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April 8, 2011

VIA ELECTRONIC FILING

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

Re: Smart Grid Interoperability Standards, Docket No. RM11-02-000; Joint Comments of Alberta Electric System Operator, California Independent System Operator Corporation, Electric Reliability Council of Texas, the Independent Electricity System Operator of Ontario, Inc., ISO New England, Inc., Midwest Independent Transmission System Operator, Inc., New York Independent System Operator, Inc., and Southwest Power Pool, Inc.

Dear Secretary Bose:

Transmitted electronically for filing in the referenced docket are the Joint Comments of Alberta Electric System Operator, California Independent System Operator Corporation, Electric Reliability Council of Texas, the Independent Electricity System Operator of Ontario, Inc., ISO New England, Inc., Midwest Independent Transmission System Operator, Inc., New York Independent System Operator, Inc., and Southwest Power Pool, Inc.

If there are any questions concerning this filing, please call me at (202) 661-2212.

Very truly yours,

/s/ Daniel R. Simon

Daniel R. Simon
Counsel for
ISO New England Inc.

Enclosure

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

Smart Grid Interoperability Standards	**)**	**Docket No. RM11-2-000**

JOINT COMMENTS OF ALBERTA ELECTRIC SYSTEM OPERATOR, CALIFORNIA INDEPENDENT SYSTEM OPERATOR CORPORATION, THE ELECTRIC RELIABILITY COUNCIL OF TEXAS, THE INDEPENDENT ELECTRICITY SYSTEM OPERATOR OF ONTARIO, INC., ISO NEW ENGLAND, INC., MIDWEST INDEPENDENT TRANSMISSION SYSTEM OPERATOR INC., NEW YORK INDEPENDENT SYSTEM OPERATOR, INC., SOUTHWEST POWER POOL, INC., ON STAFF QUESTIONS REGARDING SMART GRID INTEROPERABILITY STANDARDS

I. Introduction

Pursuant to the Supplemental Notice Requesting Comments ("Supplemental Notice"), dated February 16, 2011, the Alberta Electric System Operator, California Independent System Operator Corporation, Electric Reliability Council of Texas, the Independent Electricity System Operator of Ontario, Inc., ISO New England, Inc., Midwest Independent Transmission System Operator, Inc., New York Independent System Operator, Inc., and Southwest Power Pool, Inc. ("Joint Parties") respectfully submit the following comments on questions set forth by the Commission Staff.[1] The Supplemental Notice follows a Technical Conference held by the Commission on January 31, 2011 on five families of interoperability standards identified by the National Institute of Standards and Technology ("NIST") in October 2010 as ready for

[1] The Alberta Electric System Operator and the Independent Electricity System Operator of Ontario, Inc., 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 Electric Reliability Council of Texas is not subject to the Commission's jurisdiction with respect to the issues presented in this NOPR, but is joining in support of the Joint Parties' comments.

Commission consideration pursuant to Section 1305(d) of the Energy Independence and Security Act of 2007 ("EISA"). The purpose of the January 31 Technical Conference was to explore whether there is "sufficient consensus," as that term is used in Section 1305(d), regarding the interoperability standards identified by NIST to permit the Commission to initiate a rulemaking proceeding to adopt those standards. The questions identified by Commission Staff in the Supplemental Notice seek further detail on the core issues addressed at the Technical Conference: enforceability of the proposed standards, the meaning of "sufficient consensus," and the process that should be used in evaluating proposed standards.

