

**A VERMONT
TRADITION OF EFFICIENCY**



EFFICIENCY VERMONT: 2003 ANNUAL REPORT



Efficiency Vermont

your resource for energy savings

A VERMONT TRADITION OF EFFICIENCY



The work of Efficiency Vermont is founded in the Vermont traditions of industriousness and frugality. As Vermont's statewide energy efficiency utility, Efficiency Vermont partners with individuals and businesses across the state to reduce electric use and costs. These efforts make our economy stronger by reducing the amount of money that leaves Vermont to pay for more costly electricity supply. Efficiency investments also help protect our environment by reducing the pollution caused by electricity production.

Vermonters have shown that they appreciate this practical approach to energy use. From Bennington to St. Johnsbury, businesses and households across the state are taking advantage of Efficiency Vermont's services. One in four Vermont electric ratepayers has worked with Efficiency Vermont since its formation in 2000. As businesses realize the economic benefits of investing in efficiency, they have returned to us to continue to improve their facilities and reduce their operating costs.

The bottom line is that energy efficiency is one of the best investments we can make in meeting our needs for electricity. Like any sound investment, it functions as one part of a strong, stable and diversified portfolio. It eases our dependence on other energy sources and reduces the need for upgrading the electric transmission and distribution system. As the most cost-effective part of our energy supply portfolio, efficiency lowers the total statewide cost we pay for electricity, helping to keep rates down and improve our state economy.

2003 ACCOMPLISHMENTS

In 2003, Efficiency Vermont helped 28,872 Vermont electricity customers complete efficiency investments that resulted in:

- 51.2 million kilowatt-hours (kWh) of annual electric energy savings. These savings cost Vermont electric consumers 38% of what utilities would have had to pay to purchase this energy on the wholesale supply market.
- A 6,500 kilowatt (kW) reduction in summer peak capacity requirements. This brings to 18,000 kW the total peak capacity that Efficiency Vermont has offset since 2000.
- \$45 million in total lifetime economic value over the 15-year average lifetime of the efficiency measures installed in 2003. Lifetime economic value is defined as the present value of the electricity, fossil fuels and water that are saved over the lifetime of the efficiency measures.
- A 567,000-ton reduction in greenhouse gases that otherwise would have been emitted by conventional electric generation.

VERMONT IS RECOGNIZED FOR LEADERSHIP

The year 2003 brought considerable national and international attention to Vermont for its pioneering approach to energy efficiency services. Representatives from other states, provinces and municipalities turned to Efficiency Vermont as a model in their efforts to secure a better energy future. Several locations are now considering approaches similar to Vermont's, including New Jersey, Indiana, the District of Columbia, the city of New Orleans and the Canadian provinces of New Brunswick and Manitoba.

Efficiency Vermont was honored with awards for its successful efforts in 2003, including:

- Harvard University's Kennedy School of Government *Innovations in American Government Award*.
- Two Environmental Protection Agency awards: *The Regional, State and Community Leadership for Energy Efficiency Award* for support of ENERGY STAR® products and the *Outstanding Achievement Award* for Vermont ENERGY STAR Homes.

SAVINGS THROUGH PARTNERSHIPS

We did not achieve these results by ourselves. Key to this success has been a continued growth in our strategic partnerships with a broad network of local providers of energy products and services. These partners include retailers, equipment suppliers, tradespeople, architects, engineers and other design professionals. With Efficiency Vermont's support, these partners serve as a skilled resource for their customers and clients who are seeking quality energy-efficient products and services. As a result of these partnerships, we're able to reach and help more Vermont businesses and households to save energy and money.

