

Using the Energy Efficiency And Conservation Block Grant To Lay The Foundation For Community-Wide Energy Efficiency



Executive Summary

The purpose of this document is to introduce the American Recovery and Reinvestment Act of 2009 (ARRA) and the Energy Efficiency And Conservation Block Grant (EECBG) and to demonstrate that the purchase, implementation, and support of EnergyCAP® Energy Efficiency Software and the GreenQuest™ personal energy information tool can be completely funded by EECBG.

Management of energy data is foundational to energy efficiency. Therefore, an effective energy efficiency strategy for any community ought to include energy management software. EnergyCAP and GreenQuest have a proven track record of helping organizations and individuals manage their energy information, leading to greater energy efficiency. Through the EECBG, communities can purchase these vital technologies without using scarce budgeted funds.

Background

ARRA and EECBG

The American Recovery and Reinvestment Act of 2009 was signed into United States law on February 17, 2009 in order to stimulate the economy's growth and to create and maintain jobs. This Act, Public Law 111-5, provides funding to the Department of Energy (DOE) in order to appropriate monies to states (and US territories), cities and counties, and Indian tribes in accordance with the Energy Efficiency And Conservation Block Grant program. Details of this funding opportunity are available in *Financial Assistance Funding Opportunity Announcement: Recovery Act, Opportunity Number DE-FOA-0000013*, which was issued on March 26, 2009 by the DOE. The purpose of the EECBG is threefold:

- Reduce fossil fuel emissions in a manner that is environmentally sustainable and, to the maximum extent practicable, maximizes benefits for local and regional communities;
- Reduce the total energy use of the eligible entities; and
- Improve energy efficiency in the building sector, the transportation sector, and other appropriate sectors.

Entities that are awarded funding will create and implement strategies that accomplish these goals.

Qualifying entities

The total amount that ARRA has appropriated for EECBG in fiscal year 2009 is \$3.2 Billion. This breaks down to \$1,863,881,000 for states; \$767,480,000 for cities and counties; and \$54,819,900 for Indian tribes. In order to qualify, entities must meet these population requirements:

- States – There is no population requirement for states; all US states in addition to the District of Columbia, Puerto Rico, the U.S Virgin Islands, American Samoa, Guam, and the Commonwealth of the Northern Mariana Islands are eligible to apply
- Cities – To be eligible, cities must have a population of 35,000 or more or be one of the 10 most populated cities in its state
- Counties – To be eligible, counties must have a population of 200,000 or more or be one of the 10 most populated counties in its state

- Indian tribes – The funding will be allocated among the federally recognized tribes and the established Alaska regional corporations

Entities that do not meet the above population requirements are eligible to receive funding from their own state, with the exception of US territories and Indian tribes.

Timeframe

The application due date for all applicants is June 25, 2009 at 8:00 Eastern Time. The DOE encourages applicants to submit materials before their assigned due dates. EECBG grants preference to applications that include activities that start quickly. That is, the sooner activities begin the better. EECBG also stipulates that—all funds must be obligated/committed within 18 months of the effective date of the award and expended within 36 months of the effective date of the award.|| Grants are not one-time allocations. It is estimated, according to the US Conference of Mayors that EECBG will increase in subsequent years in the amounts of \$5 Billion in FY 2010 – 2011 and \$6 Billion in FY 2012.

EECBG principles and activities

The EECBG has established principles to guide entities in creating and implementing their energy efficiency plans. Such plans are composed of activities. The EECBG has also established recommended activities that are eligible for funding.

Guiding principles

As previously stated, the EECBG is managed by the Department of Energy to provide funding for entities that meet the established goals of the EECBG. In attaining these goals, the DOE suggests the entities consider these guiding principles:

- Prioritize energy efficiency and conservation first as the cheapest, cleanest, and fastest ways to meet energy demand.
- To maximize benefits over the longest possible terms, entities should look for ways to link their energy efficiency efforts to long-term priorities (especially community economic development, community stabilization and poverty reduction efforts).
- Invest funds in programs and projects that create and/or retain jobs and stimulate the economy while meeting long term energy goals.
- Target programs and projects that create and/or retain jobs and stimulate the economy while meeting long term energy goals.
- Target programs and projects that will provide substantial, sustainable and measurable energy savings, job creation and economic stimulus effects.
- Give priority to programs and projects that leverage federal funds with other public and private resources
- To the extent possible, develop programs and strategies that will continue beyond the funding period.
- Ensure oversight, transparency, and accountability for all program activities.
- Enact policies that transform markets, increase investments, and support program goals.
- Develop comprehensive plans that benchmark current performance and set aggressive goals.

