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January 24, 2010

**VIA ELECTRONIC FILING**

The Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First Street, N.E.
Washington, DC 20426

**Re: *System Restoration Reliability Standards*, Notice of Proposed Rulemaking; Docket No. RM10-16-000**

Dear Secretary Salas:

Transmitted electronically for filing in the referenced docket are the Comments of the ISO/RTO Council.

If there are any questions concerning this filing, please call me at (202) 661-2205.

Respectfully submitted,

*/s/ Howard H. Shafferman*

Howard H. Shafferman
Counsel for ISO New England Inc.
On behalf of the ISO/RTO Council

Enclosure

**UNITED STATES OF AMERICA**
**BEFORE THE**
**FEDERAL ENERGY REGULATORY COMMISSION**

**System Restoration Reliability Standards ) Docket No. RM10-16-000**

# COMMENTS OF THE ISO/RTO COUNCIL

## I. INTRODUCTION

The ISO/RTO Council ("IRC")[1] respectfully submits these joint comments in response to the Commission's Notice of Proposed Rulemaking issued in the above-captioned docket on November 18, 2010.[2]

In the NOPR, the Commission proposes to approve three Reliability Standards, EOP-001-1 (Emergency Operations Planning), EOP-005-2 (System Restoration from Blackstart Resources), and EOP-006-2 (System Restoration Coordination) developed by the North American Electric Reliability Corporation ("NERC"), the Commission-certified Electric Reliability Organization ("ERO"), as well as the definition of the term "Blackstart Resource" to

[1] The IRC is comprised of the Alberta Electric System Operator ("AESO"), the California Independent System Operator ("CAISO"), Electric Reliability Council of Texas ("ERCOT"), the Independent Electricity System Operator of Ontario, Inc., ("IESO"), ISO New England, Inc. ("ISONE"), Midwest Independent Transmission System Operator, Inc., ("Midwest ISO"), New York Independent System Operator, Inc. ("NYISO"), PJM Interconnection, L.L.C. ("PJM"), Southwest Power Pool, Inc. ("SPP"), and New Brunswick System Operator ("NBSO"). NYISO joins in these comments except for Section III.B.1 hereof. AESO and NBSO do not join in these comments. The IESO, AESO and NBSO are not subject to the Commission's jurisdiction and these comments do not constitute agreement or acknowledgement that they can be subject to the Commission's jurisdiction. The IRC's mission is to work collaboratively to develop effective processes, tools and standard methods for improving the competitive electricity markets across North America. In fulfilling this mission, it is the IRC's goal to provide a perspective that balances reliability standards with market practices so that each complements the other, thereby resulting in efficient, robust markets that provide competitive and reliable service to customers.

[2] 75 Fed. Reg. 71625 (November 24, 2010) (the "NOPR").

be added to the NERC Glossary of Terms. As explained by the Commission: "The proposed Reliability Standards were drafted to ensure plans, facilities and personnel are prepared to enable system restoration from blackstart resources in order that reliability is maintained during system restoration."[3] The Commission also proposes to approve the retirement of the currently effective Reliability Standards EOP-001-0 (Emergency Operations Planning), EOP-005-1 (System Restoration Plans), EOP-006-1 (Reliability Coordination – System Restoration), and EOP-009-0 (Documentation of Blackstart Generating Unit Test Results) as well as the definition of "Blackstart Capability Plan" from the NERC Glossary of Terms, which are superseded by the proposed Reliability Standards EOP-001-1, EOP-005-2 and EOP-006-2.

## II. SUMMARY

The IRC offers the following comments on the NOPR:

- Regarding EOP-005-2:
  - No change is needed in Requirement R11 of EOP-005-2 to clarify the meaning of the "unique tasks" for which Transmission Operator personnel must be trained;
  - The current standard's requirement for periodic testing of telecommunication facilities needed to implement restoration plans is adequately addressed in other standards and therefore need not be carried over specifically as a restoration plan element into EOP-005-2;
- Regarding EOP-006-2:
  - It is unnecessary to require Reliability Coordinators to maintain a database of all restoration resources;
  - There is sufficient "give and take" built into Requirements R5 and R5.1 concerning Reliability Coordinator approval of Transmission Operator restoration plans;
  - The Commission's proposal to require Reliability Coordinators to verify the blackstart plan, would be redundant to the requirement that

[3] NOPR at P 1.

Transmission Operators verify their restoration plans, and would provide no further benefit; and

- While the IRC, in general, does not oppose the collection of this data or the establishment of the ERO database proposed in paragraph 29 of the NOPR, the purpose and use of this data collection are not clear, and the IRC notes that using Section 1600 of NERC's Rules of Procedure could be more appropriate.

