The North American Electric Reliability Council (NERC) strongly supports the formation of an industry organization to develop business practice standards and related communications protocols for the wholesale electric industry, as requested by the Commission in its December 19, 2001, order in this docket.\footnote{Since its formation in 1968, NERC has been instrumental in making the North American electric system the most reliable electric system in the world. NERC’s membership is unique. As a not-for-profit corporation, NERC’s members are the ten Regional Reliability Councils whose members come from all segments of the electric industry: investor-owned utilities; federal power agencies; rural electric cooperatives; state, municipal and provincial utilities; independent power producers; power marketers; and end-use customers. These entities account for virtually all the electricity supplied and purchased in the United States, Canada, and a portion of Baja California Norte, Mexico.} In a related development, NERC’s Board of Trustees on February 20, 2002, made two important decisions:

1. NERC will continue to establish reliability standards for the operating and planning of the bulk electric systems of North America through its own fair, open, balanced and inclusive standards development process; and
2. NERC is committed to closely coordinating its standard-setting activities with those of the new business practices organization, in support of the Commission’s goal of achieving reliable, well-functioning competitive wholesale electric markets.

These comments describe the nature and scope of NERC’s reliability standards and explain how NERC envisions coordinating its standard-setting activities with those of the new business practices organization.
NERC is authorized to state that the following organizations and entities have agreed to support this filing: American Public Power Association, Arizona Public Service Corporation, National Association of State Utility Consumer Advocates, National Rural Electric Cooperative Association, Southern Company Services, Inc., Transmission Access Policy Study Group, Western Area Power Administration, and Wisconsin Electric Power Company.

Comments and questions with respect to these comments should be addressed to:

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I. Background

In its December 19 order, the Commission stated that it expected to issue a rule regarding a standard market design for the wholesale electric market in the near future and that standards governing business practices and electronic communications would be needed to implement the Commission’s market design principles. The Commission called on the electric industry to establish a single consensus, industry-wide standards organization to develop these business practice standards and communication protocols for the wholesale electric industry. The Commission also directed the industry to adopt a process to coordinate the development of wholesale electric business practice standards and related communications protocols with other standards, such as reliability standards, that impact the integrated North American electric grid.

For several months prior to the December order, NERC had been working with other industry participants as well as representatives of the Gas Industry Standards Board on the issue of how best to
develop business practice standards and reliability standards to support the evolving electricity markets. Once the Commission issued the order, NERC and all industry participants intensified their efforts to pursue a consensus process that would both address the development of business practice standards and communications protocols, and ensure the coordination of that process with the development of NERC’s reliability standards. The industry has made substantial progress toward meeting the Commission’s request, although work remains to be done. NERC is committed to continue to work with others in the industry to complete the task of creating an organization to develop the business practice standards needed to implement the Commission’s market design policies.

At its meeting on February 20, 2002, NERC’s independent Board of Trustees adopted a resolution that demonstrates its complete and unambiguous commitment to maintaining the reliability of the North American electric grid, including the development of reliability standards (Appendix A-1). The Board strongly believes that there is a paramount public interest in a reliable bulk power system in North America and concluded that an organization encompassing both the United States and Canada should have as its principal mission maintaining the reliability of that system. In light of NERC’s technical expertise, history, and governance by an independent board charged to represent the broad public interest, the Board affirmed that NERC will be that organization. At the same time, the Board indicated it is committed to developing reliability standards that enable and encourage market solutions to the maximum extent possible. The Board also committed NERC to work with the industry to develop a joint filing in this docket, and to coordinate with those organizations responsible for developing any standards that impact the operation of the interconnected electric systems throughout North America.

To further support the concept of a fair, open, balanced and inclusive process for developing reliability standards, the Board adopted a weighted-sector voting model for the approval of reliability standards (Appendix A-2). This approach provides for balanced and inclusive participation in the standards development process, and at the same time prevents any single segment from dominating the process or blocking the approval of a standard. NERC is in the process of incorporating the new voting model into
the NERC standards development process. NERC will also apply to the American National Standards Institute (ANSI) for accreditation of its standards development process.

