Before the

Department of Energy

Washington, D.C. 20585

In the Matter of

Implementing the National Broadband	**)**
Plan by Empowering Consumers and	**)**
The Smart Grid: Data Access, Third	**)**
Party Use and Privacy	**)**

NBP RFI: Data Access, Third Party Use and Privacy

COMMENTS OF UTILITIES TELECOM COUNCIL

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NBP RFI: Data Access, Third Party Use, and Privacy

COMMENTS OF UTILITIES TELECOM COUNCIL

The Utilities Telecom Council hereby comments in response to the Department of Energy (DOE) request for information on data access, third party use, and privacy.[1] In summary, UTC submits that the innovative deployment by energy utilities of smart meters and smart control systems will create a smart energy grid that will unlock the value of what has been called the Energy Information Economy[2]. Smart energy grids will create an environment in which consumers will have greater abilities to manage their own energy usage and utilities will have new tools to affect grid-wide energy efficiencies never before possible. The key to all this is data. How to provide secure access to it for customers and their agents is the crux of this RFI's questions and the focus of our responses. The Energy Information Economy will bring with it an inevitable

[1] Department of Energy, *Implementing the National Broadband Plan by Empowering Consumers and the Smart Grid: Data Access, Third Party Use, and Privacy,* 75 FR 26,203, May 11, 2010.

[2] Federal Communications Commission, *Connecting America: National Broadband Plan,* March 16, 2010

and exponential increase in data as well as new costs. The challenge for utilities, regulators, consumers, service providers, technology manufacturers, and others is to provide the right balance between enabling this new era of energy management with both the net value of the applications and the privacy rights of consumers. UTC believes that depending upon the particular utility and applications chosen, the smart grid can provide huge net benefits for consumers, but as is the fundamental principle for both regulated and unregulated utilities, the value of applications has to be measured against the costs which will ultimately be borne by consumers. Similarly, the development and distribution of consumer consumption data must be carefully weighed against the privacy rights of consumers, as already implemented by utilities and state regulatory authorities. Policies on data access must be driven by the need to provide benefits for consumers, not the financial gains of third party participants.

Introduction

UTC is the international trade association for the telecommunications and information technology interests of electric, gas and water utilities, pipeline companies and other critical infrastructure industries. Its members include large investor-owned utilities that serve millions of customers across multi-state service territories to relatively smaller municipal and cooperative utilities that may serve thousands of customers in isolated towns, cities and rural areas of the country. In addition, UTC is allied with all of the major electric, gas and water utility associations, as well as other organizations

representing various other critical infrastructure industries – as part of its Critical Infrastructure Communications Coalition.[3]

Questions

1) **Who owns energy consumption data?**

While the term "ownership" is open for debate and interpretation, the concept of energy customer access to data on their energy usage is not. While the debate on data ownership may provide an interesting discussion, it may really be clouding resolution of the more important questions concerning consumer consumption data – who has access to customer consumption data and how can we continue to ensure its privacy and security? What is clear is that consumers should have access to their own specific energy usage data and be in control over its delivery to third parties. To that end, utilities should continue to maintain both the privacy and security of consumer data but also be free to use the data for their own internal purposes. Moreover, costs must be balanced against benefits when it comes to delivering data to consumers and third-parties, particularly if the method of data delivery is complex or as the data requested gets closer to "real-time" measurement.

Utilities have been collecting consumer consumption data since electric meters were commercially introduced in 1888. Historically, electric utilities used electric

[3] For more information about the Critical Infrastructure Communications Coalition go to http://www.utc.org/utc/critical-infrastructure-communications-coalition.

meters merely to measure energy usage and provide accurate bills for consumers. In this era of smart meters, electric utilities with advanced metering infrastructures will be able to send both pricing and demand response signals to consumer electric meters and smart devices in order to impact the consumption of energy on critical peak days or during periods which stress the existing system. Additionally, smart meters may be capable of providing both utilities and consumers with an incredible amount of data. That data can help consumers understand their own energy consumption and thus make wiser decisions concerning when and how to use energy. It can also help utilities operate their systems to ensure the safe, reliable and efficient operation of the system while minimizing the need for major new generation, transmission or distribution infrastructure investments.

Utilities understand that consumer consumption data must be kept secure from unauthorized access. At the same time, utilities must also keep the data private by exercising judgment and care when allowing third parties to access the data. To these ends, utilities have a solid history of protecting customer data. Regardless of whether utilities are investor-, municipally- or cooperatively-owned, they have and will continue to maintain both the privacy and security of the data and respond to both regulatory and consumer requirements.

