



Actions to Consider Taking to Promote Energy Efficiency, Reliability and Security

SMART GRID

Smart Grid refers to improvements to the reliability, security and efficiency of the electricity delivery system – the grid or network of transmission and distribution facilities that runs between power plants and ultimate consumers of electricity, such as homes and businesses. The concept of Smart Grid is to add digital electronic monitoring, analysis, control and two-way communication capabilities to the grid to maximize the reliable movement of power over the grid while also enabling consumer to better manage and reduce their overall use of electricity. Smart Grid technologies also will enable utilities and consumers to take advantage of other technologies that can create further energy reliability, security and efficiency benefits, including, Smart Metering, distributed generation, plug-in hybrid electric vehicles, and intermittent renewable energy resources. Smart Grid technologies are available that could be deployed in a cost effective manner. Moreover, various federal laws establish a national policy to support deployment of Smart Grid technologies.¹ However, the deployment of Smart Grid technologies has been greatly limited because of cost recovery considerations (especially for electric utilities who are otherwise best positioned to invest in, and deploy them) and a lack of concerted national effort at the federal and State levels to actively promote deployment.

A supportive President could take actions under existing legal authorities to promote the development and deployment of Smart Grid technologies:

Federal promotion of Smart Grid technologies - Title XIII of EISA 2007 establishes a national policy to support deployment of Smart Grid technologies, creates new federal committees to monitor and report on the status of the deployment of Smart Grid technologies and the identification of impediments to such deployment,² and provides incentives for investments

¹ See Title XIII of the Energy Independence and Security Act of 2007 (“EISA 2007”), codified at 15 U.S.C. 17381 *et seq.*; Sections 1223 and 1241 of the Energy Policy Act of 2005 (“EPAAct 2005”) (Section 1241 is codified at Section 219 of Part II of the Federal Power Act (“FPA”) (16 U.S.C. 824 *et seq.*)). Title XIII of EISA 2007 in part also amends various provisions in Title I of the Public Utilities Regulatory Policies Act (“PURPA”), codified at 16 U.S.C. § 2601 *et seq.*

² Title XIII establishes the Smart Grid Advisory Committee, accountable to the Secretary of Energy, and the Smart Grid Task Force, accountable to the Assistant Secretary for the DOE Office of Electricity Delivery and Energy Reliability (“OEDER”). The Secretary of Energy, acting through OEDER and the Task Force, and with the advice of the Advisory Committee, is required to provide the first status report to Congress in late 2008 and subsequent reports every two years thereafter. In addition, the Secretary of Energy, after consulting with the Department of Homeland Security and the Federal Energy Regulatory Commission (“FERC”), is required to submit a report to Congress in June 2009 that provides a quantitative assessment and determination of the existing and potential impacts of the deployment of Smart Grid technologies on improving the security of the electrical grid.



in Smart Grid technologies.³ In addition, FERC, acting pursuant to FPA Section 219(c)(3), promulgated a rule, as part of an overall rule concerning incentives for transmission infrastructure investment, under which it may provide incentives for Smart Grid investments on a case-by-case basis.⁴ As a follow up to these efforts, the Secretary of Energy could initiate a FERC rulemaking proceeding or several rulemaking proceedings⁵ to examine possible changes to FERC regulations to encourage the deployment of Smart Grid technologies to the fullest extent possible pursuant to FERC's jurisdiction under Part II of the FPA over transmission used in interstate commerce.⁶ Such changes to FERC regulations could include a generic rule that certain Smart Grid technologies, such as those specified in Section 1223 of EPAct 2005,⁷ qualify for special ratemaking incentives.

State consideration of Smart Grid regulatory standards – Title I of PURPA provides that it is national policy to encourage: (1) conservation of energy supplied by electric utilities, (2) optimal efficiency of electric utility facilities and resources, and (3) equitable rate for electric consumers.⁸ Title I requires State utility commissions and unregulated retail utilities to consider by December 2009 implementing certain Smart Grid regulatory standards⁹ to encourage Smart

³ Title XIII authorizes the Secretary to establish: (i) a Smart Grid Regional Demonstration Initiative (“RDI”) to provide up to 50 percent cost sharing to utilities for investments included in a demonstration project; and (ii) a Smart Grid Investment Matching Program to provide reimbursement of 20 percent of qualifying Smart Grid investments. These programs are authorized for fiscal years 2008 through 2012, and the RDI authorization is limited to \$100,000,000 per fiscal year, but funds have not yet been appropriated by Congress.

⁴ *Promoting Transmission Investment through Pricing Reform*, Order No. 679, 71 Fed. Reg. 43,294 (July 31, 2006) at PP 280-311. In this rulemaking FERC considered, but declined to make, any generic findings that the advanced transmission technologies described in Section 1223 of EPAct would qualify for special ratemaking incentives.

⁵ See Section 402 of the DOE Organization Act, codified at 42 U.S.C. 7173.

