

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

Smart Grid Policy

: Docket No. PL09-4-000

**COMMENTS ON BEHALF OF
THE PUBLIC UTILITIES COMMISSION OF OHIO**

May 11, 2009

EXECUTIVE SUMMARY

The Public Utilities Commission of Ohio (Ohio Commission) welcomes FERC's efforts to arrive at national standards to ensure cybersecurity, grid interoperability, and reliability. The Ohio Commission maintains that federal jurisdictional utilities should include regional transmission organizations (RTOs), and owners and operators of interstate transmission systems. In addition, we believe that states are best suited and positioned to implement and maintain the provision of local distribution company (LDC) demand response (DR) proposals and programs. Individual states should be responsible for ensuring compliance with FERC-imposed DR guidelines and standards regarding cybersecurity, reliability, and grid interoperability.

FERC should work with the National Association of Regulatory Utility Commissioners (NARUC) and the states to determine those approaches that best work for intrastate deployment of DR. Specifically, FERC should initiate an ongoing dialog with NARUC, the states, interested local distribution companies, the North American Electric Reliability Corporation (NERC), and the North American Energy Standards Board (NAESB) to determine principles and/or guidelines necessary to ensure ongoing state compliance with FERC's national standards.

FERC should allow for the federal cost recovery of any DR stranded investment previously sanctioned by a state commission that is in non-compliance of any new federal rule intended to promote enhanced reliability, interoperability or cybersecurity. Finally, FERC should require the National Institute of Standards and Technology (NIST) to provide its proposed final work product to FERC within 12 to 18 months from the issuance of the Smart Grid Policy Statement.

BACKGROUND

On March 19, 2009, the Federal Energy Regulatory Commission (FERC) issued its Smart Grid Policy Statement in the above-captioned proceeding. It was noticed in the Federal Register on April 10, 2009. FERC observes that Section 1305(a) of the Energy Independence and Security Act (EISA) directs the National Institute of Standards and Technology (NIST) to coordinate the development of a framework that includes protocols and model standards for information management to achieve interoperability of Smart Grid devices and systems. Once FERC is satisfied that the NIST's work has led to sufficient consensus on interoperability standards the EISA directs FERC to institute a rulemaking to adopt standards and protocols as may be necessary to insure smart-grid functionality and interoperability for the interstate transmission of bulk electric power, and organized regional and wholesale electric markets.

The Public Utilities Commission of Ohio (Ohio Commission) hereby submits its responses to FERC's proposed Smart Grid Policy Statement. Comments responding to FERC's proposal are due on May 11, 2009.

DISCUSSION

State – Federal Partnership in the Development and Implementation of Smart Grid Model Standards

The State of Ohio encourages Smart Grid implementation to modernize the grid and as a supporting infrastructure for demand response, environmentally sustainable technologies, and distributed generation. We look forward to working with FERC to advance Smart Grid development. The Ohio Commission recognizes the need for national cyber security and reliability standards, under 16 U.S. Code §824o, and appreciates FERC's desire to accelerate their development to support Smart Grid

deployments. The Ohio Commission believes the development and adoption of *model* standards and protocols for Smart Grid implementation can best be achieved through a partnership between the States and the Federal Government.

We note, first, that successful standards development is inherently a collaborative process. Standards typically are developed through the work of national and international agencies and committees, such as NIST. In the case of Smart Grid standards, the EISA gives NIST “primary responsibility to coordinate the development of a framework that includes protocols and model standards”. FERC was given authority to adopt necessary standards and protocols for interstate transmission and for regional and wholesale electricity markets only upon finding that “sufficient consensus” had been achieved in the NIST process.

Second, the interoperability standards needed for Smart Grid and NIST’s responsibility to coordinate standards development encompass areas that are outside FERC’s jurisdiction. EISA Section 1305 does not give FERC authority to adopt standards and protocols to ensure smart-grid functionality and interoperability in areas that are not subject to substantive Federal jurisdiction. The adequacy of electric facilities and services, generator operating procedures, electric distribution, LDC information and communications systems, distribution utility demand response programs, retail rate designs and related demand response, meters and customer premises equipment, net metering, integration of distributed energy resources, retail rate offerings for electric vehicle charging, LDC cost recovery, and retail transactions between consumers and a distribution utility or curtailment service provider all are subject to State jurisdiction. The development of model interoperability standards for State consideration and adoption of those standards in those States, as needed, will be essential to accelerating Smart Grid development.

