

Electronic Handbook of Industrial Resources

VERMONT



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VERMONT

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Introduction

This handbook provides a comprehensive listing of incentives, tools, and resources for industrial manufacturing energy efficiency in the state of Vermont. The document is organized according to industrial system and features information on rebates, waived fees, tax credits, loans, and other resources, such as analysis tools, education and training programs, and energy assessments. The handbook is based on data available in the *States Incentives and Resources Database*, which is maintained by the U.S. Department of Energy (DOE) Industrial Technologies Program (ITP).

The States Incentives and Resources Database is a comprehensive searchable online database of approximately 3,100 energy efficiency incentives organized by state. The database is updated regularly and is accessible via the *Save Energy Now* State and Regional Partnerships'

http://www1.eere.energy.gov/industry/states/state_activities/incentive_search.aspx



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State Industrial Overview

Vermont has a total of 600,000 residents and ranks 51st in the nation in terms of GDP, which is \$25.4 billion. In 2008, Vermont ranked 50th in the nation's industrial energy consumption at 26.8 trillion Btu and 49th in the nation's industrial natural gas consumption at 3.0 trillion Btu.¹

Vermont's total energy consumption is the lowest of all the states, and is one of two states with no coal power plants. In addition, its share of electricity generated by nuclear power plants, which is approximately 75%, is the highest in the nation.²

Exhibit 1 below compares the industrial energy consumption in Vermont in relation to the national average. The chart in Exhibit 2 is a visual representation of the same data.

Exhibit 1: Total Industrial Energy Consumption Statistics in Vermont

Year	Vermont Energy Consumption (Trillion Btu)	National Average (Trillion Btu)
2000	32.0	680.2
2001	30.4	642.8
2002	28.0	642.0
2003	25.8	639.6
2004	31.4	658.7
2005	30.7	696.7
2006	30.3	636.6
2007	29.3	637.0
2008	26.8	614.8

Source: http://www.eia.doe.gov/emeu/states/sep_use/ind/use_ind_vt.html

Vermont at a Glance

State Information

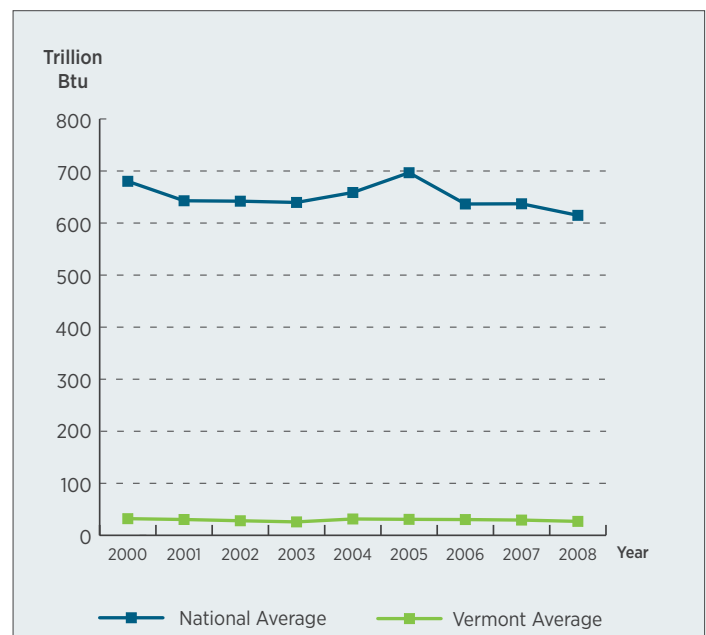
2009 Population (Million)	.6
2008 GDP (Billion)	25.4
Rank by GDP	51

Energy Statistics

Total Energy Consumption 2008 (Trillion Btu)	154.4
Total Industrial Energy Consumption 2008 (Trillion Btu)	26.8
Total Industrial Energy Consumption Rank	50
Total Industrial Electricity Use 2008 (Trillion Btu)	5.3
Total Industrial Electricity Use Rank	48
Total Industrial Natural Gas Use 2008 (Trillion Btu)	3.0
Total Industrial Natural Gas Use Rank	49

Source: http://tonto.eia.doe.gov/state/state_energy_profiles.cfm?sid=VT

Exhibit 2: Total Industrial Energy Use



Federal and National Industrial Energy Efficiency Programs

In addition to the state level programs outlined in more detail in section III there are many government and non-government organizations that have resources to assist industry in the western region to utilize energy more effectively. Financial and technical resources are available from federal agencies, national laboratories, utilities, utility associations, industrial organizations, energy efficiency organizations, state energy offices, energy services companies, nonprofits or nongovernmental organizations, foundations, and private companies.

