

Efficiency Vermont 2006 Executive Summary

Efficiency Vermont solidified its track record of performance and innovation in 2006, establishing a sound basis for new directions and goals established by the Vermont Public Service Board. Efficiency Vermont increased participation in its major markets, initiated innovative community-based strategies, and built new partnerships. It was a year in which the Board, by increasing budget levels, further recognized energy efficiency as a least-cost resource to meet Vermont's electric power needs and improve electric system reliability. The year featured heightened public awareness of the value of energy efficiency and formal recognition by the regional transmission organization, ISO New England, for electricity savings produced by Efficiency Vermont and the region's "other demand resources." Efficiency Vermont is now uniquely positioned to pursue the new directions and goals established by the Board, and to participate regionally in delivering a landmark, cost-effective, and reliable mix of electrical energy resources.

Sustained Performance

During 2006, Efficiency Vermont achieved level energy savings in all major markets as compared to its results 2005, except in business new construction. Once again, Efficiency Vermont expanded its customer base in more ways than had occurred in the previous year. In business markets, Efficiency Vermont initiated new methods of engaging customers as they increasingly recognized the value of energy efficiency in improving their economic performance. In new and existing homes, Efficiency Vermont continued to find new opportunities to work with retailers, manufacturers, contractors, and design professionals to encourage the use of energy-efficient lighting, appliances, and heating and cooling systems. In addition to producing savings for 2006, this market transformation effort has set the stage for increased performance in the years to come.

During 2006, Efficiency Vermont increased its effectiveness in delivering services while helping Vermonters save 56,000 MWh of electricity. Savings were slightly lower than in 2005 because of lower amounts of business new construction and slightly reduced sales of retail products.

Indicators of Efficiency Vermont's performance include:

- A 7% increase in summer peak demand savings to 9.6 MW, as compared to 2005.
- In 2006, each \$10,000 spent by Efficiency Vermont resulted in 38 MWh of savings, which is comparable to 2005 results.
- A reduction in statewide sales of electricity due to both efficiency measures and a warmer-than-normal winter.

New Community Initiatives

Efficiency Vermont increased its efforts with local communities to address energy savings. This included targeted initiatives in specific towns, collaboration with local energy teams and specific outreach to the largest municipal users of electricity, water and wastewater facilities and schools.

- In Northfield and Hardwick, Efficiency Vermont began a community-wide effort to encourage broad civic participation in measures that would reverse the growth in energy use from 2006 through 2008. By the end of 2006, 30% of Northfield's electric customers

had already participated in efforts that led to achieving 23% of the community's energy reduction target. In Hardwick, participation was 37%, with 38% of the target energy reduction attained.

- Efficiency Vermont supported the Manchester Challenge, a community-based effort that resulted in the sale of approximately 42,000 compact fluorescent light bulbs over a six-month period. Given the small size of the community, this is an accomplishment that is unprecedented anywhere else in the country.
- Efficiency Vermont collaborated with the Vermont League of Cities and Towns, the Department of Public Service, Vermont School Energy Management Program, Burlington Electric Department, and Vermont Gas Systems to implement a U.S. Department of Energy Rebuild America Grant, which leveraged several other funding sources. The grant was designed to build partnerships among local governments, schools, and efficiency service providers. This effort has resulted in more than 100 energy audits of school and municipal buildings and approximately 75 completed Efficiency Vermont projects, totaling 1,700 MWh in savings. The project also facilitated development of more effective strategies for working with Vermont communities.
- In the spring of 2006, Efficiency Vermont supported a project at Middlebury College, in which students directly installed compact fluorescent light bulbs (CFLs). This led to an Efficiency Vermont-sponsored, statewide "Collegiate Change a Light Challenge" in the fall, the first initiative of its kind in the nation. The challenge resulted in the installation of more than 4,400 CFLs at 17 campuses across Vermont

Enhanced Ability to Serve Existing Markets

During 2006, Efficiency Vermont deepened the energy savings in existing business facilities and homes and in new commercial and residential construction through a variety of new approaches and strategies. Among these were:

- Efficiency Vermont's annual Better Buildings by Design Conference, now recognized as the region's premier design and construction conference, featured interactive learning about building durability, efficiency, and value. The conference drew a record 1,200 participants, a 19% increase from 2005. Sixty percent of the attendees were first-time participants.
- Within the business market, Efficiency Vermont implemented concentrated efforts in specific arenas in which support of more energy-efficient equipment, processes, and design could lead to significant savings potential. A concentration on compressed air measures led to 33 projects at 29 facilities and resulted in 3,500 MWh in savings. This year's publication and distribution of a technical brief, *Reduce Energy Use in Commercial Kitchens*, will help business customers reduce electricity costs and other energy costs associated with food preparation.
- During 2006, Efficiency Vermont initiated a concerted approach focusing on the 65 commercial and industrial customers that use over 1 MW on electricity on a single meter. As a result, Efficiency Vermont Account Managers are increasingly being brought into corporate-level discussions regarding energy efficiency with these customers. They are also actively participating in the collaborative identification of opportunities and the development of plans to reduce electrical operating costs.
- Efficiency Vermont is being honored by the U.S. Environmental Protection Agency with a national ENERGY STAR award for Excellence in Home Improvement in recognition of its 2006 efforts with existing homes. The award commends Efficiency Vermont's "strategy to build and promote a market infrastructure that has the building-science expertise necessary to address consumer needs."

