



Clean Energy Development Fund

2010 Annual Report

Submitted to the Vermont Legislature
and
Governor of the State of Vermont

January 2011

■ Table of Contents

Executive Summary	3
Mission, Authorities & Resources	5
2010 Funding Summary	6
Programs and Funding	
ARRA-Energy Efficiency and Conservation Block Grants	11
ARRA-State Energy Program.....	12
CEDF Projects.....	17
Conclusion.....	20

Appendices

Appendix One – The Clean Energy Development Fund

Appendix Two – CEDF Financial Information

Appendix Three – 2010 CEDF & ARRA Funded Projects



■ Executive Summary

Vermont's clean energy sector experienced a substantial boost in 2010. During this year, the Clean Energy Development Fund (CEDF) together with Department of Public Service (DPS) awarded **over \$34 million** in state and federal clean energy funds to more than **600 recipients**. This year's investments supported renewable energy production and energy efficiency projects in **more than 200 communities** throughout the state.

A combination of factors led to an unanticipated level of interest in renewable and energy efficiency applications at the Fund. Hundreds of communities, school districts, businesses, institutions, organizations and individuals competed for—and many received—resources to support clean energy initiatives. While much of 2010 required intense efforts by CEDF and DPS to issue awards and formalize agreements, 2011 promises to see the benefits of the renewable energy and energy efficiency as the projects funded in 2010 reach fruition. This report provides details on CEDF's allocations and efforts to expand the clean energy sector in the state.

This year's story began in 2009 when Vermont was awarded \$31,592,500 from the **American Recovery and Reinvestment Act (ARRA)** including \$21,999,000 for the ARRA State Energy Program (ARRA-SEP) and \$9,593,500 for the Energy Efficiency and Conservation Block Grant program (EECBG) for distribution through 2012. Both programs are administered by the US Department of Energy (DOE) in conjunction with the states to propel energy savings, clean energy generation, and job creation. **In 2010 the Fund awarded \$25.7 million of the ARRA monies** including \$8.6 million from the EECBG (the remaining ARRA funds were obligated in 2009) and \$17.1 million from the ARRA-SEP. The **CEDF also allocated \$8.4 million of state funds** collected from Entergy Vermont Yankee for a total of \$34.1 million.

The types of activities funded this year include *energy efficiency building retrofits* and *efficient street lighting*, which together received nearly a third of the funds awarded, followed closely by *photovoltaic (PV)*. *Geothermal, wind, biogas, biomass heating, efficiency finance programs, solar thermal, small hydro, and transportation efficiency* rounded out the awards. In addition to the energy saved through efficiency projects, renewable electrical generation projects are on track to develop over **23 MW of clean energy** for the state yielding approximately 55 million kWh annually and over 95 billion BTUs from thermal projects. The combined state and federal grants, loans and tax credits awarded in 2010 will **leverage an additional \$79 million for a total of \$113 million** to be invested throughout the state. Using US Department of Energy job formulas, the project investments are estimated to support approximately **1,200 job-years** in firms and organizations employing skilled "green collar" workers. This new renewable electric generation will **reduce carbon emissions by over 50,000 tons** (CO₂ equivalents) annually.

The CEDF tapped ARRA resources to provide over **\$7 million for the popular Small Scale Renewable Energy Incentive Program** administered by the Renewable Energy Resource Center of the Vermont Energy Investment Corporation, and contributed **\$2.28 million for the Vermont Fuel Efficiency Partnership** administered by the Central Vermont Community Action Council. Both of these efforts help Vermont families reduce their energy costs.

In addition to expanding its scope as a result of ARRA, the CEDF developed the Vermont Business Solar Tax Credits Program as required by Act 159 (32 VSA §5930z). Given the fund's balance and revenue projections, the **CEDF allocated \$7.5 million for business solar tax credits**. The CEDF received applications for more than \$28.8 million in tax credits associated with 218 solar projects. Ultimately, the CEDF issued solar tax credits worth \$7.43 million to 79 PV projects and \$66,416 for 11 solar thermal projects. Collectively, these tax credits will leverage \$17.5 million for total project costs of \$25 million. The total capacity for these projects would be 4,008 kW for the PV projects and over 329 MMBtu per year for the solar thermal projects.

Vermonters responded to funding opportunities far beyond expectations. From the EECBG, ARRA-SEP and CEDF grant rounds to the small scale rebate program to the business solar tax credit program, there were so many more requests than there were funds available—even with the infusion from ARRA. Clearly, 2010 will stand out as a landmark year when interest in clean energy moved further into the mainstream.

The demand for ARRA and CEDF state resources required a rapid ramp up of program administration. Processing the volume of requests and awards coupled with the stringent compliance requirements under ARRA necessitated effective collaboration between the CEDF, DPS, DOE and other state agencies. Aware of the magnitude and importance of the task, the CEDF and DPS rose to the challenge of deploying \$34.1 million of ARRA and state funds. Working closely together, the CEDF and DPS deployed nearly three times the \$12 million awarded in 2009. The CEDF and DPS were able to accomplish this with minimal administrative expense. For 2010 administration expenses accounted for less than 2 percent of funds awarded and are projected to stay under 4 percent for 2011.

The unprecedented funding for renewable energy projects and energy efficiency improvements provided a unique opportunity to build capacity in Vermont’s emerging clean energy sector. As a result, hundreds of municipalities, school districts, non-profits, businesses, community organizations and individuals gained substantial experience with designing and installing building retrofits and renewable energy systems. Such skills will prove increasingly important as Vermont moves closer towards a carbon-reduced future. The associated savings from the projects supported with these funds will prove essential in helping Vermont communities meet other critical needs and obligations for current and future generations.

The clean energy markets in Vermont are growing but future growth will require additional capital and technical assistance. However, there is no indication that additional federal ARRA resources will be forthcoming and Entergy Vermont Yankee (Entergy VY) funding, which only continues through 2012, is already obligated to fund the existing business solar tax credits. Some markets are approaching self sustaining levels but most will require additional resources to grow.

It is in the State’s interest to see the clean energy industry continue to grow, and the CEDF is an efficient and successful vehicle for that growth. Additional funding for the activities of the CEDF should be sought in order to realize the future clean energy economy that Vermonters desire.



■ Purpose of this Report

The purpose of this annual report is to account for the 2010 activities of the Vermont Clean Energy Development Fund (CEDF), and more specifically, to show how State CEDF and federal American Recovery and Reinvestment Act (ARRA) monies were distributed to meet the goals of the Fund. The report is intended to provide information to the Governor of Vermont, the State Legislature, stakeholders and the citizens of Vermont.

■ Mission, Authorities & Resources

In 2005, the Vermont General Assembly established the Vermont Clean Energy Development Fund (CEDF) through Act 74 (10 V.S.A. § 6523). The purpose of the Fund is *“to promote the development and deployment of cost-effective and environmentally sustainable electric power and thermal energy or geothermal resources, and emerging energy-efficient technologies, for the long-term benefit of Vermont consumers, primarily with respect to renewable energy resources, and the use of combined heat and power technologies.”*

Act 74 specified that the CEDF will be established and funded by the 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. (i.e., Entergy Vermont Yankee), and by any other monies that may be appropriated to or deposited into the Fund. The Clean Energy Development Fund’s FY 2010 budget of \$6.2 million derived from Entergy payments. Over the next two years (2011 & ’12), the CEDF will receive additional payments from Entergy Vermont Yankee estimated to total \$3,854,000 which includes a final payment in March 2013.



38 kW Solar PV array installed at the Health Care & Rehabilitation Services of Southeastern Vermont, Inc. with a CEDF state grant. (Photo provided by Health Care & Rehabilitation Services of Southeastern Vermont, Inc.)

In 2009, The US Department of Energy awarded Vermont with \$31,592,500 from the American Recovery and Reinvestment Act (ARRA) including \$21,999,000 for the ARRA-State Energy Program and \$9,593,500 for the Energy Efficiency and Conservation Block Grant program for distribution in FY 2010 and beyond. The one-time federal stimulus presented substantial opportunity for the CEDF to expand the scope and rate of renewable energy development and energy efficiency improvements in Vermont, an effort that will have lasting economic and environmental benefits.

As stipulated by changes in 2009 [10 V.S.A. § 6523(e)], the legislature created a Clean Energy Development (CED) Board with eight appointed directors and the State Treasurer (the members of the CED Board are listed in **Appendix One**, page 24). The CED Board retained a fund manager to

implement the strategy of the CEDF. DPS provides the CED Board and its fund manager with administrative services. DPS has extensive experience with development of solicitations, proposal review, selection, execution, monitoring and metrics reporting, invoice processing and payment of funds for monetary awards. The department works with Vermont’s ratepayers, power suppliers, other stakeholders and interested parties

on a regular basis. To assist deploying of the unprecedented volume of funding, DPS ramped up its capacity at the end of 2009, and continued to add staff in 2010.

In early 2010 the CEDF developed and adopted the following four interconnected goals to guide their funding decisions (Figure 1):