Eligible activities

Following is a partial list of activities that are eligible for funding. These activities are part of the overall energy efficiency plan that the entity will submit as part of their application for grant money. A complete list is available in Sec. 544 of the Energy Independence and Security Act (EISA) of 2007. This list is taken directly from the announcement from the DOE. **After considering the eligible activities, this document will identify those activities that EnergyCAP and GreenQuest pertain to and how these solutions will help enable the entity to meet the goals of the EECBG.**

Development of an Energy and Conservation Strategy

Entities may use a grant received under this part to develop and/or implement a strategy for energy efficiency and conservation and to carry out activities to achieve the purposes of the program. All entities receiving direct formula grants from the DOE are required to submit a proposed strategy for approval.

Technical Consultant Services

Entities may retain technical consultant services to assist the eligible entity in the development of such a strategy, including formulation of energy efficiency, energy conservation, and energy usage goals; identification of strategies to achieve those goals through efforts to increase energy efficiency, reduce fossil fuel emissions or reduce energy consumption through investments or by encouraging behavioral changes. Entities may develop methods to measure progress in achieving the goals. Entities may develop and publish annual reports to the population served by the eligible entity describing the strategies and goals and the progress made in achieving them during the preceding calendar year.

Residential and Commercial Building Energy Audits

Entities may support the conduct of residential and commercial building energy audits.

Financial Incentive Programs

Entities may establish financial incentive programs and mechanisms for energy efficiency improvements such as energy saving performance contracting, on-bill financing, and revolving loan funds.

Energy Efficiency Retrofits

Grants may be made to nonprofit organizations and governmental agencies for the purpose of retrofitting existing facilities to improve energy efficiency.

Energy Efficiency and Conservation Programs for Buildings and Facilities

Entities may develop and implement energy efficiency and conservation programs for buildings and facilities within the jurisdiction of the entity. The range of activities includes the design and operation of the programs; the identification of the most effective methods for achieving maximum participation and efficiency rates; public education; measurement and verification protocols; and identification of energy efficient technologies.

Development and Implementation of Transportation Programs

Entities may develop and implement programs to conserve energy used in transportation, including but not limited to:

- Employee flex time programs;
- Promoting use of satellite work centers;
- Development and promotion of zoning guidelines or requirements that promote energy efficient development;

- Development of infrastructure such as bike lanes and pathways and pedestrian walkways;
- Synchronization of traffic signals;
- State/locals/regional integrated planning activities (i.e. transportation, housing, environmental, energy, land use) with the goal of reducing greenhouse gas emissions and vehicle miles traveled;
- Incentive programs to reduce commutes by single occupancy vehicles;
- Improvements in operational and system efficiency of the transportation system such as implementation of intelligent transportation system (ITS) strategies;
- Idle-reduction technologies and/or facilities to conserve energy, reduce harmful air pollutants, and greenhouse gas emissions from freight movement; and
- Installation of solar panels on interstate rights-of-way to conserve energy in highway operations and maintenance activities.

Building Code and Inspections

Entities may develop and implement building codes and inspection services to promote building energy efficiency.

Energy Distribution

Entities may implement distributed energy resource technologies that significantly increase energy efficiency, including:

- District heating and cooling systems
- Combined heat and power systems
- Cogeneration systems
- Energy Storage systems
- Absorption chillers
- Desiccant humidifiers
- Micro turbines
- Ground source heat pumps

Material Conservation Programs

Entities may implement activities to increase participation and efficiency rates for material conservation programs, including source reduction, recycling, and recycled content procurement programs that lead to increases in energy efficiency.

Reduction and Capture of Methane and Greenhouse Gases

Entities may use grant funds to purchase and implement technologies to reduce, capture, and, to the maximum extent practicable, use methane and other greenhouse gases generated by landfills or similar waste-related sources, such as wastewater treatment plants, operations producing food waste, dairy farms and other animal operations.

Traffic Signals and Street Lighting

Entities may use grant funds to replace traffic signals and street lighting with energy efficient lighting technologies, including light emitting diodes; and any other technology of equal or greater energy efficiency.

Renewable Energy Technologies on Governance Buildings

Entities may use grant funds to develop, implement, and install on or in any government building of the eligible entity onsite renewable energy technology that generates electricity from renewable resources, including solar energy; wind energy; fuel cells; and biomass.

