon, coordinated actions with the other balancing authorities to correct the deviation will not reflect that balancing authority's contribution to the deviation and, thus, those corrective actions will not be fully effective, thereby adversely affecting the state of the Bulk-Power System. While in this case the Commission agrees that a violation of Requirement R3 would not present an immediate threat to reliability, Requirement R4 is not merely procedural in nature since full coordinated corrective actions are necessary for the effective control of the Bulk-Power System. The Commission, therefore, directs NERC to revise the Violation Risk Factor for BAL-004-0, Requirement R3 to "medium."

<sup>&</sup>lt;sup>24</sup> Order No. 693, at P 384.

### Reliability Standard BAL-005-0, Requirements R1.1, R1.2, and R1.3

44. Requirements R1.1, R1.2, and R1.3 require that each Generator Operator (R1.1), Transmission Operator (R1.2), and Load-Serving Entity (R1.3), ensure that its facilities or loads are included within the metered boundaries of a balancing authority area so that they can be fully accounted in each balancing authority for purposes of balancing supply and demand across an Interconnection. NERC states that the potential to violate Requirements R1.1, R1.2, and R1.3 is limited and can only exist if two adjacent balancing authorities use different metering points for their ACE and, in the case of Requirement R1.3, if the load is tapped directly from the tie-line circuit. NERC points out that common metering point requirements are covered in Requirement R12.1 of BAL-005-0. In the case of Requirement R1.1, NERC further explains that unless balancing authority areas are not using common metering points on the tie-line facilities, a generator will always be included within the metered boundaries of one balancing authority area pursuant to Requirement R12.1. Furthermore, at a minimum, a generator must be associated with a source balancing authority in order to schedule its products.

45. Based on the above explanation, NERC indicates that, while the concept that generating and transmission facilities, as well as loads, need to be accounted for is important, in practice the situation that could cause violation of Requirements R1.1, R1.2 or R1.3 is not likely since Requirement 12.1 and other scheduling requirements are in place to account for the generator and transmission facilities and loads and to indicate possible balancing authority area metering deficiencies. Thus, while conceptually valid, the situation that could result in non-compliance with these Requirements is already addressed elsewhere. NERC concludes, therefore, that these Requirements are duplicative and merit a "lower" Violation Risk Factor.

46. The Commission finds that NERC's justification that the potential to violate these Requirements only exists for one specific scenario and NERC's explanation that the Requirements are duplicative is not persuasive. As indicated above, a Violation Risk Factor assignment represents the potential risk that the violation of a Requirement presents to the Bulk-Power System, not the potential for the Requirement to be violated or duplicative. The Commission also disagrees with NERC's assertion that the situation that could result in the violation of these Requirements is already covered in BAL-005-0, Requirement R12.1. That Requirements R1.1 and R1.2 further specify the facilities that must be included within the common metered boundaries and Requirement 1.3 specifies the loads. Thus, these Requirements go beyond BAL-005-0, Requirement R12.1 and the aforementioned scheduling requirements and therefore are not duplicative.

47. The Commission believes that a violation of these Requirements is directly relevant to ensuring the proper function of AGC systems that automatically adjust balancing authorities' generation output to match load. The ability to match generation to load directly affects the monitoring and control of the Bulk-Power System. This is crucial to

avoiding undue burdens on other balancing authorities. Thus, the Commission directs NERC to revise the subject Violation Risk Factors to "medium."

#### **Reliability Standard BAL-005-0, Requirement R2**

48. BAL-005-0, Requirement R2 states that each balancing authority shall maintain regulating reserve that can be controlled by AGC to meet the control performance standard that was previously discussed in this order in connection with BAL-003-0, Requirements R.2 and R3. NERC assigns a "lower" Violation Risk Factor, arguing that, while meeting CPS is a core regulating requirement, it is covered by other Requirements, and that Requirement R2, in particular, focuses on *how* to meet CPS. Further, NERC contends that, while AGC is a preferred method to achieve CPS compliance, entities should not be penalized for meeting CPS requirements without the use of AGC. NERC states that while important, the risk to the Interconnection is not increased provided CPS is met through other methods or approaches. NERC further explains that a balancing authority may have legitimate reasons to take its units off regulation or take its energy management system off AGC that, under this Requirement, may, despite these legitimate reasons, subject them to a sanction for a violation.

