

Security

SAFEGUARDING DATA THROUGH SMARTER TECHNOLOGY

AS SECURE AS ATMs

Smart meters are a key component of the smart grid. From physical restrictions to layered security approaches to unique identities, ComEd implements multiple levels of cyber-security to protect smart meters, our customers' energy-usage data and our electric system.

- We use state-of-the-art cryptographic technologies, similar to those used by global financial institutions and the U.S. Department of Defense to protect against unauthorized access to your personal information. We encrypt all customer-related, energy-use data transmitted by smart meters using methods similar to those used for online banking and ATM machines.
- We regularly test our information systems to deter hackers, identify potential weaknesses and ensure that the highest standards of cyber-security are maintained.
- ComEd, the industry at-large, state regulators and our technology partners continue to monitor security issues and evolve our standards and technology to safeguard against potential threats.

Securing our customers' energy-usage data is absolutely central to our commitment to provide you with the best service possible. The confidence of our customers is what has enabled ComEd to serve northern Illinois for more than a century.



SMART METER BENEFITS

Once installed, smart meters will provide the following benefits:

Access to more information about your home's electricity usage, which you can access securely through the Internet, to give you greater control over your energy consumption.

Eventual access to special pricing options that reward you for voluntarily reducing consumption during designated peak usage times.

A reduction in utility operating costs by eliminating manual meter reading and manual meter service connections when customers move in and out.

Smart meters are an important part of a modernized electric grid that, when complete, can notify ComEd when an outage occurs and when power is restored.

For more information, visit ComEd.com/SmartGrid

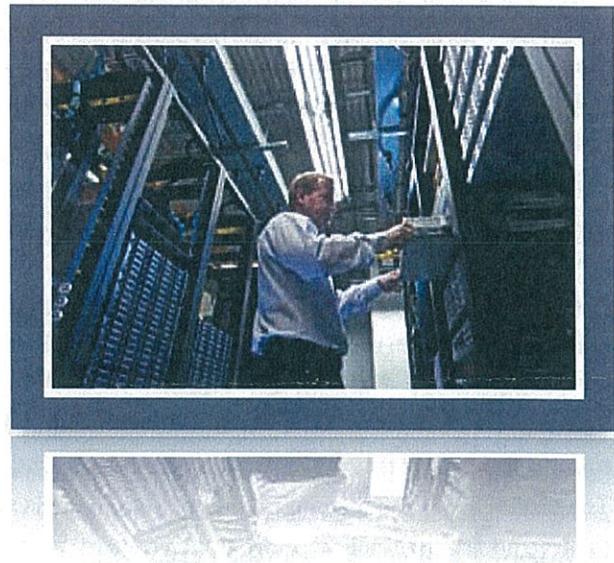
SAFEGUARDING DATA THROUGH SMARTER TECHNOLOGY

ComEd is modernizing its electric infrastructure to provide customers with a stronger, more reliable electric system.

ComEd also plans to introduce new, state-of-the-art technologies – including smart meters – to create a smart grid that supports the 21st century economy.

To protect both our electric system and customer-related energy-usage data, these technologies include the latest in security features.

- Security is built into every element of the smart grid including hardware devices, software operations and network-level transactions.
- Systems and personnel must go through a multi-factor authentication process each time they connect to secured data sources making sure that customer data privacy is maintained at all times.
- Customer data is encrypted using methods similar to those used for ATMs and online transactions.



SMART METER SECURITY

Securing our customers' energy-usage data is absolutely central to our commitment to provide you with the best service possible.

Energy-use data transmitted by our smart meters is encrypted using methods similar to those used for online banking and ATM machines.

Information systems are tested regularly to deter hackers, identify potential weaknesses and ensure that the highest standards of cyber-security are maintained.

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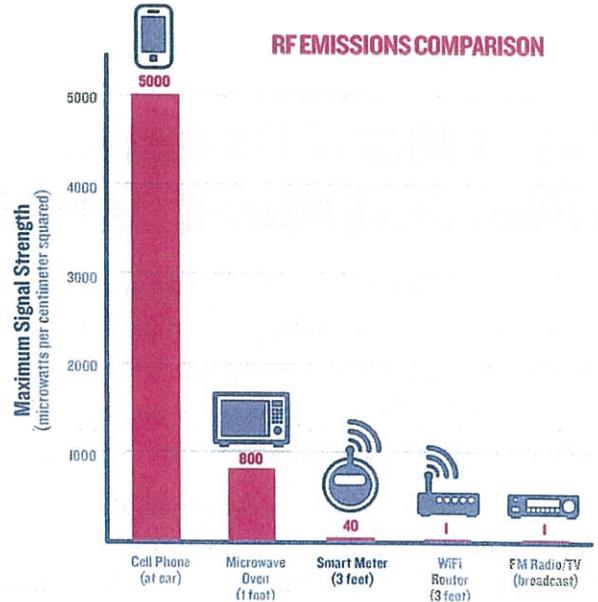
Radio Frequency