II. Proposed Process for Coordinating the Development of Reliability Standards and Wholesale Electric Business Practice Standards

NERC remains committed to ensure that its revised process for developing and adopting reliability standards is closely coordinated with the new business standards organization. Anticipating that the North American Energy Standards Board (NAESB) will be the entity under which wholesale electric business practice standards and related communications protocols will be developed, NERC has already begun working with NAESB to develop a memorandum of understanding that will define how our respective standards development processes will be coordinated. This section outlines a proposed process for achieving this coordination.

A. Principles for Coordination

NERC supports the following overarching principles for coordinating with the standards setting process of a wholesale electric business practice standards body:

- Safeguarding the reliability and integrity of the integrated, international bulk power system is of paramount importance.
- Clear reliability standards that are mandatory and enforceable for all industry participants are necessary for the reliable physical operation and planning of the facilities that comprise the integrated bulk power system.
- Business practice standards are also needed to ensure liquid and efficient wholesale electricity markets.
- Business practice standards are often integrally linked to standards developed to ensure the reliability of integrated grids.

Therefore, NERC believes that it and NAESB should work together to coordinate the development of reliability standards by NERC and wholesale electric business practice standards and
related communications protocols by NAESB.

**B. NERC Reliability Standards**

NERC develops reliability standards through its standards development process (Appendix B). These standards consist of policies, principles, requirements, measures, and expected outcomes or performance to assure the reliable physical operation and planning of integrated transmission grids.

- Reliability standards are based on the reliability and market interface principles adopted initially by the NERC independent Board on October 16, 2001 (See Appendix C).
- Reliability standards establish technical or performance requirements that can be measured, along with requirements for preparedness.²
- Reliability standards are written such that they:
  - Achieve their reliability objective without causing undue restrictions or adverse impacts on competitive electricity markets,
  - Do not provide any entity the opportunity or means to impose discriminatory requirements upon users of the bulk electric system,
  - Neither mandate nor prohibit any specific market structure, and
  - Enable and encourage market solutions to the extent possible and appropriate.
- Where the intent is to rely primarily on market mechanisms for implementation, reliability standards may also include “backstop” procedures to assure the physical reliability of the system. Such procedures would be implemented when market mechanisms are not in place or will likely be ineffective to achieve the reliability objectives.
- The NERC Board acts to adopt reliability standards, which makes them mandatory.

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² Such standards will include (1) technical standards related to the provision, maintenance, operation, or state of electric systems, and will likely contain measures of physical parameters and will often be technical in nature; (2) performance standards related to the actions of entities providing for or impacting the reliability of bulk electric systems, and will likely contain measures of the results of such actions, or the performance of such actions; and (3) preparedness standards related to the actions of entities to be prepared for conditions that are low in probability but high in risk and consequence. Such standards are critical to reliability and will likely contain measures of such preparations or the state of preparedness, but measurement of actual outcomes may occur infrequently or never.
C. NAESB Business Practice Standards and Related Communications Protocols Processes

The proposed Wholesale Electric Quadrant (WEQ) of NAESB will develop voluntary wholesale electric business practice standards and related communications protocols, which will conform to standard market design principles developed by the Commission and to reliability standards developed by NERC. NAESB will not develop reliability standards or policies, principles, requirements, measures, and expected outcomes or performance for the reliable physical operation and planning of integrated transmission grids. It is expected that some of the business practice standards developed by NAESB will, however, establish uniform market rules and mechanisms for implementing and achieving compliance with NERC reliability standards.

