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UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

18 CFR Part 40

[Docket Nos. RM08-19-000, RM08-19-001, RM09-5-000, RM06-16-005]

Mandatory Reliability Standards for the Calculation of Available Transfer Capability, Capacity Benefit Margins, Transmission Reliability Margins, Total Transfer Capability, and Existing Transmission Commitments and Mandatory Reliability Standards for the Bulk-Power System

(Issued March 19, 2009)

AGENCY: Federal Energy Regulatory Commission.

ACTION: Notice of Proposed Rulemaking.

SUMMARY: Pursuant to section 215 of the Federal Power Act, the Commission proposes to approve six Modeling, Data, and Analysis Reliability Standards submitted to the Commission for approval by the North American Electric Reliability Corporation, the Electric Reliability Organization certified by the Commission. The proposed Reliability Standards require certain users, owners, and operators of the Bulk-Power System to develop consistent methodologies for the calculation of available transfer capability or available flowgate capability.

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 by any of the following methods:

- Agency Web Site: <http://ferc.gov>. Documents created electronically using word processing software should be filed in native applications or print-to-PDF format and not in a scanned format.
- Mail/Hand Delivery: Commenters unable to file comments electronically must mail or hand deliver an original and 14 copies of their comments to: Federal Energy Regulatory Commission, Secretary of the Commission, 888 First Street, N.E., Washington, D.C. 20426.

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SUPPLEMENTARY INFORMATION:

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NOTICE OF PROPOSED RULEMAKING

(Issued March 19, 2009)

1. Pursuant to section 215 of the Federal Power Act (FPA),¹ the Federal Energy Regulatory Commission (Commission) proposes to approve, and direct modifications to, six Modeling, Data and Analysis (MOD) Reliability Standards submitted to the Commission by the North American Electric Reliability Corporation (NERC), which has been certified by the Commission as the Electric Reliability Organization (ERO) for the United States.² The proposed Reliability Standards pertain to methodologies for the consistent and transparent calculation of available transfer capability or available flowgate capability. The Commission also proposes to retire the existing MOD Reliability Standards replaced by the versions proposed here. The retirement of these

¹ 16 U.S.C. 824o.

² North American Electric Reliability Corp., 116 FERC ¶ 61,062 (ERO Certification Order), order on reh'g & compliance, 117 FERC ¶ 61,126 (ERO Rehearing Order) (2006), appeal docketed sub nom. Alcoa, Inc. v. FERC, No. 06-1426 (D.C. Cir. Dec. 29, 2006).

Reliability Standards would be effective upon the effective date of the proposed MOD Reliability Standards.

2. In Order No. 890, the Commission found that the lack of a consistent and transparent methodology for calculating available transfer capability is a significant problem because the calculation of available transfer capability, which varies greatly depending on the criteria and assumptions used, may allow the transmission service provider to discriminate in subtle ways against its competitors.³ The calculation of available transfer capability is one of the most critical functions under the open access transmission tariff (OATT) because it determines whether transmission customers can access alternative power supplies. Improving transparency and consistency of available transfer capability calculation methodologies will eliminate transmission service providers' wide discretion in calculating available transfer capability and ensure that customers are treated fairly in seeking alternative power supplies. The Commission believes that the Reliability Standards proposed here address the potential for undue discrimination by requiring industry-wide transparency and increased consistency regarding all components of the available transfer capability calculation methodology and certain definitions, data, and modeling assumptions.

³ Preventing Undue Discrimination and Preference in Transmission Service, Order No. 890, 72 FR 12266 (Mar. 15, 2007), FERC Stats. & Regs. ¶ 31,241 (2007), order on reh'g, Order No. 890-A, 73 FR 2984 (Jan. 16, 2008), FERC Stats & Regs. ¶ 31,261 (2007), order on reh'g, Order No. 890-B, 73 FR 39092 (July 8, 2008), 123 FERC ¶ 61,299 (2008), order on reh'g, Order No. 890-C, 126 FERC ¶ 61,228 (2009).

3. The Commission proposes to approve the Reliability Standards filed by NERC in this proceeding as just, reasonable, not unduly discriminatory or preferential, and in the public interest. These Reliability Standards represent a step forward in eliminating the broad discretion previously afforded transmission service providers in the calculation of available transfer capability. The proposed Reliability Standards will enhance transparency in the calculation of available transfer capability, requiring transmission operators and transmission service providers to calculate available transfer capability using a specific methodology that is both explicitly documented and available to reliability entities who request it.⁴ The proposed Reliability Standards also require documentation of the detailed representations of the various components that comprise the available transfer capability equation, including the specification of modeling and risk assumptions and the disclosure of outage processing rules to other reliability entities. These actions will make the processes to calculate available transfer capability and its various components more transparent, which in turn will allow the Commission and others to ensure consistency in their application.

⁴ Reliability entities include: transmission service providers, planning coordinators, reliability coordinators, and transmission operators as those entities are defined in the NERC Glossary. Standards adopted by the North American Energy Standards Board (NAESB) govern disclosure of this information to other entities. The Commission addresses the proposed NAESB business practices in a Notice of Proposed Rulemaking issued concurrently in Docket No. RM05-5-013. See Standards for Business Practices and Communication Protocols for Public Utilities, 126 FERC ¶ 61,248 (2009).

I. Background

A. Order Nos. 888 and 889

4. In April 1996, as part of its statutory obligation under sections 205 and 206 of the FPA⁵ to remedy undue discrimination, the Commission adopted Order No. 888 prohibiting public utilities from using their monopoly power over transmission to unduly discriminate against others.⁶ In that order, the Commission required all public utilities that own, control or operate facilities used for transmitting electric energy in interstate commerce to file open access non-discriminatory transmission tariffs that contained minimum terms and conditions of non-discriminatory service. It also obligated such public utilities to “functionally unbundle” their generation and transmission services. This meant that public utilities had to take transmission service (including ancillary services) for their own new wholesale sales and purchases of electric energy under the open access tariffs, and to separately state their rates for wholesale generation, transmission and ancillary services.⁷ Each public utility was required to file the pro

⁵ 16 U.S.C. 824d, 824e.

⁶ Promoting Wholesale Competition Through Open Access Non-discriminatory Transmission Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities, Order No. 888, 61 FR 21540 (May 10, 1996), FERC Stats. & Regs. ¶ 31,036 (1996), order on reh’g, Order No. 888-A, 62 FR 12274 (Mar. 14, 1997), FERC Stats. & Regs. ¶ 31,048 (1997), order on reh’g, Order No. 888-B, 81 FERC ¶ 61,248 (1997), order on reh’g, Order No. 888-C, 82 FERC ¶ 61,046 (1998), aff’d in relevant part sub nom. Transmission Access Policy Study Group v. FERC, 225 F.3d 667 (D.C. Cir. 2000), aff’d sub nom. New York v. FERC, 535 U.S. 1 (2002).

⁷ This is known as “functional unbundling” because the transmission element of a wholesale sale is separated or unbundled from the generation element of that sale, although the public utility may provide both functions.

forma OATT included in Order No. 888 without any deviation (except a limited number of terms and conditions that reflect regional practices).⁸ After their OATTs became effective, public utilities were allowed to file, pursuant to section 205 of the FPA, deviations that were consistent with or superior to the pro forma OATT's terms and conditions.

5. The same day it issued Order No. 888, the Commission issued a companion order, Order No. 889,⁹ addressing the separation of vertically integrated utilities' transmission and merchant functions, the information transmission service providers were required to make public, and the electronic means they were required to use to do so. Order No. 889 imposed Standards of Conduct governing the separation of, and communications between, the utility's transmission and wholesale power functions, to prevent the utility from giving its merchant arm preferential access to transmission information. All public utilities that owned, controlled or operated facilities used in the transmission of electric energy in interstate commerce were required to create or participate in an Open Access

⁸ See Order No. 888, FERC Stats. & Regs. ¶ 31,036 at 31,769-70 (noting that the pro forma OATT expressly identified certain non-rate terms and conditions, such as the time deadlines for determining available transfer capability in section 18.4 or scheduling changes in sections 13.8 and 14.6, that may be modified to account for regional practices if such practices are reasonable, generally accepted in the region, and consistently adhered to by the transmission service provider).

⁹ Open Access Same-Time Information System (Formerly Real-Time Information Networks) and Standards of Conduct, Order No. 889, 61 FR 21737 (May 10, 1996), FERC Stats. & Regs. ¶ 31,035 (1996), order on reh'g, Order No. 889-A, FERC Stats. & Regs. ¶ 31,049 (1997), order on reh'g, Order No. 889-B, 81 FERC ¶ 61,253 (1997).

Same-Time Information System (OASIS) that was to provide existing and potential transmission customers the same access to transmission information.

6. Among the information public utilities were required to post on their OASIS was the transmission service provider's calculation of available transfer capability. Though the Commission acknowledged that before-the-fact measurement of the availability of transmission service is "difficult," the Commission concluded that it was important to give potential transmission customers "an easy-to-understand indicator of service availability."¹⁰ Because formal methods did not then exist to calculate available transfer capability and total transfer capability, the Commission encouraged industry efforts to develop consistent methods for calculating available transfer capability and total transfer capability.¹¹ Order No. 889 ultimately required transmission service providers to base their calculations on "current industry practices, standards and criteria" and to describe their methodology in an Attachment C to their tariffs.¹² The Commission noted that the requirement that transmission service providers purchase only available transfer capability that is posted as available "should create an adequate incentive for them to calculate available transfer capability and total transfer capability as accurately and as uniformly as possible."¹³

¹⁰ Order No. 889, FERC Stats. & Regs. ¶ 31,035 at 21749.

¹¹ Id. at 21750.

¹² Id.

¹³ Id.

7. Although Order No. 888 obligated each public utility to calculate the amount of transfer capability on its system available for sale to third parties, the Commission did not standardize the methodology for calculating available transfer capability, nor did it impose any specific requirements regarding the disclosure of the methodologies used by each transmission service provider.¹⁴ As a result, a variety of available transfer capability calculation methodologies have been used with very few clear rules governing their use. Moreover, there was often very little transparency about the nature of these calculations, given that many transmission service providers historically filed only summary explanations of their available transfer capability methodologies in Attachment C to their OATTs.

B. Order Nos. 890 and 693

8. Section 215 of the FPA requires a Commission-certified ERO to develop mandatory and enforceable Reliability Standards, which are subject to Commission review and approval. If approved, the Reliability Standards are enforced by the ERO, subject to Commission oversight, or by the Commission independently. As the ERO, NERC worked with industry to develop Reliability Standards improving consistency and transparency of available transfer capability calculation methodologies. On April 4, 2006, as modified on August 28, 2006, NERC submitted to the Commission a petition seeking approval of 107 proposed Reliability Standards, including 23 Reliability Standards pertaining to Modeling, Data and Analysis (MOD). The MOD group of

¹⁴ Order No. 888, FERC Stats. & Regs. ¶ 31,036 n.610.

Reliability Standards is intended to standardize methodologies and system data needed for traditional transmission system operation and expansion planning, reliability assessment and the calculation of available transfer capability in an open access environment.

9. On February 16, 2007, the Commission issued Order No. 890, which addressed and remedied opportunities for undue discrimination under the pro forma OATT adopted in Order No. 888. Among other things, the Commission required industry-wide consistency and transparency of all components of available transfer capability calculation and certain definitions, data and modeling assumptions. The Commission concluded that the lack of industry-wide standards for the consistent calculation of available transfer capability poses a threat to the reliable operation of the Bulk-Power System, particularly with respect to the inability of one transmission service provider to know with certainty its neighbors' system conditions affecting its own available transfer capability values. As a result of this reliability concern, the Commission asserted that the proposed available transfer capability reforms were also supported by FPA section 215, through which the Commission has the authority to direct the ERO to submit a Reliability Standard that addresses a specific matter.¹⁵ Thus, the Commission in Order No. 890 directed industry to develop Reliability Standards, using the ERO's Reliability Standards development procedures, that provide for consistency and transparency in the methodologies used by transmission owners to calculate available transfer capability.

¹⁵ FPA section 215(d)(5). 16 U.S.C. 824o(d)(5).

10. The Commission stated in Order No. 890 that the available transfer capability-related Reliability Standards should, at a minimum, provide a framework for available transfer capability, total transfer capability and existing transmission commitments calculations. The Commission did not require a single computational process for calculating available transfer capability because, among other things, it found that the potential for discrimination and decline in reliability level does not lie primarily in the choice of an available transfer capability calculation methodology, but rather in the consistent application of its components, input and exchange data, and modeling assumptions.¹⁶ The Commission found that, if all of the available transfer capability components, and certain data inputs and assumptions are consistent, the three available transfer capability calculation methodologies would produce predictable and sufficiently accurate, consistent, equivalent and replicable results.¹⁷

11. On March 16, 2007, the Commission issued Order No. 693, approving 83 of the 107 Reliability Standards filed by NERC in April 2006.¹⁸ Of the 83 approved Reliability Standards, the Commission approved ten MOD Reliability Standards.¹⁹ However, the Commission directed NERC to prospectively modify nine of the ten approved MOD

¹⁶ Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 1029.

¹⁷ Id. P 1030.

¹⁸ Mandatory Reliability Standards for the Bulk-Power System, Order No. 693, 72 FR 16416 (Apr. 4, 2007), FERC Stats. & Regs. ¶ 31,242, order on reh'g, Order No. 693-A, 120 FERC ¶ 61,053 (2007).

¹⁹ Id. P 1010.

Reliability Standards to be consistent with the requirements of Order No. 890.²⁰ The Commission reiterated the requirement from Order No. 890 that all available transfer capability components (i.e., total transfer capability, existing transmission commitments, capacity benefit margin, and transmission reliability margin) and certain data input, data exchange, and assumptions be consistent and that the number of industry-wide available transfer capability calculation formulas be few in number, transparent and produce equivalent results.²¹ The Commission directed public utilities, working through the NERC Reliability Standards and NAESB business practices development processes, to produce workable solutions to implement the available transfer capability-related reforms adopted by the Commission. The Commission also deferred action on 24 proposed Reliability Standards, which did not contain sufficient information to enable the Commission to propose a disposition.²²

II. Proposed Reliability Standards

12. In response to the requirements of Order No. 890 and related directives of Order No. 693,²³ on August 29, 2008, NERC submitted for Commission approval five MOD

²⁰ Id.

²¹ Id. P 1029-30; see also Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 207.

²² Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 287-303. Some of these Reliability Standards required the regional reliability organizations to develop criteria for use by users, owners or operators within each region. The Commission set aside such Reliability Standards and directed NERC to provide additional details prior to considering them for approval. Id. P 287-303.

