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 ONCOR ELECTRIC DELIVERY COMPANY LLC

Oncor Electric Delivery Company LLC (Oncor) is a regulated electric transmission and distribution utility that serves the north-central, eastern and western parts of Texas, including the cities of Dallas and Fort Worth. Oncor operates the largest electric transmission and distribution system in Texas, delivering power to over 3 million homes and businesses and operating approximately 117,000 miles of distribution and transmission lines in Texas. Oncor operates in a unique market in which only competitive Retail Electric Providers (REPs) who are not utilities sell electricity to end-use consumers, and the transmission and distribution utilities (who are not REPs) deliver that electricity to consumers pursuant to tariffs and terms of service governed by the Public Utility Commission of Texas (PUCT). While the PUCT regulates certain aspects of REPs' operations by establishing consumer protection requirements, it does not regulate the price of electricity charged by the REPs, nor does it regulate what services the REP may choose to offer.

Oncor and two other utilities in Texas are implementing Advanced Meter System (AMS) Deployment Plans that have been approved by the PUCT. Under its approved plan, Oncor will deploy smart meters to all residential and small commercial customers by the end of 2012, projected to be over three million customers. The Texas statute that authorized and encouraged the deployment of smart meters and the PUCT's rule implementing that statute contemplate deployment of advanced meters to all residential and small commercial customers. Oncor has over 1 million smart meters deployed and operational today. These meters record consumption every 15 minutes. The meters provide wireless ZigBee interface to premises so that customers can use in-home systems that communicate with the smart meter to interrogate it directly for current consumption. This customer-system-to-meter electronic interrogation can be more rapid than 15 minutes and provide near-real-time consumption information. These meters also have the capability to remotely connect or disconnect electric power to the premise. Finally, these meters also measure the voltage supplied to the customer and, when necessary, enable the utility to examine the quality of power supplied.

Oncor and the other utilities with approved plans have established the Smart Meter Texas Portal (Portal) as a common web portal for consumers to access and review their electric energy consumption at 15-minute intervals for the previous 24 hours, as well as their historic usage. REPs also have access to their customers' energy use data via the Portal through the use of application program interfaces (APIs). Under the approved AMS deployment plans, REPs may initiate messages and control signals to their customers via the Portal for text messages, load control actions, and peak period notifications, among others, and those messages will be delivered over the AMS systems and through the meter to customer premises. The Portal was made available to REPs early this year and is now available to consumers who have smart meters. Additional functionalities may be added, as determined by the PUCT.

Although REPs and third parties may have access to customer data under circumstances further described below, the utility's record of customer energy consumption remains the official record for billing determination.

Under the smart meter deployments approved by the PUCT, Oncor and the two other utilities have implemented significant consumer education efforts to help consumers learn about smart meters. Oncor has a multifaceted consumer education program that includes a Mobil Experience Center that travels to each community where the smart meters are being deployed and is available in public settings and staffed by Oncor employees. Its purpose is to explain smart meters and the features and services they enable, and to answer consumers' questions.

It is with this background that Oncor responds to the following questions:

(1) Who owns energy consumption data?

Under Texas law, consumers in Texas who are served by investor-owned utilities own their energy consumption data, and utilities are obligated to protect that data and other account information from misuse or unauthorized public disclosure. Oncor has established its policies and procedures, and implemented its AMS, in a manner that complies with the law's requirements.

The critical issue, however, is not who owns the data, but what control consumers have over the use of that data by third parties and what rights consumers have to authorize third-party access for parties of their own choosing. The law in Texas provides for the use of this data by the utility for business operations and power system planning and operations Texas law also provides for use of this data by the REP selling the electricity to the customer. Texas law also allows the customer to authorize its data to be provided to third parties of their choosing under a controlled process outlined further below.

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

Oncor supports the state law in Texas providing that all electricity consumers are entitled to privacy protections related to their meter data. This applies regardless of the type of consumer, *i.e.*, residential, commercial, or industrial.

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

Explicit authorization from consumers should be required for sharing their individual consumer data with third parties who are not the utility or the REP directly engaged in providing electricity to the consumer.

Utilities should be free to utilize individual meter data or aggregated data for internal purposes to aid the utility in delivering safe and reliable electricity. Utilities should be free to provide aggregated meter data for various public purposes, as has been done by utilities for many years, such as to regulatory and other governmental agencies, and in public information the utility may choose to publish, such as in SEC 10k reports and annual reports to shareholders. Utilities also should be free to provide individual meter data where a legal requirement to provide that information has been appropriately established.

(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?

i. Opt-In/Opt-Out of Smart Meter Deployment

Consumers should NOT be able to opt in or opt out of smart meter deployment. The economics of deployment of smart meters are dependent upon widespread use, rather than selective use. Smart meters serve public purposes that are broader than just measurement of consumption for billing, and are part of operational changes that will improve reliability and provide broader customer consumer services.