EFFICIENCY FOR ALL

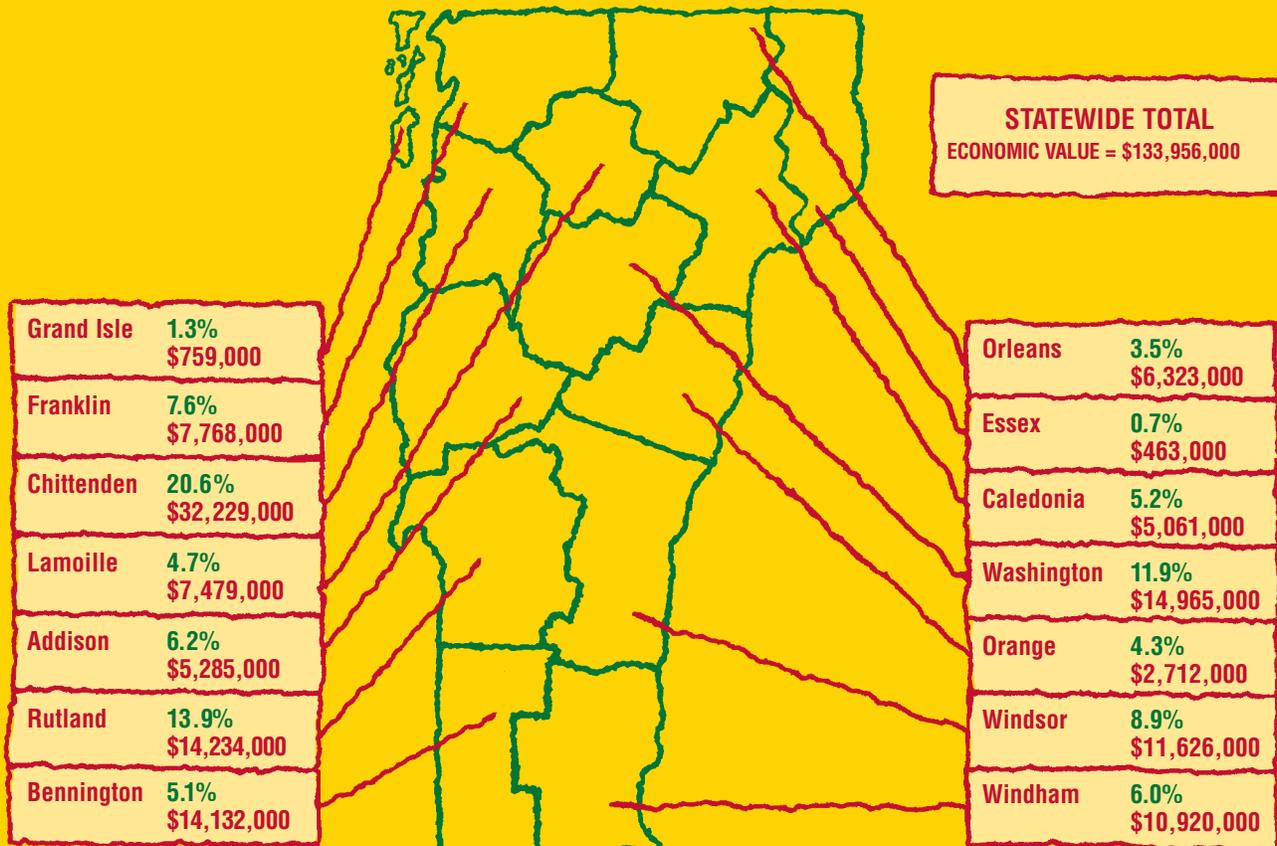
As the tables on the following pages show, Vermont households and businesses from every county benefited from Efficiency Vermont's services in 2003. This equitable statewide distribution of benefits is one of Efficiency Vermont's priorities.

DISTRIBUTION OF BENEFITS BY SECTOR

	BUSINESS	RESIDENTIAL	TOTAL
BENEFITS ACHIEVED IN 2003			
Annual kWh Savings	36,218,000	14,998,000	51,216,000
Lifetime Economic Value	\$31,666,000	\$13,140,000	\$44,806,000
CUMULATIVE BENEFITS ACHIEVED 2000 – 2003			
Annual kWh Savings	87,934,000	64,867,000	152,801,000
Lifetime Economic Value	\$76,817,000	\$57,139,000	\$133,956,000

DISTRIBUTION OF PARTICIPATION AND BENEFITS BY COUNTY 2000 – 2003

LEGEND: GREEN: % DISTRIBUTION OF EFFICIENCY VERMONT PARTICIPATION | RED: LIFETIME ECONOMIC VALUE FROM EFFICIENCY INVESTMENTS