As was evident from the January 31 Technical Conference, there is not sufficient consensus that the five families of interoperability standards are ripe for Commission consideration in a rulemaking proceeding. The Joint Parties suggest that several additional steps must be taken before the Commission can proceed to considering whether there is sufficient consensus regarding the five families of standards. These steps should also guide NIST development and Commission consideration of further families of standards. The first step is for the Commission to define what it means to "adopt" a standard. A standard means nothing without defining how it is used. Rather than creating a mandatory compliance obligation, the Joint Parties suggest that the Commission's notion of adoption involve recognition that a particular standard provides interoperability[2] in certain defined scenarios. The second step is to return the standards to NIST for further consideration and development in light of this notion of adoption so that the NIST process is then better focused to provide the Commission with

[2] An important component of this definition of "adoption" is that the Commission establish a clear definition of "interoperability." There are several similar definitions in current use by different organizations: NIST has a Framework and Roadmap definition in NIST Special Publication 1108; EPRI has a similar definition in its "Customer Communication Architecture Development document; the GridWise Architecture Council has also defined "interoperatbility" within the "Introduction to Interoperability and Decision-Maker's Interoperability Checklist version 1.5. The Commission should adopt a single reference definition of "interoperability" to help provide clarity, which will allow for clearer use of terms like "adoption" as it is described in these comments.

information needed to support the ultimate adoption of standards. Part of this additional work should involve ensuring that the standard provides adequate levels of cyber security and that it has been proven in real-world scenarios. Third, once NIST is prepared to resubmit the five families of standards (or submit new families for the first time), the Joint Parties urge the Commission to perform its own review of whether there is sufficient consensus. The Commission's review should not be limited only to considering whether there was consensus with the NIST proceeding. Instead, based on broad input from all affected parties, the Commission should determine whether there is sufficient consensus regarding the adoption of the standards developed through the NIST process.

II. Defining "Adoption"

The Joint Parties urges the Commission to focus first on providing clarity regarding what it will mean for the Commission to "adopt" a standard. A standard cannot be defined without reference to how that standard will be used. Further, whether or not a standard is appropriate depends on whether, and how, compliance with that standard will be met. Without stating clearly how the standards will be used, it is difficult for parties to know whether a standard is appropriate. Without providing parties a basis for forming an evaluation, meaningful consensus will prove elusive.

In the context of smart grid interoperability standards, the Joint Parties do not believe that making standards enforceable in the traditional sense that the Commission enforces the regulations it promulgates would advance the intent of Congress to facilitate the development and use of interoperability standards. The successful promotion of any standards development effort will be driven by the iteration between standards creation and implementation of standards. Implementations can come in the form of pilot projects or actual production implementations.

This iteration will allow the promotion of technology and business services through successful implementations. Standards are necessary to provide broad adoption of Smart Grid Technology and must serve as a reference for repeatable implementations and, at the same time, not be so prescriptive that implementation of pilot projects and first generation implementations are stifled.

The concerns that are at the core of the requirements in Section 1305(d) of EISA involve obstacles that cyber security issues and the use of proprietary technology can pose to the advancement and broad use of Smart Grid technology. Congress's intent was to implement standards that will facilitate the implementation of the Smart Grid and reduce long-term implementation costs through the standardization of data interfaces between devices and participants in the Smart Grid.

The strict enforcement of mandatory standards may limit flexibility, innovation, increase the cost of implementation and reduce the speed of change. In particular, many standards have overlapping uses and applications. In some cases, multiple standards could be used for a particular application. The selection of the appropriate standard or set of standards for a specific application is based on multiple factors, and may vary by organization based on numerous factors including:

- functionality of the standard;
- compatibility with other existing technologies;
- standards currently in use;
- security;
- education and training of staff;
- compatibility with long-term technical strategy; and
- cost of implementation and support.

Any organization implementing Smart Grid technologies considers these factors in the development of the technical architecture and design process for a particular application. As these considerations indicate, the selection of the appropriate standard or standards is a highly

complex process that involves consideration of multiple factors. In order to make a correct decision in a given circumstance, an organization must have sufficient flexibility to weigh these factors in a manner that facilitates the organization's core goals. It is not clear how the Commission would be able to predetermine and select standards for use in such a complex decision-making process without impacting an organization's flexibility, innovation, speed of implementation and costs. Accordingly, the Joint Parties urge the Commission to follow the conclusions set forth in the Smart Grid Policy Statement,[3] and to reject any suggestion that the Commission should make any particular group of interoperability standards adopted under the EISA process strictly mandatory and enforceable.

