

**Before the
DEPARTMENT OF ENERGY**

In the matter of:

Implementing the National Broadband Plan
by Studying the Communications
Requirements of Electric Utilities to Inform
Federal Smart Grid Policy

DOE-HQ-2009-0003-0835

REPLY COMMENTS OF VERIZON AND VERIZON WIRELESS

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As Verizon¹ noted in its opening comments in response to the Department of Energy's Request for Information (RFI),² effective communications networks and services are critical to the success of Smart Grid technology. Existing commercial broadband networks built and operated by experienced communications providers would best facilitate the implementation of Smart Grid technology, which requires the highly secure transmission and processing of vast amounts of information to and from consumers and electricity producers and distributors.

As evidenced by comments submitted in this proceeding, established communications providers not only are capable of meeting the communications needs of the utility sector as Smart Grid technology is implemented – they are already doing so.

1. Verizon and Other Experienced Communications Providers Are Already Actively Engaged in Meeting Smart Grid Communications Demands.

The facts provided to the Department in this proceeding clearly demonstrate that communications providers are capable of meeting Smart Grid communications demands – and are already doing so. Verizon is already actively working with partners in the utility sector to meet the communications demands of Smart Grid, and it is experiencing growing demand for such services. To date, Verizon Wireless has contracted with more than twenty utilities to provide one million automated metering and Smart Grid “endpoints.” Verizon’s networks are currently used to supply connectivity to

¹ In addition to Verizon Wireless, the Verizon companies participating in this filing (“Verizon”) are the regulated, wholly-owned subsidiaries of Verizon Communications, Inc.

² *Implementing the National Broadband Plan by Studying Communications Requirements of Electric Utilities to Inform Federal Smart Grid Policy*, Request for Information, 75 Fed. Reg. 26206, 26207 (May 11, 2010).

smart meters and modems and to collect and transmit data from these meter systems. Verizon also already supports hundreds of energy and utility clients worldwide with a variety of communications services. And to better serve the utility sector, Verizon has partnered with several smart grid technology vendors including Itron, Ambient Corporation, CURRENT Group, Consert Inc., and 4Home to develop innovative Smart Grid technology solutions and consumer applications.

Verizon Wireless and other commercial wireless providers also currently support Smart Grid applications that allow consumers to reduce their electric bills.³ AT&T, for example, recently announced that it enables two-way communications with more than 7.5 million electric meters over its wireless network.⁴ AT&T's pilot program with Texas New Mexico Power had a 99.96% success rate on average daily reads.⁵

Further, in order to increase all parties' understanding of the communications demands of Smart Grid technology and of the significant role that established communications providers can play in meeting them, Verizon has launched a study with the Utilities Telecom Council that will examine the communications and information technology requirements of the nation's utilities.⁶ The first-of-its-kind study will identify the unique requirements of the utility industry to ensure safe, reliable and cost-effective energy grids. The study is likely to confirm that there is no one-size-fits-all approach that

³ See Comments of CTIA-The Wireless Association® at 3-4.

⁴ AT&T Inc., Press Release, *AT&T Launches New Mobility Applications and Services for Companies, Government Customers* (Jul. 20, 2010) available at <http://www.att.com/gen/press-room?pid=18131&cdvn=news&newsarticleid=30961>.

⁵ Comments of AT&T Inc. at 9.

⁶ Utilities Telecom Council, Press Release, *Utilities Telecom Council and Verizon to Study Utility Communications Needs* (rel. Jun. 17, 2010).

applies across all utility functional domains or even from one utility to the next. The research will help clarify the different latency, coverage, and other requirements for domains ranging from critical transmission control networks to metering device communications at the edge of the electricity grid and also how these requirements are evolving.

2. Established Communications Providers Are Well Positioned to Meet the Communications Demands of Smart Grid.

Despite this evidence that commercial broadband networks are already supporting Smart Grid solutions and that service providers are enhancing their Smart Grid offerings with an eye on current and future demands, certain commenters continue to argue, based largely on vague assertions, anecdotes, and often dated information, that existing communications networks cannot satisfy certain Smart Grid requirements.⁷ Although there is no question that electric utility companies have stringent reliability and security requirements, existing commercial broadband networks built and operated by experienced communications providers often are well positioned to meet these needs. These networks are already widely available, and their operators have a vast amount of expertise in providing wireless and wireline communications capabilities in an efficient, reliable, and secure manner. Indeed, in addition to their work on Smart Grid communications, existing communications providers also currently serve federal and state governments (including in such sensitive areas as military or homeland security communications), financial institutions, and other sophisticated business customers that also have stringent security and reliability needs. Of course, a full determination of the

⁷ See, e.g., Comments of Meeker Cooperative Light and Power at 4; Comments of Mille Lacs Energy Cooperative at 4; Comments of Florida Power and Light at 22.

suitability of solutions from commercial providers for any given utility hinges on an appropriate examination of that company's particular circumstances and requirements and negotiations concerning the communications providers' capabilities – not on generalized statements and sweeping conclusions

Relying on existing broadband networks operated by commercial communications providers can provide a number of advantages over utility-owned and operated networks. These providers are able to leverage their experience and capabilities to address the interoperability, redundancy, reliability, and security challenges inherent in the implementation of Smart Grid technology in an efficient and effective manner. Using their extensive wireline and wireless networks, experienced communications providers are well positioned to provide utilities with efficient and unique solutions to meet their specific needs. Moreover, Verizon and other communications providers devote considerable resources to – and have substantial expertise with – emergency preparedness, which is critical to ensuring that communications networks remain in service when they are needed most.

What is more, implementing Smart Grid will not be simply a one-step solution, but instead will require the continuing deployment and upgrading of communications technologies. Here too, established communications providers are well positioned to meet evolving communications requirements, as they continue to invest in and deploy more secure and reliable networks and services to keep pace with fast-changing technology and evolving customer demands. By contrast, if communications networks funded by electric utilities' customers or taxpayers fail to keep pace with technological

advances, they would become vulnerable to security breaches or other threats and become less efficient over time.

Moreover, as electricity demands change over time in unpredictable ways, utilities will need proven and reliable communications and control networks beyond the electrical grid. For instance, as various electricity-powered technologies, such as electric vehicles, become more common, electric utilities will need access to information on regional and system-wide energy needs and the capability to track these vehicles, which may connect to different utilities at different points in the day, similar to cell phone users roaming from one carrier's network to another. Given the many evolving communications needs of utilities, established communications providers with ubiquitous, interoperable networks are well positioned to create and implement smarter energy infrastructure efficiently.

In short, Verizon and other established communications providers have the facilities, systems, and expertise to help utilities implement the most cost-effective and efficient Smart Grid technology solutions.

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Respectfully submitted,

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