

Vermont SMARTGrid: Smart meters and rates, bills, and project funding

What is “smart grid”?

“Smart grid” is an upgraded electric system that uses fiber optic cable and digital technology to relay information back and forth between customer meters and the utility, and between the utility and various components of the electric grid. When fully operational, smart grid will provide a more reliable electric system, with the ability to more easily incorporate renewable energy sources and to offer customers innovative rate options and other tools to better manage their electric use. For individual customers, the key to smart grid is a “smart meter.”

Why do we need a smart grid?

The electric power grid has been a primary driver of the economy for more than a century. It contributes incalculably to the comfort, security and safety of everyday life. However, the demands of the digital age, the cost of energy, population growth, and concerns about the environment, reliability and security are increasing requirements from the electric system. By updating this critical infrastructure, and offering new rate choices for customers, the smart grid will provide new tools to improve reliability, increase security and balance the increasing demands of the electricity system.

How will the smart grid technology upgrades be paid for?

In Vermont, the American Recovery and Reinvestment Act grant funds awarded by U.S. Department of Energy will pay up to half of the cost of these upgrades. The remainder will be an investment by Vermont utilities on behalf of customers. The operational cost savings that utilities will achieve from using smart grid technology will offset some or all of the cost of smart grid infrastructure upgrades.

Will the smart grid offer me opportunities to save on my electric bill?

Yes. As smart grid technology and smart meters, are implemented in Vermont, utilities will offer programs that allow residential customers to monitor and control their electric consumption through the use of in home displays, home area networks, and web presentment, combined with new pricing options. These programs will provide opportunities for consumers to reduce their energy consumption during peak times when prices are high, and shift it to off-peak times when the prices are lower. In the future, as new services such as plug-in hybrid and electric vehicles become more commonplace, these pricing plans will enable consumers to charge their vehicles when prices are low.



Smart meters have a digital display in place of the row of dials in mechanical meters.

When will these smart grid programs be available to me?

Although all of Vermont’s utilities are working together towards a common goal in smart meter installation, the start-up of new pricing structures will vary from utility to utility. Check with your electric provider to see when these programs will be available to you.

Will the smart grid affect my current electric bill?

Vermont utilities expect that consumers will experience no immediate cost impact from the implementation of smart grid technology because operational savings and grant funds will offset the costs of equipment and installation.

Are smart meters more accurate than mechanical meters?

In Vermont and around the country, experience with new smart meters shows that they are very accurate. In an independent study commissioned by the California Public Utilities Commission, all meters tested were accurate within .01%. Vermont's standard for meter accuracy is +/-4%. Occasionally older mechanical meters slow down so they do not register all the power consumed. In these cases the more accurate electronic meter may correct this slowness, resulting in a more accurate reading that measures all of the power. Experience with smart meters to date has shown that a difference between readings on an old meter and a smart meter occurs infrequently.

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For more information: <http://www.velco.com/smartgrid> or <http://www.sgiclearinghouse.org/>