



***Public Serving Institutions (PSI)***  
**March 2010**  
**REQUEST FOR PROPOSALS - Revised**

**INTRODUCTION**

The purpose of this solicitation is to obtain proposals from eligible organizations for projects that implement non-electric energy efficiency measures in buildings or install renewable energy generation systems (both electric and thermal) on buildings.

The total amount of funding available through this request for proposals (RFP) is \$2,000,000, which is made available from the American Recover and Reinvestment Act of 2009 (ARRA) as part Public Serving Institutions (PSI) program of the Clean Energy Development Fund (CEDF) as specified by the Vermont General Assembly. This will help stimulate the creation or increased retention of jobs, save energy, increase energy generation from renewable sources, and reduce greenhouse gas emissions. **This solicitation is funded entirely with monies from ARRA and therefore respondents will be subjected to unprecedented levels of transparency and reporting requirements** including, but not limited to: reporting, tracking and segregation of incurred costs; job creating and preservation reporting; access to records; and ensuring wage rates. Respondents are encouraged to thoroughly review this RFP.

*Public Serving Institutions* are defined in this RFP as non-profit public and private universities, colleges, hospitals, health clinics and fire districts. **These are the only eligible applicants under this solicitation.** Cities, towns, villages, municipally-owned fire stations and K-12 schools are **not** eligible under this RFP as they were eligible for funding under the Energy Efficiency and Conservation Block Grant (EECBG) program. Awards will be made through this competitive RFP process. Award recipients will be expected to report on the expected and actual energy savings or generation achieved and other factors detailed below.

Eligible applicants may submit proposals for projects in the following two categories: *Energy Efficiency Retrofits* and *Renewable Energy Technologies on Buildings*. This program offers both grants and loans; however, applicants must apply for either a grant or a loan, but not both. **An applicant may only submit one proposal.** Proposals must be for projects based in Vermont. All electric-generation projects must be grid-connected. Funds cannot be used for projects that have already begun construction and/or equipment purchases have been made. All projects must be completed within two years of the award.

Fire stations owned by Fire districts may apply for grants ranging from \$15,000 to a maximum of \$75,000 with a 10% cost share, with no more than 50% of the cost share as in-kind. All others may apply for grants that range from \$50,000 to \$250,000 with a 50% cost share required with no more than 25% of the cost share as in-kind. Loans may range from \$50,000 to \$500,000 with a 10% cash cost share required. Loans will go through a two-step approval process. Loans awarded will be made through the Vermont Economic Development Authority (VEDA) with a 2% interest rate.

Projects that are participating in the Vermont Sustainable Priced Energy Enterprise Development (SPEED) Standard Offer (AKA the feed-in tariff) program are not eligible for grants from the CEDF. Projects in the standard offer program are eligible for loans but only under extraordinary circumstances.

Small-scale solar electric, solar hot water, small-scale wind, and hydro systems are **not** eligible for funding under the PSI program as incentives are currently available for these types of systems under the Vermont Small Scale Renewable Energy Incentive Program. This exclusion includes solar electric (PV) systems up to 150 kW, solar hot water systems up to 1,000 kBtu/day, small-scale wind systems up to 50 kW, and micro-hydro systems up to 3 ft.-gal./min drop. Larger projects are eligible under the PSI program as well as other CEDF programs.

The CEDF and the Department of Public Service (DPS) reserve the right to make necessary changes or adjustments to the program design or to any statements made in this RFP upon receiving further guidance from U.S. Dept. of Energy, Office of Management & Budget, or the Vermont Office of Economic Stimulus and Recovery.

**Proposals must arrive at the Department of Public Service (DPS) office by 4:00 P.M. on Thursday, May 6th, 2010.** Applicants mailing proposals should allow adequate time to ensure receipt of their proposal(s) by the deadline. Proposals received after 4:00 PM on Thursday, May 6th will not be considered. Proposals are limited to 15 pages, with no less than a 12-point font and one-inch margins. One original signed hard copy, three additional copies and an electronic copy (which can be emailed or submitted on a CD) of the proposal must be delivered to Andrew Perchlik, c/o Vermont Department of Public Service. Proposals must include a complete Cover Page and Budget Worksheet, both of which are available on the DPS website or by contacting the CEDF Director. Electronic copies should be emailed to the Director and should consist of a single PDF file containing the following in this order: Cover Page, Proposal Narrative, and Budget Worksheet. **Both** electronic and hard copies must arrive before the deadline. Proposals and questions should be addressed to:

Andrew Perchlik  
CEDF Director  
C/o Vermont Department of Public Service  
112 State Street  
Montpelier, VT 05620-2601  
Phone: (802) 828-4017  
Email: [andrew.perchlik@state.vt.us](mailto:andrew.perchlik@state.vt.us)

## BACKGROUND

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 CEDF 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 March of 2012.

10 V.S.A. §6523 states the purpose of the CEDF as follows: “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.” The statute also lists the following eligible expenditures relevant to this RFP:

- Projects to benefit publicly owned or leased buildings;
- Small-scale renewable energy in Vermont residences, institutions and businesses.
- Projects to develop and use thermal or geothermal energy (with or without electrical energy generation)

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 direct incentive payments through the *Vermont Small-Scale Renewable Energy Incentive Program*. Since its inception, the CEDF has awarded over \$18 million in grants to businesses, community groups, institutions, farms and individuals working to create the clean energy economy in Vermont. This public investment leveraged a total investment of more than \$60 million in renewable energy. Additional information on the CEDF is available in the on the DPS website at: [http://publicservice.vermont.gov/energy/ee\\_cleanenergyfund.html](http://publicservice.vermont.gov/energy/ee_cleanenergyfund.html)

In 2009, the CEDF received \$21,999,000 from the US Department of Energy State Energy Program (SEP) through a state formula allocation via the American Recovery and Reinvestment Act of 2009 (ARRA), Public Law 111-5. DOE’s authorization for this program is set forth in Title V, Subtitle D of the Energy Independence and Security Act (EISA) of 2007.

The goals established for the State Energy Program (SEP) are:

1. Increase energy efficiency to reduce energy costs and consumption for consumers, businesses and government.
2. Reduce reliance on imported energy.
3. Improve the reliability of electricity and fuel supply and the delivery of energy services.
4. Reduce the impacts of energy production and use on the environment.

The American Recovery and Reinvestment Act was enacted to preserve and create jobs and promote economic recovery; to assist those most impacted by the recession; to provide investments needed to increase economic efficiency by spurring technological advances in science and health; to invest in transportation, environmental protection, and other infrastructure that will provide long-term economic benefits; and, to stabilize State and local government

budgets, in order to minimize and avoid reductions in essential services and counterproductive state and local tax increases.

**This solicitation is funded entirely with monies from ARRA-SEP and therefore respondents will be subjected to unprecedented levels of transparency and reporting requirements.**

Be advised that the following special terms and conditions may apply to projects funded with these monies:

- Reporting, tracking and segregation of incurred costs;
- Reporting on job creation and preservation;
- Publication of information on the Internet;
- Access to records by Inspectors General and the Government Accountability Office;
- Ensuring that iron, steel and manufactured goods are produced in the United States;
- Ensuring wage rates are comparable to those prevailing on projects of a similar character;
- Protecting whistleblowers and requiring prompt referral of evidence of a false claim to an appropriate inspector general; and
- Certification and Registration.

