

151 FERC ¶ 61,236
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

18 CFR Part 40

[Docket No. RM15-16-000]

Transmission Operations Reliability Standards and
Interconnection Reliability Operations and Coordination Reliability Standards

(June 18, 2015)

AGENCY: Federal Energy Regulatory Commission.

ACTION: Notice of proposed rulemaking.

SUMMARY: The Commission proposes to approve revisions to the Transmission Operations and Interconnection Reliability Operations and Coordination Reliability Standards, developed by the North American Electric Reliability Corporation, which the Commission has certified as the Electric Reliability Organization responsible for developing and enforcing mandatory Reliability Standards.

DATES: Comments are due **[INSERT DATE 60 Days after publication in the FEDERAL REGISTER]**

ADDRESSES: Comments, identified by docket number, may be filed in the following ways:

- Electronic Filing through <http://www.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: Those unable to file electronically may mail or hand-deliver comments to: Federal Energy Regulatory Commission, Secretary of the Commission, 888 First Street, NE, Washington, DC 20426.

Instructions: For detailed instructions on submitting comments and additional information on the rulemaking process, see the Comment Procedures Section of this document

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SUPPLEMENTARY INFORMATION:

151 FERC ¶ 61,236
UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

Transmission Operations Reliability Standards and
Interconnection Reliability Operations and Coordination
Reliability Standards

Docket No. RM15-16-000

NOTICE OF PROPOSED RULEMAKING

(June 18, 2015)

1. Pursuant to section 215 of the Federal Power Act (FPA),¹ the Commission proposes to approve revisions to the Transmission Operations (TOP) and Interconnection Reliability Operations and Coordination (IRO) Reliability Standards, developed by the North American Electric Reliability Corporation (NERC), the Commission-certified Electric Reliability Organization (ERO). The Commission believes that the proposed TOP and IRO Reliability Standards improve on the currently-effective standards by providing a more precise set of Reliability Standards addressing operating responsibilities and improving the delineation of responsibilities between applicable entities. The Commission also believes that the revised TOP Reliability Standards eliminate gaps and ambiguities in the currently-effective TOP requirements and improve efficiency by incorporating the necessary requirements from the eight currently-effective TOP Reliability Standards into three cohesive, comprehensive Reliability Standards. Further,

¹ 16 U.S.C. 824o (2012).

the Commission believes that the proposed standards clarify and improve upon the currently-effective TOP and IRO Reliability Standards by designating requirements in the proposed standards that apply to transmission operators for the TOP standards and reliability coordinators for the IRO standards. Thus, the Commission proposes to find that there are benefits to clarifying and bringing efficiencies to the TOP and IRO Reliability Standards, consistent with the Commission's policy promoting increased efficiencies in Reliability Standards and reducing requirements that are either redundant with other currently-effective requirements or have little reliability benefit.²

2. The Commission also proposes to find that NERC has adequately addressed the concerns raised by the Commission in the Notice of Proposed Rulemaking (Remand NOPR) issued in November 2013.³ In the Remand NOPR, the Commission proposed to remand an earlier version of proposed TOP and IRO Standards due to concerns regarding the proposed treatment of system operating limits (SOLs) and interconnection reliability operating limits (IROLs) and concerns about outage coordination. Further, the Commission proposes to approve the definitions for operational planning analysis and real-time assessment, and the violation severity level and violation risk factor assignments.

² *Electric Reliability Organization Proposal to Retire Requirements in Reliability Standards*, Order No. 788, 145 FERC ¶ 61,147 (2013).

³ *Monitoring System Conditions - Transmission Operations Reliability Standard, Transmission Operations Reliability Standards, Interconnection Reliability Operations and Coordination Reliability Standards*, Notice of Proposed Rulemaking, 145 FERC ¶ 61,158 (2013). Concurrent with filing the proposed TOP/IRO standards in the immediate proceeding, NERC submitted a motion to withdraw the earlier petition that was the subject of the Remand NOPR. No protests to the motion were filed and the petition was withdrawn pursuant to 18 CFR § 385.216(b).

3. While proposing to approve the TOP and IRO Reliability Standards, below the Commission seeks clarifying comments addressing four issues: (A) possible inconsistencies in identifying IROs; (B) monitoring of non-bulk electric system facilities; (C) removal of the load-serving entity as an applicable entity for proposed Reliability Standard TOP-001-3; and (D) data exchange capabilities. Based on comments and information received on these issues, the Commission may issue directives as appropriate.

I. Background

4. 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. Once approved, the Reliability Standards are enforced by the ERO, subject to Commission oversight, or by the Commission independently. On March 16, 2007, the Commission issued Order No. 693, approving 83 of the 107 initial Reliability Standards filed by NERC, including the existing TOP and IRO Reliability Standards.⁴ In addition, in Order No. 748, the Commission approved revisions to the IRO Reliability Standards.⁵

5. On April 16, 2013, in Docket No. RM13-14-000, NERC submitted for Commission approval three revised TOP Reliability Standards to replace the eight

⁴ *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).

⁵ *Mandatory Reliability Standards for Interconnection Reliability Operating Limits*, Order No. 748, 134 FERC ¶ 61,213 (2011).

currently-effective TOP standards.⁶ Additionally, on April 16, 2013, in Docket No. RM13-15-000, NERC submitted for Commission approval four revised IRO Reliability Standards to replace six currently-effective IRO Reliability Standards. On November 21, 2013, the Commission issued the Remand NOPR in which the Commission expressed concern that NERC had “removed critical reliability aspects that are included in the currently-effective standards without adequately addressing these aspects in the proposed standards.”⁷ The Commission identified two main concerns and asked for clarification and comment on a number of other issues. Among other things, the Commission expressed concern that the proposed TOP Reliability Standards did not require transmission operators to plan and operate within all SOLs, which is a requirement in the currently-effective standards. In addition, the Commission expressed concern that the proposed IRO Reliability Standards did not require outage coordination.

6. On December 20, 2013, NERC filed a motion requesting that the Commission defer action, until January 31, 2015, to allow NERC time to consider the reliability concerns raised by the Commission in the Remand NOPR. The Commission granted that

⁶ On April 5, 2013, in Docket No. RM13-12-000 NERC proposed revisions to Reliability Standard TOP-006-3 to clarify that transmission operators are responsible for monitoring and reporting available transmission resources and that balancing authorities are responsible for monitoring and reporting available generation resources.

⁷ Remand NOPR, 145 FERC ¶ 61,158 at P 4.

motion on January 14, 2014.⁸ In response to the Remand NOPR, NERC initiated Project 2014-03 to develop further revisions to the TOP and IRO Reliability Standards.

NERC Petition

7. On March 18, 2015, as supplemented on May 12, 2015, NERC submitted a petition seeking approval of two sets of Reliability Standards to replace the currently-effective TOP and IRO Reliability Standards. NERC states that the proposed TOP Reliability Standards generally address real-time operations and planning for next-day operations, and apply primarily to the responsibilities and authorities of transmission operators, with certain requirements applying to the roles and responsibilities of the balancing authority. NERC adds that the proposed IRO Reliability Standards set forth the responsibility and authority of reliability coordinators to provide for reliable operations. According to NERC, reliability coordinators have an essential role in ensuring reliable operations, as they are the functional entities with the highest level of authority and have the wide-area view of the bulk electric system.⁹

8. NERC states that the proposed Reliability Standards include improvements over the currently effective TOP and IRO Reliability Standards in key areas such as:
(1) operating within SOLs and IROLs; (2) outage coordination; (3) situational awareness;

⁸ *Monitoring System Conditions- Transmission Operations Reliability Standard, Transmission Operations Reliability Standards, Interconnection Reliability Operations and Coordination Reliability Standards*, Order Granting Motion to Defer Action, 146 FERC ¶ 61,023 (2014).

⁹ The TOP and IRO Reliability Standards are not attached to this NOPR. The complete text of the Reliability Standards is available on the Commission's eLibrary document retrieval system in Docket No. RM15-16 and is posted on the ERO's web site, available at: <http://www.nerc.com>.

(4) improved clarity and content in foundational definitions; and (5) requirements for operational reliability data.

9. NERC states that the proposed TOP and IRO Reliability Standards address the coordinated efforts to plan and reliably operate the bulk electric system under both normal and abnormal conditions. NERC states that the proposed Reliability Standards provide a comprehensive framework for reliable operations, with important improvements to ensure the bulk electric system is operated within pre-established limits while enhancing situational awareness and strengthening operations planning. NERC explains that the proposed Reliability Standards establish or revise requirements for operations planning, system monitoring, real-time actions, coordination between applicable entities, and operational reliability data. According to NERC, the proposed Reliability Standards help to ensure that reliability coordinators and transmission operators work together, and with other functional entities, to operate the bulk electric system within SOLs and IROLs.¹⁰ Further, NERC explains that SOLs and IROLs are vital concepts in the Reliability Standards because they establish acceptable performance criteria both pre- and post-contingency to maintain reliable bulk electric system operations. NERC states that when any facility rating or stability limit is exceeded, or expected to be exceeded, these conditions should be mitigated to avoid the possibility of

¹⁰ The NERC Glossary of Terms defines IROL as “[a] System Operating Limit that, if violated, could lead to instability, uncontrolled separation, or Cascading outages that adversely impact the reliability of the Bulk Electric System.” In turn, NERC defines SOL as “[t]he value (such as MW, MVar, Amperes, Frequency or Volts) that satisfies the most limiting of the prescribed operating criteria for a specified system configuration to ensure operation within acceptable reliability criteria.”

further deteriorating system conditions and the potential for a cascading event. In addition, NERC states that the standard drafting team developed a white paper on SOL definition and exceedance criteria which clarified the team's position on establishing and exceeding SOLs, and on implementing operating plans to mitigate exceedances. The SOL white paper explains the links between relevant reliability standards and reliability concepts to establish a common understanding necessary for developing effective operating plans to mitigate SOL exceedances.¹¹

10. NERC states that it reviewed the report on the Arizona-Southern California Outages on September 8, 2011, Causes and Recommendations ("2011 Southwest Outage Blackout Report") that includes findings and recommendations applicable to transmission operators, balancing authorities and reliability coordinators, and provides explanations of how the proposed Reliability Standards address the reliability issues identified following the 2011 Southwest Outage Blackout Report. Further, NERC states that it addressed outstanding Commission directives relevant to the proposed TOP and IRO Reliability Standards.