49. The Commission agrees with NERC that the primary purpose of Requirement R2 is to specify how a balancing authority must meet CPS, *i.e.* through the use of AGC. However, as stated previously in this order, the Commission has recognized that there may be some Reliability Standards where the "how" is inextricably linked to the effectiveness of the Reliability Standard. Such is the case here. The thrust of this Requirement is not only that each balancing authority shall maintain regulating reserves but that the regulating reserve of each balancing authority must be controlled by AGC.

50. While theoretically, CPS can be met without the use of AGC, for example, when the AGC system is malfunctioning, the Commission believes, in practice, that AGC is the most dependable and effective means for multiple balancing authorities in an Interconnection to collectively meet CPS requirements in tandem while minimizing assistance from each other in this regard. Human reaction is neither fast enough nor dependable enough in this repetitive task to provide the immediate and continuous support to correct for Interconnection frequency drift. Further, the failure to use AGC presents a higher risk that immediate load shedding will need to be implemented after the sudden loss of generation or an unforeseen significant load increase and, thus, the failure to use AGC subjects the Bulk-Power System to a higher risk of instability. As noted above, while there occasionally may be legitimate reasons for a balancing authority taking its energy management system off AGC, this consideration appropriately pertains to the separate Violation Severity level determinations that consider the extent to which a Reliability Standard Requirement has been violated.

51. Accordingly, the Commission directs NERC to revise the Violation Risk Factor assignment for BAL-005-0, Requirement R2 to "high."

### **Reliability Standard BAL-005-0, Requirement R7**

52. BAL-005-0, Requirement R7 requires the balancing authority to operate AGC continuously unless such operation adversely impacts the reliability of the Interconnection. It further states that if AGC has become inoperative, the balancing authority shall use manual control to adjust generation to maintain the Net Scheduled Interchange. NERC assigns a "lower" Violation Risk Factor characterizing this as an explanatory statement on good control practices with regard to meeting CPS. NERC adds that whether a balancing authority meets CPS through AGC, through manual control, or through some alternate AGC control mode, the important point is that CPS is met. NERC states that CPS requirements are already covered by other Reliability Standards and this Requirement is merely supportive to those. NERC adds that while important, the risk to the Interconnection is not increased, provided CPS is met through other methods or approaches.

53. NERC further states that a balancing authority may have legitimate reasons for taking its AGC out of tie-line frequency bias or out of automatic control other than for Interconnection or system reliability problems. A balancing authority may be aware of a temporary problem with a regulating unit that would cause other units to respond if on AGC control for the brief timeframe until the problem was corrected. In lieu of adjusting set points for this short duration, the operator may elect to turn AGC off. Additionally, if an operator questions the accuracy of tie-line readings, he or she may turn AGC off of automatic in order to investigate.

54. The Commission disagrees with NERC's assignment of a "lower" Violation Risk Factor to BAL-005-0, Requirement R7. This is a clear Requirement and not explanatory text as NERC states. As the Commission explains in the discussion of BAL-003-0, Requirement R3, AGC provides the equivalent of automatic voltage regulation for real power output to automatically adjust generation output when there is a mismatch between generation and load in a balancing authority. AGC ensures against undue burden being placed on other balancing authorities following a loss of generation. While legitimate reasons may exist for a balancing authority to take its AGC out of tie-line frequency bias or out of automatic control other than for Interconnection or system reliability problems, this is not an issue that is addressed through the assignment of a "lower" Violation Risk Factor.

55. Because a violation of Requirement R7 directly affects the monitoring and control of the Bulk-Power System, the Commission directs NERC to revise the subject Violation Risk Factor to "medium."

