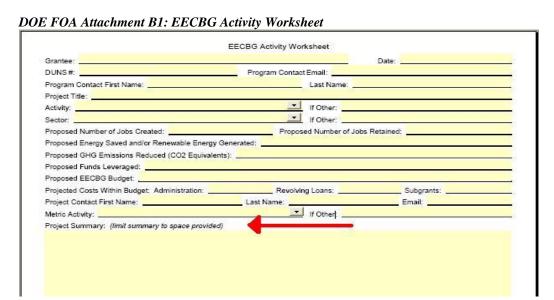
# Sample Text to Incorporate ENERGY STAR® into Energy Efficiency and Conservation Block Grant Activity Worksheets

Increased energy efficiency in existing buildings represents one of the best opportunities for immediate and cost-effective reductions in energy use and greenhouse gas emissions.

As described in the U.S. Department of Energy's (<u>DOE's</u>) Funding Opportunity Announcement, state and local governments applying for Energy Efficiency and Conservation Block Grant (EECBG) funds must submit project summaries within the supplied Activity Worksheet (attachment B1 in the EECBG Funding Opportunity Announcement).

This document presents sample text that can be used to integrate ENERGY STAR tools and resources into the "Project Summary" section of the EECBG Activity Worksheet. Insert customized program details within the sample text where items are listed in brackets.



## **Table of Contents:**

Sample Templates for Cities, Counties, and Tribes	1
Strategic Implementation of Energy Efficiency Improvements in Public Buildings .	. 2
Improving Building Energy Efficiency within Target Market Sectors	. 3
Implementing Energy Retrofits in Existing Homes	. 4
Sample Templates for States	5
Strategic Implementation of Energy Efficiency Improvements in Public Buildings .	. 6
Improving Building Energy Efficiency within Statewide Target Market Sectors	7
Improving Building Energy Efficiency in K-12 Schools	. 8
Implementing Energy Retrofits in Existing Homes	. 9
Additional Resources	10



# Strategic Implementation of Energy Efficiency Improvements in Public Buildings

This activity is a program under which *<city/county/tribe staff and/or consultants>* will improve the energy efficiency of *<city-/county-/tribe->*owned buildings.

- 1. **Benchmark Energy Performance** < Facility staff and/or consultants > will begin by establishing an account in EPA's Portfolio Manager tool and will collect key building and operational characteristics and energy use data to assess and understand the current energy performance of < city/county-/tribe->owned buildings.
- **2.Identify Under-Performing Buildings**—Using Portfolio Manager results, < facility staff and/or consultants> will compare energy performance levels in all buildings to identify under-performing buildings which will be targeted for energy efficiency improvements. The initial Portfolio Manager results will establish the baselines for measuring progress for energy efficiency improvement project over time.
- 3. Implement Best Operating Practices and Energy Efficiency Improvement—Through <a href="retrocommissioning">retrocommissioning and/or facility audits</a>, <a href="facility staff">facility staff</a> and/or consultants</a> will identify and implement best operational and maintenance strategies and equipment retrofit opportunities for improving energy efficiency in the target buildings identified in Step 2 above. Drawing upon industry guidance, such as EPA's ENERGY STAR Building Upgrade Manual, ENERGY STAR Product Procurement Guidance, DOE's Commercial Buildings Energy Efficient Building Practices, staff will implement efficiency improvements to <a href="facility systems">lighting systems</a>, supplemental loads, air distribution systems, and/or heating and cooling systems, as indicated by the retrocommissioning and/or facility audit results.>
- **4. Track Progress over Time**—Facility staff will track progress in Portfolio Manager and monitor variations in energy consumption and associated greenhouse gas emissions.
- 5. Verify and Document Results—Portfolio Manager will be used to provide a level of transparency and accountability by generating performance indicators, including energy use intensity, energy efficiency improvement over a baseline, EPA's Performance Rating (where applicable), and greenhouse gas emissions associated with building energy use. At the end of the project period, this information will be used to report energy use and greenhouse gas reduction results back to DOE.

