

Life on the Smart Grid

Advanced Metering Infrastructure (AMI) Will Bring Big Changes

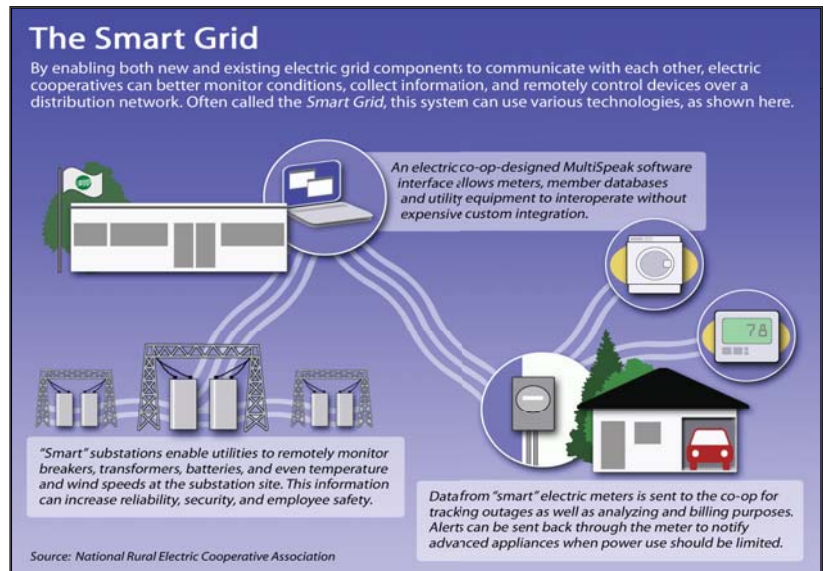
Imagine it's a hot summer day. Air conditioners across New England are cranked up, causing the demand and the price of electricity to soar. At home, your smart meter is receiving the latest price information and (if you've given your consent) automatically shuts off your water heater, turns off the heating element in your clothes dryer and nudges up the temperature in your refrigerator by two degrees. When you get home, you go online to check your electricity consumption for the day and see the drop in your usage that corresponds precisely with the increase in demand and price. Not only did you save some money, you helped the region meet its demand for electricity without the need to build additional power plants. That saves us all money.

This is just one of the benefits that smart grid technology offers for Co-op members. Starting later this year, NHEC will begin replacing all of its existing electric meters (approximately 83,000) with "smart meters". They are an important part of so-called "smart grid" technologies that use two-way communications, advanced sensors and controls to help reduce members' energy use, improve the efficiency of the electricity grid, and optimize the integration of renewable energy systems. NHEC's AMI project may also include in-home energy management systems and intelligent controls in appliances, giving members more choice and control over how and when electricity is used.

THE TWO COMPONENTS

NHEC's AMI project has two components – a Smart Grid Investment Project (SGIP) and a Smart Grid Demonstration Project (SGDP).

- The SGIP involves the creation of a communications infrastructure and the replacement of all electric meters. NHEC is working to create a communications infrastructure comprised of microwave and fiber optic links across the length and breadth of New Hampshire that will allow all 83,000 electric meters to receive and transmit data.
- The SGDP is a program involving a limited number of NHEC members that is meant to demonstrate the advanced capabilities of the AMI. After installing smart meters, NHEC will install 1,000 load management switches at participating



members' homes in the demonstration project area. These switches will remotely control devices and appliances such as water heaters or electric thermal storage heat, helping NHEC reduce its members' peak load, thereby reducing the overall cost of electricity for the entire membership. In addition, 500 in-home displays will be delivered to selected members' homes, allowing them to understand their energy use patterns, view real-time usage data, historical data and actual costs. The demonstration area will initially include member sites in the Lakes Region area, but after assessing the results of the demonstration project, NHEC expects to make these capabilities available to all members.

PROJECT COSTS

The total cost of the SGIP is approximately \$35.5 million. The total cost of the SGDP is approximately \$4.7 million. With the support and assistance of project advocates, including the Office of U.S. Senator Jeanne Shaheen (D-NH), NHEC was able to qualify for a total of \$18.2 million in federal grants. This total includes a Smart Grid Investment Grant of \$15.8 million and a Smart Grid Demonstration Grant of \$2.4 million. These grants were awarded by the Department of Energy using funds that were part of the American Recovery and Reinvestment Act of 2009.