Opportunities and Challenges

The two most significant developments affecting Efficiency Vermont's potential for growth in 2006 and beyond were the Public Service Board's substantial increase in the energy efficiency utility's budget levels for the contract period through 2008 and the inclusion of demand-side resources in the ISO New England Forward Capacity Market. These external developments created significant new opportunities for Efficiency Vermont.

The Board issued an order in August that significantly increased the EEU budget. This led to expanded efforts to ramp up activity to meet these new and ambitious savings goals. A subsequent Board order presented a new requirement to achieve energy and capacity reductions in targeted geographic regions.

In December, Efficiency Vermont activities were approved for Market Participant status with ISO New England. That designation provides Efficiency Vermont with an additional opportunity to participate in decisions regarding the regional electricity market. Market Participant status also allows Efficiency Vermont to receive payment from the ISO New England Forward Capacity Market for the system demand reductions that Efficiency Vermont provides to the region.

During 2006, Efficiency Vermont's performance in two important markets was less than expected with respect to the annual savings achieved. This shortfall in performance caused Efficiency Vermont to examine these markets more closely, improve information feedback processes, and, in some cases, revise projections accordingly. The markets and the lessons learned were:

- Retail Products— Sales and savings associated with retail lighting products were less than expected for the year. Several factors are likely to account for this, the chief one of which was a reduction in July in the coupon value for CFL rebates. In the past, lower incentives did not slow the market down. This year, however, it appears that lower incentives, combined with market circumstances, reduced participation and sales of efficient lighting products. Increased national demand for lighting products delayed implementation of wholesale buy-downs planned for the second half of the year. In addition, the percentage of total retail lighting products used in commercial applications decreased, compared with 2005, which resulted in significantly lower savings per product in 2006. Plans for 2007 will include key strategies for increasing retailer participation, more in-store promotions, and year-round use of buy-downs. Efficiency Vermont also intends to implement more timely feedback mechanisms regarding sales.
- Business New Construction— Although the number of business new construction projects assisted by Efficiency Vermont increased slightly in 2006 compared with the previous year, the savings per project decreased from an average of 71 MWh in 2005 to 49 MWh. This decrease appears to be due primarily to a reduction in the size and scope of commercial construction projects. Efficiency Vermont may revise its expectations for 2007 in light of these findings.

Increased Awareness of Energy Efficiency

Efficiency Vermont continues to promote energy efficiency as a cost-effective way to address Vermont's long-term energy supply as well as rising costs and environmental impact. The year 2006 may come to be remembered as a tipping point, when Americans broadly acknowledged that global warming is a reality that requires significant and meaningful action if it is to be stabilized or reduced. Throughout the year, more and more Vermonters sought Efficiency

Vermont's assistance in reducing their electricity use and providing general advice about efficiency. Some examples follow:

- The Efficiency Vermont Web site experienced a 44% increase in traffic over the previous year's traffic, with more than 232,000 visits by more than 110,000 visitors. The average visitor spent 11 minutes at the site, which is well above the industry average for comparable sites.
- Media coverage included 614 placements in print, on television and over the airwaves. The increasingly popular "Ask Rachael" column now appears in 15 community newspapers and one daily. It is one of the most consulted pages on the Web site, and experienced a fourfold increase in customer service inquiries. The column generates nearly two-thirds of our customer service e-mails.

Continued Value for Vermont's Ratepayers

Overall, Efficiency Vermont continues to demonstrate the value of energy efficiency for the state, its ratepayers, and the environment. Efficiency Vermont's efforts have saved energy and dollars, helped to reduce the state's greenhouse gas emissions, and provided significant economic value. Across the seven-year history of Efficiency Vermont, cumulative savings have risen to 318,000 MWh. This translates to a carbon reduction of 187,000 metric tons.

During 2006, our efforts resulted in a \$5,900,000 reduction in Vermonters' retail energy costs. Forty-one percent (41%) of these costs were saved by more than 685 businesses, with the remainder reflecting savings in Vermont homes.