The issue of access to customer data is not new; state commissions dealt with the same kinds of privacy and access issues as they considered restructuring. Retail energy marketers sought consumer consumption data in order to more

accurately define their markets and improve their marketing potential. While many state commissions supported the movement to deregulated markets, they felt protection of consumer data was paramount and prohibited utilities from providing such data to any 3rd parties without consumer consent. In order to ensure the actual consent by consumers, several states actually required a "wet signature." In this new internet era, "informed consent" may become a more important issue as consumers may click on a pop-up ad which merely says "Click here to see if your electric bill can be cut by *up to 53%*" (italics added). Consumers may not fully comprehend that a mere mouse click might trigger the release of their usage data to an unknown third party.

The fact that the quantity of data being developed is increasing, or the fact that it will be electronically created, transmitted and then stored at the utility doesn't change the underlying need for consumer consumption data to be kept private and secure. The only change is the application of those basic principles to an era of both the internet and cyber security. The issue of data ownership clouds the issue of privacy and security. For regulated utilities, state regulatory authorities should ultimately shape the rules that determine control use and disclosure of individual customer consumption data. For non-state-regulated utilities, their consumer-selected boards of directors or municipal governments will provide the appropriate rules for control of the data.

As discussed below, it may be premature to answer the question of who owns consumption data given that other policy issues should be addressed first.

However, to the extent that DOE needs to answer the ownership question upfront, UTC believes that data is owned by the entity by or for whom it is collected. If consumers install on their junction boxes or on individual devices commercially available products to measure, record and analyze energy usage, the data collected belongs to consumers. Similarly, if a utility or its agent purchases and installs an advanced meter in order to collect data required to bill for electric service and to monitor the condition and performance of the distribution system, the utility owns the data in the same way that it owns the data it collects on its SCADA system. To take any other position raises questions about whether the utility may use the data it collects or share the data with its agents and service providers for basic operational purposes without express permission from each consumer. Those questions would undermine utilities' ability and incentive to make cost-effective investments in smart grid devices and to integrate those devices with their operations.

Importantly, the issue of ownership need not be resolved before policymakers can answer the separate and more important questions concerning who should have access to the data, for what purposes and under what conditions. States and other regulators have been able to answer those questions for decades without assigning ownership of the data to either consumers or utilities.

2) Who should be entitled to privacy protections relating to energy information?

Clearly electric consumers are entitled to continued privacy and security of personally identifiable information regarding their electricity use. But electric utilities are also entitled to and require privacy protections for both the energy information they obtain from their metering equipment and for the energy information that they create and utilize in the operation of the electric grid. Electric utilities will collect data about their consumers' use of electric service in order to properly bill consumers for energy use and provide consumers with information that they can use to make wise decisions about when and how to use energy.

But utilities will also collect this information in order to maintain and enhance reliability, power quality, and the efficiency of the distribution system. For example, there are other more basic reasons that utilities need to be able to control the grid. Understanding consumer consumption allows utilities to carefully integrate consumer energy generation resources, such as solar or wind generation, along with the potential mass distribution of electric vehicle chargers and thermal energy storage devices. It also permits them to correctly size distribution transformers, properly design protective systems, find and reduce the causes of distribution losses, reduce outages and improve power quality by locating the causes of frequent blinks, maintain voltage and frequency, and otherwise enhance electric service.

The bottom line is that utilities utilize consumer-related data, market data and operational data to ensure the safe and reliable operation of the system at affordable prices.

3) What, if any, privacy practices should be implemented in protecting energy information?

Utilities have always maintained the privacy and security of not only their own internal operational data but also consumer usage data. They have been guided by their own concepts of privacy and security for consumer data as well as, in many cases, regulatory mandates. The fact that the quantity of data being developed has increased, or the fact that it will be electronically created, transmitted and then stored at the utility doesn't change the underlying need to keep consumer consumption data private and secure. The only change is the application of those basic principles to an era of both the internet and cyber security.

In order to ensure the continued privacy and security of consumer usage data, utilities should review their privacy and security practices given the increased volumes of data produced in digital format, particularly as digital privacy gains greater visibility due to publicized privacy breaches involving mass market Internet services. But based upon the historic, unblemished record on utility protection of consumer data, and the role that state regulatory commissions have

played in ensuring such protection, there is no need for DOE to establish any specific standards to ensure the privacy and security of consumer data.

While utilities will do their best to ensure the privacy and security of consumer data, once the data is given to consumers and/or their third party designee, it is beyond the control of utilities to control or protect.

4) Should consumers be able to opt in /opt out of smart meter deployment or have control over what information is shared with utilities or third parties?