These special terms and conditions will be based on provisions included in Titles XV and XVI of the Act. The exact terms and conditions are located at:

[http://management.energy.gov/business\\_doe/business\\_forms.htm](http://management.energy.gov/business_doe/business_forms.htm)

Respondents are encouraged to thoroughly review this RFP as well as guidance on the State Energy Program under ARRA provided by the Department of Energy (DOE) to the states at [http://apps1.eere.energy.gov/wip/pdfs/sep\\_arra\\_foa.pdf](http://apps1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf) (in particular, pages 4-5, and 47-50). Additional information on the DOE State Energy Program may be accessed at ([http://apps1.eere.energy.gov/state\\_energy\\_program/](http://apps1.eere.energy.gov/state_energy_program/)). Applicants should consult the DOE website ([www.energy.gov](http://www.energy.gov)), the OMB website ([www.whitehouse.gov/omb/](http://www.whitehouse.gov/omb/)), and the Recovery website ([www.recovery.gov](http://www.recovery.gov)) regularly to keep abreast of guidance and information as it evolves.

## PROJECT CATEGORIES

The purpose of this solicitation is to obtain proposals from eligible organizations for projects that implement non-electric energy efficiency measures in buildings, and install renewable energy generation systems (both electric and thermal) on buildings. Applicants may submit proposals for projects in the following two categories: *Energy Efficiency Retrofits* and *Renewable Energy Technologies on Buildings*. Applicants cannot be reimbursed for educational, outreach and similar types of activities, but should note whether these types of activities will be completed to promote the project. See below for details.

Eligible *Public Serving Institutions* for this RFP are defined as non-profit public and private universities, colleges, hospitals, health clinics and fire stations owned by a fire district. **These are the only eligible applicants under this program.** Cities, towns, villages, municipally-owned fire stations, and K-12 schools are *not* eligible as they were eligible for funding under the previously announced Energy Efficiency and Conservation Block Grants (EECBG) program. Awards will be made through this competitive RFP process. Award recipients will be expected to report on the expected and actual energy savings or generation achieved and other factors detailed below.

This program offers both grants and loans; however, applicants must apply for either a grant or a loan, but not both. An applicant may submit only one proposal. All projects must be based in Vermont. All electric-generation projects must be grid-connected. Funds cannot be used for projects that have already begun construction and/or equipment purchases that have been made. All projects must be completed within two years of the award.

Eligible Entities	Grants	Loans
Fire Districts	\$15,000 - \$75,000 Cost share: 10% with no more than 50% of the cost share as in-kind	NA
Non-profit Public or Private Hospitals, Health Clinics, Colleges and Universities	\$50,000 - \$250,000 Cost share: 50% with no more than 25% of the cost share as in-kind	\$50,000 - \$500,000 2% interest rate Cost share: 10% cash

Fire districts may apply for grants ranging from \$15,000 to a maximum of \$75,000 with a 10% cost share with no more than 50% of the cost share as in-kind. All others may apply for grants that range from \$50,000 to \$250,000 with a 50% cost share required with no more than 25% of cost share as in-kind. Loans may range from \$50,000 to \$500,000 with a 10% cost share required. Applicants should use the Excel budget worksheet which will show the cost share required.

Loan proposals will go through a separate application process. Applications will be reviewed and scored together with all other grant and loan applications received under this RFP. Those loan applications approved by the CEDF will then be subject to underwriting analysis by the Vermont Economic Development Authority (VEDA). The rate on all loans will be 2%.

All projects must be completed within two years of the award.

## GENERAL INFORMATION

### Energy Audit

All applicants are highly encouraged to conduct an energy efficiency audit prior to seeking funding, and to contact Efficiency Vermont for guidance in incorporating energy efficiency into work scopes being developed in response to this RFP. Efficiency Vermont generally does not perform energy audits, but is available to provide limited support to applicants seeking guidance about thermal efficiency measures funded through this program.

Efficiency Vermont can provide the following types of assistance:

- Answering electric and thermal efficiency questions
- Guidance on project prioritization
- Referral services to guide customers to appropriate expertise
- Links to online energy calculators and other technical resources

- Assistance with the completion and evaluation of the Building Energy Profile
- Access to Efficiency Vermont incentives for energy efficient heating, ventilation and air conditioning and other incentives

Energy efficiency measures that only save electricity are not eligible projects under this RFP. The primary focus of Efficiency Vermont services and incentives is to reduce *electric* consumption and demand for Vermont electric ratepayers through the installation of cost-effective *electric* efficiency measures.

The Efficiency Vermont customer service call center is staffed Monday to Friday from 8:00 a.m. to 5 p.m. and can be reached toll-free at 1-888-921-5990. Press “0” and tell the operator you are calling about the “Public Serving Institutions RFP”. Information on incentives and auditor resources is available at: [www.encyvermont.com](http://www.encyvermont.com). Additional information regarding energy audits is contained in Appendix B.

### **NEPA Compliance**

The two PSI categories— *Energy Efficiency Retrofits* and *Renewable Energy Technologies on Buildings*— have size guidelines designed to satisfy DOE requirements for categorical exemptions from the National Environmental Policy Act (NEPA) of 1969. Project proposals can be larger than the guidelines. However, these project categories have been pre-approved by DOE so that projects that fall in these categories and meet the requirements included in the NEPA Compliance Form in Appendix C will not require further NEPA applications or review. For more info on categorical exclusions, see NEPA Section 31 of the DOE FAQ sheet at: [http://apps1.eere.energy.gov/state\\_energy\\_program/recovery\\_act\\_faqs.cfm#recovery](http://apps1.eere.energy.gov/state_energy_program/recovery_act_faqs.cfm#recovery)

Proposals for projects that do not fall within these bounded categories receiving financial assistance via ARRA-SEP must be reviewed under NEPA. The first step in DOE’s NEPA review process requires financial assistance recipients to submit information to DOE regarding the potential environmental impacts of the project receiving DOE funds. Applicants must complete the Environmental Checklist (DOE PMC EF-1) on-line at the following site: <https://www.eere-pmc.energy.gov/NEPA.asp>

### **Section 106 of the National Historic Preservation Act:**

While energy improvements to historic buildings are greatly encouraged, they must be carefully planned to avoid unintended consequences. ARRA-SEP funded work must not harm or destroy historic buildings or archeological sites that are eligible for or listed on the National Register of Historic Places. Some buildings that are over 50 years old are likely to meet National Register criteria. The Vermont Division for Historic Preservation can provide information on National Register status, appropriate treatments for improving energy performance in historic buildings, and a list of preservation consultants who can assist applicants in planning their projects. Generally, projects that focus on window repair, installation of storm windows, installation of basement and attic insulation, furnace upgrades, and air sealing will meet preservation guidelines. Applicants should consult the Division's website at [www.historicvermont.org](http://www.historicvermont.org) and Appendix D for more information. To meet federal requirements, projects selected for an award will need written approval from the State Historic Preservation Office.

## **Category One: Energy Efficiency Retrofits**

Under this category applicants may apply for funds to retrofit existing facilities to improve thermal energy efficiency. Projects are limited to: installation of insulation; heating, venting, and air conditioning (HVAC) upgrades; weather sealing; purchase and installation of thermal boilers and furnaces; and replacement of windows and doors. Implementation of these measures will not require NEPA review.

All projects must be on, in, or servicing buildings owned by eligible entities only. The maximum funding amount for this category is \$250,000 for grants and \$500,000 for loans with the minimum of \$50,000. Grants require a 50% cost share with no more than 25% of the cost share as in-kind. Loans require a 10% cash match. Fire districts may apply for grants up to \$75,000 with a minimum of \$15,000 and a 10% cost share with no more than 50% of the cost share as in-kind.

Loan proposals will go through a two-step application process. Applications will first be reviewed and scored together with all other grant and loan applications received under this RFP. Those loan applications approved by the CEDF will then go to the Vermont Economic Development Authority (VEDA) for underwriting and final approval. The rate on all loans will be 2%.

Applicants for this category should, if possible, submit a completed energy audit, which includes a cost estimate of measures that will be implemented. See Appendix B for more information on energy audits. Although an audit is not required, it is highly recommended and applicants may receive preferential consideration if an energy audit has been completed. If an audit was not completed, applicants must submit justification for proposed measures and cost and energy savings estimates. Applicants are encouraged to contact Efficiency Vermont for assistance in determining what projects to propose under this category.

