

March 8, 2011

Susan M. Hudson, Clerk
Vermont Public Service Board
112 State Street
Montpelier, VT 05620-2701

Re: Efficiency Vermont 2011 Annual Plan

Dear Ms. Hudson:

In its memorandum of January 28, 2011 (“Efficiency Vermont’s Annual Plan for 2011”), the Public Service Board (Board) suggested that Efficiency Vermont make revisions to its 2011 Annual Plan in response to comments from the Board and the Department of Public Service (Department). In response, Efficiency Vermont is circulating this letter to the parties, and which will be posted on the Efficiency Vermont website with the submitted Annual Plan.

Retrofit vs. Market Opportunities: In its comments of January 6, 2011, the Department suggests a clarification that, consistent with prior Board guidance, Efficiency Vermont does not emphasize retrofit opportunities over market opportunities. Efficiency Vermont agrees with this comment; although addressing retrofit opportunities is part of its overall strategy, it is not given preference over market opportunities.

Geographic Targeting: The Department suggested that Efficiency Vermont provide more information with regard to its plans for Geographic Targeting for 2011. A summary of those activities is provided as Attachment A.

Leveraging: The Department suggested that in its discussion of leveraging ratepayer funds, Efficiency Vermont illustrate how this has been accomplished in the past. Two recent examples are provided below.

The first is Efficiency Vermont’s successful application to the U.S. Department of Energy for a grant to study the potential benefits of Smart Grid technology on households eligible to receive low-income Weatherization assistance. This grant application proposed using \$200,000 in ratepayer funds to leverage approximately \$700,000 in additional federal funding for this important research.

The second is Efficiency Vermont's support for residential retrofit work in the Rutland area being coordinated by NeighborWorks, a non-profit organization, with funding from the federal Energy Efficiency and Conservation Block Grant program. This initiative uses NeighborWorks funds to support Efficiency Vermont's Home Performance with ENERGY STAR[®] program, in an effort to expand the number of residential retrofit activity, particularly in Rutland County. NeighborWorks hopes to complete 1,000 projects over the 2011 through 2013 time period. If this goal is achieved, approximately \$1.13 million from NeighborWorks will leverage Efficiency Vermont's contribution of \$1.97 million.

Solar Hot Water Measures in Heating and Process Fuel Initiatives: Both the Department and the Board expressed an interest in being kept closely informed regarding potential Efficiency Vermont support for solar hot water projects, prior to implementation. As with other emerging technologies, Efficiency Vermont will continue to evaluate solar hot water measures, their operating characteristics, energy savings potential, and cost-effectiveness. Efficiency Vermont will keep the Board, the Department, and other stakeholders informed of its findings, plans, and expected expenditures.

Research and Development: The Department requested descriptions of any significant research and development projects contemplated by Efficiency Vermont for 2011. Two such projects are planned. The first will investigate the use of social networking tools to encourage higher levels of individual and community engagement in energy efficiency activities. The second will investigate the costs and potential for savings for ultra-low-load residential buildings, and the possibility of their being incorporated into Efficiency Vermont's Residential New Construction market. Both projects are described in more detail in Attachment B.

Efficiency Vermont appreciates the comments from the Department and the Board on its Annual Plan.

Sincerely,



Jim Merriam
Director

Attachment A Efficiency Vermont Geographic Targeting Initiatives for 2011

Preliminary Geographic Targeting savings results through 2010 indicate that summer peak (kW) demand savings are 9,328 kW, or 115% of the 3-year performance period target and the winter peak (kW) demand savings are 2,073 kW, or 86% of the 3-year target.

The Geographic Targeting strategy for 2011 continues to focus on increasing participation and installing measures that reduce peak demand in the targeted areas. Efficiency Vermont will encourage deeper savings and higher participation in these areas by providing greater levels of technical assistance, financing assistance, and financial incentives. Efficiency Vermont will use several approaches; many are extensions of earlier efforts, whereas others are enhancements of existing strategies or new initiatives.