Stimulating Vermont's Economy: Net Lifetime Economic Value for 2006

Benefits	<u>\$45,000,000</u>	Lifetime economic value of efficiency investments
Minus Costs	<u>\$14,800,000</u>	Costs paid for by investments through Efficiency Vermont
	<u>\$13,600,000</u>	Costs paid for by participant and third-party investments
	<u>\$28,400,000</u>	Total costs
Equals Net Benefits	<u>\$16,600,000</u>	Net lifetime economic value to Vermont

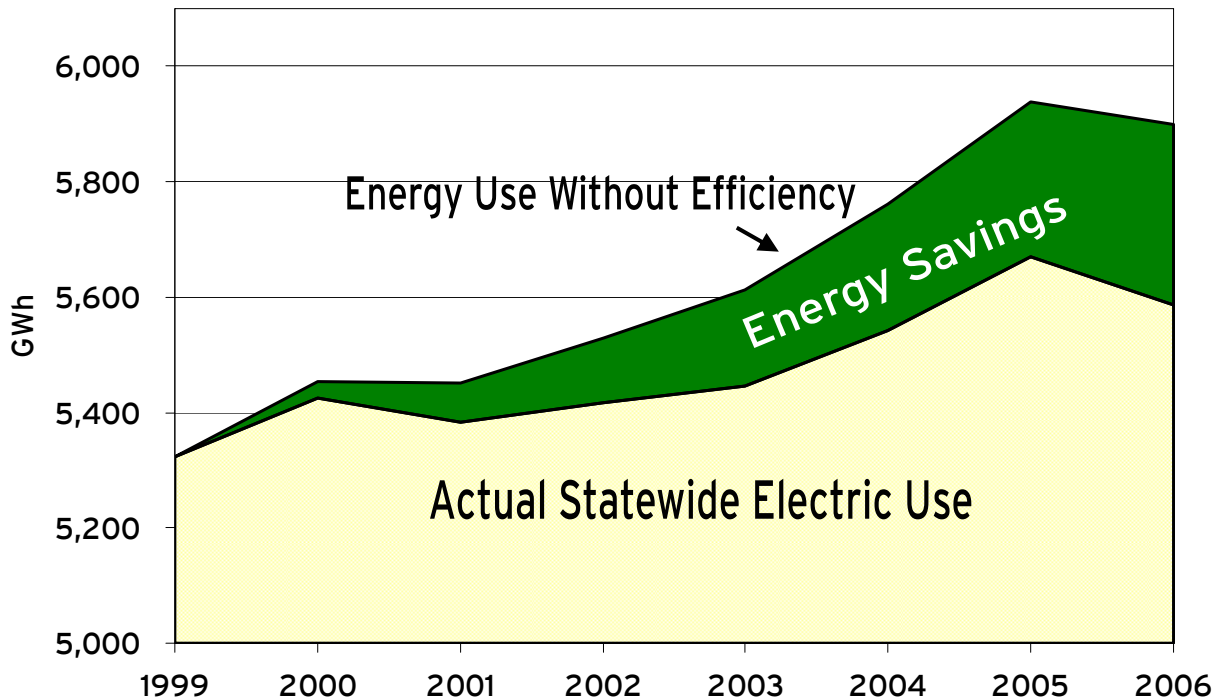
In 2006, Efficiency Vermont's total expenditures were approximately 3.7 cents per kWh for energy efficiency resources that reduce Vermont's annual need for electricity generation by 56,000 MWh, 9.6 MW at summer peak and 8.6 MW at winter peak. This cost per kWh does not include participating customers' additional costs and savings, such as customer contributions to the costs of efficiency measures and customer costs or savings associated with fossil fuel use, water use, and/or building operation and maintenance. Including these other costs and savings brings the net resource cost of saved electric energy to 3.6 cents per kWh. To supply the same energy and capacity over the average 11-year life of efficiency measures installed in 2006, Vermont utilities would have to spend, based on current values of avoided costs, 10.4 cents per kWh.

Efficiency Vermont Costs, MWh Savings, and Yield: 2000-2006

Year	Efficiency Vermont Costs	Incremental Annual MWh Savings	MWh Savings/\$10,000 Invested
2000	\$5,598,000	23,500	41.98
2001	\$8,803,000	37,500	42.60
2002	\$10,982,000	40,600	36.97
2003	\$12,958,000	51,200	39.51
2004	\$13,993,000	51,900	37.09
2005	\$15,096,000	57,100	37.82
2006	\$14,839,000	56,100	37.81

Efficiency Vermont's savings continue to have an impact on statewide electrical load growth. It is estimated that without the savings attributed to Efficiency Vermont, statewide electricity requirements would have grown at an average rate of 1.4%. Efficiency Vermont savings cut this rate by two thirds, to 0.5%.

Impact of Efficiency Vermont on Growth in Statewide Annual Electrical Use



By the close of 2006, the portion of Vermont's electrical energy needs being met through all savings delivered by Efficiency Vermont had grown to 5.3%. This meets a significant portion of the state's resource needs, effectively equivalent to what could be considered Vermont's fifth-largest utility.

Efficiency remains the state's least-cost energy resource: It reduces contributions to greenhouse gases, it is good for economic development, and it is good for the environment. Energy efficiency is now a major contributor in meeting energy needs and has demonstrated the ability to play an even larger role as part of the state's and the region's energy resource mix for the future.