Third, on substantive issues, such as how to promote Demand Response, individual States may have different regulatory mandates and policies. For example, the

Ohio Commission has been working with our utilities in conjunction with PJM and the Midwest ISO to facilitate the development of Price Responsive Demand. It is important that data models be extended and software be sufficiently flexible to accommodate the different approaches being pursued in the different states on issues such as demand response. The Ohio Commission would be concerned if FERC were to attempt to force substantive policy choices into data models or a national policy framework that could stifle innovation.

Finally, by virtue of their relationships with regulated utilities in their states, State regulators are in the best position to help ensure utility compliance with interoperability, cyber security and reliability standards and protocols, including standards that FERC may adopt, such as standards for the communication of data between utilities and Regional Transmission Organizations (RTOs). The Ohio Commission looks forward to working with FERC and our RTOs to ensure such compliance.

The Ohio Commission believes that the most appropriate approach to facilitate the adoption of uniform standards and overcome any impasse that might arise is to:

- Support the development of **model** standards and protocols through the NIST process, including efforts to harmonize with existing standards;
- Review NIST recommendations and develop approaches to resolve any impasses through the FERC – NARUC Smart Grid Collaborative; and
- To the extent sufficient consensus emerges, FERC and the State commissions should adopt uniform model standards for interoperability to be applied within areas subject to their respective jurisdictions.

Decisions about when to adopt a standard will require balancing the extent of support for the standard, its importance in achieving Smart Grid objectives, potential stranded costs, whether it would create an efficient and open system architecture, and potential impacts on competition and innovation. There will be areas in which no FERC action will be required to ensure that uniform protocols and standards are used in the industry. The

adoption of standards by a number of leading utilities or states, in many cases, may result in their uniform use throughout the vendor community.

Our remaining comments address or seek clarification regarding specific points in the proposed policy statement.

Definitions

FERC’s policy statement indicates that it is interested in the development of interoperability, cyber security and reliability standards for, and the deployment of, Smart Grid functions and characteristics that can help address challenges to the Commission-jurisdictional bulk power system. FERC’s proposal fails to identify a specific definition of the term “jurisdictional bulk power system.”

The Ohio Commission requests that FERC confirm that, consistent with the Federal Power Act, its jurisdiction over the bulk power system is limited to interstate regional transmission organizations (RTOs), wholesale sales of electric power, and certain reliability standards as specified in federal statute. Section 1305 of the EISA extends no jurisdiction to the Commission beyond that which has already been conferred. Indeed, Section 1305(d) makes clear that the Commissions rulemaking authority is limited to ensuring smart-grid functionality and interoperability “in interstate transmission of electric power” areas where the Commission already has jurisdiction. States retain the same regulatory authority that they did before enactment of the EISA.

Additionally, when addressing cost recovery and stranded investment, FERC refers to “jurisdictional entities,” which also is never defined. The Ohio Commission maintains that federal jurisdictional utilities, for the purpose of this investigation, should be limited to regional transmission organizations (RTOs) and owners and operators of interstate transmission systems.

Demand Response

FERC's proposed policy statement reflects that, in order to achieve an appropriate level of standardization, a series of demand response (DR) "use cases" should be developed using readily available software and systems engineering tools. FERC encourages a particular focus on "use cases" for the key DR activities including: dispatchable DR load reductions to address loss or unavailability of variable resources and the potential for dispatchable DR to increase power consumption during over-generation situations. FERC notes that such DR capabilities will require additional standardization of the interfaces between systems on the retail customer premises and utility systems, including addressing data confidentiality issues

The Ohio Commission maintains that activities to provide a reliable and secure bulk power system are an ongoing process that requires continuous development and monitoring. The Ohio Commission submits that the states are best suited and positioned to implement Price Responsive Demand through dynamic retail pricing and maintain the provision of LDC DR programs. Use cases and data definitions need to be accommodating to DR activities in the different states. The Ohio Commission believes that individual States should be responsible for ensuring compliance with FERC imposed DR guidelines and standards regarding cybersecurity, reliability, and grid interoperability that apply to LDC pricing and DR activities. In addition, FERC should recognize valid efforts to date made by states concerning DR deployment and not attempt to assert regulatory jurisdiction over DR programs and policies. States have exclusive jurisdiction over retail pricing and its DR impacts. As a result of our experience with DR implementation, the individual states are best positioned to deploy, manage, and fund LDC DR programs.

