

Rutland Herald

This is a printer friendly version of an article from www.rutlandherald.com
To print this article open the file menu and choose Print.

[Back](#)

Article published Jul 24, 2011

Getting smart about energy and the economy

By Jim Merriam

So what is this smart grid all about, anyway?

This is a question we frequently get at Efficiency Vermont, from families and businesses wondering what the smart grid means for them, and how they will benefit from it. It is an important question, because in 2009, Vermont received one of the nation's largest federal grants for smart grid, \$69 million, which will be matched with \$69 million in investment from Vermont utilities.

This funding will bring smart grid technology to about 85 percent of Vermont homes and businesses over the next several years. This will make Vermont a national leader in the deployment of smart grid technology. But what does it all actually mean, and what are Vermonters getting for this significant investment?

Here is one textbook definition of smart grid: "A power system architecture that permits two-way communication between the grid and essentially all devices that connect to it, ultimately all the way down to consumer appliances."

This definition might be technically correct, but it still doesn't answer the basic questions. What is the smart grid? And what does it mean for the individual consumer?

First and foremost, the smart grid is a means to an end. It is a tool that, like all tools, has no inherent value beyond its ability to help us do things that we think are useful. Smart grid is a combination of technologies and programs that will help Vermont families and businesses better understand and take control of their energy usage and energy costs.

In a way, the smart grid is similar to the Internet. The Internet has no value by itself; its value is in all the things it enables us to do that make our lives better and more productive — or, sometimes, less productive.

Efficiency Vermont's focus is squarely on how the investment in smart grid can benefit Vermont consumers. Our mission is to help families and businesses save energy and save money, and we see smart grid as a new tool to help achieve that goal.

How will this happen?

For consumers, smart grid means vastly improved opportunities to understand how they are using energy, what that usage costs, and how they can save energy and save money. Instead of just getting a bill at the end of each month, smart grid will enable consumers to see their energy usage and costs in much greater detail. This will enable you, the consumer, to make decisions that could lower your energy use, your energy costs, and even your carbon footprint.

Today, using energy is like shopping in a grocery store where nothing has a price on it — you just pay a total bill when you get to the checkout line. With smart grid, your ability to see the price of each "item" will increase dramatically, enabling you to make choices that

match your priorities and your budget.

How might this look in practice? One possibility is that you could visit a website that would help analyze your energy usage and provide you with energy-saving recommendations. Or you might have a display on your wall that resembles a digital thermometer, providing information about energy usage and costs.

As with the Internet, the ways in which consumers might be able to make use of their smart grid energy usage information is almost limitless. We are only in the early stages of understanding what the potential might be.

What we do know is that the potential for consumers to reduce their energy usage and save money is very real. According to a study published in 2010 by the American Council for an Energy Efficient Economy, programs that provide consumers with detailed feedback on their energy usage resulted in households reducing their electricity usage by an average of 4 to 12 percent. Generally speaking, the more detailed and frequent the feedback, the higher the savings for consumers.

Efficiency Vermont is working to identify the smart grid technologies that will be most effective in helping consumers reduce their energy usage and costs. In collaboration with Vermont Electric Cooperative, we are conducting a pilot program to better understand what type of information feedback is most useful to consumers and helps them to save the most money.

Since all Vermonters are helping to pay for the smart grid investment, it is vitally important that all Vermonters benefit from that investment. That is why we are also conducting a pilot program to better understand how smart grid technology can specifically benefit low-income ratepayers.

The benefits of smart grid technology are already evident for many large businesses, who often track their energy usage very carefully. By working with these businesses to analyze their patterns of energy usage, Efficiency Vermont has been able to help them identify additional savings opportunities that contribute to their bottom line. As the smart grid technology is deployed we will be able to bring this service to help more Vermont businesses save energy and money.

Ultimately, the value to Vermonters of smart grid is not related to what smart grid is, but what it can do for us. As Vermont's smart grid infrastructure is put into place, Efficiency Vermont will be developing ways to engage families and businesses in using this technology to save money and save energy.

Jim Merriam is the director of Efficiency Vermont and can be contacted at jmerriam@veic.org www.encyvermont.com; [http://www.encyvermont.com/\[URL\]](http://www.encyvermont.com/[URL])

[/URL]