### Reliability Standard BAL-005-0, Requirement R17

56. BAL-005-0, Requirement R17 establishes an obligation for the calibration and checking of time and frequency devices installed on the Bulk-Power System to facilitate a

balancing authority's ability to keep supply and demand in balance through matching generation with load. Requirement R17 requires a balancing authority to at least annually check and calibrate its time error and frequency related devices against a common reference. The balancing authority shall adhere to the minimum values listed in the Reliability Standards. NERC assigns a "lower" Violation Risk Factor to Requirement R17, stating that a violation is not expected to affect the electrical state of, capability of, or the ability to effectively monitor and control the Bulk Power System. NERC states that while it is a good practice to check and calibrate these devices, the selection of timeframes for these purposes is arbitrary. NERC further states that, as balancing authorities have multiple frequency devices, a miscalibration of a single device would not put the Interconnection at an elevated risk. In addition, Requirement R16, which requires the flagging of bad data, provides another method to track errant frequency values. Finally, NERC adds, many modern frequency devices do not have the capability to be calibrated, but are merely discarded if out of range.

57. The Commission notes that the requirement to at least annually calibrate and check frequency devices is based on industry consensus reached during the Reliability Standards development process. While some balancing authorities may have multiple frequency devices, there is no requirement to have multiple devices, and this is not otherwise relevant as each of these devices, to be useful, still needs to be calibrated to ensure accuracy. The ability of a balancing authority to actually balance supply and demand is only as good as the accuracy of its time and frequency devices. A balancing authority with a systematic error in its frequency devices could record a CPS that indicates proper balancing of supply and demand while in reality it is "leaning" on the Interconnection to make up for an actual supply shortfall or "pushing" on the Interconnection with an excess of generation supply that exceeds the balancing authority's internal demand. Either of these outcomes is undesirable and can adversely affect the electrical state of the Bulk-Power System.

58. The Commission has already approved "medium" Violation Risk Factor assignments for other maintenance and testing Requirements for Bulk-Power System equipment which are equivalent to the "calibration and checking" of Bulk-Power System equipment pursuant to Requirement R17, for example, PRC-008-0, Requirement R2 which establishes the testing and maintenance for undervoltage load shedding systems. Both PRC-008-0 Requirement R2 and BAL-005-0, Requirement R17 address the testing and maintenance of systems necessary to assure the reliable operation of the Bulk-Power System. To ensure consistency among Reliability Standards with similar reliability Requirements, the Commission directs NERC to revise the Violation Risk Factor for BAL-005-0, Requirement R17 to "medium."

### Reliability Standard FAC-008-1, Requirements R1.1, R1.2, R1.2.1, and R1.2.2

59. FAC-008-1, Requirements R1.1, R1.2, R1.2.1, and R1.2.2 contain the specifications for the methodology used for developing a facility rating for solely-owned and jointly-owned facilities. NERC views these Requirements as supportive of other Requirements in

FAC-008-1 and characterizes them as the documentation of a methodology, a task NERC represents as administrative. NERC states that FAC-009-1 requires development of facility ratings in accordance with the methodology and is appropriately assigned a "medium" Violation Risk Factor assignment. NERC contends that not having a documented methodology is not expected to affect the electrical state of, capability of, or the ability to effectively monitor and control the Bulk-Power System.

60. The Commission does not find NERC's explanation persuasive. The Commission stated in Order No. 693 that identifying the limiting elements of facilities enhances reliability by providing operators specific information about the limiting elements and therefore allowing them to assess the risks associated with circuit loadings.<sup>25</sup> Although the Commission approved Reliability Standard FAC-008-1, it directed NERC to develop modifications to include the requirement for the documentation of underlying assumptions and methods used to determine normal and emergency facility ratings.<sup>26</sup>

The Commission disagrees with NERC's characterization of these Reliability 61. Standards as merely administrative tasks. While these Requirements indeed support Requirement R1, more importantly, they comprise the basis for which facility ratings will be determined in Reliability Standard FAC-009-1. Contrary to NERC's assertion, the absence of a documented methodology may adversely affect the electrical state of, capability of, or the ability to effectively monitor and control the Bulk-Power System because FAC-008-1 is the only Reliability Standard where the elements used to develop facility ratings is established. The elements, and subsequently developed methodology, are directly relevant to the effective monitoring of the Bulk-Power System. For example, the investigation following the August 14, 2003 blackout determined that there are significant variations in how the ratings of transmission lines are calculated.<sup>27</sup> The Final Blackout Report concluded that these variations create unnecessary and unacceptable uncertainties about the safe carrying capacity of individual lines on the transmission networks.<sup>28</sup> To address these "unnecessary and unacceptable uncertainties" that are directly relevant to the efficient monitoring of the Bulk-Power System, Final Blackout Report Recommendation No. 27 requires the development of enforceable standards for transmission line ratings.<sup>29</sup>