Revisions to TOP Standards

11. NERC proposes three TOP Reliability Standards to replace the existing suite of TOP standards. The proposed TOP Reliability Standards generally address real-time operations and planning for next-day operations, and apply primarily to the responsibilities and authorities of transmission operators. Among other things, NERC

¹¹ NERC Petition at 46 and Exhibit E, "White Paper on System Operating Limit Definition and Exceedance Clarification."

states that the proposed revisions to the TOP Reliability Standards help ensure that transmission operators plan and operate within all SOLs.

TOP-001-3 (Transmission Operations)

12. NERC proposes Reliability Standard TOP-001-3 (Transmission Operations), which contains twenty requirements. The purpose of proposed Reliability Standard TOP-001-3 is to prevent instability, uncontrolled separation, or cascading outages that adversely affect the reliability of the interconnection, by ensuring prompt action to prevent or mitigate such occurrences. According to NERC, the proposed standard achieves this reliability goal by providing appropriate entities with the authority to take actions, or direct the actions of others, to maintain reliability during real-time operations. NERC explains that the standard includes real-time monitoring and real-time assessment requirements to preserve reliability and ensure that applicable entities identify and address all SOL exceedances.

13. Requirements R1 and R2 require each transmission operator and balancing authority to explicitly and affirmatively act to address the reliability of its area through its own actions or by issuing operating instructions. In contrast, NERC notes that the obligation to act in currently effective Reliability Standard TOP-001-1a is implied, but not an explicit requirement. Requirements R3 and R4 together provide that each applicable entity must comply with each operating instruction issued by its transmission operator, unless doing so would violate safety, equipment, regulatory, or statutory requirements or the action cannot be physically implemented, and require an applicable entity to notify the transmission operator if it is unable to comply with the transmission

operator's operating instruction. Similarly, Requirements R5 and R6 require the same actions of applicable entities with respect to an operating instruction issued by a balancing authority.

14. Requirement R7 requires each transmission operator to assist other transmission operators within its reliability coordinator area, and Requirement R8 requires a transmission operator to inform applicable entities of the transmission operator's actual or expected operations that result in, or could result in, an emergency.

15. Requirements R9, R16, and R17 address outage coordination of monitoring and control equipment. Requirement R9 provides that each balancing authority and transmission operator must notify its reliability coordinator and known impacted interconnected entities of all planned outages, and unplanned outages of 30 minutes or more, for telemetering and control equipment, monitoring and assessment capabilities, and associated communication channels between the affected entities. Requirements R16 and R17 state that each transmission operator and balancing authority must provide its system operators with the authority to approve planned outages and maintenance.

16. Requirement R10 addresses transmission operator monitoring obligations to help ensure that transmission operators have the necessary situational awareness to maintain reliable operations. Requirement R10 provides that each transmission operator must take certain steps for determining SOL exceedances within its transmission operator area. NERC explains that Requirement R10 addresses the Commission's concerns that the TOP and IRO Reliability Standards, that were the subject of the Remand NOPR, did not

have sufficient requirements for real-time monitoring. Requirement R11 is the equivalent of Requirement R10 for balancing authorities.

17. Requirement R12 provides that each transmission operator must not operate outside of any identified IROL for a continuous duration exceeding its associated IROL T_v . NERC states that this requirement will provide consistency with the reliability coordinators requirements contained in currently-effective Reliability Standard IRO-009-1.¹² Requirement R13 provides that each transmission operator must ensure that a real-time assessment is performed at least once every 30 minutes. The revised definition of “real-time assessment” includes additional specificity regarding various inputs for the assessment and how that information may be provided through third-party services, which may provide smaller entities an efficient method for compliance. Requirement R14 provides that each transmission operator must initiate its operating plan to mitigate a SOL exceedance identified as part of its real-time monitoring or real-time assessment.¹³

18. Requirement R15 provides that each transmission operator must inform its reliability coordinator of actions taken to return the system to within limits when a SOL has been exceeded. Requirement R18 provides that each transmission operator must operate to the most limiting parameter in instances where there is a difference in SOLs. Requirements R19 and R20 provide that each transmission operator and balancing

¹² NERC defines T_v as “[t]he maximum time that an Interconnection Reliability Operating Limit can be violated before the risk to the interconnection or other Reliability Coordinator Area(s) becomes greater than acceptable. Each Interconnection Reliability Operating Limit’s T_v shall be less than or equal to 30 minutes.”

¹³ NERC Petition, Exhibit B at 5.

authority must have data exchange capabilities with the entities from which it needs data in order to maintain reliability in its area.

19. In addition, NERC states that it removed the load-serving entity (LSE) function from proposed TOP-001-3, Requirements R3 through R6 due to the November 2014 NERC Board of Trustees action to remove the LSE as a functional entity from NERC's Rules of Procedure.¹⁴ On May 12, 2015, NERC supplemented its filing with additional explanation for the removal of the LSE function.

TOP-002-4 (Operations Planning)

20. Proposed Reliability Standard TOP-002-4 contains seven requirements relating to operations planning for transmission operators and balancing authorities. NERC explains that the proposed standard addresses next-day planning and provides for the necessary notifications and coordination between various functional entities. NERC adds that the revised definition of "operational planning analysis" specifies the scope and inputs required for next-day analyses. According to NERC, the proposed standard also improves coordination of next-day operations by requiring transmission operators and balancing authorities to provide operating plans to their reliability coordinators.

21. Proposed Requirements R1 through R3 and R6 apply to transmission operators, and proposed Requirements R4, R5, and R7 apply to balancing authorities. Requirement R1 requires each transmission operator to have an operational planning analysis that will allow it to assess whether its planned operations for the next day within its transmission

¹⁴ NERC Petition, Exhibit K, Consideration of Comments January 7, 2015, at 2.

operator area will exceed any of its SOLs. Requirement R2 requires each transmission operator to have operating plans for next-day operations to address potential SOL exceedances identified in the operational planning analysis performed pursuant to Requirement R1. Requirement R4 requires each balancing authority to have operating plans for the next day that address expected generation resource commitment and dispatch, interchange scheduling, demand patterns, and capacity and energy reserve requirements, including deliverability capability. Requirements R3 and R5 require each transmission operator and balancing authority, respectively, to notify the entities identified in their operating plan as to their roles in that plan. Requirements R6 and R7 require each transmission operator and balancing authority to provide its operating plan to its reliability coordinator.

TOP-003-3 (Operational Reliability Data)

22. Proposed Reliability Standard TOP-003-3 (Operational Reliability Data) establishes requirements for the provision of information and data needed by the transmission operator and balancing authority for reliable operations. The purpose of proposed Reliability Standard TOP-003-3 is to ensure that transmission operators and balancing authorities have the data needed to fulfill their operational and planning responsibilities. The proposed Reliability Standard consists of five Requirements, including requirements for balancing authorities and transmission operators to maintain and distribute to relevant entities data specifications needed to perform various analyses and assessments. The proposed Reliability Standard also requires entities receiving data

specifications to respond according to mutually agreed upon parameters including format and security protocols.

23. Requirement R1 requires each transmission operator to maintain a documented specification for the data necessary, including non-bulk electric system and external network data, for it to perform its operational planning analysis, real-time monitoring, and real-time assessments. Requirement R2 requires each balancing authority to maintain a documented specification for the data necessary for it to perform its analysis functions and real-time monitoring. Requirements R3 and R4 require each transmission operator and balancing authority to distribute its data specification to the entities that have the necessary data. Requirement R5 requires each applicable entity receiving a data specification pursuant to Requirement R3 or R4 to satisfy the obligations of the documented data specification.

24. In response to the Commission's concerns in the Remand NOPR with regard to the need for including external networks and sub-100 kV facilities in the operational planning analysis conducted by transmission operators, NERC explains that proposed Reliability Standard TOP-003-3 requires each applicable entity to develop a data specification that would cover its data needs for monitoring and analysis purposes, including non-bulk electric system data and external network data deemed necessary by the transmission operator to support its operational planning analyses, real-time monitoring, and real-time assessments. With respect to sub-100 kV facilities, NERC determined that any sub-100 kV elements that are necessary for reliable operation of the bulk electric system would be included as bulk electric system facilities through the

exception process provided in Appendix 5C to the NERC Rules of Procedure. NERC explains that the exception process provides the means for transmission operators and reliability coordinators to include elements in the bulk electric system that are necessary for the reliable operation of the interconnected transmission system but were not identified in the bulk electric system definition. Accordingly, NERC concludes that it is not necessary to include non-bulk electric system monitoring in Reliability Standard TOP-001-3. In addition, NERC explains that proposed Reliability Standard TOP-001-3, Requirement R10 requires transmission operators to monitor bulk electric system facilities within their transmission operator area, and to obtain information deemed necessary by the transmission operator about such bulk electric system facilities located outside of the transmission operator area when determining SOL exceedances.

