The Vermont Energy Digest An Inventory of Renewable Energy and Efficiency

Appendices

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Vermont Incentives for Renewables and Efficiency

Vermont has numerous incentives and other initiatives that support renewable energy and efficiency. A summary of each of these is on the Database of State Incentives for Renewables and Efficiency website, www.dsireusa.org. The text box below lists the incentives described on the website. Following is a description of just a few of Vermont's initiatives.

The Solar and Small Wind Incentive Program

The Vermont Solar and Small Wind Incentive Program was established in 2003. The Vt. Department of Public Service oversees the program, and the Renewable Energy Resource Center, a project of the Vermont Energy Investment Corporation, administers it. A summary of the incentive amounts are given in the solar and wind chapters of this report. The program incentives generally cover about 20%-25% of the total installed cost of the systems.

In the first two rounds of the incentive program, about \$1.4 million in incentives was awarded, supporting the installation of more than 345 solar and wind energy systems and leveraging millions in private investment. In September 2006, another \$980,000 of incentive funding was made available. The new funding is expected to support the installation of about 210 new solar and wind energy systems during a one-year period.

Additional funding is expected to be provided for the next several years through the Clean Energy Fund. According to the Renewable Energy Resource Center, the participation rate and results achieved under the program are impressive, especially for solar. The program has achieved the results with incentive levels that are significantly lower than similar programs nationwide, indicating that these public dollars invested are providing a comparatively high return (Renewable Energy Resource Center).

School Energy Management Program

This program, administered through the Vermont Superintendents' Association, assists schools with energy management, and has helped many Vermont schools install wood-chip-fired systems, as detailed in the Wood section of this report.

Sales Tax Exemption

All equipment used in a net-metered system, and solar hot water systems are exempt from Vermont's 6% sales tax.

The Vermont Anemometer Loan Program

This program provides wind measurement equipment to Vermont residents who are considering the installation of small wind systems on their property. It's administered by Vermont Technical College; faculty and students collect and analyze data from the equipment and prepare site reports.

Vermont Energy Star Homes Service, a project of Efficiency Vermont

This service gives financial incentives for the construction of new homes meeting specified energy efficient criteria.

Vermont Incentives for Renewables and Efficiency

Financial Incentives

CVPS - Biomass Electricity Production Incentive

Sales Tax Exemption

Direct State Loan Program

State Rebate Programs

Commercial Lighting Incentives

Cool Choice HVAC Incentives

Dairy Farm Incentive Program

Efficiency Vermont - Residential Energy Efficiency

Rebate Programs

Energy Efficient Transformer Program

Incentives for Integrated Design and High

Efficiency Equipment

LED Traffic Light Incentive Program

Small Commercial Refrigeration Incentive

Solar & Small Wind Incentive Program

Vending Machine Controller Incentive

CVPS - Biomass Grant Program

Vermont Gas - HomeBase Retrofit Loan Program

Utility Rebate Programs

Burlington Electric Department - Neighbor\$ave

Energy Efficiency Rebate Program

Vermont Gas - HomeBase Programs and WorkPlace

Programs

Alternative Fuel and Vehicle Incentives

Alternative Fuel Vehicle Research and Development

Tax Credit

Natural Gas Vehicle Incentives

Rules, Regulations and Policies

Energy Efficiency Standards for Appliances

Vermont Building Energy Codes

Fuel Source and Environmental Impact of Generation

Disclosure

Interconnection Standards

Vermont Net Metering Rules

Public Benefits Funds

Clean Energy Development Fund

Efficiency Vermont

Renewable Portfolio Goal

Alternative Fuel and Vehicle Policies

Agricultural Economic Development Plan for

Biofuels

Governor's Commission on Climate Change

Fuel Efficient Vehicle Acquisition Requirements

Neighborhood Electric Vehicle (NEV) Access to

Roadways

Alternative Fuel Vehicle (AFV) Acquisition

Requirements

State Agency Energy Plan Transportation

Requirements

Related Programs and Initiatives

Utility Green Pricing Programs Central Vermont Public Service

Green Mountain Power

Source: Database of State Incentives for Renewables and Efficiency, www.dsireusa.org and U.S. Department of Energy's Alternative Fuels Data Center, www.eere.energy.gov/afdc/laws/incen_laws; see these websites for a description of each incentive.

Recent Vermont Laws and Programs

Since 2005, there have been many events related to energy policy in Vermont. New legislation has been passed, new initiatives are underway in state government, and non-profit and business sectors. Below is an outline of the major legislation and initiatives in Vermont state government. Please refer to the Vt. Dept. of Public Service's *Update to the 2005 Vermont Electric Plan: Draft* released in October 2006 for a more complete summary of this recent activity in state government.