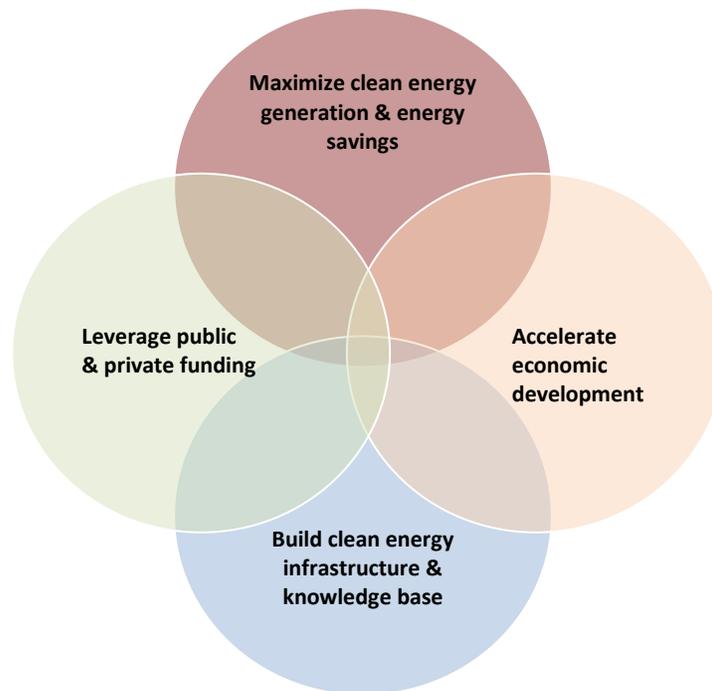


Figure 1. Clean Energy Development Fund Goals

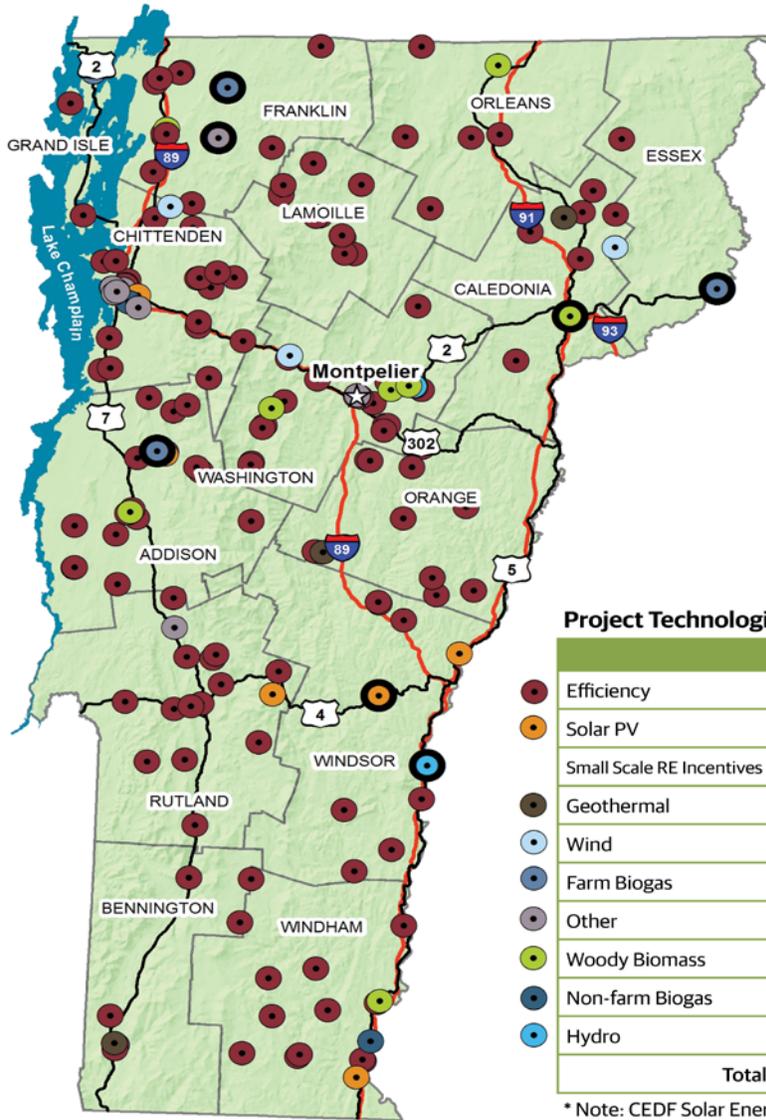
Additional details and background on the Clean Energy Development Fund may be found in **Appendix One**.

■ 2010 FUNDING SUMMARY

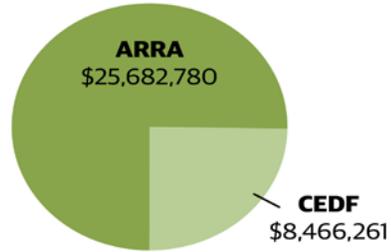
2010 proved to be a watershed year for the CEDF as its portfolio of grants, loans and financial incentives nearly tripled from \$12.6 million in 2009 to \$34.1 million in awards to more than 600 recipients. The combined federal ARRA and state CEDF monies leveraged an additional \$79 million for a total of \$113 million slated for investment in over 200 Vermont communities (see Map 1). Using US Department of Energy (DOE) job formulas, the project investments are estimated to support approximately 1,200 skilled job-years in Vermont firms and organizations.

This year CEDF awarded a wide range of grants, contracts, loans, small scale incentives (rebates), and business solar tax credits (Figures 2 & 3; Table 1). The federal ARRA \$25.7 million was divided into \$17.1 million for the ARRA State Energy Program (ARRA-SEP) and \$8.6 million for the Energy Efficiency and Conservation Block Grant (EECBG) program. Both programs are administered by DOE in conjunction with the states to propel energy savings and job creation. Of state funds, CEDF divided \$8.4 million between grants, loans and business solar tax credits.

2010 ARRA and CEDF Funded Projects



TOTAL FUNDING

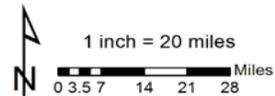


Project Technologies by Funding Source

	ARRA	CEDF	Total
Efficiency	\$11,066,920	\$0	\$11,066,920
Solar PV	\$1,157,900	\$7,436,581*	\$8,594,481
Small Scale RE Incentives	\$7,077,897*	\$0	\$7,077,897
Geothermal	\$2,092,000	\$0	\$2,092,000
Wind	\$1,410,328	\$0	\$1,410,328
Farm Biogas	\$250,000	\$950,000	\$1,200,000
Other	\$939,843	\$69,880	\$1,009,723
Woody Biomass	\$902,893	\$4,800	\$907,693
Non-farm Biogas	\$760,000	\$0	\$760,000
Hydro	\$24,999	\$5,000	\$29,999
Total	\$25,682,780	\$8,466,261	\$34,149,041

* Note: CEDF Solar Energy Business Tax Credits and VEIC Small-scale Renewable Energy Incentives funded by ARRA appear on different maps.

Icons with a black ring are CEDF funded projects.



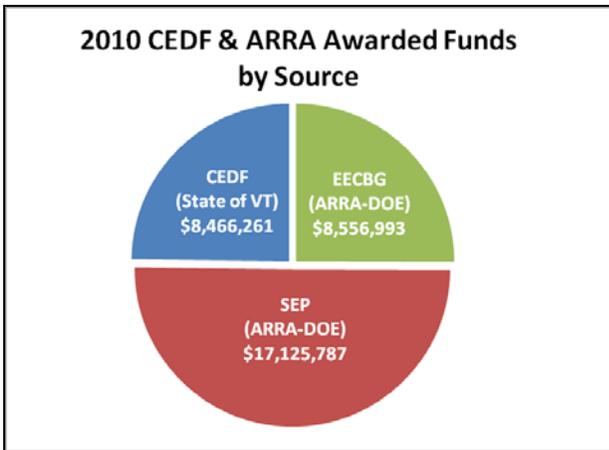


Figure 2. Funding by Source

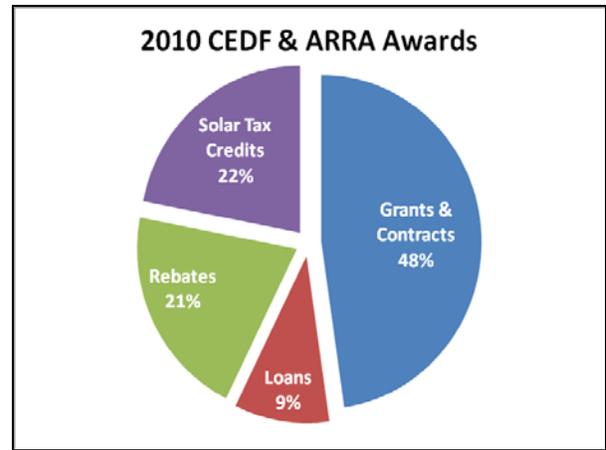


Figure 3. Funding by Type

2010 Funding Summary

AMERICAN RECOVERY AND REINVESTMENT ACT		
Energy Efficiency and Conservation Block Grant (EECBG)		
<i>Grants & Contracts</i>		
Municipal, Schools & Other Organizations.....		\$5,397,200
Regional Planning Commissions.....		\$880,000
VT Fuel Efficiency Partnership (All Fuels Program).....		\$2,279,793
Sub-Total: EECBG Grants		\$8,556,993
State Energy Program (ARRA-SEP)		
<i>Grants & Contracts</i>		
Public Serving Institutions.....		\$2,718,949
Renewable Energy & Other.....		\$2,473,653
State Projects		\$2,079,498
Sub-Total: ARRA-SEP Grants		\$7,272,100
<i>Loans</i>		\$2,775,790
<i>Small Scale Incentives</i>		\$7,077,897
Sub-Total: ARRA-SEP Grants, Loans, Rebates		\$17,125,787
Sub-Total: ARRA.....		\$25,682,780
STATE OF VERMONT		
Clean Energy Development Fund (CEDF)		
<i>Grants</i>		\$466,264
<i>Loans</i>		\$500,000
<i>Business Solar Tax Credits</i>		\$7,499,997
Sub-Total: VT CEDF		\$8,466,261
GRAND TOTAL: CEDF & ARRA FUNDING 2010.....		\$34,149,041

Table 1. 2010 Funds from CEDF & ARRA

The CEDF distributed ARRA and state monies in 2010 via three rounds of grant solicitations, a continuous loan application and review process, rebates and contracts or agreements as stipulated by the Legislature. All ARRA funds are being obligated, disbursed, administered, and accounted for in a manner that is consistent with all applicable federal requirements such as transparency, timeliness, job creation, energy savings, local matching funds and accountability. By law, CEDF passed these requirements down to its subrecipients. The sections below summarize the use of these funds.

These funds, passed through the CEDF, are helping to grow the state’s clean energy economy. The types of projects funded this year include energy efficiency building retrofits and efficient street lighting with nearly a third of the funds awarded, followed closely by PV, then geothermal, wind, biogas, biomass heating, efficiency finance programs, solar thermal, small hydro, and transportation efficiency (Table 2). All electric generation projects had to be grid-connected. In addition to the energy saved through efficiency projects, renewable electrical generation projects are on track to develop over 23 MW of power for the state yielding approximately 55 million kWh annually and over 95 billion BTUs from thermal projects (Table 3). Estimates show that just this new renewable electric generation will reduce carbon emissions by over 50,000 tons (CO₂ equivalents) annually. In addition to electrical and thermal generation the CEDF funded over 200 energy efficiency projects that will save energy and reduce carbon emissions for years to come. Reportable data on energy saved from 2010 projects was not available in time for this report. Energy savings will be reported in a subsequent report.

CEDF and DPS process funds on a reimbursement basis. In 2010, the Fund made reimbursement payments of \$3,940,513 of CEDF state monies, \$2,512,281 of ARRA-SEP monies and \$758,600 of EECBG monies. The bulk of the awards described below are for projects that are at the beginning stages, which will require reimbursement for their activities in 2011.

During 2010, the CEDF issued notification to seven delinquent grants that had failed to move ahead with their projects. These seven projects represent \$1,517,700 in non-performing investments awarded since inception of the Fund. Having served notice, these funds will be reclaimed and re-purposed in 2011 should the grantees fail to achieve their benchmarks. The Fund experienced no loan delinquencies in 2010.

Appendix Two shows the financials for the Fund and **Appendix Three** provides a listing of the 2010 projects.