25. NERC adds that when non-bulk electric facilities have no impact on the bulk electric system, but are needed for completing system models, the Commission-approved Reliability Standard FAC-001-2, Requirement R3 addresses the issue. This Reliability Standard requires the reliability coordinator to include in its methodology its entire reliability coordinator area and critical modeling details from other reliability coordinator areas that would affect the facility under study. In addition, the reliability coordinator must include details of system models used to determine SOLs.

Revisions to IRO Standards

26. The proposed IRO Reliability Standards, which complement the proposed TOP Standards, are designed to ensure that the bulk electric system is planned and operated in a coordinated manner to perform reliably under normal and abnormal conditions. The

proposed IRO Reliability Standards set forth the responsibility and authority of reliability coordinators to provide for reliable operations. NERC states that in the proposed IRO Reliability Standards reliability coordinators must continue to monitor SOLs in addition to their obligation in the currently effective Reliability Standards to monitor and analyze IROLs. These obligations require reliability coordinators to have the wide-area view necessary for situational awareness and provide them the ability to respond to system conditions that have the potential to negatively affect reliable operations.

IRO-001-4 (Reliability Coordination – Responsibilities)

27. Proposed Reliability Standard IRO-001-4 (Reliability Coordination – Responsibilities) contains requirements relating to the reliability coordinator’s overall responsibility for reliable operation within the reliability coordinator area. Requirement R1 provides that each reliability coordinator must act to address the reliability of its reliability coordinator area through direct actions or by issuing operating instructions. Requirement R2 provides that each applicable entity must comply with its reliability coordinator’s operating instructions unless compliance cannot be implemented or would violate safety, equipment, regulatory, or statutory requirements. Requirement R3 provides that applicable entities must inform the reliability coordinator if they are unable to perform an operating instruction issued by its reliability coordinator.

IRO-002-4 (Reliability Coordination – Monitoring and Analysis)

28. Proposed Reliability Standard IRO-002-4 (Reliability Coordination – Monitoring and Analysis) contains requirements relating to capabilities for monitoring and analysis of real-time operating data. The purpose of the proposed Reliability Standard is to provide system operators with the capabilities necessary to monitor and analyze data needed to perform reliability functions. Requirement R1 requires each reliability coordinator to have data exchange capabilities with its balancing authorities, transmission operators, and other entities as it deems necessary, for it to perform operational planning analyses, real-time monitoring, and real-time assessments. Requirement R2 provides that each reliability coordinator must provide its system operators with the authority to approve planned outages and maintenance of its telecommunication, monitoring, and

analysis capabilities. Requirement R3 provides that each reliability coordinator must monitor facilities, the status of special protection systems and non-bulk electric system facilities identified as necessary within its reliability coordinator area and neighboring reliability coordinator areas, to identify any SOL or IROL exceedances. Requirement R4 provides that each reliability coordinator must have monitoring systems that provide information used by the reliability coordinator's operating personnel, with particular emphasis to alarm management and awareness systems, automated data transfers, and synchronized information systems, over a redundant infrastructure.

IRO-008-2 (Reliability Coordinator Operational Analyses and Real-time Assessments)

29. Proposed Reliability Standard IRO-008-2 (Reliability Coordinator Operational Analyses and Real-time Assessments) contains requirements for reliability coordinators to conduct next-day analyses and assessments of operating conditions in real-time to help prevent instability, uncontrolled separation, or cascading. NERC states that the proposed definitions of operational planning analysis and real-time assessment are integral components of proposed Reliability Standard IRO-008-2 because they specify the scope and inputs for next-day analysis and real-time assessments of operating conditions in real-time. Furthermore, NERC states that proposed Reliability Standard IRO-008-2 enhances next-day operations planning by specifying requirements for coordination of the reliability coordinator's operating plan to address potential SOL and IROL exceedances.
30. Requirement R1 provides that each reliability coordinator must perform an operational planning analysis that will allow it to assess whether the planned operations

for the next day will exceed SOLs and IROLs. Requirement R2 requires each reliability coordinator to have a coordinated operating plan for next-day operations to address potential SOL and IROL exceedances identified as a result of its operating planning analysis. Requirement R3 provides that each reliability coordinator must notify impacted entities identified in its operating plan as to their role in the plan. Requirement R4 states that each reliability coordinator must ensure that a real-time assessment is performed at least once every 30 minutes. Requirement R5 provides that each reliability coordinator must notify impacted transmission operators and balancing authorities within its reliability coordinator area and other impacted reliability coordinators when a real-time assessment indicates an actual or expected condition that results in, or could result in, a SOL or IROL exceedance. Further, Requirement R6 provides that each reliability coordinator must notify impacted entities when a SOL or IROL exceedance has been prevented or mitigated.

IRO-010-2 (Reliability Coordinator Data Specification and Collection)

31. Proposed Reliability Standard IRO-010-2 (Reliability Coordinator Data Specification and Collection) provides a mechanism for a reliability coordinator to obtain the information and data it needs for reliable operations and to help prevent instability, uncontrolled separation, or cascading outages. According to NERC, proposed Reliability Standard IRO-010-2 reflects recommendations from the 2011 Southwest Outage Blackout Report, including more clearly identifying necessary data and information to be included in a reliability coordinator's data specification. Requirement R1 provides that the reliability coordinator must maintain a documented specification for the data,

including non-bulk electric system and external network data, necessary for it to perform its operational planning analyses, real-time monitoring, and real-time assessments.

Requirement R2 provides that the reliability coordinator must distribute its data specification to entities that have the required data. Requirement R3 provides that applicable entities receiving a data specification must satisfy the obligations of the documented specification using a mutually-agreeable format, process for resolving data conflicts, and security protocol.

IRO-014-3 (Coordination Among Reliability Coordinators)

32. Proposed Reliability Standard IRO-014-3 (Coordination among Reliability Coordinators) contains requirements for coordination for interconnected operations at the reliability coordinator level. The purpose of the proposed Reliability Standard is to ensure that each reliability coordinator's operations are coordinated such that they will not adversely affect other reliability coordinator areas and to preserve the reliability benefits of interconnected operations. Requirement R1 requires each reliability coordinator to have and implement operating procedures, processes, or plans for activities that require notification or coordination of actions that may affect adjacent reliability coordinator areas. Requirement R2 requires each reliability coordinator to maintain its operating procedures, processes, or plans through annual reviews and updates, with no more than 15 months passing between reviews. Requirement R3 requires each reliability coordinator to notify other impacted reliability coordinators upon identification of an expected or actual emergency. Requirement R4 specifies that, if the reliability coordinators disagree on the existence of an emergency, each must operate as though an

emergency exists. Requirement R5 states that a reliability coordinator that identifies an emergency must develop an action plan to resolve the emergency, and Requirement R6 requires impacted reliability coordinators to implement the action plan. Under Requirement R7, a reliability coordinator must assist another reliability coordinator if the requesting reliability coordinator has implemented its emergency procedures.

IRO-017-1 (Outage Coordination)

33. NERC states that proposed Reliability Standard IRO-017-1 (Outage Coordination) is a new Reliability Standard designed to ensure that outages are properly coordinated in the operations planning time horizon and near-term transmission planning horizon.

According to NERC, the requirements in the proposed Reliability Standard, which span both time horizons, provide the necessary requirements for effective coordination of planned outages to support reliable operations.

34. NERC notes that in the Remand NOPR the Commission identified coordination of outages as a critical reliability function that should be performed by the reliability coordinator that was not adequately addressed. NERC explains that proposed Reliability Standard IRO-017-1 addresses the Commission's Remand NOPR concerns by requiring each reliability coordinator to develop, implement and maintain an outage coordination process for generation and transmission outages. NERC also explains that each transmission operator and balancing authority would then be required to perform the functions specified in its reliability coordinator's process. Further, NERC states that each planning coordinator and transmission planner will provide its planning assessment to relevant reliability coordinators and work together to solve any issues or conflicts with

planned outages among the applicable entities. Additionally, NERC states that proposed Reliability Standard IRO-014-3, Requirement R1, Part 1.4 requires reliability coordinators to coordinate with adjacent reliability coordinators the exchange of planned and unplanned outage information to support operational planning analyses and real-time assessments in their operating procedures, processes, or plans.

35. Proposed Reliability Standard IRO-017-1 has four requirements. Requirement R1 provides that each reliability coordinator must develop, implement, and maintain an outage coordination process for generation and transmission outages. Requirement R2 provides that each transmission operator and balancing authority must perform the functions specified in its reliability coordinator's outage coordination process. Requirement R3 provides that each planning coordinator and transmission planner must provide its planning assessment to impacted reliability coordinators. Requirement R4 requires each planning coordinator and transmission planner to jointly develop solutions with its respective reliability coordinators for identified issues or conflicts with planned outages in its planning assessment for the near-term transmission planning horizon.

Definitions

36. NERC also proposes revised definitions for “operational planning analysis” and “real-time assessment.”¹⁵ NERC contends that the proposed definitions provide

¹⁵ The proposed definition of operational planning analysis is “[a]n evaluation of projected system conditions to assess anticipated (pre-Contingency) and potential (post-Contingency) conditions for next-day operations. The evaluation shall reflect applicable inputs including, but not limited to, load forecasts; generation output levels; Interchange; known Protection System and Special Protection System status or degradation; Transmission outages; generator outages; Facility Ratings; and identified phase angle and equipment limitations. (Operational Planning Analysis may be provided through internal

significant additional detail compared to the currently effective definitions to enhance the consistency and the reliability benefit of operational planning analysis and real-time assessments.¹⁶ NERC states that the additional specificity reflected in the proposed definitions addresses concerns raised in the Remand NOPR and includes several inputs that were identified as recommendations in the 2011 Southwest Outage Blackout Report, which, in turn, will enhance situational awareness.