Statutory changes

Act 61: Renewable Energy, Efficiency, Transmission, and Vermont's Energy Future

Act 61 was passed in 2005, and addressed many energy issues. It established the Sustainably Priced Energy Enterprise Development Program (SPEED), which encourages utilities to engage in contracts with renewable generators. The Legislature targeted efficiency programs and renewable sources to fill all incremental electricity load growth between 2005 and 2013; if this does not occur, a renewable portfolio standard will be established, according to the law. The Act also removed the budget cap from the efficiency budget, directing the Public Service Board to set the level of funding for efficiency programs. It also formalized the transmission planning process (Vt. Dept. of Public Service, October 20, 2006).

Act 74: Vermont Yankee / Dry Cask Storage, and the Clean Energy Development Fund

Act 74, passed in 2005, related to regulatory conditions of Vermont Yankee Nuclear Station applying for permits to construct a dry cask storage facility for spent nuclear fuel. In addition, it created the Vermont Clean Energy Development Fund, consisting of proceeds from the agreement with the state during the sale of Vermont Yankee to Entergy. The purpose of the fund is to promote the development of cost-effective and environmentally sustainable electric power, primarily renewable sources and combined heat and power. The fund will receive payments between \$6 - \$7.2 million per year through 2012 (Vt. Dept. of Public Service, October 20, 2006). The Vt. Dept. of Public Service, which administers the fund, distributed the first \$1.3 million in funds to be spent in 2006 as follows: to the Vermont Solar and Small Wind Incentive Program (see description below), to overcome lack of access by three farms to three-phase power lines needed for connection of anaerobic digestion systems, to support installation of a combined heat and power facility, to support installation of a biomass system in a public building, to start a public engagement process, and to the agricultural economic development special account which provides assistance to farmers in converting biomass to energy (Vt. Dept. of Public Service, July 2006).

Act 208: Energy Security and Reliability

Passed by the Legislature in 2006, this Act had many provisions, including: mandating a public engagement process on energy planning, focused on how to fill the upcoming electricity supply gap; establishing Commercial Building Energy standards which took effect in January 2007; requiring the Public Service Board and Dept. of Public Service to create an electricity affordability program and study; and requiring the Public Service Board to expand the scope of Vermont's net metering program (Vt. Dept. of Public Service, October 20, 2006).

Act 168: Greenhouse Gas Reduction Goals

This Act created the goal of reducing Vermont's global warming pollution to 25% below 1990 emissions by 2012, and 50% by 2028. It provides for the creation of a climate action plan for Vermont (Vt. Dept. of Public Service, October 20, 2006).

Act 152: Appliance Efficiency Standards

This Act established minimum efficiency standards for certain products sold or installed in the state (Vt. Dept. of Public Service, October 20, 2006).

Climate change developments

The Governor's Commission on Climate Change

In December 2005, Governor Douglas created by Executive Order the Governor's Commission on Climate Change, charged to develop a Vermont Climate Change Action Plan by September 2007. The commission consists of six members, plus a plenary group of about 30 members, with additional members in four technical work groups (Governor's Commission on Climate Change). The commission is currently considering policy proposals to deal with global warming (Porter, January 10, 2007).

The Regional Greenhouse Gas Initiative

This initiative, launched in December 2005, is a cooperative effort by nine Northeast and Mid-Atlantic states to design a regional cap-and-trade system for carbon dioxide from power plants in the region. Governor Douglas was the first Governor to sign the initiative, which is the first effort of its kind that doesn't depend on federal authority. The program allows producers of energy and pollution to buy and sell credits for a limited amount of emissions. The RGGI agreement starts in 2009 and its goal is to reduce global warming pollution by 10% during the following decade (Porter, January 10, 2007). It caps region-wide carbon dioxide emissions at 121 million short tons. Vermont's share of this cap is about 1.2 million short tons (Vt. Dept. of Public Service, 2007).

Public/stakeholder involvement initiatives

The Participatory Energy Planning - Mediated Modeling Project

This project was a series of workshops about the electrical energy future of Vermont. It was initiated by Mediated Modeling Partners using a grant given by the Northeastern States Research Collaborative, with the goal of collaborating to build a computer model simulating interrelationships in electrical energy use that impact cost, reliability, and environmental impact. The workshop participants were stakeholders from government, industry, non-profit organizations, and consumers. It is expected that the process will provide a baseline for further public discussion about Vermont's electric energy future (Vt. Dept. of Public Service, October 20, 2006). The final workshop occurred in late 2006, and a report was issued in January 2007.

In addition, the Public Service Board and Dept. of Public Service were engaged in rulemakings, technical workshops, and other regulatory changes. There have been developments related to the Vermont Yankee Nuclear Station. See the Vt. Dept. of Public Service's *Update to the 2005 Vermont Electric Plan: Draft* for a complete summary. Recent developments related to renewable generation, net metering, and transmission projects are detailed in other sections of this report.