Table 2. Technologies & Tools by Funding Source

Technology	ARRA	CEDF	Total	% of Total
Efficiency (Buildings & Lighting)	\$11,066,920	\$0	\$11,066,920	32.4%
Photovoltaics	\$1,157,900	\$7,436,581	\$8,594,481	25.2%
Small Scale RE Incentives (PV, Wind, Solar Thermal)	\$7,077,897	\$0	\$7,077,897	20.7%
Geothermal	\$2,092,000	\$0	\$2,092,000	6.1%
Wind	\$1,410,328	\$0	\$1,410,328	4.1%
Farm Biogas	\$250,000	\$950,000	\$1,200,000	3.5%
Biomass	\$902,893	\$4,800	\$907,693	2.7%
Non-Farm Biogas	\$760,000	\$0	\$760,000	2.2%
Other (e.g., Multiple Technologies – Wind/Solar)	\$705,290	\$3,464	\$708,754	2.1%
Efficiency Finance Programs	\$121,200	\$0	\$121,200	0.4%
Solar Thermal	\$0	\$66,416	\$66,416	0.2%
Commercial Building Energy Standards	\$49,998	\$0	\$49,998	0.1%
Renewable Energy and Energy Efficiency Mapping	\$40,000	\$0	\$40,000	0.1%
Small Scale Hydro	\$24,999	\$5,000	\$29,999	0.1%
Transportation Efficiency	\$23,356	\$0	\$23,356	0.1%
TOTAL	\$25,682,780	\$8,466,261	\$34,149,041	100%

Table 3. Energy Production Estimates from CEDF & ARRA Funded Projects (2010)

Project Name	Town	Type	Capacity (kW)	Energy production (kWh)	Energy production (BTU/hr)	Energy Production (MMBtu/yr)
Carbon Harvest	Brattleboro	Biogas	250	4,098,985	5,980,920	15,760
S Burlington Co-Generation	South Burlington	Biogas	65	569,400	9,180,000	-
Goddard College PSI	Plainfield	Biomass	-	-	4,500,000	8,320
North Country Hospital PSI	Newport	Biomass	-	-	15,640,000	6,120
Town of East Montpelier	East Montpelier	Biomass	-	-	200,000	160
AgNorth	Alburgh	Farm Biogas	1,900	13,315,200	-	64,850
Eaton Energy (Auburn Farm)	Lunenburg	Farm Biogas	95	765,605	-	-
Four Hills Farm	Bristol	Farm Biogas	450	3,022,125	-	-
Kane's Cow Power LLC	Enosburg Falls	Farm Biogas	220	1,450,620	-	-
BGS-Bennington	Bennington	Geothermal	-	-	672,000	-
VT Technical College PSI	Randolph	Geothermal	-	-	48,000	-
Renewable Energy Resource Center (VEIC)	Statewide	Small Scale RE Incentives	3,052	881,668	691,487	-
City Market Onion River Co-op PV	Burlington	PV	31	32,748	-	-
Housing Vermont	Bristol	PV	915	1,122,156	-	-
Norwich Community PV	Norwich	PV	228	240,000	-	-
Vermont Solar	Killington	PV	300	404,547	-	-
Solar Business Tax Credits	Statewide	PV, Solar Thermal	4,008	-	-	403
Burke Mountain	East Burke	Wind	100	324,000	-	-
Georgia Mountain Wind	Georgia	Wind	12,000	28,640,000	-	-
TOTAL			23,614	54,867,054	36,912,407	95,613

Project Highlight: Orange Center School Retrofit (EECBG)

Orange Center School is a historic building built in the early 1900's with a major addition completed in the early 1990's. The school's facility committee has prioritized energy efficiency since 2008 when they completed their initial energy assessment through the Vermont Superintendents Association School Energy Management Program. Their EECBG award of \$50,000, leveraged with \$8,000 in local monies, funded an extensive project throughout the 30,000 square foot building to seal and insulate its thermal envelope.

"During the project we discovered exactly how under insulated the school really was and we are all very excited to be able to provide such a huge upgrade over what was there," said school business manager, Chris Locarno.

The retrofit delivered an R-Value of 60 in the attic spaces, well above the minimum 49 R-Value recommended for Vermont buildings by the Department of Energy. Due to optimal attic insulation and many other weatherization measures installed, the school will reduce fuel oil consumption by 26 percent saving 3,200 gallons of #2 heating oil, 71,600 lbs in green house gasses (CO₂ equivalents) and \$7,000 per year. This savings will in fact contribute to needed funding for the school's next priority, which is to upgrade to energy efficient lighting technology throughout the school. (Photo provided by Orange Center School)



ARRA Energy Efficiency and Conservation Block Grants (EECBG)

EECBG funding supported energy efficiency and renewable energy projects via three main initiatives: a competitive local government grant round, funding for regional planning commissions, and support for the Vermont Fuel Efficiency Partnership. This program included \$8.6 million of ARRA funds to implement energy efficiency measures in buildings and transportation, install energy efficient traffic signals and street lighting, provide energy efficiency financial incentive programs, and install renewable energy generation systems (Table 4; Figure 4).

Table 4. EECBG Grants by Category (\$ Maximum Award)

EECBG Grants (\$ Maximum Award)	Amount Awarded (\$)
Energy Efficiency Retrofits (\$50,000)	\$4,156,802
Traffic Signals and Street Lighting (\$50,000)	\$698,426
Financial Incentives for Energy Efficiency (\$250,000)	\$121,200
Implementation of Transportation Projects (\$25,000)	\$23,356
Renewable Energy Technologies on Govt. Buildings (\$75,000)	\$397,416
Sub-Total: EECBG Grants	\$5,397,200
Regional Planning Commissions (\$80,000 each)	\$880,000
Vermont Fuel Efficiency Partnership (Contract)	\$2,279,793
TOTAL	\$8,556,993

➤ EECBG Local Government Competitive Grant Round

The first initiative under this program was a competitive local government sub-grant program. In response to the grant solicitation, the CEDF/DPS received an astonishing 323 pre-applications requesting over \$13 million in funding for the \$5.8 million available. After screening the pool of pre-applications, 162 applicants were invited to submit full proposals. In March 2010, the \$5.8 million was awarded to 128 distinct units of government (cities, towns, villages, schools and school districts) for energy efficiency and renewable energy projects.

The volume of grants coupled with the administrative requirements of ARRA demanded that DPS expand its staffing capabilities. During the summer months, DPS added staff to cope with the load. By the end of December, \$5.4 million in grant agreements with 124 municipalities, school districts and other organizations were executed for a range of building retrofit, renewable energy, street lighting and financial incentive projects. Grants under the EECBG program averaged \$39,189. Other renewable energy and efficiency grants aided an additional nine projects around the state including biomass and geothermal heating, PV and transportation planning. With grant agreements in place for most projects, many projects have begun invoicing CEDF/DPS.

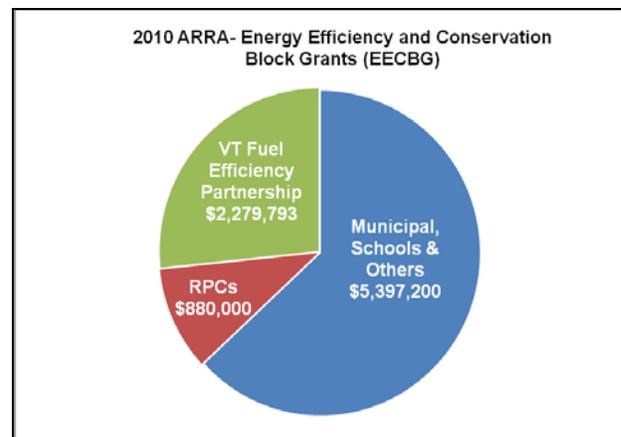


Figure 4. ARRA EECBG Activities

Although actual disbursements were relatively low by the end of the year, the rate of project implementation has increased dramatically. Thus, CEDF expects to hasten disbursements of ARRA monies in 2011.

➤ **Vermont Fuel Efficiency Partnership and Regional Planning Commissions**

To improve thermal efficiency statewide, the CEDF/DPS committed \$2.28 million of EECBG funds to the Vermont Fuel Efficiency Partnership administered by the Central Vermont Community Action Council. This initiative, also known as the *All Fuels Program*, supports the delivery of energy efficiency services to Vermont heating consumers to implement cost effective efficiency measures thus complementing electric efficiency activities funded through Efficiency Vermont. All Fuels funds audits, installation of efficiency measures such as insulation and heating system upgrades, outreach and education, and workforce training. A majority of the funds will be used to weatherize multi-family homes for low income Vermonters who are over the eligible income levels for the current Weatherization Program (60 percent of median income) but under 100 percent of median income. This effort will fill a key gap to meet the needs of a population that does not have the means to install efficiency measures.

As a part of the ARRA funding, each of the state's 11 Regional Planning Commissions (RPCs) received an allocation of \$80,000 for energy planning and efficiency activities.

Project Highlight: City Market Solar PV (ARRA-SEP)

With \$53,900 in ARRA funds, Burlington's City Market installed a 31.28 kW rooftop solar PV system consisting of 136 solar panels. As of July it had generated 17,354 kWh and is on track to meet or exceed the annual 32,748 kWh projection. The Co-op's monthly electric bill was about \$17,000 mostly due to freezer and refrigeration units.

"We've been working on different projects to improve energy efficiency and the solar project is one of the largest and most impactful," said Operations Manager Pat Burns. The installation saved an estimated 26,741 lbs CO₂ per year. This community-owned grocery, dedicated to sustainable agriculture and local development, hired all local businesses on the project. (Photo provided by City Market)



■ **ARRA State Energy Program (ARRA-SEP)**

In 2010, CEDF harnessed the more than \$17 million in funding through the ARRA-SEP to accelerate clean energy development. The Fund awarded \$2.47 million in grants and \$2.78 million in low-interest loans for an array of renewable and energy efficiency projects for schools, organizations, communities, and businesses. Technologies included efficient lighting, PV, biomass heating, wind, biogas (farm, landfill and waste water treatment plant) and small hydro power. Within ARRA-SEP was the legislatively authorized Public Serving Institutions program which awarded grants totaling \$2.72 million to colleges, hospitals and other public organizations (Figure 5).

ARRA-SEP funds also continued to support the very popular and successful solar and wind rebates through the Vermont Small Scale Renewable Energy Incentive Program administered by the Renewable Energy Resource Center. This year, the CEDF provided over \$7 million of ARRA-SEP funds to this program (See Table 6 for details).

The Fund also provided \$2 million under ARRA-SEP for a geothermal heating and cooling system to be installed at the new State office building in Bennington. Two small contracts totaling \$79,500 rounded out the ARRA-SEP funding for the year: one to update Vermont’s Commercial Building Energy Standards (CBES), and a second to help communities learn how to install group-net metered renewable power systems.

