



# Vermont Clean Energy Development Fund

## *Strategic Plan*

May 2007

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## ■ Purpose of this Plan

The purpose of this Strategic Plan is to provide a framework for the Vermont Clean Energy Development Fund (CEDF), including how the funds will be managed and how they will be distributed to meet the goals of the Fund. This plan is meant to be flexible to be able to respond to a constantly changing energy environment. In addition to this plan, an annual program plan and budget will be developed each year to identify the financing initiatives and programs that the Fund will pursue in the coming year, and establish target dollar allocations for the initiatives. The Strategic Plan will be reviewed each year and any amendments will be included in the annual report issued each January. The plan will be subject to a public process review not less frequently than every five years.

## ■ Establishment of the Fund

In 2005, the Vermont General Assembly established the Vermont Clean Energy Development Fund through Act 74 (10 V.S.A. § 6523). The Act specifies that the Vermont Clean Energy Development Fund will be established and funded through proceeds due to the state under the terms of two Memoranda of Understanding between the Vermont Department of Public Service (DPS) and Entergy Nuclear VT and Entergy Nuclear Operations, Inc., and by any other monies that may be appropriated to or deposited into the Fund. The CEDF will receive payments from Entergy through 2012.



*WEC's Landfill gas facility - Coventry*

## ■ Management & Governance

### **DEPARTMENT OF PUBLIC SERVICE (DPS) ADMINISTRATION**

In accordance with 10 V.S.A. § 6523, the CEDF shall be administered by the DPS. The DPS has extensive experience with issuing proposal solicitations and administering contracts and grants. The DPS also works with Vermont's ratepayers, power suppliers, and other stakeholders and interested parties on a regular basis. A Fund Administrator will be hired by the DPS to manage day-to-day operation of the Fund.

The Fund Administrator will be responsible for:

- Updating the strategic plan
- Preparing the annual program plan and budget
- Maintaining a loan and credit policy that details underwriting criteria for all loans, grants, and investments made by the Fund
- Distributing information on the Fund, including maintaining a page on the DPS website and creating brochures
- Writing and issuing proposal solicitations, reviewing proposals, and awarding funding
- Monitoring and managing all financial assistance
- Making recommendations for loans and investments, in consultation with Vermont Economic Development Authority (VEDA) management and the DPS Commissioner, to the Investment Committee
- Preparing program and financial reports

### **ADVISORY COMMITTEE**

The role of the Advisory Committee is to review the strategic plan and the annual

program plan and operating budget. The Advisory Committee will also appoint the Investment Committee members. As defined in 10 V.S.A § 6523, the Advisory Committee will consist of the Commissioner of Public Service or a designee, and the Chairs of the House and Senate Committees on Natural Resources and Energy or their designees.

### **INVESTMENT COMMITTEE**

The Investment Committee will review and approve the CEDF plans, budget and programs designs. The Investment Committee will also assist the Fund Administrator and the DPS Commissioner in the review of grants and investments; determining the viability of a project, company, product or service; and evaluating marketing and business plans. As defined in 10 V.S.A § 6523, the Investment Committee shall consist of seven persons appointed by the Advisory Committee. Policies and procedures will be adopted to govern the Committee. These policies will at minimum include a discussion of: member appointments, terms, and resignation; formation of subcommittees; use of executive sessions; confidentiality; and conflicts of interest.

### **MANAGEMENT OF THE FUNDS**

The Fund Administrator and the Investment Committee work together to determine the amount of funds that will be targeted for grants, loans, equity and/or subordinated debt investments. Since these types of financial support are markedly different in nature, the processing of requests for these types of funds will be handled as described below:

- 1) When a request for a grant is approved by the Investment Committee and Fund Administrator, funds will be dispersed by DPS based on specific requisitions by the

grantee which is subject to approval by the Fund Administrator.

- 2) If a loan is requested and approved by the Investment Committee and Fund Administrator based in part on a due diligence write -up prepared by VEDA, VEDA will prepare the loan documents, close the loan, monitor it and manage the relationship with the borrower. VEDA will handle the accounting for the loan and apply payments as they are received, and manage any loan collection activity that may become necessary with the approval of the Fund Administrator and Investment Committee. VEDA will charge a fee for its services that will be negotiated between VEDA and DPS and will be memorialized in a Memorandum of Understanding.
- 3) The Investment Committee will decide on a case-by-case basis whether to allocate funds for equity/subordinated debt investments and will identify resources to participate in due diligence and negotiate on the Fund's behalf. The preference would likely be to co-invest with other established investment firms.