37. The proposed NERC Glossary term “Operating Instruction” defines the scope of commands that are covered by the proposed TOP and IRO Reliability Standards. NERC explains that the revisions in the proposed definitions are intended to ensure that operational planning analyses and real-time assessments contain sufficient details to result in an appropriate level of situational awareness for next-day planning and real-time operations, respectively.

Implementation Plan

38. NERC proposes that, for all standards except proposed Reliability Standards TOP-003-3 and IRO-010-2, the effective date will be the first day of the first calendar quarter twelve months after Commission approval. The twelve month implementation period for systems or through third-party services.)”

¹⁶ The proposed definition of real-time assessment is “[a]n evaluation of system conditions using Real-time data to assess existing (pre-Contingency) and potential (post-Contingency) operating conditions. The assessment shall reflect applicable inputs including, but not limited to: load, generation output levels, known Protection System and Special Protection System status or degradation, Transmission outages, generator outages, Interchange, Facility Ratings, and identified phase angle and equipment limitations. (Real-time Assessment may be provided through internal systems or through third-party services.)”

all of the standards except TOP-003-3 and IRO-010-2 is intended to allow time for entities to update processes and train operators on the revised requirements. All of the Requirements in proposed TOP-003-3 and IRO-010-2 except TOP-003-3, Requirements R5 and IRO-010-2, Requirement R3 would become effective three months earlier, in order to provide recipients of data requests from their reliability coordinators, transmission operators, and/or balancing authorities time to respond to the requests for data.

39. According to NERC's implementation plan, for proposed TOP-003-3, all requirements except Requirement R5 will become effective on the first day of the first calendar quarter nine months after the date that the standard is approved. For proposed IRO-010-2, Requirements R1 and R2 would become effective on the first day of the first calendar quarter that is nine months after the date that the standard is approved. Requirement R3 would become effective on the first day of the first calendar quarter twelve months after the date that the standard is approved. NERC states that the reason for the difference in effective dates for proposed TOP-003-3 and IRO-010-2 is to allow applicable entities to have time to properly respond to the data specification requests.

II. Discussion

40. Pursuant to section 215(d) of the FPA, we propose to approve NERC's proposed revisions to the TOP and IRO Reliability Standards as just, reasonable, not unduly discriminatory or preferential, and in the public interest. We believe that NERC's approach of consolidating requirements and removing redundancies generally has merit and is consistent with Commission policy promoting increased efficiencies in Reliability

Standards and reducing requirements that are either redundant with other currently effective requirements or have little reliability benefit.¹⁷

41. We agree with NERC that the proposed TOP and IRO Reliability Standards would improve reliability by defining an appropriate division of responsibilities between reliability coordinators and transmission operators.¹⁸ Specifically, NERC states that the proposed TOP Reliability Standards will be improved by eliminating multiple TOP standards, resulting in a more concise set of standards. Thus, we believe that NERC's TOP proposal would reduce redundancy and more clearly delineate responsibilities between applicable entities. In addition, we believe that the proposed Reliability Standards provide a comprehensive framework as well as important improvements to ensure that the bulk electric system is operated within pre-established limits while enhancing situational awareness and strengthening operations planning. We believe that the proposed TOP and IRO Reliability Standards address the coordinated efforts to plan and reliably operate the bulk electric system under both normal and abnormal conditions.

42. For these reasons, we propose to approve NERC's revisions to the TOP and IRO Reliability Standards. We also discuss below: (A) concerns raised in the Remand NOPR plus possible inconsistencies of identifying IROs; (B) other reliability issues including (1) monitoring of non-bulk electric system facilities; (2) removal of the load-serving entity function from proposed Reliability Standard TOP-001-3; and (3) data exchange capabilities.

¹⁷ *Electric Reliability Organization Proposal to Retire Requirements in Reliability Standards*, Order No. 788, 145 FERC ¶ 61,147 (2013).

¹⁸ *See, e.g.*, Order No. 748, 134 FERC ¶ 61,213, at PP 39-40.

A. Remand NOPR Issues

1. Operational Responsibilities and Actions of SOLs and IROLs

43. We propose to find that NERC has adequately addressed the concerns raised by the Commission in the Remand NOPR with respect to the treatment of SOLs in the proposed TOP Reliability Standards. In the Remand NOPR, the Commission expressed concern that the proposed TOP standards did not have a requirement “for transmission operators to plan and operate within all SOLs. Without a requirement to plan and operate within all SOLs in the proposed standards and by limiting non-IROL SOLs to only those identified by the transmission operator internal to its area, system reliability is reduced and negative consequences can occur outside of the transmission operator’s internal area.”¹⁹ The Commission noted that “non-IROL SOLs that appear to be excluded from the proposed standard are non-IROL SOLs that are in a transmission operator’s area that impact another transmission operator’s area or more than one transmission operator’s area.”²⁰

44. The Commission believes that the proposed TOP Reliability Standards address the Commission’s Remand NOPR concerns by requiring transmission operators to plan and operate within all SOLs, and to monitor and assess SOL conditions within and outside a transmission operator’s area. Specifically, proposed Reliability Standard TOP-001-3, Requirement R14 requires each transmission operator to initiate its operating plan to mitigate a SOL exceedance identified as part of its real-time monitoring or real-time

¹⁹ Remand NOPR, 145 FERC ¶ 61,158 at P 42.

²⁰ *Id.* P 51.

assessment. Proposed Reliability Standard TOP-001-3, Requirement R10 requires each transmission operator to monitor facilities within its transmission operator area as well as certain facilities outside of its transmission operator area to determine SOL exceedances within its transmission operator area during the real-time operations time horizon. In addition, proposed Reliability Standard TOP-001-3, Requirement R15 requires that each transmission operator inform its reliability coordinator of actions taken to resolve a SOL exceedance.²¹ To address the concerns of operational planning, proposed Reliability Standard TOP-002-4, Requirement R1 requires each transmission operator to have an operational planning analysis to assess whether its next-day planned operations will exceed any of its SOLs within its area, and Requirement R2 requires the transmission operator to have a next-day operating plan(s) to address any potential SOLs exceedances identified in its operational planning analysis.²²

45. Further, proposed Reliability Standard IRO-008-2, Requirements R1, R2, R3, R5, and R6 require reliability coordinators to plan and operate within SOLs and IROLs, which we believe work in tandem with the proposed TOP Standards and address the Commission's concern that the previously-proposed Reliability Standards limited "non-IROL SOLs" to only those internally identified by the transmission operator. Specific to operational planning, proposed Reliability Standard IRO-008-2, Requirement R1 requires the reliability coordinator to have an operational planning analysis to assess whether its next-day planned operations will exceed SOLs and IROLs within its wide area, and

²¹ NERC Petition at 24-25.

²² NERC Petition at 27.

Requirement R2 requires the reliability coordinator to have a coordinated next-day operating plan(s) to address potential SOLs and IROLs exceedances identified in its operational planning analysis while considering the next-day operating plan(s) provided by its transmission operators and balancing authorities.²³ Requirement R3 requires the reliability coordinator to notify impacted entities identified in its operating plan cited in Requirement R2 as to their role in such plan(s). The Commission believes that the consideration of the transmission operators' and balancing authorities' operating plans by the reliability coordinator in its own operating plan provides the necessary situational awareness of all SOLs, internal and external to the transmission operator or balancing authority.

46. In the Remand NOPR, the Commission raised the concern that the then-proposed version of the TOP/IRO Standards did not consider the possibility that additional SOLs could develop or occur in the same-day or real-time operational time horizon, and therefore would pose an operational risk to the interconnected transmission network.²⁴ To address this concern, Reliability Standard IRO-008-2, Requirement R5 requires each reliability coordinator to notify impacted transmission operators and balancing authorities within its reliability coordinator area and other impacted reliability coordinators when results of a real-time assessment indicate actual or expected conditions that could result in SOL or IROL exceedances, and Requirement R6 requires reliability coordinator

²³ NERC Petition at 52.

²⁴ Remand NOPR, 145 FERC ¶ 61,158 at P 55.

notification to impacted transmission operators, balancing authorities and other impacted reliability coordinators when any SOLs or IROLs have been prevented or mitigated.²⁵

47. Likewise, based on NERC's explanation, we believe that the proposed Reliability Standards in the immediate proceeding are designed to improve system performance by giving reliability coordinators the authority to direct actions to prevent or mitigate instances of exceeding IROLs. This delineation of responsibilities between reliability coordinators and transmission operators is appropriate because the primary decision-making authority for mitigating IROL exceedances is assigned to reliability coordinators while transmission operators have the primary responsibility for mitigating SOL exceedances.²⁶ To further support the reliability coordinator's primary responsibility for IROLs to prevent instability, uncontrolled separation, or cascading, proposed Reliability Standard TOP-001-3, Requirement R12 requires that a transmission operator must not operate outside of any identified IROLs for a continuous duration exceeding its associated IROL T_v .²⁷

48. In addition, NERC explains that the proposed Reliability Standard IRO-014-3 contains requirements for coordination of interconnection operations at the reliability coordinator level and ensures that each reliability coordinator's operations are

²⁵ NERC Petition at 32.