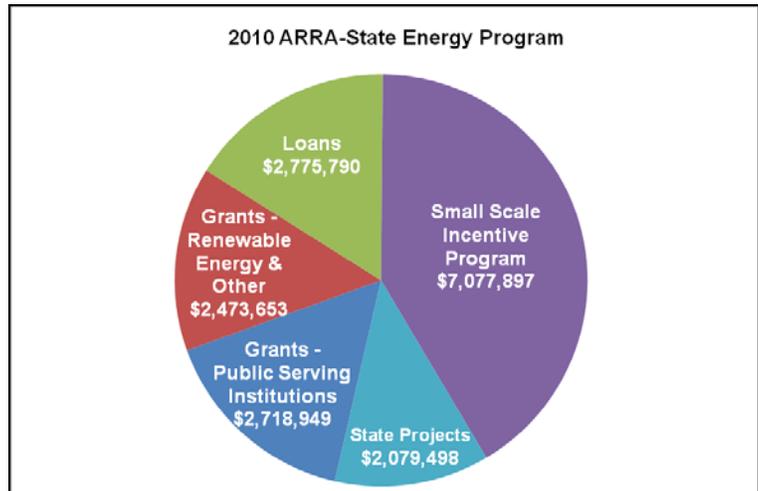


Figure 5. ARRA State Energy Program Activities

➤ **Competitive Grant and Loan Round**

To distribute federal ARRA-SEP and state funds, CEDF issued one competitive grant and loan round in 2010 for proposals for small-, large-, and community-scale projects, special demonstration projects, and pre-project financial assistance. In response to its February solicitation, CEDF received proposals from thirty two applicants requesting over \$7 million in financial assistance. In May the Fund awarded \$1.8 million in ARRA-SEP grants and loans to 10 projects including a biogas cogeneration project, a 10 to 12 MW wind plant at Georgia Mountain, and a 300 kW PV system. Several projects requested and received both grants and loans. (See the CEDF section below for information on applicants that received state funding through this solicitation).

➤ **ARRA-SEP Loans**

To advance clean energy production in the state, CEDF provides low-interest loans (2%) to qualified projects on an on-going basis. In addition to the loans that were offered through the competitive round above, the Fund approved an additional \$1.4 million in loans to fund such initiatives as a landfill methane project, biomass district heating at a college campus, and a 100 kW wind project at Burke Mountain. The average renewable energy loan in the ARRA-SEP pool was approximately \$463,000 (Table 5).

Table 5. 2010 Renewable Energy Loans (ARRA-SEP and CEDF)

PROJECT (FUNDING SOURCE)	LOCATION	AMOUNT AWARDED (\$)	ESTIMATED kWh/year	RATED CAPACITY
AgNorth – Farm Biogas from Crop Digester (ARRA-SEP)	Alburgh	\$250,000	13,315,200	1,900 kW
Burke Mountain – Wind (ARRA-SEP)	East Burke	\$500,000	324,000	100 kW
Carbon Harvest – Landfill Biogas (ARRA-SEP)	Brattleboro	\$500,000	4,098,985	250 kW
Draker Laboratories – Energy Software (ARRA-SEP)	Burlington	\$425,790	NA	NA
Georgia Mountain Wind – Wind (ARRA-SEP)	Georgia	\$750,000	28,640,000	12,000 kW
Goddard College – Biomass Heating (ARRA-SEP)	Plainfield	\$350,000	NA	NA
Sub-Total ARRA-SEP Loans		\$2,775,790		
Eaton Energy/Auburn Farm – Farm Biogas (CEDF)	Lunenburg	\$500,000	765,605	100 kW
TOTAL LOANS		\$3,275,790	47,143,790 kWh/yr	14,350 kW

Public Serving Institutions Program

In 2009 the Legislature allocated \$2 million of the ARRA funds to be used to support clean energy projects at “public serving institutions”¹. In 2010 the Fund awarded 13 grants to colleges, universities, hospitals and health clinics under this program totaling \$1,718,949. An additional \$1 million went to the Department of Buildings and General Services (BGS) as stipulated by the Legislature for statewide energy efficiency measures in state facilities (Table 6).

Table 6. Public Serving Institutions SEP-ARRA Grants

Institution	Location	Type	Amount Awarded (\$)
North Country Hospital	Newport	Biomass	\$149,478
Goddard College	Plainfield	Biomass	\$150,000
Brattleboro Retreat	Brattleboro	Efficiency	\$50,000
Burlington College	Burlington	Efficiency	\$233,000
Castleton State College	Castleton	Efficiency	\$137,964
Visiting Nurse Association	Colchester	Efficiency	\$50,000
Marlboro College	Marlboro	Efficiency	\$83,258
Middlebury College	Middlebury	Efficiency	\$137,000
VT College of Fine Arts	Montpelier	Efficiency	\$233,000
Northern Tier Ctr for Health	Richford	Efficiency	\$72,500
College of St Joseph	Rutland	Efficiency	\$122,749
VT Law School	South Royalton	Efficiency	\$250,000
VT Technical College	Randolph	Geothermal	\$50,000
BGS-statewide efficiency	Statewide	Efficiency	\$1,000,000
TOTAL			\$2,718,949

¹ Defined as non-profit public and private universities, colleges, hospitals, health clinics and fire districts. Cities, towns, villages, municipally-owned fire stations and K-12 schools were not eligible under this program as they were eligible for funding under the Energy Efficiency and Conservation Block Grant (EECBG) program.

➤ **Small Scale Renewable Energy Incentive Program**

The Vermont Small Scale Renewable Energy Incentive Program, created in 2003, continues to help spur the development and production of clean energy in the state. The program provides rebates to individuals, businesses, municipalities, and multi-family low-income housing projects for grid connected and net metered solar electric and small wind systems, solar hot water and small-scale hydropower systems. Operated by the Renewable Energy Resource Center (RERC, a unit within the Vermont Energy Investment Corporation, VEIC), the program received a boost of \$7,077,897 in funding this year from CEDF via ARRA-SEP. The CEDF has provided funding for this program since the Fund’s inception.

Based upon increased demand for rebates and growth of the renewable energy sector, the Board adopted a new incentive structure for 2010 designed to reduce the incentive amount upon reaching predefined “capacity triggers.” For example, the starting incentive of \$1.50 per watt for PV was dropped to \$1.25 per watt once the first capacity block of 750 kW of electric generation capacity was reached. Due to the high demand for rebates of PV systems the capacity triggers were reach so quickly that it caused some disturbance in the PV market. In order to have a more predictable program structure the CEDF has put in a flat incentive structure for PV of \$0.75/watt for 2011, with no capacity triggers.

In 2010, CEDF incentive program used both ARRA and state resources to provide rebates to 324 renewable energy installations with total costs for these projects topping \$7 million. An additional 269 systems were reserved in 2010 as well. Since inception, the Fund has supported 1,129 systems with a total installed cost of \$23.3 million using funds from CEDF, ARRA, DOE and DPS. Table 7 below summarizes the wind, PV, and solar hot water system installations and system capacities. Map 2 shows the distribution in the state.

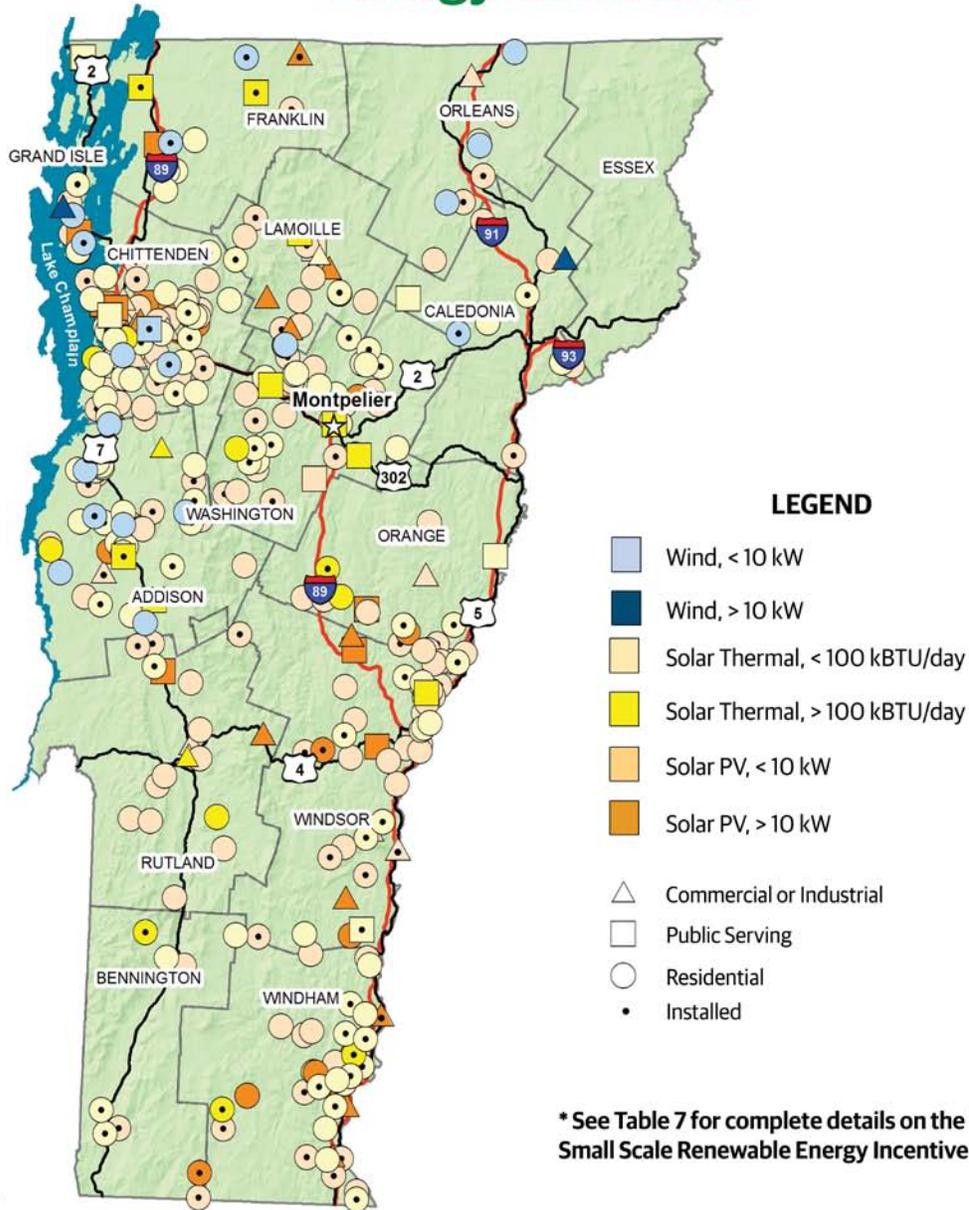
Table 7. Vermont Small Scale Renewable Energy Incentive Program

Description	Wind	Solar PV	Solar Hot Water	Total
	Installed Systems			
Number Installed				
2010	13	150	161	324
<i>Cumulative (since 2003)</i>	85	481	563	1,129
Total Cost of Installed Systems				
2010	\$442,728	\$4,602,239	\$2,052,402	\$7,097,369
<i>Cumulative</i>	\$2,719,185	\$14,065,809	\$6,497,894	\$23,282,888
Incentives Paid for Installed Systems				
2010	\$154,000	\$1,088,201	\$367,019	\$1,609,902
<i>Cumulative</i>	\$968,875	\$2,822,426	\$1,036,446	\$4,828,429
Total Installed Capacity (kW & kBTU/day)				
2010	kW 63.34	kW 709.762	kBTU/day 16,586	
<i>Cumulative</i>	345.47	1,806.245	50,941	
Estimated Annual kWh/yr				
2010	68,547	813,121		881,668
<i>Cumulative</i>	483,725	2,065,438		2,549,163
Leveraged Dollars: \$1 CEDF ARRA =	\$3.41 other funding (2010); \$3.84 cumulative			
	Projects Underway, Funds Reserved in 2010			
Number Reserved	15	168	86	269
Current Reservations - Not Installed	\$624,477	\$2,321,014	\$183,536	\$3,129,027
Total Proposed Capacity (kW & kBTU/day)	245 kW	2,034 kW	9,687 kBTU/day	

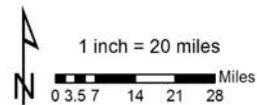
Data supplied by Renewable Energy Resource Center

Map 2. Location of Small-Scale Incentive Projects, 2010

2010 VEIC Small-Scale Renewable Energy Incentives*



* See Table 7 for complete details on the Vermont Small Scale Renewable Energy Incentive Program.