Funds that accumulate in the CEDF will be temporarily managed by the State Treasurers office prior to their being granted, loaned, or invested as outlined above.



***McNeil Wood-Powered Electric Generating Facility - Burlington***

## ■ Goals and Objectives

### **GOALS**

The goal of the Fund is to increase the development and deployment of cost-effective and environmentally sustainable electric power resources – primarily with respect to renewable energy resources, and the use of combined heat and power technologies - in Vermont. The Fund shall be managed to promote:

- The increased use of renewably produced electrical, thermal energy, and combined heat and power technologies in the state;
- The growth of the renewable energy-provider and combined heat and power industries in the state;
- The creation of additional employment opportunities and other economic development benefits in the state through the increased use of renewable energy and combined heat and power technologies;
- The stimulation of increased public and private sector investment in renewable energy and combined heat and power related enterprises, institutions, and projects in the state.

### **RATIONALE**

The further development of clean energy generation in Vermont will provide environmental benefits, increased energy diversity, price stability, and a thriving clean energy market to enable clean energy businesses to develop and expand.

The promotion of clean energy businesses and industry in the state will create additional employment opportunities. Creation and retention of quality jobs is

important for current and future generations of Vermonters.

Fulfillment of the Fund goals will also support Vermont's greenhouse gas emission reduction targets as well as supporting the objectives set forth in 30 V.S.A. § 8004 to meet all incremental energy growth in Vermont between 2005 and 2012 through renewable energy generation.

### **SCOPE**

The CEDF will fund a wide variety of clean electric energy technologies and programs. 10 V.S.A. § 6523 specifies that “clean energy resources” means electric power supply and demand-side resources that are combined heat and power facilities, cost-effective energy efficiency resources, or renewable energy resources.

Renewable energy includes the following:

- solar photovoltaic and solar thermal energy;
- wind energy;
- geothermal heat pumps;
- farm, landfill, and sewer methane recovery;
- low emission, advance biomass power, and combined heat and power technologies using biomass fuels such as wood, agricultural or food wastes, energy crops, and organic refuse-derived waste, but not municipal solid waste;
- advanced biomass heating technologies and technologies using biomass-derived liquid fuels such as biodiesel, bio-oil, and bio-gas.

In addition, the CEDF will also consider small hydroelectric as renewable energy.

## **OBJECTIVES**

- Increase the installation of renewable energy systems for homes, businesses, farms, and public buildings.
- Increase the amount of combined heat and power (CHP) systems in the state.
- Facilitate clean energy distributed generation that enhances grid stability.
- Facilitate and support efforts by Vermont communities to develop small-scale renewable energy projects.
- Help developers secure project financing for construction of eligible renewable energy generating facilities and support pre-development activity.
- Continued growth of clean energy related businesses and industry in Vermont.
- Provide financial and technical assistance for the design, development, and commercialization of clean energy technologies and products.

renewable energy and combined heat and power technologies in Vermont through the support of transformational technology, market and cultural developments.

4. Ensure maximum value from the CEDF by supporting initiatives and activities that are reliable, cost effective (or reasonably likely to become cost effective), and utilize commercialized or nearly commercialized technologies.
5. Pursue geographic distribution of projects throughout the state consistent with system needs, while providing citizens the maximum exposure to alternative generation opportunities.
6. Pursue organizational development that results in the least administrative cost to maximize funds for direct investment.
7. Participate in projects in which the funds will make a meaningful difference.

## **■ Guiding Principles**

1. Support diversified portfolio of clean energy technologies that will benefit ratepayers and municipalities; leverage private and public investment; and have positive impacts in terms of economic development, additional employment opportunities, and environmental attributes.
2. Allow for sufficient risk taking in fund use to stimulate development of clean energy products, businesses, and market initiatives by investing the funds through grants, loans, and equity investments in the most appropriate fashion for each project to maximize the mission related public benefit return over the life of the Fund.
3. Seek to remove market barriers related to the development and deployment of

## **■ Potential Funding Areas**

The CEDF will consider providing financial assistance for the following areas to meet the Funds goals and objectives, however this does not preclude the potential for funding to other areas within the Scope of the Fund, but not specifically mentioned below.