NHEC Foundation Awards \$220,000 in 2009

In a year that saw it surpass the \$1 million mark in charitable giving since its inception, the New Hampshire Electric Co-op (NHEC) Foundation awarded more than \$220,000 to 39 non-profit groups in 2009.

Founded in 2005, the NHEC Foundation is funded by over 39,000 Co-op members who agree to have their monthly electric bills rounded up to the next dollar with the proceeds benefitting the Foundation.

Grants were made to non-profits across New Hampshire, reflecting NHEC's broad service territory. Grants were broken out as follows: Community/Economic Development - \$23,000; Cultural/Arts - \$6,400; Educational - \$70,685; Health & Social Service - \$116,101; Historic/Preservation - \$4,500.

Recipients of some of the largest awards included the New Hampshire Food Bank (\$16,888), Society for Protection of NH Forests (\$10,000), Boys & Girls Club of the Lakes Region (\$10,000), Whole Village Child Care Center of Plymouth (\$7,500), American Red Cross (\$5,000 for services provided during 2008 Ice Storm), Pemi Baker Home Health & Hospice (\$5,000), New Durham Food Pantry (\$5,000 to support building improvements). A complete list of 2009 awards, as well as more information about the NHEC Foundation, is available online at www.nhec.coop/community_nhecfoundation.

The NHEC Foundation is the primary source of funding for Project Care, which works in conjunction with social service agencies to assist Co-op members in crisis situations pay their electric bills and avoid disconnection of service. The Foundation also funds the NHEC Chapter of Dollars for Scholars, which last year awarded six \$1,500 scholarships to college or college-bound Co-op members.



Watts Happening

Board of Directors Meetings

The NHEC Board of Directors regularly meets on the last Tuesday of each month at the Cooperative's headquarters in Plymouth. Please check the Board of Directors page on the Co-op website at www.nhec.coop, or call Sharon Yeaton at (603) 536-8801 to confirm the current month's meeting time and location.

Attention Business Owners

The Co-op wants to partner with you for the benefit of our members and your bottom line. We're always seeking member businesses that are willing to offer Co-op members discounts on your products or services. It's a model that's worked well for the 30 or so businesses that have participated over the past seven years. Here's how it works - you offer a discount on a product or service, we put a coupon in our newsletter. You get free advertising to 80,000 members who receive the newsletter and a lot of new business. If you'd like to work with us, please contact Seth Wheeler at wheelers@nhec.com, or call (603) 536-8685.

Annual Meeting Is June 10

Save the date - Thursday, June 10, 2010 is the 71st Annual Meeting of Members. For the second year in a row, the Annual Meeting will be held at the Plymouth Regional Senior Center in Plymouth. We'll also be serving dinner again, so please join us for dinner and stay for a look at how your Co-op is doing in these challenging times. More information will be provided in the April newsletter and online at www.nhec.coop.

Co-op Classifieds

Buy or sell online with Co-op Classifieds. Ads are free of charge to Co-op members; no limit to number of ads. To get started, visit us online at www.nhec.coop.

Zero Interest Loans for Energy Efficiency Improvements

In addition to rebates of up to \$4,000, NHEC is offering zero interest loans to qualified residential members who invest in energy efficiency improvements.

The Home Performance with ENERGY STAR® program starts with a comprehensive home energy audit to determine where improvements are needed. After the assessment, your contractor will prepare a work proposal outlining recommended improvements. These improvements may qualify you for a 75% rebate up to \$4,000 to help you pay for the improvements. To help cover the rest of your out-of-pocket expenses, an interest-free revolving loan fund is available with repayment periods depending on the amount of the loan (max. loan is \$7,500).

For added convenience, billing will be equal monthly payments on your electric bill. This program was established by a grant from the Regional Greenhouse Gas Emissions Reduction Fund. Complete program details and eligibility guidelines are available on the Home Performance with ENERGY STAR page at www.nhec.coop.



For member service
please call
1-800-698-2007
Monday-Friday, 8-5:00
or visit us online at www.nhec.coop

To report an outage
please call
1-800-343-6432

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