<sup>25</sup> *Id.* P 755.
<sup>26</sup> *Id.* P 771.
<sup>27</sup> Final Blackout Report at 162.
<sup>28</sup> *Id.*<sup>29</sup> *Id.*

62. The Commission approved a "medium" Violation Risk Factor for Reliability Standard FAC-009-1, entitled "Establish and Communicate Facility Ratings." To ensure consistency and a rational connection between similar Requirements of Reliability Standards, the Commission directs NERC to revise the Violation Risk Factors for FAC-008-1, Requirements R1.1, R1.2, R1.2.1, and R1.2.2 to "medium."

### Reliability Standard TOP-006-1, Requirement R3

63. TOP-006-1, Requirement R3 states that each reliability coordinator, transmission operator, and balancing authority shall provide appropriate technical information concerning protective relays to its operating personnel. NERC has assigned a "lower" Violation Risk Factor to this Requirement, stating that "appropriate technical information" is ambiguous.

64. In Order No. 693 the Commission directed NERC to provide additional clarification for the "appropriate technical information"<sup>30</sup> but found that the term was sufficiently clear and objective to provide guidance for compliance.<sup>31</sup> The question of ambiguity should be addressed in the determination of whether a violation has occurred rather than in the determination of the level of risk a violation poses to the Bulk-Power System. The assignment of a Violation Risk Factor denotes the latter. The stated purpose of Reliability Standard TOP-006-1, Requirement R3 is to "ensure critical reliability parameters are monitored in real-time." Requirement R3 contains both the lesser risk reliability objective of providing information and the higher risk reliability objective of providing information for assigning a "lower" Violation Risk Factor to this Requirement.

65. Further, as stated in the May 2007 Order, the Commission expects consistency within a Reliability Standard. Requirement R3 requires appropriate technical information concerning protective relays be provided by reliability coordinators, transmission operators, and balancing authorities. The Commission views the provision of this information similar to that required in TOP-006-1, Requirement R1, which requires that each transmission operator and balancing authority shall know the status of all generation and transmission resources available for use. The Commission believes each of these Requirements is relevant to ensuring situational awareness, the absence of which was identified as a principal cause of the August 14, 2003 blackout.<sup>32</sup> Further, given that the

<sup>30</sup> Order No. 693 at P 1665.

<sup>31</sup> See Order No. 693 at P 1659; see also Mandatory Reliability Standards for the Bulk-Power System, 71 FR 64770 at P 1017 (Nov. 3, 2006), FERC Stats. & Regs. ¶32,608 (Oct. 20, 2006).

<sup>32</sup> Final Blackout Report at 159.

Commission approved a "medium" Violation Risk Factor assignment for TOP-006, Requirement R1, a "lower" Violation Risk Factor for Requirement R3 is inconsistent. Therefore, the Commission directs NERC to revise the subject Violation Risk Factor to "medium."

#### **Conclusion**

66. In sum, after reviewing the additional information provided by NERC, the Commission accepts NERC's explanation of 43 of the 74 Violation Risk Factor assignments identified in the May 2007 Order and directs modifications to 31 Violation Risk Factors, as indicated in the summary chart provided in Appendix B, effective as of the date of this order. The Commission directs NERC to submit, within 30 days, a compliance filing containing these modifications incorporated into a revised version of the complete Violation Risk Factor matrix encompassing each Commission-approved Reliability Standard.

67. NERC points out that several of the 74 Reliability Standards identified in Appendix B to the May 2007 Order are actively being reviewed as part of an existing Reliability Standards development project. In assigning Violation Risk Factors to these Reliability Standards, NERC should use the guidelines identified in the May 2007 Order.

