



**STATE OF VERMONT**  
JOINT FISCAL OFFICE

**MEMORANDUM**

To: James Reardon, Commissioner of Finance & Management  
From: Nathan Lavery, Fiscal Analyst  
Date: January 30, 2012  
Subject: JFO #2547, #2548, #2549

No Joint Fiscal Committee member has requested that the following items be held for review:

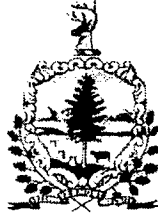
**JFO #2547 – One limited service position** to for inventory management and emergency supply distribution under the terms of the Public Health Emergency Preparedness Readiness Initiative. These duties are currently performed by a contractor. Conversion to a limited service position will save approximately \$65,000 per year. This position will be funded through a previously approved grant.  
*[JFO received 12/27/11]*

**JFO #2548** – \$996,566 grant from the U.S. Department of Energy to the Vermont Department of Public Service. These funds will be used to create a self-sustaining market for energy-efficient retrofitting of commercial buildings. The project will utilize existing partnerships between regulators, efficiency experts, the lending industry, and the business community to create a program that provides access to financing capital through a combination of private and federal funding sources.  
*[JFO received 12/27/11]*

**JFO #2549** – \$852,557 grant from the Federal Emergency Management Agency to the Vermont Agency of Transportation. These funds will be used to provide deferral disaster assistance for damages caused by flooding on May 20, 2011 in the Franklin County, Washington County and Windham County.  
*[JFO received 12/27/11]*

The Governor's approval may now be considered final. We ask that you inform the Secretary of Administration and your staff of this action.

cc: Harry Chen, Commissioner  
Elizabeth Miller, Commissioner  
Brain Searles, Secretary



**STATE OF VERMONT**  
JOINT FISCAL OFFICE

**MEMORANDUM**

To: Joint Fiscal Committee Members  
From: Nathan Lavery, Fiscal Analyst  
Date: January 6, 2011  
Subject: Grant Requests

Enclosed please find four (4) items that the Joint Fiscal Office has received from the administration. Twenty-seven (27) limited service position requests are included among these items.

**JFO #2547 – One limited service position** to for inventory management and emergency supply distribution under the terms of the Public Health Emergency Preparedness Readiness Initiative. These duties are currently performed by a contractor. Conversion to a limited service position will save approximately \$65,000 per year. This position will be funded through a previously approved grant.

*[JFO received 12/27/11]*

**JFO #2548 – \$996,566 grant** from the U.S. Department of Energy to the Vermont Department of Public Service. These funds will be used to create a self-sustaining market for energy-efficient retrofitting of commercial buildings. The project will utilize existing partnerships between regulators, efficiency experts, the lending industry, and the business community to create a program that provides access to financing capital through a combination of private and federal funding sources.

*[JFO received 12/27/11]*

**JFO #2549 – \$852,557 grant** from the Federal Emergency Management Agency to the Vermont Agency of Transportation. These funds will be used to provide deferral disaster assistance for damages caused by flooding on May 20, 2011 in the Franklin County, Washington County and Windham County.

*[JFO received 12/27/11]*

**JFO #2550 – \$18,090,369 grant** from the U.S. Department of Health and Human Services to the Department of Vermont Health Access. This grant will be used for planning of design and implementation of a Health benefit Exchange pursuant to the Affordable Care Act (ACA). **Twenty-seven (7) limited service positions** are included with this request. **Expedited review has been requested. Joint Fiscal Committee members will be contacted by January 20 with a request to waive the balance of the review period and approve this item.**

*[JFO received 12/27/11]*

Please review the enclosed materials and notify the Joint Fiscal Office (Nathan Lavery at (802) 828-1488; [nlavery@leg.state.vt.us](mailto:nlavery@leg.state.vt.us)) if you have questions or would like an item held for legislative review. Unless we hear from you to the contrary by January 20 we will assume that you agree to consider as final the Governor's acceptance of these requests.

**State of Vermont**  
 Department of Finance & Management  
 109 State Street, Pavilion Building  
 Montpelier, VT 05620-0401

[phone] 802-828-2376  
 [fax] 802-828-2428

Agency of Administration

JFO 2548

**STATE OF VERMONT  
 FINANCE & MANAGEMENT GRANT REVIEW FORM**

<b>Grant Summary:</b>		Project will build on existing government and industry partnerships to create larger and self-sustaining market to retrofit commercial buildings with energy efficiency improvements.			
<b>Date:</b>		12/16/2011			
<b>Department:</b>		Department of Public Service			
<b>Legal Title of Grant:</b>		State Energy Program			
<b>Federal Catalog #:</b>		81.119			
<b>Grant/Donor Name and Address:</b>		U.S. Dept of Energy, 1617 Cole Blvd, Golden, Colorado			
<b>Grant Period:</b>		<b>From:</b>	<b>To:</b>		
		9/30/2011	9/29/2013		
<b>Grant/Donation</b>		797,253			
	<b>SFY 1</b>	<b>SFY 2</b>	<b>SFY 3</b>	<b>Total</b>	<b>Comments</b>
<b>Grant Amount:</b>	\$373,712	\$498,282	\$124,572	\$996,566	
<b>Position Information:</b>		<b># Positions</b>	<b>Explanation/Comments</b>		
		0			
<b>Additional Comments:</b>					
<b>Department of Finance &amp; Management</b>				<i>MS 12/14/11</i>	(Initial) <i>DB 12-16-11</i>
<b>Secretary of Administration</b>				<i>MS 12/14/11</i>	(Initial)
<b>Sent To Joint Fiscal Office</b>					Date <i>12/27/11</i>



REC'D DEC 16 2011

VERMONT GRANT ACCEPTANCE REQUEST Affordable Care Act (Form AA-1-ACA)		Priority Level (check one box): Expedited 14 Days <input type="checkbox"/> Normal 30 days <input checked="" type="checkbox"/>			
<b>BASIC GRANT INFORMATION</b>					
<b>1. Agency:</b>					
<b>2. Department:</b>		Vermont Department of Public Service			
<b>3. Program:</b>		State Energy Program			
<b>4. Legal Title of Grant:</b>		Sustainable Vermont: Putting Private Capital Markets to Work in A Model Retrofit Policy for Businesses			
<b>5. Federal Catalog #:</b>		81.119 2011 SEP Competitive Grants			
<b>6. Grant/Donor Name and Address:</b> U.S. Department of Energy, Golden Field Office, 1617 Cole Blvd. Golden, CO 80401					
<b>7. Grant Period:</b>		<b>From:</b> 9/30/2011	<b>To:</b> 9/29/2013		
<b>8. Purpose of Grant:</b> Goal of the project is to use built-in partnerships among regulators, efficiency experts, the lending industry, and the business community to use private capital and federal bonds to create self-sustaining, larger market for significant retrofits of commercial buildings.					
<b>9. Impact on existing program if grant is not Accepted:</b> Opportunity for creating commercial building significant retrofits would be lost as significant new energy savings in the commercial sector, particularly among small- to mid-sized businesses, for whom energy efficiency improvements have typically been financially out of reach.					
<b>10. BUDGET INFORMATION</b>					
	<b>SFY 1</b>	<b>SFY 2</b>	<b>SFY 3</b>	<b>Comments</b>	
<b>Expenditures:</b>	<b>FY 12</b>	<b>FY 13</b>	<b>FY 14</b>		
Personal Services	\$74,742	\$99,656	\$24,915	\$199,313	
Operating Expenses	\$	\$	\$		
Grants	\$298,970	\$398,626	\$99,657	Award amount \$797,253.	
<b>Total</b>	<b>\$373,712</b>	<b>\$498,282</b>	<b>\$124,572</b>	<b>\$996,566</b>	
<b>Revenues:</b>					
State Funds:	\$	\$	\$		
Cash	\$	\$	\$		
In-Kind	\$1,938	\$2,584	\$647	PSD Indirect used to meet 20% match requiremen t	
Federal Funds:	\$	\$	\$		
(Direct Costs)	\$298,970	\$398,626	\$99,657		
(Statewide Indirect)	\$	\$	\$		
(Departmental Indirect)	\$	\$	\$		
Other Funds:	\$	\$	\$		
Grant (source VEIC Match)	\$72,804	\$97,072	\$24,268	Subcontract portion of 20%	

				Match
<b>Total</b>	\$373,712	\$498,282	\$124,572	\$996,566
<b>Appropriation No:</b>		<b>Amount:</b>		\$
				\$
				\$
				\$
				\$
				\$
				\$
				\$
		<b>Total</b>		\$

**PERSONAL SERVICE INFORMATION**

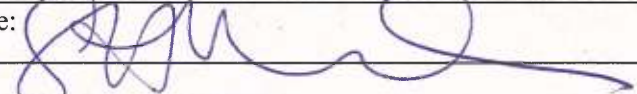
11. Will monies from this grant be used to fund one or more Personal Service Contracts?  Yes  No  
 If "Yes", appointing authority must initial here to indicate intent to follow current competitive bidding process/policy.

Appointing Authority Name: \_\_\_\_\_ Agreed by: \_\_\_\_\_ (initial)

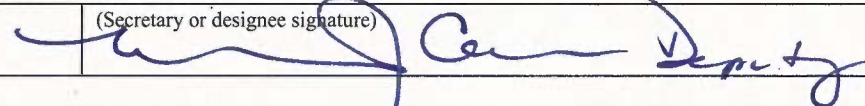
<b>12. Limited Service Position Information:</b>	<b># Positions</b>	<b>Title</b>
	0	
<b>Total Positions</b>		

12a. Equipment and space for these positions:  Is presently available.  Can be obtained with available funds.


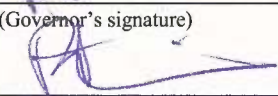
**13. AUTHORIZATION AGENCY/DEPARTMENT**

I/we certify that no funds beyond basic application preparation and filing costs have been expended or committed in anticipation of Joint Fiscal Committee approval of this grant, unless previous notification was made on Form AA-1PN (if applicable):	Signature: 	Date: 10/24/11
	Title: COMMISSIONER	
	Signature:	Date:
	Title:	

**14. SECRETARY OF ADMINISTRATION**

<input checked="" type="checkbox"/> Approved:	(Secretary or designee signature)  Deputy	Date: 12/16/11
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**15. ACTION BY GOVERNOR**

<input type="checkbox"/> Accepted		Date:
<input type="checkbox"/> Rejected	(Governor's signature) 	Date: 12/23/11

**16. DOCUMENTATION REQUIRED**

**Required GRANT Documentation**

<input type="checkbox"/> Request Memo	<input type="checkbox"/> Notice of Donation (if any)
<input type="checkbox"/> Dept. project approval (if applicable)	<input type="checkbox"/> Grant (Project) Timeline (if applicable)
<input checked="" type="checkbox"/> Notice of Award	<input type="checkbox"/> Request for Extension (if applicable)

<input checked="" type="checkbox"/> Grant Agreement <input checked="" type="checkbox"/> Grant Budget	<input type="checkbox"/> Form AA-1PN attached (if applicable)
<b>End Form AA-1</b>	

Response to  
Funding Opportunity Announcement DE-FOA-0000533

**Sustainable Vermont:  
Putting Private Capital Markets to Work in  
a Model Retrofit Policy for Businesses**

**State Energy Program 2011 Competitive Awards  
Area of Interest 1:  
Enhancing Commercial Building Retrofits  
through Streamlined Standards and Policy Incentives**

**Submitted by  
State of Vermont  
Department of Public Service—State Energy Office**

**Elizabeth Miller, Commissioner of Public Service**

**August 11, 2011**

The Vermont Department of Public Service, through Assistant Director Kelly Launder (Principal Investigator), proposes a project to open private capital markets and leverage qualified tax credit bonds to stimulate commercial-sector demand for energy efficiency retrofits in "Sustainable Vermont: Putting Private Capital Markets to Work in a Model Retrofit Policy for Businesses." The Department represents the public interest in energy matters and provides regulatory and planning frameworks for energy efficiency and renewable energy implementation in Vermont.

The goal of this project is to use built-in partnerships among regulators, efficiency experts, the lending industry, and the business community to use private capital and federal bonds to create a self-sustaining, larger market for significant retrofits of commercial buildings. The proposed project is located in Vermont, where a proven, cost-effective, rigorously regulated energy efficiency utility (EEU) is in place. The EEU has already identified and understands the barriers to energy efficiency investment. Vermont is well positioned to systematically address and overcome known barriers in the lending community and commercial sector, and thus to make the energy efficiency retrofit market an even smarter investment than what has been achieved with rebates, incentives, and targeted programs.

The objectives of "Sustainable Vermont," and the proposed methods for implementation, are to:

1. Design and implement a centralized, commercial retrofit financing program that:
  - a. Stimulates demand across all market participants by building and effectively linking the energy efficiency value chain
  - b. Leverages public funds, facilitates access to private capital financing at favorable lending terms, and to the broadest array of possible consumers
  - c. Integrates a streamlined application and approval process
  - d. Consolidates, standardizes, and centralizes project energy savings data
  - e. Grows dynamically with Vermont markets to reach self-sustainability through private funding sources
2. Demonstrate the extent to which the development of a secondary market in energy efficiency investments is possible.
3. Provide a replicable, scalable model and roadmap for creating a dynamic financing market that facilitates the transition to an increasingly advanced and successful energy policy framework.
4. Use and leverage Vermont's qualified energy conservation bond (QECB) issuance in a streamlined and cost-effective manner.
5. Identify the critical minimum infrastructure necessary to operate the program, and the level of market participation necessary to become self-sustainable.
6. Build a training protocol for energy efficiency technical consultants to articulate the financial options available to customers via private capital markets.
7. Achieve optimal energy reduction by financing all-fuels energy efficiency for businesses.
8. Create a pipeline for increased energy efficiency construction and technical assistance jobs.

The potential impact of this integrated approach will be seen in: (1) significant new energy savings in the commercial sector, particularly among small- to mid-sized businesses, for whom energy efficiency improvements have typically been financially out of reach; (2) an increased willingness in the lender market to originate loans for commercial energy efficiency improvements; (3) a contractor network better supported by financial options for customers; and (4) an innovative and productive use of federal tax credit bonds. The primary design and implementation work will be conducted by the Vermont Energy Investment Corporation, the award-winning organization that has implemented the nation's oldest and leading energy efficiency utility, Efficiency Vermont; and which has furthered the field in its design, program planning, evaluation and other consulting work for national and international clients.



achieved increasingly ambitious energy efficiency performance objectives, and created an ongoing stream of new energy efficiency programs to help keep Vermont ratepayers' bills—and energy costs—down. Taken together, these policies and strategies have made the state a consistent national leader in energy efficiency. Energy efficiency in Vermont is about acquiring least-cost energy, cost-effectively, in perhaps the nation's most rigorous regulatory environment. By establishing the nation's first statewide energy efficiency utility (EEU, under the Efficiency Vermont brand) in 2000, Vermont has provided a national model for making energy efficiency an energy resource. Twenty-six states now have an energy efficiency resource standard, and many others have pending legislation.<sup>1</sup> Vermont continues to demonstrate success by completely offsetting electric energy load growth with energy efficiency savings, and consistently ranking among the top 5 performers on the American Council for an Energy-Efficient Economy's (ACEEE's) Energy Efficiency Scorecard. In partnering with the Vermont Energy Investment Corporation (VEIC), which implements the EEU activity under an Order of Appointment by the Vermont Public Service Board, the State is able to leverage existing structures, technical assistance, and human resources, while building on a deep history of energy efficiency policy, implementation, and the funding that has made deep efficiency resource acquisition possible.

