



## FCC'S NATIONAL BROADBAND PLAN ADVANCES NUMEROUS INITIATIVES TO FOSTER SMART GRID DEVELOPMENT

**The Federal Communications Commission has released its “National Broadband Plan.” Among the larger issues addressed in the Plan is the use of wireless broadband to facilitate Smart Grid development. The Plan is available at <http://www.broadband.gov/download-plan/>.**

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### OVERVIEW

The National Broadband Plan unveiled in full by the Federal Communications Commission on March 16, 2010, proposes a dozen wide-ranging recommendations designed to integrate broadband into the Smart Grid, unleash innovation in smart homes and smart buildings, and accelerate sustainable information and communications technologies. The recommendations, which will require varying forms of federal and state action to implement, are set forth in a full chapter in the Plan dedicated to “Energy and the Environment.” Some initiatives simply require commencement of government studies; others will require Congressional action to allow utility use of public safety spectrum (likely to be the Plan’s most controversial proposal) and possible federal

preemption of state regulation regarding consumer accessibility to energy data. Recommendations related to consumer data will also likely require adoption of privacy protections, at the state or federal level.

As one Commissioner noted, the Plan is just a plan; it does not have the force of law. It can be expected, as discussed below however, to trigger multiple review, rulemaking, and legislative proceedings at the state and federal levels that will span at least the next five years.

### INTEGRATING BROADBAND INTO THE SMART GRID

Up front, the Plan acknowledges that development of the Smart Grid is a national priority for several reasons: “It will increase the reliability of the electric grid,

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more efficiently integrate renewable generation, reduce peak demand and support the widespread adoption of electric vehicles.” The Plan describes the current heterogeneity of networks employed by electric utilities in the United States — wired and wireless, licensed and unlicensed, private and commercial, fixed and mobile, broadband and narrowband — and concludes that “the lack of a mission-critical wide-area broadband network capable of meeting the requirements of the Smart Grid threatens to delay its implementation.” To correct this deficiency, the Plan suggests that the nation pursue three parallel tracks: (i) allowing utilities to share the public safety mobile broadband network for “mission-critical” communities; (ii) hardening existing commercial mobile networks to support “mission-critical” Smart Grid applications; and (iii) empowering utilities to construct and operate their own “mission-critical” broadband networks.

In what is likely to draw the most opposition, particularly from the strong public safety communications lobby, the Plan recommends that Congress consider amending the Communications Act of 1934 to enable utilities to use the public safety wireless broadband network in the 700 MHz band. The Plan suggests licensees or lessees of this public safety spectrum should be allowed to enter into agreements with utilities governing use and priorities. In addition, the Plan recommends that, at the sole discretion of the public safety licensee, utilities be allowed to purchase services on a public safety network, contribute capital funds and infrastructure, and even serve as the operators of joint networks.

Other recommendations designed to integrate broadband with the Smart Grid include the following:

- In answer to utilities’ expressed interest in building their own private wireless broadband networks and their concern over lack of suitable spectrum, the FCC and the Commerce Department’s National Telecommunications Administration, which administers federal government use of spectrum, should assess federal uses of spectrum and identify a nationwide band in which Smart Grid networks could operate. Use of this spectrum should be conditioned on meeting interoperability standards and customer data accessibility, privacy, and security needs. At the same time, the Plan emphasizes that use of this spectrum should not be mandatory and that legacy systems would not be stranded.
- The FCC should commence a proceeding to evaluate the reliability and resiliency of commercial broadband communications networks and explore whether hardened commercial wireless data networks could serve as a core part of the Smart Grid.
- The Plan recommends that state public utility commissions (“PUCs”) remove economic disincentives to utilities’ use of commercial wireless networks, which often are suitable and already widely used for Smart Grid applications. It notes, for instance, that rate-of-return regulated utilities typically earn guaranteed profits on assets they deploy — such as private networks — but only receive cost

recovery for utilization of commercial networks.