²³ The Reliability Standards were originally due on December 10, 2007. See Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 223. NERC requested additional time
(continued...)

Reliability Standards: MOD-001-1 – Available Transmission System Capability, MOD-008-1 - TRM Calculation Methodology (hereinafter Transmission Reliability Margin Methodology), MOD-028-1 Area Interchange Methodology, MOD-029-1 - Rated System Path Methodology, and MOD-030-1 - Flowgate Methodology.²⁴ On November 21, 2008, NERC submitted for Commission approval a sixth MOD Reliability Standard: MOD-004-1 - Capacity Benefit Margin (hereinafter Capacity Benefit Margin Methodology). On March 6, 2009, NERC submitted for Commission approval: MOD-030-2 – a revised Flowgate Methodology Reliability Standard and withdrew its request for approval of MOD-030-1.

13. The Available Transmission System Capability Reliability Standard (MOD-001-1) serves as an “umbrella” Reliability Standard that requires each applicable entity to select and implement one or more of the three available transfer capability methodologies found in MOD-028-1, MOD-029-1, or MOD-030-2. MOD-004-1 and MOD-008-1 provide for the calculation of capacity benefit margin and transmission reliability margin, which are inputs into the available transfer capability calculation. If approved, NERC states that its

to develop the Reliability Standards in order to address concerns raised in its stakeholder process. See NERC November 21, 2007 Request for Extension of Time, Docket Nos. RM05-17-000, et. al., at 7. The Commission ultimately granted three requests for extension of time, extending NERC’s deadline by over seven months, so that NERC could develop the Reliability Standards proposed here.

²⁴ NERC designates the version number of a Reliability Standard as the last digit of the Reliability Standard number. Therefore, version zero Reliability Standards end with “-0” and version one Reliability Standards end with “-1.”

filing wholly addresses eight of the 24 Reliability Standards that the Commission did not approve in Order No. 693 because further information was needed.

14. NERC contends that the proposed Reliability Standards will have no undue negative effect on competition, nor will they unreasonably restrict available transfer capability on the Bulk-Power System beyond any restriction necessary for reliability and do not limit use of the Bulk-Power System in an unduly preferential manner. NERC contends that the increased rigor and transparency introduced in the development of available transfer capability and available flowgate capability calculations serve to mitigate the potential for undue advantages of one competitor over another. Under the proposed Reliability Standards, applicable entities are prohibited from making transmission capability available on a more conservative basis for commercial purposes than for either planning for native load or use in actual operations, thereby mitigating the potential for differing treatment of native load customers and transmission service customers. NERC states that data exchange, which has been heretofore voluntary, is now mandatory and it is required that the data be used in the available transfer capability/available flowgate capability calculations. None of these requirements exist in the current available transfer capability-related Reliability Standards. NERC contends that these improvements help the Commission achieve many of the primary objectives of Order No. 890 regarding transparency, standardization and consistency in available transfer capability calculations.

15. NERC states that all three methodology Reliability Standards (MOD-028-1, MOD-029-1, and MOD-030-2) share fundamental equations that, while mathematically

equivalent, are written in slightly different forms. As a result, the manner of determining the components varies between methodologies. The employment of any two methodologies, given the same inputs, may produce similar, but not identical, results. As noted by NERC there are fundamental differences in the proposed methodologies that can keep them from producing identical results. For example, the rated system path methodology does not use the same frequent simulations of power flow used by the other two methodologies. NERC states that the rated system path methodology therefore will rarely generate numbers that identically match those determined by an entity using the other two methodologies.

16. NERC proposes to make the MOD Reliability Standards proposed here applicable to transmission operators and transmission service providers. NERC states that the drafting team considered applying the Reliability Standards to the transmission operator instead of the transmission service provider. According to NERC, the Reliability Standard drafting team believes that the NERC Functional Model supports a determination that responsibility for several of the requirements lies with the transmission operator.²⁵ NERC also states that a number of entities argued in the NERC drafting process that the transmission service provider actually undertakes efforts to meet those requirements. NERC states that the drafting team believes this points to a delegation of

²⁵ NERC has developed a “Functional Model” that defines the set of functions that must be performed to ensure the reliability of the Bulk-Power System. The Functional Model identifies 14 functions and the name of a corresponding entity responsible for fulfilling each function. NERC’s functional model can be found at <http://www.nerc.com/page.php?cid=2|247|108>.

tasks to a larger entity that is the byproduct of a regional transmission organization and its regional transmission tariff. Accordingly, NERC states that the MOD Reliability Standards retain the use of transmission operators in the Reliability Standards, and explained to entities how delegation or joint registration organizations address the compliance implications of the assignment.

A. Coordination with Business Practice Standards

17. NERC states that it has worked closely and collaboratively with NAESB, conducting numerous joint meetings and conference calls, to develop the Reliability Standards proposed here and related NAESB business-practice standards.²⁶ NERC states that the focus of the proposed Reliability Standards is to address only the reliability aspects of available transfer capability and available flowgate capability and not to address the commercial aspects of available transfer capability, except to the extent that commercial system availability closely matches actual remaining system capability. The associated NAESB business practice standards are intended to focus on the competitive aspects of these processes. Through implementation of these Reliability Standards, access to the grid may indirectly be restricted, but NERC states that NAESB business practices and Commission orders related to these Reliability Standards ensure that any limitation will be applied in a manner that ensures open access and promotes competition.

²⁶ As noted above, the Commission addresses the proposed NAESB business practices in a Notice of Proposed Rulemaking issued concurrently in Docket No. RM05-5-013.

18. According to NERC, it and NAESB have coordinated the development of these business practices and the Reliability Standards to ensure that there are no duplications or double counting between the business practice standards and the Reliability Standards, and they will continue to coordinate as necessary so that the available transfer capability-related Reliability Standards are compatible and consistent.

B. Available Transmission System Capability, MOD-001-1

19. NERC proposes the Available Transmission System Capability Reliability Standard (MOD-001-1) as part of a set of Reliability Standards which are designed to work together to support a common reliability goal: to ensure that transmission service providers maintain awareness of available system capability and future flows on their own systems as well as those of their neighbors. NERC states that, historically, differences in implementation of available transfer capability methodologies and a lack of coordination between transmission service providers have resulted in cases where available transfer capability has been overestimated. As a result, systems have been oversold, resulting in potential or actual system operating limits and interconnection reliability operating limits being exceeded. NERC states that MOD-001-1 is the foundational Reliability Standard that obliges entities to select a methodology and then calculate available transfer capability or available flowgate capability using that methodology, thereby ensuring that the determination of available transfer capability is accurate and consistent across North America and that the transmission system is neither oversubscribed nor underutilized.

20. NERC states that, unlike the current set of voluntary available transfer capability standards, MOD-001-1 requires adherence to a specific documented and transparent methodology. NERC states that it requires applicable entities to calculate available transfer capability on a consistent schedule and for specific timeframes. According to NERC, MOD-001-1 requires users, owners and operators to disclose counterflow assumptions and outage processing rules to other reliability entities. NERC states that this Reliability Standard prohibits applicable entities from making transmission capability available on a more conservative basis for commercial purposes than the system's capability in actual operations. NERC's MOD-001-1 also requires entities, for the first time, to exchange and use available transfer capability data. NERC states that the Reliability Standard reflects industry's consensus best practices for determining available transfer capability.

21. As proposed, this Reliability Standard includes nine requirements, which would be applicable to all transmission service providers and transmission operators. To ensure consistency of enforcement, NERC states that each requirement is supported by a measure that identifies what is required and how the requirement will be enforced.

22. Under NERC's proposed Requirement R1, a transmission operator must select one of three methodologies for calculating available transfer capability or available flowgate capability for each available transfer capability path for each time frame (hourly, daily or monthly) for the facilities in its area. As stated above, the three proposed methodologies are: the area interchange methodology, the rated system path methodology, and the flowgate methodology.

23. Several proposed requirements within this Reliability Standard address the calculation of available transfer capability or available flowgate capability. Requirement R2 requires each transmission service provider to calculate available transfer capability or available flowgate capability values hourly for the next 48 hours, daily for the next 31 calendar days and monthly for the next 12 months. Requirement R6 requires each transmission operator in its calculation of total transfer capability or total flowgate capability to use assumptions no more limiting than those used in its planning of operations. NERC contends that, consistent with the requirements of Order No. 890 and related directives of Order No. 693, Requirement R6 will minimize the differences between total transfer capability and total flowgate capability for transmission and transfer capability used in native load and reliability assessment studies.²⁷ Similarly, Requirement R7 requires each transmission service provider, in its calculation of available transfer capability or available flowgate capability, to use assumptions no more limiting than those used in its planning of operations. NERC contends that this requirement addresses the Commission's directive in Order No. 693 for the ERO to modify the available transfer capability Reliability Standards to include a requirement that the assumptions used in available transfer capability and available flowgate capability calculations be consistent with those used for planning the expansion or

²⁷ See Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 237; Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 1051.

operation of the Bulk-Power System to the maximum extent possible.²⁸ Requirement R8 requires each transmission service provider to recalculate available transfer capability at a certain specified interval (hourly, daily, monthly) unless the input values specified in the available transfer capability calculation have not changed. NERC contends that Requirement R8 satisfies the Commission's directive to calculate available transfer capability on a consistent time interval.²⁹

24. MOD-001-1 also proposes several record keeping and information sharing requirements for transmission service providers. Requirement R3 requires each transmission service provider to keep an available transfer capability implementation document that explains the implementation of its chosen methodology(ies), its use of counterflows, the identities of entities with which it exchanges information for coordination purposes, any capacity allocation processes, and the manner in which it considers outages. Requirement R4 requires transmission service providers to keep specific reliability entities advised regarding changes to the available transfer capability implementation document.³⁰ Requirement R5 requires the transmission service provider

²⁸ Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 1057; see also Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 292.

²⁹ See Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 301; Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 1057.

³⁰ These include: each planning coordinator, reliability coordinator, and transmission operator associated with the transmission service provider's area; and each planning coordinator, reliability coordinator, and transmission service provider adjacent to the transmission service provider's area.

to make the available transfer capability implementation document available to those same reliability entities.³¹ Finally, proposed Requirement R9 allows a transmission service provider thirty calendar days to begin to respond to a request from any other transmission service provider, planning coordinator, reliability coordinator or transmission operator for certain data to be used in the requestor's available transfer capability or available flowgate capability calculations.

25. In Order No. 693, the Commission directed the ERO to develop modifications to the available transfer capability Reliability Standards to include a requirement that applicable entities make available assumptions and contingencies underlying available transfer capability and total transfer capability calculations. NERC contends that this Reliability Standard addresses this issue by requiring disclosure in the available transfer capability implementation document under Requirement R3.1 and part of the data exchange required by Requirement R9. NERC states that it has agreed with NAESB that requirements for posting information are more appropriately addressed through the NAESB process. Accordingly, NERC states that NAESB will be addressing the requirements associated with posting this information, instead of NERC.

³¹ Although the Reliability Standards only require the transmission service provider to make the available transfer capability implementation document available to certain reliability entities, the NAESB standard on OASIS posting requirements (Standard 001-13.1.5) requires transmission service providers to provide a link to the document on OASIS.

C. Capacity Benefit Margin Methodology, MOD-004-1

26. As proposed, the Capacity Benefit Margin Methodology Reliability Standard (MOD-004-1) provides for the calculation of capacity benefit margin, which is defined by NERC as the amount of firm transmission capability preserved by the transmission service provider for load-serving entities, whose loads are located on that transmission service provider's system, to enable access by the load-serving entities to generation from interconnected systems to meet generation reliability requirements.³² The purpose of this Reliability Standard is to promote the consistent and reliable calculation, verification, preservation, and use of capacity benefit margin to support analysis and system operations. NERC states that preservation of capacity benefit margin for a load-serving entity allows that entity to reduce its installed generating capacity below that which may otherwise have been necessary without interconnections to meet its generation reliability requirements. NERC states that the transmission transfer capability preserved as capacity benefit margin is intended to be used by the load-serving entities only in times of emergency generation deficiencies.

27. NERC proposes to apply MOD-004-1 to transmission service providers, transmission planners, load-serving entities, resource planners and balancing authorities. As discussed more fully below, NERC states that it does not specify a particular methodology for calculating capacity benefit margin, but rather improves transparency by

³² See North American Electric Reliability Council, Glossary of Terms Used in Reliability Standards, (Effective February 12, 2008), available at: http://www.nerc.com/docs/standards/rs/Glossary_12Feb08.pdf.

requiring adherence to specific documented and transparent methodology to ensure consistent and reliable calculation, verification, preservation and use of capacity benefit margin.

28. To improve consistency and transparency in the calculation of capacity benefit margin, the proposed Reliability Standard imposes twelve requirements on entities electing to use a capacity benefit margin. Requirement R1 requires the transmission service provider that maintains capacity benefit margin to prepare and keep current a capacity benefit margin implementation document that includes at a minimum: (1) the process through which a load-serving entity within a balancing authority associated with the transmission service provider, or the resource planner associated with that balancing authority area, may ensure that its need for transmission capacity to be set aside as capacity benefit margin will be reviewed and accommodated by the transmission service provider to the extent transmission capacity is available; (2) the procedure and assumptions for establishing capacity benefit margin for each available transfer capability path or flowgate; and (3) the procedure for a load-serving entity or balancing authority to use transmission capacity set aside as capacity benefit margin, including the manner in which the transmission service provider will manage situations where the requested use of capacity benefit margin exceeds the amount of capacity benefit margin available.

29. Requirement R2 requires the transmission service provider to make its current capacity benefit margin implementation document available to the transmission operators, transmission service providers, reliability coordinators, transmission planners, resource planners, and planning coordinators that are within or adjacent to the

transmission service provider's area, and to the load-serving entities and balancing authorities within the transmission service providers area, and notify those entities of any changes to the capacity benefit margin implementation document prior to the effective date of the change.

30. Requirements R3 and R4 require each load-serving entity and resource planner determining the need for transmission capacity to be set aside as capacity benefit margin for imports into a balancing authority to develop that need by using one or more of the following to determine the generation capability import requirement:³³ loss of load expectation studies, loss of load probability studies, deterministic risk-analysis studies, and reserve margin or resource adequacy requirements established by other entities, such as municipalities, state commissions, regional transmission organizations, independent system operators, regional reliability organizations, or regional entities.