In addition to the general application requirements listed on pages 10-15, applicants with projects under this category need to provide the following additional information.

- Applicants must sign and submit the NEPA compliance form in Appendix C with their application.
- Applicants must include a procurement policy that specifies purchasing practices. When procuring equipment and services, price or rate quotations need to be obtained from an adequate number of qualified sources. Items costing more than \$100,000 need to be selected by competitive bidding while those under \$100,000 need to have a set of quotes to demonstrate that costs are reasonable. Additionally, applicants must include its selection procedures for procurement transactions in their application. Grantees will need to maintain records regarding the procurement process (e.g., copies of the quotes received).

## Category Two: Renewable Energy Technologies on Buildings

Under this category, applicants may request funds to implement and install on or in any building of the eligible entity the following renewable energy technologies: solar electric (PV > 150 kW); solar hot water (>1,000 kBtu/d); wind (> 50 kW); geothermal heat pumps; biomass boilers; and combined heat and power systems (boilers sized appropriately for the existing building in which they are located).

Proposals for wind power projects must include average wind speed data for the proposed site as well as estimated Kwhr production for the turbine(s).

The following bounded categories satisfy NEPA requirements under this program and will not require further NEPA review.

- Ground Source Heat Pump (Geothermal) – 5.5 tons of capacity or smaller, horizontal/vertical, ground closed-loop system
- Combined Heat and Power System – boilers sized appropriately for the buildings in which they are located
- Biomass thermal – 3 MMBtus per hour or smaller system with appropriate Best Available Control Technology (BACT) installed and operated. (See Box)

Applicants may choose to develop larger projects or hydro projects under this category, but their proposals will be subject to a full NEPA review prior to award.

**CEDF encourages projects that fit in the bounded categories identified above to expedite deployment of federal funds.**

For facilities that already have an existing Air Pollution Control Permit for any reason and that are proposing to install a combined heat and power system or a biomass thermal system of any size, the facility must contact the Air Pollution Control Division to determine if the facility's Air Pollution Control Permit needs to be modified.

For facilities that do not currently have an existing Air Pollution Control Permit and that are proposing to install a biomass combined heat and power system or a biomass thermal system with a heat transfer surface area great than 900 square feet (a boiler with heat input of approximately 6 MMBtu/hr or larger), the facility must submit an application for a construction permit to the Air Pollution Control Division. The permit will require the equivalent of Best Available Control Technology. If the proposed system has a heat transfer surface area of less than 900 square feet, an Air Pollution Control Permit is not required.

### Best Available Control Technology (BACT)

BACT is an emissions limitation which is based on the maximum degree of control that can be achieved. BACT can be add-on control equipment or modification of the production processes or methods. This includes fuel cleaning or treatment and innovative fuel combustion techniques. BACT may be a design, equipment, work practice, or operational standard if imposition of an emissions standard is infeasible.

The main pollutants of concern from small biomass thermal units are particulate matter and organic pollutants (products of incomplete combustion) that are categorized as toxic air pollutants. BACT on small biomass systems should focus on minimizing the emission of these two types of pollutants.

On small combustion systems where 'end of pipe' control equipment may be impractical, it is important that these systems operate with the highest possible combustion and thermal efficiency. In general, efficient systems require less fuel to provide the required heat output and consequently produce fewer pollutants for a given heat demand.

Applicants must include in their proposal the features of their biomass thermal system that represents BACT such as the use of low ash content fuels, advanced combustion design, high thermal efficiency, thermal mass storage, pollution control device(s), work practices and applicable certifications regarding proven emission performance.

The Vermont Air Pollution Control Division may be contacted at 802-241-3840.

Small-scale solar electric, solar hot water, small-scale wind, and hydro systems are **not** eligible for funding under the PSI program as incentives are currently available for these types of systems under the Vermont Small Scale Renewable Energy Incentive Program. This exclusion includes solar electric (PV) systems up to 150 kW, solar hot water up to 1,000 kBtu/d systems, small-scale wind up to 50 kW systems, and micro-hydro systems up to 3 ft.-gal./min drop. For more information, see: (<http://www.nerc-vt.org/incentives/newincentivestructure.htm>).

Proposals for wind power projects must include average wind speed data for the proposed site as well as estimated Kwhr production for the turbine(s).

Although an audit is not required, it is highly recommended and applicants for renewable energy technologies may receive preferential consideration if an energy audit and energy efficiency upgrades have been completed. If an audit has not been completed, applicants must submit information on what energy efficiency measures they have completed.

Funding under this category is for new systems only and may not be used to purchase used generating equipment, nor may funding be used to repair existing energy systems.

All projects must be on, in, or servicing buildings owned by eligible entities only. The maximum funding amount for this category is \$250,000 for grants and \$500,000 for loans with the minimum of \$50,000. Grants require a 50% cost share with no more than 25% of the cost share as in-kind. Loans require a 10% cash cost share. Fire districts may apply for grants up to \$75,000 with a minimum of \$15,000 and a 10% cost share with no more than 50% of the cost share as in-kind.

Loan proposals will go through an additional application process. Loan applications will be reviewed and scored together with all other grant and loan applications received under this RFP. Those loan applications approved by the CEDF will also be subject to underwriting analysis by the Vermont Economic Development Authority (VEDA).

All projects must be based in Vermont. Funds cannot be used for projects that have already begun construction and/or equipment purchases that have been made. All projects must be completed within two years of the award. All electric generation projects must be grid-connected. For electric generation projects, a Grantee must receive their Certificate of Public Good (CPG) from the Public Service Board before any invoices or costs incurred for the project will be reimbursed.

In addition to the general application requirements listed on 10-15, applicants with projects under this category need to provide the following additional information.

- Applicants must sign and submit the NEPA compliance form in Appendix C with their application.
- Applicants must include a procurement policy that specifies purchasing practices. When procuring equipment and services, price or rate quotations need to be obtained from an adequate number of qualified sources. Items costing more than \$100,000 need to be selected by competitive bidding while those under \$100,000 need to have a set of quotes to demonstrate that costs are reasonable. Additionally, applicants must include its selection procedures for procurement transactions in their application. Grantees will

need to maintain records regarding the procurement process (e.g., copies of the quotes received).

## **INFORMATION REQUIRED FROM APPLICANTS**

Proposals should be prepared simply and economically, providing a straightforward, concise description of the applicant's ability to meet the requirements of the RFP. Fancy bindings, colored displays, promotional materials, and so forth are not desired. Emphasis should be on completeness and clarity of content. Information in the applicant's proposal that should be held confidential must be clearly marked as confidential and comply with an exemption from public inspection as per 1 V.S.A. § 317(c) (available online at: <http://www.leg.state.vt.us/statutes/fullsection.cfm?Title=01&Chapter=005&Section=00317>). It is not acceptable to mark the entire proposal as confidential.

Grant proposals should be no longer than 15 pages, with no less than a 12-point font and one-inch margins. Resumes, letters of support, the Cover Page, and the Budget Worksheet, plus completed feasibility studies, **do not** count toward the 15-page limit. Other information, such as site maps, pictures, etc., count towards the 15-page limit.

Proposals must include at minimum the following information:

### **Cover Page**

Applicants must complete the Cover Page included as Attachment 1 of this RFP and attach it to the front of the submitted proposal. This Cover Page is available as a separate document with form fields at [http://publicservice.vermont.gov/energy/ee\\_cleanenergyfund.html](http://publicservice.vermont.gov/energy/ee_cleanenergyfund.html) or can be obtained from the grants administrator ([Diane.Reynolds@state.vt.us](mailto:Diane.Reynolds@state.vt.us)). The following section explains the information required for the Cover Page.

#### **1. Project Title**

Provide a descriptive title for the project.