Demand for rebates from this program remains high, despite the reduction in incentive levels, partially due to the reduction in PV prices. According to the RERC, the PV installed cost per watt for residential systems dropped from \$9 in 2009 to less than \$7 a year later—a sign that the market for solar installations is maturing. CEDF anticipates that the incentive program will run out of incentive dollars for reservations during the first quarter of 2011.

■ CEDF Projects

While the allocation of federal dollars under ARRA in 2010 increased, funding by the State of Vermont to CEDF through its memoranda with Entergy Vermont Yankee (Entergy VY) decreased from \$6.8 million in 2009 to \$4.3 million in 2010. A portion of the Entergy VY funds are connected to wholesale electric sales made by Entergy VY. The decrease in funds received from Entergy VY was due to the dramatic slump in wholesale electric prices in New England in 2010.

The CEDF awarded \$966,264 in grants and loans in 2010 using monies from Entergy VY. The remaining Entergy VY funds, plus the anticipated funds from Entergy, were used to award business solar tax credit certificates. The Clean Energy Development Board certified \$7.5 million in tax credits for PV and solar thermal installations (Figure 6).

➤ **Vermont Business Solar Tax Credit Program**

While VT has had a solar tax credit for several years, 2010 was the first year that the CEDF was required to create a tax credit program to allocate a limited amount of tax credits. Due to the high demand for these credits (which ended in 2010) almost 90% of the state CEDF dollars awarded this year supported PV and solar thermal development through the Business Solar Tax Credit program.

Act 159 of 2009 (32 VSA §5930z) required the Clean Energy Development Board to develop a business solar tax credit certification program that would certify no more than \$9.4 million in solar tax credits. The Act also required the CED Board to set aside an undetermined amount of funds for projects less than 150 kW of rated capacity. Demand was huge. By the legislatively set July 15, 2010 deadline, the Board had received applications for more than \$28.8 million in tax credits for 218 solar projects.

At their July 12 meeting, Board members determined there was only \$7.5 million available given the Fund’s balance, obligations and projected revenue. The members debated issuing tax credits on the dates projects were started vs. a least cost basis, and opted for the former given that the tax credit was changed to a limited credit half-way through the year. In August, after the first \$7million of credits were certified, an additional \$500,000 was set aside for a second round that was only open to solar thermal projects and PV projects under 150kW in size. Projects that obtained a Certificate of Public Good

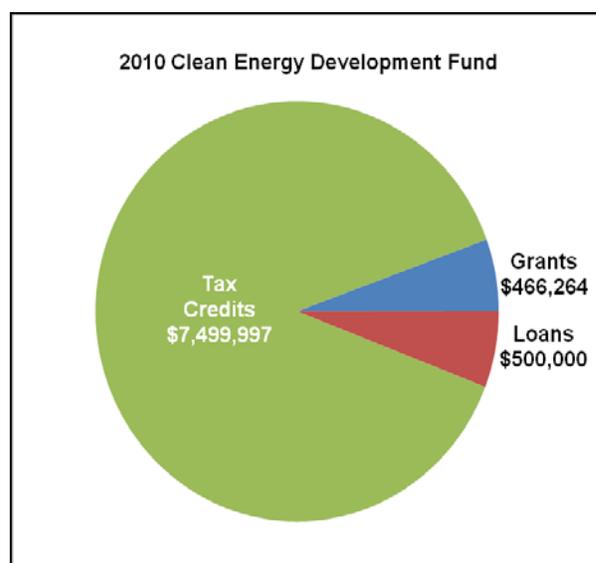


Figure 6. State Funded Activities

(CPG) received their tax credit certification in December 2010. For solar thermal projects, certification was issued upon receipt of photographic proof of the installed system rather than a CPG.

Ultimately, the CEDF issued \$7.5 million in tax credits including \$7.43 million for 79 PV projects and \$66,416 for 11 solar thermal projects. Collectively, these tax credits will leverage \$17.5 million for total project costs of \$25 million. The combined capacity for these projects is 4,008 kW (AC) for PV and over 329 MMBtu for solar thermal per year. More than 100 projects remain in a queue that establishes an order for allocating any additional funds that become available for these solar tax credits.

➤ **Competitive Grant Round**

CEDF issued one competitive grant round in 2010 for proposals from small-, large-, and community-scale projects, special demonstration projects, and pre-project financial assistance. In response to this February solicitation, CEDF received proposals for thirty two different projects requesting over \$7 million in financial assistance. In May, the Fund awarded \$454,800 of state monies to four projects: one small study and farm methane digester systems at Auburn Star Farm, Four Hills Farm, and Kane’s Scenic River Farm. Auburn Star requested and received a grant and loan (see Loan section below).

Project Highlight: Fayston Municipal Building Retrofit & Biomass Heat System (EECBG)

Through the leadership of municipal officials and energy committee members, the town of Fayston will enjoy energy and cost savings due to a deep efficiency retrofit and installation of a super efficient pellet boiler system. In 2010, Fayston received over \$75,000 in EECBG monies to renovate the poorly insulated municipal office building and replace its oil furnace.

“This is where energy efficiency measures combine with renewable energy pay back to the taxpayer while reducing our dependency on foreign oil,” said town energy coordinator David Frank. “This wood pellet boiler burns at 86 percent efficiency.” The town expects to offset 1,500 gallons of fuel oil annually, and save over \$2,000 per year due to the combined energy efficiency measures and use of wood pellets that will come from Vermont forests. (Photo provided by Town of Fayston)



Governor James Douglas and representatives from Fayston celebrate completion of their EECBG-funded project.

➤ **CEDF Loans**

The CEDF loan program was launched in November 2007 to fund a wide variety of clean and/or renewable electric energy technologies including PV; wind energy; farm, landfill and sewer methane recovery; CHP; thermal and geothermal systems; hydroelectric systems; and emerging energy-efficient technologies. All electric-generation projects must be grid-connected. The CEDF makes loans that meet the Fund’s objectives and advance the overall goals of the Fund as set forth in 10 V.S.A § 6523 and the CEDF Strategic Plan.

CEDF issued just one loan this year with State funds (seven loans were made with ARRA funds): a \$500,000 loan to the Auburn Star Farm for a farm methane digester CHP project valued at \$1,120,000. This 95 kW system is slated to return 765,605 kWh of power annually.

Project Highlight: East Montpelier Elementary School Efficiency Upgrade (EECBG)

Built in 1965, the East Montpelier Elementary School was added to in 1989 and maintained with care throughout its life. Using EECBG funds, the school replaced their outdated HVAC control system. The existing system had been altered, expanded and had parts decommissioned due to failure. Running 24/7 with antiquated electrical and mechanical controls, it was no longer efficient or effective. Every advisor of energy efficient system upgrades they consulted assured that its replacement would have the greatest energy cost savings and benefit of any retrofit considered.

A \$50,000 EECBG award plus \$12,000 in match funded the purchase and installation of a Direct Digital Control (DDC) Web-Based Energy Management System. The web-based system allows for remote monitoring by school personnel for system set-point adjustments and alarm call-outs. The system provides automated controls for the school’s boilers, pumps, unit ventilators, gravity ventilators, unit heaters and various exhaust fans. These units are controlled based on the school’s calendar, building occupancy and outdoor temperature resets.

As a result, the school will benefit from energy cost savings of 10 to 15 percent per year. The reduced consumption of #2 heating oil and electricity will yield reductions of 32,900 lbs of green house gasses (CO₂ equivalents) per year. (Photo by DPS)



➤ **Municipal Technical Assistance Program**

The MTAP was designed to help municipalities investigate what forms of renewable energy might be appropriate for their town. Technical assistance may include developing and/or permitting a renewable energy project, preparing funding proposals or developing bid specifications. In 2010, CEDF offered grants to three Municipalities: Fairfield Hydro/Solar Study (\$3,464), the Windsor Hydro Study (\$5,000), and the Woodstock PV Study (\$3,000). The maximum grant award for this category was \$5,000 with a 10% cash match. This popular program had to be canceled in June due to the lack of resources.

■ **Conclusion**

Vermonters responded to funding opportunities from CEDF far beyond expectations. From the EECBG, ARRA-SEP and CEDF grant rounds to the small scale rebate program to the business solar tax credit program, there were so many more requests than there were funds available—even with the infusion from ARRA. Clearly, 2010 will stand out as a landmark year when interest in clean energy moved further into the mainstream.

The demand for ARRA and CEDF state resources required a rapid ramp up of program administration. Processing the volume of requests and awards coupled with the stringent compliance requirements under ARRA necessitated effective collaboration between the CEDF, DPS, DOE and other state agencies. Aware of the magnitude and importance of the task, the CEDF and DPS rose to the challenge of deploying \$34.1 million of ARRA and state funds. Working closely together, the CEDF and DPS deployed nearly three times the \$12 million awarded in 2009. The CEDF and DPS were able to accomplish this with minimal administrative expense. For 2010 administration expenses accounted for less than 2 percent of funds awarded and are projected to stay under 4 percent for 2011.

2009 Project Highlight: Champlain College Geothermal Project (CEDF)

With the modest help of a \$125,000 CEDF grant in 2009, Champlain College installed a state-of-the-art geothermal heating and cooling system in the new Perry Hall Welcome center. According to college President David Finney, this was intended to be “the first and lasting impression visitors and students will have of the college.” Contractors dug about 700 feet to pull 52° F water which is passed through 36 heat pumps for heating the 27,000 sq. ft. building. The project includes a student-developed monitoring system to track results.

