

ICLEI's Guide to Community-Based Energy- Efficiency Financing



Created by ICLEI-Local Governments for Sustainability USA, Nov. 6, 2009

Introduction: Why ICLEI Created This Guide

ICLEI-Local Governments for Sustainability USA has developed this guide to support the hundreds of local governments eligible for competitive funding through the Energy Efficiency and Conservation Block Grant (EECBG) program. The U.S. Department of Energy (DOE) is now accepting applications in two topic areas for up to \$454 million in grants. This guide is designed to help local governments to understand, design and establish the types of innovative financing models sought under both topic areas within the EECBG competitive grant offering. It is designed as a complement to the Funding Opportunity Announcement (FOA) and a reference resource.

This guide is divided into two sections. Section I describes various methods of financing energy efficiency retrofits in your community and compiles many of the latest and most useful resources available today. Section II focuses on designing and implementing a program that achieves widespread participation by learning from the experiences of many communities that have implemented similar programs.

This guide does not address all program activities eligible under the FOA, but focuses on innovative and sustainable financing mechanisms for community-based energy efficiency retrofits. Other activities beyond those described in this guide may be eligible for funding, please consult the FOA for details.

Background and Program Basics

The [Funding Opportunity Announcement \(PDF 394 KB\)](#) was issued on Oct. 19, 2009 and applications will be accepted through [Grants.gov](#) until Dec. 14, 2009. The FOA is divided into two topic areas.

- Topic 1, the Retrofit Ramp-up, is open to any local government that has been eligible to receive EECBG funding (additional information on eligibility for this topic area can be found on page 8).
- Topic 2 is the General Innovation Fund, which is available only to those local governments that did not receive direct formula funding from DOE (additional information on eligibility for this topic area can be found on page 16).

Each topic area has its own requirements and details, so it is important to thoroughly read and understand the FOA. Applicants are requested, but not required, to submit a letter of intent by Nov. 19, 2009 for applications submitted to both Topic 1 and Topic 2. If sent by mail, letters must be postmarked no later than Nov. 6; letters sent by e-mail are accepted until the deadline, Nov. 19. E-mails should be sent to the following address: FOA148@emcbc.doe.gov. See Page 26 of the FOA for more information.

Section I: Financing Models

Within Topic 1: Retrofit Ramp-up (see page 7 of the FOA), DOE seeks to stimulate activities and investments that can:

- Fundamentally and permanently transform energy markets in a way that make energy efficiency and renewable energy the options of first choice; and
- Sustain themselves beyond the grant monies and the grant period by designing a viable strategy for program sustainability into the overall program plan.

The following information will be helpful in addressing specific merit review criterion for Topic 1: Leveraging and Sustainability as well as that for Topic 2: Project Impact. See Page 37 of the FOA for the full list of criteria and weights.

Getting Started

In summer 2009, ICLEI conducted a series of webinars on the various community-based energy efficiency financing models currently operating in the United States. These recorded webinars and associated supporting documents serve as an excellent starting point for local governments seeking to understand how these models operate.

[>> View ICLEI's 2009 Webinar Series on Innovative Energy Financing](#)



Based on the common themes that emerged from these webinars, ICLEI encourages local governments to keep the following points in mind when developing community-based energy efficiency financing programs:

- As a general best practice, payments should be less than the energy cost savings achieved by the retrofit to entice participation in the finance program.
- Longer repayment periods allow lower monthly payments. However, make sure the measures implemented will last at least as long as the repayment period.
- Consider who will qualify to participate (for example, qualification for traditional financing is based on credit score; other metrics can broaden participation).

The remainder of this section contains important information and resources related to the financing options listed in the FOA, organized by type.

PACE (Property Assessed Clean Energy) Programs

A PACE bond is a bond in which the proceeds are lent to commercial and residential property owners to finance energy retrofits (efficiency measures and small renewable energy systems). The owners then repay the loans via an assessment on their property tax bill that is smaller than the monthly cost savings produced by the energy efficiency measures. PACE bonds can be issued by municipal financing districts or finance companies and the proceeds can typically be used to retrofit both commercial and residential properties.

There is an important note on Page 13 of the FOA regarding PACE:

“PACE programs supported by funds awarded under this FOA are required to follow the best practices outlined in the "Policy Framework for PACE Financing Programs" documents created by an interagency team as part of the Vice President's Middle Class Task Force Recovery through Retrofit strategy, available at <http://www.whitehouse.gov/administration/eop/ceq/>.”

A direct link to the document is provided here:

http://www.whitehouse.gov/assets/documents/PACE_Principles.pdf.