**The proposed basic design.** Most retrofit programs offered in Vermont and nationally are largely supported by ratepayer funds and a mix of short-term grant and stimulus funds that eventually wind down or require recapitalization. These programs can be successful on their own terms, but they are structured to continue to draw from public funds. By necessity, they require increased funding as goals and objectives become more aggressive. Ideally, programs should transition to market-based mechanisms funded almost exclusively by private-sector capital, supported by State policy to ensure sustainability. This ideal cannot be reached, however, without some level of critical infrastructure that will trigger that market mechanism, and allow the program and the market to grow dynamically together. The proposed project is designed to use U.S. Department of Energy (DOE) funding, and Vermont qualified energy conservation bonds (QECBs) to provide easy access to finance capital; combined with deep energy efficiency program and policy experience of VEIC, and technical assistance from Efficiency Vermont to initiate that market-based mechanism. Concurrently, VEIC will build an in-house energy consultant training program focused on effectively presenting the economic value of energy efficiency retrofits to business customers. This program will then scale to build a trained contractor-driven sales network to stimulate and maintain market demand, while helping consumers navigate the finance process. Through collaborative partnerships, the project team will determine the mix of program fees (e.g., participant, contractor, financial institution) to sustain program operations. In delivering a sustainable retrofit program, the proposed project will determine the key components and minimum level of critical infrastructure necessary to ensure success and broad replicability.

**The opportunity.** Because of Vermont's advanced energy policy framework and a strong energy efficiency infrastructure, Vermont is now well positioned to leverage significant new sources of private investment in energy efficiency. The primary opportunity lies with: (1) traditional lenders, which typically avoid energy efficiency investments because they lack reliable savings projections and verifiable data; and (2) commercial-sector entities, which are inconsistent in their demand for energy efficiency retrofits because of: (1) an unclear value proposition, and (2) complicated or non-existent paths for obtaining financing. The mix of small, medium, and large businesses in Vermont is proportionally more challenging for this effort than the national average.<sup>2</sup> But because of its size, Vermont does business on

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<sup>1</sup><http://www.ferc.gov/market-oversight/other-mkts/renew/other-rnw-eers.pdf>

<sup>2</sup> According to the 2008 U.S. Census, the national average of businesses with 20 or more employees is 10.4%, compared to Vermont's 13.5%; for businesses with 100 or more employees, the U.S. average is 1.8%, compared to

relationships with NYSERDA, St. Louis County Saves, the Connecticut Energy Efficiency Fund, and the Massachusetts HEAT program. Vermont does not intend to replicate any of these programs, but it can integrate their key design aspects into this effort. Each of the above programs has encountered pitfalls during program design and implementation. Vermont can learn from and avoid these, thus optimizing the budget and timeframe envisioned for this project. This is a best-practice approach to building a best-outcome project in Vermont.

### **1.3 Energy consumption baseline information**

To benchmark the success of this project, the Project Team will use baseline energy consumption data from Efficiency Vermont's 2009 Annual Report, the most recent, verified baseline data available.

### **1.4 Identifying and obtaining available financing for commercial energy efficiency retrofits**

The project team will build a network of partnering financial institutions (FI) to originate loans, provide capital, and service loans that remain with the respective FIs. Seven FIs in Vermont have active energy-related finance programs.<sup>6</sup> These programs have achieved only limited success due to lack of uptake, but their familiarity with energy-related finance products makes them likely candidates for participating in the proposed project. A Request for Information (RFI) will be issued to ensure maximum competitive participation, with focused outreach to other area banking entities. Critical to FI participation will be the *implementation of a loan loss reserve fund*, which will mitigate risk and act as a credit enhancement.

VEIC's non-profit status will also *enable this project to attract funding from sources such as foundations and defined benefit funds*, one outcome of which is the possible creation of innovative program structures. VEIC will draw on FI and philanthropic foundation relationships to determine the feasibility of using *program-related investment dollars (PRI)*<sup>7</sup> *to fuel a secondary market for energy efficiency finance products*. Secondary market development has typically failed because of a capital-to-project gap, illiquidity of investments with long timeframes (no exit for the investor), lack of data on bundled energy efficiency loan return on investment (ROI), and traditionally high ROI requirements of potential investors. This project effectively bridges the capital-to-project gap by implementing a partnering FI network to originate loans, and by accumulating bundled ROI data through QECB loan purchases. Because foundations have a significantly longer investment time horizon than do traditional investors, ROI requirements that fall between 2-8%, and an objective to invest in socially responsible activities, they are ideal for creating a secondary market for energy efficiency loans.

### **1.5 Known challenges to meeting project objectives**

The project's approach has strategies that directly address the three known challenges to meeting project objectives. The barriers presented here have coincidentally been identified in a recent study by the Environmental Defense Fund (EDF).<sup>8</sup> This recognition of market failures—common to Vermont and to nation as a whole—and their strategic solutions suggest the potential for scalability of the proposed project to a national level, with corresponding potential impacts.

#### ***Facilitating access to private capital at favorable terms***

<sup>6</sup> Bank of Bennington, Brattleboro Savings and Loan, NeighborWorks, Opportunities Credit Union, Passumpsic Savings Bank, Union Bank, and Vermont State Employees Credit Union.

<sup>7</sup> Created by the Tax Reform Act of 1969, Program-Related Investment (PRI) is a financial instrument used by private foundations to invest in ventures that support a socially responsible activity.

<sup>8</sup>[http://www.edf.org/documents/11860\\_EnergyEfficiencyFinancingBarriersandOpportunities\\_July%202011.pdf](http://www.edf.org/documents/11860_EnergyEfficiencyFinancingBarriersandOpportunities_July%202011.pdf)

Program operations will be designed to run as leanly as possible, with a focus on integrating with existing EEU programming to minimize costs.

## 2. Merit Review Criterion Discussion

### 2.1 Project Approach

#### 2.1.1 Reasonableness, completeness, and feasibility of the proposed approach in meeting the objectives of the FOA

Vermont's proposed project pushes the evolution of mature, cost-effective, energy efficiency practice to a level of self-sustainability, supported by the dynamism of private capital markets. Further, VEIC has an 11-year record of consistently raising the bar on energy efficiency implementation throughout the United States – in part by recommending strategies similar to those successfully implemented in Vermont. The proposed approach takes advantage of a growing interest in cost-effectively reducing energy use and paying for commercial energy improvements via meaningful private-sector investments in building infrastructure. Perhaps above all, Vermont has a long record of energy efficiency partnerships with VEIC, the Legislature, the Public Service Board, business associations, distribution utilities, small lenders, the legal community, chambers of commerce, fuel dealers, and community action organizations. The potential role of the larger and diverse finance industry—and the barriers to its participation—are clearly outlined in this proposal, and understood. Business barriers are also well understood, and addressed.

#### 2.1.2 Strategy and design

This strategy addresses three distinct challenges in the marketplace: (1) the desire of businesses to make their buildings more energy-efficient in the long term—without jeopardizing the bottom line in the short term; (2) the interest of private capital firms in taking advantage of new opportunities in a relatively stable arena for investment; and (3) creating new jobs in the construction, manufacturing, lending, and energy efficiency industries.

**Strategy One: Develop and implement a comprehensive private-sector-funded commercial energy efficiency retrofit program.**

The proposed project will combine a DOE-funded LLR, Vermont QECBs, Efficiency Vermont developed tools and training, and a contractor-driven sales network to successfully create a sustainable commercial energy efficiency retrofit program for the benefit of businesses that have been reluctant or unable to install significant efficiency measures. The DOE's *Guide to Clean Energy Finance* outlines the following four goals of loan loss reserve funds:

- Mobilizing, leveraging, and supporting partnering financial institutions
- Broadening consumer access to lending products
- Lengthening loan tenor
- Reducing loan interest rates

The program design will integrate QECBs to help reach the above goals, and to effectively mobilize and leverage the QECB issuance. The use of QECBs with the LLR helps mitigate risk for financial institutions, ensures a reduced interest rate on consumer loans, and provides a streamlined structure to issue the bonds. Using both the LLR and QECBs as the financial backbone of this project will also facilitate creation of the FI partner network, and further encourage the financial institutions in gaining experience with energy efficiency finance products. The proposed project design, step by step:

- By purchasing a portion of loans from the FI with QECB funds, consumers will likely receive a lower overall interest rate through blending of the FI market interest rate, and the QECB interest rate.

The Project Team will examine successful QECB issuance programs to ensure optimal design of the bonds' terms and overall program structure. Vermont will inform its program design by conferring with Missouri's St. Louis County Saves program and NYSEERDA, which both recently implemented a QECB-backed Green Community Program. NYSEERDA is also successfully employing a shared-risk model for commercial sector financing.

**3) Develop partner lending network, and FI partner program guidelines**

VEIC will draw on existing FI relationships through current finance programs, as well as banking institutions that offer energy-related finance products in Vermont and other states.<sup>6</sup>

Significant time will be spent structuring the implementation agreements for both the LLR and for the energy efficiency loan program. Because the Efficiency Vermont structure is a key component of the program (marketing, data reporting and collection, contractor networking, etc.), it will be essential that the implementation agreements coordinate all elements to assure that all parties work in close cooperation. The structuring of implementation agreements is expected to involve;

- **Risk Assessment**

The *Clean Energy Finance Guide* notes that prevailing energy efficiency loan risk profiles are based on perceived rather than actual risk. VEIC has conducted market research on multiple energy finance programs with default rates well below typical unsecured consumer loan default rates. These programs include the Massachusetts HEAT loan: over \$62M in unsecured loans with a 0.79% default rate; the Pennsylvania Keystone HELP loan: \$52.4M with a 1.45% default rate; and Manitoba Hydro: \$100M with a default rate of less than 1%. Vermont's consumer finance data and updated program data from best-practice states will help develop an accurate risk assessment.

- **Underwriting Terms**

A primary objective is to offer financing products to the broadest array of consumers possible. As such, the goal is to negotiate minimal underwriting approval criteria, while still meeting an acceptable risk profile. To appeal to mass markets, this might include zero-money-down loans and favorable interest rates. Recent studies indicate that actual monthly payment amounts might be more important than low interest rates; therefore, the Project Team will also advocate extended payback periods (15-year terms are envisioned to coordinate with maximum QECB issuance periods). This might also allow cash-flow-positive loans. Finally, the team will investigate structuring loan interest rates that are based on the specific energy efficiency measures being installed. For example, Connecticut manages a program that offers lower interest rates for high-priced, high-payback items such as furnaces and insulation, while offering slightly higher rates for items such as windows. Programs offered both in Connecticut and Pennsylvania also offer a special interest rate for comprehensive retrofits that target deep energy savings. This method rewards the consumer for making a greater investment in efficiency, while also recognizing that those associated measures carry a greater likelihood of meeting projected energy savings targets, and are therefore less risky to finance.

- **Streamlined application and approval procedure**

Crucial to the success of the program is a streamlined, easy-to-navigate consumer process in applying for financing—and a quick approval decision. The Project Team will

facilitating access to low-cost financing requires a full initial sale through loan issuance. In Connecticut and Michigan, the loan programs have empowered vendors to take on the sales role normally handled by a bank loan officer. Training programs on sales techniques and the requirements of Truth-in-Lending Laws, have enabled contractors to be more proactive than simply leaving behind a loan application or brochure. Programs are heavily regulated with quality assurance/quality control (QA/QC) to ensure consistent excellence in work quality and no unscrupulous sales tactics. Michigan Saves imposes a 1.99% contractor QA / QC and administrative fee on loans generated. This approach was suggested by contractors and ensures the sustainability of the program (and contractor income).

#### **Plan**

Efficiency Vermont's existing network of contractors already tied into efficiency programming services<sup>11</sup> will provide a substantial foundation for the contractor sales network. A full training course will involving distribution and training on the energy efficiency economic value tool.

Vermont and most other northern states depend on fuel oil and natural gas for heating. Integrating all-fuel contractors into the program, and tailoring the design of approved efficiency measures to target the all-fuels customer is an effective way to reach this large, underserved market. The project team will work with collaborative community partners such as the Vermont Fuel Dealers Association to design program specific implementation guidelines.

Design of the contractor network will include the following objectives:

- Establish minimum contractor qualification standards
- Design program structure, including any program fees
- Develop contractor training course
- Develop QA/QC plan

#### **9) Outreach**

The Project Team will rely on an existing broad outreach / partnering network from VEIC's 26-year history in the energy efficiency industry. The public outreach capacity includes long-term relationships with professional organizations, trade groups and associations, multiple local and national banking institutions, local and national philanthropic foundations, and ties to every level of the building community. VEIC's marketing department routinely targets the commercial sector, and has a complementary campaign for 2012 with radio ads, trade publications, daily community publications, contractor newsletters, direct mailers, and social media outreach.

##### **2.1.3 Goals, metrics, tasks and methods, deliverables, schedule, and budget**

The overarching goal of this proposal is to build sufficient links between the private capital markets and commercial retrofit opportunities in Vermont so that cost-effective energy efficiency financing for businesses becomes self-sustaining. Metrics for this project will be measurements for: (1) energy savings, confirmed through a longstanding, regulated energy efficiency market structure; (2) number of loans originated, loan amounts and terms; (3) ROI project data; (4) bundled loan ROI data from QECB purchases; (5) participation rates of lenders; (6) participation rates of businesses; (7) job creation; and (8) program default rates.

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<sup>11</sup>Efficiency Vermont's contact database of more than 5,000 building, banking, and trade professionals (2,400 home builders, 500 contractors, 900 architects, 300 engineers, 800 design professionals, 1,500 real estate professionals, 100 lending institution personnel, 265 municipal clerks, and 230 zoning officials)

(varying from direct installation of efficient products to a significant retrofit) was approximately \$13,230, representing the sum of Efficiency Vermont incentives, the customer's contribution to the project, and third-party costs. Total resource benefits lost—fossil fuel savings, water savings, and the avoided cost of electricity—have a value of almost twice that amount: \$26,327 per project. Annualized megawatt-hour savings lost, per project, would be 21.35 MWh. These are all conservative estimates of the real value and number of lost projects, since access to capital would likely enable larger and more projects.

### **2.2.3 How proposed approach can be replicated in or expanded to other markets, municipalities, states, or regions, or at national level**

A collaborative design approach will include input from other states leading programs, multiple stakeholders, and proven successful energy efficiency programming and design. The success of this program is designed around engaging local markets – both the financial institutions for providing capital, and the energy efficiency building community for stimulating demand. In any state or region, these markets know the clients best – and likewise – the clients know these participants. Further, the project is designed to determine the extent to which the model is feasible for financial markets, energy efficiency customers, and the building community.

### **2.2.4 Degree of project sustainability that will result from policies**

This project tests the extent to which financial markets will transform current practice when barriers to energy efficiency investment are removed and the extent to which commercial customers will invest in energy efficiency when financial barriers are significantly reduced. The extent to which the market is transformed relates to the degree of project sustainability.

## **2.3 Partnership Structure and Capabilities**

### **2.3.1 Appropriateness of the credentials, capabilities, and experience of the project team and key personnel**

The Principal Investigator is Kelly Launder, Assistant Director of Planning and Energy Programs at the DPS. Peter Adamczyk (Project Director) is a 23-year veteran manager of finance and lending activity for Fortune 100 companies. He led the analysis and research in the design and implementation of Vermont's first PACE program, and is a recognized expert in the coordination of municipal and other governmental PACE programs with banks and other lenders. Todd Sbarro (Project Manager) has a 10-year background in successful capital management, equities and investment analysis, and risk analysis. As part of the business development group at VEIC, he recently completed an independent study of energy finance programs for New Hampshire. Jules Fishelman, VEIC's Information Technology Manager, helped develop and oversees that organization's customer information database, which tracks dollars, energy use, measure, and account management data for all VEIC projects, including Efficiency Vermont activity. George Lawrence manages the design and evaluation of Commercial and Industrial consulting projects for VEIC. Karl Goetze supervises engineering staff at Efficiency Vermont, and has been instrumental in developing effective initiatives for the Business Energy Services market. Both Karl and George are Certified Energy Managers. Sally Talberg is experienced electricity generation and transmission policy and regulation, and in environmental policy and regulation. She is a program design and implementation manager for Michigan Saves, a multi-million dollar financing program for energy efficiency improvements. Julie Bennett is a vice president at Public Sector Consultants, and manages the environment and energy practice area, provides strategic counsel and facilitation services, conducts research and analysis, and manages projects in energy, water quality, land use, community and economic development, and natural resource management. She is also the finance manager for Michigan Saves.

participant in Northeast Energy Efficiency Partnerships programs, and has supported NEEP's policy projects in building codes, high-performance schools, and appliance standards. Efficiency Vermont and the DPS have worked together with the state's Clean Energy Development Fund to provide appropriate support for effective deployment of ARRA funds, including assisting colleges, universities, and hospitals in their applications for the Public Serving Institutions opportunity, and supporting the Smart Grid Investment Grant activity.