D. Coordinating between the NERC and NAESB Processes: Elements of a Memorandum of Understanding

NERC believes that there should be a formal coordination process between NERC and the WEQ of NAESB, and that the terms of this coordination process should be formalized in a memorandum of understanding (MOU) between the two organizations. The following are elements that should guide the development of such an MOU:

- It should be the intent of both NERC and NAESB that reliability standards and wholesale electric business practice standards be harmonized and that each organization be able to move forward with its appropriate standards development activity while keeping the other fully informed as to its efforts.

- NERC and NAESB should coordinate closely their respective standards development activities to achieve the maximum possible coordination and synergy between the reliability standards developed by NERC and the business practice standards and related communications protocols developed by NAESB.

- NERC will determine if any business practice standard developed by NAESB conflicts with any NERC reliability standards, and will work with NAESB to resolve any such conflicts.
• NERC will encourage the members of its committees and subcommittees to participate actively in the NAESB standards development process on the development of those wholesale electric business practice standards and related communications protocols that help achieve reliability objectives through market mechanisms.

• NAESB should encourage the members of its proposed Wholesale Electric Quadrant Executive Committee, subcommittees and working groups to participate actively in the NERC standards development process on the development of those NERC reliability standards that impact wholesale electric markets.

• NERC and NAESB should agree on specific coordination protocols that address notifications, joint participation, and conflict resolution related to the development of their respective standards.

II. Conclusion

NERC commits to continue to work with the Commission and with all entities involved in the electric industry to ensure that the reliability of the North American electric grid is maintained. NERC also commits to develop its reliability standards such that they enable and encourage market solutions to the extent possible and appropriate. NERC and the parties listed in support of this filing believe that the process outlined above provides a viable and supportable approach to fulfill these objectives.

North American Electric Reliability Council

David N. Cook
General Counsel
Resolution on Responsibility for Reliability Standards, adopted February 20, 2002, by NERC Board of Trustees

WHEREAS, safeguarding the reliability and integrity of the integrated, international bulk power system is of paramount importance, and

WHEREAS, there need to be clear rules for the reliable operation and planning of the facilities that comprise the integrated bulk power system (core reliability standards), that are mandatory and enforceable for all industry participants, and

WHEREAS, the NERC Board is committed to NERC developing reliability standards that enable and encourage market solutions to the maximum extent possible, and

WHEREAS, NERC has successfully exercised responsibility for reliability of the interconnected, international transmission grid for nearly 35 years, and

WHEREAS, the Federal Energy Regulatory Commission, on December 19, issued an order announcing that it would develop standard market design principles and requested the industry to establish a single consensus, industry-wide organization to develop wholesale electric business practice standards and communication protocols to complement these principles, and

WHEREAS, in its December 19 order, the Commission also stated that the industry should adopt a process to coordinate between wholesale electric business practice standards and reliability standards,

BE IT THEREFORE RESOLVED that NERC will, through a fair, open, balanced, and inclusive process, continue to set, monitor, and enforce compliance with standards for the reliable operation and planning of interconnected electric grids throughout North America, and

BE IT FURTHER RESOLVED that NERC will work with other electric industry organizations to create a workable process to coordinate NERC’s standards with the development of related standards, and

BE IT FURTHER RESOLVED that NERC will work with other electric industry organizations on the development of a joint filing by March 15 in response to the Commission’s December 19 order.
Resolution on Incorporating Features of the WESM Proposal into the NERC Standards Development Process, adopted February 20, 2002, by NERC Board of Trustees

WHEREAS, the Board finds the weighted-segment voting model in the WESM proposal is most appropriate for the approval of reliability standards, and

WHEREAS, the Board favors the approach recommended in the proposed WESM model that prevents any single segment from blocking the approval of a standard, and

WHEREAS, the Board believes that it is critical to meeting its public interest responsibilities that the Board vote to adopt all standards for the reliable operation and planning of interconnected electric grids throughout North America,

THEREFORE BE IT RESOLVED that the Board commends the Standing Committees Representation Task Force for their proposal on Wholesale Electric Standards Development, and