²⁶ See Remand NOPR, 145 FERC ¶ 61,158 at P 85. Further, currently-effective Reliability Standard IRO-009-1, Requirement R4 states that "[w]hen actual system conditions show that there is an instance of exceeding an IROL in its Reliability Coordinator Area, the Reliability Coordinator shall, without delay, act or direct others to act to mitigate the magnitude and duration of the instance of exceeding that IROL within the IROL's T_v ."

²⁷ NERC Petition at 25.

coordinated such that they will not adversely affect other reliability coordinators' areas.²⁸ Proposed Reliability Standard IRO-014-3 requires the reliability coordinator to have and implement operating procedures, processes, or plans for activities that require notification or coordination of actions that may affect adjacent reliability coordinators' areas.

49. Furthermore, the Commission believes the revised definitions of operational planning analysis and real-time assessment are critical components of the proposed TOP and IRO Reliability Standards and, together with the definitions of SOLs, IROs and operating plans, work to ensure that reliability coordinators, transmission operators and balancing authorities plan and operate the bulk electric system within all SOLs and IROs to prevent instability, uncontrolled separation, or cascading. In addition, the revised definitions of operational planning analysis and real-time assessment address other concerns raised in the Remand NOPR as well as multiple recommendations in the 2011 Southwest Outage Blackout Report.²⁹ For example, the definition of operational planning analysis is used in proposed Reliability Standards TOP-002-4, TOP-003-3, IRO-002-4, IRO-008-2, IRO-010-2, and IRO-014-3 to ensure a consistent approach to operations planning for the reliability coordinators, transmission operators and balancing authorities.³⁰ Further, the proposed revised operational planning analysis definition adds additional detail and clarity, including the evaluation of pre- and post-contingency

²⁸ NERC Petition at 33.

²⁹ NERC Petition at 17-18.

³⁰ NERC Petition at 19.

conditions as well as the evaluation of multiple applicable inputs that are absent in the currently-effective definition.

50. Likewise, the definition of real-time assessment is used in the following proposed Reliability Standards: TOP-001-3; TOP-003-3; IRO-002-4; IRO-008-2; IRO-010-2; and IRO-014-3 to ensure a consistent approach to the real-time operation of the Bulk Power System for the reliability coordinators, transmission operators and balancing authorities.³¹ The proposed revised real-time assessment definition is the same type of evaluation as the operational planning analysis with the exception that real-time assessment uses real-time data to assess existing conditions and operational planning analysis uses projected system conditions to assess anticipated system conditions.

51. The Commission does note, however, that in Exhibit E (SOL White Paper) of NERC's petition, NERC states that with regard to the SOL concept, the SOL White Paper brings "clarity and consistency to the notion of establishing SOLs, exceeding SOLs, and implementing Operating Plans to mitigate SOL exceedances."³² The Commission further notes that IROLs, as defined by NERC, are a subset of SOLs that, if violated, could lead to instability, uncontrolled separation, or cascading outages that adversely impact the reliability of the bulk electric system.³³ The Commission agrees with NERC that clarity

³¹ NERC Petition at 18.

³² NERC Petition, Exhibit E, "White Paper on System Operating Limit Definition and Exceedance Clarification" at 1.

³³ NERC Glossary of Terms defines Interconnection Reliability Operating Limit as "[a] System Operating Limit that, if violated, could lead to instability, uncontrolled separation, or Cascading outages that adversely impact the reliability of the Bulk Electric System."

and consistency are important with respect to establishing and implementing operating plans to mitigate SOL and IROL exceedances. However, the Commission notes that in its 2015 State of Reliability report, NERC states that the Western Interconnection reliability coordinator definition of an IROL has additional criteria that may not exist in other reliability coordinator areas.³⁴ Based on this information, it is unclear whether NERC regions apply a consistent approach to identifying IROLs. Accordingly, the Commission seeks comment on (1) identification of all regional differences or variances in the formulation of IROLs, (2) the potential reliability impacts of such differences or variations, and (3) the value of providing a uniform approach or methodology to defining and identifying IROLs.

2. Outage Coordination

52. We believe, too, that NERC has addressed the concerns raised in the Remand NOPR with respect to the IRO standards regarding planned outage coordination. In the Remand NOPR, the Commission expressed concern with NERC's proposal because Reliability Standards IRO-008-1, Requirement R3 and IRO-010-1a (subjects of the proposed remand and now withdrawn by NERC) did not require the coordination of

³⁴ NERC 2015 State of Reliability report at 44, available at www.nerc.com. See also WECC Reliability Coordination System Operating Limits Methodology for the Operations Horizon, Rev. 7.0 (effective March 3, 2014) at 18 (stating that "SOLs qualify as IROLs when ... studies indicate that instability, Cascading, or uncontrolled separation may occur resulting in uncontrolled interruption of load equal to or greater than 1000 MW"), available at <https://www.wecc.biz/Reliability/PhaseII%20WECC%20RC%20SOL%20Methodology%20FINAL.pdf>.

outages, noting that outage coordination is a critical reliability function that should be performed by the reliability coordinator.³⁵

53. With respect to proposed Reliability Standard IRO-017-1, submitted by NERC for approval in the immediate proceeding, Requirement R1 requires each reliability coordinator to develop, implement and maintain an outage coordination process for generation and transmission outages within its reliability coordinator area. Under Requirement R2, each transmission operator and balancing authority, in turn, would perform the functions specified in its reliability coordinator's outage coordination process. Further, Requirement R3 requires each planning coordinator and transmission planner to provide its planning assessment to the relevant reliability coordinators and to work together to solve any issues or conflicts with planned outages among the applicable entities under Requirement R4. Additionally, proposed Reliability Standard IRO-014-3, Requirement R1, Part 1.4 requires reliability coordinators to include the exchange of planned and unplanned outage information to support operational planning analyses and real-time assessments in the operating procedures, processes, and plans for activities that require coordination with adjacent reliability coordinators. Further, the proposed revised definitions of operational planning analysis and real-time assessments require that these evaluations of system conditions include transmission and generation outages. We believe that these proposed standards and revised definitions adequately address our concerns with respect to outage coordination as outlined in the Remand NOPR.

B. Other Reliability Issues

³⁵ Remand NOPR, 145 FERC ¶ 61,158 at P 90.

54. While proposing to approve the TOP and IRO Reliability Standards, the Commission seeks clarifying comments addressing three additional issues: (1) monitoring of non-bulk electric system facilities; (2) removal of the load-serving entity as an applicable entity for proposed Reliability Standard TOP-001-3; and (3) data exchange capabilities. Based on comments and information received on these issues, the Commission may issue directives as appropriate.

1. Monitoring of Non-Bulk Electric System Facilities

NERC Petition

55. NERC explains how the proposed Reliability Standards address the recommendations in the 2011 Southwest Outage Blackout Report, in particular with respect to Finding 17 concerning the impact of sub-100 kV facilities on the reliability of the interconnected transmission network. Finding 17 states:

WECC RC and affected TOPs and BAs do not consistently recognize the adverse impact sub-100 kV facilities can have on BPS reliability. As a result, sub-100 kV facilities might not be designated as part of the BES, which can leave entities unable to address the reliability impact they can have in the planning and operations time horizons. If, prior to September 8, 2011, certain sub-100 kV facilities had been designated as part of the BES and, as a result, were incorporated into the TOPs' and RC's planning and operations studies, or otherwise had been incorporated into these studies, cascading outages may have been avoided on the day of the event.

Recommendation 17 states:

WECC, as the RE, should lead other entities, including TOPs and BAs, to ensure that all facilities that can adversely impact BPS reliability are either designated as part of the BES or otherwise

incorporated into planning and operations studies and actively monitored and alarmed in [real-time contingency analysis] systems.

NERC states that proposed Reliability Standard IRO-002-4, Requirement R3 addresses monitoring of non-bulk electric system facilities by requiring each reliability coordinator to monitor facilities and necessary non-bulk electric system facilities in order to identify SOL and IROL exceedances within its reliability coordinator area.³⁶ In addition, NERC states that proposed Reliability Standards IRO-010-2, Requirement R1.1 and TOP-003-3, Requirement R1.1 address non-bulk electric system data by specifically requiring reliability coordinators and transmission operators to incorporate any non-bulk-electric system data as deemed necessary into their operational planning analyses, real-time monitoring, and real-time assessments.³⁷

56. However, NERC explains that the standard drafting team concluded it is unnecessary to include non-bulk electric system monitoring in proposed Reliability Standard TOP-001-3, Requirement R10 for the transmission operator, in a similar fashion as proposed Reliability Standard IRO-002-4, Requirement R3 for the reliability coordinator. Instead, the standard drafting team determined that any non-bulk electric system facility elements that are necessary for reliable operation of the bulk electric system would be included in the bulk electric system through the exception process provided in Appendix 5C to the NERC Rules of Procedure. NERC states that the exception process provides the means for transmission operators and reliability

³⁶ NERC Petition at 61.

³⁷ *Id.* at 40.

coordinators to include elements in the bulk electric system that are necessary for the reliable operation of the interconnected transmission system but not identified in the bulk electric system definition.³⁸

Commission Proposal

57. We propose to find that NERC has adequately addressed the 2011 Southwest Outage Blackout Report recommendation in connection with sub-100 kV facilities for proposed Reliability Standards IRO-002-4, Requirement R3, IRO-010-2, Requirement R1.1 and TOP-003-3, Requirement R1.1. In doing so, we rely primarily on the proposed responsibility of the reliability coordinator to monitor such facilities to the extent necessary.