Examples of important public benefits provided by full smart meter deployment include:

- reliability improvements gained by reducing the time required to restore power via the “last gasp” feature whereby meters send out a notice to the utility that power has been lost, thereby allowing the utility to pinpoint immediately where the power outages occurred;
- more rapid final billing when a customer moves out from premises enabled by a remote reading of the meter at the time the account is closed, rather than the dispatch of a meter reader for a manual reading;
- more rapid connection of electric service and initial base meter reading when a customer moves into a premise, enabled by the remote disconnect/reconnect capability in each meter;

- eliminating the costs of, and any inconvenience to consumers of, manual meter readings;
- other grid monitoring functions, such as voltage quality measurement;
- pre-pay functionalities that REPs may choose to provide to customers; and
- dual register functionality that records any net generation back to the grid from customer-owned generation separately from consumption, to support certain policies the PUCT may choose to implement, or to support certain sale and purchase arrangements that a REP may choose to implement, related to consumer-owned generation.

As with all other power grid technologies, each utility should be able to select the meter technology to be implemented on its system. This will ensure that the meter technology used will be compatible with the utility's other installed and planned systems and technologies.

ii. Control of Information by Consumers

Consumers should not have the right to control what information is shared with their utility or utilized by their utility in delivering safe and reliable electric service. As noted above, smart meters provide multiple functions for utilities.

But consumers should have rights to control what information is shared by their utility with third parties for purposes not directly related to consumption measurement for tariff or billing purposes or for utility system operations. Consumers should also have the right to initiate the sharing of their information with third parties with whom they desire to share such information and to terminate the sharing arrangement.

Today in Texas, a Letter of Authorization (LOA) is required to be executed by the consumer to explicitly allow sharing of the consumer's meter data by the utility with certain third parties. The LOA process is a formal process established by the PUCT that has been in place for many years. This structure was established before the advent of "smart" meters to meet legitimate consumer needs. Examples include authorizing REPs other than the one presently serving that customer to review data (such as in relation to the REPs making offers to serve that customer) or to have data provided to market aggregators, power brokers, energy management companies, consultants (including architect and engineering firms, electrical contractors, and energy audit firms), friends, and family. The spectrum of customers who utilize this service includes industrial, commercial, and residential customers.

Today, this LOA process is a manual, hardcopy paper process that is labor intensive. Discussions are ongoing in a workshop forum under the PUCT's auspices regarding whether electronic LOA-type authorizations via the Smart Meter Texas Portal or other electronic means will be made available, and, if so, what authorizations will be permitted and what consumer review, notice, and education are required, among other issues. An electronic process potentially offers advantages, including timeliness for the execution of the grant or rescission of access by third parties, security, and convenient consumer

review and control.

See the following references: Public Utility Regulatory Act, Title II, TEX. UTIL. CODE § 39.107; PUCT Substantive Rules, § 25.130(j) and § 25.472(b).

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

In Texas, the PUCT and every electric utility have established channels for consumers to report any concerns or problems related to electric service or billing, and these channels have been utilized by consumers to raise concerns or issues with smart meters. The procedures for customers to raise complaints at the PUCT are described in detail on the PUCT's website. The PUCT's procedures allow for customers to raise those complaints via a telephone call, in a written communication, or through the PUCT's website. Similarly, the process for raising a complaint at a utility is usually reflected on its website or is available through a telephone call or written communication to the utility.

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

Many features and benefits of smart meter systems are such that they do not require action or intervention by a customer for the customer to receive benefits, nor do they require access to and use of broadband.

A fundamental design principal for the Oncor AMS was that it would be structured to operate without broadband communications. Consumers without broadband access do reap benefits of the AMS, since it was designed to operate without broadband. Furthermore, consumers do not need to act or intervene in AMS functionalities to reap these benefits.

All customers with advanced meters receive the following benefits:

- reliability improvements gained by reducing the time required to restore power via the "last gasp" feature whereby meters send out a notice to the utility that power has been lost, thereby allowing the utility to pinpoint immediately where the power outages occurred;
- more rapid final billing when a customer moves out from premises enabled by a remote reading of the meter at the time the account is closed, rather than the dispatch of a meter reader for a manual reading;
- more rapid connection of electric service and initial base meter reading when a customer moves into a premise, enabled by the remote disconnect/reconnect capability in each meter;
- eliminating the costs of, and any inconvenience to consumers of, manual meter readings;

- other grid monitoring functions, such as voltage quality measurement;
- pre-pay functionalities that REPs may choose to provide to customers; and
- dual register functionality that records any net generation back to the grid from customer-owned generation separately from consumption, to support certain policies the PUCT may choose to implement, or to support certain sale and purchase arrangements that a REP may choose to implement, related to consumer-owned generation.

