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Data Privacy and Smart Meters
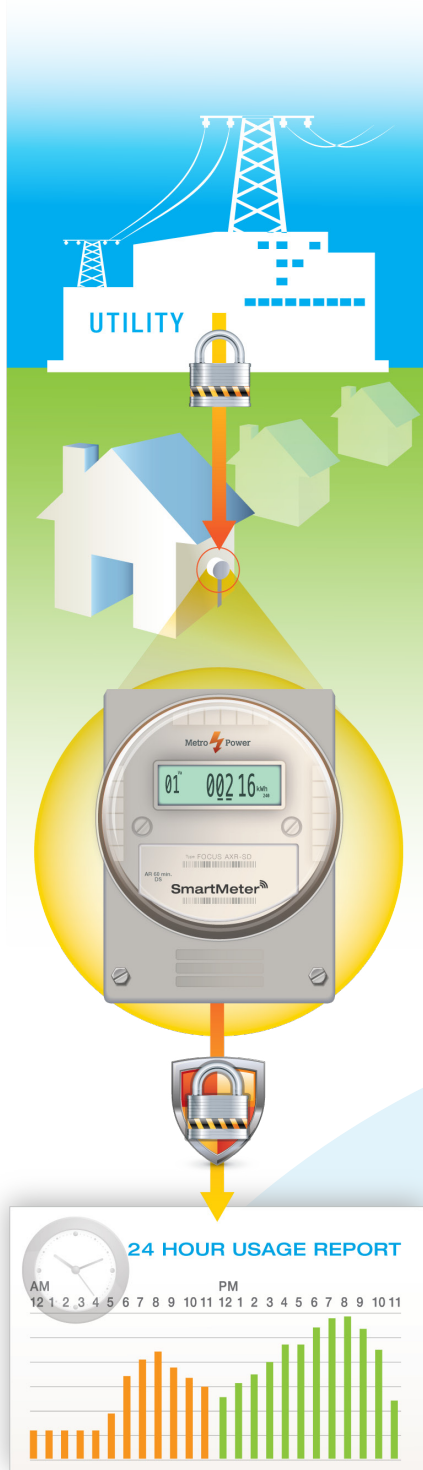
The Smart Grid

Many components of our electricity grid are decades old and wearing out. Utilities across the United States are spending billions of dollars to upgrade and modernize our electrical infrastructure with smarter technology to improve its efficiency, reliability and security well into the 21st century.

A major focus of this upgrade is to ensure that critical and timely data about the transmission of power is available. The smart meter is a key power system component that allows utilities and customers to understand how and when energy is being used. Millions of smart meters have already been installed in homes across the country. They can prevent outages and reduce the length of those that do occur. Smart meters help consumers save energy and money on their electrical bills, which helps the environment by reducing the need for constructing new power plants.

What is a smart meter?

A smart meter is a modern version of the analog meter still used in most U.S. homes. Smart meters allow for the collection of more accurate and detailed electricity usage data and enable the wireless communication of home energy usage. Instead of a meter reader walking on to your property to look at the numbers on a dial, the information is automatically and wirelessly sent to your utility over a secure network.

What data is collected and stored by my smart meter?

No customer-identifying information – such as names and addresses – is stored in the meters or transmitted across the network. Just like analog meters, smart meters collect how much electricity you use. The main difference is that smart meters collect more of that information throughout the day. Some smart meters send utilities a snapshot of customers' energy usage every 15 minutes, while others may collect hourly energy information.

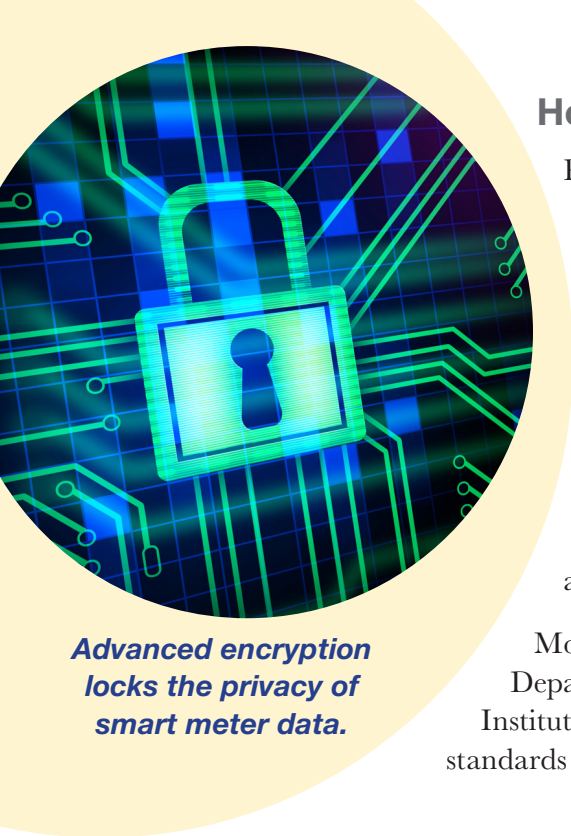Since smart meters collect and wirelessly transmit much more data about electricity consumption, it is important to have strong privacy protections in place.

Multiple layers of security protect data privacy during transmission.

How is the information protected?

Protecting customer data is a top priority for utilities. For 100 years, they have advanced strong privacy protection principles. This will not change with the use of smart meters.

Even before smart meters are installed, utilities are required to submit detailed plans to their state regulatory commissions describing how customer data will be protected. Using the same advanced methods as internet banking and ATM machines, digital smart meters encrypt (code) customers' energy usage data to ensure privacy, transmitting it to the utility over a wireless network with multiple layers of security incorporated throughout the system. The performance of security measures are tested and reviewed regularly to guard against unauthorized access to systems.

Moreover, utility companies are working with federal agencies, such as the Department of Homeland Security, the Department of Energy, and the National Institute of Standards and Technology (NIST), to strengthen privacy and security standards to provide even more safeguards for consumer protection.

Advanced encryption locks the privacy of smart meter data.

Who will have access to my information?

Access to information is restricted to authorized utility personnel, who need that data to satisfy a business function, such as improvements in billing and customer service.

The White House, in partnership with utilities, has initiated a program called "Green Button" designed to give consumers access to their own energy usage data. Utilities that participate in the Green Button program will allow consumers to easily access and securely download their own household smart meter data. Additionally, using the Green Button, consumers will be able to choose to share their smart meter data with companies delivering new services such as smart thermostats, remote home control systems and smart appliances.

Green Button Download My Data ®

In conclusion…

The privacy of electricity usage data is protected now and that will not change with the use of smart meters. Electric companies, the federal government, and the suppliers of critical electric grid systems and components are working together to strengthen consumer safeguards, develop a best-in-class data security model and enforce its implementation.

We encourage you to take the time to get to know your electric provider's privacy policy and commitment to keeping client data safe. With that assurance, you will feel free to enjoy the many benefits of a modernized power grid system, including the ability to manage your electricity use and save money, increased reliability of power delivery, and the integration of clean, renewable energy sources to help power our homes in the 21st century.

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Working for a consumer-friendly, consumer-safe smart grid

SGCC is a consumer focused non-profit organization aiming to promote the understanding and benefits of modernized electrical systems among all stakeholders in the United States. Membership is open to all consumer and environmental advocates, technology vendors, research scientists, and electric utilities for sharing in research, best practices, and collaborative efforts of the group.

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