#### **2.3.4 Demonstrated commitment of project team**

Ever since it made its first low-interest loan to agricultural customers in 2003, VEIC has worked with the DPS in seeking ways to leverage as much funding as possible in service to Vermont ratepayers. The project team is fully familiar with the State's banking leadership, and the key personnel are frequently invited speakers at town committees and business association meetings; further, the VEIC Board of Directors includes a retired banker, the director of the Vermont Law School's Institute on Energy and the Environment, and two former regulators.

#### **2.3.5 Extent of leveraged funding by other organizations and / or programs**

Efficiency Vermont is prepared to support this proposed project by providing it with full access to its technical assistance team, at a value of \$200,000 total for both Budget Periods. The proposed activity fully corresponds to Efficiency Vermont's programming in business energy services and its ability to offer expertise from its Technical Group.

### **3. Project Timetable**

This is a two-year proposal, with substantial program design and pilot testing and critical evaluation taking place in Year 1, and full implementation of the design in Year 2. The budget calls for \$351,353 in Year 1, which will go toward program design and development, and \$645,213 in Year 2, to capitalize the loan loss reserve fund, full implementation, and project administration. Year 1 phases will be: (1) establishing the LLR, developing the Green Community Program, and developing the partner lending network; (2) developing the accounting, IT, and data infrastructure; establishing the eligible energy efficiency measures list; developing the M& V plan; and (3) developing the tool and the contractor-training network—with ongoing critical evaluation of these phases. Year 2 phases will be: (1) outreach efforts for implementation; (2) critical evaluation; and (3) full implementation of the project.

### **4. Relevance of Outcomes / Impacts**

With 13% of businesses "walking away" from energy efficiency projects they wanted to install, in a state with a well-established energy efficiency program (see Section 2.2.2), the relevance of the outcomes and impacts in terms of correcting the barriers to participation is demonstrable. The gains in energy savings and total resource benefits are correspondingly balanced by the gains to the financial markets, as has been described throughout this proposal.

### **5. Role of Participants**

This information is contained in detail in Sections 2.3.1 and 2.3.2.



# Efficiency Vermont

www.encyvermont.com

255 South Champlain Street, Suite 7 • Burlington, VT 05401-4894 • phone: 802-860-4095 • toll-free: 888-921-5990 • fax: 802-658-1643

August 8, 2011

Elizabeth Miller, Esq.  
Commissioner, Vermont Department of Public Service  
112 State Street, Drawer 20  
Montpelier, VT 05620

Re: Letter of Commitment – Cost Share  
Vermont proposal  
State Energy Program 2011 Competitive Awards  
DE-FOA-0000533

Dear Commissioner Miller:

Efficiency Vermont, the statewide energy efficiency utility, is willing to commit a cost share in support of the State of Vermont's proposal to the U.S. Department of Energy for Area of Interest 1, Enhancing Commercial Building Retrofits through Streamlined Standards and Policy Incentives.

We are pleased to assist this project, if awarded, by providing a cost share in technical and marketing assistance valued at 20% of total project funding. We estimate the contribution to be approximately \$100,000 per year across FY 2012 and FY 2013.

The proposed effort to reduce the barriers to business participation in meaningful energy efficiency retrofit projects, while also reducing barriers in the finance industry to supporting significant energy improvements in buildings, is a critically important next step in advancing energy and climate security for the United States.

With best wishes,



Jim Merriam  
Director







**VERMONT ECONOMIC  
DEVELOPMENT AUTHORITY**

Vermont Agricultural Credit Corporation  
Vermont Small Business Loan Program  
Vermont 504 Corporation

August 10, 2011

Ms. Elizabeth Miller  
Commissioner, Vermont Department of Public Service  
112 State Street, Drawer 20  
Montpelier, VT 05620-2601

Re: **U.S. Department of Energy FOA  
DE-FOA-0000533  
State Energy Program 2011 Competitive Awards**

Dear Commissioner Miller:

VEDA is pleased to hear that the State of Vermont is pursuing the U.S. Department of Energy's Funding Opportunity for the 2011 State Energy Program Competitive Awards. We enthusiastically support the effort the State will make in advancing sustainable energy efficiency retrofit in the commercial sector, particularly because it encourages partial funding from private-sector capital.

We see this project as one that has the potential to benefit a wide range of customers. We understand that the project plan draws on the use of Efficiency Vermont services to build a contractor-driven sales network, which will help broaden other opportunities for reaching more customers where the needs are greatest.

VEDA wishes you well in your pursuit of this special funding, and we look forward to working with you if the project is awarded.

Sincerely,

A handwritten signature in black ink, appearing to read 'Jo Bradley', is written over a white background.

Jo Bradley  
CEO

# VFDA

*Vermont Fuel Dealers Association*  
www.vermontfuel.com

Commissioner Elizabeth Miller  
Vermont Department of Public Service  
112 State Street, Drawer 20  
Montpelier, VT 05620-2601

**Re: U.S. Department of Energy FOA  
DE-FOA-0000533  
State Energy Program 2011 Competitive Awards**

August 9, 2011

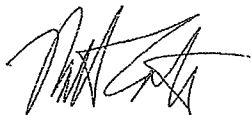
Dear Commissioner Miller:

The Vermont Fuel Dealers Association (VFDA) represents nearly 300 companies that distribute heating fuel, as well as those that install, sell and service heating equipment. The Vermont Fuel Education Center operated by VFDA is the state's leading provider of education and training to both fuel and non-fuel companies that sell, install and service oil and gas heating systems.

The more than 4000 Vermonters that are employed in the heating industry see the need for energy efficiency improvements first hand. A consumer most often considers upgrading their heating system when the old system is failing or has failed. A lack of financing is one of the reasons why our customers decide not to improve the efficiency of their heating system and instead ask us to make the old equipment work. A program that would allow heating service companies to offer financing directly to the consumer would greatly improve our ability to install more energy efficient heating systems.

We are encouraged that the State of Vermont is pursuing the U.S. Department of Energy's Funding Opportunity for the 2011 State Energy Program Competitive Awards and is focusing on financing. The Vermont Fuel Dealers Association looks forward to working with you if the project is awarded.

Sincerely,



Matt Cota  
Executive Director  
Vermont Fuel Dealers Association (VFDA)

Response to  
Funding Opportunity Announcement DE-FOA-0000533

**Sustainable Vermont:  
Putting Private Capital Markets to Work in  
a Model Retrofit Policy for Businesses**

State Energy Program 2011 Competitive Awards  
Area of Interest 1:  
Enhancing Commercial Building Retrofits  
through Streamlined Standards and Policy Incentives

Submitted by  
State of Vermont  
Department of Public Service—State Energy Office

Elizabeth Miller, Commissioner of Public Service

August 11, 2011

The Vermont Department of Public Service, through Assistant Director Kelly Launder (Principal Investigator), proposes a project to open private capital markets and leverage qualified tax credit bonds to stimulate commercial-sector demand for energy efficiency retrofits in "Sustainable Vermont: Putting Private Capital Markets to Work in a Model Retrofit Policy for Businesses." The Department represents the public interest in energy matters and provides regulatory and planning frameworks for energy efficiency and renewable energy implementation in Vermont.

The goal of this project is to use built-in partnerships among regulators, efficiency experts, the lending industry, and the business community to use private capital and federal bonds to create a self-sustaining, larger market for significant retrofits of commercial buildings. The proposed project is located in Vermont, where a proven, cost-effective, rigorously regulated energy efficiency utility (EEU) is in place. The EEU has already identified and understands the barriers to energy efficiency investment. Vermont is well positioned to systematically address and overcome known barriers in the lending community and commercial sector, and thus to make the energy efficiency retrofit market an even smarter investment than what has been achieved with rebates, incentives, and targeted programs.

The objectives of "Sustainable Vermont," and the proposed methods for implementation, are to:

1. Design and implement a centralized, commercial retrofit financing program that:
  - a. Stimulates demand across all market participants by building and effectively linking the energy efficiency value chain
  - b. Leverages public funds, facilitates access to private capital financing at favorable lending terms, and to the broadest array of possible consumers
  - c. Integrates a streamlined application and approval process
  - d. Consolidates, standardizes, and centralizes project energy savings data
  - e. Grows dynamically with Vermont markets to reach self-sustainability through private funding sources
2. Demonstrate the extent to which the development of a secondary market in energy efficiency investments is possible.
3. Provide a replicable, scalable model and roadmap for creating a dynamic financing market that facilitates the transition to an increasingly advanced and successful energy policy framework.
4. Use and leverage Vermont's qualified energy conservation bond (QECCB) issuance in a streamlined and cost-effective manner.
5. Identify the critical minimum infrastructure necessary to operate the program, and the level of market participation necessary to become self-sustainable.
6. Build a training protocol for energy efficiency technical consultants to articulate the financial options available to customers via private capital markets.
7. Achieve optimal energy reduction by financing all-fuels energy efficiency for businesses.
8. Create a pipeline for increased energy efficiency construction and technical assistance jobs.

The potential impact of this integrated approach will be seen in: (1) significant new energy savings in the commercial sector, particularly among small- to mid-sized businesses, for whom energy efficiency improvements have typically been financially out of reach; (2) an increased willingness in the lender market to originate loans for commercial energy efficiency improvements; (3) a contractor network better supported by financial options for customers; and (4) an innovative and productive use of federal tax credit bonds. The primary design and implementation work will be conducted by the Vermont Energy Investment Corporation, the award-winning organization that has implemented the nation's oldest and leading energy efficiency utility, Efficiency Vermont; and which has furthered the field in its design, program planning, evaluation and other consulting work for national and international clients.

achieved increasingly ambitious energy efficiency performance objectives, and created an ongoing stream of new energy efficiency programs to help keep Vermont ratepayers' bills—and energy costs—down. Taken together, these policies and strategies have made the state a consistent national leader in energy efficiency. Energy efficiency in Vermont is about acquiring least-cost energy, cost-effectively, in perhaps the nation's most rigorous regulatory environment. By establishing the nation's first statewide energy efficiency utility (EEU, under the Efficiency Vermont brand) in 2000, Vermont has provided a national model for making energy efficiency an energy resource. Twenty-six states now have an energy efficiency resource standard, and many others have pending legislation.<sup>1</sup> Vermont continues to demonstrate success by completely offsetting electric energy load growth with energy efficiency savings, and consistently ranking among the top 5 performers on the American Council for an Energy-Efficient Economy's (ACEEE's) Energy Efficiency Scorecard. In partnering with the Vermont Energy Investment Corporation (VEIC), which implements the EEU activity under an Order of Appointment by the Vermont Public Service Board, the State is able to leverage existing structures, technical assistance, and human resources, while building on a deep history of energy efficiency policy, implementation, and the funding that has made deep efficiency resource acquisition possible.

**The proposed basic design.** Most retrofit programs offered in Vermont and nationally are largely supported by ratepayer funds and a mix of short-term grant and stimulus funds that eventually wind down or require recapitalization. These programs can be successful on their own terms, but they are structured to continue to draw from public funds. By necessity, they require increased funding as goals and objectives become more aggressive. Ideally, programs should transition to market-based mechanisms funded almost exclusively by private-sector capital, supported by State policy to ensure sustainability. This ideal cannot be reached, however, without some level of critical infrastructure that will trigger that market mechanism, and allow the program and the market to grow dynamically together. The proposed project is designed to use U.S. Department of Energy (DOE) funding, and Vermont qualified energy conservation bonds (QECBs) to provide easy access to finance capital; combined with deep energy efficiency program and policy experience of VEIC, and technical assistance from Efficiency Vermont to initiate that market-based mechanism. Concurrently, VEIC will build an in-house energy consultant training program focused on effectively presenting the economic value of energy efficiency retrofits to business customers. This program will then scale to build a trained contractor-driven sales network to stimulate and maintain market demand, while helping consumers navigate the finance process. Through collaborative partnerships, the project team will determine the mix of program fees (e.g., participant, contractor, financial institution) to sustain program operations. In delivering a sustainable retrofit program, the proposed project will determine the key components and minimum level of critical infrastructure necessary to ensure success and broad replicability.

**The opportunity.** Because of Vermont's advanced energy policy framework and a strong energy efficiency infrastructure, Vermont is now well positioned to leverage significant new sources of private investment in energy efficiency. The primary opportunity lies with: (1) traditional lenders, which typically avoid energy efficiency investments because they lack reliable savings projections and verifiable data; and (2) commercial-sector entities, which are inconsistent in their demand for energy efficiency retrofits because of: (1) an unclear value proposition, and (2) complicated or non-existent paths for obtaining financing. The mix of small, medium, and large businesses in Vermont is proportionally more challenging for this effort than the national average.<sup>2</sup> But because of its size, Vermont does business on

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<sup>1</sup><http://www.ferc.gov/market-oversight/othr-mkts/renew/othr-rnw-eers.pdf>

<sup>2</sup> According to the 2008 U.S. Census, the national average of businesses with 20 or more employees is 10.4%, compared to Vermont's 13.5%; for businesses with 100 or more employees, the U.S. average is 1.8%, compared to

relationships with NYSERDA, St. Louis County Saves, the Connecticut Energy Efficiency Fund, and the Massachusetts HEAT program. Vermont does not intend to replicate any of these programs, but it can integrate their key design aspects into this effort. Each of the above programs has encountered pitfalls during program design and implementation. Vermont can learn from and avoid these, thus optimizing the budget and timeframe envisioned for this project. This is a best-practice approach to building a best-outcome project in Vermont.

### **1.3 Energy consumption baseline information**

To benchmark the success of this project, the Project Team will use baseline energy consumption data from Efficiency Vermont's 2009 Annual Report, the most recent, verified baseline data available.

### **1.4 Identifying and obtaining available financing for commercial energy efficiency retrofits**

The project team will build a network of partnering financial institutions (FI) to originate loans, provide capital, and service loans that remain with the respective FIs. Seven FIs in Vermont have active energy-related finance programs.<sup>6</sup> These programs have achieved only limited success due to lack of uptake, but their familiarity with energy-related finance products makes them likely candidates for participating in the proposed project. A Request for Information (RFI) will be issued to ensure maximum competitive participation, with focused outreach to other area banking entities. Critical to FI participation will be the *implementation of a loan loss reserve fund*, which will mitigate risk and act as a credit enhancement.

VEIC's non-profit status will also *enable this project to attract funding from sources such as foundations and defined benefit funds*, one outcome of which is the possible creation of innovative program structures. VEIC will draw on FI and philanthropic foundation relationships to determine the feasibility of using *program-related investment dollars (PRI)*<sup>7</sup> *to fuel a secondary market for energy efficiency finance products*. Secondary market development has typically failed because of a capital-to-project gap, illiquidity of investments with long timeframes (no exit for the investor), lack of data on bundled energy efficiency loan return on investment (ROI), and traditionally high ROI requirements of potential investors. This project effectively bridges the capital-to-project gap by implementing a partnering FI network to originate loans, and by accumulating bundled ROI data through QECB loan purchases. Because foundations have a significantly longer investment time horizon than do traditional investors, ROI requirements that fall between 2-8%, and an objective to invest in socially responsible activities, they are ideal for creating a secondary market for energy efficiency loans.