The Commission orders:

(A) NERC's August 16, 2007 compliance filing is hereby approved as modified effective as of the date of this order, as discussed in the body of this order.

(B) NERC is hereby directed to file the modified Violation Risk Factors as identified in Appendix B within 30 days of the date of this order, as discussed in the body of this order.

By the Commission.

(SEAL)

Kimberly D. Bose, Secretary.

## Appendix A Levels of Violation Risk Factors<sup>33</sup>

NERC defines the three levels of risk to the Bulk-Power System:

- High Risk Requirement: (a) is a requirement that, if violated, could directly cause or contribute to Bulk-Power System instability, separation, or a cascading sequence of failures, or could place the Bulk-Power System at an unacceptable risk of instability, separation, or cascading failures; or (b) is a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly cause or contribute to Bulk-Power System instability, separation, or a cascading sequence of failures, or could place the Bulk-Power System at an unacceptable risk of instability, separation, or cascading failures, or could place the Bulk-Power System at an unacceptable risk of instability, separation, or cascading failures, or could place the Bulk-Power System at an unacceptable risk of instability, separation, or cascading failures, or could hinder restoration to a normal condition.
- Medium Risk Requirement: (a) is a requirement that, if violated, could directly affect the electrical state or the capability of the Bulk-Power System, or the ability to effectively monitor and control the Bulk-Power System, but is unlikely to lead to Bulk-Power System instability, separation, or cascading failures; or (b) is a requirement in a planning time frame that, if violated, could, under emergency, abnormal, or restorative conditions anticipated by the preparations, directly affect the electrical state or capability of the Bulk-Power System, or the ability to effectively monitor, control, or restore the Bulk-Power System, but is unlikely, under emergency, abnormal, or restore the Bulk-Power System, but is unlikely, under emergency, abnormal, or restore the Bulk-Power System, but is unlikely, under emergency, abnormal, or restoration conditions anticipated by the preparations, to lead to Bulk-Power System instability, separation, or cascading failures, nor to hinder restoration to a normal condition.
- Lower Risk Requirement: is administrative in nature and (a) is a requirement that, if violated, would not be expected to affect the electrical state or capability of the Bulk-Power System, or the ability to effectively monitor and control the Bulk-Power System; or (b) is a requirement in a planning time frame that, if violated, would not, under the emergency, abnormal, or restorative conditions anticipated by the preparations, be expected to affect the electrical state or capability of the Bulk-Power System, or the ability to effectively monitor, control, or restore the Bulk-Power System.

<sup>&</sup>lt;sup>33</sup> See May 2007 Order, 119 FERC at P 9.

# Appendix B

## **Commission Directed Revisions to Violation Risk Factor Assignments**

Reliability		<b>Commission Violation Risk Factor</b>
Standard	Requirement	Revision
BAL-001-0	R1.	Medium
BAL-001-0	R2.	Medium
BAL-002-0	R2.	Medium
BAL-002-0	R4.	Medium
BAL-003-0	R2.	Medium
BAL-003-0	R3.	Medium
BAL-003-0	*R5.	Medium
BAL-003-0	*R5.1.	Medium
BAL-004-0	R3.	Medium
BAL-005-0	R1.1.	Medium
BAL-005-0	R1.2.	Medium
BAL-005-0	R1.3.	Medium
BAL-005-0	R2.	High
BAL-005-0	R7.	Medium
BAL-005-0	R17.	Medium
EOP-002-2	*R2.	High
EOP-002-2	*R3.	High
EOP-002-2	*R4.	High
EOP-002-2	*R5.	High
EOP-005-1	*R6.	High
EOP-005-1	*R7.	High
EOP-005-1	*R8.	High
EOP-008-0	*R1.	High
EOP-008-0	*R1.4.	High
FAC-008-1	R1.1.	Medium
FAC-008-1	R1.2.	Medium
FAC-008-1	R1.2.1.	Medium
FAC-008-1	R1.2.2.	Medium
PRC-022-1	*R1.	Medium
TOP-006-1	R3.	Medium
TOP-006-1	*R4.	Medium

\*items which NERC identifies as meriting reconsideration