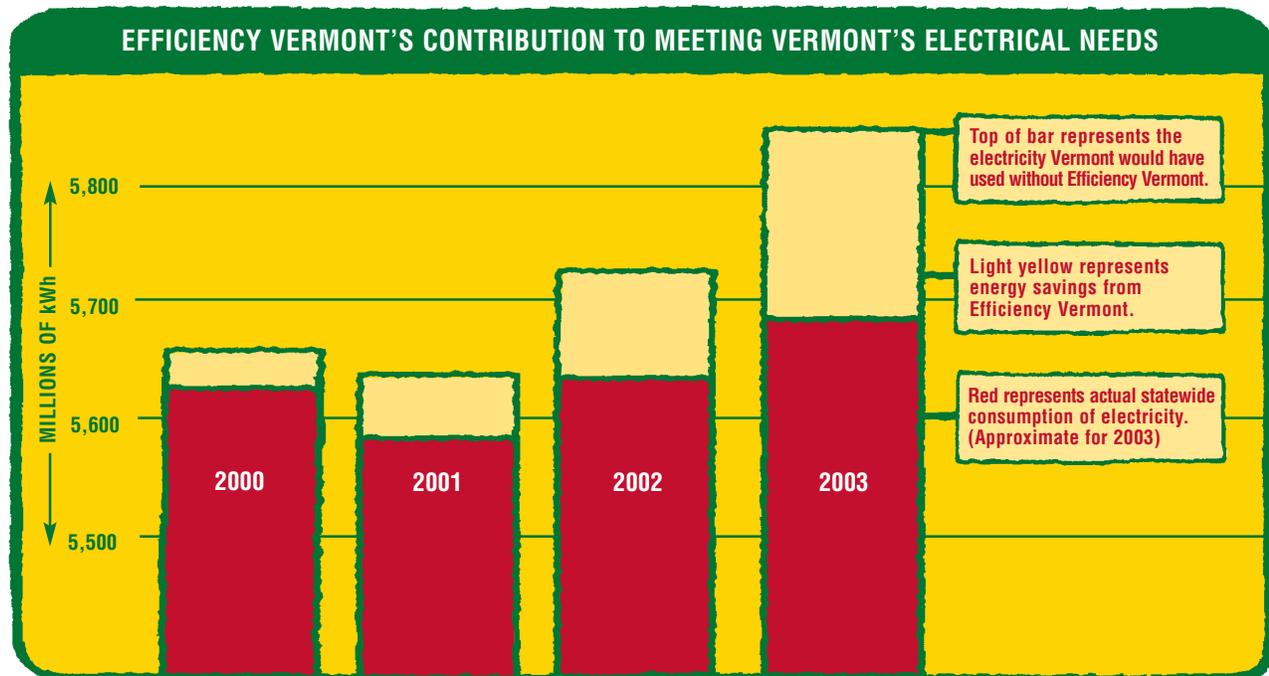
VERMONT'S MOST COST-EFFECTIVE POWER RESOURCE

Energy efficiency is the most cost-effective source of electric power available to Vermont today. By reducing electric use and demand, Vermont also reduces its need to buy electricity on the volatile wholesale market.

Vermonters who worked with Efficiency Vermont in 2003 to make cost-effective efficiency investments saved 51.2 million kWh in electric energy. Households and businesses are expected to see these savings continue every year for an average of 15 years. 2003's savings met 45% of the growth in electrical energy requirements in Vermont during the

year. This significant source of supply cost Vermont's ratepayers only 2.8 cents/kWh, saving electricity at 38% of the cost that Vermont utilities would otherwise pay to purchase comparable electricity supply on the wholesale market.

In 2003, Efficiency Vermont saved electricity at an expenditure rate of 2.8 cents per kWh.



SUCCESS SNAPSHOT:

MASCOMA SAVINGS BANK



Mascoma Savings Bank's newly constructed office building in White River Junction exemplifies innovative, energy-efficient design that will lower the owners' energy costs for years to come. This award-winning structure is the result of a partnership among the bank, Banwell Architects, GWR Engineering and Efficiency Vermont. Working with the design team from early in their process, Efficiency Vermont's Jonathan Kleinman and Jay Pilliod assessed the cost-effectiveness of energy-saving approaches while considering the owners' desire for a flexible, comfortable workspace. The result is a building that uses energy-efficient technologies to stay comfortable year-round without high energy demands and costs.

Mascoma's underfloor heating and cooling system – the first of its kind in Vermont – gives the bank maximum flexibility and increases occupant comfort through superior climate control. Offices have been placed on outside walls to take optimal advantage of natural daylight, and the building uses energy-efficient lighting controls that adjust illumination levels in response to available daylight. The design also incorporates an innovative, energy-saving ventilation system to maintain healthy indoor air at a minimal operating cost as well as high-efficiency chilled water and boiler systems.