This program helps create sustained energy savings and job retention by reinvesting energy cost savings into the *<city/county/tribe>* energy management program over time. Energy efficiency improvements that result in cost savings will fund facility staff for continuous building benchmarking, monitoring, analysis, and performance upgrades into the future for further energy savings and reinvestment.

# Example Program:

**Montgomery County, MD, Climate Protection Plan** (see Energy Analysis, beginning on p. 163) www.montgomerycountymd.gov/content/dep/Sustainability/2009mococlimprotplan.pdf

## **Improving Building Energy Efficiency within Target Market Sectors**

This activity is a program under which <*city/county/tribe staff and/or consultants>* will establish a marketing campaign with technical and/or financial assistance to increase and accelerate energy efficiency improvements by owners and managers of commercial and industrial buildings communitywide, with a special focus on target groups such as <*commercial real estate, corporate real estate, hospitality, retail, healthcare, schools, etc.>*.

As part of this program, <*city/county/tribe staff and/or consultants>* will leverage ENERGY STAR resources to encourage building owners and managers to take the necessary and appropriate steps to identify cost-effective opportunities to reduce energy use.

The program will consist of a *year-long campaign, competition, marketing effort>* among participants to benchmark and reduce energy use. Participants will use EPA's Portfolio Manager as the tool for benchmarking, tracking, and reporting energy use and will include the following components:

- 1. Outreach and promotional activities—<*City/county/tribe staff and/or consultants>* will conduct outreach and promotional activities to promote the program, encourage participation by local businesses and organizations, and educate constituents about the benefits of energy efficiency. These activities will include <a kick-off event with local government and business leaders, an energy awareness fair, a school or local special event, a workshop to educate employees about energy efficiency in the workplace, etc.>
- 2. Technical Support and Portfolio Manager Training—Participants will be directed to the technical assistance opportunities offered by EPA through ENERGY STAR, including: <Portfolio Manager, Guidelines for Energy Management, Building Upgrade Manual, Financial Calculators for Project Evaluation, Online Training Resources, etc.> Additional performance improvement assistance will be provided by <city/county/tribe staff and/or consultants> and will include <comprehensive facility energy audits, feasibility studies to investigate a proposed energy efficiency project or process improvement, support with benchmarking in Portfolio Manager, etc.>.
- **3. Incentives**—The *<city/county/tribe>* will provide *<in-kind technical assistance, grants, loans, other type of funding, local recognition>* to encourage and accelerate the implementation of energy efficiency improvements.
- **4. Locally Focused Recognition** To recognize all participants, the *<city/county/tribe>* will *<host an awards ceremony with local government and business leaders and media, place a public service announcement in the local news media, etc.>* Additionally, *<local government name>* will recognize participants that have met energy efficiency targets, such as *<reducing energy use, achieving a high level of energy performance, earning the ENERGY STAR label for one or more buildings, etc.>* and will provide *<a signed certificate of achievement from the mayor's office, a breakfast or lunch reception for employees, etc.>*

## Example Program:

Go Green Louisville

 $\underline{www.energystar.gov/index.cfm?fuseaction=challenge\_community.showIntroduction}$ 

# **Implementing Energy Retrofits in Existing Homes**

Under this program, <*city/county/tribe staff and/or consultants>* will encourage homeowners to make energy-efficient home improvements by leveraging American Recovery and Reinvestment Act of 2009 (ARRA) funds to establish <*low-interest financing and/or rebate options for residential energy efficiency improvements.>* The program will include six program elements and communitywide standards. Protocols and guidance for qualifying improvements will be developed by <*organization name>*.