### **BIOMASS**

Biomass is any organic matter, which is available on a renewable basis through natural processes or as a by-product of human activity. Biomass includes: agricultural crops and wastes, wood and wood waste, energy crops, and organic refuse-derived waste. Biomass resources can be converted into energy and liquid

fuels through many different means such as combustion, gasification, fermentation, and anaerobic digestion.

Animal manure and other organic waste can be used to create energy through anaerobic digestion. The increased use of anaerobic digester technology in Vermont would not only provide a source of energy generation on farms, it also addresses odor control, and can mitigate run-off of pollutants into local waterways. Studies have also been conducted regarding the potential for a central manure digester plant to service dairy farms in the Enosburg Falls area, and the feasibility of a cooperative dairy manure management project in St. Albans.

**Anaerobic Digestion Systems in Vermont**

Anaerobic Digesters have been installed at a number of VT farms, including Foster Brothers in Middlebury, Whitcomb Farm in Williston, Hinsdale Farm in Charlotte, and Blue Spruce Farm in Bridport.

However, anaerobic digestion systems haven't been installed on a broad basis because they require a substantial initial investment. Additionally, many farms lack access to three phase power lines, which are needed for economic, commercial electrical generation. It is likely that CEDF financial

resources will be allocated to continue development in this area.

Another biomass resource that is plentiful in Vermont is wood. There has been great success in using wood for fuel in commercialized boilers in Vermont, particularly in K-12 schools where 25 systems have been installed. Consideration will be given to allocating funds for the installation of additional biomass systems with a particular focus on publicly owned buildings. The potential for centralized-district heating may also be explored.

### **COMBINED HEAT AND POWER (CHP)**

CHP can be an efficient, clean and reliable approach to generating power and thermal energy that provides numerous benefits to

energy users, the environment, and the electric grid. In a globally competitive world where our employers are facing stiff cost competition, the economic benefit of reducing a facility's fuel and/or electricity costs is important to maintaining our economic prosperity. CHP can decrease the impact of grid power outages and can help reduce grid congestion by reducing load in areas of high demand.

**North Country Hospital CHP Project**

This CHP system that uses wood chips to generate heat and electricity has been receiving national attention. The system has resulted in huge cost savings for the hospital, anticipated to be as high as \$328,000 annually.

CHP/DG applications can be utilized in a wide variety of facilities, including: industrial manufacturers, colleges and universities, K-12 schools, hospitals, prisons, large office buildings, nursing homes, district energy systems, wastewater treatment facilities, landfills, and multi-family housing.

The up-front capital cost can be a barrier to increased CHP deployment, as commercial and industrial customers often have to focus their resources on their core businesses. CEDF financial resources may be allocated for feasibility studies as well as installation of new systems to further develop CHP projects in Vermont.

### **HYDROELECTRIC POWER**

When flowing water is captured through a turbine and turned into electricity it is called hydroelectric power or hydropower. Hydropower is a domestic, renewable, clean energy source, that doesn't degrade air quality.

There has been renewed interest in small hydro in Vermont and several municipalities are conducting feasibility studies regarding the potential for the installation of small systems. One major barrier to new hydro facilities is the significant time and costs for permitting. The CEDF would be an appropriate resource to provide assistance

to develop new hydroelectric systems through the funding of feasibility studies, permitting costs, and/or installation costs.

## **SOLAR**

Solar energy is an abundant resource that can be used to generate electricity, provide hot water, and heat air. Although intuitively it may seem that Vermont would have poor solar resources, the state actually has about 80% of Florida's resource. Significant technical and marketing experience also exist in Vermont for the sales and installation of all types of solar energy systems.

Solar energy applications can be utilized in a wide variety of facilities, including: industrial manufacturers, colleges and universities, K-12 schools, hospitals, prisons, large office buildings, nursing homes, wastewater treatment facilities, and multi-family housing.



