

Home Energy Reports: Bringing Low-cost Savings to More Vermonters

REPORT AND ANALYSIS



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Key Findings

- > In the first 6 months, the pilot has saved 3.5 million kilowatt-hours for 100,000 customers, a total cost savings of over half a million dollars
- > Highly-specific data is a crucial component to creating accurate, useful reports
- > Customer input and responsive programming are key to success

Vermonters are committed to using resources wisely and investing for the future.

The creation of Efficiency Vermont -the statewide energy efficiency utility, is evidence of this commitment. Efficiency Vermont was engineered by Vermonters to reduce energy use and associated costs for residents and businesses alike. This investment has helped our state in countless ways, including stabilizing and lowering energy costs through reduced need for new power plants and transmission lines, and driving economic growth in the clean energy economy.

But this positive cycle of investment only continues when Vermont home- and business-owners continue to reduce their energy use by installing more efficient equipment, appliances, and lighting, for example. Through education, services, and incentives, Efficiency Vermont helps Vermonters overcome the technical and financial obstacles to making efficiency improvements, opening the door to lower energy costs in the long term.

Innovative by design

The formation of Efficiency Vermont was an innovation in and of itself. The idea of a public utility whose sole resource was based on energy *not used* was a groundbreaking concept when the Vermont Legislature created the nation's first energy efficiency utility in 1999.

Most Vermonters can remember the first time they saw the strange glass coil of tubing called the compact fluorescent lamp or CFL. This technology is now commonplace. To get to the next level of energy savings through lighting required new technology, making way for super-efficient LEDs. Efficient lighting is a case in point of why one innovation must always be followed by another. Efficiency Vermont is constantly looking towards the future: towards something that will catch the attention of the market, drive energy savings, and deliver value to customers.

Today, not only are we bringing the latest technologies to market, we are leveraging customer energy usage data to achieve highly targeted savings for homeowners. It's about taking efficiency to the next level, and delivering value at an even lower cost than we do today.

Introducing Home Energy Reports

Conservation is nothing new to Vermonters. Hanging laundry to dry or turning down the thermostat are common practices in many homes. But until recently, we haven't had an effective method to measure energy savings driven by conservation actions. Behavioral Savings give us a way to quantify those conservation efforts by measuring energy use before and after a change in behavior.

One programmatic approach to achieve Behavior Savings is through Home Energy Reports. Home Energy Reports provide customers with data on their energy usage compared to others, thereby empowering him or her to make changes to the way they use energy. Their usage data can then be used to measure those energy saving behaviors, and drive deeper savings.

Applied research has shown that comparing people's performance to one another drives behavioral changes—from recycling to carpooling. This forms the backbone of the Behavioral Savings approach.

Efficiency Vermont's first step in using this approach came in late 2014 when customized Home Energy Reports were sent to 100,000 randomly-selected households. A control group

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of 20,000 additional customers, to whom no Report was sent, was established as well. This created the conditions for a scientific study to measure the savings that resulted from the Reports alone.

Similar approaches have been implemented by nearly 100 utilities across North America—and it works. For example, Efficiency Nova Scotia has been running a similar program for several years, resulting in \$3.4 (US) Million* in energy savings for its customers in 2014 alone.

There can be downsides, however, to the Behavioral Savings approach. Comparison of energy usage—even when anonymous—makes some people uncomfortable. For some, what happens inside our homes, including how we use electricity, is a personal matter. During the initial phase of this program we heard this sentiment from 0.2% of those who received Home Energy Reports.

While this is a modest number of customers, it was enough for us to pause and review the information going out in Home Energy Reports.

Customer Feedback

Since launch, Efficiency Vermont's customer support team has fielded 1002 inquiries regarding the Home Energy Reports. While the majority of recipients view the reports favorably, there are also customers who responded less positively. Some felt judged or frustrated because they used more electricity than others due to running a small business out of their home, having a large family, or operating essential medical equipment. Others had increased their electric use as a result of converting to electric devices like a heat pump or EVs, and felt their report contradicted their overall more sustainable energy choices. Still other Vermonters weren't sure why they were using so much electricity, and wanted advice on how to reduce their usage.

Of the 988 inquiries, the top questions and concerns to our customer support team broke down along the following themes:

- *Those seeking more information - 23%*
- *Validity of the neighbor comparison - 15%*
- *Perception of shaming or being judged - 10%*
- *Questions regarding type of heat used in household - 6%*
- *Accuracy of the underlying data - 6%.*

We also conducted a satisfaction survey to capture a wider range of feedback beyond those who called our call center. Here are some of the highlights:

- *701 Report recipients responded to the survey.*
- *71% recalled having received the Report and of those, 92% viewed it favorably.*
- *Of the 8% of respondents who did not view it favorably, 72% still saw the value in the Reports.*
- *Those who were unfavorable cited concerns consistent to those we fielded through customer support: neighbor comparisons, perception of being judged, heat type, and accuracy.*

**This number has been evaluated but not verified.*

Home Energy Reports will continue to grow in accuracy as more data about recipients' homes is added, such as square footage or occupancy.

Customer feedback has always been and will continue to be important. It helps us to learn, evolve, and provide the highest quality services.

Based on this feedback, we have taken steps to improve the Reports. For example, we are helping high energy users focus on achievable goal settings, and helping Report recipients update detailed information about their home in order to make their Reports even more accurate.

Home Energy Reports will continue to grow in accuracy as more data about recipients' homes is added, such as square footage or occupancy. We did not have access to this type of data during the launch of these Reports, making nuanced situations hard to reflect. We hope to integrate this type of data to provide a deeper level of accuracy in coming months.

The Results

Preliminary results show that the Home Energy Reports are effective in motivating customers to save energy. Compared to the control group that did not receive a Home Energy Report, the active group saved a combined 3.5 million kilowatt-hours (November 2014-May 2015).

That equates to the following:

- *Enough savings to power 6,315 Vermont homes for a month*
- *Total cost savings of over \$535,000.*

Next Steps

Serving all Vermonters with simple and low-cost ways to save energy is core to Efficiency Vermont's mission. Based on these early results, coupled with the positive customer feedback and changes to the Report, we see the Home Energy Reports as consistent with that mission.

The next round of Home Energy Reports is scheduled to be in homes in August, 2015 and will include a letter from our Director, Liz Gamache, providing additional background and context. We have also improved the website, offering more information and ways to improve the Report experience. And as always, our customer support specialists are ready to answer questions, opt customers out should they wish, and point people toward achievable next steps.

Customer feedback has always been and will continue to be important. It helps us to learn, evolve, and provide the highest quality services. After all, efficiency works best when many people lend their voices and join together in collective action.