#### **2. Project Category**

- a. State which project category (*Energy Efficiency Retrofits* or *Renewable Energy Technologies on Buildings*) you are applying under.
- b. Eligible Entity Type (from drop down menu)

#### **3. Project Summary**

Provide a short paragraph describing the essential elements of your project.

#### **4. Identification of Applicant Organization**

State the full name and address of the organization. Also list the main contact and his or her contact information. This person should also be listed as an Authorized Negotiator below.

#### **5. Identification of Subcontractors**

If applicable, list any subcontractors that will perform, or assist in performing, the work, including their name, address, and contact information.

#### 6. Authorized Negotiator(s)

Include the name, phone number, and email address for individuals authorized to negotiate any and all aspects of the proposed grant with the State and/or Clean Energy Development Fund. One original hard copy of the proposal must be signed by a duly authorized representative of the party (or parties) submitting the proposal.

#### 7a. Electrical Output:

Maximum installed generator capacity (kW; for solar, use the DC rating):

Expected actual maximum capacity (kW; for solar, use the AC rating):

Projected Annual kWh:

Capacity factor:

Fuel Type (for example, "wood"):

#### 7b. Thermal Output (For CHP and thermal-only projects):

Fuel type:

Maximum heat delivery rate (Btu/hour):

Expected heat delivery rate (Btu/hour):

Expected annual Btus delivered:

Capacity factor:

Estimated CO<sub>2</sub> emission rate (in lbs/MMBtus of heat input):

Thermal source this project will displace (e.g., oil-fueled boiler) and an estimate of the CO<sub>2</sub> emission rate (lbs/MMBtus of heat input) of the displaced thermal source:

#### 7c. Geothermal Capacity:

Describe your system (i.e., open loop/closed loop; water source/ground source; if water source, ground water/surface water):

Describe the length and depth of circulating loops:

Maximum heating/cooling capacity of heat pump (tons):

Has soil conductivity been assessed, and if so, what are the values?

Ratio of equipment cost to installation cost:

Is the system Energy Star rated?

Expected annual Btu of heating/cooling delivered:

Expected annual kWh consumed:

#### 8. Energy Efficiency/Savings Aspects of Project:

Efficiency rating of installed equipment (if applicable):

Efficiency of fuel consumption (if applicable):

Efficiency measures already taken:

Efficiency measures to be taken:

Expected annual energy savings (kWh and/or Btu):

Amount of greenhouse gases reduced (CO<sub>2</sub> equivalents):

Amount of criteria air pollutants reduced (tons):

#### 9. Expected Interconnection Date:

Applicants must provide an estimate of when they expect to apply for and receive their Certificate of Public Good from the Public Service Board or their FERC license or exemption.

#### 10. Estimated Project Life

Applicants must provide a project lifespan estimate, either from the equipment warranty information or a reasonable estimation based upon similar installations.

### 11. Total Project Costs

Applicants must include the **total** project costs (this should also be included in the budget).

### 12. CEDF Funds Requested

Applicants must specify the amount and type of funds (i.e., grant or loan) they are requesting from the CEDF towards their project.

### 13. Estimated Payback Time

Applicants must provide an estimate of the project's payback period, in years, both with and without CEDF funding. Please show your calculations.

### 14. Federal Funds Questionnaire:

All funds for the PSI program are from the American Reinvestment and Recovery Act (ARRA). A grantee awarded federal funding must be registered in Central Contractor Registration (CCR) and have a DUNS number in order to receive a grant agreement. This process can take a long time, so applicants should be preparing now. To obtain a number, call 1-866-705-5711 or visit <http://www.dnb.com/us/>. Projects awarded federal funds must adhere to federal requirements, including a preliminary National Environmental Policy Act (NEPA) review, if required (checklist may be viewed at <https://www.eere-pmc.energy.gov/NEPA.asp>), auditing, and reporting. A list of potential reporting requirements and funding limitations may be found at [http://apps1.eere.energy.gov/wip/pdfs/sep\\_arra\\_foa.pdf](http://apps1.eere.energy.gov/wip/pdfs/sep_arra_foa.pdf) in section 10.3A, as well as at <http://edocket.access.gpo.gov/2009/pdf/E9-9073.pdf> (see especially for Buy American and Davis-Bacon wage requirements), and in the ARRA terms and conditions appended to the end of this solicitation.

Please answer the following:

- Are you registered with CCR, and do you have a DUNS number?
  - If yes, what is the number?
  - If no, will you be able to apply for a number before a grant agreement is issued?
- Jobs you expect this project will retain (number, type, duration):
- Jobs you expect this project will create (number, type, duration):
- Age of Building involved in proposed project:

### 15. Signature:

Please sign below to indicate you have read and acknowledge all of the conditions of this request for proposals, and that, to the best of your knowledge, the information you have supplied is accurate.

### Personnel

Applicants shall have demonstrable knowledge, skills, and experience as it relates to the required work. Proposals should include a description of the applicant's prior experience in all areas relevant to the project. The proposal must identify all persons that will be employed in the proposed work by skill and qualifications. Identify key personnel by name and title and provide a resume for each (resumes **do not** count toward the 15-page limit). Subcontractors must be listed, including the firm name and address and contact person (on the cover page as well), and complete description of work to be subcontracted. Include descriptive information concerning subcontractor's organization and abilities.

### Work Plan

Describe in narrative form the plan for accomplishing the work required to complete the project. Include a description of any pre-development activities that have been completed, including

feasibility studies or energy audits. It is recommended that Energy Efficiency Retrofit projects complete an energy audit, which should be included in the application. Although an audit is not required, it is highly recommended and applicants may receive preferential consideration if an energy audit has been completed. If an audit was not completed, applicants must submit justification for proposed measures and cost and energy savings estimates.

Indicate the number of hours allocated to each task and which staff member(s) will complete the tasks. Include a time-related chart showing each event, task, and decision point in the work plan. Also describe the plan for project oversight, quality assurance measures, and financial management and which staff member(s) will have this responsibility. Include a list of all permitting requirements for the project and whether any of the permits have been obtained. Applicants must ensure that it will comply with all federal, state, and local permitting regulations.

Identify whether any pre-development activities, including feasibility studies, have been completed for the project. Any necessary preliminary feasibility studies and/or resource assessments should be completed prior to applications. Solar projects do not need to supply feasibility studies but should include a PV Watts (or equivalent) report for the project site. Wind generation projects must supply at least one year of completed anemometry study.

Applicants should include the date of construction for each existing building and/or structure that will be physically affected by the proposed project.

The applicant must also ensure that it will comply with all federal, state and local regulations for waste disposal.

Applicants must include a procurement policy that specifies purchasing practices.

### **Potential Energy Generation**

Applicants should use this section to provide a brief description of any assumptions used in Sections 7, 8, 10, and 13 on the cover page.

### **Environmental, Economic, & Societal Impact**

Applicants should describe the specific environmental, economic, and societal benefits created through support of the project such as: the reduction in carbon dioxide and other greenhouse gas emissions and air pollutants; reduction of fossil fuel use; number of existing jobs retained; and the number of new jobs created (both temporary and permanent). Applicants should be prepared to provide the calculations used for these estimates upon request.

A method to estimate reductions in greenhouse gas emissions:

1. Estimate fuel and electricity savings (e.g., gallons of fuel oil or propane) the project will achieve.
2. Calculate the resulting reductions in greenhouse gas (i.e., CO<sub>2</sub>) emissions using the assumptions for the amount of emissions per unit of fuel set forth below.
3. If the project results in any increase in electricity consumption, such as the electricity required to operate a geothermal (aka ground-source) heat-pump, add the resulting CO<sub>2</sub> emissions from the increase in electricity consumption.
4. Summarize the net change in fuel consumption, electricity consumption, and associated CO<sub>2</sub> emissions.