BUSINESS INITIATIVES

- **Key Account Management.** This proven strategy continues in 2011. Efficiency Vermont will continue to seek customized solutions for the specific needs of large and mid-sized businesses and institutions statewide, with a special focus on opportunities for the 108 key accounts in Geographic Targeting areas. Efficiency Vermont will proactively help identify efficiency opportunities that respond to corporate needs, and will work within customers' planning cycles to move opportunities forward. This strategy will leverage Efficiency Vermont incentives and the market resources of design professionals, vendors, and trade allies. The strategy includes both retrofit and market opportunities approaches.

- **Direct installation.** Efficiency Vermont will conclude the Lighting Plus direct installation program in the first quarter of 2011. The program was targeted to commercial customers in Geographic Targeting areas. Since its launch in 2007, Lighting Plus has been successful in achieving important energy and peak demand savings in those areas. After more than three years of intensive effort, Efficiency Vermont is beginning to see higher program delivery costs, indicating that the customer market is approaching saturation. Business customers in Geographic Targeting areas can now take advantage of the newLIGHT initiative, a prescriptive rebate program delivered primarily through electrical contractors. Due to wide availability and prescriptive nature of the program, many more businesses will be able to participate.

- **Municipal Street Lighting Initiative.** In October 2010, Efficiency Vermont launched the Municipal Street Lighting Initiative, which encourages municipalities to develop comprehensive streetlight projects that can be considered for Efficiency Vermont incentives. The initiative has four components:
 1. *Step-by-Step Guide: Improving Efficiency in Municipal Street and Public Space Lighting.* Efficiency Vermont has prepared a step-by-step guide to help municipalities improve efficiency of municipal street and public space lighting. This guide addresses both the elimination of unnecessary streetlighting and the conversion of the remaining fixtures to LEDs. The guide is available here: http://www.energycvermont.com/stella/filelib/EVT_MunicipalStreetLightingGuide_Final.pdf

2. *Workshops.* Efficiency Vermont organizes workshops for municipal officials and staff, and local energy committees to review the steps outlined in the *Guide*.
3. *Technical Assistance.* Efficiency Vermont is providing technical assistance to help municipalities develop projects to improve efficiency in municipal street and public space lighting. Municipalities that sign a Memorandum of Agreement will be provided with up to 12 hours of technical assistance to develop a project scope and budget and to implement steps outlined in the *Guide*.
4. *Financial Assistance.* Efficiency Vermont will offer municipalities financial incentives equal to their electric utility's charge for the un-depreciated costs of the existing fixtures being removed and/or replaced.

Several municipalities have indicated an interest in participating in the initiative; outreach to municipalities in the Geographic Targeting areas will be expanded in 2011.

- **Customer-Specific Outreach.** In addition to the commercial initiatives outlined above, Efficiency Vermont plans to use multiple approaches to increase participation and to acquire peak demand reductions among businesses in the Geographic Targeting areas. Efficiency Vermont's database allows identification of Geographic Targeting customer accounts, review of those accounts' energy consumption and demand (when available), and the tracking of historical participation. With this information, Efficiency Vermont can identify customers with characteristics that could make them good candidates for peak demand reduction measures. Some of these customer-specific characteristics are:
 - Non-participants
 - High summer / winter peak (kW) demand
 - High energy (kWh) consumption
 - Participants with expired or expiring efficiency measures

Once Efficiency Vermont identifies these customers, it will use multiple strategies to reach them and explore the opportunities to complete energy efficiency projects with them. Here are some of the outreach strategies to be used in 2011:

1. *Small Business Marketing Campaign.* Targeted messaging delivered to the appropriate customer segments, informing them of the opportunities to reduce their energy use and demand. One example of our small business marketing campaign includes this piece:



2. *Business Energy Ambassadors.* The Business Energy Ambassadors program is designed to increase small business investment in energy-efficient products and to increase participation in Efficiency Vermont programs. Efficiency Vermont will partner with one or more business associations in selected regions to organize volunteers to conduct on-site “business energy visits.” Each volunteer will be trained to identify basic energy saving opportunities. The volunteers will review the newLIGHT and other initiatives with business owners during the visit. The Business Energy Ambassadors program will target businesses that could benefit from the limited-time, enhanced financial incentives being offered by Efficiency Vermont. Volunteers will provide information to businesses and property owners on steps they can take to pursue energy-saving opportunities and how to access Efficiency Vermont’s incentives. Business Energy Ambassadors was launched in several areas across Vermont in 2010 and will continue to be offered in Geographic Targeting areas in 2011.