Funding from the state helped the project gain credibility for geothermal heat as a viable energy option, said a school spokesperson. Becoming a case study for geothermal, numerous institutions and visitors from as far away as Sweden have come to see the system and now plan systems of their own. (Photos provided by Stephen Mease, Champlain College)



The unprecedented funding for renewable energy projects and energy efficiency improvements provided a unique opportunity to build capacity in Vermont's emerging clean energy sector. As a result, hundreds of municipalities, school districts, non-profits, businesses, community organizations and individuals gained substantial experience with designing and installing building retrofits and renewable energy systems. Such skills will prove increasingly important as Vermont moves closer towards a carbon-reduced future. The associated savings from the projects supported with these funds will prove essential in helping Vermont communities meet other critical needs and obligations for current and future generations.

The clean energy markets in Vermont are growing but future growth will require additional capital and technical assistance. However, there is no indication that additional federal ARRA resources will be forthcoming and Entergy Vermont Yankee (Entergy VY) funding, which only continues through 2012, is already obligated to fund the existing business solar tax credits. Some markets are approaching self sustaining levels but most will require additional resources to grow.

It is in the State's interest to see the clean energy industry continue to grow, and the CEDF is an efficient and successful vehicle for that growth. Additional funding for the activities of the CEDF should be sought in order to realize the future clean energy economy that Vermonters desire.

■ Appendix One – The Clean Energy Development Fund

In 2005, the Vermont General Assembly established the Vermont Clean Energy Development Fund (CEDF) 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 with a final payment received in March of 2013.

The CEDF offers a portfolio of funding opportunities to accelerate the development, commercialization, and production of clean energy in Vermont, including grants, loans, equity investments, and contracts. The rationale that supports the Fund includes recognition that:

- 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 goal of receiving 25% of the State's total energy use from renewable energy primarily from in-state farms and forests by 2025. In addition the CEDF goals support 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.

PURPOSE

The purposes of the Fund shall be to promote the development and deployment of cost-effective and environmentally sustainable electric power and thermal energy or geothermal resources, and emerging energy-efficient technologies, for the long-term benefit of Vermont consumers, primarily with respect to renewable energy resources, and the use of combined heat and power technologies. (10 V.S.A. § 6523 (c))

GOALS

To the extent possible given funding availability, the Fund is managed to promote:

- The increased use of renewably produced electrical, thermal, geothermal energy, combined heat and power, and emerging energy-efficient 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; and
- 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.

OBJECTIVES

- Increase the installation of renewable energy systems for homes, businesses, farms, and public buildings.
- Increase the amount of combined heat and power (CHP) 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.
- Continue to grow clean energy related businesses and industry in Vermont.
- Provide financial and technical assistance for the design, development, and commercialization of clean energy and emerging energy efficiency technologies and products.

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 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.

ADMINISTRATION

In accordance with 10 V.S.A. § 6523, the Department of Public Service (DPS) provides the Clean Energy Development Board and its fund manager with administrative services. 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. DPS staff managed the Fund until a permanent fund manager was hired to manage the day-to-day operation of the Fund.

Prior to August 2009, the Fund was administered by the DPS with an Advisory Committee made up of legislators and the commissioner of the DPS. The Advisory Committee appointed an Investment Committee of nine whose members reviewed and approved the CEDF plans, budgets and program designs, and assisted the DPS in the review of grants and investments; determining the viability of a project, company, product or service; and evaluating marketing and business plans. This structure was changed in August of 2009 when a separate Board was set up to administer the CEDF per the legislative changes set forth below.

CLEAN ENERGY DEVELOPMENT FUND BOARD

As stipulated by changes made by the legislature in 2009, a Board was created consisting of nine directors [10 V.S.A. § 6523(e)]:

- Three at-large directors appointed by the Speaker of the House
- Three at-large directors appointed by the President Pro-tempore of the Senate
- Two at-large directors appointed by the Governor
- The State Treasurer, ex officio

The Board is required to develop a five-year strategic plan and annual program plan with input from a public stakeholder process, consistent with state energy planning principles, as well as an annual operating budget and proposed program designs to facilitate clean energy market and project development (including the use of financial assistance, investments, competitive solicitations, technical assistance, and other incentive programs and strategies). The Board is also responsible for holding quarterly public meetings, commissioning an audit every three years, and providing annual reports to the house and senate committees on natural resources and energy, the senate committee on finance, and the house committee on commerce and economic development. Finally, the Board retains and supervises the fund manager, who is housed within and assigned for administrative purposes to the Department of Public Service.

The CEDF Board reviews and approves the plans, budget and program designs. The Board also assists the fund manager in the review of grants and investments; determining the viability of a project, company, product or service; and evaluating marketing and business plans.

MANAGEMENT OF THE FUNDS

The fund manager and the Board work together to determine the amount of funds to be used for grants, loans, equity and/or subordinated debt investments. Since these types of financial support differ from one another, the CEDF manages each type as described below.

When a request for a grant is approved by the Board, funds are dispersed by DPS based on specific requisitions by the grantee, which is subject to approval by the fund manager.

If a loan is requested and approved by the fund manager the Board then reviews the application and receives a recommendation from the fund manager. The Board decides if the loan application should be sent to the Vermont Economic Development Authority (VEDA) for underwriting analysis. If the application is sent on to VEDA, VEDA returns the application with an analysis and recommendation to the Board on the loan. If the Board gives final approval VEDA then prepares the loan documents, closes the loan, and manages the relationship with the borrower. VEDA handles the accounting for the loan, applies payments as they are received, and manages any loan collection activity as necessary. VEDA charges a modest fee for its services that was negotiated between VEDA and the CEDF.

The Board decides 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 is to co-invest with other established investment firms.

The 2010 Clean Energy Development Fund Board

- ❖ **Robert Dostis** – Green Mountain Power, Co-chair
- ❖ **Sam Swanson** – Pace Energy and Climate Center, Co-chair
- ❖ **Jo Bradley** – Vermont Economic Development Authority
- ❖ **Tom Evslin** – Evslin Consulting
- ❖ **Ellen Kahler** – Vermont Sustainable Jobs Fund
- ❖ **Mary Lintermann** – DEW Construction Corp.
- ❖ **Rich Sedano** – Regulatory Assistance Project
- ❖ **Mark Sinclair** – Clean Energy Group
- ❖ **Jeb Spaulding**, as the Vermont Treasurer, is an ex officio Director of the Board



David Blittersdorf served on the Board from August 2009 to mid-July 2010.

CEDF Fund Manager

Andrew Perchlik

Department of Public Service/CEDF Administrative Personnel (through December 2010)

David O'Brien – Commissioner	Edward Delhagen – Energy Program Specialist
Steve Wark – Deputy Commissioner	Erin Lawrence – Federal Grants & Financial Administrator
Dave Lamont – Director, Planning & Energy Resources Div.	Christine Dewyea – Financial Specialist
Kelly Launder – Assistant Director, PERD	Malcolm Matthew – Financial Specialist
Sheri Rockcastle – Administrative Services Manager	Michelle Hughes – Grants Specialist
Lisa Nisen – Administrative Services Technician	Karin McNeill – Grants Specialist
Pam Hull – Administrative Assistant	Diane Reynolds – Grants Specialist

Appendix Two – CEDF Financial Information

VERMONT CLEAN ENERGY DEVELOPMENT FUND STATEMENT OF NET ASSETS December 31, 2010

ASSETS

Cash and cash equivalents	\$	6,879,767
Notes Receivable	\$	3,027,357
Accrued Interest	\$	2,968
Investments	\$	100,000
Total Assets	\$	<u>10,010,092</u>

LIABILITIES

	\$	-
Accounts Payable	\$	11,813
Grants & Contracts Payable	\$	5,085,840
Total Liabilities	\$	<u>5,097,653</u>

NET ASSETS

Total Net Assets	\$	<u><u>4,912,439</u></u>
------------------	----	-------------------------

VERMONT CLEAN ENERGY DEVELOPMENT FUND 2010 FUND BALANCE STATEMENT JANUARY 1, 2010 TO DECEMBER 31, 2010

FUND BALANCE AS OF:

January 1, 2010	\$	<u>9,458,879</u>
-----------------	----	------------------

CASH FLOWS:

Additions	\$	4,492,877
Subtractions	\$	(7,224,823)
NET INCREASE/(DECREASE) IN CASH	\$	<u>(2,731,946)</u>

FUND BALANCE AS OF:

December 31, 2010	\$	<u>6,726,933</u>
-------------------	----	------------------

LESS CASH ENCUMBERED

\$	<u>(5,085,840)</u>
----	--------------------

CASH AVAILABLE

\$	<u><u>1,641,094</u></u>
----	-------------------------

**VERMONT CLEAN ENERGY DEVELOPMENT FUND
STATEMENT OF REVENUES, EXPENDITURES AND
CHANGES IN FUND BALANCE
JANUARY 1, 2010 TO DECEMBER 31, 2010**

REVENUES

Entergy Dry cast Storage Payments	\$ 2,500,000
Entergy Up-Rate Payments	\$ 1,868,116
Interest Income	\$ 21,812
Loan Interest Income	\$ 27,541
Loan Repayments	\$ 70,176
Loan Fees	\$ 5,231
Total Revenues	<u>\$ 4,492,877</u>

EXPENDITURES

Wages & Benefits	\$ 111,859
Per Diem	\$ 4,714
Meetings & Conferences	\$ 225
Dues	\$ 20
Travel	\$ 4,642
Loan Fees	\$ 8,372
Purchased Services	\$ 24,978
Misc Administration	\$ 1,371
Contracts	\$ 1,059,279
Grants	\$ 2,078,092
Loans	\$ 766,293
Transfers	\$ 3,164,978
Total Expenditures	<u>\$ 7,224,823</u>

Excess of revenues over (under) expenditures	<u>\$ (2,731,946)</u>
Net change in fund balance	\$ (2,731,946)
Fund balances, January 1	<u>\$ 9,458,879</u>
Fund balances, December 31	<u><u>\$ 6,726,933</u></u>