Energy Efficiency Upgrade Costs	\$155,000
Efficiency Vermont Incentives	\$80,000
Mascoma Bank's Net Investment	\$75,000
Annual Electricity Savings	\$12,000
Customer Return on Investment	16%

STIMULATING THE STATE'S ECONOMY

Efficiency Vermont stimulates Vermont's economy by substituting efficiency for more costly energy sources. One way to measure this economic stimulus is to look at the lifetime economic value of the efficiency investments. Lifetime economic value is defined as the present value of the electricity, fossil fuels and water saved over the lifetime of efficiency measures. In 2003, the lifetime economic value of investments made by Vermonters working with Efficiency Vermont was \$51 million, based on the value of the electricity, fossil fuels and water we helped to conserve. Since 2000, when Efficiency Vermont was established, the cumulative lifetime economic value of efficiency investments totals \$134 million.

The table below summarizes the *net* economic value that Efficiency Vermont has cumulatively provided from 2000

through 2003, after accounting for the cost of efficiency investments.

As these results show, Efficiency Vermont is helping individuals and businesses to achieve a healthy return on their investments. Businesses that took advantage of Efficiency Vermont's services in 2003 should realize an average 79% return on their efficiency investment. These returns on efficiency far exceed the returns available from investment opportunities of comparable risk. These continuing savings in electricity, fossil fuel and water costs help to decrease the cost of living and doing business in the Green Mountain State.

The proceeds from efficiency investments go back to Vermont households and businesses to be reinvested in the purchase of other goods and services. Most of this reinvesting involves transactions with Vermont businesses, supporting jobs and the state economy.

STIMULATING VERMONT'S ECONOMY—NET LIFETIME ECONOMIC VALUE FOR 2000 – 2003		
Benefits	\$134 Million	Lifetime Economic Value of Efficiency Investments
Minus Costs	\$38 Million	Costs paid for by investments through Efficiency Vermont
	\$24 Million	Costs paid for by participant and third-party investments
	\$62 Million	Total Costs
= Net	\$72 Million	Net Lifetime Economic Value to Vermont

SUCCESS SNAPSHOT:

PROGRESSIVE PLASTICS



When Progressive Plastics needed to replace two hydraulic injection molding machines, the owners contacted Efficiency Vermont Project Manager Sheryl Loprete to discuss their options. Working with Wayne Ferdyn of Niigata, a supplier of injection molding machines, Efficiency Vermont was able to help Progressive Plastics analyze the benefits of upgrading to the more energy-efficient machines and then provide financial incentives to offset their cost.

The Williamstown, Vermont, company was able to reduce its electricity use by nearly 160,000 kilowatt-hours each year, but electricity savings were just one of the efficiencies that resulted from this project. The more efficient electric machines reduced the company's scrap rate from as much as 5% to nearly zero, eliminating the need to sort more than 20 million parts per year. They also eliminated the labor expense and environmental costs of dealing with hydraulic fluid from the old machines.

The new machines have even boosted productivity. The company has been able to add production shifts during the week and weekend, for a 73% increase in productivity. The new machines also shortened production cycles for a 27% increase in raw production efficiency.

Energy Efficiency Upgrade Costs	\$42,000
Efficiency Vermont Incentives	\$21,000
Progressive Plastics' Net Investment	\$21,000
Annual Electricity Savings	\$13,000
Customer Return on Investment	63%

KEEPING THE LIGHTS ON

Electric power reliability was front-page news across the country in 2003. With blackouts affecting large swaths of the Northeast, the significance of Efficiency Vermont's mission to reduce peak loads became even more pronounced. Rising peak demand in both summer and winter has caused some of Vermont's existing electricity infrastructure to reach the limits of its load-carrying capacity. Existing generation, transmission and

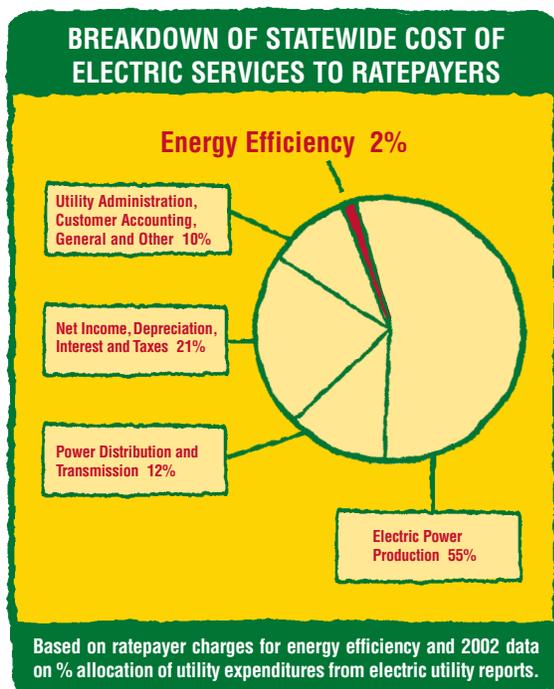
distribution facilities are increasingly stressed by the state's growing energy demands. Efficiency savings alleviate that stress. These energy savings increase the reliability of existing facilities, while helping to postpone the need for costly upgrades and expansion.