In Texas, the PUCT has approved the implementation of significant consumer education efforts by Oncor and the other two utilities deploying smart meters to assist consumers in their understanding of the benefits of smart meters. The PUCT has also approved the funding of a program through which low-income consumers would receive free in-home monitors that would assist them in monitoring their energy usage, and the implementation of that program is presently under consideration by the PUCT.

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

The most relevant standards to Oncor's Smart-Grid deployment are based on those at the State level. In areas of Texas where retail competition has been implemented, state law assigns ownership of meter data to the customer, while providing utilities and REPs rights to use that data in the normal course of their business. This fundamental yet balanced approach protects customer information while allowing a utility to deliver safe and reliable electric service and a REP to provide appropriate billing service and develop innovative services based on the more detailed information available from the meters.

(8) Which of the potentially relevant data privacy standards are best suited to provide a framework that will provide opportunities to experiment, rewards for successful innovators, and flexible protections that can accommodate widely varying reasonable consumer expectations?

The electric market in Texas in which Oncor operates was designed to encourage innovation and protect consumers. We believe the resulting model for use and control of meter data does, indeed, provide control to consumers over privacy, while allowing for a wide range of innovation.

As noted in response to question (7), in areas of Texas where retail competition has been implemented, state law assigns ownership of meter data to the consumer, while providing utilities and REPs rights to use that data in the normal course of their business. This framework helps to protect consumer privacy and yet provides opportunities to experiment and allow successful innovations and protections that can accommodate widely varying reasonable consumer expectations.

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

The model put in place in Texas (see responses to Questions 4 and 7) places a bias on privacy, and allows access and use to evolve as the consumer becomes more comfortable with this technology.

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

Utilities should begin with an approach that customer information must be protected, as noted in response to question (7), since security of customer data has always been an important matter for utilities. The security provisions associated with smart grid technologies should be based on the fundamental policies that recognize the sensitivity of customer information and should recognize the potentially increased value of customer information in association with smart meter data as a target for unauthorized use.

Policies should limit access to those employees of utilities and REPs with a business need for access. Architecture provisions should consider segregation of smart meter and customer data from other corporate and grid data, and should provide security provisions associated with that architecture that ensure access only by those with a need to know.

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

DOE can coordinate and consolidate the diversity of utility views and represent those clearly and forcefully before other agencies and Congress as needed to support this critical infrastructure to society, such as it is presently doing in a companion RFI related to communication requirements with respect to FCC proceedings on the National Broadband Plan.

The electric sector is well recognized as critical to the nation's welfare, economy, and security. DOE's scope would include its role as the sector specific agency for energy with respect to homeland security, as established under Homeland Security Presidential Directive 7 (HSPD 7).

DOE can also directly solicit the views of state agencies that have regulatory jurisdiction over utilities.

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

Access to individual energy consumption data should be pursuant to governing laws that protect civil liberties, except as otherwise mandated pursuant to applicable laws, rules, and orders that regulate utilities (*e.g.*, laws regarding utility regulatory commission authority over utilities).

Access to aggregated data that does not identify individual customers should be available to Federal, State, and Local governments to support the energy policy and planning responsibilities of those units of government.

(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, and what standards, guidelines, or practices might best assist third parties in handling and protecting this data?

i. Access to individual customer information

Except in the two instances mentioned below, no third parties (other than the utility and or REP providing service to that customer) should have access to individual customer information or data except as explicitly authorized by the customer. If a third party is a contractor to a utility or a REP and that contractor is providing services that would otherwise be provided by the utility or the REP, then that third party should be allowed to have access to customer consumption data if it is necessary for the performance of their assigned tasks. That contractor would be subject to the same confidentiality requirements as the utility and the REP. The only other instance in which a third party should have access to customer energy information is if the disclosure of that data is required by law.

Clear processes or frameworks should be established by utilities or their respective state regulatory authorities that provide the means for customers to authorize third parties to have access to their energy information. Such processes should be clear and transparent to support the innovation and array of services that may be brought to customers, but it should be secure and under customer control.

ii. Access to aggregated data

Aggregated data is shared widely today. Parties who currently use aggregated data and the uses for that information include:

- Independent system operators (ISOs) and related industry organizations have a need for aggregated data for planning purposes, and utilities supply this data today;
- Utilities often report aggregated data in reports to governmental agencies and to the public;

- Governmental bodies, such as state regulatory commissions, energy commissions, and legislative bodies, have typically been granted authority under law for access to aggregated data, and they use that data to assist them in regulating and governing utilities and participants in the energy industry.