3. *Personal Outreach.* Where it makes sense, Efficiency Vermont will reach out through its Customer Support and Development group or other staff to engage with customers who appear to have opportunities to save energy and reduce demand.

RESIDENTIAL INITIATIVES

- o **Efficient Products.** Efficiency Vermont will continue to focus on providing incentives at the point of sale of efficient products bought at retail stores, and on upstream markdowns and buy-downs that reduce the retail cost of efficient products. This approach has proven to be an effective method for influencing buying decisions for energy-efficient products. Efficiency Vermont has an established network of more than 95 retail partner stores in Geographic Targeting areas and has continued to expand its network of retailers throughout this contract period. Efficiency Vermont will continue to use the ENERGY STAR® brand as its cornerstone approach for raising consumer awareness and confidence in energy-efficient products. These efforts will include special promotions of higher-performing ENERGY STAR appliances where possible. Specifically, Efficiency Vermont will continue to offer these approaches to reduce first-cost barriers. We will also continue to support the manufacturer-distributor-retailer supply chain in 2011 by providing:

1. *Negotiated cooperative promotions* (NCPs, also referred to as “product buy-downs” or “markdowns”), in which manufacturers and retailers reduce the retail costs of efficient products for consumers. This practice will continue to be the primary mechanism for promoting efficient lighting products. NCPs provide both a highly effective means of overcoming the first-cost barrier for consumers and a greater role in product selection for Efficiency Vermont. NCPs also allow Efficiency Vermont to promote specialty CFLs and other lighting products that have a history of high-quality performance.
2. *Instant rebate coupons* for energy-efficient lighting products not covered by NCPs in more retail locations statewide, as well as special coupons for residential and business customers in Geographic Targeting areas.
3. *Mail-in rebates for appliances* that are at the upper end of efficiency within the ENERGY STAR qualifying product lines. The lines include room air conditioners, refrigerators / freezers, dehumidifiers, and clothes washers. These appliances are available in more than 18 retail locations in Geographic Targeting areas.
4. *Broad consumer awareness / education*, which will continue to promote energy-efficient products to consumers and create a stronger market for efficient products sold through the retail network.
5. *Targeted marketing and advertising campaigns*:
 - Cooperative advertising with retail partners
 - Time-sensitive promotional incentives
 - Key influencer advertisements
 - Special targeting for underserved portions of the market
 - Targeted mailings to Geographic Targeting customers
 - Targeted mailing / outreach for second refrigerator / freezer turn-in campaign
 - Retail events hosted by participating retailers in geographic targeting areas.
6. Active participation in and support for national efforts to improve energy-efficient product quality, particularly CFLs.

In 2011, Efficiency Vermont will enhance the offerings in the Retail Efficient Products market through the following initiatives:

1. *Greater emphasis and promotion of specialty CFLs* over standard spiral CFLs, through retail partner outlets.
 2. Introductory promotions of *LED lighting* to the residential market.
 3. *Targeted promotions* to small businesses across Vermont.
 4. *Instant rebate coupons* for energy-efficient lighting products not covered by NCPs in more retail locations statewide, as well as special coupons for residential and business customers in Geographic Targeting areas.
- **Existing Homes.** There are few opportunities for demand reduction in retrofit markets, but Efficiency Vermont will continue to promote the Home Performance with ENERGY STAR service in Geographic Targeting areas. A targeted mailer to customers in Vermont Gas service territory will promote enhanced incentives for domestic water heating conversions from electric to natural gas fired units, when cost-effective.

Attachment B
Efficiency Vermont Research and Development Initiatives for 2011

The following table presents a summary of the two research and development projects that Efficiency Vermont is undertaking for 2011. An overview of each project and its potential to provide benefits to Vermont ratepayers is also presented.