*Solar Photovoltaics at UVM - Burlington*

### **Solar Photovoltaics**

Solar photovoltaics (PV), which convert sunlight directly into electricity, have significant application potential, in both the residential and commercial sector. PV is simple to net-meter and interconnect, using off-the-shelf equipment UL listed into the multiple hundred kilowatt size range. Solar electricity provides many benefits to the grid, including:

- In-state generation of a clean, reliable, safe, and secure energy source
- Distributed generation providing line support during hours of peak demand in the summer months

- Offset of electric generation during times of peak cost for purchased power during the summer
- Peak generation during months when hydroelectric output is reduced
- Ability to add generation quickly and simply, at the location needed
- Predictable supply, based on established weather prediction capabilities

The residential application of PV typically brings a larger investment from the homeowner than a similar commercial system, since homeowners are typically less concerned about payback and residential customers have higher rates. Commercial PV systems typically see an economy of scale at system sizes above 100 kW, depending on the project. While commercial systems smaller than that can often make sense, they are priced similar to a residential system. Commercial systems can also make use of federal tax credits and depreciation that are not currently available to residential customers.

### **Solar Hot Water**

Solar hot water generation in Vermont is best suited for domestic hot water. Solar hot water systems are relatively simple technology and the equipment could easily be manufactured or assembled in Vermont if there was a sufficient market to purchase the products. Indoor pool heating through a solar hot water system, for example, provides excellent fuel use reduction and economic payback.

### **Solar Air Heating**

Solar air heating equipment is usually the simplest application of solar, as there is no storage mechanism or interconnection to other systems. Heated air can be used either for supplemental space heating or for preheating ventilation air. Solar air heating systems are reliable, efficient, and require little to no maintenance. They can significantly reduce heating bills and can

improve indoor air quality by reducing humidity and increasing exterior fresh air and air filtering.

Solar Incentives
<p><b>Solar Electric</b></p> <ul style="list-style-type: none"> <li>• \$1.75/Watt for individuals and businesses</li> <li>• \$3.50/Watt incentive for multi-family low-income housing projects</li> </ul> <p><b>Solar Hot Water</b></p> <ul style="list-style-type: none"> <li>• \$1.75/100 Btu/day for individuals and businesses</li> <li>• \$3.50/100 Btu/day incentive for multi-family low-income housing projects</li> </ul>

**Solar Incentives**

Funding has been provided through the CEDF for the *Vermont Solar and Small Wind Incentive Program*, which was originally launched in October 2003. The program currently provides an incentive to individuals, businesses, and multi-family low-income housing projects for solar electric and solar hot water systems. It is

anticipated that the CEDF will continue to provide funding for further solar system installations in the form of direct incentive payments, grants, and/or loans.

**WIND**

Wind energy systems are a reliable source of sustainable energy as they utilize an inexhaustible, clean, non-polluting resource. Small-scale wind turbines also use a relatively small amount of space so they are compatible with many existing land uses. Small-scale net-metered wind turbine systems are connected to the electric grid and lower electricity demand from the electric utility. Net-metered wind turbines are smaller (in terms of tower height, rotor diameter, and amount of energy generated) than commercial wind turbines.

**Wind Incentives**

Incentives currently available through the *Vermont Solar and Small Wind Incentive Program* make residential and small commercial wind installations more affordable. It is anticipated that the CEDF will continue to provide funding for additional small-scale wind system installations in the form of direct incentive

payments, grants, and/or loans. The CEDF may also provide financial incentives for commercial wind projects if a novel application of the technology is being utilized or if a developer shows that CEDF financing will make a meaningful difference.

Small Wind Incentive
<ul style="list-style-type: none"> <li>• \$2.50/Watt for individuals and business (\$4.00/Watt for Vermont-made components)</li> <li>• \$4.50/Watt for schools, farms and local/state governments</li> </ul>

**■ Funding Mechanisms**

The CEDF will offer a portfolio of funding opportunities to accelerate the development, commercialization, and production of clean energy in Vermont, including: grants and contracts; loans; equity investments; and direct incentive payments to individuals, businesses, state and local government, and non-profit organizations. It is likely that the portfolio will evolve over time in light of changing needs, market conditions, and experience. The sub-section “CEDF Financial Projects” below describes projected types of incentives that may be made available. Actual funding opportunities may differ from the descriptions below and/or may change over time.