The Ohio Commission calls to FERC's attention that it has made significant progress concerning the deployment of intrastate DR programs in cooperation with the Ohio's LDCs. This ongoing experience dictates that states are best suited and better

positioned to address intrastate LDC deployment of such programs. In support of our position, the Ohio Commission calls to FERC's attention that we are currently in the process of implementing DR programs with all of Ohio's LDCs. While work is ongoing, below is a summary of Ohio's accomplishments to date.

On December 17, 2008, the Ohio Commission approved a proposal by Duke Energy Ohio LDC to deploy advanced meters to all its customers as part of a "SmartGrid" initiative. The deployment commenced in 2008, with more than 50,000 customers receiving an advanced solid-state meter. The rollout is to continue at an accelerated pace over the next five years. The full deployment plan for Duke Energy Ohio's 700,000 plus retail customers calls for an investment of more than \$550 million over the next five years. In addition, dynamic retail rate designs will be offered to those customers who elect this option by the end of 2009.

On March 18, 2009, the Ohio Commission approved AEP-Ohio's LDC plan to rollout 110,000 advanced smart meters in the northeast quadrant of Columbus. The company's long-term goal is to realize full deployment of advanced meters to all of its retail customers over a seven-year period. AEP has been researching and evaluating the capabilities of various communications and metering technologies from several vendors in its Dolan Labs for over two years. AEP has publicly committed to its expanded vision known as "*gridSmart*," which includes, but also goes beyond, advanced metering to embrace automated distribution technologies that would share the communications overlay supporting advanced metering.

On January 21, 2008, the Ohio Commission directed its staff and FirstEnergy in its distribution rate case decision to conduct a study of AMI/Modern Grid technology and deployment options. The study should include an assessment of potential advanced smart metering technology investments, open system architecture planning, large-scale AMI deployment, other cost effective modern/Smart Grid applications and a cost/benefit analysis of such options.

The Ohio Commission notes that LDC DR programs throughout the country have unique designs utilizing different architectures, meter technologies, and communications mediums. Since the development of DR initiatives are in their relative nascent stages, particularly involving residential customers, the optimal combination of inputs for DR deployment may not yet be fully realized. In addition, the optimal DR program for one location may not be well suited at another location. For example, a DR program and deployment strategy that works well in rural Ohio may not be well suited for New York City. The development of a standard semantic framework could enable data definitions to be harmonized and extended to match different substantive and procedural approaches but need to be sufficiently generic so as to allow companies the freedom to implement their own retail customer DR driven models and at the same time provide the communication and information necessary to maintain system reliability and security. It will be essential that NIST works with states and LDCs in the development of interoperability standards that can accommodate differences in state and utility pricing, forecasting, and DR programs. Moreover, any Federal standard should not unduly favor one system or vendor over another and, to the extent possible, FERC-crafted standards for DR should be configuration and technology neutral.

As a result of these complicating factors, FERC should work with NARUC and the states to identify model interoperability standards that can best work for both RTO DR programs and in LDC deployment of DR, taking into consideration this is a dynamic complicated system of effective architectures, technologies, and system methodologies. The Ohio Commission believes this requires that FERC initiate an ongoing dialog among the National Association of Regulatory Utility Commissioners (NARUC), the states, interested LDCs, the North American Electric Reliability Corporation (NERC), and the North American Energy Standards Board (NAESB) to determine principles and/or guidelines necessary to enable compliance with cyber security reliability, and grid interoperability standards. FERC should rely on the individual states to develop and

institute programs that result in best overall results for that particular state's retail consumers.

Interim Rate Policy for Smart Grid-related Filings by Jurisdictional Entities

FERC's policy statement indicates that a key consideration for utilities when determining whether to adopt such systems will be whether they are able to recover the costs of these deployments in regulated rates. Another key consideration may involve the potential for stranded costs associated with legacy systems that are replaced by Smart Grid equipment.

The Ohio Commission maintains the cost recovery associated with the initial deployment of DR by LDCs should occur at the intrastate level. Only stranded costs should be socialized on a national basis. Therein, FERC should consider inviting comments as to whether costs for upgrading (or replacing) existing DR programs and equipment to meet model DR standards should be socialized on a national basis. States could then assist FERC by verifying those intrastate costs that should be classified as stranded.