Since its inception in 2000, Efficiency Vermont has lowered Vermont's summer peak load by a total of 18,800 kW and winter peak load by 34,000 kW.

AN INVESTMENT IN EFFICIENCY

Vermont ratepayers invest 2% of the cost of their electricity service in energy efficiency. The remaining 98% is used to purchase other components of electric supply.

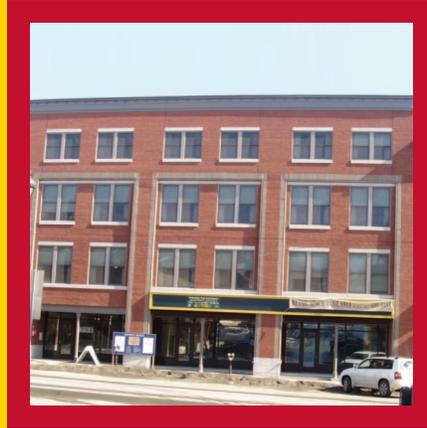
Efficiency Vermont is funded by Vermont ratepayers through an Energy Efficiency Charge on their electric bills. In 2003, collections from ratepayers were \$14 million. Efficiency Vermont spent approximately \$13 million to deliver energy efficiency services to Vermonters. The remaining funds were used by the State for evaluation and administrative costs of the Energy Efficiency Utility.



ALLOCATION OF EFFICIENCY VERMONT 2003 EXPENDITURES

Outreach and Technical Assistance	\$4,426,000
Services and Initiatives	\$2,892,000
Financial Incentives	\$5,176,000
Administration and Information Technology	\$464,000
Total Expenditures	\$12,958,000

SUCCESS SNAPSHOT:
DANIEL'S BLOCK



The Gilman Housing Trust has been a longtime champion of developing affordable and energy-efficient multifamily housing around Vermont. Olivia Bealeu, project manager for the Trust, has partnered with Efficiency Vermont on several multifamily projects, the latest of which is the Daniel's Block project in downtown St. Johnsbury, Vermont.

The original historic Daniel's Block was completely destroyed by fire in 2000. This new construction project is a historic replica of the original, including 25 affordable senior housing units and commercial space on the first floor. Efficiency Vermont Senior Project Manager Mary Jane Poynter, analyzed the building comprehensively, taking into account all aspects of the project that used electricity, water and fuel to assess which energy-efficient measures would result in the lowest costs over time.

The commercial and residential spaces were designed with efficient lighting and HVAC equipment, water conservation measures and ENERGY STAR appliances. The result is a building with historic character that provides comfortable, energy-efficient, affordable housing and attractive commercial space to support the revitalization of downtown St. Johnsbury.

Energy Efficiency Upgrade Costs	\$40,000
Efficiency Vermont Incentives	\$20,000
Gilman Housing Trust's Net Investment	\$20,000
Annual Electricity Savings	\$14,000
Customer Return on Investment	70%