Appendix Three: 2010 CEDF & ARRA Funded Projects

Project Name	Town	Type	Amount (\$)	Total Project Cost (\$)	Leverage (\$)
ARRA EECBG Municipal & School Districts					
Town of Bakersfield	Bakersfield	Efficiency	\$40,316	\$44,796	\$4,480
City of Barre	Barre	Efficiency	\$50,000	\$87,702	\$37,702
Village of Bellows Falls	Bellows Falls	Efficiency	\$9,000	\$10,000	\$1,000
Town of Belvidere School District	Belvidere Center	Efficiency	\$8,481	\$11,181	\$2,700
Mt. Anthony Union High School District	Bennington	Efficiency	\$50,000	\$62,500	\$12,500
Mt. Anthony Union High School District	Bennington	Efficiency	\$30,332	\$35,000	\$4,668
Town of Winhall	Bondville	Efficiency	\$44,055	\$48,950	\$4,895
Leicester Central School	Brandon	Efficiency	\$50,000	\$58,070	\$8,070
Bridport Central School	Bridport	Efficiency	\$45,675	\$50,750	\$5,075
Mt Abraham Union High School	Bristol	Efficiency	\$50,000	\$62,273	\$12,273
Mt Abraham Union High School	Bristol	Efficiency	\$19,221	\$22,468	\$3,247
Bristol Elem School	Bristol	Efficiency	\$50,000	\$64,997	\$14,997
Town of Cavendish	Cavendish	Efficiency	\$50,000	\$70,920	\$20,920
Town of Charlotte	Charlotte	Efficiency	\$25,547	\$29,570	\$4,024
Charlotte School District	Charlotte	Efficiency	\$50,000	\$58,000	\$8,000
Town of Chelsea	Chelsea	Efficiency	\$47,451	\$52,740	\$5,289
Green Mountain Union High School	Chester	Efficiency	\$50,000	\$61,276	\$11,276
Frederic Duclos Barstow Memorial School	Chittenden	Efficiency	\$48,000	\$58,780	\$10,780
Town of Chittenden	Chittenden	Efficiency	\$21,665	\$24,436	\$2,771
Town of Corinth	Corinth	Efficiency	\$50,000	\$60,733	\$10,733
Bingham Memorial School (Cornwall)	Cornwall	Efficiency	\$50,000	\$59,673	\$9,673
Craftsbury Schools	Craftsbury Common	Efficiency	\$45,000	\$58,315	\$13,315
Shrewsbury Mountain School	Cuttingsville	Efficiency	\$50,000	\$65,004	\$15,004
Currier Memorial School	Danby	Efficiency	\$47,661	\$57,518	\$9,857
Dover School District	Dover	Efficiency	\$12,950	\$14,950	\$2,000
Orange Center School	East Barre	Efficiency	\$50,000	\$65,533	\$15,533
East Montpelier Elem School	East Montpelier	Efficiency	\$50,000	\$64,973	\$14,973
Town of East Montpelier	East Montpelier	Efficiency	\$28,386	\$34,859	\$6,473
Eden Central School District	Eden	Efficiency	\$39,237	\$44,057	\$4,820
Town of Granville	Granville	Efficiency	\$48,930	\$57,967	\$9,037
Highgate Elementary School	Highgate Center	Efficiency	\$44,668	\$49,631	\$4,963
Highgate Elementary School	Highgate Center	Efficiency	\$36,959	\$41,066	\$4,107
Town of Highgate	Highgate Center	Efficiency	\$42,779	\$47,542	\$4,763
Town of Huntington	Huntington	Efficiency	\$50,000	\$74,700	\$24,700
Town of Hyde Park School District	Hyde Park	Efficiency	\$41,088	\$45,870	\$4,782
Irasburg Village School	Irasburg	Efficiency	\$49,743	\$56,540	\$6,797
Town of Brighton	Island Pond	Efficiency	\$50,000	\$93,153	\$43,153
Town of Isle La Motte	Isle La Motte	Efficiency	\$17,600	\$19,785	\$2,185
Mt Mansfield School District	Jericho	Efficiency	\$50,000	\$104,900	\$54,900
Town of Jericho	Jericho	Efficiency	\$49,999	\$55,669	\$5,670
Johnson Town School District	Johnson	Efficiency	\$45,820	\$50,933	\$5,113
Village of Johnson	Johnson	Efficiency	\$49,950	\$74,547	\$24,597
Town of Killington	Killington	Efficiency	\$15,480	\$17,200	\$1,720
Lincoln Elem School	Lincoln	Efficiency	\$35,429	\$41,459	\$6,030
Town of Lincoln	Lincoln	Efficiency	\$50,000	\$60,000	\$10,000
Flood Brook Union School	Londonderry	Efficiency	\$50,000	\$60,465	\$10,465
Lowell Graded School	Lowell	Efficiency	\$21,600	\$24,000	\$2,400
Marlboro School District	Marlboro	Efficiency	\$45,000	\$50,000	\$5,000
Town of Mendon	Mendon	Efficiency	\$43,678	\$48,536	\$4,858
Middlebury Union Middle School	Middlebury	Efficiency	\$50,000	\$59,750	\$9,750
Town of Middlebury	Middlebury	Efficiency	\$43,380	\$48,200	\$4,820
Middletown Springs Elementary School	Middletown Springs	Efficiency	\$50,000	\$64,475	\$14,475
Monkton Elem School	Monkton	Efficiency	\$50,000	\$59,576	\$9,576
U-32 School	Montpelier	Efficiency	\$50,000	\$58,054	\$8,054
U-32 School	Montpelier	Efficiency	\$50,000	\$56,827	\$6,827
Harwood Union High School	Moretown	Efficiency	\$43,784	\$73,558	\$29,774
Village of Morrisville Water & Light	Morrisville	Efficiency	\$38,307	\$47,624	\$9,317
New Haven (Beeman) Elem School	New Haven	Efficiency	\$46,553	\$51,292	\$4,739
Newfane School District	Newfane	Efficiency	\$50,000	\$71,900	\$21,900
Town of Fayston	North Fayston	Efficiency	\$18,282	\$24,007	\$5,725
Troy School	North Troy	Efficiency	\$50,000	\$59,103	\$9,103
Orleans Elementary School	Orleans	Efficiency	\$12,432	\$13,815	\$1,383
Orleans Elementary School	Orleans	Efficiency	\$50,000	\$58,000	\$8,000
Town of Peacham	Peacham	Efficiency	\$22,422	\$31,525	\$9,103
Pittsford School District	Pittsford	Efficiency	\$31,562	\$35,582	\$4,020
Pittsford School District	Pittsford	Efficiency	\$24,905	\$28,541	\$3,636
Calais Elementary School	Plainfield	Efficiency	\$49,200	\$54,715	\$5,515

Project Name	Town	Type	Amount (\$)	Total	
				Project Cost (\$)	Leverage (\$)
Town of Plainfield	Plainfield	Efficiency	\$34,500	\$70,254	\$35,754
Town of Randolph	Randolph	Efficiency	\$50,000	\$68,510	\$18,510
Randolph Union High School	Randolph	Efficiency	\$50,000	\$92,400	\$42,400
Town of Richmond	Richmond	Efficiency	\$13,284	\$15,046	\$1,762
Town of Georgia	St. Albans	Efficiency	\$44,298	\$50,008	\$5,710
Town of Georgia	St. Albans	Efficiency	\$18,122	\$20,136	\$2,014
Town of Shaftsbury	Shaftsbury	Efficiency	\$46,924	\$52,345	\$5,421
Town of Sharon	Sharon	Efficiency	\$49,500	\$55,000	\$5,500
Town of Shelburne	Shelburne	Efficiency	\$50,000	\$109,086	\$59,086
Shoreham Elementary School	Shoreham	Efficiency	\$32,175	\$35,750	\$3,575
Town of Shoreham	Shoreham	Efficiency	\$37,800	\$42,100	\$4,300
South Burlington School District	South Burlington	Efficiency	\$50,000	\$58,756	\$8,756
South Burlington School District	South Burlington	Efficiency	\$50,000	\$58,756	\$8,756
Royalton School District	South Royalton	Efficiency	\$45,000	\$55,142	\$10,142
Strafford School District	South Strafford	Efficiency	\$50,000	\$58,308	\$8,308
City of St. Albans	St. Albans	Efficiency	\$50,000	\$149,269	\$99,269
Bellows Free Academy St. Albans	St. Albans	Efficiency	\$50,000	\$80,500	\$30,500
Town of St. Johnsbury	St. Johnsbury	Efficiency	\$40,250	\$47,161	\$6,911
Starksboro (Robinson) Elementary School	Starksboro	Efficiency	\$49,785	\$54,385	\$4,600
Starksboro (Robinson) Elementary School	Starksboro	Efficiency	\$12,717	\$14,117	\$1,400
Town of Starksboro	Starksboro	Efficiency	\$26,555	\$39,730	\$13,175
Town of Strafford (retro)	Strafford	Efficiency	\$18,686	\$21,132	\$2,446
Town of Strafford (lite)	Strafford	Efficiency	\$18,860	\$26,860	\$8,000
Sutton School District	Sutton	Efficiency	\$10,000	\$11,100	\$1,100
Village of Swanton	Swanton	Efficiency	\$49,590	\$55,100	\$5,510
Village of Swanton	Swanton	Efficiency	\$45,289	\$62,445	\$17,156
Town of Thetford	Thetford Center	Efficiency	\$23,282	\$26,219	\$2,937
Town of Tinmouth	Tinmouth	Efficiency	\$32,053	\$39,175	\$7,122
Town of Townshend	Townshend	Efficiency	\$45,000	\$50,000	\$5,000
Underhill Central Elementary School	Underhill Center	Efficiency	\$50,000	\$155,345	\$105,345
Underhill Central Elementary School	Underhill Center	Efficiency	\$14,460	\$16,710	\$2,250
Waitsfield Elementary School	Waitsfield	Efficiency	\$49,000	\$58,864	\$9,864
Town of Waitsfield	Waitsfield	Efficiency	\$49,999	\$60,705	\$10,706
Wardsboro Central School	Wardsboro	Efficiency	\$50,000	\$60,205	\$10,205
Warren Elementary School	Warren	Efficiency	\$17,208	\$25,578	\$8,370
Town of Warren	Warren	Efficiency	\$50,000	\$57,780	\$7,780
Washington Village School	Washington	Efficiency	\$50,000	\$119,619	\$69,619
Town of Waterbury	Waterbury	Efficiency	\$49,725	\$56,250	\$6,525
Waterville School District	Waterville	Efficiency	\$21,394	\$24,112	\$2,718
Town of Waterville	Waterville	Efficiency	\$40,993	\$50,548	\$9,555
Town of Burke	West Burke	Efficiency	\$11,064	\$12,170	\$1,106
West Rutland School	West Rutland	Efficiency	\$50,000	\$57,789	\$7,789
Town of Westford	Westford	Efficiency	\$12,200	\$13,588	\$1,388
Whiting Village School	Whiting	Efficiency	\$17,905	\$24,543	\$6,638
Williamstown Elementary School	Williamstown	Efficiency	\$37,500	\$47,735	\$10,235
Town of Williamstown	Williamstown	Efficiency	\$45,833	\$56,576	\$10,743
Town of Wilmington	Wilmington	Efficiency	\$50,000	\$56,000	\$6,000
City of Winooski - Light	Winooski	Efficiency	\$50,000	\$140,143	\$90,143
JFK Middle School/Winooski School District	Winooski	Efficiency	\$50,000	\$82,245	\$32,245
City of Winooski - Retro	Winooski	Efficiency	\$25,000	\$37,259	\$12,259
Woodbury Town School District	Woodbury	Efficiency	\$29,000	\$34,000	\$5,000
Woodstock Elementary School	Woodstock	Efficiency	\$40,700	\$46,188	\$5,488
City of Montpelier	Montpelier	Efficiency	\$50,000	\$80,242	\$30,242
Town of Middlesex	Middlesex	Efficiency Finance Programs	\$13,900	\$15,454	\$1,554
Town of Putney	Putney	Efficiency Finance Programs	\$72,000	\$80,000	\$8,000
Town of Thetford	Thetford	Efficiency Finance Programs	\$21,600	\$24,000	\$2,400
Town of Waitsfield	Waitsfield	Efficiency Finance Programs	\$13,700	\$15,230	\$1,530
Sub-Total: ARRA EECBG Municipal & School Districts			\$4,859,376	\$6,438,197	\$1,578,821
ARRA EECBG Regional Planning Commissions					
Southern Windsor RPC	Ascutney	Efficiency	\$80,000	\$80,000	\$0
Bennington RPC	Bennington	Efficiency	\$80,000	\$80,000	\$0
Windham RPC	Brattleboro	Efficiency	\$80,000	\$80,000	\$0
Addison RPC	Middlebury	Efficiency	\$80,000	\$80,000	\$0
Central VT RPC	Montpelier	Efficiency	\$80,000	\$80,000	\$0
Lamoille RPC	Morrisville	Efficiency	\$80,000	\$80,000	\$0
Rutland RPC	Rutland	Efficiency	\$80,000	\$80,000	\$0
Northwest RPC	St. Albans	Efficiency	\$80,000	\$80,000	\$0