ITP is one such program that provides industrial manufacturers across the country with a variety of energy efficiency tools, resources, and incentives. ITP is a prime example of DOE's commitment to improving the energy efficiency of industrial operations in the United States. ITP is a multi-faceted outreach and deployment initiative designed specifically for industrial manufacturers. ITP supports research and development of energy efficient technologies, provides industry with energy management and assessment tools, resources, and information.

Several other federal agencies offer energy efficiency incentives in addition to the multitude of DOE resources. The Internal Revenue Service, for instance, provides tax incentives to industrial manufacturers that implement energy efficiency projects. In addition, the U.S. Environmental Protection Agency provides loans on new energy efficient construction and incentives on the implementation of combined heat and power systems. Finally, the U.S. Department of Agriculture is another federal agency that provides incentives to rural and small industrial operations seeking to become more energy efficient.

State Incentives by Industrial System

Building Systems

Cogeneration Program

Vermont Electric Cooperative (VEC) provides help with feasibility, financing, sourcing, and long-term planning for cogeneration projects. VEC can help customers locate potential funding sources, such as equipment manufacturers, leasing companies, or financial institutions, as well as provide long-term contracts for excess electricity generated.

For More Information:
<http://www.vermontelectric.coop/cogeneration.htm>

Sponsor: Vermont Electric Cooperative
Sponsor Type: Utility

Commercial LED Lighting Equipment Rebate

Efficiency Vermont now supports the installation of energy efficient light-emitting diode (LED) lighting through financial rebates.

For More Information:
<http://www.encyvermont.com/pages/Business/RebateCenter/>

Sponsor: Efficiency Vermont
Sponsor Type: State

Corporate Tax Credit for Solar

Vermont offers a corporate income tax credit in an amount equal to 100% of the "Vermont-property portion" of the federal business energy tax credit for solar.

For More Information:
<http://www.leg.state.vt.us/docs/legdoc.cfm?URL=/docs/2008/bills/passed/S-209.HTM>

Sponsor: Vermont Department of Taxes
Sponsor Type: State

Design Incentives

Incentives are available for the purchase and installation of energy efficient equipment in a new construction project. Efficiency Vermont will also work with a developer to help design a more energy efficient building.

For More Information:
<http://www.encyvermont.org/pages/Business/BuildingEfficiently/Incentives/>

Sponsor: Efficiency Vermont
Sponsor Type: State

Electric Water Heater Rental

For customers that would prefer to lease rather than purchase, Green Mountain Power Corporation offers energy efficient water heaters for rent for as low as \$10.50 per month.

For More Information:
<http://www.greenmountainpower.com/programs.html>

Sponsor: Green Mountain Power Corporation
Sponsor Type: Utility

Energy Audit

Burlington Electric Department offers its business customers a free energy audit by energy efficiency specialists to determine which energy efficiency programs will work best for the customer.

For More Information:

https://www.burlingtonelectric.com/page.php?pid=39&name=for_business

Sponsor: Burlington Electric Department

Sponsor Type: Utility

Heating and Cooling Equipment Rebate Program

Efficiency Vermont is offering incentives to nonresidential customers that install energy efficient HVAC equipment. Rebates range from \$50 to \$250 per unit. Rebates more than \$2,500 require preauthorization from Efficiency Vermont.

For More Information:

<http://www.encyvermont.com/pages/Business/RebateCenter/>

Sponsor: Efficiency Vermont

Sponsor Type: State

WorkPlace New Construction Program

Vermont Gas offers rebates to nonresidential customers that install energy efficient unit heaters, hot water boilers, kitchen exhaust hoods, pool heaters, steam boilers, hot water heaters, waste heat recovery equipment, venturi steam traps, furnaces, modulating burners, air-to-air heat recovery equipment, and heat exchangers.

For More Information:

http://www.vermontgas.com/efficiency_programs/comm_programs.html#new_construction

Sponsor: Vermont Gas

Sponsor Type: Utility

Energy Sources

Clean Energy Development Fund (CEDF) Loan Program

The CEDF Loan Program provides funding between \$50,000 and \$250,000 for the development of clean electric-energy technologies by providing funding for purchasing land and buildings (when specific to qualifying projects), for purchasing and installing machinery and equipment, and for working capital. Low-interest loans with a fixed rate of 4% are available to individuals, companies, nonprofits, and municipalities. Eligible clean electric-energy technologies generally include solar, wind, biomass, fuel cells, and combined heat and power (CHP).