For more information on PACE programs, please see:

- [Program documents](#) from local governments that have implemented financing districts
- [A Guide to Renewable Energy and Energy Efficiency Financing Districts](#) from University of California, Berkeley: Renewable and Appropriate Energy Laboratory
- PACENOW: a web resource devoted to innovative financing to accelerate the retrofitting of America's buildings for energy independence. www.pacenow.org
- [Vote Solar's PACE Financing Page](#)



- The Database of State Incentives for Renewables and Efficiency (DSIRE, www.dsireusa.org) has information on which states have legislation that permits local governments to establish property assessed financing programs

Repayment Through Mortgage Refinance

As an alternative to PACE, a homeowner could refinance their mortgage through a bank and incorporate the cost of retrofits to reduce the burden of providing up-front capital for the improvements. Local governments can provide incentives, for example purchasing points to lower the interest rate on the new mortgage. The combined savings from the lower mortgage interest rate and the energy savings can create an attractive proposition that encourages the homeowner to invest in the energy efficiency improvements. This mechanism limits participation to those who qualify for refinance.

For more information on mortgage refinance programs, please see:

- Architecture 2030's [Multiply Your Stimulus Dollars: 14x Stimulus](#)
- The 14x [Guide to Implementation](#) and [slides](#) from ICLEI's 14x webinar

Revolving Loan Funds

A revolving loan fund is a pool of money designated for a specific purpose that is loaned out to qualified applicants. The fund is replenished via loan and, potentially, interest repayments for a predetermined set of time—known as the payback or repayment period. Local governments can use EECBG funding to reduce cost of this financing to make the loan an attractive mechanism to the building owner. The revolving fund model has been utilized in a variety of areas, such as community development, business enhancement, environmental conservation and restoration, and energy efficiency. Revolving funds are often set up to support projects that require seed money initially but will generate their own revenues or savings over time.

Page 15 of the FOA restricts the amount of funding that can be used by formula-eligible local government and tribe awardees for establishing a revolving loan fund. These entities may use up to 20% of their award or \$250,000, whichever is greater.

For more information on revolving loan funds, please see:

- [ICLEI's Revolving Loan Fund for Energy Efficiency Retrofits Guide](#)
- [Sample Revolving Energy Fund Tracking Sheet](#)
- [DOE Webinar on Establishing a Revolving Loan Fund with Recovery Act Funds](#)

Utility on-Bill Payment and/or Financing

Electric, natural gas or other utilities may also play a role in energy efficiency financing. Whereas other programs collect payments via a standard monthly loan repayment or other mechanisms, payments can be attached to monthly utility bills (i.e., on-bill financing) to recoup the initial investment.



For more information on utility on-bill payment, please see:

- An [evaluation of existing on-bill financing programs](#) from Efficiency Vermont, the University of California-Berkeley, and the California Institute for Energy and Environment

Sale of Carbon and Other Offsets

Carbon offsets, or “credits,” are financial instruments produced by the reduction of carbon (i.e., greenhouse gas) emissions. In this scenario, local governments would directly finance the building energy efficiency retrofits and claim credit for the carbon and/or other credits produced through the documentation of these energy reductions. The local government would then sell these credits to recover part or all of its investment. There are two markets for carbon offsets: the larger compliance market, and the smaller voluntary market. Many types of projects can produce carbon credits including renewable energy or energy efficiency projects, the destruction of industrial pollutants or agricultural byproducts, the destruction of landfill methane, and forestry projects.

For more information on carbon offsets, please see:

- Kyoto Protocol’s [Clean Development Mechanism](#)
- [Regional Greenhouse Gas Initiative](#)
- [Western Climate Initiative](#)
- [California Climate Change Portal](#)

Sale of White Tags to Meet Efficiency Mandates

Similar to carbon and renewable energy credits, energy efficiency certificates or “white tags” (a term trademarked by the private enterprise Sterling Planet) are certificates that can be used by utilities to meet state mandates that they provide a set amount of their supply from clean energy or efficiency sources. Voluntary markets also exist throughout the country. These would be used in a fashion similar to carbon credits described previously.

For more information on white tags, please see:

- Energy Efficient Markets’ [Profile of a White Tag Project](#)
- The same project profile as above, but from [the client’s perspective](#)

Sale of Efficiencies into Forward Capacity Markets

Forward capacity markets promote energy efficiency as a method of meeting utility companies' future capacity needs by allowing energy efficiency to be sold on an equal playing field with additional generated supply. This mechanism operates similarly to the two described previously but is geographically limited.

For more information on forward capacity markets, please see:

- [RESNET Forward Capacity Trading Intro Page](#)
- Understanding your regional ISO/RTO: [ISO/RTO Council Homepage](#)



Section II: Achieving Widespread Participation

Under Topic 1, DOE requests programs to achieve “significant efficiency improvements to a large fraction of buildings within targeted neighborhoods, technology corridors or communities (i.e., “whole-neighborhood” retrofits).” Meeting this goal will require involving a broader section of the public than has been reached by energy efficiency programs to this date. Providing attractive financing will help to achieve participation, but effective marketing and outreach will be essential.

The information in this section will be helpful in addressing the merit review criterion for both Topic 1 and Topic 2: Project Approach, in particular developing a marketing and outreach strategy and identifying and overcoming barriers.