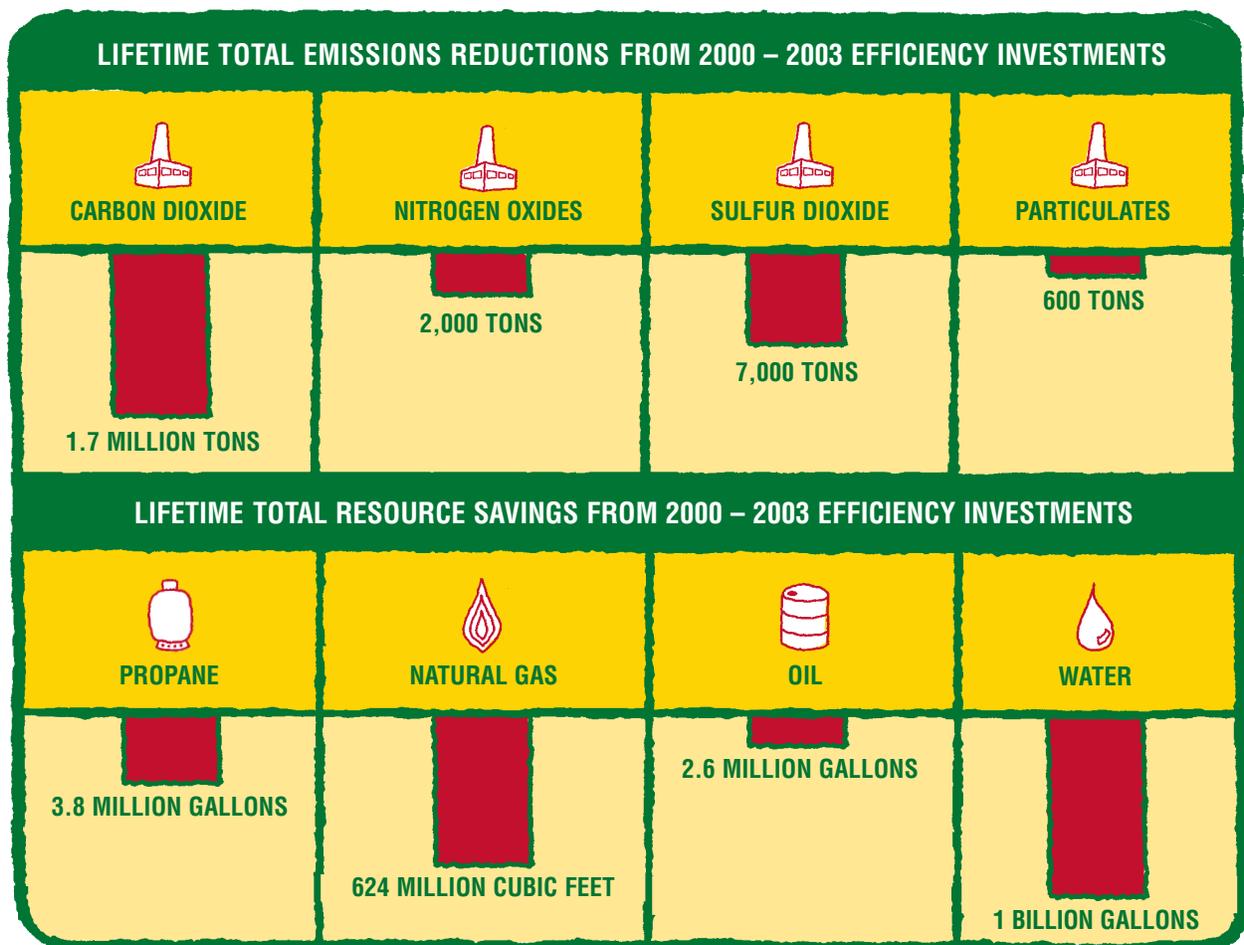
EASING THE BURDEN ON THE ENVIRONMENT

By investing in efficiency, Vermonters reduce air pollution caused by electric energy generation and the consumption of other household fuels. The charts below summarize the emissions reductions and resource savings achieved since Efficiency Vermont was established in 2000.

Saving energy in buildings is important from an environmental perspective since buildings account for roughly one-third of our total energy use, and are responsible for a similar portion of air emissions.

Reductions in air emissions improve local air quality and lower our contribution to global climate change.

To place these emissions reductions in perspective, consider that the annual reduction in carbon dioxide emissions is equal to the annual emissions of approximately 14,000 Vermont households. Another way to look at these environmental savings is that they avoid emissions that are equal to burning 685 barrels of oil each day of the year.



SUCCESS SNAPSHOT:

STRATTON MOUNTAIN RESORT



Stratton Mountain has been a leader among ski areas in incorporating energy efficiency into all of its operations from snowmaking to building construction. Stratton even has its own energy efficiency task force to work with Efficiency Vermont in pursuit of cost-effective efficiency opportunities. Efficiency Vermont Business Development Specialist Bob Morey and Project Managers Steve Booth and Mary Jane Poynter have worked with the resort for several years and are engaged with virtually every new project at the mountain.