Any Other Appropriate Activity

Entities may submit any other appropriate activity for approval in the Energy Efficiency and Conservation Strategy.

Community Energy Information Solution

Now that the eligible activities have been considered, it's time to learn how a community-wide energy information solution will help to accomplish the goals of the EECBG. The solution is comprised of EnergyCAP Energy Efficiency Software and the GreenQuest personal energy information tool. Together, these products form a comprehensive solution for managing the energy information of the local governing body as well as the local citizens. A basic step in energy management is energy measurement. After all, you can't manage what you can't measure. A community-wide energy efficiency solution must include energy measurement in order to attain energy efficiency.

EnergyCAP: For the local government

EnergyCAP, the 30-year leader in energy efficiency software, helps organizations to measure utility spending through energy tracking reports and benchmarks, manage energy accounting processes, and save both the bottom line and the environment by optimizing energy management processes and reducing energy costs. EnergyCAP can help organizations that handle utility bills for multiple locations by enabling them to take charge of their energy consumption through energy management tools that:

- Eliminate billing and metering errors
- Pinpoint and target wasteful facilities
- Optimize utility bill payment processes
- Streamline energy accounting, budgeting, and accruals
- Generate energy analysis graphs and reports
- Track and report greenhouse gas emissions
- Receive ENERGY STAR building energy ratings



EnergyCAP is used by more than 1,000 government, business and education clients to attain greater energy efficiency. Notable government clients include: Washington DC; Georgia; Maryland; San Francisco; Sacramento; Minneapolis; Oklahoma City; Orange County, CA; and Loudoun County, VA.

GreenQuest: For the local citizens

GreenQuest is a personal online energy information tool for single building owners. The governing organization sponsors its own private GreenQuest website and makes it available to its citizens. With GreenQuest, citizens manage their personal energy information, making it easy for them to:

- Track monthly utility usage and cost
- Compare energy usage to peers
- See how the weather impacts energy usage

- Obtain an ENERGY STAR building rating
- Evaluate the effectiveness of conservation projects
- Determine their property's carbon footprint



To the governing organization, GreenQuest is a direct marketing tool combined with good citizenship. The sponsor places its own messages and ads on the GreenQuest site, so that whenever citizens use GreenQuest—which is often—they see them. GreenQuest delivers great value to the sponsor:

- You'll be seen as providing an effective, valuable, and easy-to-use tool that educates, heightens energy awareness, and encourages energy conservation.
- You'll be promoting your organization and products through the messages – ads, notices, reminders, etc. – that you place on your sponsored GreenQuest site.
- You'll be associating your brand with GreenQuest partner ENERGY STAR, a name recognized by 70% of the public.
- You'll benefit from “free” viral marketing as the link to your branded version of GreenQuest is passed from friend to friend.
- You'll generate tremendous goodwill among your customers and the communities you serve by promoting energy conservation and environmental awareness.
- You'll gain valuable marketing intelligence, and identify sales prospects by analyzing energy-related data entered by your GreenQuest users.
- And, as an option, you can create a new revenue stream by selling GreenQuest advertising space.

Intersection

EnergyCAP and GreenQuest are solutions for many of the energy efficiency activities that are eligible for funding under the EECGB. The following grid identifies the specific eligible activity and how it is satisfied by EnergyCAP or GreenQuest. Please refer to the previous section that describes each activity. It should be noted that while each product meets several activities, the combination of EnergyCAP and GreenQuest provides a fuller community-wide energy information solution, which leads to community-wide energy efficiency.