**CEDF FINANCIAL PRODUCTS**

**Pre-Project Financial Assistance**

Grants and/or loans may be provided for feasibility studies and pre-development activities to develop new renewable energy facilities that may require high-risk, early-stage activities, and for those projects that do not have the resources to easily finance the project or secure loans from financial institutions.



*Wind turbine - Addison*

### **Small Renewables Incentives**

Incentives, grants, and/or loans may be provided for the installation of small renewable energy systems, totaling no more than 15kW of capacity per installation.

### **Large-Scale Renewables Incentives**

Incentives, grants, and/or loans may be provided for renewable energy projects greater than 15 kW in capacity located at commercial, industrial, institutional, and public facilities.

This may include grants and loans for utility-scale installations that do not have the resources to easily finance the project or secure loans and investments from other sources, and/or that involve a novel concept, approach, or application of the technology.

### **Business Development Incentives**

The CEDF may provide loans to manufacturers, distributors, retailers and service companies involved in renewable and advanced clean energy technologies, provided the funds will make a meaningful difference. The CEDF may offer term loans to finance renewable energy equipment, construction and mortgage loans for owner occupied commercial real estate, and provide working capital financing as part of a larger request. The Fund will charge a below market rate of interest, and secure

the loans with available collateral and personal guarantees.

### **Special Demonstration Project Incentives**

Funding and assistance may be available to demonstrate and facilitate the development and commercialization of innovative renewable energy products, technologies, technology applications, and processes. These projects must be designed to focus on market building and technology deployment strategies as opposed to traditional research and development activities.

### **Equity/ Subordinated Debt Investments**

The Investment Committee will decide on a case-by-case basis whether to allocate funds for equity/subordinated debt investments.

## **FINANCIAL PROJECTIONS**

Financial projections for the CEDF assume a mix of debt, equity, near-equity, and grant investments. The projections will be reviewed on not less than a yearly basis and may evolve over time in light of changing needs, market conditions, and experience. Subject to receiving appropriate applications, the CEDF intends to deploy substantially all available funds each year. In the start-up phase the CEDF anticipates a heavier weighting to grant investments, with the balance shifting more to loans and equity investments over time.

## **Funding Criteria**

Before committing to any expenditure, the Fund Administrator and the Investment Committee will ensure that all potential programs and projects are rigorously

evaluated to insure that the resources are allocated in a fair and cost-effective manner. Selection will also take GHG emission reductions, Sustainably Priced Energy Enterprise Development (SPEED) Program, and other related goals into consideration. In addition, an evaluation of other funding options for project applicants will be completed to ensure that the CEDF resources are needed. A general description of the funding criteria that may be considered when making funding decisions is included below. Actual funding criteria for grant and loan solicitations may differ from the descriptions below and/or may change over time.

## **PROGRAM AND PROJECT EVALUATION CRITERIA**

### **Financial Viability**

Projects or Programs must demonstrate financial viability (i.e. adequate collateral and/or cash flow to service related financing) so as not to pose an unreasonable risk of loss to the CEDF, as determined by the Investment Committee.

### **Financial Leverage**

To maximize use of the available funds, the degree of financial leverage (through funding obtained from the federal government, private investors, companies and consumers, etc.) will be a component of investment decisions.



*Anaerobic Digester at Pleasant Valley Farm - Richford*

### **Energy Available to Vermont Consumers**

Programs and projects will be evaluated in terms of the degree to which they are likely to contribute to an increase in the renewable energy generating capacity available to Vermont consumers.

### **Economic Impact**

The extent of the additional economic value created by support of a project/program will be evaluated.

### **Market Impact**

The Fund will be used to meet the existing demand for renewable energy, reduce barriers to market entry, and to create new markets in Vermont.

### **Public Benefit**

Projects will be evaluated in regards to the benefit to Vermont ratepayers and/or system benefits, and in meeting state renewable energy objectives and policies. Projects that benefit public buildings and/or will be located in constrained areas may receive preference in the evaluation process.

### **Reductions in Greenhouse Gas Emissions**

The Fund will consider the degree to which investments contribute to a reduction in carbon dioxide emissions and other greenhouse gas and air pollutants.