Since 2000, when Efficiency Vermont was established, Stratton has completed many energy efficiency projects, including residential construction and a sports center heating conversion. In 2003, when Stratton built the new Stratton Mountain Club, Efficiency Vermont helped identify and analyze the savings for efficient measures and provided financial incentives to optimize energy efficiency in the facility.

The biggest energy savings at Stratton Mountain have come from several snowmaking projects. The fourth such project was completed in 2003. New snow guns were installed with enhanced design and technology to reduce compressed air consumption while increasing the amount of snow produced compared to Stratton's old system.

Energy Efficiency Upgrade Costs in 2003	\$124,400
Efficiency Vermont Incentives	\$21,600
Stratton Mountain's Net Investment	\$102,800
Annual Electricity Savings	\$80,000
Customer Return on Investment	78%

EMPOWERING VERMONTERS TO MAKE POSITIVE CHANGE

Efficiency Vermont has truly become a resource for energy savings for Vermont households and businesses. Vermonters call us every day with questions about how to lower their electric bills and save more energy in their homes and businesses. Many more visit our Web site at efficiencyvermont.com for information and links to other resources.

Financial incentives are one way we help people invest in efficiency. But just as important are our efforts to provide Vermonters with the knowledge and tools to make their own efficiency decisions now and in the future.

Our customer service representatives work with households and small businesses to analyze their current power usage and help them find ways to lower their electric bills. To complement this personal phone assistance, we've also developed some simple tools to help Vermonters analyze efficiency opportunities.

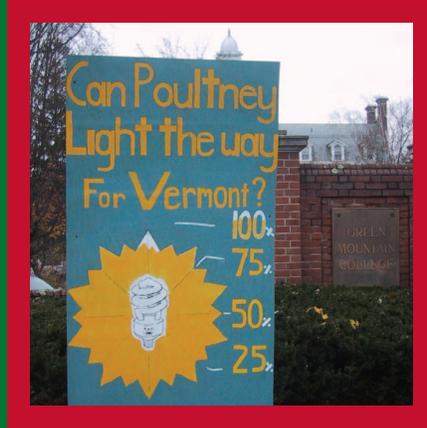
- We lend meters that measure power consumption on appliances suspected of using too much energy.
- Our easy-to-fill-out usage survey enables customers to compile information on their home energy use and then work with Efficiency Vermont to find solutions.
- We offer a home audit CD for the do-it-yourselfer to analyze power consumption and efficiency options.

Across the state, retailers, trade groups, and business and professional associations have partnered with Efficiency Vermont to provide energy efficiency training opportunities for their staffs and members. Among the many educational events we offered this year were training sessions for building contractors held at building supply stores across the state, sessions for wastewater and water professionals on motors and variable speed drives, training for Vermont's ski resort operators to help them better understand their power usage, and presentations to refrigeration contractors to inform them about new incentives for efficient refrigeration equipment.

The highlight of our efforts to support and inform building and design professionals about energy efficiency is our annual Better Buildings by Design conference. This event brings together a diverse group of more than 800 building professionals – from architects and engineers to contractors and tradespeople – to learn about advancements in efficient technologies in a hands-on setting. Attendance at this conference has grown every year, and building professionals continue to comment on how the knowledge they gain at the Better Buildings by Design conference helps them attract more new business opportunities.

SUCCESS SNAPSHOT:

POULTNEY'S CHANGE A LIGHT CHALLENGE



Efficiency Vermont sponsored a special event in Poultney, Vermont, to demonstrate how small actions by individuals or a small town can add up to make a big difference for our energy use and environment. The Change a Light Challenge asked every household and business in Poultney to replace at least one traditional light bulb with an efficient bulb. Efficiency Vermont partnered with the local Williams Hardware, the Village of Poultney, and students from nearby Green Mountain College to promote and distribute the bulbs.

The kick-off event in October 2003, held during Poultney's Annual Chili Cook-off and Homecoming Weekend, was a huge success despite the rain. Virtually every business and resident changed at least one bulb, and most bought several more. In total, Williams Hardware sold or distributed more than 4,500 bulbs in a town of about 1,500 households.

The Challenge also drew statewide publicity to the issue, with Governor Jim Douglas challenging all Vermonters to "Change a Light." If every Vermont household adopted this simple switch, Vermonters would save enough electricity to light 14,500 homes for a year.

“ We wouldn't hesitate to do a Change a Light Challenge again, and would strongly encourage other towns to participate.”

Jonas Rosenthal, Poultney Town Manager
Rutland Herald, December 3, 2003



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