Estimates of the reduction in greenhouse gas emissions may be calculated using the following assumptions:

1 gallon of fuel oil saved = 22.384 lbs CO<sub>2</sub> emissions reduced  
1 thousand cubic feet natural gas saved = 120.593 lbs CO<sub>2</sub> emissions reduced  
1 gallon propane saved = 12.669 lbs CO<sub>2</sub> emissions reduced  
1 gallon motor gasoline saved = 19.564 lbs CO<sub>2</sub> emissions reduced

Source: <http://www.eia.doe.gov/oiaf/1605/coefficients.html> This US Energy Information Administration table provides similar conversion coefficients for other fuels as well.

1 kWh of electricity = 1.004 lbs. CO<sub>2</sub> emissions  
1 MWH of electricity = 1,004 lbs CO<sub>2</sub> emissions

Source: [www.iso-ne.com/genrtion\\_resrcs/reports/emission/2007\\_mea\\_report.pdf](http://www.iso-ne.com/genrtion_resrcs/reports/emission/2007_mea_report.pdf)

Additional information and alternative calculation methods are available from the following sources:

1. ARRA Benefit Reporting Calculator. This tool is designed to provide high level estimates of energy savings and resulting emissions reductions:  
[http://apps1.eere.energy.gov/state\\_energy\\_program/docs/arra\\_benefits\\_reporting\\_calculator.xls](http://apps1.eere.energy.gov/state_energy_program/docs/arra_benefits_reporting_calculator.xls)
2. The Outcome Estimator for the State Energy Program and EECBG. This allows the applicant to estimate savings for a number of efficiency program activities that may be included in grant applications. This is available at:  
[http://apps1.eere.energy.gov/state\\_energy\\_program/docs/sep\\_metrics\\_calculator.xls](http://apps1.eere.energy.gov/state_energy_program/docs/sep_metrics_calculator.xls).
3. The U.S. EPA's Greenhouse Gas Equivalency Calculator may be used to provide an estimate of greenhouse gas emission reductions for renewable electricity production and electric energy saving projects for the purposes of this section (available at:  
[www.epa.gov/cleanenergy/energy-resources/calculator.html](http://www.epa.gov/cleanenergy/energy-resources/calculator.html)).
4. Combined heat and power projects may use the calculator available at:  
[www.epa.gov/chp/documents/chp\\_emissions\\_calc.xls](http://www.epa.gov/chp/documents/chp_emissions_calc.xls).

Applicants may use the following calculation to estimate jobs created/retained. According to the US DOE, jobs created/retained can be estimated by taking the amount of funds requested and divide them by \$92,000.

Ex: \$150,000 funds received / \$92,000 = 1.63 or 1-2 jobs created

If funds are less than \$92,000 then a fraction of a job (for example "0.5 FTE") can be listed if the applicant deems this appropriate.

It is also acceptable to provide estimated jobs created based on local income, if data is available (i.e., if the normal annual income is \$45,000, double the amount of jobs could be created than if \$92,000 was used for the estimate).

Created jobs are jobs that did not exist previously. Jobs retained are jobs that are "in-house" or taking jobs from other departments of the municipality and moving them to this project. Grantees will be required to report the **actual** number of jobs created/retained during the grant period.

For energy efficiency retrofits and renewable energy technology installations, applicants must certify that the building has met required state energy codes. Applicants should also describe

any high-performance or beyond code energy efficiency improvements that have been made or will be made in the buildings.

### **Budget Considerations**

Applicants must submit a proposed budget for the project and include narrative explanations. A budget worksheet that may be used by applicants is available at:

[http://publicservice.vermont.gov/energy/ee\\_cleanenergyfund.html](http://publicservice.vermont.gov/energy/ee_cleanenergyfund.html) or can be obtained from the grants administrator ([Diane.Reynolds@state.vt.us](mailto:Diane.Reynolds@state.vt.us)). The following cost elements should be included:

- Personnel (position, rate, hours)
- Travel (mileage can not exceed the prevailing state rate at the time of travel)
- Supplies & Materials
- Equipment
- Other (specify)
- Total Direct Costs
- Indirect Costs (may not exceed 23.64% of direct costs)
- BUDGET TOTAL

The budget must also include the applicant's cash and in-kind match for the project. For each cost element, the applicant must show what portion will be paid with CEDF funds and what portion will be paid with matching funds (designating cash versus in-kind match).

For this grant solicitation, applicants' time/labor committed to the project is considered in-kind match. Subcontractors/third party **donated** labor/services, equipment, and materials would also be considered in-kind match.

All match (both cash and in-kind) must be necessary for the accomplishment of project objectives and must be applicable to the grant period (i.e., cash or time previously spent on the project cannot be used as match). All match must be documented and verifiable. Match greater than the required amounts is encouraged.

The CEDF will expect to share in any cost savings realized by the selected applicant. Therefore, the CEDF's final share of each line item expenditure will be paid out at the proportionate rate of participation as established by that line item in the grant budget and/or any approved amendment to the budget.

### **Additional Information**

Include any other information that is believed to be pertinent, but not specifically requested elsewhere in this RFP.

## **SELECTION CRITERIA**

All proposals are subject to an evaluation by the CEDF and DPS staff, the CEDF Board, and any other reviewers deemed necessary. The CEDF reserves the right (but in no way is obligated) to interview the top prospective candidates to aid in the selection process.

All proposals will be evaluated based upon how well the project meets the goals of this RFP and the CEDF, qualifications of the individuals proposed to perform the work, relevance of previous

experience, completeness and quality of the proposal, reasonableness of cost, and any other criteria deemed relevant. Acceptance or rejection of any or all proposals will be at the sole discretion of the CEDF.

Projects will be selected based upon the information provided in the application and how the project matches up against the evaluation criteria listed below.

- 1. Project supports the CEDF's primary goal of maximizing cost-effective and environmentally sustainable clean energy generation**
  - The more energy saved/generated the higher the score
  - The more energy saved/generated per grant \$ the higher the score
  
- 2. Project supports one or more other CEDF goals**
  - Accelerate economic development for the clean energy sector in Vermont
    - Jobs retained and created
    - Creation of new businesses
    - Increase of business revenue that will cycle within VT
    - Support and/or development of the clean energy industry/sector
  
  - Leverage funding for clean energy development in Vermont
    - The more funds are leveraged the higher the score
  
  - Contribute to the knowledge base and infrastructure for a clean energy future in Vermont
    - Education and training of sector workforce
    - Potential for public visibility/education and plan for promoting the site/project
  
- 3. Experience & Qualifications**
  - Knowledge and experience in the relevant project area, including successful experience with similar projects
  - Demonstrated ability to complete project on time and on budget
  - Adequate capacity/staffing for the described work and ARRA reporting requirements
  - Previous experience with state and/or federal grants/contracts.
  