31. Requirement R5 requires the transmission service provider to establish at least every 13 months a capacity benefit margin value for each available transfer capability path or flowgate to be used for available transfer capability or available flowgate capability during the 13 full calendar months (months 2 – 14) following the current month (the month in which the transmission service provider is establishing the capacity benefit margin values). Similarly, Requirement R6 requires the transmission planner to

³³ NERC defines the generation capability import requirement as the amount of generation capability from external sources identified by a load-serving entity or resource planner to meet its generation reliability or resource adequacy requirement as an alternative to internal resources.

establish a capacity benefit margin value for each available transfer capability path or flowgate to be used in planning during each of the full calendar years two through ten following the current year (the year in which the transmission planner is establishing the capacity benefit margin values). All values must reflect consideration of each of the following, if available: (1) any studies performed by load-serving entities or resource planners pursuant to Requirement R3 for loads within the transmission service provider's area; or (2) any reserve margin or resource adequacy requirements for loads within the transmission service provider's area established by other entities, such as municipalities, state commissions, regional transmission organizations, independent system operators, regional reliability organizations, or regional entities. Once determined, the capacity benefit margin values will be allocated along available transfer capability paths based on the expected import paths or source regions provided by load-serving entities or resource planners. Capacity Benefit Margin values for flowgates will be allocated based on the expected import paths or source regions provided by load-serving entities or resource planners and the distribution factors associated with those paths or regions, as determined by the transmission service provider.

32. Requirements R7 and R8 require the transmission service provider and the transmission planner to notify, within 31 calendar days after the establishment of capacity benefit margin, all load-serving entities and resource planners that determined they had a need for capacity benefit margin of the amount, or the amount planned, of capacity benefit margin set aside.

33. Requirement R9 requires the transmission service provider that maintains capacity benefit margin and the transmission planner to provide, subject to confidentiality and security requirements, copies of the applicable supporting data, including any models, used for determining capacity benefit margin or allocating capacity benefit margin over each available transfer capability path or flowgate to each of the associated transmission operators and to any transmission service provider, reliability coordinator, transmission planner, resource planner, or planning coordinator within 30 calendar days of their making a request for the data.

34. Requirement R10 requires the load-serving entity or balancing authority to request to import energy over firm transfer capability set aside as capacity benefit margin only when experiencing a declared level 2 or higher NERC energy emergency alert.

35. When reviewing an arranged interchange using capacity benefit margin, Requirement R11 requires all balancing authorities and transmission service providers to waive, within the bounds of reliable operation, any real-time timing and ramping requirements.

36. Requirement R12 requires all transmission service providers maintaining capacity benefit margin to approve, within the bounds of reliable operation, any arranged interchange using capacity benefit margin that is submitted by an “energy deficient entity”³⁴ under an energy emergency alert level 2 if the capacity benefit margin is

³⁴ Energy deficient entities are defined by NERC in the Capacity and Energy Emergencies Reliability Standard. See EOP-002-2, Attachment 1.

available, the emergency is declared within the balancing authority area of the energy deficient entity, and the load of the energy deficient entity is located within the transmission service provider's area.

37. NERC states that the proposed Reliability Standard complies with the requirements of Order No. 890 and related directives of Order No. 693 because it sets standards that allow load-serving entities to request transfer capability to be set aside in the form of capacity benefit margin in a consistent and transparent manner. Consistent with the Commission's direction, the Reliability Standard provides an approach for determining capacity benefit margin that is flexible and does not mandate a particular methodology.³⁵ NERC contends that this is appropriate because various parts of the country have already developed robust methodologies for determining capacity benefit margin. NERC states that Requirements R3 and R4 allow load-serving entities or resource planners to perform specific studies to determine their need for capacity benefit margin. By specifying the types of studies load-serving entities or resource planners must perform, NERC contends that MOD-004-1 ensures that capacity benefit margin and transmission reliability margin are not used for the same purpose.³⁶ In response to the Commission's transparency requirement,³⁷ NERC states that Requirement R9 ensures

³⁵ Citing Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 1078; see also Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 257.

³⁶ Citing Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 1105.

³⁷ Citing id. P 1077.

that capacity benefit margin studies are made available to the appropriate reliability entities for their review and analysis. With regard to public disclosure, NERC states that it has agreed with NAESB that requirements for posting information are more appropriately addressed through the NAESB process.

38. Requirements R5 and R6 require that the transmission service provider and transmission planner utilize the information contained in the studies if it has been provided to them when establishing capacity benefit margin values and mandate the re-evaluation of capacity benefit margin at least once every thirteen months.³⁸ NERC states that, consistent with Order Nos. 890 and 693, Requirements R5 and R6 also require allocation of capacity benefit margin based on the available transfer methodology chosen under MOD-001-1.³⁹ NERC states that Requirements R10, R11 and R12 specify the manner in which capacity benefit margin is to be used.⁴⁰ NERC states that any additional requirements specified by the transmission service provider must be identified in the capacity benefit margin implementation document, as mandated in Requirement R1.3.

39. In response to the requirement that capacity benefit margins be verifiable,⁴¹ NERC states that Requirements R5, R6 and R9 ensure that the studies used to establish a need

³⁸ Citing Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 358. NERC states that it chose thirteen months to ensure enough flexibility for a yearly update without being so prescriptive as to require it on a specific day.

³⁹ Citing id. at P 257; Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 1082.

⁴⁰ Citing Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 256-7.

⁴¹ Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 1077.

for capacity benefit margin are made available to any of the reliability entities specified in Requirement R9 that request them. NERC explains that the Reliability Standard does not mandate the verification of requested amounts of capacity benefit margin because it would place a functional entity (either the transmission service provider or transmission planner) in the position of having to judge the quality of each request, which could create conflicts of interest or potentially result in liability for that entity. Rather than mandate any particular approach for validation, NERC states that Requirements R3 and R4 mandate the specific kinds of studies to be performed and supporting information that is to be maintained when determining the underlying need for capacity benefit margin. To the extent that entities do not use these methods or maintain this supporting information, NERC states that they will be in violation of the Reliability Standard.

40. In response to the Commission's call for clarity in the process for requesting capacity benefit margin,⁴² NERC states that Requirement R1.1 requires the transmission service provider explain the process by which load-serving entities and resource planners may ensure that their need for transmission capacity to be set aside as capacity benefit margin is reviewed and accommodated by the transmission service provider to the extent transmission capacity is available. Requirement R1.3 requires the transmission service provider to describe the procedure for load-serving entities and resource planners to use transmission capacity that has been set aside as capacity benefit margin. If the requested use of capacity benefit margin exceeds the amount of capacity benefit margin available,

⁴² Id. P 1081.

Requirement R1.3 also requires a description of how the transmission service provider will manage such situations. In addition, NERC states that Requirements R7 and R8 mandate that the transmission service provider notify load-serving entities and resource planners that determined they had a need for capacity benefit margin of the amount of capacity benefit margin set aside, so that they may make informed decisions about how to proceed if their full request for capacity benefit margin could not be accommodated.

D. Transmission Reliability Margin Methodology, MOD-008-1

41. As proposed, the Transmission Reliability Margin Methodology Reliability Standard (MOD-008-1) provides for the calculation of transmission reliability margin, which describes the reliability aspects of determining and maintaining a transmission reliability margin and the components of uncertainty that may be considered when making that determination. The purpose of this Reliability Standard is to promote the consistent and reliable calculation, verification, preservation, and use of transmission reliability margin to support analysis and system operations. Transmission reliability margin is transmission transfer capability set aside to mitigate risks to operations, such as deviations in dispatch, load forecast, outages, and similar such conditions. It is distinctly different from capacity benefit margin, which is transmission transfer capability set aside to allow for the import of generation upon the occurrence of a generation capacity deficiency.

42. NERC proposes to apply MOD-008-1 only to transmission operators that have elected to keep a transmission reliability margin. As discussed more fully in the discussion section below, NERC states that the Reliability Standard does not specify one

approach for calculating transmission reliability margin, but rather improves transparency by providing the key requirements and items that must be contained in any transmission reliability margin methodology.⁴³

43. To improve the transparency of transmission reliability margin calculations, the proposed Reliability Standard imposes five requirements on transmission service providers electing to keep a transmission reliability margin. Requirement R1 provides that a transmission operator must keep a transmission reliability margin implementation document that explains how specific risks such as aggregate load forecast uncertainty, load distribution uncertainty, and forecast uncertainty in transmission system topology⁴⁴ are accounted for in the transmission reliability margin, how transmission reliability margin is allocated, and how transmission reliability margin is determined for various time frames.

44. Requirement R2 allows a transmission operator to account only for the risks identified in Requirement R1 in transmission reliability margin, and prohibits the

⁴³ NERC August 29, 2008 Filing, Docket No. RM08-19-000 at 38 (NERC Filing).

⁴⁴ This includes, but is not limited to, forced or unplanned outages and maintenance outages; allowances for parallel path (loop flow) impacts; allowances for simultaneous path interactions; variations in generation dispatch (including, but not limited to, forced or unplanned outages, maintenance outages and location of future generation); short-term system operator response (operating reserve actions); reserve sharing requirements; and inertial response and frequency bias.

transmission operator from incorporating risks that are addressed in capacity benefit margin.⁴⁵ It allows reserve sharing to be included in transmission reliability margin.

45. Requirement R3 requires each applicable entity to make the transmission reliability margin implementation document and associated information available to the following reliability entities if requested: transmission service provider, reliability coordinator, planning coordinator, transmission planner, and transmission operator.

46. Requirement R4 provides that each applicable transmission operator must determine the transmission reliability margin value per the methods described in the transmission reliability margin implementation document at least once every thirteen months. Finally, Requirement R5 states that each applicable transmission operator must provide that transmission reliability margin value to its transmission service providers and transmission planners no more than seven days after it has been determined.

47. NERC states that MOD-008-1 complies with Order No. 890 by specifying the critical areas of analysis required for transmission reliability margin.⁴⁶ Further, it states that it has specified the appropriate uses of transmission reliability margin in Requirement R1 and prohibited the use of other values and double counting in Requirement R1. In addition, it maintains that MOD-008-1 complies with Order No. 693

⁴⁵ The capacity benefit margin Reliability Standard, MOD-004-1, was filed on November 21, 2008 in Docket No. RM09-5-000.

⁴⁶ NERC Filing at 32 (citing Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 273).

by imposing clear requirements for making documents supporting the transmission reliability margin determination available through Requirements R1 and R3.

48. In response to the requirement to expand the applicability of the transmission reliability margin Reliability Standard to planning authorities and reliability coordinators,⁴⁷ NERC states that the drafting team was not able to identify any requirements for these entities, based on the current drafting of the Reliability Standard. Therefore, these entities are not included in the proposed Reliability Standard. NERC states that, until such time as the transmission reliability margin methodology becomes more detailed, there does not seem to be any measurable action that can be imposed on the planning coordinator⁴⁸ or reliability coordinator.

49. In response to the Commission's statement that it would not require transfer capability that is set aside as transmission reliability margin to be sold on a non-firm basis,⁴⁹ NERC states that it has included this requirement in each of the three methodologies as a part of firm and non-firm equations. NERC states that, because some of the uncertainties included in the transmission reliability margin may reduce or be eliminated as one approaches real time, the non-firm equations allow for the partial

⁴⁷ Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 1126.

⁴⁸ The Commission notes that NERC uses the terms planning coordinator and planning authority interchangeably in its standards, as indicated in the proposed additions to the glossary of terms, addressed below. The interchangeable use of these terms may lack the clarity generally preferred, but the Commission understands that NERC is currently working on modifications to address this issue.

⁴⁹ See Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 273.

release of transmission reliability margin. In the Area Interchange Methodology (MOD-028-1), this is addressed in Requirement R11; in the Rated System Path Methodology (MOD-029-1), this is addressed in Requirement R8; and in the Flowgate Methodology (MOD-030-2), this is addressed in Requirement R9.

50. NERC contends that choosing a “best” approach to transmission reliability margin calculation would require a much more thorough technical effort. NERC therefore requests that the Commission provide additional guidance on this topic regarding its priority and a determination whether or not such an effort should be included in NERC’s annual planning process.

E. Three Methodologies for Calculating Available Transfer Capability

51. In Order No. 890, the Commission did not require a uniform methodology for calculating available transfer capability. The Commission noted that NERC was developing Reliability Standards for three available transfer capability calculation methodologies and concluded that, if all of the available transfer capability components and certain data inputs and assumptions are consistent, the three available transfer capability calculation methodologies being developed by NERC will produce predictable and sufficiently accurate, consistent, equivalent and replicable results.⁵⁰ Consistent with Order No. 890, NERC proposes three methodologies for calculating available transfer capability as detailed in the following Reliability Standards: MOD-028-1, MOD-029-1 and MOD-030-2. NERC contends that these three methodologies meet the requirements

⁵⁰ Id. P 210.

established by the Commission in Order No. 890, as well as those established in Order No. 693.

52. NERC asserts that the three methodologies are a significant improvement over the existing available transfer capability related requirements. While current MOD-001-0 is essentially a “fill-in-the-blank” Reliability Standard,⁵¹ the proposed methodologies replace the original fill-in-the blank standard by specifying in detail how total transfer capability is to be determined – from modeling requirements, to the simulation of dispatch to determine native load impacts, to the treatment of reservations and to the incorporation of neighboring data. According to NERC, MOD-001-1 specifies how existing transmission commitments and available transfer capability are to be determined in detail and clearly describes the treatment of capacity benefit margin and transmission reliability margin in the available transfer capability equations. Thus, NERC contends, these Reliability Standards reduce the potential for seams discrepancies and improve the wide-area understanding of the Bulk-Power System on a forward-looking basis. NERC states that, by promoting consistency, standardization and transparency, they directly support and improve the reliability of the Bulk-Power System and help achieve the Commission’s objectives stated in Order No. 890.

⁵¹ A fill-in-the-blank Reliability Standard requires the regional entities to develop criteria for use by users, owners or operators within each region. In Order No. 693, the Commission held 24 Reliability Standards (mainly fill-in-the-blank standards) as pending until further information was provided on each standard and requires users, owners and operators to follow these pending standards as “good utility practice” pending their approval by the Commission.

1. Area Interchange Methodology, MOD-028-1

53. NERC states that the area interchange methodology is characterized by determination of incremental transfer capability via simulation, from which total transfer capability can be mathematically derived. Capacity benefit margin, transmission reliability margin, and existing transmission commitments are subtracted from the total transfer capability, and postbacks and counterflows are added, to derive available transfer capability. NERC also states that, under the area interchange methodology, total transfer capability results are generally reported on an area to area basis.

54. MOD-028-1 describes the area interchange methodology (previously referred to as the network response available transfer capability methodology) for determining available transfer capability. NERC intends to use the Area Interchange Methodology Reliability Standard to increase consistency and reliability in the development and documentation of transfer capability calculation for short-term use performed by entities using the area interchange methodology to support analysis and system operations.