### **Energy Efficiency**

Installations at residential and commercial buildings must show that the building has met required energy codes. Additional preference may also be given for high performance buildings or beyond code energy efficiency improvements.

## **LOAN AND EQUITY INVESTMENT OPERATING PRINCIPLES**

Drawing upon VEDA's existing loan policies and procedures the CEDF will establish policies and procedures for funding its loans, which will address all relevant underwriting and loan servicing criteria. The Investment Committee has developed the following operating principles for deployment of funds:

- Business financing proposals should be commercially viable.
- The quality of a company's management team and its market opportunities will be a major consideration in evaluating an investment opportunity.
- Financing decisions will be based on agreed upon underwriting and investment criteria.
- The capital base is leveraged where possible by attracting mainstream investors and lenders to companies or projects in which risk has been reduced by the CEDF's participation.
- Investments and loans are diversified among several industry sectors and types of projects to reduce risk.
- For public incentive fund programs the following criteria shall be considered: amount of public penetration, amount of private funding leveraged, appropriateness of the technology to Vermont, and potential to create a more viable industry.

## ■ APPENDIX A: Related Legislation and Initiatives

Goals and objectives set for the CEDF will complement to the fullest extent possible related state legislation, plans, and goals as well as regional emission reduction targets.

### **REGIONAL GOALS AND INITIATIVES**

#### **The Regional Greenhouse Gas Initiative (RGGI)**

The Regional Greenhouse Gas Initiative is a cooperative effort by Northeast and Mid-Atlantic States to reduce carbon dioxide emissions. As of April 2007 the following states are participating in the RGGI: Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Rhode Island, and Vermont. The participating states will develop a regional strategy for controlling carbon dioxide emissions, which will include a cap and trade program for electric power generators.

#### **New England Governor's/Eastern Canadian Premiers Climate Change Action Plan**

The Conference of New England Governors and Eastern Canadian Premiers (NEG/ECP) is an organization of the six New England (Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, and Vermont) governors and five Eastern Canadian (New Brunswick, Newfoundland & Labrador, Nova Scotia, Prince Edward Island and Quebec) premiers.

In August 2001, the NEG/ECP adopted an action plan for addressing climate change, which sets specific greenhouse gas reduction targets for the region. Each jurisdiction in the region has committed to participate in the achievement of the following regional goals by working with the other states and provinces:

- Short-term: Reduce regional GHG emissions to 1990 emissions levels by 2010
- Mid-term: Reduce regional GHG emissions by at least 10% below 1990 emissions levels by 2020, and establish a 5 year process to adjust the goals if necessary and set future emissions reduction goals
- Long-term: Reduce regional GHG emissions sufficiently to eliminate any dangerous threat to the climate

### **GOVERNOR'S EXECUTIVE ORDERS**

#### **Climate Change Action Plan**

The Governor's Climate Change Action Plan established the Climate Neutral Working Group to coordinate, document, and encourage efforts to meet Vermont's greenhouse gas emission reduction goals, and prepare a report documenting efforts to meet those goals. It also directs state government agencies to purchase devices that meet or exceed energy star standards; purchase vehicles that have the highest available fuel efficiency in each class; and develop state commuting incentives. The Climate Neutral Working Group provided strategies and recommendations in its first Biennial report, published in April 2005.

## **Governor's Commission on Climate Change**

The Governor established a commission on climate change to develop recommendations to reduce greenhouse gas emissions in Vermont, consistent with the State's need for economic growth and energy security, through a Climate Change Action Plan due no later than September 1, 2007.

## **STATE EFFORTS**

### **Comprehensive Environmental & Resource Management Program**

Buildings and General Services established this program to advance the environmental sustainability of State government operations, to reduce the costs of operating State government through energy and programmatic savings, to support Vermont businesses that develop, produce or market environmentally preferable products, and to demonstrate to other states and the private sector that fiscal responsibility does not have to be sacrificed for environmental stewardship.