ENSURING SAFE TECHNOLOGY IS PART OF A STRONGER, MORE RELIABLE GRID

UNDERSTANDING RADIO FREQUENCY

Radio frequency (RF) describes the energy associated with electromagnetic waves. Any device that utilizes wireless technology produces RF emissions, so we encounter RF emissions daily from many sources. The RF exposure a person might encounter from a smart meter in a typical household setting can be of significantly less strength than RF signals a person may be exposed to from many common, electronic devices found within the home. Because of their proximity in the home, the following list of home electronics can subject people to far stronger RF emissions than a smart meter:

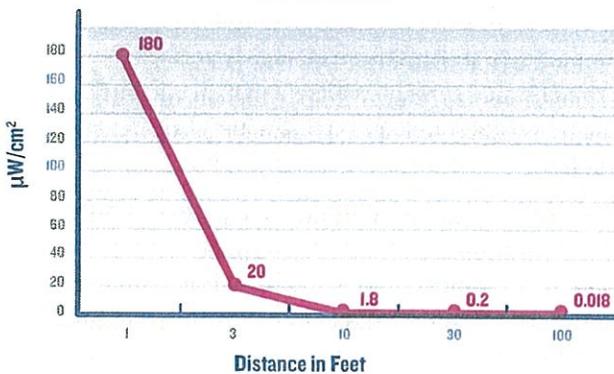
- Cell phones
- Microwave ovens
- Wireless computer networks (Wi-Fi)



Adapted from the California Council on Science and Technology smart meter study published in April 2011.

As the chart in the upper right shows, the exposure from a cell phone is hundreds of times greater than exposure from a smart meter. The chart shows RF levels for smart meters based on the meter always being in “transmit” mode (smart meters do not continuously broadcast). Moreover, because smart meters are typically installed on the outside of the home, the actual exposure to its RF emissions would be significantly lower than the already low values shown on the chart. Lastly, the strength of the RF signal originating from a smart meter diminishes rapidly the further a person moves away from it; and objects between a smart meter and a person, such as a brick wall, further reduce the amount of RF signal to which that person might be exposed (see chart below).

POWER DENSITY FROM A SMART METER BY DISTANCE



Source: “Radio-Frequency Exposure Levels from Smart Meters; A Case Study of One Model,” Electric Power Research Institute, February 2011.

RF AND YOUR HEALTH

The safety of ComEd’s electric infrastructure for its customers and employees is the top priority for ComEd. The company continues to monitor scientific research conducted on RF emissions and, to date, finds no evidence that RF emissions from smart meters pose any specific health risk. In addition, the FCC sets limits on the maximum permissible exposure for emissions of RF-emitting devices. The type of smart meter used to help build the smart grid operates at levels that are hundreds of times lower than the FCC limit.

For more information, visit ComEd.com/SmartGrid

ENSURING SAFE TECHNOLOGY IS PART OF A STRONGER, MORE RELIABLE GRID

ComEd is modernizing its electric infrastructure to provide you with a stronger, more reliable electric system. ComEd also plans to introduce new, state-of-the-art technologies to create a smart grid that supports the 21st century economy. Smart meters are a key component of this effort.

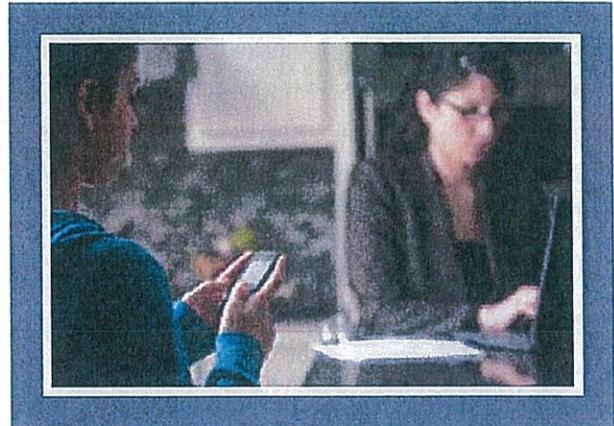
Some customers have asked us about potential health risks associated with smart meters, including the effects of radio frequencies (RF) emitted from these meters. Although smart meters use radio technology, under typical circumstances a person would receive significantly less RF exposure from a smart meter than from many other electronic devices that are used daily, including cordless phones, cell phones, microwave ovens and baby monitors.

The bottom line:

- Numerous studies conducted on the effects of RF on human health found no evidence that RF emissions from smart meters pose any specific health risk.
- Smart meters comply fully with Federal Communications Commission (FCC) health and safety standards and emit RF signals far weaker than levels permitted by the FCC.

Our smart meters comply fully with Federal Communications Commission (FCC) health and safety standards and emit RF signals far weaker than the levels permitted by the FCC. There is no evidence to suggest that RF emissions from smart meters pose any specific health risk.

The RF exposure a person might encounter from a smart meter in a typical household setting can be significantly less than the RF signals they are exposed to from common, electronic devices found within the home.