## III. COMMENTS

### A. EOP-005-2 System Restoration from Blackstart Resources

The Commission proposes to approve proposed Reliability Standard EOP-005-2, which seeks to ensure that "plans, facilities and personnel are prepared to enable system restoration from Blackstart Resources, and to ensure reliability is maintained during restoration and priority is placed on restoring the Interconnection."[4]

#### 1. No Change is Needed in Requirement R11 to Clarify the Meaning of the "Unique Tasks" For Which Transmission Operator Personnel Must Be Trained

In the NOPR, the Commission states that:

> Proposed Requirement R11 of EOP-005-2 provides that applicable entities "shall provide a minimum of two hours of System restoration [training] every two calendar years to their field switching personnel identified as performing unique tasks associated with the Transmission Operator's restoration plan that are outside of their normal tasks." NERC's Petition indicates that, in the development process, three stakeholders commented that the use of the term "unique tasks" is vague and requested a better definition and examples. The Commission is also concerned that the applicable entities may not understand what the term "unique tasks" means, and we request comment on what is intended by that term. Also, given that there a variety of means by which the ERO, if necessary, can provide greater clarity regarding the term "unique tasks," we request comment on whether guidance should be provided to the transmission operators, transmission owners and distribution providers who are responsible for providing training, and if so, how this guidance should be provided. In addition, we

[4] NOPR at P 15.

> seek comment as to whether those tasks should be identified in each transmission operator's restoration plan.[5]

With respect to the Commission's inquiry concerning the intent of the "unique tasks" term, the IRC observes that restoration actions, with respect to switching and synchronizing equipment, are very much different from those undertaken in everyday operations, and can indeed be considered "unique" because of the unique state of the power system in a shutdown/restoration state. For example, low-voltage concerns typically arise during times of high load, and high-voltage concerns typically arise during times of light load. However, system restoration requires monitoring and controlling what is likely to be *unusually high* voltage. Also, load restoration requires consideration of the effects of "cold load pickup" before feeders are energized, an issue that does not arise in normal power system operations. The foregoing are illustrations of what is intended by the "unique tasks" phrase.

Because the "unique tasks" concept is generally understood by the applicable entities, the IRC believes that no change to Requirement R11 is required, and that it is sufficient and appropriate to identify in each Transmission Operator's restoration plan the particular unique tasks for which training is required.

### 2. The Current Standard's Requirement for Periodic Testing of Telecommunication Facilities Needed to Implement Restoration Plans Is Adequately Addressed in Other Standards and Therefore Need Not Be Carried Over Specifically as a Restoration Plan Element into EOP-005-2

The Commission notes that Requirement R5 of currently effective EOP-005-1 addresses periodic testing of telecommunication facilities needed to implement restoration plans, and that this requirement is not carried over into EOP-005-2.[6] The Commission also recognizes that

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[5] NOPR at P 20 (footnote omitted).

[6] NOPR at P 21.

COM-001-1.1 Requirement R2 requires testing of telecommunications facilities with special attention given to emergency facilities and equipment, but nonetheless proposes to require that EOP-005-2 be modified to specify that the testing of telecommunication facilities must be identified in the restoration plan and be part of any restoration drill, exercise or simulation.[7]

The IRC does not believe that the proposed modification (or a requirement for testing more frequently than during annual drills, exercises or simulations[8]) is necessary, because COM-001-1.1 (specifically, R2/M1) – cited by the Commission – already requires testing of "emergency facilities and equipment." Telecommunication facilities used in restoration fall within the scope of "emergency facilities and equipment."[9]

Additionally, the IRC recommends against modification on the broader ground that it would create duplicative requirements within the standards, leading to potential confusion due to the presence of differing phraseologies, in various standards, of what is essentially a single requirement. Instead, the Reliability Standards should be streamlined, resulting in enforcement actions that target fewer standards, thereby increasing the transparency of lessons learned and enhancing reliability.

### B. EOP-006-2 System Restoration Coordination

As explained by the Commission, Reliability Standard EOP-006-2 is intended to ensure that plans are established and personnel are prepared to enable effective coordination of the

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7 *Id.*

8 *See* NOPR at P 22.