Eligible Activity	EnergyCAP	GreenQuest
Development of an Energy and Conservation Strategy	Measurement of energy information for a large organization is a basic step in any successful energy efficiency strategy. Development of a strategy without a tracking tool is incomplete.	Tracking the government buildings' energy is commendable, but only a part of a community's conservation strategy. To develop a comprehensive strategy, the local citizens must be able to measure their energy, too.
Technical Consultant Services	EnergyCAP is currently used by energy services consultants working for end-user organizations like cities and states to track energy efficiency. If consultants perform energy savings projects, then EnergyCAP can track the savings to verify if the consultant is successful.	
Residential and Commercial Building Energy Audits	EnergyCAP can be used to track the occurrence of building audits in order to measure if they were successful.	GreenQuest ad space can be sold to audit companies as a revenue source for the sponsor.
Financial Incentive Programs	The establishment of financial incentive programs for performance contracting requires effective tracking of the energy saving projects and analysis of the success of such projects. Many variables can exist such as weather changes, usage changes, rate changes, etc and a powerful tool is required for measurement and verification especially if financial incentives are being offered.	The entity might establish financial incentives for energy efficiency projects for homeowners or single building business owners. GreenQuest can be the verification tool since it tracks energy projects.
Energy Efficiency Retrofits	Retrofits can be tracked in EnergyCAP to verify savings.	
Energy Efficiency and Conservation Programs for Buildings and Facilities	EnergyCAP reports (over 250) communicate the energy use, cost, etc graphically so that the energy information can be understood. Reports can be part of a public education program. Also, EnergyCAP offers internet read-only access so the public can access the data from any computer.	Providing GreenQuest to the local citizens increases their energy awareness and puts energy conservation on their minds. Instead of just talking about energy conservation, you're providing a tool for them to conserve. Also, conservation programs are emphasized and reinforced by placing campaign messages in GreenQuest.

Development and Implementation of Transportation Programs	EnergyCAP can track fleets of vehicles, miles driven, car rental miles driven, airplane miles, etc. It can also track the Greenhouse Gas emissions resulting from those activities. If efficiency strategies are implemented, EnergyCAP can also track the progress of these strategies.	Since GreenQuest can track up to three meters, or sources of information, citizens can track modes of transportation.
Building Code and Inspections		The governing entity may place ads for new building codes or inspection services or contact information in order to inform its citizens of building ordinances.
Energy Distribution	EnergyCAP can track building energy use for efficient or inefficient facilities as well as receive interval data for analysis. Implementation of efficient energy distribution is commendable, but without enterprise-wide tracking capability, it is difficult to compare and analyze effectiveness.	
Material Conservation Programs		Reminders about material conservation programs can be communicated and contact URL links can be placed on GreenQuest for easy access for citizens.
Reduction and Capture of Methane and Greenhouse Gases	EnergyCAP's Greenhouse Gas tracking and reporting feature enables accurate and easy measurement of the organization's emissions. Reports communicate the environmental impact so that reduction goals can be disseminated and measured.	GreenQuest tracks Greenhouse Gas emissions for each building. Each citizen can understand his impact on the environment, and learn how he compares with his peers.
Traffic Signals and Street Lighting	EnergyCAP can track the electric meters for traffic signals and street lighting. Track before and after the equipment replacement in order to verify energy savings.	
Renewable Energy Technologies on Governance Buildings	Implementation of renewable energy sources should reduce energy use in a building. Use EnergyCAP to verify the energy reduction and analyze the efficacy of the energy	

The Value to States (and territories)

States receiving funding from EECBG are required to modify their statewide energy conservation plan (42 U.S.C. 6322) in order to increase energy efficiency and conservation in the state. Most states already have energy efficiency plans, but EECBG calls for greater efficiency. EnergyCAP has already been purchased by several states as part of their statewide energy conservation plans.

For example, when Maryland Governor Martin O'Malley announced his "EmPOWER Maryland" initiative in July 2007, with new energy efficiency goals for the state, EnergyCAP was purchased to ensure the state attained its goals. When Colorado Governor Bill Ritter introduced the "lead by example" plan in August 2008, which seeks to reduce energy and water consumption in State buildings, the state also selected EnergyCAP as its tracking tool.

Not only can states use EnergyCAP to stay on track with their energy efficiency goals, but EnergyCAP can also save states money. According to David Godfrey, Georgia's Utilities Program Manager, "EnergyCAP is a critical component of our goal to reduce energy consumption in state facilities. After two years of experience, we have paid for the system two times through identified utility savings."

Not only is EnergyCAP a powerful energy efficiency solution for government buildings, but GreenQuest is also an effective tool. State governments can sponsor a GreenQuest site in order to reinforce state conservation goals. It's one thing to communicate energy awareness and conservation to citizens, but it's another to provide a tool for them to participate. Using GreenQuest puts a proven tool in their hands, complements of the state.

The Value to Cities, Counties and Indian tribes

EnergyCAP is a valuable component of any city, county or Indian tribe's energy conservation plan. Already a vital part of many municipalities' efficiency goals, EnergyCAP continues to deliver robust and effective functionality to solve energy information needs for the most complicated of organizations. Plus, EnergyCAP puts value back in the hands of its users. According to Keith Roberts, Energy Manager for Sacramento, CA:

"We were able to find this \$90,000 billing error so quickly thanks to the new EnergyCAP software that has been installed AND we were able to find the error BEFORE the paper bill was even opened thanks to the electronic data that PG&E provides us each month."