55. This Reliability Standard would apply only to transmission operators and transmission service providers that have elected to implement this particular methodology as part of their compliance with MOD-001-1, Requirement R1. The proposed Reliability Standard consists of eleven requirements. Requirement R1 provides the additional information that a transmission service provider using the area interchange methodology must include in its available transfer capability implementation document. This includes information describing how the selected methodology has been implemented, in such detail that, given the same information used by the transmission operator, the results of

the total transfer capability calculations can be validated; a description of the manner in which the transmission operator will account for interchange schedules in the calculation of total transfer capability; any contractual obligations for allocation of total transfer capability; a description of the manner in which contingencies are identified for use in the total transfer capability process; and information on how sources and sinks for transmission service are accounted for in available transfer capability calculations.

56. Pursuant to Requirement R2, each transmission operator must calculate total transfer capability using a model that meets the scope specified in the requirement and includes rating information specified by generator owners and transmission owners whose equipment is represented in the model.

57. Requirement R3 details the information the transmission operator must include in its determination of total transfer capability for the on-peak and off-peak intra-day and next day time periods, as well as days two through 31 and for months two through 13.⁵² Requirement R4 requires each transmission operator to determine total transfer capability while modeling contingencies and reservations consistently, and respect any contractual allocations of total transfer capability.

58. Requirement R5 provides that each transmission operator must determine total transfer capability on a periodic basis (as specified in the requirement) or upon certain operating conditions significantly affecting bulk electric system topology.

⁵² This information includes: expected generation and transmission outages, additions, and retirements; load forecasts; and unit commitment and dispatch order.

59. Requirement R6 provides the detailed process by which each transmission operator must establish total transfer capability, which must be provided to the transmission service provider within the time frames specified in Requirement R7.

60. Requirements R8 through R11 specify the formulas and detailed specifications of the variables for calculating firm and non-firm existing transmission commitments and firm and non-firm available transfer capability.

2. Rated System Path Methodology, MOD-029-1

61. NERC states that the rated system path methodology is characterized by an initial total transfer capability, determined via simulation. As with the area interchange methodology, capacity benefit margin, transmission reliability margin, and existing transmission commitments are subtracted from the total transfer capability, and postbacks and counterflows are added, to derive available transfer capability. NERC also states that, under the rated system path methodology, total transfer capability results are generally reported as specific transmission path capabilities.

62. MOD-029-1 describes the rated system path methodology for determining available transfer capability. NERC intends to use this Reliability Standard to increase consistency and reliability in the development and documentation of transfer capability calculations for short-term use performed by entities using the rated system path methodology to support analysis and system operations.

63. This Reliability Standard would apply only to transmission operators and transmission service providers that have elected to implement rated system path methodology as part of their compliance with MOD-001-1 Requirement R1. To

implement this calculation, this Reliability Standard consists of eight requirements.

Under Requirement R1, a transmission operator must calculate total transfer capability using a model that meets the scope and criteria specified in the requirement.

Requirement R2 lists a detailed process by which the transmission operator must establish total transfer capability. Pursuant to Requirement R3, the transmission operator must establish total transfer capability as the lesser of the system operating limit or the value determined in Requirement R2. The transmission operator must then provide a transmission service provider with the appropriate total transfer capability values and study report within seven days of finalization of the study report required in Requirement R4.

64. Requirements R5 through R8 provide that each applicable transmission service provider must calculate firm and non-firm existing transmission commitments and firm and non-firm available transfer capability using a specified formula and detailed specification of the variables.

3. Flowgate Methodology, MOD-030-2

65. NERC states that the flowgate methodology is characterized by identification of key facilities as flowgates. Total flowgate capabilities are determined based on facility ratings and voltage and stability limits. The impacts of existing transmission commitments are determined by simulation. To determine the available flowgate commitments, the transmission service provider or operator must subtract the impacts of existing transmission commitments, capacity benefit margin, and transmission reliability

margin, and add the impacts of postbacks and counterflows. Available flowgate capability can be used to determine available transfer capability.

66. MOD-030-2 describes the flowgate methodology (previously referred to as the flowgate network response available transfer capability methodology) for determining available transfer capability. NERC states that the purpose of the Flowgate Methodology Reliability Standard is to increase consistency and reliability in the development and documentation of transfer capability calculations for short-term use performed by entities using the flowgate methodology to support analysis and system operations.

67. This Reliability Standard would apply only to transmission operators and transmission service providers that have elected to implement this particular methodology as part of their compliance with MOD-001-2. As proposed, the Flowgate Methodology consists of eleven requirements. Requirement R1 states that a transmission service provider implementing this methodology must include the following information in its available transfer capability implementation document in addition to that already required in the Available Transmission System Capability Reliability Standard (MOD-001-1): the criteria used by the transmission operator to identify sets of transmission facilities as flowgates that are to be considered in available flowgate capability calculations, and information on how sources and sinks for transmission service are accounted for in available flowgate capability calculations.

68. Under Requirement R2, each applicable transmission operator must determine and manage the flowgates used in the methodology based on the criteria listed in the requirement, establish its total flowgate capability based on the criteria listed in the

requirement, and provide total flowgate capability to the transmission service provider within seven days of their determination.⁵³ To achieve consistency in each component of the available transfer capability calculation, the Commission, in Order No. 890, directed public utilities, working through NERC, to develop an available flowgate capability definition and requirements used to identify a particular set of transmission facilities in a flowgate.⁵⁴ As part of the development of the Flowgate Methodology, NERC states that the Reliability Standard drafting team developed a definition of available flowgate capability. In addition, NERC states that Requirement R2 of this Reliability Standard contains a list of minimum characteristics that are to be used to identify a particular set of transmission facilities as a flowgate.

69. Requirement R3 requires the transmission operator to provide the transmission service provider with a transmission model that meets a specified criteria and Requirement R4 provides that the transmission service provider must evaluate reservations consistently when determining available flowgate capability. When

⁵³ MOD-030-2 is identical to MOD-030-1 except for certain modifications to Requirements R2 and R11. First, NERC added new sub-requirements R2.1.1.3 and R2.1.2.3. to clarify that, if any limiting element is kept within its limit for its associated worst contingency by operating within the limits of another flowgate, then no new flowgate needs to be established for such limiting elements or contingencies. Second, NERC modified sub-requirement R2.1.3. to state that the list of flowgates does not need to include any flowgates created to address temporary operating conditions. Finally, NERC modified Requirement R11 to eliminate the obligation to convert total flowgate capability to total transfer capability. The Commission notes that the modification to Requirement R11 does not alter the posting requirements of 18 CFR 37.6(b)(3).

⁵⁴ Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 313.

determining available flowgate capability, Requirement R5 provides that each transmission service provider must use the models given to it as described in Requirement R3, include appropriate outages, and use the available flowgate capability on external flowgates as provided by the transmission service provider calculating available flowgate capability for those flowgates.

70. Requirements R6 and R7 require each transmission service provider to calculate the impact of firm and non-firm existing transmission commitments using a specified process. The transmission service provider must calculate firm and non-firm available flowgate capability using the formula and detailed specification of the variables found in Requirements R8 and R9.

71. Under Requirement R10, each transmission service provider shall recalculate available flowgate capability at a certain specified interval (hourly once per hour, daily once per day, monthly once per week) unless the input values specified in the available flowgate capability calculation have not changed. NERC contends that this requirement satisfies the requirement in Order No. 890 and Order No. 693 that transmission service providers recalculate available transfer capability on a consistent time interval. Finally, Requirement R11 provides the formula and variables that a transmission service provider must use if it desires to convert available flowgate capability to available transfer capability.⁵⁵

⁵⁵ Requirement R11 of MOD-030-1 would have directed transmission service providers to use the same formula to convert total flowgate capability to total transfer capability. The formula provided in Requirement R11 of MOD-030-2 eliminates this

(continued...)

F. Implementation Plan

72. NERC proposes that the Available Transmission System Capability Reliability Standard and the three methodology Reliability Standards become effective the first day of the first quarter no sooner than one calendar year after approval of all of these four Reliability Standards by all appropriate regulatory authorities where approval is required or is otherwise effective in those jurisdictions where approval is not explicitly required. According to NERC, since the three methodology Reliability Standards require information from neighboring reliability entities for use in the development of its available transfer capability and available flowgate capability values that is compulsory under Requirement R9 of the Available Transmission System Capability Reliability Standard (MOD-001-1), none of the methodology Reliability Standards can be effectively implemented unless and until that Reliability Standard has been implemented by all entities in all jurisdictions.

73. NERC states that, although some entities may already be implementing the requirements in the Reliability Standards, many others are not, especially with regard to the data exchange requirements listed in Requirement R9 of MOD-001-1. Accordingly, software changes, associated testing, and possible tariff filings will be required to comply with the proposed Reliability Standards. Therefore, NERC maintains that a minimum of one year from regulatory approval should be allowed for entities to comply.

obligation. As noted above, this modification does not alter the posting requirements of 18 CFR 37.6(b)(3).

74. NERC proposes that each of the Capacity Benefit Margin (MOD-004-1) and Transmission Reliability Margin (MOD-008-1) Reliability Standards require compliance on the first day of the first quarter no sooner than one calendar year after approval of the Reliability Standard by appropriate regulatory authorities where approval is required or, where approval is not explicitly required, when the Reliability Standard is otherwise effective. According to NERC, unlike the other four proposed Reliability Standards included in this filing, the Transmission Reliability Margin Reliability Standard replaces the existing Reliability Standard MOD-008-0 and the Capacity Benefit Margin Reliability Standard replaces MOD-004-0. As such, they do not require coordinated implementation, as entities may rely on the previous version of the Reliability Standards if any delay in implementing the Reliability Standards occurs. NERC states that, although many entities already use transmission reliability margin and capacity benefit margin, compliance with these Reliability Standards may require software changes, software regression testing, and possible tariff changes. To accommodate these needs, NERC believes a one-year implementation period is appropriate.

III. Discussion

75. The Commission proposes to approve the revised MOD Reliability Standards and related additions to the glossary of terms, to be effective as proposed by NERC, as just, reasonable, not unduly discriminatory or preferential, and in the public interest. These Reliability Standards represent a step forward in eliminating the broad discretion previously afforded transmission service providers in the calculation of available transfer capability. As the Commission explained in Order No. 890, excessive discretion in the

calculation of available transfer capability gives transmission service providers the opportunity to discriminate in subtle ways in the provision of open access transmission service.⁵⁶ On systems where transmission capacity is constrained, a lack of transparency and consistency in the calculation of available transfer capability has led to recurring disputes over whether transmission service providers have performed those calculations in a way that discriminates against competitors.

76. The Commission acted in Order No. 890 to limit this remaining opportunity for discrimination by directing public utilities, working through NERC, to develop Reliability Standards to govern the consistent and transparent calculation of available transfer capability by transmission service providers. In Order No. 693, the Commission implemented that directive by requiring NERC to prospectively modify the MOD Reliability Standards it filed in April 2006 to address the requirements of Order No. 890. The proposed Reliability Standards satisfy these requirements by enhancing transparency and consistency in the calculation of available transfer capability, mandating that transmission service providers and transmission operators perform their calculations in accordance with methodologies that are both explicitly documented and available to reliability entities who request them. The proposed Reliability Standards also require documentation of the detailed representations of the various components that comprise the available transfer capability equation, and require transmission service providers and transmission operators to specify modeling and risk assumptions and disclosure of outage

⁵⁶ Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 68.

processing rules to other reliability entities. These actions will make the processes to calculate available transfer capability and its various components more transparent which, in turn, will allow the Commission and others to ensure that those calculations are performed consistently.

77. Although the Commission believes that the proposed Reliability Standards generally comply with the requirements of Order No. 890 and related directives of Order No. 693, the Commission is concerned that the implementation documents used by each transmission service provider to implement the Reliability Standards could provide continuing opportunities to discriminate in the provision of transmission service. As discussed in further detail below, the Commission proposes to direct the ERO to perform an audit of the implementation documents to determine if they provide sufficient transparency to enable the Commission and others to replicate and verify each transmission service provider's calculations. Without adequate transparency, it will be impossible for the Commission to ensure that transmission service providers are consistently performing their available transfer capability calculations when responding to requests for transmission service. Ensuring adequate transparency also will enable the Commission and others to verify that data and modeling assumptions used to calculate available transfer capability are being used consistently during relevant timeframes, such as in the calculation of short-term available transfer capability and the planning of operations, as required by the proposed Reliability Standards.⁵⁷

⁵⁷ MOD-001-1, Requirements R6 and R7.

78. The Commission also has concern regarding several of the substantive requirements of the proposed Reliability Standards. To address these concerns, the Commission proposes to direct the ERO to develop modifications to the Reliability Standards to address the discrete issues involving: the availability of each transmission service provider's implementation documents; the consistent treatment of assumptions in the calculation of available transfer capability; the calculation, allocation, and use of capacity benefit margin; the calculation of total transfer capability under the Rated System Path Methodology; and, the treatment of network resource designations in the calculation of available transfer capability.

79. Finally, we note that the Commission in this proceeding addresses only those revisions to the Reliability Standards filed to comply with the available transfer capability-related requirements of Order No. 890, as implemented by Order No. 693. In Order No. 693, the Commission also directed the ERO to develop modifications to a number of other Reliability Standards. The Commission expects the ERO to comply in a timely and complete manner with those directives, to the extent it has not already done so.

A. Implementation of the Reliability Standards

80. The Available Transmission System Capability Reliability Standard (MOD-001-1) serves as an "umbrella" Reliability Standard that requires each applicable entity to select and implement one or more of the three available transfer capability methodologies found in MOD-028-1, MOD-029-1, or MOD-030-2. MOD-004-1 and MOD-008-1 provide for the calculation of capacity benefit margin and transmission reliability margin, which are

inputs into the available transfer capability calculation. Together, these Reliability Standards require transmission service providers and transmission operators to prepare and keep current implementation documents that contain certain information specified in the Reliability Standards. The available transfer capability implementation documents must describe the available transfer capability methodology in such detail that the results of their calculations can be validated when given the same information used by the transmission service provider or transmission operator.⁵⁸

81. The Commission is concerned that the proposed Reliability Standards could be implemented by a particular transmission service provider or transmission operator in a way that enables them to retain the ability to unduly discriminate in the provision of open access transmission service. Although the Reliability Standards require transmission service providers to include certain minimum information in each of the implementation documents, transmission service providers are also permitted to include additional, undefined parameters and assumptions in those documents. This could include criteria that are themselves not sufficiently transparent to allow the Commission and others to determine whether they have been consistently applied by the transmission service provider in particular circumstances. This discretion appears in the three available transfer capability methodologies (MOD-028-1, MOD029-1, and MOD-030-2), as well as the Reliability Standards governing the calculation of capacity benefit margin (MOD-004-1) and transmission reliability margin (MOD-008-1).