BE IT FURTHER RESOLVED that the Board adopts the segments and weighted-segment voting model proposed by the Task Force and directs that this voting model be incorporated into the NERC standards development process as soon as possible, and

BE IT FURTHER RESOLVED that the Board directs staff to make the necessary changes to the Organization Standards Process Manual and make application to ANSI for accreditation of this new NERC standards development process.
North American Electric Reliability Council (NERC)  
"A Day in the Life of a Reliability Standard"

The flowchart on the right depicts the steps necessary for developing a NERC reliability standard. It begins with submitting a Standards Authorization Request (SAR), progresses through standard drafting steps and weighted industry segment voting, and culminates with NERC Board adoption and implementation. Along the way, NERC posts the SAR and draft standards on its public Internet website for public review and comment.

Overview
The process for developing and approving NERC reliability standards is generally based on the procedures of the American National Standards Institute (ANSI) and other standards-setting organizations in the United States and Canada. The NERC Standards Development Process has the following characteristics:

Due process – Any person with a direct and material interest has a right to participate by: a) expressing an opinion and its basis, b) having that position considered, and c) appealing if adversely affected.

Openness – Participation is open to all persons who are directly and materially affected by North American bulk electric system markets and reliability. There shall be no undue financial barriers to participation. Participation shall not be conditional upon membership in NERC or any organization, and shall not be unreasonably restricted on the basis of technical qualifications or other such requirements.

Balance – The NERC Standards Development Process shall have a balance of interests and shall not be dominated by any single interest category. The Process develops consensus, first on the need for the standard, then on the standard itself. The Process includes the following key elements:
• Nomination of a proposed standard, revision to a standard, or withdrawal of a standard using a Standard Authorization Request (SAR).

• Public posting of the SAR to allow all parties to review and provide comments on the need for the proposed standard and the expected outcomes and impacts from implementing the proposed standard. Notice of standards shall provide an opportunity for participation by all directly and materially affected persons. A notice shall be posted with the SAR, requesting that interested individuals complete and submit a Standard Drafting Team Self-nomination Form.

• Review of the public comments in response to the SAR and public posting of the resolution of all posted comments.

• Prioritization of proposed Standards Actions, leading to the authorization to develop, modify, or withdraw standards for which there is a consensus-based need.

• Assignment of appropriate technical experts to draft the new or revised standard.

• Drafting of the standard.

• Public posting of the draft standard to allow all parties to review and provide comments.

• Public posting of the resolution of all posted comments. At this point, the need for the standard has been established and comments should focus on aspects of the draft standard itself.

• Trial use of the draft standard and associated measures. The need and extent of the trial use shall be determined during the authorization process considering the recommendation of the NERC Compliance Director and public comments. The trial use may be industry-wide or may consist of one or more lesser-scale demonstrations. The trial use should be cost effective and practical, yet sufficient to validate the requirements, measures, measurement processes, and other elements of the standard. For some standards and their associated measures, a trial use may not be appropriate, such as those measures that consist of administrative reports.

• Determination of consensus on the standard as meeting the intent of the SAR and confirming its readiness for balloting.

• Formal balloting of the reliability standard for approval by the Standards Ballot Pool using the NERC Weighted Segment Voting Model.

• Re-ballot to consider specific comments by those submitting comments with negative votes.

• Board adoption of the reliability standard.

• Filing for information with FERC and applicable Canadian Regulatory Agencies.

• An appeals mechanism as appropriate for the impartial handling of substantive and procedural complaints regarding action or inaction related to the standards process.
Groups Involved in the NERC Standards Development Process

NERC Board of Trustees – has overall responsibility for assuring compliance with the integrity of the Standards Development Process. In fulfilling this responsibility the Board shall assure the public’s interest is considered in developing reliability standards that are consistent with NERC’s Reliability Principles and Market Interface Principles.