### **1.5 Known challenges to meeting project objectives**

The project's approach has strategies that directly address the three known challenges to meeting project objectives. The barriers presented here have coincidentally been identified in a recent study by the Environmental Defense Fund (EDF).<sup>8</sup> This recognition of market failures—common to Vermont and to nation as a whole—and their strategic solutions suggest the potential for scalability of the proposed project to a national level, with corresponding potential impacts.

*Facilitating access to private capital at favorable terms*

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<sup>6</sup> Bank of Bennington, Brattleboro Savings and Loan, NeighborWorks, Opportunities Credit Union, Passumpsic Savings Bank, Union Bank, and Vermont State Employees Credit Union.

<sup>7</sup> Created by the Tax Reform Act of 1969, Program-Related Investment (PRI) is a financial instrument used by private foundations to invest in ventures that support a socially responsible activity.

<sup>8</sup>[http://www.edf.org/documents/11860\\_EnergyEfficiencyFinancingBarriersandOpportunities\\_July%202011.pdf](http://www.edf.org/documents/11860_EnergyEfficiencyFinancingBarriersandOpportunities_July%202011.pdf)

Program operations will be designed to run as leanly as possible, with a focus on integrating with existing EEU programming to minimize costs.

## 2. Merit Review Criterion Discussion

### 2.1 Project Approach

#### 2.1.1 Reasonableness, completeness, and feasibility of the proposed approach in meeting the objectives of the FOA

Vermont's proposed project pushes the evolution of mature, cost-effective, energy efficiency practice to a level of self-sustainability, supported by the dynamism of private capital markets. Further, VEIC has an 11-year record of consistently raising the bar on energy efficiency implementation throughout the United States – in part by recommending strategies similar to those successfully implemented in Vermont. The proposed approach takes advantage of a growing interest in cost-effectively reducing energy use and paying for commercial energy improvements via meaningful private-sector investments in building infrastructure. Perhaps above all, Vermont has a long record of energy efficiency partnerships with VEIC, the Legislature, the Public Service Board, business associations, distribution utilities, small lenders, the legal community, chambers of commerce, fuel dealers, and community action organizations. The potential role of the larger and diverse finance industry—and the barriers to its participation—are clearly outlined in this proposal, and understood. Business barriers are also well understood, and addressed.

#### 2.1.2 Strategy and design

This strategy addresses three distinct challenges in the marketplace: (1) the desire of businesses to make their buildings more energy-efficient in the long term—without jeopardizing the bottom line in the short term; (2) the interest of private capital firms in taking advantage of new opportunities in a relatively stable arena for investment; and (3) creating new jobs in the construction, manufacturing, lending, and energy efficiency industries.

**Strategy One: Develop and implement a comprehensive private-sector-funded commercial energy efficiency retrofit program.**

The proposed project will combine a DOE-funded LLR, Vermont QECBs, Efficiency Vermont developed tools and training, and a contractor-driven sales network to successfully create a sustainable commercial energy efficiency retrofit program for the benefit of businesses that have been reluctant or unable to install significant efficiency measures. The DOE's *Guide to Clean Energy Finance* outlines the following four goals of loan loss reserve funds:

- Mobilizing, leveraging, and supporting partnering financial institutions
- Broadening consumer access to lending products
- Lengthening loan tenor
- Reducing loan interest rates

The program design will integrate QECBs to help reach the above goals, and to effectively mobilize and leverage the QECB issuance. The use of QECBs with the LLR helps mitigate risk for financial institutions, ensures a reduced interest rate on consumer loans, and provides a streamlined structure to issue the bonds. Using both the LLR and QECBs as the financial backbone of this project will also facilitate creation of the FI partner network, and further encourage the financial institutions in gaining experience with energy efficiency finance products. The proposed project design, step by step:

- By purchasing a portion of loans from the FI with QECB funds, consumers will likely receive a lower overall interest rate through blending of the FI market interest rate, and the QECB interest rate.

The Project Team will examine successful QECB issuance programs to ensure optimal design of the bonds' terms and overall program structure. Vermont will inform its program design by conferring with Missouri's St. Louis County Saves program and NYSEERDA, which both recently implemented a QECB-backed Green Community Program. NYSEERDA is also successfully employing a shared-risk model for commercial sector financing.

### 3) *Develop partner lending network, and FI partner program guidelines*

VEIC will draw on existing FI relationships through current finance programs, as well as banking institutions that offer energy-related finance products in Vermont and other states.<sup>6</sup>

Significant time will be spent structuring the implementation agreements for both the LLR and for the energy efficiency loan program. Because the Efficiency Vermont structure is a key component of the program (marketing, data reporting and collection, contractor networking, etc.), it will be essential that the implementation agreements coordinate all elements to assure that all parties work in close cooperation. The structuring of implementation agreements is expected to involve;

- **Risk Assessment**

The *Clean Energy Finance Guide* notes that prevailing energy efficiency loan risk profiles are based on perceived rather than actual risk. VEIC has conducted market research on multiple energy finance programs with default rates well below typical unsecured consumer loan default rates. These programs include the Massachusetts HEAT loan: over \$62M in unsecured loans with a 0.79% default rate; the Pennsylvania Keystone HELP loan: \$52.4M with a 1.45% default rate; and Manitoba Hydro: \$100M with a default rate of less than 1%. Vermont's consumer finance data and updated program data from best-practice states will help develop an accurate risk assessment.

- **Underwriting Terms**

A primary objective is to offer financing products to the broadest array of consumers possible. As such, the goal is to negotiate minimal underwriting approval criteria, while still meeting an acceptable risk profile. To appeal to mass markets, this might include zero-money-down loans and favorable interest rates. Recent studies indicate that actual monthly payment amounts might be more important than low interest rates; therefore, the Project Team will also advocate extended payback periods (15-year terms are envisioned to coordinate with maximum QECB issuance periods). This might also allow cash-flow-positive loans. Finally, the team will investigate structuring loan interest rates that are based on the specific energy efficiency measures being installed. For example, Connecticut manages a program that offers lower interest rates for high-priced, high-payback items such as furnaces and insulation, while offering slightly higher rates for items such as windows. Programs offered both in Connecticut and Pennsylvania also offer a special interest rate for comprehensive retrofits that target deep energy savings. This method rewards the consumer for making a greater investment in efficiency, while also recognizing that those associated measures carry a greater likelihood of meeting projected energy savings targets, and are therefore less risky to finance.

- **Streamlined application and approval procedure**

Crucial to the success of the program is a streamlined, easy-to-navigate consumer process in applying for financing—and a quick approval decision. The Project Team will



facilitating access to low-cost financing requires a full initial sale through loan issuance. In Connecticut and Michigan, the loan programs have empowered vendors to take on the sales role normally handled by a bank loan officer. Training programs on sales techniques and the requirements of Truth-in-Lending Laws, have enabled contractors to be more proactive than simply leaving behind a loan application or brochure. Programs are heavily regulated with quality assurance/quality control (QA/QC) to ensure consistent excellence in work quality and no unscrupulous sales tactics. Michigan Saves imposes a 1.99% contractor QA / QC and administrative fee on loans generated. This approach was suggested by contractors and ensures the sustainability of the program (and contractor income).

#### **Plan**

Efficiency Vermont's existing network of contractors already tied into efficiency programming services<sup>11</sup> will provide a substantial foundation for the contractor sales network. A full training course will involving distribution and training on the energy efficiency economic value tool.

Vermont and most other northern states depend on fuel oil and natural gas for heating. Integrating all-fuel contractors into the program, and tailoring the design of approved efficiency measures to target the all-fuels customer is an effective way to reach this large, underserved market. The project team will work with collaborative community partners such as the Vermont Fuel Dealers Association to design program specific implementation guidelines.

Design of the contractor network will include the following objectives:

- Establish minimum contractor qualification standards
- Design program structure, including any program fees
- Develop contractor training course
- Develop QA/QC plan

#### **9) Outreach**

The Project Team will rely on an existing broad outreach / partnering network from VEIC's 26-year history in the energy efficiency industry. The public outreach capacity includes long-term relationships with professional organizations, trade groups and associations, multiple local and national banking institutions, local and national philanthropic foundations, and ties to every level of the building community. VEIC's marketing department routinely targets the commercial sector, and has a complementary campaign for 2012 with radio ads, trade publications, daily community publications, contractor newsletters, direct mailers, and social media outreach.

##### **2.1.3 Goals, metrics, tasks and methods, deliverables, schedule, and budget**

The overarching goal of this proposal is to build sufficient links between the private capital markets and commercial retrofit opportunities in Vermont so that cost-effective energy efficiency financing for businesses becomes self-sustaining. Metrics for this project will be measurements for: (1) energy savings, confirmed through a longstanding, regulated energy efficiency market structure; (2) number of loans originated, loan amounts and terms; (3) ROI project data; (4) bundled loan ROI data from QECB purchases; (5) participation rates of lenders; (6) participation rates of businesses; (7) job creation; and (8) program default rates.

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<sup>11</sup>Efficiency Vermont's contact database of more than 5,000 building, banking, and trade professionals (2,400 home builders, 500 contractors, 900 architects, 300 engineers, 800 design professionals, 1,500 real estate professionals, 100 lending institution personnel, 265 municipal clerks, and 230 zoning officials)

(varying from direct installation of efficient products to a significant retrofit) was approximately \$13,230, representing the sum of Efficiency Vermont incentives, the customer's contribution to the project, and third-party costs. Total resource benefits lost—fossil fuel savings, water savings, and the avoided cost of electricity—have a value of almost twice that amount: \$26,327 per project. Annualized megawatt-hour savings lost, per project, would be 21.35 MWh. These are all conservative estimates of the real value and number of lost projects, since access to capital would likely enable larger and more projects.

### **2.2.3 How proposed approach can be replicated in or expanded to other markets, municipalities, states, or regions, or at national level**

A collaborative design approach will include input from other states leading programs, multiple stakeholders, and proven successful energy efficiency programming and design. The success of this program is designed around engaging local markets – both the financial institutions for providing capital, and the energy efficiency building community for stimulating demand. In any state or region, these markets know the clients best – and likewise – the clients know these participants. Further, the project is designed to determine the extent to which the model is feasible for financial markets, energy efficiency customers, and the building community.

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This project tests the extent to which financial markets will transform current practice when barriers to energy efficiency investment are removed and the extent to which commercial customers will invest in energy efficiency when financial barriers are significantly reduced. The extent to which the market is transformed relates to the degree of project sustainability.

## **2.3 Partnership Structure and Capabilities**

### **2.3.1 Appropriateness of the credentials, capabilities, and experience of the project team and key personnel**

The Principal Investigator is Kelly Launder, Assistant Director of Planning and Energy Programs at the DPS. Peter Adamczyk (Project Director) is a 23-year veteran manager of finance and lending activity for Fortune 100 companies. He led the analysis and research in the design and implementation of Vermont's first PACE program, and is a recognized expert in the coordination of municipal and other governmental PACE programs with banks and other lenders. Todd Sbarro (Project Manager) has a 10-year background in successful capital management, equities and investment analysis, and risk analysis. As part of the business development group at VEIC, he recently completed an independent study of energy finance programs for New Hampshire. Jules Fishelman, VEIC's Information Technology Manager, helped develop and oversees that organization's customer information database, which tracks dollars, energy use, measure, and account management data for all VEIC projects, including Efficiency Vermont activity. George Lawrence manages the design and evaluation of Commercial and Industrial consulting projects for VEIC. Karl Goetze supervises engineering staff at Efficiency Vermont, and has been instrumental in developing effective initiatives for the Business Energy Services market. Both Karl and George are Certified Energy Managers. Sally Talberg is experienced electricity generation and transmission policy and regulation, and in environmental policy and regulation. She is a program design and implementation manager for Michigan Saves, a multi-million dollar financing program for energy efficiency improvements. Julie Bennett is a vice president at Public Sector Consultants, and manages the environment and energy practice area, provides strategic counsel and facilitation services, conducts research and analysis, and manages projects in energy, water quality, land use, community and economic development, and natural resource management. She is also the finance manager for Michigan Saves.

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#### **2.3.4 Demonstrated commitment of project team**

Ever since it made its first low-interest loan to agricultural customers in 2003, VEIC has worked with the DPS in seeking ways to leverage as much funding as possible in service to Vermont ratepayers. The project team is fully familiar with the State's banking leadership, and the key personnel are frequently invited speakers at town committees and business association meetings; further, the VEIC Board of Directors includes a retired banker, the director of the Vermont Law School's Institute on Energy and the Environment, and two former regulators.

#### **2.3.5 Extent of leveraged funding by other organizations and / or programs**

Efficiency Vermont is prepared to support this proposed project by providing it with full access to its technical assistance team, at a value of \$200,000 total for both Budget Periods. The proposed activity fully corresponds to Efficiency Vermont's programming in business energy services and its ability to offer expertise from its Technical Group.

### **3. Project Timetable**

This is a two-year proposal, with substantial program design and pilot testing and critical evaluation taking place in Year 1, and full implementation of the design in Year 2. The budget calls for \$351,353 in Year 1, which will go toward program design and development, and \$645,213 in Year 2, to capitalize the loan loss reserve fund, full implementation, and project administration. Year 1 phases will be: (1) establishing the LLR, developing the Green Community Program, and developing the partner lending network; (2) developing the accounting, IT, and data infrastructure; establishing the eligible energy efficiency measures list; developing the M& V plan; and (3) developing the tool and the contractor-training network—with ongoing critical evaluation of these phases. Year 2 phases will be: (1) outreach efforts for implementation; (2) critical evaluation; and (3) full implementation of the project.

### **4. Relevance of Outcomes / Impacts**

With 13% of businesses "walking away" from energy efficiency projects they wanted to install, in a state with a well-established energy efficiency program (see Section 2.2.2), the relevance of the outcomes and impacts in terms of correcting the barriers to participation is demonstrable. The gains in energy savings and total resource benefits are correspondingly balanced by the gains to the financial markets, as has been described throughout this proposal.

### **5. Role of Participants**

This information is contained in detail in Sections 2.3.1 and 2.3.2.

August 8, 2011

Elizabeth Miller, Esq.  
Commissioner, Vermont Department of Public Service  
112 State Street, Drawer 20  
Montpelier, VT 05620

Re: Letter of Commitment -- Cost Share  
Vermont proposal  
State Energy Program 2011 Competitive Awards  
DE-FOA-0000533


Dear Commissioner Miller:

Efficiency Vermont, the statewide energy efficiency utility, is willing to commit a cost share in support of the State of Vermont's proposal to the U.S. Department of Energy for Area of Interest 1, Enhancing Commercial Building Retrofits through Streamlined Standards and Policy Incentives.

We are pleased to assist this project, if awarded, by providing a cost share in technical and marketing assistance valued at 20% of total project funding. We estimate the contribution to be approximately \$100,000 per year across FY 2012 and FY 2013.

The proposed effort to reduce the barriers to business participation in meaningful energy efficiency retrofit projects, while also reducing barriers in the finance industry to supporting significant energy improvements in buildings, is a critically important next step in advancing energy and climate security for the United States.