HOW SMART METERS WORK

ComEd's smart meters will eventually replace standard meters that most customers have today, and will be installed in the same meter socket that is usually located outside the home. Smart meters contain two, low-power radios:

- One low-power radio transmits electricity-use information back to the utility for billing purposes; the same job that meter readers now perform. Transmissions are intermittent, which means this low-power radio does not continuously broadcast all day long.
- The other low-power radio allows energy-usage data to be sent to an in-home device, such as an energy display or a "smart thermostat" that the customer would elect to purchase and install within their home. This radio is neither turned on nor used unless the customer requests that the smart meter be connected to one of these in-home devices.

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PROTECTING THE PRIVACY OF OUR CUSTOMER-RELATED DATA

THE INFORMATION WE COLLECT

Modernizing the electric system includes replacing the standard analog meters our customers use today with new digital meters, called “smart meters.” Just like standard meters, smart meters will measure the amount of electricity you use – not how you use it. They are not surveillance devices. Smart meters only contain the meter identifier and total energy information. No customer-identifying information is stored in a smart meter, nor is customer-identifying information transmitted across the network.

Once installed, smart meters will:

- Electronically transmit interval usage data back to ComEd to eliminate the need to send meter readers onto your property.
- Monitor service voltage data information, which is important to verify that your service is delivered within required limits for operating household and business equipment.

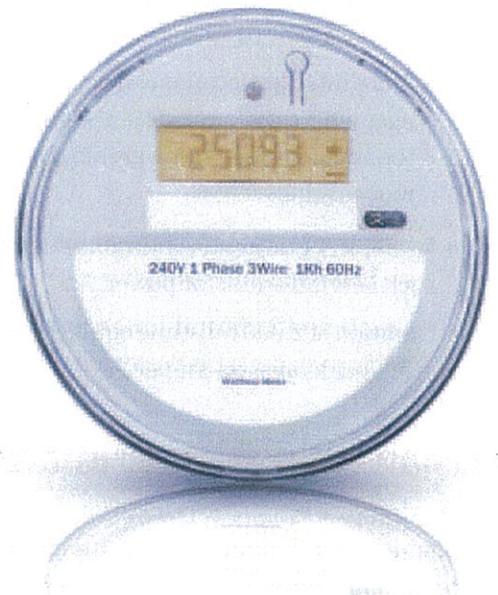
This data will be encrypted before it is transferred across our secure network. Each new meter also will contain safeguards designed to prevent unapproved, outside parties from retrieving the data.

WHAT YOU GET IN RETURN

Once installed, smart meters transmit information to ComEd electronically so that:

- You receive more information about energy use, which will allow you to better understand and manage your home’s energy use and your energy bill.
- Once the smart grid is complete, smart meters will signal to us when power has been lost, which helps us respond to outages more quickly and efficiently.

Your confidence in our ability to protect the privacy of our customer-related data is important to us. After all, earning the confidence of our customers is what has enabled us to serve northern Illinois for more than a century.



PRIVACY OF OUR CUSTOMER ENERGY-USE DATA

We are dedicated to maintaining the highest level of security to ensure that customer-related energy usage data remains confidential and secure at all times.

Smart meters contain safeguards to prevent unapproved, outside parties from retrieving data.

For more information, visit ComEd.com/SmartGrid

PROTECTING THE PRIVACY OF OUR CUSTOMER-RELATED DATA. INCREASING YOUR CONTROL OVER ENERGY USE.

Over the past decade, information technologies, such as cell phones, ATMs and WiFi, have greatly improved how we live and work. These same technologies are now being used to modernize the nation's electric system and create a smart grid that supports the 21st century economy.

The benefits of a smart grid include:

- Fewer and shorter outages through devices that can automatically reroute power when problems occur, once the smart grid is complete.
- Operational efficiencies that will create savings which will be passed on to all customers.
- More information about your home's electricity usage, which you can access securely through the Internet to give you greater control over your monthly bills.
- Easier integration of renewable energy sources, such as wind and solar power.
- Creation of 2,000 full-time equivalent jobs at the grid's peak investment period.

PROTECTING DATA ABOUT OUR CUSTOMERS' ENERGY USE

Making sure customer-related energy use information remains confidential and secure has always been a top priority for ComEd.

- In accordance with relevant laws and regulations, we will not disclose or sell any personally identifiable energy use information without approval, except when required by law.
- ComEd complies with the Illinois Consumer Fraud and Deceptive Business Practices Act, which provides that an electric service provider shall maintain customers' personal information "solely for the purpose of generating the bill for such services" and, in general, may not divulge the information except when required by law.



- The Energy Infrastructure Modernization Act, which authorizes ComEd's smart grid, also contains requirements for maintaining the privacy of customer-related data.

Even beyond these requirements, we are fully committed to maintaining not only the privacy of customer-related energy use information, but of all electronic information associated with our system. This is absolutely central to our mission, and our systems are designed to meet the highest standards of cyber-security.

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