- 4. Work Plan**
  - Clarity and reasonableness of work plan, including definition and timeliness of tasks to be performed
  - Plan and capacity for project control and financial management are clear and reasonable (including a strategy to implement, operate, monitor, and evaluate the project)
  
- 5. Budget**
  - Budget line items and amounts are sufficiently described and justified to explain the necessity of each item
  - Costs are reasonable and competitive, and payback justifies grant or loan funding
  - Degree of financial leverage (through funding obtained from the federal government, private investors, or other funding sources)
  - The need for financial assistance is well established/justified
  
- 6. Project Characteristics**
  - Suitability of the site for the proposed project(s)
  - Ability to start project immediately and complete quickly

- Degree to which pre-development activities such as energy audits, feasibility studies, permitting and other required approvals are completed
- Degree to which the project meets the comprehensive energy needs of the building or group of buildings in question. For example, a project that addresses all identified areas of a building that needs energy efficiency improvements such as insulation or boiler/furnace upgrades would be preferred to a project that addresses one particular measure (e.g., replacing only windows)
- Potential annual energy generation or energy/fuel savings
- Number of jobs created and/or retained
- Project risks (for ex. permitting) are relative to similar proposed projects

**7. Environmental, Economic, and Social Impact Characteristics**

- Degree of contribution to reductions in greenhouse emissions and to the state's renewable energy objectives
- Applicant has maximized energy efficiency at the project site prior to implementation of renewable energy, if applicable
- Project delivers electric generation to the Vermont grid in transmission-constrained locations (requires supporting statement from local utility or VELCO)

**GENERAL TERMS AND CONDITIONS**

1. The CEDF reserves the right to reject any and all proposals received as a result of this RFP for any reason, to waive minor irregularities in any proposals received, and to negotiate with any party in any manner deemed necessary to best serve the interests of the State.
2. The CEDF shall not be responsible for any costs incurred by any party in preparation of any proposal submitted in response to this RFP.
3. The CEDF reserves the right to amend or cancel this RFP at any time if the best interest of the State requires such action.
4. News releases pertaining to this RFP, grant award, or the project shall not be made without prior written approval from the CEDF.
5. All parties submitting proposals shall be Equal Opportunity Employers. During the duration of the performance of this contract, the contractor will be expected to comply with all federal, state and local laws respecting non-discrimination in employment.
6. The CEDF will pay for actual work performed and expenses incurred under this project up to the specified grant amount. Specific payment provisions will be arrived at upon mutual agreement of the parties. All payments will require the submission of an itemized billing of work performed to date in sufficient detail to justify payment.
7. In most instances, the grant payments made under this program will be treated as taxable income by the IRS and the State of Vermont. It is the responsibility of the recipient of this grant payment to consult with their tax advisor to determine the correct treatment of this payment for Federal and State tax purposes.
8. If a selected applicant receives a Vermont Business Solar Tax Credit, pursuant to 32 V.S.A. §5930z or 32 V.S.A. §5822(d) from the State of Vermont for their project, they shall remit

the equivalent dollar amount of the tax credit to the State of Vermont for use by the Clean Energy Development Fund.

9. The selected applicants shall agree to grant to the State a nonexclusive, irrevocable license to reproduce, translate, publish, use, and dispose of all material developed as a result of this project. The selected applicants further shall agree that they will not copyright any material developed as a result of the project.
10. Before commencing work on this project, a Grantee must have a Grant Agreement in place with the State. Before a Grant Agreement will be issued, the Party must provide certificates of insurance to show that the following minimum coverages are in effect. It is the responsibility of the Party to maintain current certificates of insurance on file with the state through the term of the Agreement. No warranty is made that the coverages and limits listed herein are adequate to cover and protect the interests of the Party for the Party's operations. These are solely minimums that have been established to protect the interests of the State.

Workers Compensation: With respect to all operations performed, the Party shall carry workers' compensation insurance in accordance with the laws of the State of Vermont.

General Liability and Property Damage: With respect to all operations performed under the contract, the Party shall carry general liability insurance having all major divisions of coverage including, but not limited to:

Premises - Operations  
Products and Completed Operations  
Personal Injury Liability  
Contractual Liability

The policy shall be on an occurrence form and limits shall not be less than:

\$1,000,000 per Occurrence  
\$1,000,000 General Aggregate  
\$1,000,000 Products/Completed Operations Aggregate  
\$ 50,000 Fire/ Legal/Liability

Automotive Liability: The Party shall carry automotive liability insurance covering all motor vehicles, including hired and non-owned coverage, used in connection with the Agreement. Limits of coverage shall not be less than: \$1,000,000 combined single limit.

**Party shall name the State of Vermont and its officers and employees as additional insureds for liability arising out of this Agreement.**

11. The CEDF and the State assume no liability in any fashion with respect to this RFP or any matters related thereto. All prospective contractors and their subcontractors or successors, by their participation in the RFP process, shall indemnify, save and hold the State and its employees and agents free and harmless from all lawsuits, causes of action, debts, rights, judgments, claims, demands, damages, losses and expenses or whatsoever kind in law or equity, known and unknown, foreseen and unforeseen, arising from or out of this RFP and/or any subsequent acts related thereto, including but not limited to the recommendation of a contractor and any action brought by an unsuccessful applicant.

12. All grant funds dispersed from the American Recovery and Reinvestment Act (ARRA) are subject to all requirements of the ARRA including reporting requirements, purchasing requirements, auditing requirements, requirements for administration of funds received, and requirements for transparency and accountability. Please review the bulletins and forms available at: <http://finance.vermont.gov/forms> for the latest guidance.

13. All grant awards are subject to the availability of funding.

## MONITORING AND REPORTING

Reporting is REQUIRED under this agreement. Reporting elements are still being refined and additional information may be required. Reporting will include quarterly progress as well as annual and/or final reporting, and (if required) Property Certification, and (if required) Annual Indirect Cost Proposal and Reconciliation.

Not later than ten calendar days after the end of each calendar quarter, the State must submit a report to the federal government that, at a minimum, contains the information specified in Section 1512 of the ARRA. **It is imperative that the Grantee supply the State with the necessary information so that the State can provide these reports in a timely manner.**

Periodic reports, certified by an authorized agent of the Party, utilizing the form(s) provided by the State of Vermont, shall be submitted as required. Failure to submit timely, accurate and fully executed reports shall constitute an “Event of Default” and will result in a mandate to return the funds already disbursed under this agreement, and/or the withholding of current and future payments under this agreement until such time as the reporting irregularities are resolved to the State’s satisfaction.

Quarterly and annual project reports will include expenditures and also specific activities and achievements. These items tend to be outputs (actions taken by grant recipients) but also include some short-term outcomes (results achieved relatively soon after project outputs occur that lead toward attainment of ultimate project objectives). Grantees will be expected to report their achievements in terms of the specified metrics presented below. The metrics are designed to track the accomplishments of projects funded by ARRA.

- Number, type and duration of jobs created and/or retained
- Energy savings (kWh/therms/gallons/Btus/etc.)
- Renewable energy generating capacity (kW/MW) and generation (kWh, MWh)
- GHG emissions reductions (CO<sub>2</sub> equivalents)
- Energy cost savings
- Funds leveraged

Accurate records should be kept on project expenditures for all ARRA and non-ARRA funds. Award recipients that receive ARRA funding will need to account for them separately. The specific information to be gathered and tracked is listed below and will be the same for all projects:

- Expenditures for project activities
- Expenditures for administration

- Expenditures for evaluation
- Leveraged funds

Quarterly and annual project reports will also include items such as cost status, schedule status, personnel changes, actual or anticipated project delays or changes, specific ARRA compliance such as Davis-Bacon and Buy American (if awarded ARRA funds), a narrative description of specific activities and achievements that resulted from the award of funds and other items.

Grant recipients will be presented with reporting requirements at the time they receive funding.