When EnergyCAP is procured through money received from the EECBG, it's like you're being paid to buy EnergyCAP! Not only does the EECBG pay for the software, but every dollar that EnergyCAP returns back is money you never spent.

Here are the United States cities and counties that EnergyCAP serves:

City	County
Alexandria, VA	Chesterfield, VA

Arlington, TX	Fairfax, VA
Ann Arbor, MI	Hennepin, MN
Baltimore, MD	Loudoun, VA
Lenexa, KS	Orange, CA
Minneapolis, MN	Riverside, CA
Newport News, VA	Santa Barbara, CA
Oklahoma City, OK	Washington DC
Sacramento, CA	
San Francisco, CA	

GreenQuest is also an effective energy efficiency application for cities, counties and Indian tribes. Municipalities can sponsor their own private GreenQuest site and roll it out to their citizens to provide a messaging and energy awareness and conservation tool. Or, require businesses to track their building energy use in GreenQuest to promote energy efficiency. Use GreenQuest as an additional platform to post city or county announcements. Initiate an energy education program for your residents. There are many benefits for a city, county or Indian tribe to sponsor GreenQuest.

Entities that don't qualify for EECBG

As stated in a previous section, not all cities or counties qualify to apply for the EECBG. If you don't qualify, you are still eligible to receive funding by your state. All states who receive allocations are required to create subgrant programs, where they distribute grant money. Please contact your state to request funding to implement your energy efficiency plan.

Purchasing EnergyCAP and GreenQuest

The pricing structure of EnergyCAP is ideal for recipients of the EECBG. According to the funding guidelines, funds must be committed within 18 months of the award date and expended within 36 months of the award date. EnergyCAP pricing is divided into three fees. The license fee covers the cost of the license and is due in the first year. The implementation fee covers all costs associated with the implementation of the software including: project management, custom data integration, and training. The maintenance fee covers technical support and program upgrades starting in year 2.

So, once the award is delivered and EnergyCAP is ordered, the entity can pay for the license and implementation fee in year 1. Since the maintenance fees start in year 2, and the entity has 36 months to spend the award amount, it can pay for years 2 and 3 of maintenance with the initial award amount. Since the EECBG awards every year, the entity can continue applying for and receiving funding for EnergyCAP and never pay out of its budget. This is an economical way to attain energy efficiency.

GreenQuest is an annual payment with a one-time setup fee. GreenQuest can be procured using the same schedule as EnergyCAP.

American-Made

EnergyCAP, Inc. is an American-owned and American-based company. EnergyCAP and GreenQuest are manufactured exclusively in the United States, with the only corporate office located in State College, Pennsylvania.

Conclusion

EnergyCAP and GreenQuest are effective energy management solutions that are fundable by the Energy Efficiency and Conservation Block Grant. Not only can they be purchased with your award money, but you can derive even more value from them. Combine the energy savings that you can reap from EnergyCAP with the marketing value you can derive from GreenQuest to make the solutions even more valuable. Remember, without accurate measurement tools, you can't manage accurately. Include EnergyCAP and GreenQuest in your community's energy efficiency strategy.

About Us

EnergyCAP, Inc. is the publisher of EnergyCAP® Energy Efficiency Software and the GreenQuest™ personal online energy information tool. Based in State College, PA, EnergyCAP, Inc. has thirty years of experience in the energy information software industry. An Inc. 5000 company for multiple years, EnergyCAP, Inc. has achieved double digit sales growth in each of the last five years.

EnergyCAP is used by clients for enterprise-wide energy tracking, auditing, utility bill payment processing, energy management reporting, greenhouse gas tracking, ENERGY STAR data submittal and more. EnergyCAP is available in client server, client desktop and online versions. With over 1,000 clients, EnergyCAP tracks more than \$3 Billion in energy spending annually, establishing EnergyCAP as the market leader and software of choice for prominent business, government and educational organizations. More information is available at www.EnergyCAP.com.

GreenQuest is an innovative web-based application that anyone can use to measure their current energy use, cost and environmental impact. GreenQuest allows the user to see firsthand the results of their energy conservation efforts. Organizations sponsor their own privately-branded GreenQuest website for their residents, prospective clients, employees, tax payers, etc—providing a valuable energy efficiency tool while promoting their organization and messages. More information is available at www.myGreenQuest.com.