Lawsuits

Vermont is involved in two high-profile lawsuits regarding global warming. In Massachusetts versus EPA, Massachusetts and 11 other states including Vermont sued to force the EPA to regulate greenhouse gases under the Clean Air Act. In April 2007, the U.S. Supreme Court ruled in favor of the states that the EPA has the authority to regulate greenhouse gases. In Green Mountain Chrysler versus

Torti, local auto dealers and auto industry supporters are suing to stop Vermont regulations adopted in 2006 that would mandate that fleets of new vehicles reduce their greenhouse gas emissions progressively through 2015, which would require vehicles to become more fuel efficient. This case is in process as of March 2007 (Johnson, 2007). Similar lawsuits are filed in California and Rhode Island.

Resources

Organizations that work in multiple energy sectors

Vermont Agency of Natural Resources www.anr.state.vt.us

Vermont Department of Public Service www.publicservice.vermont.gov

Renewable Energy Vermont www.revermont.org

Vermont Public Interest Research Group www.vpirg.org

Conservation Law Foundation www.clf.org

Clean Energy Group www.cleanegroup.org

The Vermont Peak Oil Network www.vtpeakoil.net

Vermont Energy Partnership www.vtep.org

10% Challenge / Alliance for Climate Action www.10percentchallenge.org

Snelling Center for Government www.snellingcenter.org

Interstate Renewable Energy Council www.irecusa.org/index.html

Apollo Alliance, Vermont chapter www.apolloalliance.org/state and local/Vermont/index.cfm

Northeast Sustainable Energy Association www.nesea.org

U.S. Dept. of Energy funded Database of State Incentives for Renewables and Efficiency www.dsireusa.org

U.S. Dept. of Energy's Energy Efficiency and Renewable Energy site www.eere.energy.gov

U.S. Energy Information Administration www.eia.doe.gov/fuelrenewable.html

Electricity

Vermont Department of Public Service publicservice.vermont.gov

Vermont Public Service Board www.state.vt.us/psb

Efficiency Vermont www.efficiencyvermont.com/pages

Vermont Energy Investment Corporation www.veic.org

Regulatory Assistance Project www.raponline.org

U.S. Dept. of Energy's Green Power Network www.eere.energy.gov/greenpower

Consortium for Energy Efficiency www.cee1.org

American Council for an Energy-Efficient Economy www.aceee.org

Transportation

Clean Cities Vermont / Vermont Clean Vehicle Coalition Website under development Contacts: Snelling Center for Government, www.snellingcenter.org and UVM University Transportation Center, rwatts@uvm.edu

Vermont Agency of Transportation www.aot.state.vt.us

Vermont Public Transportation Association www.vpta.net

Land use

Vermont Forum on Sprawl www.vtsprawl.org

Vermont Smart Growth Collaborative www.vtsprawl.org/Initiatives/sgcollaborative/VSGC main.htm

Vermont Downtown Program www.dhca.state.vt.us/DHP/programs/downtown.html

Natural gas efficiency

Vermont Gas Systems www.vermontgas.com

Consortium for Energy Efficiency www.cee1.org

Wood

Biomass Energy Resource Center www.biomasscenter.org

Vermont Department of Forests, Parks, and Recreation www.vtfpr.org

Vermont Superintendents Association, School Energy Management Program http://www.vtvsa.org/

Farm biogas

Vermont Agency of Agriculture, Food, and Markets www.vermontagriculture.com

Central Vermont Public Service www.cvps.com/cowpower

Landfill biogas

Washington Electric Cooperative www.washingtonco-op.com

Vermont Agency of Natural Resources, Waste Management Division www.anr.state.vt.us/dec/wmd.htm

U.S. Environmental Protection Agency, Landfill Methane Outreach Program www.epa.gov/lmop

Biofuels

Vermont Biofuels Association www.vermontbiofuels.org

Vermont Sustainable Jobs Fund www.vsjf.org

Vermont Biodiesel Project www.vtbiodieselproject.org

National Biodiesel Board www.biodiesel.org

Wind

Renewable Energy Resource Center www.rerc-vt.org/index.htm

Vermont Anemometer Loan Program web.vtc.edu/users/jnk06190/VTALP/index.htm

Vermont Small-Scale Wind Energy Program www.vtwindprogram.org

U.S. Dept. of Energy's Wind Powering America site www.eere.energy.gov/windandhydro/windpoweringamer ica

American Wind Energy Association www.awea.org

Solar

Renewable Energy Resource Center www.rerc-vt.org/index.htm

Hydroelectric

Community Hydro – Vermont Small Hydro Association www.communityhydro.biz/vsha.html

Geothermal

Water Energy Distributors www.northeastgeo.com

Geothermal Energy Association www.geo-energy.org

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