⁵⁸ MOD-001-1, Requirement R3.

82. It is appropriate for transmission service providers to retain some level of discretion in the calculation of available transfer capability. Requiring absolute uniformity in criteria and assumptions across all transmission service providers would preclude transmission service providers from calculating available transfer capability in a way that accommodates the operation of their particular systems. The Reliability Standards need not be so specific that they address every unique system difference or differences in risk assumptions when modeling expected flows. Each transmission service provider should retain some discretion to reflect unique system conditions or modeling assumptions in its available transmission capability methodology.⁵⁹ Any such system conditions or modeling assumptions, however, must be made sufficiently transparent and be implemented consistently for all transmission customers.

83. In order to ensure that this occurs, the Commission proposes to direct the ERO to conduct an audit of the various implementation documents developed by transmission service providers to confirm that the complete available transfer capability methodologies reflected therein, including the calculation of each component of available transfer capability, are sufficiently transparent to allow the Commission and others to replicate and verify those calculations and thereby ensure that they are being implemented consistently for all transmission customers. This audit would review the additional parameters and assumptions included by transmission service providers in their implementation documents as of the date the Reliability Standards become effective,

⁵⁹ Order No. 890-A, FERC Stats. & Regs. ¶ 31,261 at P 51.

analyzing all parameters and assumptions to determine if they are detailed enough to enable replication and verification of calculations. Upon review of this analysis, the Commission may direct the ERO to develop a modification to one or more of the Reliability Standards to address any lack of transparency that may exist in the calculation of available transfer capability and each of its components.

84. The Commission proposes to direct the ERO to complete this audit no later than 180 days after the effective date of the Reliability Standards, as approved by a final rule in this docket.⁶⁰ The Commission also proposes to direct NERC to submit a timeline for the completion of this audit within 30 days of the issuance of the final rule in this docket. The Commission discusses below the specific issues to be analyzed by NERC in its audit.

85. Before turning to those issues, the Commission reiterates that our intent is not to require the development of a single, uniform methodology for calculating available transfer capability or its components. In Order No. 890, the Commission found that the potential for discrimination does not lie primarily in the choice of an available transfer capability calculation methodology, but rather in the consistent application of its components.⁶¹ The Commission acknowledged that NERC was developing standards for three available transfer capability calculation methodologies. The Commission concluded that, if all of the available transfer capability components and certain data

⁶⁰ The audit should be prepared and submitted by NERC staff (or any consultants it may choose to employ), rather than the drafting teams that developed the proposed Reliability Standards.

⁶¹ Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 208.

inputs and assumptions are consistent, the three available transfer capability calculation methodologies being developed by NERC would produce predictable and sufficiently accurate, consistent, equivalent and replicable results.⁶²

86. As the Commission explains in Order No. 890-C, issued concurrently with this order, this does not mean that the results of available transfer capability calculations on either side of an interface must be identical in every instance. There are fundamental differences in the three available transfer capability methodologies set forth in the proposed Reliability Standards that may keep them from producing identical results. Even where the same methodology is used by transmission service providers on either side of an interface, unique system differences or differences in risk assumptions can lead to variations in available transfer capability values. The central goal of the available transfer capability reforms adopted in Order No. 890 was to limit remaining opportunities for discrimination by requiring each transmission service provider's available capability transfer methodology to be sufficiently transparent to allow for independent validation that it has been consistently applied. Subject to confirmation by NERC through its audit, the Commission believes that the Reliability Standards will provide the necessary level of transparency and, therefore, the results of available transfer capability calculations will be sufficiently accurate, consistent, equivalent and replicable.

⁶² Id. P 210.

1. Available Transfer Capability Implementation Documents

87. First, the Commission proposes to direct the ERO to study whether each available transfer capability implementation document developed by each transmission service provider under the Reliability Standards contains a level of specificity sufficient to allow the Commission and others to replicate and verify calculations of available transfer capability and available flowgate capability. Although MOD-028-1, MOD-029-1, and MOD-030-2 each improves transparency and consistency by requiring transmission service providers to use certain specified data and variables in their calculations, they also allow transmission service providers to use additional parameters and assumptions as long as they are specified in their implementation documents. Other than their inclusion in the available transfer capability implementation document, there do not appear to be any appreciable factors limiting a transmission service provider's discretion to use particular parameters and assumptions.

88. For example, in the Area Interchange Methodology (MOD-028-1), Requirement R3.1 establishes variables to be used when calculating on-peak and off-peak intra-day and next-day total transfer capabilities. The requirement also allows transmission operators to use "any other values and additional parameters as specified in the [available transfer capability implementation document]."⁶³ The requirement does not provide any further limitation on the other values and additional parameters. Thus, although the requirement promotes transparency and consistency, it could allow an entity to adopt

⁶³ MOD-028-1, Requirement R3.1.

values and parameters that are not sufficiently transparent to ensure that the transmission service provider is not discriminating in the provision of transmission service through its calculation of available transfer capability.

89. Similarly, Requirement R1 of the Rated System Path Methodology (MOD-029-1) requires a transmission operator, when calculating total transfer capabilities for available transfer capability, to use a transmission model that meets the criteria set forth in the sub-requirements. Requirement R1.1.9 allows a transmission operator to use a model that “models series compensation for each line at the expected operating level unless specified otherwise in the [available transfer capability implementation document].”⁶⁴

Requirement R1.1.10 allows a transmission operator to use a model that “includes any other modeling requirements or criteria specified in the [available transfer capability implementation document].”⁶⁵

90. The same unrestrained discretion is found in the Flowgate Methodology (MOD-030-2). Requirement R2.1 requires transmission operators to include flowgates used in the available flowgate capability based, at a minimum, on specified criteria. This criteria includes, at Requirement R2.1.3, any limiting element/contingency combination at least within the transmission model identified in Requirement R3.4⁶⁶ and R3.5⁶⁷ that has been

⁶⁴ MOD-029-1, Requirement R1.1.9.

⁶⁵ MOD-029-1, Requirement R1.1.10.

⁶⁶ Requirement R3.4 requires the transmission operator to make available to the transmission service provider a transmission model to determine available flowgate capability that contains modeling data and system topology for the facilities within its

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subjected to an interconnection-wide congestion management procedure within the last 12 months, unless the limiting element/contingency combination is accounted for using another available transmission capability methodology. Requirement R2.1.4 allows transmission operators to consider any limiting element/contingency combination within the transmission model that has been requested to be included by any other transmission service provider using the flowgate methodology or area interchange methodology under certain circumstances.

91. In Order No. 890, the Commission expressed particular concern regarding consistency in the use of counterflow assumptions in short-term and long-term calculations of available transfer capability.⁶⁸ The Reliability Standards achieve consistency by requiring each transmission service provider to identify in its available transfer capability implementation document how it accounts for counterflows and to calculate available transfer capability using assumptions no more limiting than those used in the planning of operations for the corresponding time period.⁶⁹ However, the

reliability coordinator's area. Equivalent representation of radial lines and facilities 161kv or below is allowed.

⁶⁷ Requirement R3.5 requires the transmission operator to make available to the transmission service provider a transmission model to determine available flowgate capability that contains modeling data and system topology (or equivalent representation) for immediately adjacent and beyond reliability coordination areas.

⁶⁸ Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 292-93; Order 693, FERC Stats. & Regs. ¶ 31,242 at P 1039.

⁶⁹ MOD-001-1, Requirements R3.2, R7. NERC states in its filing that additional guidance from the Commission would be necessary in order to specify in greater detail a
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Reliability Standards again place no limit on the parameters the transmission service provider can use to account for counterflows. Under MOD-028-1, MOD-029-1, and MOD-030-2, transmission service providers are permitted to make adjustments to available transfer capability or available flowgate capability to reflect counterflows so long as such adjustments are allowed under the counterflow methodology identified in the available transfer capability implementation document.⁷⁰

92. The Commission also expressed concern in Order No. 890 regarding the treatment of reservations with the same point of receipt (generator), but multiple points of delivery (load), in setting aside existing transmission capacity.⁷¹ The Commission found that such reservations should not be modeled in the existing transmission commitments calculation simultaneously if their combined reserved transmission capacity exceeds the generator's nameplate capacity at the point of receipt. The Commission required the development of

single "best" approach for treating counterflows. See NERC Filing at 101. The Commission did not require the development of a single approach for the treatment of counterflows. Rather, the Commission required the development of Reliability Standards that result in the use of counterflow assumptions for short-term and long-term available transfer capability calculations that are consistent with those used for the planning of operations and system expansion. See Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 292-93; Order 693, FERC Stats. & Regs. ¶ 31,242 at P 1039. The proposed Reliability Standards adequately address that requirement by directing each transmission service provider to identify in its implementation document how it will address counterflows in its calculation of available transfer capability and available flowgate capacity.

⁷⁰ MOD-028-1, Requirement R10; MOD-029-1, Requirement R7; MOD-030-2, Requirement R8.

⁷¹ Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 245; Order 693, FERC Stats. & Regs. ¶ 31,242 at P 1033.

Reliability Standards that lay out clear instructions on how these reservations should be accounted for by the transmission service provider. The proposed Reliability Standards achieve this by requiring transmission service providers to identify in their implementation documents how they have implemented MOD-028-1, MOD-029-1, or MOD-030-2, including the calculation of existing transmission commitments.⁷²

However, the Reliability Standards again place no limits on the parameters that each transmission service provider can use.

93. The proposed Reliability Standards thus provide each transmission service provider with substantial discretion when implementing various aspects of its available transfer capability methodology. The Commission recognizes that there are aspects of calculations that require the use of parameters and assumptions tailored to the particular needs of a transmission service provider. In certain instances, however, this discretion could be used by a transmission service provider to include criteria that allow for discrimination in the provision of transmission service through inconsistent calculation of available transfer capability. For example, the use of parameters, modeling requirements,

⁷² MOD-001-1, Requirement R3.1. In its filing, NERC discusses several options should the Commission desire to impose a uniform approach regarding the treatment of reservations with the same point of receipt, but multiple points of delivery. See NERC Filing at 90-92. Neither Order No. 890 nor Order No. 693 directed that a single approach be adopted to account for such reservations and, instead, required only that instructions on how these reservations are accounted for by the transmission service provider be clearly laid out. See Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 245; Order 693, FERC Stats. & Regs. ¶ 31,242 at P 1033. The obligation of each transmission service provider to identify in its implementation document how they have implemented MOD-028-1, MOD-029-1, or MOD-030-2, including the calculation of existing transmission capacity, satisfies this requirement.

criteria, or assumptions that are undefined or “black box” in nature would provide the transmission service provider with the opportunity and ability to vary its calculations depending on the customer seeking service. Such discretion undermines the ability of the Commission and others to replicate and verify the results of a transmission service provider’s calculations.

94. In order to ensure that remaining opportunities for undue discrimination are identified and eliminated, the Commission proposes to direct the ERO to conduct a review of the additional parameters and assumptions included by each transmission service provider in its available transfer capability implementation document as of the date the Reliability Standards become effective. Based on its review, NERC would identify in the audit required above those instances in which parameters and assumptions are not sufficiently specific or transparent to allow the Commission and others to replicate and verify the results of the transmission service provider’s calculation of available transfer capability or available flowgate capacity. Upon review of NERC’s analysis, the Commission may direct the ERO to develop a modification to MOD-001-1 to address any lack of transparency. The Commission seeks comment whether additional requirements should be directed in this proceeding to ensure that the discretion provided under the available transfer capability implementation documents cannot be used to unduly discriminate in the provision of transmission service.

2. Capacity Benefit Margin Implementation Documents

95. Second, the Commission proposes to direct the ERO to study whether the capacity benefit margin implementation documents developed by transmission service providers

under MOD-004-1 contain a level of specificity sufficient to allow the Commission and others to replicate and verify the calculation, allocation, and use of capacity benefit margin by transmission service providers. As explained above, capacity benefit margin is the amount of firm transmission capability preserved by the transmission service provider for load-serving entities, whose loads are located on that transmission service provider's system, to enable access by the load-serving entities to generation from interconnected systems to meet generation reliability requirements. As NERC explained in its filing, various entities have already developed methodologies for determining capacity benefit margin. Accordingly, NERC proposed a Reliability Standard that allows transmission service providers flexibility in choosing an appropriate methodology for calculating, allocating and using capacity benefit margins. Although MOD-004-1 specifies core elements that should be consistent among all methodologies, the transmission service provider has discretion to use any methodology to calculate, allocate, and use capacity benefit margins, provided that it is identified and described in the implementation document.

96. For example, Requirements R5.1 and R6.1 of MOD-004-1 require the transmission service provider to establish capacity benefit margin values for each path and flowgate reflecting consideration of studies provided by load-serving entities and resource planners demonstrating a need for capacity benefit margin and applicable reserve margin or resource adequacy requirements. Although Requirement R1.2 requires the transmission service provider to identify in its capacity benefit margin implementation document the procedures and assumptions for establishing these path and

flowgate values, the Reliability Standard places no limitations or parameters on those procedures or assumptions. As with MOD-001-1, MOD-004-1 would permit the transmission service provider to adopt procedures and assumptions that are not sufficiently transparent to ensure that the transmission provider is similarly treating similarly-situated customers. The Commission is therefore concerned that the Reliability Standard could be implemented by a transmission service provider in a way that allows for undue discretion in the provision of transmission service.

97. In order to ensure that remaining opportunities for undue discrimination are identified and eliminated, the Commission proposes to direct the ERO to conduct a review of the procedures and assumptions included by each transmission service provider in its capacity benefit margin implementation document as of the date the Reliability Standards become effective. Based on its review, NERC would identify in the audit required above those instances in which additional procedures and assumptions are not sufficiently specific or transparent to allow the Commission and others to replicate and verify the calculation, allocation and use of capacity benefit margin by the transmission service provider.⁷³ Upon review of NERC's analysis, the Commission may direct the

⁷³ The scope of this audit should not include review of the studies supporting requests for capacity benefit margin. The Commission agrees with NERC that it would be inappropriate to place a functional entity, such as the transmission service provider, in the position of having to judge the quality of a study supporting a customer's request for capacity benefit margin. Requirements R3 and R4 of MOD-004-1 identify the specific kinds of studies that must be performed and supporting information that is to be maintained when determining a need for capacity benefit margin. Compliance with these requirements can be audited by NERC and the regional entities in the normal course of

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ERO to develop a modification to MOD-004-1 to address any lack of transparency. The Commission seeks comment whether additional requirements should be directed in this proceeding to ensure that the discretion provided under the capacity benefit margin implementation documents cannot be used to unduly discriminate in the provision of transmission service.