These are two distinct questions, requiring two different answers. As more fully explained below, the answer to the first question is that consumers should not be able to opt in / opt out of smart meter deployments. The answer to the second question is that with respect to utilities, consumers "share" nothing, since the information is from the utility's own equipment. That clarification aside, utilities still have the obligation to maintain the privacy and security of consumer information. However, with respect to third parties offering services to consumers, consumers should (and do already) have control over what information is shared.

In response to the first question, providing consumers with a choice of metering technology, which has not occurred to date, in the past, would undermine a large portion of the value of the smart meter deployment. Consumers should not be given the opportunity to opt-out of smart meter deployment. Some of the major

benefits from smart meter deployment include both remote meter reading and house-by-house outage reporting. It also provides the ability to implement dynamic pricing and other smart grid applications. Smart meters are an essential component in enabling utilities and their consumers to work closer than ever before in order to balance supply and demand in a cost effective manner. Allowing individual consumers to opt in or out of smart meter deployment undermines the value to all consumers of smart grid deployment.

Moreover, from a privacy standpoint, lack of a smart meter and the ability to remotely read a consumer's meter actually decreases consumer privacy. Neighbors may start to question why a utility truck stops at that particular residence every month, and in many cases the lack of a smart meter would require a utility worker to enter their property to actually read the meter. Smart meter deployments enable utilities to eliminate manual meter reading, saving not only labor and transportation costs but also reducing greenhouse gas emissions. Instead of utility personnel driving to neighborhoods and walking through the backyards of all of their customers reading meters one at a time, meter reading is done remotely, thus avoiding any intrusion into customer property and/or privacy.

In response to the second question, many regulators adopted or refined policies governing whether, when, and under what conditions utilities may share customer data with third parties during the 90's in the context of retail competition. These same policies could be adopted in the context of smart

metering, while the quantity of data will change, the underlying responsibilities and obligations will not.

5) What mechanisms should be made available to consumers to report concerns or problems with the smart meters?

Responding to consumer concerns by electric utilities is not new to utilities. Utilities have fully staffed call centers whose function is to respond to consumer calls concerning any aspect of their electric service, from billing to reliability. Just as these call centers have responded to concerns about historic mechanical meters and currently deployed electronic meters, they will respond to calls about new smart electronic meters. In fact, many utilities have been using electronic meters for years, as part of their automatic meter reading (AMR) programs. States and other relevant retail regulators also have procedures in place permitting consumers to report concerns or problems with their meters and other quality of service issues.

6) How do policies and practices address the needs of different communities, especially low-income rate payers or consumer with low literacy or limited access to broadband technologies?

Utilities have been dealing with low income ratepayers, consumers with low literacy and consumers with limited access to broadband technologies for the last hundred years. State regulatory authorities have specifically identified low income consumers as a class to study as part of the numerous smart grid pricing

pilots. Pilots have shown that low income consumers actually can benefit from implementation of dynamic pricing supported by smart meter deployment. In a just published paper, *The Impact of Dynamic Pricing on Low Income Customers*[4], the analysis revealed that "low income customers are responsive to dynamic rates and that many such customers can benefit even without shifting load." And that "[c]ontrary to the arguments about the inability of low income customers to respond to price signals, these results show that low income customers do shift their load in response to price signals."

7) Which, if any, international, federal, or state data-privacy standards are most relevant to Smart Grid development, deployment and implementation?

State regulatory authority data-privacy standards which currently control consumer data access and privacy are the most relevant to smart grid development, deployment and implementation. Smart grid development, deployment and implementation are expansions of typical utility operations, but more data intense.

9) Because access and privacy are complementary goods, consumers are likely to have widely varying preferences about how closely they want to control and monitor third-party access to their energy information: what mechanisms exist that would empower consumers to make a range of

[4] *The Impact of Dynamic Pricing on Low Income Customers,* IEE Whitepaper, June 2010, Prepared by Ahmad Faruqui, Ph.D., Sanem Sergici, Ph. D., Jennifer Palmer, A.B.

reasonable choices when balancing the potential benefits and detriments of both privacy and access?

Third parties could have access to consumer data through one of two routes: data could be provided by the utility or it could be provided by the consumer. At least since the onset of retail competition, States and other relevant retail regulators have developed rules governing with whom utilities may share consumer data, for what purposes, and under what conditions. Those rules typically address when and in what form utilities must receive consumer consent before sharing data.

The development of smart grid is creating new questions about how consumers may ensure the privacy of data that they give to third parties or data that they direct utilities to give to third parties on the consumers' behalf. These transfers of data create a different set of issues because the transfer is to an entity of the consumer's choice for the consumer's benefit. In many cases, the utility will have no legal privity with the third party. In these cases, the consumer will be responsible for the protection of his or her own data. The consumer will have to establish a contractual relationship with the third party that dictates how the third party may use the data and the terms under which the third party can further share the consumer data with others. If that contract is violated, the consumer will likely have to look to the courts, the Federal Trade Commission, or other similar consumer protection agencies for assistance.