FERC should be cautious not to adopt guidelines that penalize those companies and states that are ahead of the curve on DR implementation. Consequently, FERC should allow for the cost recovery of any stranded investment that results in the abandonment, or partial abandonment, of a DR program due to non-compliance with new rules intended to promote enhanced reliability , interoperability and/or cybersecurity . FERC must be diligent to ensure that such efforts by states and their respective companies should not be penalized for forging ahead with programs that they believed are in the best interest of their consumers and society as a whole.

Timelines

FERC notes that the EISA contains no specific deadline for the creation of interoperability standards. The Ohio Commission observes that the EISA includes potentially an unrestricted number of participants involved with developing proposed Smart Grid standards for consideration. In an attempt to avoid this process from being unintentionally delayed or bogged down as a result of the large number of potential participants, FERC should request that NIST provide its final work product and recommendations within 12 to 18 months from the issuance of the Smart Grid Policy Statement and should make earlier release of cyber security and interoperability standards a priority.

Cybersecurity, Reliability, and Interoperability

The Ohio Commission supports FERC's proposal for the NIST to undertake the necessary steps to ensure that standards and protocols developed are consistent with the overarching cybersecurity and reliability mandates of the EISA as well as existing reliability standards approved by the Commission pursuant to section 215 of the Federal Power Act (FPA). The Ohio Commission also supports FERC's proposal that FERC should be responsible for the ongoing development of interoperability, reliability and cybersecurity standards. The Ohio Commission maintains that, to the extent possible, FERC should establish standards, guidelines and/or benchmarks for the states to utilize to ensure that the provision of LDC DR services are meeting FERC's requirements concerning reliability, grid interoperability, and cybersecurity. The Ohio Commission believes that such guidelines should be crafted in an attempt to ensure that, to the extent possible, one DR specific configuration and/or technology in use is not favored over another. The Ohio Commission maintains that this approach will work best over attempting to arrive at specific individual standards for each and every potential intrastate DR configuration. States should work with their LDCs and FERC to ensure that its standards are realized.

System Security

FERC proposes initial overarching principles regarding security that Smart Grid applications must address in order to comply with the need for full cybersecurity and with the Commission's bulk-power system concerns, consistent with its authority under section 215 of the FPA.

The Ohio Commission submits that the FERC's Policy Statement is unclear as to what FERC's "Smart Grid applications" is intended to include. If FERC's interpretation of Section 1305(a) is limited to include only the provision of Smart Grid equipment installed on the interstate grid, the Ohio Commission agrees that the standards developed under the EISA and should be subject to FERC's jurisdiction. On a related matter, the Ohio Commission maintains that, upon developing these standards, FERC should endeavor to ensure that the common framework and models should be general enough to allow companies the freedom to follow their own corporate models and at the same time provide the communication and information necessary to maintain system reliability and security.

The Ohio Commission maintains that standards developed under this process be applied and verified workable to the bulk power system before developing standards impacting distribution systems. The process must consider the possibility that a common model also lends itself to common failure. The common model should not be so formulaic as to provide the opportunity to defeat the cybersecurity standards.

The Ohio Commission agrees that, to the extent that they could affect the reliability of the bulk-power system, Smart Grid technologies for the bulk power system must address: (1) the integrity of data communicated (2) the authentication of communications (3) the prevention of unauthorized modifications to Smart Grid devices and the logging of all modifications made; (4) the physical protection of Smart Grid

devices; and (5) the potential impact of unauthorized use of these Smart Grid devices on the bulk-power system.

CONCLUSION

The Ohio Commission thanks FERC for the opportunity to file its responses to FERC's Smart Grid inquiries.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that the foregoing have been served in accordance with 18 C.F.R. Section 385.2010 upon each person designated on the official service list compiled by the Secretary in this proceeding.

/s/Werner L. Margard
Werner L. Margard

Dated at Columbus, Ohio this May 11, 2009.

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

5/12/2009 11:33:51 AM

in

Case No(s). 93-7000-EL-FAD

Summary: Comments on behalf of the Public Utilities Commission of Ohio, filed in FERC Docket No. PL09-4-000, In re Smart Grid Policy electronically filed by Kimberly L Keeton on behalf of Public Utilities Commission of Ohio