Criterion	Social Media Behavior Tool	Ultra-Low-Load Home Building
The opportunity addresses a fundamental need for Efficiency Vermont.	Provides a unique way for communities to engage in discussions around energy efficiency. Current tool bag for Vermont’s communities active in the energy savings field is limited; this effort addresses that challenge.	To reach long-term energy goals, the baseline energy requirement of homes must be reduced significantly. Enabling and supporting the construction of ultra-low-load homes in Vermont is a necessary part of the mission.
The activity appears to have significant value to Efficiency Vermont within a 5 year horizon	We see a significant opportunity to increase individual participation in the context of communities or other social media groups	Efficiency Vermont anticipates finding much greater energy reduction, versus baseline code, compared to current ENERGY STAR specifications.
The opportunity represents an activity unique to Vermont and that cannot leverage national or regional R&D programs.	Vermont has a significant level of awareness and community engagement not easily represented in elsewhere in the nation. Tighter communities shorten the last mile of outreach.	While studies are being completed nationwide, Efficiency Vermont will measure and monitor building performance during occupancy, specific to the Vermont environment.
The R&D opportunity benefits significantly from being evaluated within the smaller scale of Vermont – capitalizing on smaller population and geographic territory of Vermont to extrapolate to a broader goal	Vermont’s size helps determine in a faster manner the potential for this tool. Faster feedback, smaller investment, less noise in assessing impact.	Vermont offers a population that seems very willing to embrace change for the benefit of environmental improvement. The support for and offers of partnership have been overwhelming.
Local organizations are willing to partner with Efficiency Vermont and to leverage the R&D opportunity.	The following local groups have been contacted and have expressed interest and willingness to partner: VECAN, VECP, Tamarack Media - TogetherGreen Fellows Program, VPIRG, VBSR, Front Porch Forum, 350.org, OneChange.org.	An early study was performed with Habitat for Humanity, proving that ultra-low-load homes can be affordable. Many local organizations have since offered to partner in future studies.

Social Media Behavior Tool (\$30,000)

The costs of currently available tools for public outreach and engagement limit the program’s ability to leverage significant community interest in a coherent and consistent manner. Low-cost methods for information sharing and organizing are widely available, but the effectiveness of using these frameworks to deliver quantitative program benefits have not yet been demonstrated.

This project configures existing technology platforms and Internet services to meet program design



goals through increased participation rates and enhanced marketing strategies. Partnerships with local affinity organizations will be used to pilot the performance of these new services, beginning in the first quarter. Evaluations of the initial pilots will begin in the second quarter. Because the basis for this project is in information technology, there will be significant amounts of data specifics to support assessing the cost-effectiveness of the initiative. The pilot phase might be extended beyond the second quarter, if the results of the initial trials warrant it.

Ultra-Low-Load Home Building (\$90,000)

Home construction practices are rapidly evolving to support the increasing demand and need for lower-load homes. New building practices and technologies are making great strides toward enabling affordable home construction, which in turn will help meet Vermont's long-term energy goals. However, the building performance of ultra-low-load construction (extremely well air-sealed, significant insulation, solar gain optimization, appropriate ventilation, and minimal HVAC) differs from traditional building practices. It is therefore very important for builders and consumers to understand topics such as whole-house heating / cooling distribution from small point sources, indoor air quality, humidity, occupant comfort, and building durability. In addition, the current industry standard modeling tools do not accurately indicate energy consumption data of ultra-low-load homes.

To achieve the state's long-term energy goals, ultra-low-load homes must become common building practice and part of the Efficiency Vermont-supported Residential New Construction services. This project has two components;

1. Approximately ten ultra-low-load homes in the New England area will be fitted with a monitoring system so that true building performance and energy consumption can be assessed during occupancy.
2. The same homes will be modeled with industry standard software (REMRate) and with software that accounts for very low energy usage (PHPP). Both modeling strategies will be compared to actual use data collected through monitoring.

This project will allow Efficiency Vermont to better understand potential building performance issues, to determine the most accurate predictive modeling method, and to realize the true energy savings potential--above code. With this knowledge, Efficiency Vermont will be able to incorporate ultra-low-load homes appropriately into the Residential New Construction program and help Vermont new construction continuously lower baseline energy consumption requirements.