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

At a minimum, consumers should have access to any information about their consumption that is used for billing purposes. Within the Texas investor-owned utility market, for those utilities having approved AMS deployment plans, every consumer with a smart meter will have access to their meter's 15-minute interval data via a common web portal called the Smart Meter Texas Portal. This access is to the previous day's data, as well as historic data.

Further, consumers may have near-real-time access to their consumption data from the smart meter serving their premise via in-home devices or systems that meet appropriate standards for security and interoperability and are properly provisioned through their utility to their respective meter.

Third parties that are not the utility and the REP providing service to the consumer should have access only to the information that the consumer allows them to have.

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

i. Direct access at the meter

Under the advanced meter programs for investor-owned utilities in Texas, smart meters must include an industry standard interface to devices in the customer premise, so that consumers can access consumption data in near real-time. This requirement is accomplished through a ZigBee protocol wireless interface. Consumers with devices or systems that have been tested to meet the ZigBee certifications and tested for interoperability with the meters being deployed by Oncor may have these provisioned to interface to their meter. This access is controlled for security purposes and requires a provisioning process through the utility to assure that only devices agreed to by consumers are provisioned to their meter.

Once established, this mechanism provides raw meter data on consumption and demand. The rate of updating this data is only limited by the internal cycle time of the operating system on the meter and is in the range of less than 10 seconds repeatability for the meters deployed by Oncor. It should be noted that any historical record or archival record required by the consumer must be created by their systems or by third-party services they retain, since meters do not retain long-term historical data.

This access will support a variety of functions that are perhaps only limited by the

imaginations of system developers. A simple example would be the opportunity to turn off lights, TVs, or appliances, and see in near-real-time the impact on consumption rates via an in-home display. A sophisticated example might be a system that also includes rate or price information, establishes a database, and includes algorithms that can notify consumers when consumption patterns are anticipated to cause monthly bills to exceed targets and offer the consumer suggestions to modify their consumption habits to meet their budgetary targets.

However, it should be noted that the utility meter data record remains the system of record for billing purposes.

ii. Centralized access

The smart meter platform implemented by Oncor was never envisioned to provide real-time or near-real-time access for customers via a centralized data access point. The communications network and centralized data processing systems would need to be substantially changed at substantial cost to provide such centralized access. As previously noted, a fundamental design principal for the Oncor AMS was that it would be structured to operate without broadband communications.

Customers of utilities in Texas who are implementing advanced meter systems do have centralized access to recent consumption data via the Smart Meter Texas Portal, which provides consumption data from the previous 24-hour day. Their REPs also have the same access. Discussions are underway in forum managed by the PUCT that may lead to third-party access through this portal.

(16) What steps have the states taken to implement Smart Grid privacy, data collection, and third party use of information policies?

And

(17) What steps have investor owned utilities, municipalities, public power entities, and electric cooperatives taken to implement Smart Grid privacy, data collection and third party use of information policies?

This response is to both questions (16) and (17).

As previously noted, in areas of Texas where retail competition has been implemented, state law establishes that consumers own their meter data, and that consumers may authorize third parties to have access to their data. This structure was established before the advent of “smart” meters and was established to meet legitimate consumer needs. Examples of parties authorized include REPs other than the one presently serving that customer, market aggregators, power brokers, energy management companies, and consultants (including architect and engineering firms, electrical contractors, and energy audit firms), as well as friends and family.

Today, the process for authorization is a manual, hardcopy process called a Letter of Authorization (LOA) that requires the customer's signature. With the implementation of the Smart Meter Texas Portal, discussions are underway about whether to provide to customers an electronic means via the Portal to authorize third parties to have access their consumption information.

Electronic authorization processes potentially have advantages over the manual process used today. These include timeliness, security, transparency, and visibility for consumers. An on-line process could allow consumers to review who they have granted access to (and under what terms and conditions) and to easily revoke access when desired.

For meter data that will be obtained directly from the meter by consumer-premise systems under the advanced meter system being deployed by Oncor, Oncor has implemented a secure provisioning process through which only devices authorized by the consumer may be provisioned to the meter, to prevent unauthorized provisioning and unauthorized access to the meter data.

Once consumer systems have obtained data directly from the meter, it is incumbent upon the consumer to assure security of that data, much as it is incumbent upon a consumer today to assure security of data on their personal computers that are connected to the internet. If the consumer has a third party providing energy monitoring or management services based upon that meter data, then consumers also bear the responsibility for assuring that the third-party systems provide for security, just like they must assure the security of web sites they may wish to utilize for on-line transactions such as banking or on-line shopping.

(18) Should DOE consider consumer data accessibility policies when evaluating future Smart Grid grant applications?

Only to the extent that Federal law requires it (unless the specific grant relates to consumer use of data as part of an R&D project) and that Federal law does not conflict with governing state law.

Respectfully submitted,

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