With best wishes,



Jim Merriam  
Director





**VERMONT ECONOMIC  
DEVELOPMENT AUTHORITY**

Vermont Agricultural Credit Corporation  
Vermont Small Business Loan Program  
Vermont 504 Corporation

August 10, 2011

Ms. Elizabeth Miller  
Commissioner, Vermont Department of Public Service  
112 State Street, Drawer 20  
Montpelier, VT 05620-2601

Re: **U.S. Department of Energy FOA  
DE-FOA-0000533  
State Energy Program 2011 Competitive Awards**

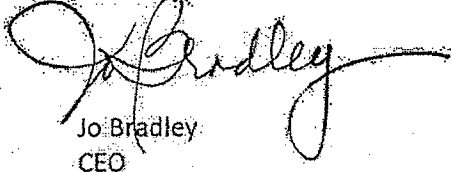
Dear Commissioner Miller:

VEDA is pleased to hear that the State of Vermont is pursuing the U.S. Department of Energy's Funding Opportunity for the 2011 State Energy Program Competitive Awards. We enthusiastically support the effort the State will make in advancing sustainable energy efficiency retrofit in the commercial sector, particularly because it encourages partial funding from private-sector capital.

We see this project as one that has the potential to benefit a wide range of customers. We understand that the project plan draws on the use of Efficiency Vermont services to build a contractor-driven sales network, which will help broaden other opportunities for reaching more customers where the needs are greatest.

VEDA wishes you well in your pursuit of this special funding, and we look forward to working with you if the project is awarded.

Sincerely,



Jo Bradley  
CEO

# VFDA

Vermont Fuel Dealers Association

[www.vermontfuel.com](http://www.vermontfuel.com)

Commissioner Elizabeth Miller  
Vermont Department of Public Service  
112 State Street, Drawer 20  
Montpelier, VT 05620-2601

Re: U.S. Department of Energy FOA  
DE-FOA-0000533  
State Energy Program 2011 Competitive Awards

August 9, 2011

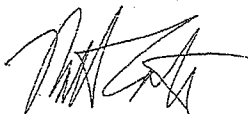
Dear Commissioner Miller:

The Vermont Fuel Dealers Association (VFDA) represents nearly 300 companies that distribute heating fuel, as well as those that install, sell and service heating equipment. The Vermont Fuel Education Center operated by VFDA is the state's leading provider of education and training to both fuel and non-fuel companies that sell, install and service oil and gas heating systems.

The more than 4000 Vermonters that are employed in the heating industry see the need for energy efficiency improvements first hand. A consumer most often considers upgrading their heating system when the old system is failing or has failed. A lack of financing is one of the reasons why our customers decide not to improve the efficiency of their heating system and instead ask us to make the old equipment work. A program that would allow heating service companies to offer financing directly to the consumer would greatly improve our ability to install more energy efficient heating systems.

We are encouraged that the State of Vermont is pursuing the U.S. Department of Energy's Funding Opportunity for the 2011 State Energy Program Competitive Awards and is focusing on financing. The Vermont Fuel Dealers Association looks forward to working with you if the project is awarded.

Sincerely,



Matt Cota  
Executive Director  
Vermont Fuel Dealers Association (VFDA)

**Kelly Launder**  
**VT Dept. of Public Service**  
**112 State Street**  
**Montpelier, VT 05620**  
**(802) 828-4039**

**Education:**

*Michigan State University, East Lansing, MI*  
M.S. in Resource Development, 2001

*Michigan State University, East Lansing, MI*  
B.A. in Communication, 1992

**Work Experience:**

*Vermont Dept. of Public Service, Planning and Energy Resources Division,*  
*Montpelier, VT*

**Assistant Director**

October 2009 – present

- Managerial, administrative and planning work for the Department of Public Service. Supervision is exercised over a professional staff of policy, grant and energy program specialists.
- Develop overall policy directives for the Planning and Energy Resources Division in cooperation with the Director of Planning.
- Organize, plan, coordinate and supervise the work of staff across multiple programs and projects in the division. Engage in ongoing evaluation of division activities.
- Oversee the administration of federal funds, acting as the department liaison and primary contact with the US Department of Energy (DOE). Develop and facilitate submittal of applications and budgets for funds by sub-grantees. Ensure compliance with DOE rules, regulations, and federal fund tracking and reporting requirements.
- Act as the department liaison with the VT Clean Energy Development Fund (CEDF). Provide recommendations on CEDF program design, and develop RFPs, contract and grant agreements.
- Manage various Vermont Energy programs and projects, often serving as the department representative.
- Provide policy analysis, recommendations and testimony on energy related issues and programs before legislative committees and the Public Service Board.

**Program Manager**

April 2004-October 2009

- Administered the following programs: Biomass Energy, Residential Energy Efficiency, Rebuild, Wind, and the State Heating Oil and Propane Program (SHOPP)
- Vermont Clean Cities Coordinator
- Developed and issued proposal solicitations, facilitate proposal review and selection
- Developed and submitted proposals to secure funding
- Published *Vermont Fuel Price Report*
- Maintained Energy Efficiency Division website
- Staffed the Commission on Wind Energy Regulatory Policy (organized Commission meetings and public hearings, issued press releases, administered contracts, and edited final report on Commission recommendations)

***State of Michigan, Energy Office, Lansing, MI***

Program Manager

Biomass Energy and Rebuild Michigan Programs

December 1997-April 2004

- Developed and implemented program plans
- Developed and issued proposal solicitations, facilitated proposal review and selection
- Wrote press releases for projects
- Administered grants
- Developed and submitted proposals to secure federal funding
- Facilitated Michigan Ethanol Working Group meetings
- Published *Michigan Ethanol Working Group News*
- Coordinator for 2000 & 2001 Michigan Ethanol Workshop
- Conducted research and prepared reports on bioenergy topics
- Responded to approximately 400 information requests per year
- Maintained Biomass Energy Program website

***MI Corn Growers Association/Corn Marketing Program of MI, Lansing, MI***

Ethanol Consultant

May 2001-October 2001

- Responded to ethanol-related information requests
- Assisted with grant proposal development
- Organized promotional events

***EarthRight Institute, White River Jct., VT***

Intern

December 1993-July 1994

- Research assistant and writer for "Guide to Town Energy Planning in NH"
- Responded to information requests
- Organized and re-established volunteer program
- Assisted with membership drives



**PETER ADAMCZYK**  
**Energy Finance and Development Manager**

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- More than 23 years' experience successfully managing finance and lending activity for Fortune 100 institutions.
- Lead VEIC research and analysis manager for the design and implementation of Vermont's first PACE program (in Burlington).
- Recognized expert in property assessed clean energy (PACE) programs, specializing in municipal and other governmental coordination of PACE activity with banks and other lending institutions.
- Invited speaker at recent regional conferences on renewable energy, environmental action, and community energy initiatives.
- Lengthy experience as manager of successful financial businesses, from setup through rapid growth, including sales and marketing, negotiation, hiring and training, finance and budgeting; fully conversant with legal, regulatory, and tax compliance at federal and local levels.
- Strong background in securitization and other funding mechanisms.
- Broad experience in preparing business cases and implementing them, responding to Requests for Proposals from prospective clients, and managing relationships with clients and regulatory agencies.
- Strong people management skills across multiple cultures, including large-staff management in New York, London, Dublin, and Hong Kong.

## **PROFESSIONAL EXPERIENCE**

May 2009 - Present

**Energy Finance and Development Manager, Vermont Energy Investment Corporation** Burlington, VT

Policy and program design advisor for renewable energy and efficiency initiatives at the national and state level. Responsible for senior level management of projects involving the design, delivery, and evaluation of energy efficiency and renewable energy measures, programs, and policies. Recent and current activities include:

- Developer and lead resource statewide for PACE-related mechanisms. Successful, strategic resource coordinator for city and town governments, regional planning commissions, banks, and other lending institutions implementing PACE programs.
- Develop integrated financing packages for energy retrofit projects for commercial and residential customers.
- Manager of development and promotion of Energy Efficiency Mortgage products, with Vermont and New England regional institutions
- Prepare business case for creation of regional public-purpose Energy Savings Companies (PPESCOs)

1997 -2008

**Managing Director and President, AIG Securities Lending Corp.**

New York, NY

Responsible for the initiation, development and ongoing management of the firm's global securities lending business (a portfolio management strategy to enhance investment yield) Oversight of fixed-

income portfolio management and securitized assets. Relationship manager for more than 40 clients, composed of insurance companies, pension funds, and mutual funds, as well as for more than 30 banks and brokerage firms.

1996- 1997

**Director, UBS Securities**

New York, NY

Initiated a new agency lending business, including development of all infrastructure for startup. Prepared business case for board approval, formulated marketing strategy, and developed procedures. Recruited and trained staff of 14.

1990-1996

**Principal, Barclays Global Investors**

San Francisco, CA

Responsible for the initiation, development and ongoing management of the firm's global securities lending business (a portfolio management strategy to enhance investment yield) Oversight of fixed-income portfolio management and securitized assets. Relationship manager for more than 40 clients, composed of insurance companies, pension funds, and mutual funds, as well as for more than 30 banks and brokerage firms.

1985-1990

**Supervisor, Analyst, G.T. Capital Management**

San Francisco, CA

Managed group responsible for investment performance analysis, economic and political trend analysis, and foreign exchange and cash investment functions.

## **EDUCATION**

**BA, University of California, Berkeley (Institute of International Studies), International Economics, 1986**

## **ADDITIONAL QUALIFICATIONS**

April 2009	<b>North American Board of Certified Energy Practitioners (NABCEP) Entry Level Photovoltaic Certification</b>
February 2009	<b>Northeast HERS Alliance Home Energy Rating System (HERS) Certification</b>
November 1996	<b>Financial Industry Regulatory Authority (FINRA), Registered Securities Principal (Series 24) licensure.</b> This license qualifies an individual to manage activities such as corporate securities, variable annuity contracts, and venture capital, to approve advertising and sales literature, and also for supervision of investment banking, trading, customer accounts, and primary / secondary markets activities.

**TODD E. SBARRO**  
**Vermont Energy Investment Corporation**

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**EXPERIENCE**

**Vermont Energy Investment Corporation, Burlington, VT** August 2010 – Present  
BUSINESS DEVELOPMENT ANALYST, CORPORATE BUSINESS DEVELOPMENT

- Identify, develop and manage corporate business development opportunities including go/no-go process
- Project manage business development efforts including team selection and coordination
- Manage proposal development process, including content development
- Contribute to client deliverables in areas of subject matter expertise
- Inform business decisions through comprehensive market research and analysis including market characterization, competitor and trend analysis.
- Align analysis and strategy with corporate vision to increase revenue and identify new business opportunities.
- Develop and make executive recommendations on product and market segments.
- Work directly with internal SBU's to inform strategic and tactical decisions and advise on competitive landscape and impact.
- Develop business plans to advance internal development of business opportunities.
- Leverage existing external business relationships and develop new relationships
- Interpret market findings to deliver succinct, clear impact assessments and corporate wide reports.

**Sbarro Capital Management, Jericho, VT** October 2003 – August 2010  
SOLE PROPRIETER AND EQUITIES TRADER

- Conducted top-down market research and company analysis to characterize business environment, market structure, competitive landscape, and trend development.
- Built valuation models integrating relative valuation, key metrics, sensitivity, and DCF analysis.
- Monitored, evaluated and filtered multiple sources of information including live news streams, technical charts, market data, and social networking sites.
- Synthesized data into spreadsheets for investment reference.
- Managed P/L by executing responsive performance plans and risk analysis.
- Collaborated with trading colleagues over phone, Skype and messenger platforms.
- Achieved average 38% ROI 2003-2010.

**E-Trade Professional, Stamford, CT** June 2000 – October 2003  
TEAM AND TRADING FLOOR MANAGER December 2000-2003

- Enhanced firm operations through strong team leadership, creativity and problem solving.
- Trained, mentored and managed team members in technical analysis, strategy, and risk management.
- Managed trading floor risk and capital allocation.
- Mediated conflict between traders.
- Negotiated and structured trader payout and incentive plans with upper level management.
- Directed weekly meetings addressing trading strategy, methodology, risk, and time management.
- Created and led presentations to senior management detailing profit maximization and key areas for improvement.

PROPRIETARY TRADER 2000-2003

- Produced over \$2 million in profits for the firm.
- Responsible for managing \$1 million of firm capital.

**Connecticut College, New London, CT** June 1999 – May 2000  
OFFICE OF COMMUNITY AND PUBLIC AFFAIRS INTERN

- Performed comparative analysis of community outreach programs at private New England colleges.
- Collaborated with the New London Development Corporation on resource allocation and projects.
- Extensively used Excel and PowerPoint to produce charts, spreadsheets and presentations.

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**EDUCATION**

**Connecticut College, New London, CT** 1996 – 2000

- B.A., Economics, Deans List

**The London School of Economics, London, England** 1998 – 1999

One-year intensive study program focusing on economic policy.

**GEORGE LAWRENCE**  
**Consultant, Consulting Division**  
Vermont Energy Investment Corporation

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**PROFESSIONAL EXPERIENCE**

2011 - Present

**Consultant, Vermont Energy Investment Corporation, Burlington, Vermont**

Commercial and Industrial project management for mid-sized and large projects. Designs, reviews, and/or critiques energy efficiency and renewable energy programs and policies, with a specialty in commercial and industrial (C&I) programs and policies. Conducts research and performs economic analysis of efficiency measures, programs and policies. Assists consulting business development including sometimes leading proposal preparation. Examples of recent client work includes:

- **Oak Ridge National Laboratory (ORNL) Technical Assistance Program** – Provide program design support to EECBG and SEP ARRA grant recipients through ORNL Technical Assistance Project, including incentive design, quality assurance programs, etc.
- **DC Sustainable Energy Utility** – Providing commercial and industrial business market initiative experience for VEIC's Washington, D.C. based efficiency utility.
- **New Hampshire Public Utilities Commission** – Evaluated New Hampshire's commercial and industrial energy efficiency programs for cost effectiveness and comprehensiveness in delivery of services, and made recommendations for improvements.

2006 - 2011

**Planning and Development Manager, Vermont Energy Investment Corporation Burlington, Vermont**

Managed multiple commercial, municipal, and industrial business market initiatives for Efficiency Vermont. Designed and instituted programs for the Farm, K-12 Schools, Water and Wastewater, and Ski Industry markets to reduce electrical and energy usage by these customers. Designed and instituted programs to target industrial users of compressed air to reduce waste and save energy.

2004 – 2006

**Construction Sales, Green Building Products, McKernon Group, Brandon, Vermont**

Contacted and advised architects, engineers, contractors, and homeowners on new building products and their benefits. Managed sales of multiple lines of environmentally friendly construction materials such as insulating concrete forms and structural insulated panels. Certified insulating concrete form installation trainer.

2000 – 2004

**Sales Manager, Telecom Applications, Northern Power Systems, Waitsfield, Vermont**

Managed domestic and international sales of renewable and fossil fuel powered energy systems that were used in extreme environments. Consulted and advised commercial, government, and military organizations. Traveled extensively throughout North America to meet with customers.

1999 - 2000

**Sales Manager, Windstream Power Systems, Burlington, Vermont**

Managed domestic and international sales of renewable energy power systems.

## **EDUCATION**

**Middlebury College, BA Physics, 1989**

## **ADDITIONAL INFORMATION**

- Association of Energy Engineers - Certified Energy Manager
- Association of Energy Engineers - Certified Energy Auditor
- Department of Energy - AirMaster Compressed Air Specialist
- Building Performance Institute - Building Analyst Certification
- Building Performance Institute - Envelope Certification
- Building Performance Institute - Heating Certification

**KARL GOETZE, CEM**  
Vermont Energy Investment Corporation

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## **PROFESSIONAL EXPERIENCE**

### **2001 – Present**

#### ***Engineering Staff Manager (2011 – present), Vermont Energy Investment Corporation, Burlington, Vt.***

- Manages and directs Engineering staff in the development and delivery of high-quality technical services to Efficiency Vermont staff and customers.