3. Transmission Reliability Margin Implementation Documents

98. Finally, the Commission proposes to direct the ERO to study whether the transmission reliability margin implementation documents developed by each transmission operator under the Reliability Standards contain a level of specificity sufficient to allow the Commission and others to replicate and verify the calculation and use of transmission reliability margin. Transmission reliability margin is transmission transfer capability set aside to mitigate risks to operations, such as deviations in dispatch, load forecast, outages, and similar such conditions. As NERC explains in its filing, transmission reliability margin is a subjective quantity as it is almost entirely based on the principles of risk management and risk tolerance, which vary from entity to entity.⁷⁴ Therefore, although MOD-008-1 identifies the particular categories of uncertainty that transmission operators may consider when establishing transmission reliability margin, the transmission operator is permitted to use any methodology to calculate, allocate, and

their compliance review. See Guidance Order on Compliance Audits Conducted by the Electric Reliability Organization and Regional Entities, 126 FERC ¶ 61,038 (2009).

⁷⁴ NERC Filing at 97.

use transmission reliability margins, provided that it is identified and described in the implementation document.

99. NERC states in its filing that guidance from the Commission would be necessary in order to specify in greater detail a single “best” methodology to govern the calculation of a maximum transmission reliability margin.⁷⁵ The Commission does not believe that it is necessary to establish a single methodology for calculating, allocating and using transmission reliability margin. In Order Nos. 890 and 693, the Commission directed NERC to clarify how transmission reliability margin should be calculated and allocated across paths or flowgates and how to establish an appropriate maximum transmission reliability margin.⁷⁶ The Commission directed NERC to specify the parameters for entities to use in determining uncertainties for which transmission reliability margin can be set aside and used. The Commission also directed the ERO to modify its Reliability Standards to prevent the use of capacity benefit margin and transmission reserve margin for the same purposes (i.e. double counting). The proposed Reliability Standard accomplishes these directives by requiring each transmission operator to identify in its transmission reliability margin implementation document the components that will be used to calculate transmission reliability margin, how those components will be used, and how resulting transmission reliability margin values will be allocated across paths or

⁷⁵ Id.

⁷⁶ Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 275; Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 1122-23, 1126.

flowgates.⁷⁷ This level of detail satisfies the requirements of Order No. 890 and related directives of Order No. 693 by making each transmission operator's transmission reliability margin methodologies transparent.

100. However, as with MOD-001-1 and MOD-004-1, the Commission is concerned that MOD-008-1 could be implemented by a transmission operator in a way that allows for undue discrimination in the provision of transmission service. For example, Requirements R1.1 and R1.2 of MOD-008-1 require each transmission operator to include in its transmission reliability margin implementation document the components of uncertainty used in establishing a transmission reliability margin, a description of how those components are used in the calculation of transmission reliability margin, and a description of how transmission reliability margin is allocated across paths or flowgates. The transmission reliability margin implementation document developed by transmission operators could include parameters, modeling requirements, criteria or assumptions that are insufficiently transparent, providing the transmission operator the opportunity and ability to vary its calculations depending on the customer requesting transmission service.

101. In order to ensure that remaining opportunities for undue discrimination are identified and eliminated, the Commission proposes to direct the ERO to conduct a review of the procedures identified in each transmission operator's transmission reserve margin implementation document as of the date the Reliability Standards become effective. Based on its review, NERC would identify in the audit required above those

⁷⁷ MOD-008-1, Requirement R1.

instances in which procedures, criteria, or assumptions are not sufficiently specific or transparent to allow the Commission and others to replicate and verify the results of the transmission operator's calculation of transmission reserve margin. Upon review of NERC's analysis, the Commission may direct the ERO to develop a modification to MOD-008-1 to address any lack of transparency. The Commission seeks comment whether additional requirements should be directed in this proceeding to ensure that the discretion provided under the transmission reserve margin implementation documents cannot be used to unduly discriminate in the provision of transmission service.

B. Proposed Modifications of the Reliability Standards

102. While the Commission generally proposes to approve the Reliability Standards as in compliance with Order No. 890 and the related directives of Order No. 693, the Commission also proposes to direct the ERO to develop modifications of the Reliability Standards to comply with the following discrete issues: the availability of each transmission service provider's implementation documents; the consistent treatment of assumptions in the calculation of available transfer capability; the calculation, allocation and use of capacity benefit margin; the calculation of total transfer capability under the Rated System Path Methodology; and, the treatment of network resource designations in the calculation of available transfer capability. Each of these issues is discussed below.

1. Availability of Implementation Documents

a. NERC Proposal

103. The proposed Reliability Standards require that the available transfer capacity, capacity benefit margin, and transmission reliability margin implementation documents

be made available to specified entities. Requirement R4 of MOD-001-1 requires that the following entities have access to the available transfer capability implementation document: each planning coordinator, reliability coordinator, and transmission operator associated with the transmission service provider's area; and each planning coordinator, reliability coordinator, and transmission service provider adjacent to the transmission service provider's area. Requirement R2 of MOD-004-1 requires each transmission service provider to make its capacity benefit margin implementation document available to transmission operators, transmission service providers, reliability coordinators, transmission planners, resource planners, and planning coordinators that are within or adjacent to the transmission service provider's area, and to load-serving entities and balancing authorities within the transmission service provider's area. Requirement R3 of MOD-008-1 requires each transmission operator to provide its transmission reliability implementation document upon request by transmission service providers, reliability coordinators, transmission planners, and transmission operators. NERC states that it and NAESB have agreed that requirements for making information available to other entities are more appropriately addressed through the NAESB process.

b. Commission Proposal

104. The Commission is concerned that the proposed Reliability Standards potentially restrict the disclosure of the available transfer capability, capacity benefit margin, and transmission reliability margin implementation documents. NERC does not explain in its filings why only certain entities would have access to these materials, nor why the specified list of recipients varies for each document. While the Commission notes that

the proposed NAESB standards accompanying the Reliability Standards would require transmission service providers to post a link to the implementation documents on their OASIS, which would result in disclosure beyond the specified entities listed in the Reliability Standards, the Commission believes that it is important for reliability purposes to require disclosure of the implementation documents to a broader audience than provided in the Reliability Standards. The Commission's jurisdiction under section 215 of the FPA is broader than our jurisdiction to require compliance with the NAESB standards under sections 205 and 206 of the FPA. These documents will describe how the transmission provider will implement the Reliability Standards and, therefore, should be disclosed by all transmission service providers, not only those who are also public utilities.

105. Therefore, to ensure sufficient transparency, the Commission proposes to direct the ERO, pursuant to section 215(d)(5) of the FPA and section 35.19(f) of our regulations, to modify the proposed Reliability Standards to make the available transfer capability, capacity benefit margin, and transmission reliability margin implementation documents available to all customers eligible for transmission service in a manner that is consistent with relevant NAESB standards. The Commission seeks comment on any improvements that may be necessary to improve access by transmission customers to the implementation documents.

2. Consistent Treatment of Assumptions

a. NERC Proposal

106. Under each of the methodologies contained in the proposed Reliability Standards, available transfer capability is calculated as total transfer capability minus existing transmission commitments, capacity benefit margin, and transmission reliability margin, plus postbacks and counterflows. NERC contends that the Reliability Standards work together to ensure that similar risks will not be double counted in the calculation of capacity benefit margin and transmission reliability margin. Specifically, Requirement R2 of MOD-008-1 prohibits a transmission operator from including any of the components of capacity benefit margin in the components of uncertainty used to calculate transmission reliability margin. NERC contends that MOD-004-1 addresses this prohibition by describing the specific type of studies and requirements that may be used to determine a need for capacity benefit margin.

b. Commission Proposal

107. The Commission is concerned that proposed Reliability Standards do not preclude a transmission service provider from using data and assumptions in a way that double counts their impact on available transfer capability and thereby skews the amount of capacity made available to others. NERC states that MOD-004-1 and MOD-008-1 have been drafted to preclude the double counting of similar risks in the calculation of capacity benefit margin and transmission reliability margin. However, other components of the available transfer capability calculation could be affected by the same data or assumptions, and there is no apparent restriction in the Reliability Standards from such

data or assumptions in a way that double counts their impact on available transfer capability.

108. For example, the Reliability Standards would appear to allow the transmission service provider to factor a reserve margin for facility outages into more than one of the components of the available transfer capability calculation. If the effect of the reserve margin were to appear in multiple components of the available transfer capability calculation in a similar way, under certain modeling approaches the results of that calculation would be skewed. While it may be appropriate for some variables to be factored into multiple components of the available transfer capability calculation, such as facility ratings, the Reliability Standards do not require that assumptions affecting multiple components of the available transfer capability calculation are implemented in a way that is consistent with their actual effect on available transfer capability. The Commission proposes to direct the ERO, pursuant to section 215(d)(5) of the FPA and section 35.19(f) of our regulations, to modify the proposed Reliability Standards to ensure that the proposed Reliability Standards preclude a transmission service provider from using data and assumptions in a way that double counts their impact on available transfer capability and thereby skews the amount of capacity made available to others.

3. Capacity Benefit Margin (MOD-004-1)

a. NERC Proposal

109. As noted above, Requirements R5.1 and R6.1 of MOD-004-1 require transmission service providers to establish capacity benefit margin values for each path and flowgate “reflect[ing] consideration of” both (i) studies provided by load-serving entities and

resource planners demonstrating a need for capacity benefit margin and (ii) applicable reserve margin or resource adequacy requirements. In preparing their studies, Requirements R3.1 and R4.1 direct load-serving entities and resource planners to use one or more of the following to determine the generation capability import requirement: (i) loss of load expectation studies, (ii) loss of load probability studies, (iii) deterministic risk-analysis studies, and (iv) applicable reserve margin or resource adequacy requirements. With regard to the allocation and use of transmission capacity set aside as capacity benefit margin, Requirement R1.3 requires the transmission service provider to include in its capacity benefit margin implementation document the procedure for a load-serving entity or balancing authority to use transmission capacity set aside as capacity benefit margin, including the manner in which the transmission service provider “will manage” situations where the requested use of capacity benefit margin exceeds the capacity benefit margin available.

b. Commission Proposal

110. In Order Nos. 890 and 693, the Commission emphasized that each load-serving entity has the right to request that capacity benefit margin be set aside, and to use transmission capacity set aside for that purpose, to meet its verifiable generation reliability criteria requirement.⁷⁸ The Commission is concerned that, as proposed, the Reliability Standard would allow a transmission service provider to calculate, allocate,

⁷⁸ Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 1080; see also Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 259; Order No. 890-A, FERC Stats. & Regs. ¶ 31,261 at P 82.

and use capacity benefit margin in a way that impairs the reliable operation of the Bulk-Power System. Under the Reliability Standard, the transmission service provider is to “reflect consideration” of studies provided by load-serving entities and resource planners demonstrating a need for capacity benefit margin and “manage” situations where the requested use of capacity benefit margin exceeds the capacity benefit margin available. The Reliability Standard places no bounds on this “consideration” and “management” and, for example, would permit a transmission service provider to make decisions regarding the use of capacity benefit margin based solely on economic considerations notwithstanding a demonstration of need for capacity benefit margin by a load-serving entity or resource planner. The Commission proposes, pursuant to section 215(d)(5) of the FPA and section 39.5(f) of our regulations, to direct the ERO to develop a modification to the Capacity Benefit Margin Methodology (MOD-004-1) to ensure that the Reliability Standard would not allow a transmission service provider to calculate, allocate, and use capacity benefit margin in a way that impairs the reliable operation of the Bulk-Power System.

111. In addition, the Commission has concern regarding references to applicable reserve margin and resource adequacy requirements in the determination of the generation capability import requirements by load-serving entities and resource planners under Requirements R3.1 and R4.1. Under the phrasing of those provisions, load-serving entities and resource planners must determine their generation capability import requirement by using one or more of loss of load expectation studies, loss of load probability studies, deterministic risk-analysis studies, and applicable reserve margin or

resource adequacy requirements. As a result, a load-serving entity or resource planner could rely solely on reserve margin and resource adequacy requirements to demonstrate a need for capacity benefit margin without any analysis of loss of load expectations, loss of load probabilities, or deterministic risk. In comparison, Requirements 5.1 and 6.1 obligate the transmission service provider to consider both the studies provided by load-serving entities and resource planners and applicable reserve margin and resource adequacy requirements when calculating capacity benefit margin and allocating it to particular paths or flowgates. The Commission proposes, pursuant to section 215(d)(5) of the FPA and section 39.5(f) of our regulations, to direct the ERO to develop a modification to MOD-004-1 to require load-serving entities and resource planners to determine generation capability import requirements by reference to relevant studies and applicable reserve margin or resource adequacy requirements, as relevant.

4. Calculation of Total Transfer Capability under the Rated System Path Methodology (MOD-029-1)

a. NERC Proposal

112. Requirement R2 of the Rated System Path Methodology (MOD-029-1) provides the process a transmission operator must use to determine total transfer capability. Requirement R2.7 of that Reliability Standard requires the transmission operator to set the total transfer capability of an available transfer capability path to a value determined prior to 1994 in certain instances:

R2.7. For available transfer capability Paths whose path rating, adjusted for seasonal variance, was established, known and used in operation since January 1, 1994, and no action

has been taken to have the path rated using a different method, set the total transfer capability at that previously established amount.

b. Commission Proposal

113. In Order No. 890, the Commission required the use of consistent practices to calculate total transfer capability.⁷⁹ In Order No. 890-A, the Commission clarified that, while total transfer capability need not be recalculated at consistent time intervals, the transmission operator should consider whether any changes in system topology, contingency outages, or other factors are substantial enough to merit recalculation of total transfer capability.⁸⁰

114. NERC has not explained the inclusion of Requirement R2.7 in the Rated System Path Methodology. It is not clear to the Commission why certain applicable entities would be required to use pre-1994 total transfer capability values. The Commission is concerned that requiring pre-1994 total transfer capability values to remain in place without adequate explanation essentially exempts certain paths from the total transfer capability requirements in the Rated System Path Methodology and may result in total transfer capability values that are incorrectly based on stale assumptions and criteria.

115. While the Commission proposes to approve the proposed Reliability Standard overall as just and reasonable and an improvement on available transfer capability transparency, as discussed above, pursuant to section 215(d)(5) of the FPA and section

⁷⁹ Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 237.

⁸⁰ Order No. 890-A, FERC Stats. & Regs. ¶ 31,261 at P 105.