Instead of adopting standards in the sense of creating a mandatory compliance obligation, the Joint Parties suggest that the Commission's notion of adoption involve Commission recognition that a standard provides interoperability in certain defined scenarios. The Commission's ultimate adoption of the standards will serve as recognition of best practices and carries with it a presumption of reasonableness for the purposes of implementation of technology that ensures interoperability and cyber security. A party's failure to adopt the technology should not per se be grounds for enforcement action by the Commission, but should be considered in any Commission proceeding, formal or otherwise, addressing interoperability and cyber security issues in any area of the country under the Commission's jurisdiction.

III. Providing NIST Further Guidance on Additional Standards Development

Once the Commission clarifies what it means to adopt a standard, the Joint Parties urge the Commission to provide NIST with guidance as to what additional work should be completed before the Commission will consider the standards again. Part of this additional work should

[3] *See Smart Grid Policy*, 128 FERC ¶ 61,060 at P 23 (2009) ("Smart Grid Policy").

involve ensuring that the standard provides adequate levels of cyber security and that it has been proven in real-world scenarios.

As outlined during the January 31 Technical Conference, the five families of standards have not been adequately tested and certified, particularly with respect to cyber security issues. As the Commission itself recognized in the Smart Grid Policy Statement, although Smart Grid technologies offer the possibility of substantial operational efficiencies, they also potentially provide additional avenues for cyber attacks.[4] Thus, it is critical that all standards facilitate cyber security, and that cyber security remain a core element in each standard evaluated by the Commission. Accordingly, the Commission should direct NIST to ensure that its process explicitly consider cyber security.

IV. Performing Independent Review of the Sufficiency of Consensus Surrounding Standards

NIST utilizes multiple Standards Development Organizations ("SDO") that are expensive to engage, given the resource and travel requirements. Indeed, as outlined at the Technical Conference, the standards under consideration were developed by the International Electrotechnical Commission ("IEC"), an SDO based in Switzerland. As also outlined at the Technical Conference, the cost of obtaining copies of the relevant standards from the IEC is very high -- more than $10,000 for access to a single copy for a single individual. It is not realistic, under these circumstances, to expect the majority of entities subject to the interoperability standards at issue in this proceeding to be able to participate robustly in the standards development process.

For these reasons, the Commission should not rely solely on the NIST process to determine consensus. In other words, the Commission should not simply evaluate the NIST

[4] *See* Smart Grid Policy at P 30.

process to see if that process had sufficient consensus. Instead, the Commission should independently determine whether there is sufficient consensus that the output of the NIST process created appropriate standards. This independent determination should be made by using an open process that seeks broad input from multiple parties. Once the Commission has finished seeking this feedback, it should use its own judgment to determine whether it believes there is sufficient consensus. This determination should not be reduced to a vote-counting exercise.

Part of this broad review should include, among other things, review and comment on a proposed standard by a special committee comprised of both NERC and representatives of electric utilities. Such a review will help the Commission ensure that the proposed standard satisfies safety and reliability concerns, and -- perhaps most importantly -- that the entities charged with implementing technologies subject to the standard will be able to do so. Any ruling on a required interoperability standard should include a transition period and the identification of ongoing processes that support versioning and certification.

The Joint Parties further recommend that such a committee include representatives of Regional Transmission Organizations ("RTOs") and Independent System Operators ("ISOs"). RTOs/ISOs are not only central to the independent and reliable operation of much of the Bulk Electric System in North America, but -- for that reason -- also have a significant role to play in the adoption and implementation of new Smart Grid technologies. Furthermore, because of their focus on the independent operation of the integrated grid, RTOs and ISOs have a perspective on these issues that will ensure that favored technology standards adequately and equitably address interoperability amongst competing implementing parties. Accordingly, RTOs and ISOs should be represented on any utility panel charged with reviewing and providing comments on proposed

interoperability standards for purposes of allowing the Commission to determine whether sufficient consensus exists.

IV. Conclusion

The Joint Parties respectfully request that the Commission consider these comments in its determination of how to proceed on the five families of standards proposed by NIST.

Respectfully submitted,

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April 8, 2011