#### ***Manager, Business Energy Services (2005 – 2011)***

- Developed, introduced, and trained staff on new incentive approach, based on customer economics (internal rate of return), replacing budgeted \$ / MWh as basis for determining incentive levels in custom projects.
- Innovative and entrepreneurial approaches to business challenges, including
  - Developed “Roadmap with energy use target” concept for VT Housing and Conservation Board’s MacArthur Grant for long term affordable housing
  - Orchestrated revenue-generating VEIC fee-for-service work for Public Housing Authorities (HUD required audits)
  - Organized VEIC-sponsored CEM course to allow staff to participate locally for minimal cost subsidized by other non-VEIC participants
- Created and led effort to encourage best practices, clarifying / addressing issues that had caused staff confusion.
- Technical Solutions Group member.
- Led team in development of common analysis tools.
- Led team to improve the custom project review process using Value Methodology
- Led effort that identified value and benefits of Info Sharing system
- Introduced and trained staff on Opportunity qualification concept
- Supervised 14 staff and 1 subcontractor
- Signoff responsibilities up to \$50,000

#### ***Senior Project Manager (2001 – 2005)***

- Responsible for comprehensive technical energy analysis and administrative oversight.
- Led Multifamily Market Team, planning and steering multifamily market initiatives.
- Used innovative approaches to encourage customers to pursue cost-effective energy efficiency and conservation recommendations.
- Supervised team of six staff and one subcontractor.
- Performed comprehensive energy analyses for multifamily and small commercial projects.

#### ***Energy Auditor and Ratings Services Manager (1994 – 2001)***

- Performed energy analyses of single-family homes; recommended cost-effective energy improvements; provided site inspections with blower door testing and building diagnostics.
- Managed relationships among builders, homeowners, realtors, and utilities. Performed audits for Energy Rated Homes of Vermont; assessed energy efficiency improvement potential; provided post-

measures installation inspections for qualification in utility DSM programs and lender energy financing products.

- Responsible for the collection, management, and analysis of technical survey data for Public Service Electric and Gas in New Jersey and Southern Maryland Electric Cooperative. Served as field investigator for Vermont Baseline New Construction baseline survey.

**1993 – 1994**

***Energy Technician, Energy Alternatives, Burlington, Vt.***

- Delivered weatherization services for public and private clients.
- Performed energy efficiency measures: diagnostics; installation of dense-pack cellulose insulation; air-sealing; and other efficiency measures in numerous single-family homes and apartments throughout northwestern Vermont.

## **EDUCATION**

Dartmouth College, BA, English, 1988.

## **SYNERGISTIC ACTIVITIES**

### **Certifications:**

- Certified Energy Manager (CEM), Association of Energy Engineers
- Certified Energy Rating Supervisor
- Certified State Energy Auditor

### **Diagnostic / Evaluation Computer Skills:**

- REM / Rate – Energy Rating software
- WUFI – Hygrothermal Analysis software
- ESPRE – Building Energy Simulation model

**JULES FISHELMAN**  
**Vermont Energy Investment Corporation**

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**PROFESSIONAL EXPERIENCE**

2004 – Present

**Information Technology Manager, Vermont Energy Investment Corporation** Burlington, VT

Plans, organizes, and facilitates the work of VEIC's information technology (IT) team and its delivery of services to both internal and external customers.

- Supervisor of a staff and subcontractors.
- Ensures that the IT team effectively communicates with and successfully delivers high quality services to its customers.
- Assists team members with their professional development.
- Serve to promote IT's services to both internal and external customers.

1998 – 2004

**Network Administrator, Vermont Energy Investment Corporation** Burlington, VT

Responsible for the administration of a 100+ seat mixed server network environment, software and hardware support for a windows XP Intel-based desktops and laptops, plus specifying and purchasing all hardware and software for VEIC's LAN and workstations.

1997 – 1998

**Customer Service Representative, Kea Technologies** Williston, VT

Provided support services for software and hardware distribution for a variety of small and mid-sized corporations. Responsibilities included customer service and sales, employee training, and handling returned merchandise and corporate purchase-order fulfillment.

**EDUCATION**

**BA, University of Vermont, Religion and Psychology, 1995**

**Costrux Software, Software Development Management**

**Costrux Software, Requirements Analysis Boot Camp**

**ADDITIONAL QUALIFICATIONS**

- Citrix Metaframe and Presentation Server
- Novell Netware, Groupwise, and Zenworks for Desktops Administration
- Microsoft Exchange, Outlook and Advanced MS Office
- NetWare Troubleshooting
- SQL Server Reporting Services
- Crystal Reports
- Project Management
- Application Testing





## JULIE METTY BENNETT

*Vice President*

### EDUCATION

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Michigan State University, BA, Interdisciplinary Studies in Social Science with a concentration in Environmental Policy; second major in Political Science; MS, Resource Development with specialization in Environmental Toxicology

### POSITION WITH FIRM

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**2008–present**     *Vice President.* Conducts research and analyses; writes reports on natural resources and public policy issues for the firm and its clients. Serves as manager of the Great Lakes Fishery Trust, program manager for People and Land (PAL), and trust and grant manager for Michigan Saves, overseeing daily operations, financial management, accounting, and fundraising as well as providing grant-management services.

**2000–2007**     *Senior Consultant.*

### PREVIOUS PROFESSIONAL EXPERIENCE

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**1999–2000**     *Water Quality Project Organizer,* Great Lakes Natural Resource Center, National Wildlife Federation (NWF), Ann Arbor, Mich. Worked to educate and mobilize individuals, organizations, and federal, state, and local policymakers in furtherance of Great Lakes water-quality issues; organized workshops and media events, produced materials, and provided training.

**1997–1999**     *Environment Policy Specialist,* Michigan United Conservation Clubs, Lansing, Mich. Represented the organization before the legislature on environmental issues; reviewed technical documents and science-related policy proposals associated with energy conservation, air quality, and solid/hazardous waste management; prepared position papers, news articles, and action alerts on state policy developments; participated in various steering committees and task groups related to energy, air quality, and land use issues.

**1995–1997**     *Resource Policy Assistant,* Michigan United Conservation Clubs, Lansing, Mich. Assisted in advocating and facilitating environmental policy change; prepared materials for members; created and maintained Web page.

**1996**     *Environmental Educator,* Cranbrook Institute of Science, Bloomfield Hills, Mich. Prepared EarthQuest exhibits pertaining to a variety of environmental issues and educated visitors on such topics as water quality, composting, and rain forest depletion.

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**Julie Metty Bennett**  
*Vice President*

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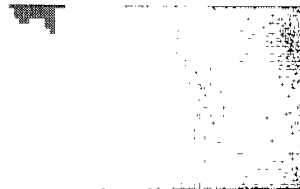
1994

*Clean Water Advocate*, Clean Water Action, East Lansing, Mich. Participated in fundraising and citizen and lawmaker education.

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**PROFESSIONAL AND COMMUNITY ACTIVITIES**

- Member, Michigan Land Use Institute Advisory Council, 2011–present
- Board Member, Scenic Michigan, 2000–present (Vice President 2001–2004)
- Water Resource Fellowship, Environmental Science and Policy Program, Michigan State University, 2004–2005
- Board Member, Hamburg Township Environmental Review Board, 2005–present
- Board Member, Hamburg Township Recreation Board, 2005–present
- Board Member, Huron River Watershed Council, 2005–present
- Board Member, Michigan Environmental Council, 2005–present
- Advisory Council Member, Northwestern Michigan College Water Studies Institute, 2005–present
- Advisory Council Member, Great Lakes Nonprofit Institute, 2005–present



**SALLY A. TALBERG**  
*Senior Consultant*

## EDUCATION

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Michigan State University, BS, Environmental and Natural Resources Policy Studies; Lyndon B. Johnson School of Public Affairs, University of Texas-Austin, MPA.

## POSITION WITH FIRM

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**2008–Present**     **Senior Consultant.** Conducts research and analyses; writes reports on environment and energy policy issues for the firm and its clients. Serves as manager of program design and implementation for Michigan Saves, a multi-million dollar financing program for energy efficiency improvements.

## PREVIOUS PROFESSIONAL EXPERIENCE

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**2006–2008**     **Departmental Analyst,** Michigan Public Service Commission (MPSC), Energy Markets Section, Lansing, Mich. Tracked and analyzed issues at the state, regional, and federal level involving electric transmission rates, transmission planning, and interconnection of new electric generating facilities. Collaborated with utilities, state commission staff, and other stakeholders and provided input through stakeholder processes of the Midwest Independent Transmission System Operator. Served as case coordinator of electric dockets before the Federal Energy Regulatory Commission. Collaborated with legal counsel to develop strategies and prepare MPSC pleadings. Briefed commissioners and presented recommendations for MPSC action. Served as co-leader of Michigan Planning Consortium to improve the electric industry planning process. Conducted research for a 50-state survey on regulatory policies involving rate treatment and competitive bidding for new electric generating facilities.

**2004–2008**     **Environmental Quality Analyst,** Michigan Department of Environmental Quality (MDEQ), Water Bureau, Enforcement Unit, Lansing, Mich. Managed civil enforcement cases addressing violations of water-pollution and drinking-water laws. Devised enforcement strategies; drafted consent orders, civil complaints, briefing memoranda, and correspondence; and negotiated settlements with opposing counsel. Served as point person on assigned contested cases involving challenges to permits, fees, and other agency actions.

**2003–2004**     **Lead Electric Policy Analyst,** Public Utility Commission of Texas, Policy Development Division, Austin, Texas. Analyzed laws, policies, and issues affecting the electric industry, formulated issues and options, and presented recommendations for commission action. Advised commissioners on contested cases and rulemakings. Led the agency's 2003 electric legislative team, which analyzed fiscal and other impacts of pending legislation. Advised and trained division staff, administrative law judges, and management on electric-industry topics, policies, and processes. Drafted

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(517) 484-6549 Fax  
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**Sally A. Talberg**  
*Senior Consultant*

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- commission orders, rules, reports, and memoranda. Assisted in oversight of the Texas Electric Choice Pilot Project and wrote final evaluation report.
- 2002–2003**     **Chief Electric Policy Analyst**, Public Utility Commission of Texas, Policy Development Division, Austin, Texas.
- 2000–2002**     **Senior Electric Policy Analyst**, Public Utility Commission of Texas, Policy Development Division, Austin, Texas.
- 1999–2000**     **Graduate Intern**, Lower Colorado River Authority, Austin, Texas. Developed environmental procedure manual for water and wastewater facilities. Produced internal auditing checklists based on environmental and safety laws and regulations. Created and maintained database to track and report compliance by water, wastewater, and hydroelectric facilities. Developed survey tools to evaluate pollution-prevention program aimed at utility's vendors and wholesale electric customers.
- 1997–1998**     **Policy Specialist**, Michigan Environmental Council, Lansing, Mich. Monitored and analyzed legislative and regulatory actions on air quality, energy, and high-speed rail. Developed correspondence, presented legislative testimony, and spoke at meetings and public events; negotiated and collaborated with policymakers, technical experts, businesses, and nonprofit organizations on various policy issues. Drafted grant proposal related to energy and air quality that secured \$120,000 from a private foundation.
- 1996–1997**     **Resource Specialist/Assistant**, Michigan United Conservation Clubs, Lansing, Mich. Managed \$40,000 grant-funded energy project to promote energy efficiency in Michigan. Analyzed policies, presented testimony, and communicated with legislators and regulators regarding electric restructuring and energy efficiency. Collaborated with the Michigan Attorney General's office, public utilities, trade associations, labor unions, consumer groups, and social service agencies on electric-restructuring issues.

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## AWARDS

- 2005             Michigan Department of Environmental Quality "Team" Award
- 1999             Demonstration of Energy-Efficient Developments Scholarship Recipient, American Public Power Association
- 1995–96         Jon F. Bartholic Award for Excellence in Creativity, Michigan State University
- 1995–96         Milton H. Steinmueller Scholastic Achievement Award, Michigan State University

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## PUBLICATIONS

- *Energy Efficiency and Load Management in an Era of Competition: Opportunities and Challenges* (Professional Report), Lyndon B. Johnson School of Public Affairs, The University of Texas at Austin, 2001.
- The Clean Air Act and Grandfathered Power Plants: A Case Study of the Conners Creek Plant, *LBJ Journal of Public Affairs* 12 (Spring 2000), 19–31.
- (Co-author) *Navigating the Waters of the Paso del Norte: A People's Guide*, U.S.-Mexican Special Publications, (Austin, Tex.: Lyndon B. Johnson School of Public Affairs, 1999).
- (Co-author) *Treading Water: A Review of Government Progress under the Great lakes Water Quality Agreement* (A Report to the International Joint Commission), *Toledo Journal of Great Lakes' Law, Science, and Policy* 1998, no. 1 (1998).



## Department of Energy

Golden Field Office  
1617 Cole Boulevard  
Golden, Colorado 80401-3393

September 8, 2011

Ms. Elizabeth Miller  
Vermont Department of Public Service  
112 State Street  
Montpelier, VT 05620

Dear Ms. Miller:

**SUBJECT:** Funding Opportunity Announcement Number DE-FOA-0000533, State Energy Program 2011 Competitive Awards, Application Title: Sustainable Vermont: Putting Private Capital Markets to Work in a Model Retrofit Policy for Businesses

The Department of Energy (DOE) evaluated your application submitted in response to the subject Funding Opportunity Announcement. After careful review, I am pleased to inform you that your application has been selected for negotiations leading to an award.

**Please refrain from making this information public until Thursday September 15, 2011, as DOE plans to make public announcements between now and then**

The Golden Field Office utilizes an electronic, paperless procurement system. Therefore, ALL organizations conducting financial assistance actions with this office MUST be registered with the Central Contractor Registration (CCR) and FedConnect. It is imperative that you read and follow the information provided in the document titled "CCR and FedConnect Registrations" at: <https://www.eere-pmc.energy.gov/Forms.aspx>. If you are not currently registered in CCR and FedConnect, you must register immediately; otherwise, the Golden Field Office cannot continue negotiations leading to an award.

Since there is insufficient time to fully negotiate your award prior to the end of the Federal fiscal year, the Golden Field Office will issue a conditional award using the proposed budget information in your application. A conditional award is comprised only of an Assistance Agreement and Special Terms and Conditions. A conditional award obligates DOE funding, but prohibits disbursement of the funding until successful negotiations are reached to the satisfaction of the DOE Contracting Officer. Performance against the conditional award is, therefore, at your own risk, and payments for costs incurred for your project will not be made until completion of negotiations. Upon successful completion of negotiations, the award will be modified to remove its conditional status, revise the Special Terms and Conditions, and add additional attachments such as Attachment 1, Statement of Project Objectives; Attachment 2, Federal Assistance Reporting Requirements; and Attachment 3, Budget Information - Non Construction Programs, SF 424A.



Please note that you are restricted from taking any action using Federal funds, which would have an adverse effect on the environment or limit the choice of reasonable alternatives prior to DOE providing either a National Environmental Policy Act (NEPA) clearance or a final NEPA determination regarding your project. If you proceed with activities that are not authorized for Federal funding by the DOE Contracting Officer in advance of the final NEPA determination, you do so at risk of not receiving Federal funding, and such costs may not be recognized as allowable cost share for purposes of your award.

In the interim, further information is required to expedite the completion of successful negotiations and removal of the conditional status of the award. Please email the following information to Christopher Kudola, Grants Management Specialist at [Chris.Kudola@go.doe.gov](mailto:Chris.Kudola@go.doe.gov) by October 11, 2011. If the information below has not changed since you submitted your initial application, you do not have to resubmit the information.