⁶ While FERC has, as a matter of practice, limited its regulatory jurisdiction over grid-related matters to generation and transmission facilities used in interstate commerce at the wholesale level, it may have the authority to regulate transmission facilities at the retail level as well (even though such facilities have to date been regulated by State commissions). See *New York v. FERC*, 535 U.S. 1 (2002).

⁷ Section 1223 of EPAct 2005 refers to these as “advanced transmission technology” which it defines as “technology that increase the capacity, efficiency or reliability of an existing or new transmission facility.” Section 1223 provides that this term includes, but is not limited to, 18 enumerated categories of technologies. Section 1223 further provides that FERC shall encourage, as appropriate, the deployment of advanced transmission technologies.

⁸ See PURPA Section 101.

⁹ These standards include requiring electric utilities to demonstrate that they considered and rejected Smart Grid investments on economic or reliability grounds before making an



Grid investments after public notice and a hearing, and to the extent they decline to implement this standard, or adopt different or modified standards, to state the reason for their decision in writing and make this decision available to the public.¹⁰ Title I authorizes to participate in these proceedings as a party of right and seek judicial review of any determination made under Title I with respect to any electric utility in State court (to the extent that the Secretary was a party to the proceeding), and/or bring an action to enforce the procedural requirements of Title I in the appropriate State court.¹¹ A supportive President could put pressure on State commissions to seriously consider regulatory policies to encourage the deployment of Smart Grid technologies standards by making clear that the Secretary of Energy will actively seek to enforce the substantive and procedural requirements of Title I of PURPA as they relate to Smart Grid regulatory standards, including being an active participant and promoter of these standards in applicable State commission proceedings.

ELECTRIC UTILITY REVENUE DECOUPLING

Electric utility revenue decoupling can help to minimize an inherent disincentive of reduced retail sales resulting from reduced demand for electricity when the volumetric retail price for electricity (the price per kilowatt-hour) also is intended to recover of and on some portion of the utility's fixed costs. This disincentive is believed to be a significant impediment to energy conservation and efficiency measures, both by utilities and consumers. Revenue decoupling can be achieved through the use of separate rates for fixed and variable costs of retail service and/or some sort of revenue adjustment mechanism. Title I of PURPA establishes standards or requirements consonant with the goals of utility revenue decoupling ("RDM Standards").¹² While a number of these RDM Standards have been in place for decades,¹³ only a small number of States, most notably California, have implemented aggressive revenue decoupling measures.

investment in nonadvanced grid technologies, and, perhaps most importantly, authorizing electric utilities to recover of and on costs made stranded by investments in Smart Grid technologies (e.g., book costs of obsolete meter reading equipment). *See* PURPA Section 111(d)(6).

¹⁰ *See* PURPA Sections 111(a)-(c). If a State commission or unregulated utility fails to consider the Smart Grid standards by December 2009, then such standards must be considered and a determination made in the first rate proceeding on or after December 2010. *See* PURPA Section 112.

¹¹ *See* PURPA Sections 121, 123.

¹² *See* PURPA, Sections 111(d)(1) (Cost of Service), 111(d)(2) (Declining Block Rates), 111(d)(3) (Time-of-Day Rates), 111(d)(6) (Load Management Techniques), 111(d)(8) (Investments in Conservation and Demand Management), 111(d)(9) (Energy Efficiency Investments in Power Generation and Supply), 111(d)(14) (Time-Based Metering and Communications (also known as "Smart Metering")).

¹³ A number of the RDM Standards were contained in PURPA as enacted in 1978, though several (most notably Smart Metering) were added or modified when PURPA was amended in part by EPAAct 2005.



A supportive President could take actions under existing legal authorities to promote electric utility revenue decoupling by State utility commissions:

Inventory and analysis of States' consideration of RDM Standards – Similar to the Smart Grid regulatory standards discussed above, Title I of PURPA imposes substantive and procedural requirements on State utility commissions and unregulated utilities to consider and make a determination concerning implementation of the RDM Standards.¹⁴ While deadlines for consideration of the various RDM Standards have passed (some decades ago),¹⁵ there does not appear to be any comprehensive federal inventory of whether and how these standards were ever seriously considered. Accordingly, the President should direct the Secretary of Energy to immediately undertake a comprehensive inventory and analysis of actions taken by State utility commissions and unregulated electric utilities to consider and determine whether to implement the RDM Standards to see if those actions comport with the requirements of Title I of PURPA.

Possible federal follow up to States' consideration of RDM Standards – If and to the extent that the inventory and analysis discussed above determines that certain States failed to consider the RDM Standards in the manner required under Title I of PURPA, the President could put pressure on these States to revisit consideration of the RDM Standards by making clear that the Secretary of Energy will actively seek to enforce the substantive and procedural requirements of Title I of PURPA as they relate to the RDM Standards.

¹⁴ See PURPA Sections 111(a)-(c), 112.

¹⁵ For all but one of the RDM Standards this period passed three years after initial enactment of PURPA in 1978. For the Smart Metering standard, which was added under EPAct 2005, this period passed in August 2007.