**APPENDIX A:**

***COVER PAGE***

## ***Vermont Clean Energy Development Fund (CEDF)***

### **March 2010 Public Serving Institutions (PSI) Request for Proposals Cover Page**

Note: Instructions for each field are in the March 2010 PSI Request for Proposals

**1. Project Title:**

**2a. Project Category (select from drop-down list):**

**2b. Eligible Entity Type: (select from drop-down list):**

**3. Project Summary:**

**4. Applicant Name, Address, and Contact Information:**

**5. Subcontractors (Name, Address, and Contact Information):**

**6. Authorized Negotiator(s) (Name, Address, and Contact Information):**

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**7a. Electrical Output**

Maximum installed generator capacity (kW):

Expected actual maximum capacity (kW):

Projected annual kWh:

Capacity Factor:

Fuel Type:

**7b. Thermal Output (CHP and thermal-only projects):**

Fuel Type:

Maximum heat delivery rate (Btu/hr):

Expected heat delivery rate (Btu/hr):

Expected annual Btus delivered:

Capacity Factor:

Estimated CO<sub>2</sub> emission rate (in lbs/MMBtu of heat input):

Thermal source displaced and estimate of CO<sub>2</sub> emission rate of displaced source:

**7c. Geothermal capacity (geothermal projects):**

System description:

Length and depth of circulating loops:

Maximum heating/cooling capacity of heat pump (tons):

Soil conductivity values:

Ratio of equipment cost to installation cost:

Is the system Energy Star rated (Y/N)?:

Expected annual Btu of heating/cooling delivered:

Expected annual kWh consumed:

**8. Energy Efficiency/Savings Aspects of Project:**

Efficiency rating of installed equipment:

Efficiency of fuel consumption:

Efficiency measures already taken:

Efficiency measures to be taken:

Expected annual energy savings (kWh or Btu):

Greenhouse gas reductions (CO<sub>2</sub> equivalents):

Air pollutant reduction (tons):

**9. Expected Interconnection Application Date and Date of Anticipated Receipt of CPG:**

**10. Estimated Project Life (equipment warranty or reasonable lifespan expectation):**

**11. Total Project Costs:**

**12. CEDF Funds Requested:**

**13. Estimated Payback Time (with and without CEDF funding):**

**14. Federal Funds Questionnaire:**

Are you registered with CCR and do you have a DUNS number?

If so, what is the DUNS number?

If not, will you be applying for a number?

Are you able to accept federal funds?

Jobs retained (number, type, duration):

Jobs created (number, type, duration):

Age of building involved in proposed project(s)?

Have you reviewed all the terms and conditions listed in this Request for Proposals?

**15. Signature:**

**APPENDIX B:**

***ENERGY AUDIT DESCRIPTIONS***

# ENERGY AUDIT DESCRIPTIONS<sup>1</sup>

## Energy audit<sup>2</sup>

An **energy audit** is an inspection, survey and analysis of energy flows in a building, process or system with the objective of understanding the energy dynamics of the system under study. Typically an energy audit is conducted to seek opportunities to reduce the amount of energy input into the system without negatively affecting the output(s). When the object of study is an occupied building, reducing energy consumption while maintaining or improving human comfort, health and safety are of primary concern. Beyond simply identifying the sources of energy use, an energy audit seeks to prioritize improvement according to the greatest to least cost effective opportunities for energy savings.

## Types of energy audit

The term energy audit is commonly used to describe a broad spectrum of energy studies ranging from a quick walk-through of a building/facility to identify major problem areas to a comprehensive analysis of the implications of alternative energy efficiency measures sufficient to satisfy the financial criteria of sophisticated investors. Common residential and commercial audit types are described in more detail below, although the actual tasks performed and level of effort may vary with the consultant providing services under these broad headings. The only way to ensure that a proposed audit will meet your specific needs is to spell out those requirements in a detailed scope of work. Taking the time to prepare a formal solicitation will also assure the building/facility owner of receiving competitive and comparable proposals.

## Efficiency Vermont and Energy Audits

Efficiency Vermont, the state's energy efficiency utility, does not typically perform energy audits. Efficiency Vermont does sometimes assist in reviewing the electrical energy ramifications of audit reports resulting from audits performed by accredited contractors. Also Efficiency Vermont, on a case-by-case basis will assist with walk-throughs *when electrical energy savings potential appears to be significant and the end user customer is committed to applying budgetary dollars to improvements.*

With regard to residential and small commercial auditing, Efficiency Vermont has taken a more defined role in supporting energy audits through the administration of Home Performance with ENERGY STAR<sup>®</sup>. This program works to train and credential contractors to perform audits in accordance with a strong, accurate and disciplined framework which has been developed and accepted throughout the country. A listing of Home Performance certified contractors can be found at: <http://www.encyvermont.com/pages/Residential/Marketplace/>

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<sup>1</sup> Prepared by Efficiency Vermont, 6/2/09

<sup>2</sup> Significant sections of the language in this document taken from [http://en.wikipedia.org/wiki/Energy\\_audit](http://en.wikipedia.org/wiki/Energy_audit)

## **COMMERCIAL, MUNICIPAL AND GOVERNMENT ENERGY AUDITS**

### **Walk-through audit**

The walk-through audit (alternatively called a simple audit, screening audit or preliminary audit) is the simplest and quickest type of audit. It involves minimal interviews with site-operating personnel, a brief review of facility utility bills and other operating data, and a walk-through of the facility to become familiar with the building operation and to identify any glaring areas of energy waste or inefficiency.

Typically, only major problem areas will be uncovered during this type of audit. Corrective measures are briefly described, and quick estimates of implementation cost, potential operating cost savings, and simple payback periods are provided. This level of detail, while not sufficient for reaching a final decision on implementing proposed measures, is adequate to prioritize energy-efficiency projects and to determine the need for a more detailed audit.

### **General audit**

The general audit (alternatively called a mini-audit, site energy audit, detailed energy audit or complete site energy audit) expands on the preliminary walk-through audit described above by collecting more detailed information about building and facility operations and by performing a more detailed evaluation of energy conservation measures. Energy bills are collected for a 12 to 36 month period to allow the auditor to evaluate the facility's heating fuel use and electric energy and demand rate structures and energy usage profiles. If interval meter data are available, the detailed energy profiles that such data make possible will typically be analyzed for signs of energy waste. Additional metering of specific energy-consuming systems is often performed to supplement utility data. In-depth interviews with facility operating personnel are conducted to provide a better understanding of major energy consuming systems and to gain insight into short- and long-term energy consumption patterns.

This type of audit will be able to identify all energy-conservation measures appropriate for the facility, given its operating parameters. A detailed financial analysis is performed for each measure based on detailed implementation cost estimates, site-specific operating cost savings, and the customer's investment criteria. Sufficient detail is provided to justify project implementation.

### **Investment-grade audit**

In most corporate settings, upgrades to a facility's energy infrastructure must compete for capital funding with non-energy-related investments. Both energy and non-energy investments are rated on a single set of financial criteria that generally stress the expected return on investment (ROI). The projected operating savings from the implementation of energy projects must be developed such that they provide a high level of confidence for ROI. In fact, investors often demand guaranteed savings.

The investment-grade audit (alternatively called a comprehensive audit, detailed audit, maxi audit, or technical analysis audit) expands on the general audit described above by providing a dynamic model of energy-use characteristics of both the existing facility and all energy conservation measures identified. The building model is calibrated against actual heating fuel use and electric usage data to provide a realistic baseline against which to compute operating savings for proposed measures. Extensive attention is given to understanding not only the operating characteristics of all energy consuming systems, but also situations that cause load profile variations on short- and long-term bases (e.g. daily, weekly, monthly, annually). Existing heating fuel and electric utility data are supplemented with sub-metering of major energy consuming systems and monitoring of system operating characteristics.

**APPENDIX C:**

***NEPA COMPLIANCE FORM***

## NEPA COMPLIANCE FORM

I \_\_\_\_\_ (Enter Name and Title of duly authorized representative to sign this statement) ensure that the project described in this application will not:

- (1) Threaten a violation of applicable statutory, regulatory, or permit requirements for environment, safety, and health, including requirements of DOE and/or Executive Orders;
- (2) Require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators);
- (3) Disturb hazardous substances, pollutants, contaminants, or CERCLA-excluded petroleum and natural gas products that preexist in the environment such that there would be uncontrolled or unpermitted releases; or
- (4) Adversely affect environmentally sensitive resources. Environmentally sensitive resources include, but are not limited to:
  - (i) Property (e.g., sites, buildings, structures, objects) of historic, archeological, or architectural significance designated by Federal, state, or local governments or property eligible for listing on the National Register of Historic Places;
  - (ii) Federally-listed threatened or endangered species or their habitat (including critical habitat), Federally- proposed or candidate species or their habitat, or state-listed endangered or threatened species or their habitat;
  - (iii) Wetlands regulated under the Clean Water Act (33 U.S.C. 1344) and floodplains;
  - (iv) Areas having a special designation such as Federally- and state-designated wilderness areas, national parks, national natural landmarks, wild and scenic rivers, state and Federal wildlife refuges, and marine sanctuaries;
  - (v) Prime agricultural lands;
  - (vi) Special sources of water (such as sole-source aquifers, wellhead protection areas, and other water sources that are vital in a region); and
  - (vii) Tundra, coral reefs, or rain forests.