Please complete the following required forms, which are available on the Project Management Center (PMC) website at <https://www.eere-pmc.energy.gov/Forms.aspx>:

- a. Financial Assistance Pre-Award Information Sheet, PMC 121.1 (**NOTE: Complete this form first and promptly email it to the Grants Management Specialist listed above.**)
- b. Application for Federal Assistance, SF 424;
- c. Budget Information – Non Construction Programs, SF 424A;
- d. Budget Justification;
- e. Financial Information, PMC 410.1;
- f. Representation of Limited Rights Data and Restricted Computer Software;
- g. Environmental Checklist, EF1. (This form should be completed on line at <https://www.eere-pmc.energy.gov/nepa.asp>);
- h. Statement of Project Objectives (SOPO);
- i. Sub-recipient/Subcontractor Information: for each sub-recipient/subcontractor who is expected to perform work estimated to be more than \$100,000, or 50 percent of the total work effort (whichever is less), provide: (1) separate SF 424A budget; (2) Budget Justification; (3) approved rate agreement or proposal; and (4) description of work;
- j. Copy of the most recent A-133 audit (for non-profit, states, local governments, and educational institutions, if applicable) or independent audit (applicable to for-profit entities);
- k. Commitment Letters from Third Parties Contributing to Cost Share, if applicable;
- l. Copy of your approved Indirect Rate Agreement or a Rate Proposal, following the guidelines in the PMC 400.2 form;
- m. Disclosure of Lobbying Activities (SF-LLL), if applicable.

The Financial Assistance Rules, 10 CFR Part 600 (Administrative Requirements) are located at: [http://www.access.gpo.gov/nara/cfr/waisidx\\_09/10cfrv4\\_09.html](http://www.access.gpo.gov/nara/cfr/waisidx_09/10cfrv4_09.html).

OMB Circulars (addressing Cost Principles) are located at: [http://www.whitehouse.gov/omb/financial\\_offm\\_circulars/](http://www.whitehouse.gov/omb/financial_offm_circulars/).

Or the codified Cost Principles are located at: [http://www.access.gpo.gov/nara/cfr/waisidx\\_10/2cfrv1\\_10.html#1](http://www.access.gpo.gov/nara/cfr/waisidx_10/2cfrv1_10.html#1) (Parts 220 or 225 or 230).

Commercial Organizations may locate Cost Principle information at: <https://www.acquisition.gov/Far/> (Part 31.2).

You may not incur pre-award costs without prior approval of DOE. All pre-award costs are incurred at your risk (i.e., DOE is under no obligation to reimburse such costs if for any reason negotiations are not successful or if the negotiated award is less than anticipated and inadequate to cover such costs). All costs must be allowable, allocable, and reasonable in accordance with the applicable cost principles.

After completion of negotiations, acknowledgment of award documents through FedConnect by the recipient's authorized representative constitutes acceptance of the terms and conditions of the award and represents the recipient's electronic signature. Therefore, it is not necessary to return a signed Assistance Agreement to DOE after your authorized representative acknowledges the award in FedConnect.

If you are unable to provide the information by the date requested or have any questions concerning the requested information, please contact Chris Kudola at 720-356-1675 or [Chris.Kudola@go.doe.gov](mailto:Chris.Kudola@go.doe.gov).

On behalf of the DOE, I would like to express a sincere appreciation for your interest and participation in the State Energy Program and look forward to initiating this worthwhile project.

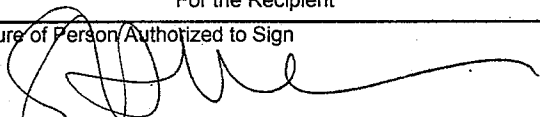
Sincerely,



Robert D. Kingsley  
Contracting Officer

cc: Kelly Launder  
bcc: S. Brett Bumble

**ASSISTANCE AGREEMENT**

1. Award No. DE-EE0005457		2. Modification No.		3. Effective Date 09/30/2011		4. CFDA No. 81.119		
5. Awarded To STATE OF VERMONT DEPARTMENT OF PUBLIC SERVIC 112 STATE ST DRAWER 20 MONTPELIER VT 056202601				6. Sponsoring Office Golden Field Office U.S. Department of Energy Golden Field Office 1617 Cole Blvd. Golden CO 80401			7. Period of Performance 09/30/2011 through 09/29/2013	
8. Type of Agreement <input type="checkbox"/> Grant <input checked="" type="checkbox"/> Cooperative Agreement <input type="checkbox"/> Other		9. Authority 42 USC 6321 42 USC 7101			10. Purchase Request or Funding Document No. See Schedule			
11. Remittance Address STATE OF VERMONT DEPARTMENT OF PUBLIC SERVIC 112 STATE ST DRAWER 20 MONTPELIER VT 056202601				12. Total Amount Govt. Share: \$797,253.00  Cost Share : \$199,313.00  Total : \$996,566.00		13. Funds Obligated This action: \$797,253.00  Total : \$797,253.00		
14. Principal Investigator Kelly Launder Phone: 802-828-4039		15. Program Manager Henry D. Fowler Phone: 720-356-1595			16. Administrator Golden Field Office U.S. Department of Energy Golden Field Office 1617 Cole Blvd. Golden CO 80401-3393			
17. Submit Payment Requests To			18. Paying Office			19. Submit Reports To		
20. Accounting and Appropriation Data 2011 SEP Competitive Grants								
21. Research Title and/or Description of Project SUSTAINABLE VERMONT: PUTTING PRIVATE CAPITAL MARKETS TO WORK IN A MODEL RETROFIT POLICY FOR BUSINESSES								
For the Recipient				For the United States of America				
22. Signature of Person Authorized to Sign 				25. Signature of Grants/Agreements Officer Signature on File				
23. Name and Title ELIZABETH MILLER COMMISSIONER		24. Date Signed 9/28/11		26. Name of Officer Yolanda C. Ramirez		27. Date Signed 09/19/2011		



**CONTINUATION SHEET**

REFERENCE NO. OF DOCUMENT BEING CONTINUED  
DE-EE0005457

PAGE OF  
2 3

NAME OF OFFEROR OR CONTRACTOR  
STATE OF VERMONT DEPARTMENT OF PUBLIC SERVICE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>DUNS Number: 809376791</p> <p>1. This is a conditional award, comprised of this Assistance Agreement and the Special Terms and Conditions. Upon successful completion of negotiations, this award will be modified to lift its conditional status, to revise the Special Terms and Conditions, and to add additional attachments, such as Attachment 1, Intellectual Property Provisions; Attachment 2, Statement of Project Objectives; Attachment 3, Federal Assistance Reporting Requirements; and Attachment 4, Budget Information - Non Construction Programs.</p> <p>2. The award was prepared using the proposed budget information in the Recipient's application. The Special Terms and Conditions, Provision 1 of the award states DOE will not release the funding obligated by this award until successful completion of negotiations are reached to the satisfaction of the Contracting Officer. Performance against this award is, therefore, at the Recipient's own risk, and payments for costs incurred for the Recipient's project will not be made until completion of negotiations.</p> <p>3. A representative of the DOE office will contact the Recipient to request additional and/or revised information needed to supplement and clarify the Recipient's application, to complete the negotiations of an amended award.</p> <p>DOE Award Administrator: Christopher Kudola E-mail: Chris.Kudola@go.doe.gov Phone: 720-356-1675</p> <p>DOE Project Officer: Henry Fowler E-mail: Henry.Fowler@go.doe.gov Phone: 720-356-1595</p> <p>Recipient Business Officer: Elizabeth Miller E-mail: elizabeth.miller@state.vt.us Phone: 802-828-2321</p> <p>Recipient Principal Investigator: Kelly Launder E-mail: kelly.launder@state.vt.us Phone: 802-828-4039</p> <p>Continued ...</p>				

**CONTINUATION SHEET**

REFERENCE NO. OF DOCUMENT BEING CONTINUED  
DE-EE0005457

PAGE OF  
3 | 3

NAME OF OFFEROR OR CONTRACTOR  
STATE OF VERMONT DEPARTMENT OF PUBLIC SERVICE

ITEM NO. (A)	SUPPLIES/SERVICES (B)	QUANTITY (C)	UNIT (D)	UNIT PRICE (E)	AMOUNT (F)
	<p>Electronic signature or signatures as used in this document means a method of signing an electronic message that--</p> <p>(A) Identifies and authenticates a particular person as the source of the electronic message;</p> <p>(B) Indicates such person's approval of the information contained in the electronic message; and,</p> <p>(C) Submission via FedConnect constitutes electronically signed documents.</p> <p>ASAP: Yes Extent Competed: COMPETED Davis-Bacon Act: NO</p> <p>Fund: 05450 Appr Year: 2011 Allottee: 31 Report Entity: 200835 Object Class: 41000 Program: 1004902 Project: 0000000 WFO: 0000000 Local Use: 0000000</p>				

## SPECIAL TERMS AND CONDITIONS

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## 1. CONDITIONAL AVAILABILITY OF FUNDS

- a. Notwithstanding the obligation of funds shown on the Assistance Agreement cover page, the parties hereby agree that the availability of funds to the Recipient for payment of costs incurred by the Recipient is conditioned upon the Contracting Officer's review and approval of the Recipient's application and the completion of negotiations. The Recipient is prohibited from spending Federal funds at this time. No funds, therefore, shall be made available to the Recipient for payment, and DOE does not guarantee or assume any obligation to reimburse costs incurred by the Recipient during the negotiation process.
- b. When the parties have completed negotiations of all final Special Terms and Conditions for this award, the Contracting Officer will issue a modification to this award making available the obligated amount for payment in accordance with the payment terms contained in the Special Terms and Conditions of this award. The Recipient may then receive payment for allowable incurred costs or recognize incurred costs toward cost share requirements, as applicable, in accordance with the negotiated payment terms.
- c. Failure by the Recipient to provide an application with supporting documentation acceptable to the Contracting Officer, or failure to complete negotiations, will be deemed a Noncompliance pursuant to 10 CFR 600.24. Based on such noncompliance, the Contracting Officer may unilaterally terminate or suspend this award and deobligate the amounts obligated. In such case, the Recipient shall not be reimbursed for costs incurred.

## 2. RESOLUTION OF CONFLICTING CONDITIONS

Any apparent inconsistency between Federal statutes and regulations and the Special Terms and Conditions contained in this award must be referred to the DOE Award Administrator for guidance.

## 3. AWARD AGREEMENT TERMS AND CONDITIONS

- a. This award consists of the Assistance Agreement cover page, plus the following:
  - 1) Special Terms and Conditions.
  - 2) Applicable program regulations.
  - 3) DOE Assistance Regulations, 10 CFR Part 600 at <http://ecfr.gpoaccess.gov>.
  - 4) If the award is for research and the award is for a university or non-profit, the Research Terms & Conditions and the DOE Agency Specific Requirements at <http://www.nsf.gov/bfa/dias/policy/rtc/index.jsp> apply.
  - 5) Application/proposal as approved by DOE.
  - 6) National Policy Assurances to be incorporated as Award Terms in effect on date of award at <http://energy.gov/management/downloads/national-policy-assurances-be-incorporated-award-terms>

- b. When the parties have completed negotiations of all final Special Terms and Conditions for this award, the Contracting Officer will issue a modification and the following documents will be added to the award:

1) Special Terms and Conditions.

2) Attachments:

Attachment Number	Title
1.	Intellectual Property Provisions
2.	Statement of Project Objectives
3.	Federal Assistance Reporting Checklist and Instructions
4.	Budget Pages (SF 424A)

#### 4. ELECTRONIC AUTHORIZATION OF AWARD DOCUMENTS

Acknowledgement of award documents by the Recipient's authorized representative through electronic systems used by the Department of Energy, specifically FedConnect, constitutes the Recipient's acceptance of the terms and conditions of the award.

Acknowledgement via FedConnect by the Recipient's authorized representative constitutes the Recipient's electronic signature.

#### 5. INTELLECTUAL PROPERTY PROVISIONS AND CONTACT INFORMATION

- a. The intellectual property provisions applicable to this award will be included as an Attachment to the award modification upon completion of negotiations. A list of all intellectual property provisions may be found at <http://energy.gov/gc/standard-intellectual-property-ip-provisions-financial-assistance-awards>
- b. Questions regarding intellectual property matters should be referred to the DOE Award Administrator identified on the Assistance Agreement cover page. The DOE Award Administrator will facilitate discussions with the DOE Golden Field Office Patent Counsel as part of negotiations, as required.

#### 6. COST MATCH

The following provision will be revised in a modification to the award, to include the Federal Government share and Recipient match of the negotiated budget for the award. Therefore, the entries in the table below are subject to change. Upon completion of negotiations, the negotiated Budget will be attached to the award modification.

- a. Total Estimated Project Cost is the sum of the Federal Government share and Recipient match of the estimated project costs. Your cost match must come from non-Federal sources unless otherwise allowed by law. By accepting Federal funds under this award, you agree that you are liable for your percentage match of total Federal Government share, on a budget period basis, even if the project is terminated early or is not funded to its completion. With the consent of the Contracting Officer, you may concentrate cost match in earlier phases or budget periods of the project (front-load) as long as you meet the overall cost match requirements. However, you

are prohibited from concentrating cost match in later budget periods or phases (back-loading).

This cost is shared as follows:

Budget Period	DOE Cost Share	Recipient Cost Match \$ / %	Total Estimated Costs
1	\$797,253	\$199,313 / 25%	\$996,566
Total Project	\$797,253	\$199,313 / 25%	\$996,566

- b. If you discover that you may be unable to provide the cost match of at least the amount identified in paragraph a. of this term, you should immediately provide written notification to the DOE Award Administrator, indicating whether you will continue or phase out the project. If you plan to continue the project, the notification must describe how replacement cost match will be secured.
- c. You must maintain records of all project costs that you claim as cost match, including in-kind costs, as well as records of costs to be paid by DOE. Such records are subject to audit.
- d. Failure to provide the cost match required by this term may result in the subsequent recovery by DOE of some or all the funds provided under the award.

## 7. REPORTING REQUIREMENTS

- a. Requirements. The reporting requirements for this award will be identified on the Federal Assistance Reporting Checklist, DOE F 4600.2, and become an Attachment to the award modification upon completion of negotiations.

Failure to comply with the reporting requirements will be considered a material noncompliance with the terms of the award. Noncompliance may result in withholding of future payments, suspension, or termination of the current award, and withholding of future awards. A willful failure to perform, a history of failure to perform, or unsatisfactory performance of this and/or other financial assistance awards, may also result in a debarment action to preclude future awards by Federal agencies.

- b. Dissemination of scientific/technical reports. Scientific/technical reports submitted under this award will be disseminated on the Internet via the DOE Information Bridge ([www.osti.gov/bridge](http://www.osti.gov/bridge)), unless the report contains patentable material, protected data, or SBIR/STTR data. Citations for journal articles produced under the award will appear on the DOE Energy Citations Database ([www.osti.gov/energycitations](http://www.osti.gov/energycitations)).

- c. Restrictions. Reports submitted to the DOE Information Bridge must not contain any Protected Personal Identifiable Information (PII), limited rights data (proprietary data), classified information, information subject to export control classification, or other information not subject to release.

## 8. PAYMENT PROCEDURES

- (1) Method of Payment. Payment will be made by reimbursement through the Department of Treasury's ASAP system.
- (2) Requesting Reimbursement. Requests for reimbursements must be made through the ASAP system. Your requests for reimbursement should coincide with your normal billing pattern, but not more frequently than every two weeks. Each request must be limited to the amount of disbursements made for the Federal share of direct project costs and the proportionate share of allowable indirect costs incurred during that billing period.
- (3) Adjusting Payment Requests for Available Cash. You must disburse any funds that are available from repayments to and interest earned on a revolving fund, program income, rebates, refunds, contract settlements, audit recoveries, credits, discounts, and interest earned on any of those funds before requesting additional cash payments from DOE.
- (4) Payments. All payments are made by electronic funds transfer to the bank account identified on the ASAP Bank Information Form that you file with the U.S. Department of Treasury.
- (5) Supporting Documents for Agency Approval of Payments. Because the Special Terms and Conditions contain provisions with conditions on the Recipient's activities, DOE may require Agency pre-approval of payments. If the Agency approval requirement is in effect for your award, the ASAP system will indicate that Agency approval is required when you submit a request for payment. The DOE payment authorizing official may request additional information from the Recipient to justify the payment requests prior to release of funds, as deemed necessary. Supporting documents include invoices, copies of contracts, vendor quotes, and other expenditure explanations that justify the reimbursement requests.