### **State Agency Energy Plan**

This plan focuses on the conservation of energy and resources and reducing pollution in virtually all aspects of state governmental operations. The plan set the following goals:

- Infrastructure: A 20% reduction in energy use (from 2004 baseline)
- Transportation: A 10% reduction in energy use
- Overall: An initial goal of 15% reduction in energy use by state governmental operations

### **Vermont Electric Plan**

The 2005 Vermont Electric Plan is state government's public policy document for Vermont's electric utility industry. The Plan lays out long range goals, specific objectives and recommended actions for meeting Vermont's electricity needs. The Plan analyzes the current status of the state's electric utility industry and the primary factors that may influence it over the planning horizon, discussing background and definition of the major issues in detail. The Department of Public Service is charged with developing and updating the plan by Vermont Statute (30 V.S.A. § 202 and § 202a).

A draft update to the Electric Plan was released in 2006 to provide a consolidated source of information about the electric industry related events that had transpired since the release of the 2005 Plan.

### **Vermont Comprehensive Energy Plan**

The Department of Public Service is in the early process of preparing a Comprehensive State Energy Plan, which will provide an update to the 1998 Plan. The Comprehensive State Energy Plan will provide analysis and projections regarding the use, cost, supply and environmental effects of energy resources used in Vermont. The Department of Public Service is charged with developing and updating the plan by Vermont Statute (30 V.S.A. § 202b).

## **LEGISLATION**

### **Act 61-Renewable Energy, Efficiency, Transmission, & Vermont's Energy Future**

This Act, passed in 2005, considers a wide range of energy issues and created the Sustainably Priced Energy Enterprise Development (SPEED) Program. The SPEED Program encourages Vermont utilities to engage in purchase power contracts with renewable resource developers. In establishing the SPEED Program, the Vermont General Assembly targeted in-state efficiency and renewable energy generation to meet all incremental load between 2005 and 2013.

The Vermont Public Service Board (PSB), in establishing the SPEED program and the standards for interconnecting small and renewable generators, adopted rules 4.300 and 5.500. In broad terms, the SPEED rules are designed to encourage Vermont's electric utilities to purchase in-state renewable power. This serves as a complement to the establishment of Renewable Portfolio Standards in many states neighboring Vermont, and the associated Renewable Energy Credits (RECs). The contracts that Vermont is promoting through SPEED are for the energy (the actual electrons). The RECs (which represent the green attributes of renewable projects) can be sold elsewhere.

### **Act 208-The Energy Security and Reliability Act**

Passed in 2006, this Act provided for a “comprehensive statewide public engagement process on energy planning, focused on electric energy supply choices facing the state beginning in 2012.” It also outlined the management of the CEDF by the Department of Public Service, an Advisory Committee, and an Investment Committee. Additionally the Act established Commercial Building Energy Standards, required the PSB to design a proposed “Electricity Affordability Program”, and directed the PSB to expand the scope of Vermont’s net-metering program. In expanding the net-metering program the PSB was directed to consider “expanding the maximum kilowatt capacity of facilities that may participate in the program”, allowing “group net-metering” systems, “providing compensation to the customer for any remaining unused kilowatt-hour credit accumulated during the previous 12 months”, developing a system that allows the capture and sale of RECs from net-metering, and allowing net-metering systems to be considered SPEED resources.”

### **Act 168-An Act Relating to Establishing Greenhouse Gas Reduction Goals and a Plan for Meeting Those Goals**

Act 168 creates the goal of reducing greenhouse gas emissions 25% from 1990 baselines by 2012, and 50% by 2028. It provides for the creation and implementation of a climate action plan for Vermont, following the goals of the New England Governors and Eastern Canadian Premiers Conference as stated in Governor Douglas’ Executive Order of December 2005.

### **Act 123-An Act Relating to Vermont’s Participation in the Regional Greenhouse Gas Initiative (RGGI)**

Act 123 ensures that as Vermont designs a carbon cap and trade program (RGGI), it is designed so as to permit holders of credits to trade them. The Act also outlines a process for allocation of the tradable credits, and requires the DPS report to the legislature in January of each year detailing implementation and operation of RGGI, including revenues collected and expenditures made.

### **Act 69-Promotion of Energy Efficiency and Renewable Electric Generation**

This Act authorizes electric utilities to establish renewable pricing programs that allow consumers to voluntarily purchase part or all of their energy from renewable sources. This Act also established an incentive program for the installation of small-scale renewable energy systems.