58. However, the transmission operator may have a more granular perspective than the reliability coordinator of its necessary non-bulk electric system facilities to monitor in order to identify SOL and IROL exceedances, and it is not clear whether or how the transmission operator would communicate any insight it may have to the reliability coordinator to ensure monitoring of all necessary facilities. Thus, the Commission seeks comment on how NERC will ensure that the reliability coordinator will receive information from the transmission operator regarding which non-bulk electric system facilities should be monitored. Further, as stated above, Recommendation 17 states “...to ensure that all facilities that can adversely impact BPS reliability are either designated as part of the BES or *otherwise incorporated into planning and operations studies and actively monitored and alarmed in [real-time contingency analysis] systems.*” (emphasis

³⁸ *Id.* at 47-48.

added.) Including such non-bulk electric system facilities in the definition of bulk electric system through the Rules of Procedure exception process could be an option to address any potential gaps for monitoring facilities. However, there may be potential efficiencies gained by using a more expedited method to include non-bulk electric system that requires monitoring. Thus, the Commission seeks comments on whether the exception process should be used exclusively in all cases.

59. Alternatively, we seek comment regarding whether this concern should be addressed through a review process of the transmission operators' systems to determine if there are important non-bulk-electric system facilities that require monitoring. For example, Commission staff could work with NERC, Regional Entities and applicable entities to review their system modeling and perform an analysis to identify non-bulk electric system facilities that need monitoring. Accordingly, we seek comment from NERC and other interested persons on these alternatives.

2. **Removal of Load-Serving Entity Function from TOP-001-3**

NERC Petition

60. Proposed Reliability Standard TOP-001-3, Requirement R3 requires that each balancing authority, generator operator and distribution provider shall comply with each operating instruction issued by its transmission operator, and proposed Reliability Standard TOP-001-3, Requirement R4 requires that each balancing authority, generator operator and distribution provider inform its transmission operator of its inability to comply with an operating instruction. Proposed Reliability Standard TOP-001-3, Requirement R5 requires that each transmission operator, generator operator and distribution provider shall comply with each operating instruction issued by its balancing authority, and proposed Reliability Standard TOP-001-3, Requirement R6 requires that each transmission operator, generator operator and distribution provider inform its balancing authority of its inability to comply with an operating instruction.³⁹

61. In its petition, NERC states that, during the standard drafting process, the load-serving entity function was removed from proposed Reliability Standard TOP-001-3, Requirements R3 through R6. NERC explains that the removal of the load-serving entity as an applicable entity was based on the November 2014 NERC Board of Trustees action to remove load-serving entity as a functional entity from NERC's Rules of Procedure.⁴⁰ Since that time, the Commission has issued an order in Docket No. RR15-4-000 that denied, without prejudice, NERC's proposal to remove the load-serving entity as a

³⁹ NERC Petition at 22-23.

⁴⁰ NERC Petition, Exhibit K, Consideration of Comments January 7, 2015, at 2.

functional entity under NERC's Risk Based Registration petition and directed NERC to submit a compliance filing to address this issue.⁴¹

62. On May 12, 2015, NERC supplemented its initial petition with additional explanation for the removal of the load-serving entity function from proposed Reliability Standard TOP-001-3. NERC explains that the proposed standard gives transmission operators and balancing authorities the authority to direct the actions of certain other functional entities by issuing an operating instruction to maintain reliability during real-time operations. According to NERC, load-serving entities are not included in the list of entities that must comply with a transmission operator's or balancing authority's operating instructions. NERC contends that the exclusion is justified because none of the functions performed by load-serving entities, as described in the NERC Functional Model, necessitate that load-serving entities be subject to a requirement to comply with such operating instructions to ensure that a transmission operator or balancing authority can maintain reliability.⁴² NERC adds that a load-serving entity does not own or operate bulk electric system facilities or equipment or the facilities or equipment used to serve end-use customers and its NERC Functional Model tasks are limited in scope. As indicated by the NERC Functional Model, the load-serving entity does not play a role in shedding load in real-time.

63. NERC also explains in its supplemental filing that the standard drafting team did not identify any circumstances under which a transmission operator or balancing

⁴¹ *North American Electric Reliability Corp.*, 150 FERC ¶ 61,213 (2015).

⁴² NERC Supplemental Filing at 6.

authority would need to issue an operating instruction to a load-serving entity to prevent instability, uncontrolled separation, or cascading outages. NERC contends that, with respect to the load-serving entity's role as a provider of information to other functional entities, that role is primarily carried out ahead of real-time and would not be the subject of an operating instruction. Additionally, NERC states that the load-serving entity's real-time role with respect to voluntary load curtailment does not necessitate requiring load-serving entities to comply with operating instructions issued by a transmission operator or balancing authority. In order to maintain reliability in their areas and prevent instability, uncontrolled separation, or cascading outages, there may be circumstances under which transmission operators and balancing authorities need to shed load. NERC states that such action is implemented in real-time to address imminent or existing reliability issues such as an exceedance of an IROL or SOL, or a voltage problem. According to NERC, due to the urgent nature of these circumstances, the reliability coordinator, balancing authority, or transmission operator may issue operating instructions directly to the distribution provider for physical implementation of load shedding (except when this can be accomplished directly by the transmission operator).⁴³

Commission Proposal

64. NERC proposes the removal of the load-serving entity function from proposed Reliability Standard, TOP-001-3, Requirements R3 through R6, as a recipient of an operating instruction from a transmission operator or balancing authority. However, the Commission notes that the issuance and compliance of operating instructions under

⁴³ NERC Supplemental Filing at 9.

proposed Reliability Standard TOP-001-3 is not limited to the real-time operations time horizon only.⁴⁴

65. Further, if a transmission operator or balancing authority would issue an operating instruction to a load-serving entity such as to carry out interruptible load curtailments, it is not clear what entity would respond to this operating instruction if the load-serving entity is removed from proposed TOP-001-3, Requirements R3 through R6.⁴⁵

66. The Commission notes that NERC is required to make a compliance filing in July 2015 in Docket No. RR15-4-000. The Commission's decision on that filing will guide any action in this proceeding.

3. Data Exchange Capabilities

NERC Petition

67. In Order No. 808, the Commission approved Reliability Standards COM-001-2 (Communications) and COM-002-4 (Operating Personnel Communications Protocols).⁴⁶

In Order No. 808, the Commission explained that it had raised concerns in the underlying NOPR proposing to approve these COM Reliability Standards (COM NOPR) whether COM-001-2 addresses "facilities that directly exchange or transfer data."⁴⁷ In response to

⁴⁴ NERC TOP/IRO Petition, Exhibit A includes the following time horizons for proposed Reliability Standard TOP-001-3, Requirements R3 through R6: "[*Time Horizon: Same-Day Operations, Real-Time Operations*]."

⁴⁵ NERC Glossary of Terms defines Interruptible Load as the "[d]emand that the end-use customer makes available to its Load-Serving Entity via contract or agreement for curtailment."

⁴⁶ *Communications Reliability Standards*, Order No. 808, 151 FERC ¶ 61,039 (2015).

⁴⁷ Order No. 808, 151 FERC ¶ 61,039 at P 54, quoting *Communications Reliability*

the COM NOPR, NERC and other commenters clarified that Reliability Standard COM-001-2, which covers communications capability requirements, is not intended to address data exchanges or transfers.⁴⁸ As the Commission noted in Order No. 808, NERC maintained that Reliability Standard COM-001-2 need not include requirements regarding data exchange capability, “because such capability is covered under other existing or proposed standards.”⁴⁹ The Commission did not make any determinations regarding facilities used for data exchange capability in Order No. 808 and, based on NERC’s explanation in its supplemental filing, the Commission stated that it would address these issues in this TOP and IRO rulemaking proceeding.⁵⁰

68. In general, it appears that facilities for data exchange capabilities are addressed in NERC’s proposal. For example, proposed Reliability Standard TOP-001-3, Requirements R19 and R20 require some form of “data exchange capabilities” for the transmission operator and balancing authority, respectively. Similarly, proposed Reliability Standard IRO-002-4, Requirement R1 requires some form of “data exchange capabilities” for the reliability coordinator. However, we seek additional explanation from NERC regarding how it addresses data exchange capabilities in the TOP and IRO

Standards, Notice of Proposed Rulemaking, 148 FERC ¶ 61,210, at P 33 (2014).

⁴⁸ *Id.* P 48.

⁴⁹ *Id.* See also NERC’s Supplemental Comments in Response to Notice of Proposed Rulemaking, *Communications Reliability Standards*, Docket No. RM14-13-000 at 3.

⁵⁰ Order No. 808, 151 FERC ¶ 61,039 at P 54.

Reliability Standards in the following areas: (a) redundancy and diverse routing; and (b) testing of the alternate or less frequently used data exchange capability.

(i) **Redundancy and Diverse Routing of Data Exchange Capabilities**

Background

69. The terms “redundant” and “diverse routing” of data exchange capabilities appear in Reliability Standard COM-001-1, where the reliability coordinator, transmission operator and balancing authority are required to have telecommunication facilities that are “redundant” and “diversely routed” to maintain Bulk-Power System reliability.⁵¹ NERC added two definitions (Interpersonal Communication and Alternative Interpersonal Communication) to Reliability Standard COM-001-2 that addressed redundant and diverse routing of communications between persons and proposed to eliminate the need to use phrases such as “redundant and diversely routed” that it described as ambiguous.⁵² With respect to the data exchange capabilities, NERC stated that several proposed or existing standards “provided the necessary mandatory Requirements to ensure proper data exchange is occurring.”⁵³ NERC also asserted that four proposed IRO and TOP standards “include specific coverage related to data exchange,” and “collectively require data exchange capability” for reliability

⁵¹ COM-001-1.1 Standard, Requirement R1 requires that “[e]ach Reliability Coordinator, Transmission Operator and Balancing Authority shall provide adequate and reliable telecommunications facilities for the exchange of Interconnection and operating information:” and R1.4 requires that “[w]here applicable, these facilities shall be redundant and diversely routed.”