- Reduced interest Financing and/or Rebates for Qualified Energy Efficiency Improvement—
  Reduced interest rates for the loans will be achieved by <underwriting a percentage of the loan value with no-interest ARRA funds from a revolving pool, and/or over-collateralizing loan funds that purchase these loans with these funds, and/or using these funds to support state revenue bond issues to purchase these loans from qualified lenders. > These funds can also be applied as direct loan discounts. The <city/county/tribe> will partner with lenders experienced in supporting energy efficiency lending, qualified by the local government. The loans can be <secured (mortgage) loans, unsecured loans, or other loan facilities. > To qualify for the loans, homeowners must complete qualified measures. Homeowners that complete improvements from a list of ENERGY STAR qualified products or improvements will be eligible for a <X %> interest rate loan. Those that participate in Home Performance with ENERGY STAR and achieve total energy savings of 20-30% are eligible for a loan at <X-A%> or <X-B%> if total energy savings exceed 30%. Total energy savings will be estimated using software approved by <DOE Weatherization Assistance Program or a Pre- and Post-Home Energy Rating. > <City/county/tribe staff and/or consultants> will partner with <utilities, state, a third-party organization, and lending institutions> to provide the following:
- **2. Consumer Education Campaign**—Educate consumers and market the availability of the low-interest loans to achieve scalable activity in reducing emissions and increasing energy efficiency.
- **3. Contractor Training**—Train contractors in how to conduct comprehensive energy audits, home energy ratings, and the proper installation of energy efficiency improvements.
- **4. Residential Educational Energy Audits with Direct Installation of Low-Cost Measures**—Deliver educational energy audits and direct installation of low-cost measures such as CFLs, and low-flow showerheads. In addition to energy saving tips and a review of energy bills, the energy auditor will provide information that encourages participation in the *<low-interest financing and/or rebates>* for qualified energy efficiency improvements and Home Performance with ENERGY STAR.
- **5. Home Performance with ENERGY STAR**—Recruit contractors to participate in the Home Performance with ENERGY STAR program. This program motivates homeowners to use skilled home energy analysts and contractors that offer a whole-house approach for reducing energy use. Contractors that participate will be trained and certified to complete comprehensive energy audits and whole-house energy efficiency improvements. Typical projects will include sealing, insulation, duct sealing and repair, high-efficiency HVAC systems, windows, lighting, and appliances.
- **6. Program Measurement and Verification** Inspect the quality and energy savings of all work funded through low-interest financing and Home Performance with ENERGY STAR. A third-party evaluation contractor will collect, evaluate, and report results to DOE and evaluate the program.

## **Example Programs:**

# **Austin Energy Home Performance with ENERGY STAR Program**

 $\underline{http://www.austinenergy.com/Energy\%20Efficiency/Programs/Rebates/Residential/Home\%20Performance\%20with\%20Energy\%20Star/index.htm}$ 

## **Efficiency Vermont Home Performance with ENERGY STAR Program**

http://www.efficiencyvermont.com/pages/Residential/SavingEnergy/HomePerformanceWithENERGYST

**Sample Templates for States** 

# Strategic Implementation of Energy Efficiency Improvements in Public Buildings

This activity is a program under which *<state staff and/or consultants>* will improve the energy efficiency of state-owned buildings.