## 9. FINAL INCURRED COST AUDIT

In accordance with 10 CFR 600, DOE reserves the right to initiate a final incurred cost audit on this award. If the audit has not been performed or completed prior to the closeout of the award, DOE retains the right to recover an appropriate amount after fully considering the recommendations on disallowed costs resulting from the final audit.

**10. REBUDGETING AND RECOVERY OF INDIRECT COSTS**

- a. If actual allowable indirect costs are less than those budgeted and funded under the award, you may use the difference to pay additional allowable direct costs during the project period. If at the completion of the award the Government's share of total allowable costs (*i.e.*, direct and indirect), is less than the total costs reimbursed, you must refund the difference.
- b. You are expected to manage your indirect costs. DOE will not amend an award solely to provide additional funds for changes in indirect cost rates. DOE recognizes that the inability to obtain full reimbursement for indirect costs means the Recipient must absorb the underrecovery. Such underrecovery may be allocated as part of the organization's required cost sharing.

**11. NATIONAL ENVIRONMENTAL POLICY ACT (NEPA) REQUIREMENTS**

DOE has not made a final NEPA determination for this project. You (Recipient) are restricted from taking any action using Federal funds, which would have an adverse effect on the environment or limit the choice of reasonable alternatives prior to DOE providing a final NEPA determination regarding this project or any additions or modifications to this project.

Notwithstanding the obligation of funds shown on the Assistance Agreement cover page, the parties hereby agree that the availability of funds to the Recipient for payment of costs incurred by the Recipient is conditioned upon the final NEPA determination. The Recipient is prohibited from spending Federal funds at this time. No funds, therefore, shall be made available to the Recipient for payment, and DOE does not guarantee or assume any obligation to reimburse costs incurred by the Recipient until a final NEPA determination is made.

Once a final NEPA determination is made, the Contracting Officer will issue a modification to this award making available the obligated amount for payment in accordance with the payment provisions contained in this document. You may then receive payment for allowable incurred costs or recognize costs incurred toward cost share requirements, as applicable, in accordance with the negotiated payment terms.

If you move forward with activities that are not authorized for Federal funding by the DOE Contracting Officer in advance of a final NEPA determination, you are doing so at the risk of not receiving Federal funding and such costs may not be recognized as allowable cost share.



**12. STATEMENT OF FEDERAL STEWARDSHIP**

DOE will exercise normal Federal stewardship in overseeing the project activities performed under this award. Stewardship activities include, but are not limited to, conducting site visits; reviewing performance and financial reports; providing technical assistance and/or temporary intervention in unusual circumstances to correct deficiencies which develop during the project; assuring compliance with terms and conditions; and reviewing technical performance after project completion to ensure that the award objectives have been accomplished.

**13. STATEMENT OF SUBSTANTIAL INVOLVEMENT**

This award is a Cooperative Agreement, and therefore a Statement of Substantial Involvement is required, defining the nature and extent of DOE's involvement in performance of this award. The amended award will include, in this provision, the DOE substantial involvement language agreed upon by the Recipient and DOE based on their negotiations.

**14. SITE VISITS**

DOE's authorized representatives have the right to make site visits at reasonable times to review project accomplishments and management control systems and to provide technical assistance, if required. You must provide, and must require your subrecipients to provide, reasonable access to facilities, office space, resources, and assistance for the safety and convenience of the Government representatives in the performance of their duties. All site visits and evaluations will be performed in a manner that does not unduly interfere with or delay the work.

**15. PUBLICATIONS**

- a. You are encouraged to publish or otherwise make publicly available the results of the work conducted under the award.
- b. An acknowledgment of Federal support and a disclaimer must appear in the publication of any material, whether copyrighted or not, based on or developed under this project, as follows:

*Acknowledgment:* "This material is based upon work supported by the Department of Energy [National Nuclear Security Administration] [add name(s) of other agencies, if applicable] under Award Number(s) [enter the award number(s)]."

*Disclaimer:* "This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents

that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.”

**16. FEDERAL, STATE, AND MUNICIPAL REQUIREMENTS**

You must obtain any required permits and comply with applicable Federal, state, and municipal laws, codes, and regulations for work performed under this award.

**17. LOBBYING RESTRICTIONS**

By accepting funds under this award, you agree that none of the funds obligated on the award shall be expended, directly or indirectly, to influence congressional action on any legislation or appropriation matters pending before Congress, other than to communicate to Members of Congress as described in 18 U.S.C. 1913. This restriction is in addition to those prescribed elsewhere in statute and regulation.

**18. NOTICE REGARDING THE PURCHASE OF AMERICAN-MADE EQUIPMENT AND PRODUCTS -- SENSE OF CONGRESS**

It is the sense of the Congress that, to the greatest extent practicable, all equipment and products purchased with funds made available under this award should be American-made.

**19. REPORTING SUBAWARDS AND EXECUTIVE COMPENSATION**

a. Reporting of first-tier subawards.

1. Applicability. Unless you are exempt as provided in paragraph d. of this award term, you must report each action that obligates \$25,000 or more in Federal funds that does not include Recovery funds (as defined in section 1512(a)(2) of the American Recovery and Reinvestment Act of 2009, Pub. L. 111-5) for a subaward to an entity (see definitions in paragraph e. of this award term).

2. Where and when to report.

i. You must report each obligating action described in paragraph a.1. of this award term to <http://www.fsr.gov>.

ii. For subaward information, report no later than the end of the month following the month in which the obligation was made. (For example, if the obligation was made on November 7, 2010, the obligation must be reported by no later than December 31, 2010.)

3. What to report. You must report the information about each obligating action that the submission instructions posted at <http://www.fsr.gov> specify.

b. Reporting Total Compensation of Recipient Executives.

1. Applicability and what to report. You must report total compensation for each of your five most highly compensated executives for the preceding completed fiscal year, if

i. The total Federal funding authorized to date under this award is \$25,000 or more;

ii. In the preceding fiscal year, you received;

(A) 80 percent or more of your annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and

(B) \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and

iii. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/excomp.htm>.)

2. Where and when to report. You must report executive total compensation described in paragraph b.1. of this award term:

i. As part of your registration profile at <http://www.ccr.gov>.

ii. By the end of the month following the month in which this award is made, and annually thereafter.

c. Reporting of Total Compensation of Subrecipient Executives.

1. Applicability and what to report. Unless you are exempt as provided in paragraph d. of this award term, for each first-tier subrecipient under this award, you shall report the names and total compensation of each of the subrecipient's five most highly compensated executives for the subrecipient's preceding completed fiscal year, if;

i. In the subrecipient's preceding fiscal year, the subrecipient received;

(A) 80 percent or more of its annual gross revenues from Federal procurement contracts (and subcontracts) and Federal financial assistance subject to the Transparency Act, as defined at 2 CFR 170.320 (and subawards); and

(B) \$25,000,000 or more in annual gross revenues from Federal procurement contracts (and subcontracts), and Federal financial assistance subject to the Transparency Act (and subawards); and

ii. The public does not have access to information about the compensation of the executives through periodic reports filed under section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m(a), 78o(d)) or section 6104 of the Internal Revenue Code of 1986. (To determine if the public has access to the compensation information, see the U.S. Security and Exchange Commission total compensation filings at <http://www.sec.gov/answers/excomp.htm>.)

2. Where and when to report. You must report subrecipient executive total compensation described in paragraph c.1. of this award term:

i. To the recipient.

ii. By the end of the month following the month during which you make the subaward. For example, if a subaward is obligated on any date during the month of October of a given year (*i.e.*, between October 1 and 31), you must report any required compensation information of the subrecipient by November 30 of that year.

#### d. Exemptions

If, in the previous tax year, you had gross income, from all sources, under \$300,000, you are exempt from the requirements to report:

i. Subawards and;

ii. The total compensation of the five most highly compensated executives of any subrecipient.

#### e. Definitions. For purposes of this award term:

1. Entity means all of the following, as defined in 2 CFR Part 25:

i. A Governmental organization, which is a State, local government, or Indian tribe;

ii. A foreign public entity;

iii. A domestic or foreign nonprofit organization;

iv. A domestic or foreign for-profit organization;

v. A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.

2. Executive means officers, managing partners, or any other employees in management positions.

3. Subaward:

i. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which you received this award and that you as the recipient award to an eligible subrecipient.

ii. The term does not include your procurement of property and services needed to carry out the project or program (for further explanation, see Sec. \_\_.210 of the attachment to OMB Circular A-133, Audits of States, Local Governments, and Non-Profit Organizations).

iii. A subaward may be provided through any legal agreement, including an agreement that you or a subrecipient considers a contract.

4. Subrecipient means an entity that:

i. Receives a subaward from you (the recipient) under this award; and

ii. Is accountable to you for the use of the Federal funds provided by the subaward.

5. Total compensation means the cash and noncash dollar value earned by the executive during the recipient's or subrecipient's preceding fiscal year and includes the following (for more information see 17 CFR 229.402(c)(2)):

i. Salary and bonus.

ii. Awards of stock, stock options, and stock appreciation rights. Use the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the Statement of Financial Accounting Standards No. 123 (Revised 2004) (FAS 123R), Shared Based Payments.

iii. Earnings for services under non-equity incentive plans. This does not include group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of executives, and are available generally to all salaried employees.

iv. Change in pension value. This is the change in present value of defined benefit and actuarial pension plans.

v. Above-market earnings on deferred compensation which is not tax-qualified.

vi. Other compensation, if the aggregate value of all such other compensation (e.g. severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property) for the executive exceeds \$10,000.

## **20. CENTRAL CONTRACTOR REGISTRATION AND UNIVERSAL IDENTIFIER REQUIREMENTS**

### **A. Requirement for Central Contractor Registration (CCR)**

Unless you are exempted from this requirement under 2 CFR 25.110, you as the recipient must maintain the currency of your information in the CCR until you submit the final financial report required under this award or receive the final payment, whichever is later. This requires that you review and update the information at least annually after the initial registration, and more frequently if required by changes in your information or another award term.

### **B. Requirement for Data Universal Numbering System (DUNS) Numbers**

If you are authorized to make subawards under this award, you:

1. Must notify potential subrecipients that no entity (see definition in paragraph C of this award term) may receive a subaward from you unless the entity has provided its DUNS number to you.
2. May not make a subaward to an entity unless the entity has provided its DUNS number to you.

### **C. Definitions**

For purposes of this award term:

1. Central Contractor Registration (CCR) means the Federal repository into which an entity must provide information required for the conduct of business as a recipient. Additional information about registration procedures may be found at the CCR Internet site (currently at <http://www.ccr.gov>).
2. Data Universal Numbering System (DUNS) number means the nine-digit number established and assigned by Dun and Bradstreet, Inc. (D&B) to uniquely identify business entities. A DUNS number may be obtained from D&B by telephone (currently 866-705-5711) or the Internet (currently at <http://fedgov.dnb.com/webform>).

3. Entity, as it is used in this award term, means all of the following, as defined at 2 CFR Part 25, subpart C:

- a. A Governmental organization, which is a State, local government, or Indian Tribe;
- b. A foreign public entity;
- c. A domestic or foreign nonprofit organization;
- d. A domestic or foreign for-profit organization; and
- e. A Federal agency, but only as a subrecipient under an award or subaward to a non-Federal entity.

4. Subaward:

- a. This term means a legal instrument to provide support for the performance of any portion of the substantive project or program for which you received this award and that you as the recipient award to an eligible subrecipient.
- b. The term does not include your procurement of property and services needed to carry out the project or program (for further explanation, see Sec. \_\_.210 of the attachment to OMB Circular A-133, Audits of States, Local Governments, and Non-Profit Organizations).
- c. A subaward may be provided through any legal agreement, including an agreement that you consider a contract.

5. Subrecipient means an entity that:

- a. Receives a subaward from you under this award; and
- b. Is accountable to you for the use of the Federal funds provided by the subaward.

## **21. DECONTAMINATION AND/OR DECOMMISSIONING (D&D) COSTS**

Notwithstanding any other terms of this Agreement, the Government shall not be responsible for or have any obligation to the recipient for (i) Decontamination and/or Decommissioning (D&D) of any of the recipient's facilities, or (ii) any costs which may be incurred by the recipient in connection with the D&D of any of its facilities due to the performance of the work under this Agreement, whether said work was performed prior to or subsequent to the effective date of this Agreement.

**22. INDEMNITY**

You shall indemnify the Government and its officers, agents, or employees for any and all liability, including litigation expenses and attorneys' fees, arising from suits, actions, or claims of any character for death, bodily injury, or loss of or damage to property or to the environment, resulting from the project, except to the extent that such liability results from the direct fault or negligence of Government officers, agents or employees, or to the extent such liability may be covered by applicable allowable costs provisions.



### Budget Information - Non Construction Programs

OMB Approval No. 0348-0044

**Section A - Budget Summary**

Grant Program Function or Activity (a)	Catalog of Federal Domestic Assistance Number (b)	Estimated Unobligated Funds		New or Revised Budget		
		Federal (c)	Non-Federal (d)	Federal (e)	Non-Federal (f)	Total (g)
1. Administration	81.119			\$20,671	\$5,168	\$25,839
2. Contractual	81.119			\$776,582	\$194,145	\$970,727
3.						\$0
4.						\$0
5. Totals		\$0	\$0	\$797,253	\$199,313	\$996,566

**Section B - Budget Categories**

6. Object Class Categories	Grant Program, Function or Activity				Total (5)
	(1)	(2)	(3)	(4)	
a. Personnel	\$13,828				\$13,828
b. Fringe Benefits	\$5,016				\$5,016
c. Travel					\$0
d. Equipment					\$0
e. Supplies					\$0
f. Contractual	\$776,582				\$776,582
g. Construction					\$0
h. Other					\$0
i. Total Direct Charges (sum of 6a-6h)	\$795,426	\$0	\$0	\$0	\$795,426
j. Indirect Charges	\$1,827				\$1,827
k. Totals (sum of 6i-6j)	\$797,253	\$0	\$0	\$0	\$797,253
7. Program Income					\$0

**Section C - Non-Federal Resources**

(a) Grant Program	(b) Applicant	(c) State	(d) Other Sources	(e) Totals
8. Indirect	\$5,168			\$5,168
9. Third Party			\$194,145	\$194,145
10.				\$0
11.				\$0
12. Total (sum of lines 8 - 11)	\$5,168	\$0	\$194,145	\$199,313

**Section D - Forecasted Cash Needs**

	Total for 1st Year	1st Quarter	2nd Quarter	3rd Quarter	4th quarter
13. Federal	\$281,083	\$70,271	\$70,271	\$70,271	\$70,271
14. Non-Federal	\$70,271	\$17,568	\$17,568	\$17,568	\$17,568
15. Total (sum of lines 13 and 14)	\$351,354	\$87,839	\$87,839	\$87,839	\$87,839

**Section E - Budget Estimates of Federal Funds Needed for Balance of the Project**

(a) Grant Program	Future Funding Periods (Years)			
	(b) First	(c) Second	(d) Third	(e) Fourth
16. Federal	\$516,170			
17.				
18.				
19.				
20. Total (sum of lines 16-19)	\$516,170	\$0	\$0	\$0

**Section F - Other Budget Information**

21. Direct Charges	22. Indirect Charges	Approved Indirect Rate of 37.12%
	\$6,994.00	
23. Remarks		