⁵² NERC COM Petition at 16.

⁵³ NERC COM Petition at 16.

coordinators, transmission operators, balancing authorities, generator operators, and distribution providers.⁵⁴

70. In Order No. 808, the Commission approved NERC's definition of the terms Interpersonal Communication and Alternative Interpersonal Communication. NERC defines Interpersonal Communication as "[a]ny medium that allows two or more individuals to interact, consult, or exchange information." NERC defines Alternative Interpersonal Communication as "[a]ny Interpersonal Communication that is able to serve as a substitute for, and does not utilize the same infrastructure (medium) as, Interpersonal Communication used for day-to-day operation."⁵⁵ Reliability Standard COM-001-2, Requirements R1 through R6 require that reliability coordinators, transmission operators, and balancing authorities have Interpersonal Communication capabilities and Alternative Interpersonal Communication capabilities in place with other defined entities (*e.g.*, other interconnected transmission operators). In its COM Petition, NERC maintained that the defined terms make clear that an entity's communication capability must be redundant and that each of the capabilities must not utilize the same medium, while eliminating the need to use ambiguous phrases such as "redundant and diversely routed" (as used in the prior version of the standard governing communications capability).⁵⁶

⁵⁴ NERC Supp. COM Comments at 3. NERC identified these same four standards in its Initial Comments, but provides a more detailed discussion of the proposed standards and their status in its Supplemental Comments.

⁵⁵ Order No. 808, 151 FERC ¶ 61,039, at P 45 n.54.

⁵⁶ May 14, 2014, NERC COM Petition, Docket No. RM14-13-000 at 15-16.

71. As noted above, NERC indicated in its response to the COM NOPR that Reliability Standard COM-001-2 need not include requirements regarding data exchange capability because such capability is or would be covered by other existing or proposed standards. Specifically, NERC explained that data exchange is addressed by the currently enforceable Reliability Standards IRO-010-1a and IRO-014-1. In addition, NERC stated that data exchange transfer capabilities are directly addressed in proposed Reliability Standard TOP-001-3, as well as in proposed Reliability Standard IRO-002-4, Requirement R1. NERC also stated that the data itself is covered in proposed Reliability Standard IRO-010-2 and proposed Reliability Standard TOP-003-3.⁵⁷

NERC Petition

72. In the petition in this proceeding, NERC states that in proposed Reliability Standard TOP-001-3, “Requirements R19 and R20 provide that each Transmission Operator (Requirement R19) and Balancing Authority (Requirement R20) must have data exchange capabilities with the entities from which it needs data in order to maintain reliability in its area.”⁵⁸ NERC states that Requirements R19 and R20 are consistent with proposed Reliability Standard IRO-002-4, Requirement R1, which provides that each reliability coordinator must have data exchange capabilities with its balancing authorities, transmission operators, and other entities it deems necessary. Requirements R19 and R20 state:

⁵⁷ NERC COM Supplemental Comments at 3.

⁵⁸ NERC Petition at 26.

R19. Each Transmission Operator shall have data exchange capabilities with the entities that it has identified that it needs data from in order to maintain reliability in its Transmission Operator Area.

R20. Each Balancing Authority shall have data exchange capabilities with the entities that it has identified that it needs data from in order to maintain reliability in its Balancing Authority Area.

Reliability Standard IRO-002-4 Requirement R1 states:

R1. Each Reliability Coordinator shall have data exchange capabilities with its Balancing Authorities and Transmission Operators, and with other entities it deems necessary, for it to perform its Operational Planning Analyses, Real-time monitoring, and Real-time Assessments.

In addition, NERC states that IRO-002-4, Requirement R4 requires “each Reliability Coordinator must have monitoring systems...over a redundant infrastructure.”⁵⁹

Commission Proposal

73. The Commission agrees that proposed Reliability Standard TOP-001-3, Requirements R19 and R20 require some form of “data exchange capabilities” for the transmission operator and balancing authority, respectively, and that proposed Reliability Standard TOP-003-3 addresses the operational data itself needed by the transmission operator and balancing authority. In addition, the Commission agrees that Reliability Standard IRO-002-4, Requirement R1 requires “data exchange capabilities” for the reliability coordinator and that proposed Reliability Standard IRO-010-2 addresses the operational data needed by the reliability coordinator. Further, the Commission agrees that proposed Reliability Standard IRO-002-4 Requirement R4 requires a redundant infrastructure for system monitoring. However, it is not clear whether redundancy and

⁵⁹ *Id.* at 31.

diverse routing of data exchange capabilities (or an equally effective alternative that eliminates the ambiguity of “redundancy” and “diversely routed”) are adequately addressed in proposed Reliability Standards TOP-001-3 and IRO-002-4 for the reliability coordinator, transmission operator, and balancing authority.

74. Unlike the approach taken with COM-001-2, which requires redundancy and use of a diverse medium through the definitions of Interpersonal Communication and Alternative Interpersonal Communication, proposed Reliability Standards TOP-001-3 and IRO-002-4 do not appear to address redundancy and diverse routing of data exchange capabilities. While Reliability Standard IRO-002-4, Requirement R4 requires reliability coordinators to have a redundant infrastructure for system monitoring, it is not clear whether this requirement addresses redundancy and diverse routing of other forms of data exchange capabilities. For example, a redundant infrastructure used for system monitoring could be a subset of the total data exchange capabilities used by reliability coordinators and not include redundant infrastructure for capabilities such as control of equipment or real-time assessments. The Commission seeks explanation or clarification from NERC whether and how the proposed Reliability Standards in the immediate proceeding address redundancy and diverse routing or an equally effective alternative to redundancy and diverse routing. Further, if NERC or others believe that redundancy and diverse routing are not addressed, we seek comment on whether there are associated reliability risks of the interconnected transmission network for any failure of data exchange capabilities that are not redundant and diversely routed.

(ii) **Testing of the Alternate or Less Frequently Used Data Exchange Capability**

NERC Petition

75. Reliability Standard COM-001-2, Requirement R9 (approved in Order No. 808) requires each reliability coordinator, transmission operator and balancing authority to test its Alternative Interpersonal Communication capability at least once each calendar month and to initiate action to repair or designate a replacement Alternative Interpersonal Communication capability.⁶⁰

76. As noted above, proposed Reliability Standards TOP-001-3, Requirements R19 and R20 and IRO-002-4, Requirement R1 address primary data exchange capabilities of the transmission operator, balancing authority and reliability coordinator, respectively. However, the proposed TOP and IRO Reliability Standards do not appear to address testing requirements of alternative or less frequently used data exchange capabilities.

Commission Proposal

77. The Commission is concerned that the proposed TOP and IRO Reliability Standards do not appear to address testing requirements for alternative or less frequently used mediums for data exchange to ensure they would properly function in the event that the primary or more frequently used data exchange capabilities failed. The Commission seeks comment on whether and how the TOP and IRO Reliability Standards address the testing of alternative or less frequently used data exchange capabilities for the

⁶⁰ Reliability Standard COM-001-2, Requirement R9 states: “[e]ach Reliability Coordinator, Transmission Operator, and Balancing Authority shall test its Alternative Interpersonal Communication capability at least once each calendar month. If the test is unsuccessful, the responsible entity shall initiate action to repair or designate a replacement Alternative Interpersonal Communication capability within 2 hours.”

transmission operator, balancing authority and reliability coordinator. If NERC or others believe that testing requirements for alternative or less frequently used mediums for data exchange is not necessary, we seek comment on why it is not necessary.

III. Information Collection Statement

78. The collection of information contained in this Notice of Proposed Rulemaking is subject to review by the Office of Management and Budget (OMB) regulations under section 3507(d) of the Paperwork Reduction Act of 1995 (PRA).⁶¹ OMB's regulations require approval of certain informational collection requirements imposed by agency rules.⁶² Upon approval of a collection(s) of information, OMB will assign an OMB control number and an expiration date. Respondents subject to the filing requirements of a rule will not be penalized for failing to respond to these collections of information unless the collections of information display a valid OMB control number.

79. We solicit comments on the need for this information, whether the information will have practical utility, the accuracy of the burden estimates, ways to enhance the quality, utility, and clarity of the information to be collected or retained, and any suggested methods for minimizing respondents' burden, including the use of automated information techniques. Specifically, the Commission asks that any revised burden or cost estimates submitted by commenters be supported by sufficient detail to understand how the estimates are generated.

⁶¹ 44 U.S.C. 3507(d) (2012).

⁶² 5 C.F.R. § 1320.11 (2014).

Public Reporting Burden: The Commission proposes to approve revisions to the Transmission Operations and Interconnection Reliability Operations and Coordination Reliability Standards. These revisions will impose new or revised, or retire requirements for the balancing authority, transmission operator, generator operator, distribution provider, generator owner, load-serving entity, purchasing-selling entity, transmission service provider, interchange authority, transmission owner, reliability coordinator, planning coordinator, and transmission planner functions. The Commission based its paperwork burden estimates on the NERC compliance registry as of May 15, 2015. According to the registry, there are 11 reliability coordinators, 99 balancing authorities, 450 distribution providers, 839 generator operators, 80 purchasing-selling entities, 446 load-serving entities, 886 generator owners, 320 transmission owners, 24 interchange authorities, 75 transmission service providers, 68 planning coordinators, 175 transmission planners and 171 transmission operators. The estimates are based on the change in burden from the current standards to the proposed. Not all entity types would experience an increase in burden, which is reflected by absence of those entities from the chart below.