### Waste Stream Conditions

I additionally certify that we (the applicant) will submit (if required) and follow a waste management plan addressing waste generated by our proposed Project. This waste management plan describes our plan to dispose of any sanitary or hazardous waste (e.g., construction and demolition debris, old light bulbs, lead ballasts, piping, roofing material,



**APPENDIX D:**

***GUIDELINES FOR PROJECTS REQUIRING REVIEW  
PER SECTION 106 OF  
THE NATIONAL HISTORIC PRESERVATION ACT***

## **Guidelines for Projects Requiring Review Per Section 106 of the National Historic Preservation Act**

Federally-funded projects in Vermont have the potential to affect historic buildings, historic districts and archeologically sensitive areas and, per Section 106 of the National Historic Preservation Act, require review by the State Historic Preservation Office (SHPO). Because the PSI funds are from the federal Department of Energy, the Vermont Division for Historic Preservation—our state’s SHPO—is required to review specific types of projects applying for PSI funds. Projects that may require review fall under the categories of *Energy Efficiency Retrofits* and *Renewable Energy Technologies on Buildings*. Details of what types of projects will require review and the review process itself are discussed below. Applicants selected for an award will be required to have a review.

The Division for Historic Preservation will review PSI projects using information provided by a consulting Architectural Historian and/or Archeologist, as applicable, as required by Section 106 of the National Historic Preservation Act. The consultant(s) will provide the Division for Historic Preservation with a determination whether a proposed project will affect a historic building, historic district(s) and/or archeologically sensitive area(s) and a determination whether that affect is considered appropriate per Section 106 of the National Historic Preservation Act. The consultant(s) will document their findings and will provide sufficient documentation to allow the Division for Historic Preservation to review the project and offer comment. Please consult the Division's website at [www.historicvermont.org](http://www.historicvermont.org) to find lists of Architectural Historians and Archeologists.

### **Energy Efficiency Retrofits**

Some *Energy Efficiency Retrofit* projects have the potential to affect historic buildings and therefore must be reviewed by the Division for Historic Preservation using information provided by an Architectural Historian.

### **Renewable Energy Technologies on Buildings**

Some *Renewable Energy Technologies on Buildings* projects have the potential to affect historic buildings and/or archeologically sensitive areas and therefore must be reviewed by the Division for Historic Preservation using information provided by an Architectural Historian and/or Archeologist.

PLEASE NOTE: If any of the above types of proposed projects replace existing energy systems only and do not alter existing building fabric or include new construction, then the Vermont Division for Historic Preservation will NOT need to review the project.

### **Historic Preservation Web Links**

Vermont Division for Historic Preservation—General Information  
<http://www.historicvermont.org/>

Vermont Division for Historic Preservation—List of Consulting Archeologists  
<http://www.historicvermont.org/programs/regulatory.html> (Click on “Archeology Consultants” on the right side of the page)

Vermont Division for Historic Preservation—List of Consulting Architectural Historians  
<http://www.historicvermont.org/programs/regulatory.html> (Click on “Historic Preservation Consultants” on the right side of the page)

National Trust for Historic Preservation (Information on Energy Efficiency and Windows, Insulation, Mechanical Systems, More)  
<http://www.preservationnation.org/issues/weatherization/>

## **APPENDIX E:**

### **Budget Worksheet**

**This sheet is for illustration only**

**Budget information should be filled-in using the Excel  
version**

**Clean Energy Development Fund**  
**PROPOSED BUDGET - Public Serving Institutions RFP**

**APPLICANT NAME:**  
 Grant -or- Loan (circle one)

**PROJECT TITLE:**

<b>1. CAPITAL COSTS (provide supporting info and/or detail in budget narrative)</b>	CEDF \$ Requested	Cost Share (Cash)	Cost Share (In-kind)	Project Total
List item (e.g., Tower, Turbine, Tank, etc.)				
				\$0
				\$0
				\$0
				\$0
<b>Subtotal Capital Costs:</b>	<b>\$0</b>	<b>\$0</b>		<b>\$0</b>

<b>2. SUBCONTRACTOR SERVICES (provide supporting info and/or detail in budget narrative)</b>	CEDF \$ Requested	Cost Share (Cash)	Cost Share (In-kind)	Project Total
List provider and service (e.g., Engineering, Design, Installation, etc.), including hours and rates				
				\$0
				\$0
				\$0
<b>Subtotal Subcontractor Services:</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

3. PERSONNEL SALARIES/WAGES (list name and job title)	Total Hours	Hourly Rate	Total Wages (hrs x rate)	CEDF \$ Requested	Cost Share (Cash)	Cost Share (In-kind)	Project Total
			\$0				\$0
			\$0				\$0
<b>Total Salaries/Wages:</b>			\$0				\$0
<b>Fringe Rate:</b>		<b>Total Fringe Benefits:</b>	\$0				\$0
<b>Subtotal Salaries/Wages and Fringe Benefits:</b>			<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

4. OTHER (itemize and explain)	CEDF \$ Requested	Cost Share (Cash)	Cost Share (In-kind)	Project Total
List item (e.g. Travel, Insurance, Postage, etc.)				\$0
				\$0
<b>Subtotal Other:</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>

<b>4. TOTAL DIRECT COSTS (1-4)</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
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<b>5. INDIRECT COSTS (see Budget Narrative )</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
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<b>6. TOTAL PROPOSAL COSTS (4 + 5)</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>	<b>\$0</b>
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<b>Total Project Cost</b>	<b>\$0.00</b>	Choose Grant or Loan & clear the amount from the
<b>CEDF Grant Requested</b>	<b>\$0.00</b>	
<b>CEDF Loan Amount Requested</b>	<b>\$0.00</b>	

		Match Information	Required	Actual	other cell
<b>FIRE DISTRICTS:</b>					
		<b>10% Grantee Match Required (Projects \$15,000 to \$75,000)</b>	<b>\$0.00</b>	<b>\$0.00</b>	
		<i>Portion of Match Required to be in Cash (Must be at least 50% of Cost Share)</i>	\$0.00	\$0.00	
<b>Example:</b>	A grantee's project has a total cost of \$100,000 and requests \$75,000. The required cost share is \$10,000. Of this amount, the applicant must provide at least \$5,000 in cash (50% of cost share).				
<b>COLLEGES, UNIVERSITIES, HOSPITALS, HEALTH CLINICS:</b>					
		<b>50% Grantee Match Required (\$50,000 to \$250,000)</b>	<b>0.00</b>	<b>\$0.00</b>	
		<i>Portion of Match Required to be in Cash (Must be at least 75% of Total Cost)</i>	\$0.00	\$0.00	
		<b>For Loans Only: 10% Cash Cost Share Required</b>	<b>\$0.00</b>	<b>\$0.00</b>	

**NOTES For Grants:**

\* The allowable in-kind match for Fire Districts is 50% of the total cost share. Fire Districts may meet their 10% cost share requirement in cash only or in combination with in-kind. In-kind includes personnel expenses that the grantee reimburses as well as donations of time and/or labor by subcontractors or suppliers. These donations can be noted separately in the budget narrative.

\*\*The allowable in-kind match for Colleges, Universities, Hospitals and Health Clinics is 25% of the total cost of the project. Grantees may meet their 50% match requirement in cash only or in combination with in-kind. In-kind match includes personnel expenses that the grantee reimburses as well as donations of time and/or labor by subcontractors or suppliers. These donations can be noted separately in the budget narrative.