39.5(f) of our regulations, the Commission seeks comment on whether it should direct the ERO to develop a modification to the Rated System Path Methodology (MOD-029-1) to remove Requirement R2.7 as unsupported.

5. Treatment of Network Resource Designations

a. NERC Proposal

116. In each of the proposed Reliability Standards, transmission service providers are required to identify as part of their calculation of existing transmission commitments the amount of capacity that is set aside for network integration transmission service.⁸¹

However, the specificity of that requirement varies among the proposed Reliability Standards.

117. Under the Flowgate Methodology (MOD-030-2), Requirements R6.1 and 6.2 provide for calculation of the impact of network integration transmission service based on a modeling of load forecasts for the time period being calculated and unit commitment and dispatch order, including all designated network resources and other resources that are committed or have the legal obligation to run as specified in the transmission service provider's implementation document. Requirement R8 of the Area Interchange Methodology (MOD-028-1) and Requirement R5 of the Rated System Path Methodology (MOD-029-1) provide for the inclusion of firm capacity reserved for network integration

⁸¹ See MOD-028-001, Requirement R8; MOD-029-1, Requirement R5; MOD-030-2, Requirement R6.1.

transmission service, but do not describe how the transmission service provider is to identify that amount of capacity.

118. With regard to the frequency of these calculations, Requirement R8 of MOD-001-1 would require every transmission service provider calculating available transfer capability to perform recalculations of available transfer capability at specified frequencies, unless none of the calculated values identified in the available transfer capability equation have changed.

b. Commission Proposal

119. In Order No. 693, the Commission directed the ERO to develop requirements specifying how transmission service providers should determine which generators should be modeled in service when calculating available transfer capability.⁸² Among other things, the Commission directed the ERO to revise the Reliability Standards to specify that base generation dispatch schedules will reflect the modeling of all designated network resources and other resources that are committed to or have the legal obligation to run, as they are expected to run. The Commission also directed transmission service providers to address the effect on available transfer capability of designating and undesignating a network resource.

120. NERC has not explained the failure to include in each of the available transfer capability methodologies a requirement that base generation dispatch schedules will reflect the modeling of all designated network resources and other resources that are

⁸² Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 1041.

committed to or have the legal obligation to run, as they are expected to run. It is therefore unclear whether the proposed Reliability Standards address the effect on available transfer capability of designating and undesignating a network resource. While the Commission proposes to approve the proposed Reliability Standards as just and reasonable and an improvement on available transfer capability transparency, pursuant to section 215(d)(5) of the FPA and section 39.5(f) of our regulations, the Commission proposes to direct the ERO to develop a modification to the Reliability Standards to address these requirements.

C. Violation Risk Factors and Violation Severity Levels

121. To determine a base penalty amount for a violation of a requirement within a Reliability Standard, NERC must first determine an initial range for the base penalty amount. To do so, NERC will assign a violation risk factor for each requirement of a Reliability Standard that relates to the expected or potential impact of a violation of the requirement on the reliability of the Bulk-Power System. For that requirement, the ERO assigns a lower, medium or high violation risk factor for each mandatory Reliability Standard requirement.⁸³ The Commission has established guidelines for evaluating the validity of each violation risk factor assignment.⁸⁴

⁸³ The specific definitions of high, medium and lower are provided in North American Electric Reliability Corp., 119 FERC ¶ 61,145 at P 9, order on reh'g, 120 FERC ¶ 61,145 (2007) (Violation Risk Factor Rehearing Order).

⁸⁴ The guidelines are: (1) consistency with the conclusions of the blackout report; (2) consistency within a Reliability Standard; (3) consistency among Reliability Standards; (4) consistency with NERC's definition of the violation risk factor level; and
(continued...)

122. NERC will also define up to four violation severity levels – lower, moderate, high and severe – as measurements for the degree to which the requirement was violated in a specific circumstance. For a specific violation of a particular requirement, NERC or the Regional Entity will establish the initial value range for the base penalty amount by finding the intersection of the applicable violation risk factor and violation severity level in the base penalty amount table in appendix A of its sanction guidelines.

123. On June 19, 2008, the Commission issued an order establishing four guidelines for the development of violation severity levels.⁸⁵ First, the violation severity level assignments should not have the unintended consequence of lowering the current level of compliance. Second, the violation severity levels should ensure uniformity and consistency in the determination of penalties. Third, a violation severity level assignment should be consistent with the corresponding requirement. Fourth, a violation severity level assignment should be based on a single violation, not on a cumulative number of violations.

(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. A detailed explanation is provided in the Violation Risk Factor Rehearing Order, 120 FERC ¶ 61,145 at P 8-13.

⁸⁵ North American Electric Reliability Corp., 123 FERC ¶ 61,284, at P 20-35 (Violation Severity Level Order), order on reh'g & compliance, 125 FERC ¶ 61,212 (2008).

1. NERC Proposal

124. In its August 29, 2008 filing, NERC proposes violation severity levels that are specific to the individual requirements of the proposed Reliability Standards. NERC states that it developed violation severity level assignments for MOD-001-1, MOD-008-1, MOD-028-1, MOD-029-1, and MOD-030-1 prior to issuance of the Violation Severity Level Order. As a result, NERC states that it has not analyzed the proposed violation severity levels relative to the Commission's guidelines established in the Violation Severity Level Order.

125. In addition, NERC states that it is not filing the associated violation risk factors with these Reliability Standards. While violation risk factors have been developed and balloted for each of the five proposed Reliability Standards, NERC states that its Board believes further review of the violation risk factors is warranted given recent Commission actions in general and the development history of these violation risk factors in particular. In accordance with its Rules of Procedure, NERC states that it will submit violation risk factors for these proposed Reliability Standards in a future filing.

126. NERC states that each balloted Reliability Standard included a violation risk factor for each main requirement in the Reliability Standard. For all the requirements in the balloted MOD Reliability Standards, the applicable violation risk factors were "lower." In developing the violation risk factor assignments, NERC states that there were opposing viewpoints with respect to the appropriate assignments. According to NERC, one view offered that available transfer capability and its associated methodologies do not directly affect the electrical state of the system or the ability to

monitor or control it as would be required under the “medium” violation risk factor assignment. NERC states that an incorrect available transfer capability calculation may lead to oversubscribing or undersubscribing the system. According to NERC, undersubscribing, while affecting the potential for commercial activity, actually benefits reliability. Oversubscribing the system as a result of an optimistic available transfer capability value, while somewhat beneficial to commercial activity, may lead to a reliability concern that if realized can be managed by the operator’s adherence to system limits, to the extent that the operator has options to implement some measure of transmission loading relief to reduce flows due to transactions. NERC states that for an incorrect available transfer capability to become a reliability issue requires an optimistic available transfer capability value, coupled with the sale of that available transfer capability, and an operator who is not mindful to the system limits, the last of which is governed by other transmission operator and interconnection operating Reliability Standards. On this argument, according to NERC, assigning a “medium” violation risk factor due to the “direct” impact is questionable.

127. On this basis, the drafting team evaluated the scope of the remaining work to meet the Commission deadline and focused its attention to the technical issues, adjusting the violation risk factors to “lower” based on the industry comments and the arguments presented above. However, NERC states that its Board believes that a more thorough review of the violation risk factors is warranted given recent Commission actions in general and the development history of these violation risk factors in particular. NERC’s board has asked NERC staff to review these violation risk factors through an open

stakeholder process to ensure that they are consistent with the intent of the violation risk factor definitions and prior Commission decisions on violation risk factors. Accordingly, NERC states that it is not filing the associated violation risk factors with these Reliability Standards at this time. NERC states that it will submit violation risk factors for these proposed Reliability Standards in a future filing.

128. In its November 21, 2008 and March 6, 2009 filings, NERC proposes violations severity levels for MOD-004-1 and MOD-030-2, respectively. Similar to the violation severity levels proposed for MOD-001-1, MOD-008-1, MOD-028-1, MOD-029-1, and MOD-030-1, NERC does not propose any violation severity levels for the sub-requirements. In addition, NERC states that its board of trustees deferred action on the violation risk factors associated with these Reliability Standards and asked that they be reviewed through an open stakeholder process, with a report back to the board, to ensure that they are consistent with the intent of the violation risk factor definitions and Commission precedent. NERC states that it will submit violation risk factors for these Reliability Standards in a future filing.

2. Commission Proposal

129. The Commission proposes to accept NERC's commitment to file violation severity levels and violation risk factors at a later time. The Violation Severity Level Order was issued after NERC developed the violation severity level assignments for the Reliability Standards at issue in this proceeding. As a result, NERC was unable to evaluate and modify the proposed violation severity levels to comply with our guidelines prior to filing the proposed Reliability Standards. The Commission proposes to direct the

ERO to reevaluate the violation severity levels associated with all of the proposed Reliability Standards based on the Commission's guidelines outlined in the Violation Severity Level Order and prepare appropriate revisions. In addition, the Commission proposes to accept NERC's proposal to allow NERC staff to review the violation risk factors through an open stakeholder process to ensure that they are consistent with the intent of the violation risk factor definitions and guidance provided in the Violation Risk Factor Order and the Violation Risk Factor Rehearing Order. The Commission proposes to direct NERC to file revised violation severity levels and violation risk factors no later than 120 days before the Reliability Standards become effective.

D. Disposition of Other Reliability Standards

1. MOD-010-1 through MOD-025-1

130. Order No. 890 directed public utilities, working through NERC, to modify the reliability standards MOD-010 through MOD-025⁸⁶ to incorporate a requirement for the periodic review and modification of models for (1) load flow base cases with contingency, subsystem, and monitoring files, (2) short circuit data, and (3) transient and dynamic stability simulation data, in order to ensure that they are up to date. The Commission found that this requirement is essential in order to have an accurate simulation of the performance of the grid and from which to comparably calculate

⁸⁶ The MOD-010 through MOD-025 Reliability Standards establish data requirements, reporting procedures, and system model development and validation for use in the reliability analysis of the interconnected transmission systems.

available transfer capability, therefore increasing transparency and decreasing the potential for undue discrimination by transmission service providers.⁸⁷

a. NERC Proposal

131. NERC states that this modeling activity is outside the scope of the available transfer capability Reliability Standards drafting team effort because it requires a different skill set and expertise than that required for developing available transfer capability and should be addressed by a separate drafting team. NERC states that these Reliability Standards are part of its Reliability Standards Development Plan. NERC states that this is consistent with Order No. 693, which identified nine Reliability Standards, none of which were MOD-010 through MOD-025, as the core of the available transfer capability initiative directed in Order No. 890.⁸⁸

b. Commission Proposal

132. The Commission proposes to allow NERC to address revisions to MOD-010 through MOD-025 through a separate project. Those Reliability Standards are generally intended to establish consistent data requirements, reporting procedures and system models for use in reliability analysis. As such, the Commission proposes to find that NERC is correct that they were not a part of the available transfer capability modifications required in Order Nos. 890 and 693.

⁸⁷ Order No. 890, FERC Stats. & Regs. ¶ 31,241 at P 290.

⁸⁸ Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 206.

2. Reliability Standards Proposed to be Retired or Withdrawn**a. NERC proposal**

133. NERC requests that FAC-013-1, MOD-006-0, and MOD-007-0 be retired when the available transfer capability-related Reliability Standards become effective. In addition, NERC requests to withdraw its request for approval of the following Reliability Standards that were neither approved nor remanded in Order No. 693, effective upon approval of the available transfer capability-related MOD Reliability Standards in this proceeding: FAC-012-1, MOD-001-0, MOD-002-0, MOD-003-0, MOD-004-0, MOD-005-0, MOD-008-0, and MOD-009-0. According to NERC, these Reliability Standards are wholly superseded by the MOD Reliability Standards addressed in this proceeding.

b. Commission Proposal

134. The Commission proposes to approve NERC's request to retire MOD-006-0 and MOD-007-0 and to withdraw its request for approval of MOD-001-0, MOD-002-0, MOD-003-0, MOD-004-0, MOD-005-0, MOD-008-0, and MOD-009-0. The Commission also proposes to find that MOD-001-0, MOD-002-0, MOD-003-0, MOD-004-0, MOD-005-0, MOD-008-0, and MOD-009-0 are all superseded by the available transfer capability calculations required by the proposed MOD Reliability Standards in this proceeding and are, upon the effectiveness of the proposed MOD Reliability Standards, no longer necessary.

135. With regard to FAC-012-1 and FAC-013-1, the Commission disagrees with NERC that these Reliability Standards are wholly superseded by the MOD Reliability Standards addressed in this proceeding. Under FAC-012-1, reliability coordinators and planning

authorities would be required to document the methodology used to establish inter-regional and intra-regional transfer capabilities and to state whether the methodology is applicable to the planning horizon or the operating horizon. Under FAC-013-1, reliability coordinators and planning authorities are required to establish a set of inter-regional and intra-regional transfer capabilities that are consistent with the methodology documented under FAC-012-1, which could require the calculation of transfer capabilities for both the planning horizon and the operating horizon. In comparison, the proposed MOD Reliability Standards provide only for the calculation of available transfer capability and its components, including total transfer capability, in the operating horizon.⁸⁹ The proposed MOD Reliability Standards do not govern the calculation of transfer capabilities in the planning horizon, i.e., beyond 13 months in the future.

136. In Order No. 693, the Commission approved FAC-013-1, but declined to approve or remand FAC-012-1. The Commission expressed concern that FAC-012-1 merely required the documentation of a transfer capability methodology without providing a framework for that methodology including data inputs and modeling assumptions.⁹⁰ The Commission also expressed concern that the criteria used to calculate transfer capabilities for use in determining available transfer capability must be identical to those used in planning and operating the system.⁹¹ The Commission directed the ERO to modify FAC-

⁸⁹ See MOD-001-1, Requirement R2.3.

⁹⁰ Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 777.

⁹¹ Id. P 782.

012-1 to provide a framework for the transfer capability calculation methodology that takes account of the need for consistency in the criteria used to calculate transfer capabilities.⁹²

137. The available transfer capability methodologies set forth in MOD-028-1, MOD-029-1, and MOD-030-2 each provide a framework for the calculation of total transfer capability and total flowgate capability that specifies certain data inputs and modeling assumptions to be used.⁹³ Requirement R7 of MOD-001-1 also provides that, when calculating available transfer capability or available flowgate capability, the transmission provider shall use assumptions no more limiting than those used in the planning of operations for the corresponding time period studied. It therefore appears that the MOD Reliability Standards provide a framework for the consistent calculation of total transfer capability for the operating horizon. However, NERC has not addressed the requirements of Order No. 693 with regard to the calculation of transfer capabilities in the planning horizon.