Collectively, the proposed TOP and IRO Reliability Standards along with revised definitions provide for certain enhancements over the currently-effective TOP and IRO Reliability Standards.⁶³ For example, the revised definitions of operational planning analysis and real-time assessment, which are applicable to multiple proposed TOP and IRO Reliability Standards, were enhanced and provide significant additional detail over

⁶³ NERC Petition at 10.

the currently-effective definitions such as including inputs that were identified as contributing to past outages on the bulk electric system.⁶⁴ As another example, the new proposed Reliability Standard IRO-017-1 establishes operational planning requirements for each reliability coordinator to implement an outage coordination process for its area that address a reliability gap identified in the Southwest Outage Blackout Report and in the Remand NOPR.⁶⁵ The Commission estimates the annual reporting burden and cost as follows:

⁶⁴ NERC Petition at 14.

⁶⁵ NERC Petition at 17.

RM15-16-000 (Transmission Operations Reliability Standards, Interconnection Reliability Operations and Coordination Reliability Standards)						
	Number of Respondents ⁶⁶ (1)	Annual Number of Responses per Respondent (2)	Total Number of Responses (1)*(2)=(3)	Average Burden & Cost Per Response ⁶⁷ (4)	Total Annual Burden Hours & Total Annual Cost (3)*(4)=(5)	Cost per Respondent (\$) (5)÷(1)
FERC-725A						
TOP-001-3	196 (TOP & BA)	1	196	96 hrs. \$6,369	18,816 hrs., \$1,248,441	96 hrs., \$6,369
TOP-002-4	196 (TOP & BA)	1	196	284 hrs. \$18,843	55,664 hrs., \$3,693,306	284 hrs., \$18,843
TOP-003-3	196 (TOP & BA)	1	196	230 hrs. \$15,260	45,080 hrs., \$2,991,058	230 hrs., \$15,260
Sub-Total for FERC-725A					123,252 hrs., \$7,932,806	
FERC-725Z						
IRO-001-4 ⁶⁸	177 (RC & TOP)	1	177	0 hrs. \$0	0 hrs. \$0	0 hrs. \$0
IRO-002-4	11 (RC)	1	11	24 hrs. \$1,592	264 hrs., \$17,516	24 hrs., \$1,592
IRO-008-2	11 (RC)	1	11	228 hrs. \$15,127	2,508 hrs., \$166,405	228 hrs., \$15,127
IRO-010-2	11 (RC)	1	11	36 hrs. \$2,388	396 hrs., \$26,274	36 hrs., \$2,388
IRO-014-3	11 (RC)	1	11	12 hrs. \$796	132 hrs., \$8,758	12 hrs., \$796
IRO-017-1	180 (RC, PC, & TP)	1	180	218 hrs. \$14,464	39,240 hrs., \$2,603,574	218 hrs., \$14,464
Sub-Total for FERC-725Z					42,540 hrs., \$2,822,529.00	
Retirement of current standards currently in FERC-725A	457(RC, TOP, BA, TSP, LSE, PSE, & IA)	1	457	-223 hrs. -\$14,796	-101,911 hrs., -\$6,761,794	-223 hrs. -\$14,796

⁶⁶ The number of respondents is the number of entities for which a change in burden from the current standards to the proposed exists, not the total number of entities from the current or proposed standards that are applicable.

⁶⁷ The estimated hourly costs (salary plus benefits) are based on Bureau of Labor Statistics (BLS) information, as of April 1, 2015, for an electrical engineer (\$66.35/hour). These figures are available at http://bls.gov/oes/current/naics3_221000.htm#17-0000.

⁶⁸ IRO-001-4 is a revised standard with no increase in burden.

NET TOTAL of NOPR in RM15- 16				63,881 hrs, \$3,993,540	
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Title: FERC-725Z, Mandatory Reliability Standards: IRO Reliability Standards, and FERC-725A, Mandatory Reliability Standards for the Bulk-Power System

Action: Proposed Changes to Collections.

OMB Control Nos: 1902-0276 (FERC-725Z); 1902-0244(FERC-725A)

Respondents: Business or other for-profit and not-for-profit institutions.

Frequency of Responses: On-going.

80. Necessity of the Information and Internal review: The Commission has reviewed the requirements pertaining to the proposed Reliability Standards TOP-001-3, TOP-002-4, TOP-003-3, IRO-001-4, IRO-002-4, IRO-008-2, IRO-010-2, IRO-014-3, and IRO-017-1 and made a determination that the proposed requirements of these standards are necessary to implement section 215 of the FPA. These requirements conform to the Commission's plan for efficient information collection, communication and management within the energy industry. The Commission has assured itself, by means of its internal review, that there is specific, objective support for the burden estimates associated with the information requirements.

81. Interested persons may obtain information on the reporting requirements by contacting the Federal Energy Regulatory Commission, Office of the Executive Director, 888 First Street, NE, Washington, DC 20426 [Attention: Ellen Brown, e-mail: DataClearance@ferc.gov, phone: (202) 502-8663, fax: (202) 273-0873].

82. Comments concerning the information collections proposed in this NOPR and the associated burden estimates, should be sent to the Commission in this docket and may also be sent to the Office of Management and Budget, Office of Information and Regulatory Affairs [Attention: Desk Officer for the Federal Energy Regulatory Commission]. For security reasons, comments should be sent by e-mail to OMB at the following e-mail address: oira_submission@omb.eop.gov. Please reference OMB Control Nos. 1902-0276 (FERC-725Z) and 1902-0244 (FERC-725A)) in your submission.

IV. Environmental Analysis

83. 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.⁶⁹ The Commission has categorically excluded certain actions from this requirement as not having a significant effect on the human environment. Included in the exclusion are rules that are clarifying, corrective, or procedural or that do not substantially change the effect of the regulations being amended.⁷⁰ The actions approved herein fall within this categorical exclusion in the Commission's regulations.

V. Regulatory Flexibility Act Analysis

84. The Regulatory Flexibility Act of 1980 (RFA) generally requires a description and analysis of Proposed Rules that will have significant economic impact on a substantial

⁶⁹ *Regulations Implementing the National Environmental Policy Act of 1969*, Order No. 486, 52 FR 47897 (Dec. 17, 1987), FERC Stats. & Regs. Preambles 1986-1990 ¶ 30,783 (1987).

⁷⁰ 18 CFR 380.4(a)(2)(ii).

number of small entities.⁷¹ The Small Business Administration's (SBA) Office of Size Standards develops the numerical definition of a small business.⁷² The SBA revised its size standard for electric utilities (effective January 22, 2014) to a standard based on the number of employees, including affiliates (from a standard based on megawatt hours).⁷³ Proposed Reliability Standards TOP-001-3, TOP-002-4, TOP-003-3, IRO-001-4, IRO-002-4, IRO-008-2, IRO-010-2, IRO-014-3, and IRO-017-1 are expected to impose an additional burden on 196 entities (reliability coordinators, transmission operators, balancing authorities, transmission service providers, and planning authorities). Comparison of the applicable entities with the Commission's small business data indicates that approximately 82 of these entities are small entities that will be affected by the proposed Reliability Standards.⁷⁴ As discussed above, proposed Reliability Standards TOP-001-3, TOP-002-4, TOP-003-3, IRO-001-4, IRO-002-4, IRO-008-2, IRO-010-2, IRO-014-3, and IRO-017-1 will serve to enhance reliability by imposing mandatory requirements for operations planning, system monitoring, real-time actions, coordination between applicable entities, and operational reliability data. The Commission estimates

⁷¹ 5 U.S.C. 601-12.

⁷² 13 C.F.R. § 121.101 (2013).

⁷³ SBA Final Rule on "Small Business Size Standards: Utilities," 78 FR 77343 (Dec. 23, 2013).

⁷⁴ The Small Business Administration sets the threshold for what constitutes a small business. Public utilities may fall under one of several different categories, each with a size threshold based on the company's number of employees, including affiliates, the parent company, and subsidiaries. For the analysis in this NOPR, we are using a 750 employee threshold for each affected entity to conduct a comprehensive analysis.

that each of the small entities to whom the proposed Reliability Standards TOP-001-3, TOP-002-4, TOP-003-3, IRO-001-4, IRO-002-4, IRO-008-2, IRO-010-2, IRO-014-3, and IRO-017-1 applies will incur costs of approximately \$147,364 (annual ongoing) per entity. The Commission does not consider the estimated costs to have a significant economic impact on a substantial number of small entities. The Commission seeks comment on this proposal.

VI. Comment Procedures

85. 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 60 Days after publication in the FEDERAL REGISTER**]]. Comments must refer to Docket No. RM15-16-000, and must include the commenter's name, the organization they represent, if applicable, and their address in their comments.

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

87. Commenters that are not able to file comments electronically must send an original of their comments to: Federal Energy Regulatory Commission, Secretary of the Commission, 888 First Street NE, Washington, DC 20426.

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

VII. Document Availability

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

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

91. User assistance is available for eLibrary and the Commission's website during normal business hours from the Commission's Online Support at 202-502-6652 (toll free at 1-866-208-3676) or e-mail 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.

List of subjects in 18 CFR Part 40

By direction of the Commission.

(S E A L)

Kimberly D. Bose,
Secretary.