- The North American Electric Reliability Corporation should revise its security requirements to provide utilities more explicit guidance on the use of commercial and other shared networks for critical communications; it also should clarify whether such networks are suitable for grid control communications and specify how Critical Infrastructure Protection security requirements will coexist with the National Institute of Standards and Technology’s (“NIST’s”) cybersecurity standards.
- The Department of Energy (“DOE”), working with the FCC, should conduct a thorough study of the evolving communications needs of electric utilities to inform federal Smart Grid policy.

**FOSTERING DEVELOPMENT OF SMART HOMES AND BUILDINGS**

The Plan advocates providing consumers with better information about their energy use, particularly trumpeting smart meter adoption and use, and notes that “broadband is essential to realizing the full potential of smart homes and buildings.” According to the Plan, however, broadband by itself is insufficient to unleash the full potential of smart homes and buildings absent open-standards and customer data accessibility policies. The Plan advocates making energy data available to customers and their authorized third parties, while employing open and non-proprietary standards. To accomplish these goals, the Plan recommends the following:

- By the end of 2010, every state PUC should direct its regulated investor-owned utilities to provide consumers historical consumption, price and bill data over the Internet, in machine-readable standardized formats; by the end of 2011, every investor-owned utility should develop and implement this capability. The Plan notes that Congress should monitor states’ progress and, if states fail to meet these deadlines, consider national, preempting legislation that would cover consumer privacy and accessibility of energy data.
- As the Federal Energy Regulatory Commission (“FERC”) begins rulemaking to adopt NIST standards, it should include NIST standards focused on consumer data access to provide states with a model for their own Smart Grid regulation. FERC should also encourage wholesale market entities to provide information on generation mix and emissions data as close to real-time as possible at a system level.
- In future versions of its Smart Grid Systems Report, DOE should specifically provide updates on each state’s progress in enacting strong consumer data accessibility policies and also should develop and publish a set of model energy data policies for states.
- The U.S. Department of Agriculture’s Rural Utilities Service should take Smart Grid initiatives into account in disbursing loans and loan guarantees by favoring Smart Grid projects from states and utilities with strong consumer data accessibility policies and ensuring that electric cooperatives

have considered investment in qualified Smart Grid systems before investing in less sophisticated grid technologies.

As a result of these initiatives, consumers will have access to historical energy consumption information, real-time data, and price and demand response data, all in a manner that protects their privacy and maximizes informed choice.

**ACCELERATING SUSTAINABLE INFORMATION AND COMMUNICATIONS TECHNOLOGY**

In its recommendations, the Plan also directs attention to the energy-related practices of its own regulatees and the federal government. Recognizing that these constituencies account for substantial electricity use and are responsible for a greenhouse emissions share forecast to grow three times faster than that of other sectors, the Plan recommends the following:

- The FCC should initiate a notice of inquiry proceeding to study how the communications industry can improve its energy efficiency and environmental impact, examining such topics as data center energy efficiency, use of renewable power for communications networks, communications companies' reduction of carbon emissions, and the impact on energy use of peripherals in the home, like mobile phone chargers.
- The federal government should set a goal of earning the government's ENERGY STAR rating for all eligible federal data centers, beginning with metering the energy use of all centers as soon as practicable and posting the

efficiency ratings online. The Plan also suggests that DOE consider and report whether and how the government can exceed ENERGY STAR savings.

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During the meeting discussing the Plan and at the post-meeting press conference, FCC officials predicted that, to implement the parts of the Plan directed at FCC action, the agency will launch more than forty rulemakings in the coming year or so. In the "Energy and the Environment" chapter, the Plan notes that, at times, utilities had been hesitant to provide information to the FCC and had not participated at the levels the FCC had expected.

As these FCC rulemakings and inquiry proceedings move forward, utilities and affected constituencies should be alert to potential rules that may govern their operations and make sure to contribute information related to those proposals. Similarly, as other federal departments and agencies as well as Congress consider implementing steps, it will be important for interested parties to have a voice in shaping regulations and legislation before they are adopted.