Registered Ballot Body – The Registered Ballot Body is comprised of the corporations, entities, and individuals registered in NERC’s nine Industry Segments. Each member of the Registered Ballot Body is eligible to participate in the voting process for each Standards Action.

Ballot Pool. Each Standards Action has its own Ballot Pool formed of interested members of the Registered Ballot Body. The Standards Ballot Pool is comprised of those members of the Registered Ballot Body that respond to a pre-ballot survey for that particular Standard Action. The Ballot Pool is responsible for assessing the need for and technical merits of proposed Standard Actions, and for assuring comments received in the process are provided due consideration. The Ballot Pool casts its votes electronically.

Standards Authorization Committee – The Standards Authorization Committee (SAC), which reports to the NERC Board, consists of two members of each of the Industry Segments in the Registered Ballot Body. The SAC meets at regularly scheduled intervals (either in person, or by other means) to monitor and coordinate the Standards Development Process.

Requester – A Requester is any person (organization, company, government agency, individual, etc.) who submits a Standard Authorization Request (SAR) to initiate a Standards Action. A Requester may be a NERC subcommittee, working group, or task force, or any person or entity that is directly and materially affected by an existing reliability standard or the need for a new standard.

Standard Drafting Team – A team of technical experts, appointed by the SAC that drafts the technical details of a standard. Each team needs to have the technical expertise required to draft the standard to ensure the standard is objective, measurable, within the scope of the SAR, etc. When making assignments to the Drafting Team, the SAC shall consider all individuals who have completed a self-nomination form, which is posted at the same time as the SAR. Standard Drafting Teams develop responses to comments and participate in industry forums to discuss differing viewpoints on posted draft standards.
NERC Reliability and Market Interface Principles

Reliability Principles

NERC Organization Standards are based on Reliability Principles that define the foundation of reliability for North American bulk electric systems. Each Organization Standard shall enable or support one or more of the Reliability Principles, thereby ensuring that each standard serves a purpose in support of reliability of the North American bulk electric systems. Each Organization Standard shall also be consistent with all of the Reliability Principles, thereby ensuring that no standard undermines reliability through an unintended consequence.

Reliability Principle 1 – Interconnected bulk electric systems shall be planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions as defined in the NERC Standards.

Reliability Principle 2 – The frequency and voltage of interconnected bulk electric systems shall be controlled within defined limits through the balancing of real and reactive power supply and demand.

Reliability Principle 3 – Information necessary for the planning and operation of interconnected bulk electric systems shall be made available to those entities responsible for planning and operating the systems reliably.

Reliability Principle 4 – Plans for emergency operation and system restoration of interconnected bulk electric systems shall be developed, coordinated, maintained and implemented.

Reliability Principle 5 – Facilities for communication, monitoring, and control shall be provided, used, and maintained for the reliability of interconnected bulk electric systems.

Reliability Principle 6 – Personnel responsible for planning and operating interconnected bulk electric systems shall be trained, qualified, and have the responsibility and authority to implement actions.

Reliability Principle 7 – The security of the interconnected bulk electric systems shall be assessed, monitored, and maintained on a wide-area basis.
Market Interface Principles

Recognizing that bulk electric system reliability and electricity markets are inseparable and mutually interdependent, all NERC Organization Standards shall be consistent with the Market Interface Principles. Consideration of the Market Interface Principles is intended to assure Organization Standards are written such that they achieve their reliability objective without causing undue restrictions or adverse impacts on competitive electricity markets.

Market Interface Principle 1 – The planning and operation of bulk electric systems shall recognize that reliability is an essential requirement of a robust North American economy.

Market Interface Principle 2 – An Organization Standard shall not give any market participant an unfair competitive advantage.


Market Interface Principle 4 – An Organization Standard shall not preclude market solutions to achieving compliance with that standard.

Market Interface Principle 5 – An Organization Standard shall not require the public disclosure of commercially sensitive information. All market participants shall have equal opportunity to access commercially non-sensitive information that is required for compliance with reliability standards.