

The modernization of Duke Energy’s power grid is under way in Ohio.

What is the smart grid?

A smart grid is a power distribution system that uses digital technology to enable two-way “conversation” between Duke Energy and our customers, using advanced meters and other high-tech communications equipment. It’s a new way of working with our customers – helping them to manage energy better, save money and help the environment.

By giving Duke Energy timely information about what is happening on our system, the smart grid allows us to quickly detect and resolve problems, prevent and shorten power outages, improve service reliability and give customers information to better manage their energy use.

How does it work?

It starts by installing communication nodes alongside our transformers. These devices may not look high-tech, but they are the “brains” of the smart grid system. They create a virtual energy network – collecting data from the smart meters and other digital equipment on the power lines, and sending it over a wireless network back to Duke Energy and then back to the customer. We will install about 10,000 communication nodes in Ohio in 2010.

Smart digital meters give the communication nodes something to talk about – valuable data about a home or business’s energy use. Since 2008, when the Public Utilities Commission of Ohio approved our smart grid program, Duke Energy has installed approximately 60,000 smart electric meters and 40,000 smart gas meters in Ohio. And in 2010, we are on our way to installing about 80,000 more smart electric meters and 60,000 more smart gas meters.

This map shows where meters are scheduled to be installed starting in 2010. Duke Energy customers who live in counties / areas not shown on the map should expect to receive smart meters starting in 2012 and beyond.



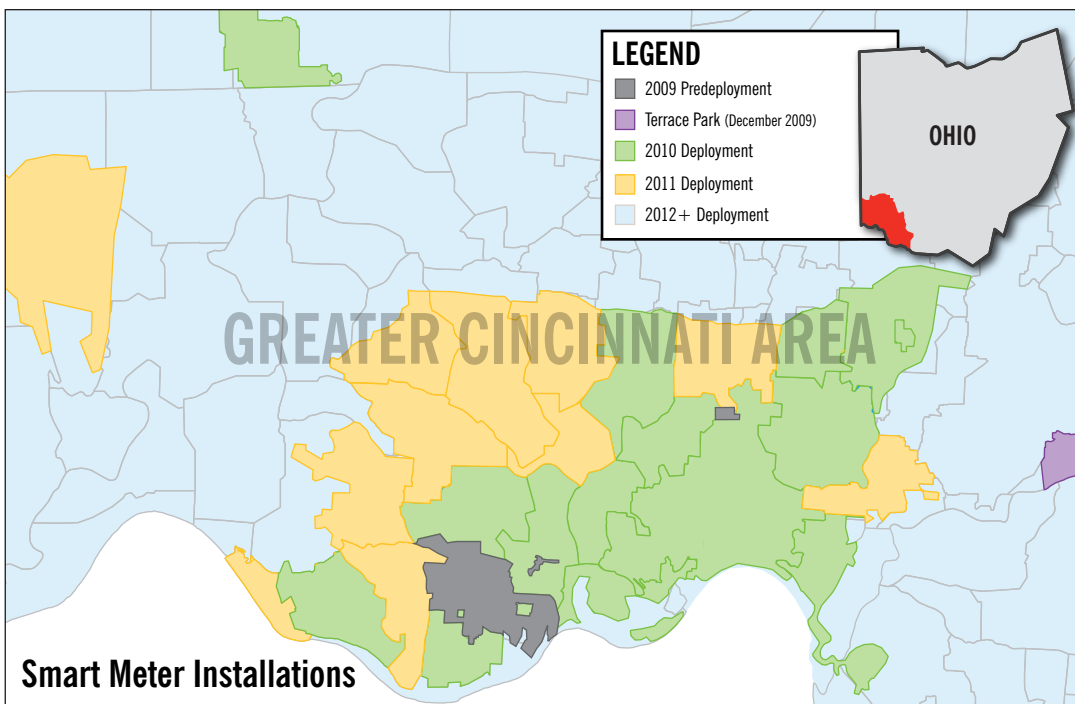
Overhead Communications Box



Underground Communications Box



Smart Electric Meter



[view a larger, detailed map of smart meter installations](#)

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What are the benefits?

Smart meters will enable some immediate benefits, including remote meter reading, which will reduce the need for a meter reader to enter a customer's home, as well as the need for estimated bills. Remote service connections and disconnections will eliminate the need for scheduling appointments, which means faster service when moving or leasing a property to new tenants.

The smart meter will also capture daily energy usage data, which will be available online to customers the next day. Having daily information available on a more timely basis will help customers make wiser energy decisions and avoid billing surprises at the end of the month.

And since the smart meter is capable of two-way conversation with computer systems back at Duke Energy – we will know more about outages than we know today, which could help us respond faster to restore service. And while we'll have more information about outages, customers should continue to call Duke Energy to report power outages.

But there's more to a smart grid than what happens at the meter.

In 2010, we plan to continue installing electronic breakers, digital sensors and automated switching devices. This distribution automation equipment will give Duke Energy more detailed information about what's happening on the grid which can help prevent and shorten outages. In some cases, the equipment will operate automatically to restore power for customers.

What about the cost?

To cover the cost of grid modernization, customers in Ohio will see incremental increases in their monthly electric bills each year, depending on the actual cost of deploying the new technology. Annually, Duke Energy will file a request with the PUCO for the cost of our smart grid efforts less any savings realized from the use of the technology. The PUCO has capped the amount customers will pay for the program, so increases in residential customers' monthly electric bills will not exceed \$0.50 in year one, \$1.50 in year two, \$3.25 in year three, \$5.25 in year four, and \$5.50 in year five and thereafter. These annual increases are not cumulative and are subject to regulatory approval. We are awaiting approval from the PUCO to recover costs associated with upgrading gas meters.

What happens next?

Customers will be notified by mail when their old meter is about to be changed for a smart meter, and door hangers will let them know once the new meter has been installed. A follow-up letter will confirm that Duke Energy is ready to begin reading the meter remotely.

Duke Energy will also let customers know as new energy efficiency programs and services become available. Meanwhile, customers can visit duke-energy.com to sign up for Online Services and find helpful tips on how they can begin saving energy now.

A smarter future

We continue to explore new energy efficiency programs, billing plans and customer service options to make our customers' energy experience more convenient and economical. The smart grid is creating new opportunities for innovation and energy management. It lays the groundwork for new energy efficiency programs to help our customers save energy and money, and provides better capability for the use of renewable energy – helping to reduce our impact on the environment.

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