- 1. Benchmark Energy Performance—< State staff and/or consultants> will begin by establishing an account in EPA's Portfolio Manager tool and collect key building and operational characteristics and energy use data to assess and understand the current energy performance of state-owned buildings.
- 2. Identify Under-Performing Buildings—Using Portfolio Manager results, <state staff and/or consultants> will compare energy performance levels in all buildings to identify under-performing buildings that will be targeted for energy efficiency improvements. The initial Portfolio Manager results will establish the baselines for setting and measuring progress for energy efficiency improvement projects over time.
- 3. Implement Best Operating Practices and Energy Efficiency Improvement— Through <a href="retrocommissioning">retrocommissioning and/or facility audits></a>, <a href="facility staff">facility staff</a> and/or consultants> will identify and implement best operational and maintenance strategies and equipment retrofit opportunities for improving energy efficiency in the target buildings identified in Step 2. Drawing upon industry guidance, such as EPA's ENERGY STAR Building Upgrade Manual, ENERGY STAR Product Procurement Guidance, DOE's Commercial Buildings Energy Efficient Building Practices, staff will implement efficiency improvements to <a href="facility systems">lighting systems</a>, supplemental loads, air distribution systems, and/or heating and cooling systems, as indicated by the retrocommissioning and/or facility audit results.>
- **4. Track Progress over Time**—State staff will track progress in Portfolio Manager and monitor variations in energy consumption and associated greenhouse gas emissions.
- 5. Verify and Document Results—Portfolio Manager will be used to provide a level of transparency and accountability by generating performance indicators, including energy use intensity, energy efficiency improvement over a baseline, EPA's Performance Rating (where applicable), and greenhouse gas emissions associated with building energy use. At the end of the project period, this information will be used to report energy use and greenhouse gas reduction results to DOE.

This program helps create sustained energy savings and job retention by reinvesting energy cost savings into state energy management programs over time. Energy efficiency improvements that result in cost savings will fund facility staff for continuous building benchmarking, monitoring, analysis, and performance upgrades into the future for further energy savings and reinvestment.

# **Improving Building Energy Efficiency within Statewide Target Market Sectors**

This activity is a program under which state staff and/or consultants will work to provide <*in-kind technical assistance, grants, loans, etc.*> to support participants in identifying and implementing cost-effective energy efficiency measures. The program will target the owners and managers of <*commercial, and/or industrial buildings>*, with a special focus on <*small businesses, healthcare, retail, hospitality, congregations, and local governments, etc.*> Participants in the program must:

- 1. Be < list eligibility requirements for participants >
- 2. Benchmark and Track Energy Use in EPA's Portfolio Manager—Participants must set up a Portfolio Manager account and enter utility data for the 11 consecutive months preceding the project start. Participants must also track progress on a monthly basis during the project implementation and for 12 months after project completion.
- 3. Submit an Energy Efficiency Project Plan with Anticipated Energy Savings—The plan must include the following:
  - a. The results of a whole-building energy audit.
  - b. A pre- and estimated post-project percent energy reduction from Portfolio Manager.
  - c. A comprehensive package of measures capable of reducing the existing energy consumption of the project building by <*X percent or more*>. A list of eligible equipment or process changes, including <*energy-efficient lighting; high-efficiency furnaces, boilers, and air conditioners; geothermal heat pumps; windows and insulation; energy-efficient refrigeration; process equipment, etc.>*
  - d. A financial plan for funding the energy efficiency measures.
  - e. A construction schedule for installation.
- 4. Submit a 1-Year Follow-Up Report—Participants must submit a complete report documenting energy reductions based on 1 year of post-implementation results within 13 months of project completion. This report must include a Statement of Energy Performance (generated from Portfolio Manager) for the building, as well as the energy and greenhouse gas emissions reductions achieved through the project.

As part of this program, the state will leverage resources offered by EPA through ENERGY STAR including: Portfolio Manager, Guidelines for Energy Management, Building Upgrade Manual, Financial Calculators for Project Evaluation, Online Training Resources, etc. The state will conduct outreach and promotional activities to promote the *Amarket Sector Energy Efficiency Program* to encourage participation and educate constituents about the benefits of energy efficiency. These activities will include *A kick-off event with target participants, an energy awareness fair, a workshop to educate employees about energy efficiency in the workplace, etc.* 

# Example Programs:

# New Jersey Local Government Energy Audit Program

 $\underline{www.njcleanenergy.com/commercial-industrial/programs/local-government-energy-audit/local-government-energy-audit}$ 