For More Information:

<http://publicservice.vermont.gov/energy/CEDF%20Loan%20Brochure.pdf>

Sponsor: Vermont Department of Public Service

Sponsor Type: State

Community Solar Lending Program

The Community Lending Program (CLP) was created in May 2009 by New Generation Energy to strengthen low- and middle- income communities through green energy projects that have a high level of environmental, economic, health, and neighborhood-enhancement benefits. All enterprises, nonprofit and for-profit, may apply for a Solar Loan from New Generation Energy's Community Lending Program.

For More Information:

<http://www.newgenerationenergy.org/?q=community-lending/community-lending-program>

Sponsor: New Generation Energy

Sponsor Type: Nonprofit

Corporate Tax Credit for Solar

Vermont offers a corporate income tax credit in an amount equal to 100% of the "Vermont-property portion" of the federal business energy tax credit for solar.

For More Information:

<http://www.leg.state.vt.us/docs/legdoc.cfm?URL=/docs/2008/bills/passed/S-209.HTM>

Sponsor: Vermont Department of Taxes

Sponsor Type: State

Hess C-Neutral

This program helps businesses become leaders in environmental stewardship and consumer advocates. Businesses have the option to bundle natural gas, electricity, and/or fuel oil with carbon offset credits, making their total energy purchase 100% carbon neutral.

For More Information:

<http://www.hessenergy.com/green/carbon.htm>

Sponsor: Hess Energy

Sponsor Type: Other

New Construction, Addition, and Renovation Projects

Burlington Electric Department's energy efficiency services help architects, engineers, developers, HVAC and electric contractors, and building contractors incorporate the most energy efficient products and systems possible when building or renovating with the goal of exceeding the City of Burlington's required Guidelines for Energy Efficient Construction.

For More Information:

https://www.burlingtonelectric.com/page.php?pid=61&name=new_construction_business

Sponsor: Burlington Electric Department

Sponsor Type: Utility

Renewable Energy Certificates

An organization can play an important role in supporting renewable energy by purchasing Renewable Energy Certificates from Hess. An organization's green power purchase can range from 1% to 100% of its electricity usage.

For More Information:

<http://www.hessenergy.com/products/green/Renewable.aspx>

Sponsor: Hess Energy

Sponsor Type: Other

Solar and Small Wind Incentive Program

Vermont's Solar and Small Wind Incentive Program provides funding for new solar water heating, solar electric (photovoltaic), and wind energy system installations. The program is available to single- and multi-family residences, businesses, farms, schools, and local and state governments.

For More Information:

<http://www.rerc-vt.org/incentives/index.htm>

Sponsor: Vermont Department of Public Service

Sponsor Type: State

Energy Efficiency Projects

The utility's sister company, Constellation Energy Projects & Services Group, helps commercial customers develop solutions to achieve energy goals.

For More Information:

<http://www.newenergy.com/portal/site/menuitem.1b1af2559c566632782c7883da6176a0>

Sponsor: Constellation NewEnergy

Sponsor Type: Utility

HVAC

Energy Audit

Burlington Electric Department offers its business customers a free energy audit by energy efficiency specialists to determine which energy efficiency programs will work best for the customer.

For More Information:

https://www.burlingtonelectric.com/page.php?pid=39&name=for_business

Sponsor: Burlington Electric Department

Sponsor Type: Utility

Heating and Air Conditioning Rebates

The utility will offer rebates to business customers who purchase and install energy efficient HVAC and air conditioning systems.

For More Information:

https://www.burlingtonelectric.com/page.php?pid=62&name=ee_incentives

Sponsor: Burlington Electric Department

Sponsor Type: Utility

Heating and Cooling Equipment Rebate Program

Efficiency Vermont is offering incentives to nonresidential customers that install energy efficient HVAC equipment. Rebates range from \$50 to \$250 per unit. Rebates more than \$2,500 require preauthorization from Efficiency Vermont.

For More Information:

<http://www.encyvermont.com/pages/Business/RebateCenter/>

Sponsor: Efficiency Vermont

Sponsor Type: State

WorkPlace New Construction Program

Vermont Gas offers rebates to nonresidential customers that install energy efficient unit heaters, hot water boilers, kitchen exhaust hoods, pool heaters, steam boilers, hot water heaters, waste heat recovery equipment, venturi steam traps, furnaces, modulating burners, air-to-air heat recovery equipment, and heat exchangers.