9 Moreover, Reliability Standard COM-002 R1 implicitly requires testing, as well. COM-002 R1 requires "Each Transmission Operator, Balancing Authority, and Generator Operator shall have communications (voice and data links) with appropriate Reliability Coordinators, Balancing Authorities, and Transmission Operators. Such communications shall be staffed and available for addressing a real-time emergency condition." Communications will not be "available" unless appropriate testing of the equipment has been undertaken on a recurring basis.

system restoration process to ensure reliability is maintained during restoration.[10] The Commission proposes to approve EOP-006-2, as it ensures that the Reliability Coordinator is involved in the development and approval of system restoration plans.[11]

### 1. It is Unnecessary to Require Reliability Coordinators to Maintain a Database of All Restoration Resources

The Commission seeks comment on whether it would be beneficial to include a provision in EOP-006-2 that would require each Reliability Coordinator to maintain a database of each Blackstart Resource within its area, consistent with the existing requirement that each Transmission Operator maintain such a database.

The IRC believes that a requirement for a Reliability Coordinator database would be unnecessary because a Reliability Coordinator has knowledge of the restoration resources available to Transmission Operators due to its role in approving the Transmission Operators' restoration plans. Moreover, a Reliability Coordinator uses its wide-area view in its coordination efforts and thus has awareness of the available restoration resources across the transmission operators' systems. Based on the definition of Blackstart Resource that the Commission proposes to approve in this NOPR, a unit with blackstart capability must be listed in the Transmission Operator's restoration plan to be a Blackstart Resource. Furthermore, the Reliability Coordinator will have the restoration plans of all the Transmission Operators in its footprint so, in essence, it will already have a "database" of the Blackstart Resources. In addition, a requirement to "roll-up" to the Reliability Coordinator the databases of the Transmission Operators may overstate or misrepresent the resources that could be useful in the Reliability Coordinator's coordinating role. For example, the initial startup and synchronization

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[10] NOPR at P 23.

[11] *Id.*

of *local* islands is performed, in some cases, independently at the Transmission Operator level. In addition, the manner in which the system collapses could significantly affect the effectiveness of particular resources in restoring the system. Therefore, not all Blackstart Resources within a Reliability Coordinator's footprint may be critical to the regionwide restoration, and some Blackstart Resources may be of limited usefulness in certain circumstances. Accordingly, the database could be of little practical value to Reliability Coordinators and would be duplicative of the information the Reliability Coordinator already has.

### 2. There Is Sufficient "Give and Take" Built Into Requirements R5 and R5.1 Concerning Reliability Coordinator Approval of Transmission Operator Restoration Plans

The Commission, in considering requirements R5 and R5.1 concerning Reliability Coordinators' review and approval of Transmission Operators' restoration plans, seeks comments on whether, in situations where a Reliability Coordinator disapproves a plan – for example, where the plan contains an element that is incompatible with another restoration plan – the approval process should incorporate a "give and take" with the pertinent Transmission Operator.

The Reliability Coordinator's review and approval is designed primarily for verification that there are no conflicts among the Transmission Operators' restoration plans or between the Transmission Operator's restoration plan and the Reliability Coordinator's restoration plan. The IRC believes that, as a practical matter, a collaborative approach underlies EOP-006-2 Requirements R5 and R5.1. Current practices with regard to coordination among Transmission Operators and the long-standing nature of restoration plans also reduce the likelihood for conflicts among the various restoration plans of the Transmission Operators. Furthermore, the Reliability Coordinator's restoration plan is usually developed from the Transmission Operators' restoration plans, again further decreasing the likelihood for conflict.

Moreover, the process should not compromise the clear authority of the Reliability Coordinator to resolve conflicts through approval or disapproval. EOP-006-2 R5.1 already requires the Reliability Coordinator to provide "stated reasons" for not approving a plan. This requirement and the existing practices facilitating coordination should be adequate to resolve any potential conflicts that may arise as a result of a disapproval issued by the Reliability Coordinator. Accordingly, the IRC believes any additional "give and take" than what is already in the standard is unnecessary and inappropriate.

### 3. Verification of Reliability Coordinators' Restoration Plans

Lastly, with respect to the Commission's proposal to require Reliability Coordinators to verify the blackstart plan, the IRC believes that this would be redundant to the requirement that Transmission Operators verify their restoration plans, and would provide no further benefit. The level of detail contained in a Transmission Operator's restoration plan is much greater than that contained in the Reliability Coordinator's restoration plan. For instance, a Transmission Operator's restoration plan will include details on switching steps to utilize the Cranking Path to start up other generators from a Blackstart Resource. It will also include steps to begin restoring load. It is these details that require verification to ensure that the Cranking Path can sustain voltages that will allow generators to be started, and not cause damage to transmission equipment from overvoltages. By contrast, the Reliability Coordinator restoration plan is a less detailed coordination or overview plan that does not include these detailed switching steps and, thus, there is no need to verify the Reliability Coordinator restoration plan through simulation. Furthermore, Reliability Coordinators already perform/confirm viability of the TOP plans by leading and participating in drills with the Transmission Operators. Again, RC-to-RC coordination is already required within the IRO Standards so we believe this proposal is not needed in the EOP standards.

