

Smart Meters: The First Step into Tomorrow

Smart Meters not only collect timely information about each customer's power usage, they also can share that information directly with AEP Ohio. This will:

- Reduce outage response time.
- Eliminate the need for on-site meter readings.
- Make new pricing options possible.

SMART Shift: Customers who participate in this program will receive a lower rate for electricity used during "off-peak" times (when demand for electricity declines and it is less expensive to produce) and a higher rate for "on-peak" times (when demand for electricity is higher and more expensive to produce). By simply moving electricity use to off-peak times, customers will be able to save money on their electricity bill.

SMART Cooling: Residential customers with central cooling systems can help reduce demand during summer months and conserve electricity by participating in this program. Through a programmable communicating thermostat, a customer's temperature is adjusted slightly during periods of high electricity use.



Information Means Innovation

As part of the gridSMART Demonstration Project, AEP Ohio is working with global partners to test these innovations and more:

- **Smart appliances** that can work with a smart meter to respond to high energy demand and operate all or parts of the appliance when costs are lower.
- When an outage occurs, **Community Energy Storage** devices can help keep the lights on for a period of time.
- **Plug-in Electric Vehicles** are being tested for integration into the electric grid and to determine customers' usage patterns.
- **Voltage Controls** within a distribution power station can conserve electricity without affecting performance or delivery of service.

Security is Primary

Working directly with the U.S. Department of Energy and Lockheed Martin, AEP Ohio is creating a unique Cyber Security Operations Center in Columbus. This high-level hub is being developed for advanced security checks and balances.

Testing of all hardware and applications is being done at AEP's Dolan Technology Center and in the field before becoming a part of the system.



gridSMART[®]

From **AEP OHIO**[®]

gridSMARTSM from AEP Ohio: the Start of a Powerful Future

In northeast Central Ohio, the gridSMART Demonstration Project Launches the Future

The AEP Ohio gridSMART Demonstration Project is a new way to think about electricity ... providing better information and new ways to better manage electricity costs.

Right now, we're collaborating with 110,000 customers to demonstrate how gridSMART technologies will make a difference in homes and businesses by testing digital communications, automation functioning and new programs and services.

AEP Ohio will be able to demonstrate how smart grid technologies provide customers with greater energy control, improve electricity delivery, and cut energy consumption and emissions. Plus, the feedback we receive will help us roll out programs and technologies successfully to other AEP Ohio customers.

Customers in parts or all of these communities are participating in the gridSMART Demonstration Project, and will soon discover how best to make these technologies work for them!

Blendon Township

Columbus

Jefferson Township

Mifflin Township

New Albany

Plain Township

Sharon Township

Worthington

Clinton Township

Gahanna

Johnstown

Minerva Park

Pataskala

Reynoldsburg

Westerville

Behind the Advanced Technologies ... A Simple Idea

"Knowledge is Power" ... that's the simple idea behind the gridSMART Demonstration Project. The more customers know about their electricity use, the more they can control it.

The gridSMART Demonstration Project is about two-way communication between customers and AEP Ohio.

- The customer gets timely information on how much power they are using, how much it costs and when they are using it. This can help customers save money and energy without giving up convenience.
- We get information that helps us better detect power outage locations so repairs can be begin quickly.