For More Information:

http://www.vermontgas.com/efficiency_programs/comm_programs.html#new_construction

Sponsor: Vermont Gas

Sponsor Type: Utility

Industrial Systems / Process Specific

Agricultural Lighting and Motor Controls

Efficiency Vermont provides financial incentives for purchasing and installing new energy-saving equipment in existing agricultural businesses in Vermont.

For More Information:

<http://www.encyvermont.com/pages/Business/RebateCenter/>

Sponsor: Efficiency Vermont

Sponsor Type: State

Cogeneration Program

VEC provides help with feasibility, financing, sourcing, and long-term planning for cogeneration projects. VEC can help customers locate potential funding sources, such as equipment manufacturers, leasing companies, or financial institutions, as well as provide long-term contracts for excess electricity generated.

For More Information:

<http://www.vermontelectric.coop/cogeneration.htm>

Sponsor: Vermont Electric Cooperative

Sponsor Type: Utility

Compressed Air System Rebates

Efficiency Vermont offers commercial and industrial customers rebates for a variety of compressed air products and systems.

For More Information:

<http://www.encyvermont.org/pages/Business/RebateCenter/>

Sponsor: Efficiency Vermont

Sponsor Type: State

Energy Audit

Burlington Electric Department offers its business customers a free energy audit by energy efficiency specialists to determine which energy efficiency programs will work best for the customer.

For More Information:

https://www.burlingtonelectric.com/page.php?pid=39&name=for_business

Sponsor: Burlington Electric Department

Sponsor Type: Utility

Energy Efficient Transformer Program

The organization is offering several financial incentives for the purchase of an energy efficient transformer. Incentives range from \$250 to \$1,200, depending on the size of the transformer.

For More Information:

<http://www.encyvermont.org/stella/filelib/Transformer.pdf>

Sponsor: Efficiency Vermont

Sponsor Type: State

Motor Rebates

The organization is offering several financial incentives for the purchase and installation of energy efficient motors.

For More Information:

<http://www.encyvermont.com/pages/Business/RebateCenter/>

Sponsor: Efficiency Vermont

Sponsor Type: State

Small Commercial Refrigeration Equipment Rebate

Efficiency Vermont provides rebates as an incentive for Vermont businesses to install energy efficient equipment.

For More Information:

<http://www.encyvermont.com/pages/Business/RebateCenter/>

Sponsor: Efficiency Vermont

Sponsor Type: State

Vending Machine Controller Incentive

Efficiency Vermont will pay a vending machine owner \$45 for the installation of a vending machine controller that powers down the machine when it is not in use.

For More Information:

<http://www.encyvermont.com/pages/Business/RebateCenter/>

Sponsor: Efficiency Vermont

Sponsor Type: State

WorkPlace New Construction Program

Vermont Gas offers rebates to nonresidential customers that install energy efficient unit heaters, hot water boilers, kitchen exhaust hoods, pool heaters, steam boilers, hot water heaters, waste heat recovery equipment, venturi steam traps, furnaces, modulating burners, air-to-air heat recovery equipment, and heat exchangers.

For More Information:

http://www.vermontgas.com/encyvermont.com/comm_programs.html#new_construction

Sponsor: Vermont Gas

Sponsor Type: Utility

Energy Efficiency Projects

The utility's sister company, Constellation Energy Projects & Services Group, helps commercial customers develop solutions to achieve energy goals.

For More Information:

<http://www.newenergy.com/portal/site/menuitem.1b1af2559c566632782c7883da6176a0>

Sponsor: Constellation NewEnergy

Sponsor Type: Utility

Lighting

Agricultural Lighting and Motor Controls

Efficiency Vermont provides financial incentives for purchasing and installing new energy-saving equipment in existing agricultural businesses in Vermont.

For More Information:

<http://www.encyvermont.com/pages/Business/RebateCenter/>

Sponsor: Efficiency Vermont

Sponsor Type: State

Commercial LED Lighting Equipment Rebate

Efficiency Vermont now supports the installation of energy efficient LED lighting through financial rebates.

For More Information:

<http://www.encyvermont.com/pages/Business/RebateCenter/>

Sponsor: Efficiency Vermont

Sponsor Type: State

Commercial Lighting Incentives

Several incentives are available for the purchase and installation of energy efficient lighting.