## **New Jersey Commercial and Industrial Pay for Performance**

http://www.njcleanenergy.com/commercial-industrial/programs/pay-performance

#### Pennsylvania Small Business Energy Efficiency Grants

www.depweb.state.pa.us/energindependent/cwp/view.asp?a=3&q=543714

# **Improving Building Energy Efficiency in K-12 Schools**

This activity is a program under which state staff and/or consultants will work to distribute *<grants*, *loans*, *type of funding>* to support participants in identifying and implementing cost-effective energy efficiency measures. The program will target K-12 school districts within the state. Participants in the program must:

- 1. Benchmark and Track Energy Use in EPA's Portfolio Manager—Participants must set up a Portfolio Manager account and enter utility data for the 11 consecutive months preceding the project start. Participants must also track progress on a monthly basis during the project implementation and for 12 months after project completion.
- 2. Submit an Energy Efficiency Project Plan with Anticipated Energy Savings—The plan must include the following:
  - a. The results of a whole-building energy audit.
  - b. A pre- and estimated post-project percent energy reduction from Portfolio Manager.
  - c. A comprehensive package of measures capable of reducing the existing energy consumption of the project building by *X percent or more>*. A list of eligible equipment or process changes, including *energy-efficient lighting; high efficiency furnaces, boilers, and air conditioners; geothermal heat pumps; windows and insulation; energy-efficient refrigeration; process equipment, etc.>*
  - d. A financial plan for funding the energy efficiency measures.
  - e. A construction schedule for installation.
- 3. Submit a 1-Year Follow-Up Report—Participants must submit a completed report documenting energy reductions based on 1 year of post-implementation results within 13 months of project completion. This report must include a Statement of Energy Performance (generated from Portfolio Manager) for the building, as well as the energy and greenhouse gas emissions reductions achieved through the project.

As part of this program, the state will leverage resources offered by EPA through ENERGY STAR including: Portfolio Manager, Guidelines for Energy Management, Building Upgrade Manual, Financial Calculators for Project Evaluation, Online Training Resources, etc. The state will conduct outreach and promotional activities to promote the *constituents*, to encourage participation and educate constituents about the benefits of energy efficiency. These activities will include *ca kick-off event with target participants, an energy awareness fair, a workshop to educate employees and students about energy efficiency in the workplace, etc.>* 

# Example Program:

Lt. Governor Lawton's ENERGY STAR School Challenge <a href="http://ltgov.wisconsin.gov/issues\_view.asp?issueid=27&locid=126">http://ltgov.wisconsin.gov/issues\_view.asp?issueid=27&locid=126</a>

# **Implementing Energy Retrofits in Existing Homes**

Under this program, < state staff and/or consultants> will encourage homeowners to make energy-efficient home improvements. State staff will use ARRA funds to establish low-interest loans and/or rebates for energy-efficient home improvements. The program will include six elements and statewide standards. < Organization name> will develop protocols and guidance for qualifying improvements.

- 1. Low-Interest Financing and/or Rebates for Qualified Energy Efficiency Improvements—
  Reduced interest rates for the loans will be achieved by <underwriting a percentage of the loan value with no-interest ARRA funds from a revolving pool, and/or over-collateralizing loan funds that purchase these loans with these funds, and/or using these funds to support state revenue bond issues to purchase these loans from qualified lenders. > These funds can also be applied as direct loan discounts. The state will partner with lenders experienced in supporting energy efficiency lending, qualified by the local government. The loans can be secured (mortgage) loans, unsecured loans, or other loan facilities. To qualify for the loans homeowners must complete qualified measures.
  - a. Homeowners that complete improvements from a prescriptive list of ENERGY STAR qualified products or improvements will be eligible for a <*X* %*> interest rate loan*.
  - b. Homeowners that participate in Home Performance with ENERGY STAR and achieve total energy savings of 20-30% are eligible for a loan at <*X%-A%*> or <*X-B%*> if total energy savings exceed 30%. Total energy savings will be estimated using software approved by <*DOE* Weatherization Assistance Program or a Pre and Post Home Energy Rating.>

The state will partner with *<utilities*, third-party organization, counties or cities> to provide:

