

DRAFT – Smart Grid Policy Drivers for the U.S. Federal Energy Regulatory Commission

Action Item from the February 9th SGF Meeting:

This document stems from an action item issued at the February 9th meeting of the Smart Grid Forum. Specifically, this paper is intended to provide information regarding the policy drivers of the U.S Federal Energy Regulatory Commission (FERC) insofar as smart grids are concerned.

Sources of Information:

The information in this presented in this paper has been gathered from documents and content posted on the FERC website: <http://www.ferc.gov/>

FERC's Role – In Their Own Words...

“The Federal Energy Regulatory Commission, or FERC, is an independent agency that regulates the interstate transmission of electricity, natural gas, and oil. FERC also reviews proposals to build liquefied natural gas (LNG) terminals and interstate natural gas pipelines as well as licensing hydropower projects. The Energy Policy Act of 2005 gave FERC additional responsibilities as outlined in FERC's Top Priorities and updated Strategic Plan.”¹

FERC High-Level Mission Statement:

In its most recent strategic plan, for 2009 to 2014, FERC outlined the following mission statement: “RELIABLE, EFFICIENT AND SUSTAINABLE ENERGY FOR CONSUMERS”

According to this plan, this translates into two primary goals for the Commission as follows:

1. “Ensure that rates, terms and conditions are just, reasonable and not unduly discriminatory or preferential.”; and
2. “Promote the development of safe, reliable and efficient energy infrastructure that serves the public interest.”²

¹ Source: FERC website (<http://www.ferc.gov/>)

² U.S. Federal Energy Regulatory Commission, “The Strategic Plan FY 2009-2014”

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FERC's mandate with respect to Smart Grids:

Legislative mandate:

As with the U.S. National Institute of Standards and Technology (NIST), FERC cites the same provisions of the *Energy Independence and Security Act of 2007* (EISA) including title XIII, which gives a comprehensive definition of a "smart grid". This definition is provided in Appendix 'A' and provides many of the same smart grid policy drives cited in chapter 2 of the, "*NIST Framework and Roadmap for Smart Grid and Interoperability Standards, Release 1.0.*"

Direction from the U.S. Congress:

*"Congress has also directed the Commission to adopt standards and protocols to govern the implementation of smart grid technologies that can enhance reliability and efficiency in the operation of the Nation's electric transmission grid."*³

Relationship to the NIST effort:

*"The Commission will support the deployment of smart grid applications by reviewing and adopting, as appropriate, standards and protocols developed through the process coordinated by the National Institute of Standards and Technology (NIST)."*⁴

Rates Policy:

"In addition, the Commission will implement rate treatment policies that support investments in smart grid technologies in the interim period between development and approval of smart grid standards.

*Through the use of incentive rates, the adoption of smart grid standards, and other transmission-related activities, the Commission aims to increase the number of transmission projects that incorporate advanced technologies. By 2014, 50 percent of all new transmission projects will incorporate advanced technologies."*⁵

Putting the Strategic Plan into action - FERC Policy Statement on Smart Grids:

On March 19, 2009, FERC issued a proposed smart grids policy statement (Docket No. PL09-4-000). This policy statement is available on the FERC website at the following location:

<http://www.ferc.gov/whats-new/comm-meet/2009/031909/E-22.pdf>

³ U.S. Federal Energy Regulatory Commission, "*The Strategic Plan FY 2009-2014*" page 23

⁴ *Ibid.* page 23

⁵ *Ibid.* page 23

Ontario Smart Grid Forum

The policy statement generally formalizes the elements of the FERC Strategic Plan. Specifically, *“The purpose of the policy statement the Commission ultimately adopts will be to prioritize the development of key interoperability standards, provide guidance to the electric industry regarding the need for full cybersecurity for Smart Grid projects, and provide an interim rate policy under which jurisdictional public utilities may seek to recover the costs of Smart Grid deployments before relevant standards are adopted through a Commission rulemaking.”*⁶

The FERC policy also statement cites the same provisions of the *Energy Independence and Security Act, 2007* as the NIST framework.⁷ In December 2009, the policy statement was used as a guide to rule on a rate application from Pacific Gas and Electric Company (PG&E) which included, among other things, a smart grid system enhancement project which met the necessary criteria.⁸

Current FERC Smart Grids Work Activities:

As noted in the citations from their strategic plan, FERC has largely delegated the interoperability task to NIST – although it remains to be seen how FERC will go about the “reviewing” and “adopting” tasks they have identified for themselves in their strategic plan (see above).

According to the FERC strategic plan, the Commissions smart grid work largely seems to fall under the *Office of Energy Policy and Innovation (OEPI)*.⁹ Beyond the interoperability work delegated to NIST, most of FERC’s activities with respect to smart grid have involved the application of their March, 2009 Smart Grid policy statement noted above.

Policy Drivers Overall:

As far as smart grids are concerned, both FERC and NIST are governed by the same legislative mandate stemming from the smart grids definition set out in *Energy Independence and Security Act, 2007 (EISA)*. Both the content on the FERC website and the foundational policy citations within NIST’s interoperability framework seem to support this. Given FERC’s mandate over rate setting, they have necessarily had to develop their own policy statements with respect to smart grids, but again, these seem to be deliberately placed in the context of achieving the objectives of the EISA.

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⁶ 126 FERC ¶ 61,253 UNITED STATES OF AMERICA FEDERAL ENERGY REGULATORY COMMISSION 18 CFR Part Chapter I [Docket No. PL09-4-000] SMART GRID POLICY, page 3

⁷ *Ibid.* pages 5 and 6

⁸ FERC media release, “*FERC approves first Smart Grid proposal using new policy.*” December 17, 2009.

⁹ U.S. Federal Energy Regulatory Commission, “*The Strategic Plan FY 2009-2014*” page 41

APPENDIX 'A' – U.S. Legislative Smart Grid Definition

Smart Grid definition set out in the *Energy Independence and Security Act, 2007 (EISA)*, Title XIII, section 1301

“It is the policy of the United States to support the modernization of the Nation’s electricity transmission and distribution system to maintain a reliable and secure electricity infrastructure that can meet future demand growth and to achieve each of the following, which together characterize a Smart Grid:

- (1) Increased use of digital information and controls technology to improve reliability, security, and efficiency of the electric grid.
- (2) Dynamic optimization of grid operations and resources, with full cyber-security.
- (3) Deployment and integration of distributed resources and generation, including renewable resources.
- (4) Development and incorporation of demand response, demand-side resources, and energy-efficiency resources.
- (5) Deployment of “smart” technologies (real-time, automated, interactive technologies that optimize the physical operation of appliances and consumer devices) for metering, communications concerning grid operations and status, and distribution automation.
- (6) Integration of “smart” appliances and consumer devices.
- (7) Deployment and integration of advanced electricity storage and peak-shaving technologies, including plug-in electric and hybrid electric vehicles, and thermal-storage air conditioning.
- (8) Provision to consumers of timely information and control options.
- (9) Development of standards for communication and interoperability of appliances and equipment connected to the electric grid, including the infrastructure serving the grid.
- (10) Identification and lowering of unreasonable or unnecessary barriers to adoption of smart grid technologies, practices, and services.”