

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matters of

International Comparison and Survey Requirements in the Broadband Data Improvement Act)	GN Docket No. 09-47
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Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, as Amended by the Broadband Data Improvement Act)	GN Docket No. 09-137
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A National Broadband Plan for Our Future)	GN Docket No. 09-51

COMMENTS – NBP PUBLIC NOTICE #2

The Alliance for Telecommunications Industry Solutions (ATIS) hereby submits these comments in response to the Federal Communications Commission’s (Commission) above-referenced *Public Notice* released September 4, 2009. ATIS believes that existing communications standards and technologies are well suited to handle Smart Grid applications but believes that there is a need for more information regarding Smart Grid requirements. ATIS urges the utility sector to better define its broadband requirements and to work with the information and communications technology (ICT) sector's standards development organizations to establish necessary technical and operational standards.

I. Background

ATIS is a global standards development and technical planning organization that leads, develops and promotes worldwide technical and operations standards for information, entertainment and communications technologies using a pragmatic, flexible and open approach. Industry professionals from more than 250 communications companies from all segments of the ICT industries actively participate in ATIS' 18 open industry forums.

The ATIS membership spans all segments of the ICT industry, including local exchange carriers, interexchange carriers, wireless equipment manufacturers, competitive local exchange carriers, data local exchange carriers, wireless service providers, providers of commercial mobile radio services, broadband providers, software developers, consumer electronics vendors, digital rights management companies, central authentication service companies and internet service providers. ATIS members include key innovators of wireless technologies and services who look to ATIS for the development of the technical specifications that will speed the new products and services to market.

ATIS' industry committees and forums focus on issues ranging from the fundamental elements of offering communications services such as ordering and billing, to network security, reliability and interoperability of current and next generation technologies, to seamless delivery of converged services such as IPTV over multimedia platforms.

II. Existing Communications Standards and Technologies

In the *Public Notice*, the Commission seeks information regarding the implementation of Smart Grid technology. Comment is specifically sought on how and whether communications technologies and networks meet Smart Grid applications. ATIS believes that

existing communications standards and technologies are well suited to handle both existing and emergent Smart Grid applications.

According to the Energy Independence and Security Act of 2007, a Smart Grid is characterized by: (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 for metering, grid operations, and distribution automation; (6) integration of "smart" appliances and consumer devices; (7) deployment and integration of advanced electricity storage and peak-shaving technologies; (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; and (10) identification and lowering of unreasonable or unnecessary barriers to adoption of smart grid technologies, practices, and services.¹

Existing and next generation broadband technologies including wireline and wireless networks are being used today to implement Smart Grid technology. Examples of cooperation between communications companies, electric utilities and other technology companies to develop and/or implement Smart Grid applications are widespread. For example: AT&T has formed partnerships with SmartSync and Cooper Power Systems to provide Smart Grid services; Qwest, in conjunction with Current Communications, is providing DSL service to Boulder, CO's Xcel Energy to backhaul smart meter data; and

¹ Energy Independence and Security Act of 2007, Pub. L. No. 110-140, 121 STAT. 1492 (2007).

Verizon has announced a partnership with Ambient Corporation to offer Smart Grid services over Verizon Wireless' network.

ATIS has been working to facilitate the development of standards pertaining to broadband services that are being used to enable Smart Grid applications. On the broadband front, for example, the ATIS Packet Technology Systems Committee (PTSC) has done work to support IP-based services for evolving packet architectures and applications for enabling signaling protocols, and providing the user-to-network (UNI) and network-to-network interface (NNI) infrastructure that allows systems to interoperate and services to be provided to broadband users. The ATIS Network Interface Power and Protection (NIPP) Committee develops standards and technical reports on broadband technologies such as digital subscriber line (DSL) and gigabit passive optical network (G-PON) interfaces, technologies which are suitable for Smart Grid applications. The ATIS Optical Transport and Synchronization Committee (OPTXS) is investigating the impact of new services on existing broadband capabilities and new high speed transport technologies.

ATIS also plays a leading role in advancing the development and use of Long-Term Evolution (LTE) wireless technology, a technology being developed by ATIS through its participation in the Third Generation Partnership Project (3GPP).² LTE is an advanced wireless technology that is designed to increase the capacity and speed of mobile telephone networks. ATIS strongly believes that LTE deployments will bring greater wireless capabilities to applications and services that would touch upon and improve the daily lives of consumers. As such, ATIS believes that existing wireless technologies and their evolution to LTE will enable Smart Grid technologies and applications and be beneficial in helping to

² ATIS is the North American Organizational Partner in 3GPP.

achieve the energy efficiency goals noted above in the Energy Independence and Security Act of 2007.

ATIS notes there are three technical specifications that address the machine to machine (M2M) optimization of data flow that may be of particular applicability to the implementation of Smart Grids. These specifications include the: *Study of Facilitating Machine to Machine Communications in 3GPP Systems* (TR 22.868 Rel 8), which was completed in December 2008; *Feasibility Study on Remote Management of USIM Applications on M2M Equipment* (TR 33.812 Rel 9), which is scheduled for release December 2009; and *Service Requirements for Machine-Type Communications* (TS 22.368 Rel 10), which is currently under development.

III. Defining Requirements and Developing Standards for Smart Grid

ATIS notes that among the questions posed by the Commission in the *Public Notice*, are those aimed at getting more information about the communications requirements of Smart Grid applications. ATIS supports the Commission's efforts to help crystallize the network requirements for smart grid applications.³

While ATIS believes that standards within the ICT sector are flexible and robust enough to meet the Smart Grid requirements, ATIS urges the utility sector to better define its broadband requirements and to work with the ICT sector's standards development organizations to meet these requirements. Such collaboration is particularly important in ensuring that next generation Smart Grid requirements are met by existing and next

³ ATIS recommends that the Commission consider a two step approach to collecting information regarding Smart Grid requirements. The first step is the collection of available information pursuant to this *Public Notice* regarding Smart Grid requirements. Once this information has been collected, it may be beneficial to seek additional information about how communications technologies and networks can meet these requirements (step 2).

generation communications networks and technologies. To this end, ATIS welcomes input into ATIS' forums and committees that are developing standards in areas relevant to the implementation of Smart Grid technologies.⁴

IV. Conclusion

ATIS believes that existing communications standards and technologies are well suited to handle Smart Grid applications. ATIS also supports the Commission's efforts to obtain more information about the requirements of Smart Grid applications and recommends that the utility sector collaborate with the ICT sector's standards development organizations in ensuring that communications networks and technologies meet these requirements.

Respectfully submitted,

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⁴ These committees and forums include: ATIS' Network Interface Power and Protection (NIPP) Committee; ATIS' Network Performance, Reliability, and Quality of Service Committee (PRQC); ATIS' Optical Transport and Synchronization Committee (OPTXS); and ATIS Packet Technology Systems Committee (PTSC).