For More Information:

<http://www.encyvermont.com/pages/Business/RebateCenter/>

Sponsor: Efficiency Vermont

Sponsor Type: State

Energy Audit

Burlington Electric Department offers its business customers a free energy audit by energy efficiency specialists to determine which energy efficiency programs will work best for the customer.

For More Information:

https://www.burlingtonelectric.com/page.php?pid=39&name=for_business

Sponsor: Burlington Electric Department

Sponsor Type: Utility

Lighting and LED Lighting Rebates

Customers looking to install or upgrade lighting systems are eligible for rebates through this program.

For More Information:

https://www.burlingtonelectric.com/page.php?pid=62&name=ee_incentives

Sponsor: Burlington Electric Department

Sponsor Type: Utility

SMARTLIGHT Discounted Replacement Lamp Program

Efficiency Vermont and Burlington Electric Department have partnered with Vermont electrical distributors to offer contractors and commercial lighting customers the most efficient replacement lamps on the market at a comparable cost to conventional products.

For More Information:

<http://www.encyvermont.com/pages/Business/HVAC/Lighting/SMARTLIGHT/>

Sponsor: Burlington Electric Department

Sponsor Type: Utility

Industrial Systems General

Building and Construction Incentives

The organization will perform a walkthrough of a facility and identify areas that could be more energy efficient. The auditor will make suggestions for improvement.

For More Information:

<http://www.encyvermont.org/pages/Business/BuildingEfficiently/Incentives/>

Sponsor: Efficiency Vermont

Sponsor Type: State

Clean Energy Development Fund (CEDF) Loan Program

The CEDF Loan Program provides funding between \$50,000 and \$250,000 for the development of clean electric-energy technologies by providing funding for purchasing land and buildings (when specific to qualifying projects), for purchasing and installing machinery and equipment, and for working capital. Low-interest loans with a fixed rate of 4% are available to individuals, companies, nonprofits, and municipalities. Eligible clean electric-energy technologies generally include solar, wind, biomass, fuel cells, and CHP.

For More Information:

<http://publicservice.vermont.gov/energy/CEDF%20Loan%20Brochure.pdf>

Sponsor: Vermont Department of Public Service

Sponsor Type: State

Commercial and Industrial Customers Programs

Central Vermont Public Service senior energy consultants throughout Vermont bring a wealth of experience and education to serve large commercial and industrial customers. These consultants are in place to answer energy questions, utility questions, and load-control questions, as well as to provide billing explanations and guidance on electric-efficiency measures. The senior energy consultants will conduct site visits and make referrals to Efficiency Vermont.

For More Information:

<http://www.cvps.com/CustomService/EnergyEfficiency.aspx>

Sponsor: Central Vermont Public Service

Sponsor Type: Utility

Direct Loan Program

The direct loan program assists borrowers in financing fixed assets. It is utilized in cooperation with commercial banks. Vermont Economic Development Authority may either make its own direct loan or may purchase a portion of a bank loan.

For More Information:

<http://www.veda.org/interior.php/pid/1/sid/1>

Sponsor: Vermont Economic Development Authority

Sponsor Type: State

Energy Audit

Burlington Electric Department offers its business customers a free energy audit by energy efficiency specialists to determine which energy efficiency programs will work best for the customer.

For More Information:

https://www.burlingtonelectric.com/page.php?pid=39&name=for_business

Sponsor: Burlington Electric Department

Sponsor Type: Utility

Financing Solutions

Efficiency Vermont works in cooperation with many banks, leasing companies, and other institutions to develop customized financing solutions for Vermont businesses.

For More Information:

<http://www.encyvermont.org/stella/filelib/Financing%20brochure-WITH%20PARTNER%20LOGOS.pdf>

Sponsor: Efficiency Vermont

Sponsor Type: State

Leased Business Spaces Program

This service provides Burlington Electric Department's commercial customers that lease space with technical assistance, rebates, lower energy bills, and, in many cases, a more comfortable workplace.

For More Information:

https://www.burlingtonelectric.com/page.php?pid=60&name=leased_business_spaces

Sponsor: Burlington Electric Department

Sponsor Type: Utility

New Construction, Addition, and Renovation Projects

Burlington Electric Department's energy efficiency services help architects, engineers, developers, HVAC and electric contractors, and building contractors incorporate the most energy efficient products and systems possible when building or renovating with the goal of exceeding the City of Burlington's required Guidelines for Energy Efficient Construction.