Marketing and Outreach Resources

- ICLEI’s [Outreach and Communications Guide](#) contains ideas for [communicating to homeowners](#).
- Consider how your program will reach [pioneers, prospectors, and settlers](#).
- [A Guide to Renewable Energy and Energy Efficiency Financing Districts](#) from the University of California, Berkeley Renewable and Appropriate Energy Laboratory has a section on education and outreach.
- [This paper](#) from Renewable and Appropriate Energy Lab provides background on barriers to energy efficiency.

Best Practices

Except where otherwise noted, the following best practice examples are taken from ICLEI’s [Innovative Financing Webinar Series](#). Best practices address two program aspects: making the program easy to access; and spreading the message through trusted channels.

Make the Program Easy to Access

Making the process as easy as possible will encourage maximum participation. It is helpful to think about the customer’s point of view in designing the program. Providing a single point of contact and single application to access multiple existing programs significantly reduces participation barriers. This point of contact could be the retrofit contractor, a non-profit, or the local government. Achieving wide participation means reaching people who have very minimal knowledge of energy efficiency. A process for educating consumers and making it easy for them to understand the audit, retrofit, and financing will be essential.

- Boulder County requires all homeowners to participate in an educational session before receiving financing. The workshop covers energy audits, how eligible efficiency and renewable energy measures work and how to apply for the program, and also encourages efficiency measures like light bulbs and appliances not eligible for financing. One-thousand seven-hundred people attended the first



round of workshops. In a post-workshop survey, 95% of respondents who did not take a loan through the program *still did the retrofit work* and paid another way. [View slides used in the workshops.](#)

- In response to the results of their customer survey (see Box 1), Cambridge Energy Alliance refocused their role to be a one-stop-shop to connect and help customers to access federal, state, and utility energy efficiency programs. They created and hired a new staff position of energy advisor—a trained professional dedicated to walking customers through the program and explaining payback periods and options.
- Sonoma County opened a storefront for their energy efficiency and renewable energy financing program to provide a place for people to ask questions and talk to someone face-to-face. They also give people the option of completing the entire application through their website.

Box 1: Results of Cambridge Energy Alliance Survey of 59 Audit Customers

- ✓ Even self-described environmentalists frequently identified cost savings as a more significant reason for interest in efficiency than environmental benefits.
- ✓ Financial issues were the most common reason for not making efficiency improvements (70%).
- ✓ When loans were shown to customers in terms of a monthly breakdown, they were perceived as more “doable” and appealing.
- ✓ While 0% loans are appealing, matching grants are the most compelling financial incentive.
- ✓ Participants complained about the complexity of the process.

Spread the Message through Trusted Channels

Public support from the mayor or other elected officials raises the profile and legitimacy of a program. Local governments are seen as a trusted third party (see Box 2). Local nonprofits, faith-based and community groups also provide trusted avenues to reach their particular constituencies.

- Cambridge Energy Alliance (CEA) has participated in 42 community events to promote the program, and organized three events specifically for the program, in addition to partnering with community groups. CEA also used volunteers to conduct a door-to-door canvass. They used GIS mapping to target 1-4 unit owner-occupied buildings. Volunteers knocked on 2,716 doors and made 512 contacts, which lead to 175 requests for a free energy audit.



- Houston’s Power to the People program conducts outreach through city council members, churches, neighborhood associations, and other community groups. They organize door-to-door canvasses of targeted neighborhoods using volunteers from that community. They also hold block parties to promote the program, all as part of a focused effort. These techniques have reached 40% to 80% participation for this low-income weatherization program. *Source:* [A Guide to Renewable Energy and Energy Efficiency Financing Districts](#).

Box 2: Local Government Credibility

The following experiment¹ shows a powerful tool for local governments. Use it!

Response rates to letters to homeowners announcing a home retrofit incentive:

- ✓ Letter on utility letterhead, county involvement not mentioned: **6%**
- ✓ Letter on utility letterhead, county involvement mentioned: **11%**
- ✓ Letter on county letterhead, signed by chairman of Board of County Commissioners: **26%**

- Contractors are another avenue for spreading the word, and are often very enthusiastic messengers because promoting the program creates more business for them. Berkeley conducted focus groups with contractors before launching their program, for which both the [script](#) and [results](#) are available.

Closing Thoughts

The Energy Efficiency and Conservation Block Grants are a unique and significant opportunity for local government to access the resources to make energy efficiency the first preference for building owners in their communities and to help achieve the climate protection goals they have set.

ICLEI USA designed this guide to support local governments as they pursue this opportunity. Additionally, ICLEI’s regional offices are available to assist local governments coordinate with one another to develop and submit a multi-jurisdictional application. Please contact an ICLEI staff member in [your region](#) for additional information.

ⁱ Stern, Paul C., Elliot Aronson, John M. Darley, Daniel H. Hill, Eric Hirst, Willett Kempton and Thomas J. Wilbanks, "The Effectiveness of Incentives for Residential Energy Conservation," Evaluation Review (April 1985, Volume 10, Number 2). Qtd in Fuller, Merrian "Enabling Investments in Energy Efficiency." <http://uc-cicee.org/energyeff/documents/resfinancing.pdf>