- **1. Consumer Education Campaign**—Educate consumers about the initiative and market low-interest loan availability to achieve scalable activity in reducing emissions and increasing energy efficiencies.
- **2. Contractor Training**—Train contractors in how to conduct comprehensive energy audits, home energy ratings, and the proper installation of energy efficiency improvements.
- 3. Residential Educational Energy Audits with Direct Installation of Low-Cost Measures—Deliver educational energy audits and direct installation of low-cost measures such as CFLs, and low-flow showerheads. Besides energy saving tips and a review of energy bills, the energy auditor will provide information encouraging participation in <state name's> low-interest financing and/or rebate program for qualified energy efficiency improvements and Home Performance with ENERGY STAR.
- **4. Home Performance with ENERGY STAR**—Recruit contractors for the Home Performance with ENERGY STAR program. This program motivates homeowners to use highly skilled home energy analysts and contractors that offer a whole-house approach for reducing energy use. Contractors that participate will complete training and become certified to complete comprehensive energy audits and whole-house energy efficiency improvements. Typical projects will include air sealing, insulation, duct sealing and repair, high-efficiency HVAC systems, windows, lighting, and appliances.
- **5. Program Measurement and Verification**—Inspect the quality and energy savings of all work funded through low-interest financing and Home Performance with ENERGY STAR. A third-party evaluation contractor will collect, evaluate, and report results to DOE and evaluate the program.

## **Example Programs:**

## **Austin Energy Home Performance with ENERGY STAR Program**

 $\underline{http://www.austinenergy.com/Energy\%20Efficiency/Programs/Rebates/Residential/Home\%20Performance\%20with\%20Energy\%20Star/index.htm$ 

## **Efficiency Vermont Home Performance with ENERGY STAR Program**

 $\underline{http://www.efficiencyvermont.com/pages/Residential/SavingEnergy/HomePerformanceWithENERGYST}$ 

# **Additional Resources**

## **DOE Recovery Act Clearinghouse**

Direct all questions about funding provided by ARRA to the DOE Recovery Act Clearinghouse. <a href="https://recoveryclearinghouse.energy.gov">https://recoveryclearinghouse.energy.gov</a> or 1-888-DOE-RCVY (1-888-363-7289)

#### **ENERGY STAR Resources:**

ENERGY STAR for Governments: www.energystar.gov/government

Home Performance with ENERGY STAR:

www.energystar.gov/index.cfm?c=home\_improvement.hm\_improvement\_hpwes\_sponsors

ENERGY STAR Product Procurement: www.energystar.gov/purchasing

## **EPA State and Local Climate and Energy Economic Recovery Resources**

ww.epa.gov/RDEE/energy-programs/state-and-local/recovery.html

Includes numerous resources that can assist state and local governments as they work to leverage resources in ARRA to reduce energy, reduce greenhouse gas emissions, and create jobs through implementation of clean energy programs.

# **Rapid Deployment Energy Efficiency Toolkit**

www.epa.gov/RDEE/energy-resources/ee\_toolkit.html

The Rapid Deployment Energy Efficiency (RDEE) Toolkit helps all entities choose successful programs as they advance energy efficiency program funding opportunities through ARRA. The toolkit is being developed under the guidance of and with input from the Leadership Group of the National Action Plan on Energy Efficiency, with facilitation support from EPA and DOE. See the following "Program Snapshots" within the RDEE Toolkit for key considerations in program selection and budgeting, including reasonable costs, energy savings, and jobs to expect for residential and commercial building energy efficiency improvements.

## Residential Retrofits:

Home Performance with ENERGY STAR (p. 21)

Residential Efficient Heating and Cooling (p. 34)

# Commercial Building Energy Efficiency Improvements:

Commercial Benchmarking and Performance (p. 50)

RDEE Toolkit Help Line: Call 1-866-602-7333 or e-mail RDEE@icfi.com