Project Name	Town	Type	Amount (\$)	Total	
				Project Cost (\$)	Leverage (\$)
Northeast (NVDA) RPC	St. Johnsbury	Efficiency	\$80,000	\$80,000	\$0
Chittenden RPC	Winooski	Efficiency	\$80,000	\$80,000	\$0
Two Rivers Ottoquechee RPC	Woodstock	Efficiency	\$80,000	\$80,000	\$0
Sub-Total: ARRA EECBG Regional Planning Commissions			\$880,000	\$880,000	\$0

EECBG Renewable Energy & Other					
Otter Valley Union High School	Brandon	Transportation	\$13,356	\$16,040	\$2,684
UVM Transportation Center	Burlington	Transportation	\$10,000	\$10,000	\$0
Dorset Fire Stations	East Dorset	Efficiency	\$37,052	\$41,169	\$4,117
Town of East Montpelier	East Montpelier	Biomass	\$38,700	\$44,220	\$5,520
Vt Superintendents Assoc (SEMP)	Montpelier	Efficiency	\$80,000	\$80,000	\$0
Town of Fayston	North Fayston	Biomass	\$57,716	\$64,456	\$6,740
Burlington Airport	South Burlington	Solar PV	\$234,000	\$2,184,000	\$1,950,000
St Albans CHP-DH Study	St. Albans	Biomass	\$25,000	\$34,850	\$9,850
Sutton School District	Sutton	Geothermal	\$42,000	\$60,417	\$18,417
Sub-Total: EECBG Renewable Energy & Other			\$537,824	\$2,535,152	\$1,997,328

EECBG All Fuels Program					
VT Fuel Efficiency Partnership (CVCAC)	Statewide	Efficiency	\$2,279,793	\$2,279,793	\$0
Sub-Total: EECBG All Fuels Program			\$2,279,793	\$2,279,793	\$0

ARRA-SEP Public Serving Institutions Grants					
North Country Hospital PSI	Newport	Biomass	\$149,478	\$298,957	\$149,479
Goddard College PSI	Plainfield	Biomass	\$150,000	\$1,999,175	\$1,849,175
Brattleboro Retreat PSI	Brattleboro	Efficiency	\$50,000	\$117,016	\$67,016
Burlington College PSI	Burlington	Efficiency	\$233,000	\$465,878	\$232,878
Castleton State College PSI	Castleton	Efficiency	\$137,964	\$275,928	\$137,964
Visiting Nurse Association PSI	Colchester	Efficiency	\$50,000	\$110,493	\$60,493
Marlboro College PSI	Marlboro	Efficiency	\$83,258	\$166,515	\$83,257
Middlebury College PSI	Middlebury	Efficiency	\$137,000	\$274,000	\$137,000
VT College of Fine Arts PSI	Montpelier	Efficiency	\$233,000	\$466,108	\$233,108
Northern Tier Ctr for Health (NOTCH) PSI	Richford	Efficiency	\$72,500	\$147,600	\$75,100
College of St Joseph PSI	Rutland	Efficiency	\$122,749	\$245,498	\$122,749
VT Law School PSI	South Royalton	Efficiency	\$250,000	\$931,110	\$681,110
VT Technical College PSI	Randolph	Geothermal	\$50,000	\$100,241	\$50,241
BGS-statewide efficiency-PSI	Statewide	Efficiency	\$1,000,000	\$1,000,000	\$0
Sub-Total: ARRA-SEP Public Serving Institutions Grants			\$2,718,949	\$6,598,520	\$3,879,571

ARRA-SEP Renewable Energy & Other Grants					
S Burlington Co-Generation	South Burlington	Biogas	\$260,000	\$539,900	\$279,900
Burlington Distr Energy Study	Burlington	Biomass	\$70,000	\$140,000	\$70,000
Middlebury Renewable Energy Study	Middlebury	Biomass	\$24,999	\$43,770	\$18,771
Maple Corner Study	Montpelier	Biomass	\$17,000	\$21,280	\$4,280
Landmark College study	Putney	Biomass	\$20,000	\$25,000	\$5,000
Barre City Elementary & Middle School	Barre	Efficiency	\$41,139	\$45,710	\$4,571
Colchester School District	Colchester	Efficiency	\$50,000	\$147,170	\$97,170
East Haven School District	East Haven	Efficiency	\$10,000	\$11,100	\$1,100
Fairfax Town School District (BFA Fairfax)	Fairfax	Efficiency	\$40,105	\$45,060	\$4,955
Lamoille Union High School District #18	Hyde Park	Efficiency	\$47,107	\$61,581	\$14,474
Jericho Elementary School	Jericho	Efficiency	\$30,685	\$36,235	\$5,550
Underhill ID Elementary School	Jericho	Efficiency	\$5,575	\$6,325	\$750
Lyndon Town School	Lyndonville	Efficiency	\$50,000	\$55,579	\$5,579
Milton Town School District	Milton	Efficiency	\$45,747	\$50,830	\$5,083
Camels Hump Middle School	Richmond	Efficiency	\$18,955	\$21,505	\$2,550
Unified School District 37-Miller's Run	Sheffield	Efficiency	\$17,010	\$20,010	\$3,000
Folsom Educational & Community Ctr	South Hero	Efficiency	\$46,925	\$52,139	\$5,214
Springfield School District	Springfield	Efficiency	\$50,000	\$70,624	\$20,624
St. Albans Town Education Center	St. Albans	Efficiency	\$50,000	\$59,664	\$9,664
Georgia Elementary & Middle School	St. Albans	Efficiency	\$49,421	\$59,726	\$10,305
Swanton Elementary School	Swanton	Efficiency	\$50,000	\$62,854	\$12,854
Missisquoi Valley Union High School	Swanton	Efficiency	\$50,000	\$57,779	\$7,779
Smilie Memorial Elementary School	Waterbury	Efficiency	\$18,845	\$21,995	\$3,150
The Newark School	West Burke	Efficiency	\$10,913	\$12,126	\$1,213
Townsend Dam Hydro Study	Plainfield	Hydro	\$24,999	\$37,499	\$12,500
VT Sustainable Jobs Fund Renewable Energy Atlas	Montpelier	Mapping	\$40,000	\$47,725	\$7,725
Dynapower	South Burlington	Other	\$250,000	\$2,198,604	\$1,948,604
Housing Vermont	Bristol	Solar PV	\$500,000	\$5,823,241	\$5,323,241

Project Name	Town	Type	Amount (\$)	Total	
				Project Cost (\$)	Leverage (\$)
City Market Onion River Co-op PV	Burlington	Solar PV	\$53,900	\$134,012	\$80,112
Vermont Solar	Killington	Solar PV	\$150,000	\$1,028,126	\$878,126
Norwich Community PV	Norwich	Solar PV	\$220,000	\$1,118,018	\$898,018
VT Technical College Anemometer Loan Prgm	Randolph Center	Wind	\$50,328	\$100,241	\$49,913
VT Environmental Research Associates	Waterbury	Wind	\$110,000	\$121,000	\$11,000
Sub-Total: ARRA-SEP Renewable Energy & Other Grants			\$2,473,653	\$12,276,428	
ARRA-SEP Loans					
Carbon Harvest	Brattleboro	Biogas	\$500,000	\$1,600,000	\$1,100,000
Goddard College	Plainfield	Biomass	\$350,000	\$1,852,500	\$1,502,500
Agnorth	Alburgh	Farm Biogas	\$250,000	\$6,802,000	\$6,552,000
Draker Laboratories	Burlington	Other	\$425,790	\$473,100	\$47,310
Burke Mountain	East Burke	Wind	\$500,000	\$973,157	\$473,157
Georgia Mountain Wind	Georgia	Wind	\$750,000	\$29,442,227	\$28,692,227
Sub-Total: ARRA-SEP Loans			\$2,775,790	\$41,142,984	\$38,367,194
ARRA-SEP Incentive Program & State Projects					
Renewable Energy Resource Center (VEIC)	Statewide	Small Scale RE Incentives	\$7,077,897	\$7,077,897	\$0
BGS-Bennington	Bennington	Geothermal	\$2,000,000	\$2,000,000	\$0
Commercial Building Energy Standards	Statewide	Commercial Building Energy Stds	\$49,998	\$49,998	\$0
Powersmith Solar Net Metering	Guilford	Other	\$29,500	\$31,350	\$1,850
Sub-Total: ARRA-SEP Incentive Program & State Projects			\$9,157,395	\$9,159,245	\$1,850
CEDF Grants					
Caledonia Kiln Study	St. Johnsbury	Biomass	\$4,800	\$6,000	\$1,200
Four Hills Farm	Bristol	Farm Biogas	\$250,000	\$2,780,260	\$2,530,260
Kane's Cow Power LLC	Enosburg Falls	Farm Biogas	\$150,000	\$1,778,950	\$1,628,950
Eaton Energy (Auburn Farm)	Lunenburg	Farm Biogas	\$50,000	\$1,120,000	\$1,070,000
Windsor Hydro Study	Windsor	Hydro	\$5,000	\$20,000	\$15,000
Fairfield Study	Fairfield	Other	\$3,464	\$3,848	\$385
Woodstock PV Study	Woodstock	Solar PV	\$3,000	\$3,475	\$475
CEDF LOANS					
Eaton Energy (Auburn Farm)	Lunenburg	Farm Biogas	\$500,000	\$1,120,000	\$620,000
CEDF Solar Business Tax Credits					
Solar Business Tax Credits	Statewide	Solar PV	\$7,433,581	\$25,265,099	\$17,831,518
Solar Business Tax Credits	Statewide	Solar Thermal	\$66,416	\$267,550	\$201,134
Sub-Total: CEDF Grants, Loans, Incentives & Tax Credits			\$8,466,260	\$32,365,182	\$23,898,922
TOTAL: CEDF & ARRA Funded Awards			\$34,149,041	\$113,675,502	\$79,526,461