138. The Commission therefore proposes not to grant NERC's request to withdraw FAC-012-1, nor approve the retirement of FAC-013-1. Instead, the Commission proposes, pursuant to section 215(d)(5) of the FPA and section 39.5(f) of our regulations, to direct the ERO to submit a revised FAC-012-1 and a modification to FAC-013-1 to

⁹² Id. P 779, 782.

⁹³ See MOD-028-1, Requirements R3 and R4; MOD-029-1, Requirements R2 and R3; MOD-030-2, Requirement R2.4.

comply with the relevant directives of Order No. 693 and as otherwise necessary to make the requirements of those Reliability Standards consistent with those of the proposed MOD Reliability Standards and the final rule in this proceeding. The Commission proposes to direct the ERO to submit a revised FAC-012-1 and a modification to FAC-013-1, as well as violation severity levels and violation risk factors for FAC-012-1 and FAC-013-1, no later than 120 days before the MOD Reliability Standards become effective.

E. Definitions

139. In Order Nos. 890 and 693, the Commission noted that there was not a definition of available flowgate capability/total flowgate capability in the ERO's glossary and directed the ERO to develop available flowgate capability/total flowgate capability definitions used to identify a particular set of transmission facilities as flowgates.

1. NERC Proposal

140. NERC proposes to modify its Glossary of Terms to add the following twenty definitions that are used in the five proposed Reliability Standards, two of which wholly replace existing terms in the Commission-approved NERC Glossary:⁹⁴

Area Interchange Methodology: The Area Interchange Methodology is characterized by determination of incremental transfer capability via simulation, from which Total Transfer Capability (TTC) can be mathematically derived. Capacity Benefit Margin (CBM), Transmission Reliability Margin (TRM), and Existing Transmission Commitments (ETC) are subtracted from the TTC, and

⁹⁴ These include Available Transfer Capability and Flowgate.

Postbacks and counterflows are added, to derive Available Transfer Capability (ATC). Under the Area Interchange Methodology, TTC results are generally reported on an area to area basis.

ATC Path: Any combination of Point of Receipt (POR) and Point of Delivery (POD) for which Available Transfer Capability (ATC) is calculated; and any Posted Path.⁹⁵

Available Flowgate Capability (AFC): A measure of the flow capability remaining on a Flowgate for further commercial activity over and above already committed uses. It is defined as Total Flowgate Capability (TFC) less Existing Transmission Commitments (ETC), less a Capacity Benefit Margin (CBM), less a Transmission Reliability Margin (TRM), plus Postbacks, and plus counterflows.

Available Transfer Capability (ATC): A measure of the transfer capability remaining in the physical transmission network for further commercial activity over and above already committed uses. It is defined as Total Transfer Capability (TTC) less Existing Transmission Commitments (ETC) (including retail customer service), less a Capacity Benefit Margin (CBM), less a Transmission Reliability Margin (TRM), plus Postbacks, plus counterflows.

Available Transfer Capability Implementation Document (ATCID): A document that describes the implementation of a methodology for calculating Available Transfer Capability (ATC) or Available Flowgate Capability (AFC), and provides information related to a Transmission Service Provider's calculation of ATC or AFC.

Block Dispatch: A set of dispatch rules such that given a specific amount of load to serve, an approximate generation dispatch can be determined. To accomplish this, the capacity of a given generator is segmented into loadable "blocks," each of which is grouped and ordered relative to other blocks

⁹⁵ See 18 CFR 37.6(b)(1) (2008).

(based on characteristics including, but not limited to, efficiency, run of river or fuel supply considerations, and/or “must-run” status).

Business Practices: Those business rules contained in the Transmission Service Provider’s applicable tariff, rules, or procedures; associated Regional Reliability Organization or Regional Entity business practices; or North American Energy Standards Board (NAESB) Business Practices.

Capacity Benefit Margin Implementation Document (CBMID): A document that describes the implementation of a Capacity Benefit Margin methodology.

Dispatch Order: A set of dispatch rules such that given a specific amount of load to serve, an approximate generation dispatch can be determined. To accomplish this, each generator is ranked by priority.

Existing Transmission Commitments (ETC): Committed uses of a Transmission Service Provider’s Transmission system considered when determining Available Transfer Capability (ATC) or Available Flowgate Capability (AFC).

Flowgate:

- 1.) A portion of the Transmission system through which the Interchange Distribution Calculator calculates the power flow from Interchange Transactions.
- 2.) A mathematical construct, comprised of one or more monitored transmission Facilities and optionally one or more contingency Facilities, used to analyze the impact of power flows upon the Bulk Electric System.

Flowgate Methodology: The Flowgate methodology is characterized by identification of key Facilities as Flowgates. Total Flowgate Capabilities (TFC) are determined based on Facility Ratings and voltage and stability limits. The impacts of Existing Transmission Commitments (ETCs) are determined by simulation. The impacts of ETC, Capacity Benefit Margin (CBM) and Transmission Reliability Margin (TRM) are subtracted from the TFC, and Postbacks and counterflows are added, to determine the Available Flowgate

Capability (AFC) value for that Flowgate. AFCs can be used to determine Available Transfer Capability (ATC).

Generation Capability Import Requirement (GCIR): The amount of generation capability from external sources identified by a Load-Serving Entity (LSE) or Resource Planner (RP) to meet its generation reliability or resource adequacy requirements as an alternative to internal resources.

Outage Transfer Distribution Factor (OTDF): In the post-contingency configuration of a system under study, the electric Power Transfer Distribution Factor (PTDF) with one or more system Facilities removed from service (outaged).

Participation Factors: A set of dispatch rules such that given a specific amount of load to serve, an approximate generation dispatch can be determined. To accomplish this, generators are assigned a percentage that they will contribute to serve load.

Planning Coordinator: *See* Planning Authority.

Postback: Positive adjustments to Available Transfer Capability (ATC) or Available Flowgate Capability (AFC) as defined in Business Practices. Such Business Practices may include processing of redirects and unscheduled service.

Power Transfer Distribution Factor (PTDF): In the pre-contingency configuration of a system under study, a measure of the responsiveness or change in electrical loadings on transmission system Facilities due to a change in electric power transfer from one area to another, expressed in percent (up to 100%) of the change in power transfer .

Rated System Path Methodology: The Rated System Path Methodology is characterized by an initial Total Transfer Capability (TTC), determined via simulation. Capacity Benefit Margin (CBM), Transmission Reliability Margin (TRM), and Existing Transmission Commitments (ETC) are subtracted from TTC, and Postbacks and counterflows are added as applicable, to derive Available Transfer Capability (ATC). Under the Rated System Path Methodology, TTC results are generally reported as specific transmission path capabilities.

Total Flowgate Capability (TFC): The maximum flow capability on a Flowgate, is not to exceed its thermal rating, or in the case of a flowgate used to represent a specific operating constraint (such as a voltage or stability limit), is not to exceed the associated System Operating Limit.

Transmission Operator Area: The collection of Transmission assets over which the Transmission Operator is responsible for operating.

Transmission Reliability Margin Implementation Document (TRMID): A document that describes the implementation of a Transmission Reliability Margin (TRM) methodology, and provides information related to a Transmission Operator's calculation of TRM.

2. Commission Proposal

141. The Commission proposes to approve the addition of these terms to the NERC Glossary with minor modification. The Commission believes that the definition of Postback is not fully determinative. NERC should be able to define this term without reference to Business Practices, another defined term. The Commission therefore proposes to direct NERC to modify the definition of Postback.

142. The definition of Business Practices includes a reference to the “regional reliability organization.” In Order No. 693, the Commission directed NERC to eliminate references to regional reliability organizations as responsible entities in the Reliability Standards because such entities are not users, owners or operators of the Bulk-Power System.⁹⁶ Accordingly, the Commission proposes to direct NERC to remove from the proposed definition of Business Practices, the reference to regional reliability

⁹⁶ Order No. 693, FERC Stats. & Regs. ¶ 31,242 at P 157.

organizations and replace it with the term Regional Entity. However, Regional Entity is not currently defined in the NERC Glossary. The Commission therefore proposes to direct NERC to develop a definition of Regional Entity consistent with section 215(a) of the FPA⁹⁷ and 18 CFR 39.1 (2008), to be included in the NERC Glossary.

IV. Information Collection Statement

143. The following collections of information contained in this proposed rule have been submitted to the Office of Management and Budget (OMB) for review under section 3507(d) of the Paperwork Reduction Act of 1995.⁹⁸ OMB's regulations require OMB to approve certain information collection requirements imposed by agency rule.⁹⁹

144. Comments are solicited on the need for this information, whether the information will have practical utility, ways to enhance the quality, utility, and clarity of the information to be collected, and any suggested methods for minimizing respondents' burden, including the use of automated information techniques.

Burden Estimate: The public reporting and records retention burdens for the proposed reporting requirements and the records retention requirement are as follows.¹⁰⁰

⁹⁷ 16 U.S.C. 824o.

⁹⁸ 44 U.S.C. 3507(d).

⁹⁹ 5 CFR 1320.11.

¹⁰⁰ These burden estimates apply only to this NOPR and do not reflect upon all of FERC-516 or FERC-717.

Data Collection	Number of Respondents	Number of Responses	Hours per Response	Total Annual Hours
Mandatory data exchanges	137	1	80	10,960
Explanation of change of ATC values	137	1	100	13,700
Recordkeeping	137	1	30	3,480

Total Annual Hours for Collection:

Reporting + recordkeeping hours = 3,480 + 24,660 = 28,140 hours.

Cost to Comply:

Reporting = \$2,811,240

24,660 hours @ \$114 an hour (average cost of attorney (\$200 per hour), consultant (\$150), technical (\$80), and administrative support (\$25))

Recordkeeping = \$185,875 (same as below)

Labor (file/record clerk @ \$17 an hour) 3,480 hours @ \$17/hour = \$59,150

Storage 137 respondents @ 8,000 sq. ft. x \$925 (off site storage) = \$126,725

Total costs = \$2,997,115

Labor \$ (\$2,811,240+ \$59,150) + Recordkeeping Storage Costs (\$126,725)

OMB's regulations require it to approve certain information collection requirements

imposed by an agency rule. The Commission is submitting notification of this proposed

rule to OMB. If the proposed requirements are adopted they will be mandatory

requirements.

Title: Mandatory Reliability Standards for the Calculation of Available Transfer Capability, Capacity Benefit Margins, Transmission Reliability Margins, Total Transfer Capability, and Existing Transmission Commitments and Mandatory Reliability Standards for the Bulk-Power System

Action: Proposed Collections

OMB Control Nos. [to be determined]

Respondents: Business or other for profit

Frequency of responses: On occasion.

Necessity of the Information:

145. Internal Review: The Commission has reviewed the proposed reliability standards and made a determination that these requirements are necessary to implement section 215 of the Energy Policy Act of 2005. These requirements conform to the Commission's plan for efficient information collection, communication and management within the energy industry. The Commission has to assure itself, by means of internal review, that there is specific, objective support for the burden estimates associated with the information requirements.

146. Interested persons may obtain information on the reporting requirements by contacting the following: Federal Energy Regulatory Commission, 888 First Street, N.E. Washington, D.C. 20426 [Attention: Michael Miller, Office of the Executive Director, Phone: (202)502-8415, fax: (202) 273-0873, e-mail: michael.miller@ferc.gov.]

147. For submitting comments concerning the collection(s) of information and the associated burden estimate(s), please send your comments to the contact listed above and to the Office of Information and Regulatory Affairs, Office of Information and Regulatory Affairs, Washington, D.C. 20503 [Attention: desk Officer for the Federal Energy Regulatory Commission, phone (202) 395-4650, fax: (202)395-7285, e-mail: oir_submission@omb.eop.gov.]

V. Environmental Analysis

148. 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.¹⁰¹ The actions proposed here fall within the categorical exclusion in the Commission's regulations for rules that are clarifying, corrective or procedural, for information gathering, analysis, and dissemination.¹⁰²

VI. Regulatory Flexibility Act Certification

149. The Regulatory Flexibility Act of 1980 (RFA)¹⁰³ generally requires a description and analysis of final rules that will have significant economic impact on a substantial number of small entities. The MOD Reliability Standards apply to transmission service providers and transmission operators, most of which do not fall within the definition of small entities.¹⁰⁴

150. As indicated above, approximately 137 entities will be responsible for compliance with the three new Reliability Standards. Of these only six, or less than five percent, have output of four million MWh or less per year.¹⁰⁵ The Commission does not consider this a substantial number.¹⁰⁶ Based on this understanding, the Commission certifies that

¹⁰¹ Regulations Implementing the National Environmental Policy Act, Order No. 486, 52 FR 47897 (Dec. 17, 1987), FERC Stats. & Regs. ¶ 30,783 (1987).

¹⁰² 18 CFR 380.4(a)(5).

¹⁰³ 5 U.S.C. 601-612.

¹⁰⁴ The definition of “small entity” under the Regulatory Flexibility Act refers to the definition provided in the Small Business Act, which defines a “small business concern” as a business that is independently owned and operated and that is not dominant in its field of operation. See 15 U.S.C. 632 (2000).

¹⁰⁵ Id.

¹⁰⁶ The Regulatory Flexibility Act defines a “small entity” as “one which is independently owned and operated and which is not dominant in its field of operation.”

(continued...)

this rule will not have a significant economic impact on a substantial number of small entities. Accordingly, no regulatory flexibility analysis is required.

VII. Comment Procedures

151. 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 Nos. RM08-19-000, RM08-19-001, RM09-5-000 and RM06-16-005, and must include the commenter's name, the organization they represent, if applicable, and their address in their comments.

152. 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

See 5 U.S.C. 601(3) and 601(6); 15 U.S.C. 632(a)(1). In Mid-Tex Elec. Coop. v. FERC, 773 F.2d 327, 340-43 (D.C. Cir. 1985), the court accepted the Commission's conclusion that, since virtually all of the public utilities that it regulates do not fall within the meaning of the term "small entities" as defined in the Regulatory Flexibility Act, the Commission did not need to prepare a regulatory flexibility analysis in connection with its proposed rule governing the allocation of costs for construction work in progress (CWIP). The CWIP rules applied to all public utilities. The revised pro forma OATT will apply only to those public utilities that own, control or operate interstate transmission facilities. These entities are a subset of the group of public utilities found not to require preparation of a regulatory flexibility analysis for the CWIP rule.

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

153. Commenters that are not able to file comments electronically must send an original and 14 copies of their comments to: Federal Energy Regulatory Commission, Secretary of the Commission, 888 First Street N.E., Washington, D.C. 20426.

154. 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.

VIII. Document Availability

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

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

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

By direction of the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.

Document Content(s)

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