10) What security architecture should be built into Smart Grid technologies to protect consumer privacy?

Care needs to be taken in designing smart grid security architecture to ensure that consumer privacy and security are built into smart grid technologies, not added on later. The architecture should be designed to ensure the privacy and security of consumer data as a default, not as an option that can be turned on by a consumer.

11) How can DOE best implement its mission and duties in the Smart Grid while respecting the jurisdiction and expertise of federal entities, states and localities?

Privacy issues are often best left to those responsible for maintaining the public interest in the provision of electric energy to end users. State commissions have addressed these privacy issues in the past and will no doubt continue to ensure the privacy and security of consumer data. Similarly, cooperatively- and municipally-owned utilities have also assumed the responsibility for ensuring the privacy of the consumers that they serve. DOE can help by continued support for grant and other programs that provide utilities and regulators with new, better, and more affordable tools for achieving their goals.

12) When, and through what mechanisms, should authorized agents of federal, state, or local governments gain access to energy consumption data?

Various federal and state laws already address the privacy concerns over utilities providing access to individual consumer energy consumption data by authorized agents of federal, state or local governments. Access to individual customer data is balanced by the privacy rights of individuals with governmental access, a balance that has been the subject of numerous court decisions. Utilities will continue to cooperate with authorized government agents in accordance with federal and state laws and judicial decisions.

13) What third parties, if any, should have access to energy information? How should interested third-parties be able to gain access to energy consumption data & what standards, guidelines, or practices might best assist third parties in handling & protecting data?

There should be no absolute right for third parties to have access to individual consumer energy information from utilities. Consumers should have the right to decide whether to provide individual energy consumption data to which they have access to third parties. State commissions and unregulated energy providers should develop procedures by which third parties can obtain permission from consumers to obtain their energy information.

It is also important to remember that utilities must retain the discretion to share consumer data with third party agents and service providers for operational

purposes, with appropriate safeguards, as they always have done. Many utilities rely heavily on third party customer-service representatives, data management and billing companies, engineering and staking companies, demand response aggregators, and others to perform tasks that larger utilities will perform in-house. These third party entities require customer information in order to perform their tasks adequately on behalf of the utility. To the extent that utilities utilize third parties they take on an obligation to ensure that the third party's actions comply with their own privacy and security requirements. However, when a consumer chooses to provide their own data to third parties, they must take full responsibility for the privacy and security of that data.

14) What forms of energy information should consumers or third parties have access to?

Consumers have always had access to consumption data as part of their monthly electric bill. For residential consumers, consumption was generally identified at the total kiloWatt-hours (kWh) per month or if the consumer is on a time of use rate, then they would see consumption in each of the TOU periods – peak, off-peak, shoulder-peak. Depending on which smart meters are chosen and the options included, many of these new meters will be capable of providing consumers with data on a one hour or less basis. The forms of energy information available to consumers depends upon the forms of energy information collected by the meter. To the extent that consumers want their own energy consumption data and the meters have the functionality, they should have

access to their own unaudited energy consumption data in the forms available from the meter. However, care must be taken to ensure access to this raw, unaudited data does not create billing confusion which inherently can lead to dissatisfied consumers and increased costs. Ultimately, consumers and their designated third party should have access to the audited data from the utility.

We are all entering a new Energy Information Economy. Questions concerning the kinds of data that may be important and available from tomorrow's smart meters will always need to be decided based upon the costs of providing that data measured against the ultimate benefits for consumers.

15) What types of personal energy information should consumers have access to in real-time or near real-time?

Availability of personal energy information depends upon the functionality of the meters installed and the ability of consumer devices to receive that unaudited data. Smart meters may or may not have the capability of providing personal energy information directly to consumers.

To the extent that data is retrieved by the utility, the process of transmitting the data back to the utility, auditing and transforming the data would delay access by about one day. Converting this process into a "real- or near real-time" process would require major overhaul of the utility infrastructure that would seriously undermine any value created with potentially significant cost implications. The

terms by which customers have access to information that is retrieved by the utility should be left to the state jurisdictions because all mechanisms will involve some level of cost that will need to be recouped through local rates.

WHEREFORE, UTC thanks the Department of Energy for initiating this study on the current and potential practices and policies for the states and other entities to empower consumers through access to detailed energy information in electronic form. UTC looks forward to working with the Department of Energy and others on developing recommendations for ensuring the continued privacy and security of consumer data while supporting innovation and consumer benefits in this emerging new Energy Information Economy.

Respectfully submitted,

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