### C. ERO Database on Transmission Operator and Reliability Coordinator System Restoration Drills, Exercises and Simulations

The Commission proposes to direct the ERO:

> to gather data and establish a database that can be accessed by transmission operators, reliability coordinators and the Commission regarding transmission operator and reliability coordinator system restoration drills, exercises and simulations. In particular, [the Commission] propose[s] that the database should include: (1) the duration of each drill, exercise and/or simulation; (2) the amount of load considered lost at the beginning of the drill, exercise and/or simulation; (3) the amount of load restored at the conclusion of the event; (4) whether the drill, exercise and/or simulation was table top, walk through simulation or computer simulation; (5) which entities participated in the drill, exercise and/or simulation; and (6) whether Blackstart Resources were used. Reliability coordinators, transmission operators and the ERO will be able to use this data to identify the effectiveness of restoration plans and to help identify improvements that may be necessary or that could enhance restoration. The Commission seeks comment on the proposed data collection including the benefits of the information to be provided in the proposed collection, the types of information proposed to be collected, and any potential burden of the proposed collection.[12]

The Commission believes the collection of this data can assist in identifying the effectiveness of restoration plans, establishing best practices, determining the effects on personnel performance[13] and developing and disseminating "lessons learned."[14]

While the IRC, in general, does not oppose the collection of this data or the establishment of this ERO database, the purpose and use of this data collection are not clear. While the Commission specified several reasons for the collection of the data in the NOPR, the IRC does

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[12] NOPR at P 29.

[13] The IRC notes that the newly-adopted PER Standards already require a "systematic approach to training" and encourages the Commission to use these measurable and specific requirement for all job-related tasks, not simply restoration activities as these are key to measuring competencies throughout all operational situations and timeframes.

[14] NOPR at P 28.

not see how collecting this data will support identifying the effectiveness of restoration plans, establishing best practices, determining the effects on personnel performance and developing and disseminating "lessons learned." In fact, a significant amount of the data gathered may be of limited value for system-wide usage or for the development of best practices, given the wide variation in resources and circumstances across Reliability Coordinators' areas:

- For example, "duration" data could be misleading: a shorter drill could be appropriate for a smaller and less complex Reliability Coordinator area, or for a less extensive simulation in which not all load is picked up or in not all interties are energized.

- Data on the amount of load "lost" and "restored" in one area's simulations could be unilluminating for another area: even if the amount of load lost or restored was significant, it may not be located in a significant area, electrically speaking.

- Data on the type of exercise may not suggest a preferred approach, because the perceived effectiveness of a particular type of exercise will necessarily involve subjective elements.

- The proposal to collect data on "whether Blackstart Resources were used" is perplexing: unless an area's drill is evaluating how to Interconnect blacked out areas to the Interconnection, the "use" of Blackstart Resources is imperative. While there are real-time situations in which Blackstart Resources are not needed or utilized due to the availability of an energized neighbor, simulations usually assume that neighboring resources are *not* available. This is for good reason: If each area's restoration exercise assumed the availability of assistance from external sources, no area's plan would be trustworthy.

While the IRC does not see the value of this data gathering, it notes that using Section 1600 of NERC's Rules of Procedure could be more appropriate for this purpose. Section 1600 could be used without creating an ongoing data-gathering requirement that could only be terminated by modifying the standard. Because the IRC expects the data to be of limited value, it believes that NERC and the Commission will quickly see that continued submittal of the data is not necessary; reliance on Section 1600 could allow easier termination of the data-gathering requirement.

If the Commission has a stronger basis for requiring collection of this data than that specified in the NOPR, it would be helpful for the final order to explain it. It would also be helpful for the Commission to recognize in its final order that broad conclusions should not be drawn from the database without considerable analysis.

## IV. CONCLUSION

WHEREFORE, for the reasons stated above, the IRC supports the adoption of the standards *as filed*. If the Commission, after receipt of comments in this proceeding, is inclined to modify the standards, the IRC respectfully suggests that this be accomplished through directing use of the Reliability Standards Development Process to consider the modifications, rather than through Commission order.

Respectfully submitted,

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