For More Information:

https://www.burlingtonelectric.com/page.php?pid=61&name=new_construction_business

Sponsor: Burlington Electric Department

Sponsor Type: Utility

Owner Occupied Business Program

This service provides Burlington Electric Department's commercial customers with technical assistance, rebates, lower energy bills, and, in many cases, a more comfortable workplace.

For More Information:

https://www.burlingtonelectric.com/page.php?pid=59&name=owner_occupied_businesses

Sponsor: Burlington Electric Department

Sponsor Type: Utility

Resource Library

Efficiency Vermont's Resource Library provides useful information and links designed to assist customers through a new construction process, rehab project, or equipment replacement process.

For More Information:

<http://www.encyvermont.com/pages/Business/ResourceLibrary/>

Sponsor: Efficiency Vermont

Sponsor Type: State

U.S. Department of Energy Industrial Assessment Center (IAC): University of Massachusetts

The University of Massachusetts IAC operates within the Center for Energy Efficiency and Renewable Energy. Assessments are offered to small- and medium-sized manufacturing plants (Standard Industrial Codes 20-39) in the New England area with gross annual sales of less than \$100 million, not more than 500 employees, no in-house energy expert, and energy costs totaling \$100,000 to \$2.5 million per year.

For More Information:

<http://www.ceere.org/iac/index.html>

Sponsor: U.S. Department of Energy

Sponsor Type: Federal

Vermont Business Energy Conservation Loan Program

The Vermont Economic Development Authority, in cooperation with Efficiency Vermont and the Burlington Electric Department, has available a \$1 million low-interest loan fund for Vermont business projects that improve energy efficiency and conserve energy.

For More Information:

https://www.burlingtonelectric.com/page.php?pid=62&name=ee_incentives

Sponsor: Burlington Electric Department

Sponsor Type: Utility

Vermont Business Energy Conservation Loan Program

This program is available to assist Vermont companies that wish to undertake projects that will improve their energy efficiency and allow them to conserve energy. The program may make loans ranging from \$5,000 up to a maximum of \$150,000.

For More Information:

<http://www.veda.org/interior.php/pid/1/sid/99>

Sponsor: Vermont Economic Development Authority

Sponsor Type: State

WorkPlace Equipment Replacement and Retrofit Program

This program is available to commercial and industrial customers. Vermont Gas will offer design assistance and a preconstruction overview of available incentives for the installation of certain equipment. Vermont Gas will also fund a feasibility study to determine the applicability of certain renewable sources.

For More Information:

http://www.vermontgas.com/efficiency_programs/comm_programs.html#retrofit

Sponsor: Vermont Gas

Sponsor Type: Utility

Constellation NewEnergy Online

This is an energy-management tool that is available to all electricity customers free of charge. The tool allows customers to find opportunities to improve their company's energy efficiency, track changes in their company's usage, and compare usage across multiple facilities.

For More Information:

<http://www.newenergy.com/portal/site/menuitem.987b194dd5e782ce18a805e4da6176a0>

Sponsor: Constellation NewEnergy

Sponsor Type: Utility

Energy Efficiency Projects

Constellation Energy Projects Services provides solutions designed to achieve energy goals and promote a sustainable future by offering an extensive array of products and services.

For More Information:

<http://www.newenergy.com/portal/site/cne/menuitem.1b1af2559c566632782c7883da6176a0>

Sponsor: Constellation NewEnergy

Sponsor Type: Utility

Energy Efficiency Projects

The utility's sister company, Constellation Energy Projects & Services Group, helps commercial customers develop solutions to achieve energy goals.

For More Information:

<http://www.newenergy.com/portal/site/menuitem.1b1af2559c566632782c7883da6176a0>

Sponsor: Constellation NewEnergy

Sponsor Type: Utility

End Notes

- ¹ U.S. Department of Energy, Industrial Technologies Program, State and Regional Partnerships, “Industrial Technologies Program Activities in Vermont.” http://www1.eere.energy.gov/industry/states/state_activities/map_new.asp?stid=VT.
- ² Energy Information Administration, “State/Territory Energy Profiles,” Accessed October 4, 2010. http://tonto.eia.doe.gov/state/state_energy_profiles.cfm?sid=VT

EERE Information Center

1-877-EERE-INFO (1-877-337-3463)

www.eere.energy.gov/informationcenter

U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy