

U.S. Department of Energy
**ENERGY EFFICIENCY AND CONSERVATION BLOCK GRANT (EECBG) PROGRAM
 STRATEGY REPORT**

Attachment D

Energy Efficiency & Conservation Strategy for Units of Local Governments & Indian Tribes

As detailed in Part 1 of this announcement, all applicants must submit an Energy Efficiency and Conservation Strategy (EECS). Units of local government and Indian tribes have the option of submitting the EECS no later than 120 days after the effective date of the award or at the time of application. Units of local government and Indian tribes who chose to submit the EECS at the time of application shall use the format contained in Attachment D. This form should be saved in a file named "UIC-Strategy.pdf" and click on "Add Optional Other Attachment" to attach.

Grantee: Oakland County, Michigan

Date: 11/23/2009

DUNS #: 136200362

Program Contact Email: holdswortha@oakgov.com

- 1. Describe your government's proposed Energy Efficiency and Conservation Strategy. Provide a concise summary of your measurable goals and objectives, which should be aligned with the defined purposes and eligible activities of the EECBG Program. These goals and objectives should be comprehensive and maximize benefits community-wide. Provide a schedule or timetable for major milestones. If your government has an existing energy, climate, or other related strategy please describe how these strategies relate to each other.**

The County's overriding goal is to lower its energy costs and reduce GHG emissions from existing buildings and facilities, thereby setting an example for other local governments within the County to follow. The County's overall strategic objectives for its use of EECBG Program grant monies are to:

- o Reduce fossil fuel emissions in a manner that is environmentally sustainable
- o Reduce use of, and expenditures on, all types of energy consumption
- o Position the County as a leader among its local cities, villages, and townships (CVTs) with regards to Energy Management Procedures, the types of projects implemented to reduce fossil fuel emissions / expenditures, material conservation programs, and fostering economic development, particularly in the renewable energy technology sector

The response to question 2 below summarizes the projects identified in our EECBG application, including budgeted costs, energy savings, jobs created / retained, time frame, and GHG reductions. The implementation of all these projects will be completed within 36 months, with all procurement contracts in place within the first eighteen (18) months from receipt of grant monies. Many will be performed in parallel and most will be completed in their entirety within 24 months of award. The County has developed a set of Energy Management Procedures that will:

- a. Establish an overall energy management program and educate County employees
- b. Fiscally account for energy use and conservation results
- c. Set a strategic framework for the efficient, collaborative purchase and delivery of energy to County facilities
- d. Establish guidelines for the planned use, maintenance, and renovation of existing facilities, and the design and construction of future facilities.
- e. Foster existing and new energy management systems to optimize electrical usage

The County's primary measurable goal (as stated in its Energy Management Procedures, which are included as an Attachment) is to reduce total energy consumption by 15% per gross square foot by the end of fiscal year 2015. This goal recognizes that there will be differences in attainable energy savings from one building or facility to another, however all buildings and facilities are included and the overall reduction should be at least 15%. In 2008 dollars, the reduction could equate to an annual \$420,000 in energy savings to the County. The EECBG grant monies will be used for projects that will allow us to more aggressively move toward achieving the 15% reduction goal. Overseeing the implementation of the Energy Management Procedures will be our Green Team, an interdisciplinary group of employees who meet monthly to discuss ways to reduce energy consumption. The Green Team has undertaken several initiatives to reduce energy costs already, including alternative electrical supplier contracting and LED lighting, and is considering other initiatives, such as automated PC power down software and "green" purchasing.

- 2. Describe your government's proposed implementation plan for the use of EECBG Program funds to assist you in achieving the goals and objectives outlined in the strategy describe in question #1. Your description should include a summary of the**

U.S. Department of Energy
ENERGY EFFICIENCY AND CONSERVATION BLOCK GRANT (EECBG) PROGRAM
STRATEGY REPORT

Grantee: Oakland County, Michigan - continued -

Date: 11/23/2009

DUNS #: 136200362

Program Contact Email: holdswortha@oakgov.com

activities submitted on your activity worksheets, and how each activity supports one or more of your strategy's goals/objectives.

The following summarizes the projects in our activity worksheets. Implementation of these projects will be completed within 36 months and contracts will be established for the work / products within 18 months. Many will be performed in parallel. Once this EECS is adopted by the DOE, these projects will be engineered, detailed budgets will be developed, and ROIs will be determined to properly prioritize each one prior to implementation.

Description: Oakland County International Airport (OCIA) Terminal Construction of a new General Aviation Terminal / Administrative Building on the site of the present facility, reusing the existing foundation, basement, and first floor slab. The new building will incorporate LEED Certification practices, hybrid HVAC / geothermal field, extra roof insulation, energy efficient lighting systems, solar hot water heating, and triple glazed windows. **Activities:** Buildings and Facilities; **Est. Budget:** \$400,800 (Overall OCIA Construction Budget: \$7.5 million) **Benefits:** Economic development / Energy consumption avoidance; **Job Creation / Retention:** 75 FTE; **Impact Period:** Medium-term (4 – 7 years); **Estimated Energy Saved:** 20,223,458 kWh, plus 25Kwh generated; **Estimated GHG reductions:** 15,659; The time frame for the construction of the OCIA is FY2009 – 11.

Description: Energy Audit / Consulting Services Oakland County's more than 40 buildings (2.0 million square feet) operate with an annual energy budget of over \$5.0 million. The Airport, Parks & Recreation, and Water Resource Commissioner operate dozens of additional facilities. An energy audit and benchmarking of key facilities will identify energy improvement opportunities in several areas. A bid is currently being developed to contract for an energy audit and a consultant / advisor to do the following in 2009: Benchmark energy use for all County-owned buildings; Perform preliminary walkthroughs and interviews at each facility; Identify energy saving opportunities; Provide an ROI analysis of same; Assist with project management. **Activities:** Technical Consulting Services; **Est. Budget:** \$195,500; **Benefits:** Energy conservation and expenditure reduction **Impact Period:** Medium term benefits with Long-term impact; **Estimated Energy Saved:** 5,127,616 kWh; **Estimated GHG reductions:** 3970; **Job Creation / Retention:** 2 FTE; The energy audit and benchmarking will be completed in FY2009.

Description: Energy Efficiency Retrofits Weather Stripping: Restore building envelopes on several buildings by means of removal and replacement of caulking and weather stripping on windows and doors. We anticipate saving between 4% and 7% of our heating and cooling costs. This project will be completed in FY2010. **HVAC Equipment Replacements:** Replace chillers that are high energy consumers with CFCs. We anticipate energy savings in the range of 15% to 35% with the installation of new units. This project will be completed in FY2010. **Water Resource Commissioner's Pump Station optimization:** Based on the energy audit of pump stations, identify equipment replacements and conservation measures. Expect savings in pump operations of 5% to 10% of the nearly \$2 Million in total energy used each year. This project will be completed in FY2010 – 2011. **P&R Window Replacement:** Replacement of windows at 30 year old park conference center with new high efficiency double pane windows. Additional insulation will also be added to the building when the window work is being done. We anticipate a reduction of energy use in this building of 12% or more through this activity. **Building Retrofits:** Identify the buildings with the greatest return on investment and execute a comprehensive design strategy for the retrofit of fixtures, lamps, and controls for these buildings. We anticipate energy savings in the range of 25% to 35% with the installation of new and retrofit lighting. This project will be completed in FY2010 – 2011. **Activities:** Energy Efficiency Retrofits, Lighting; **Est. Budget:** \$3,661,300 (Weather Stripping: \$400,000; HVAC Improvements: \$700,000; Pump Optimization: \$750,000; Window Replacement / Insulation: \$325,000; Lighting: \$1,486,300); **Benefits:** Create jobs / Energy conservation and expenditure reduction / Synergy with DTE's Energy Optimization program; **Impact Period:** Immediate benefits with Long-term impact; **Estimated Energy Saved:** 7,430,405 kWh; **Estimated GHG reductions:** 5,753; **Job Creation / Retention:** 40 FTE; The time frame for the retrofits is FY2009 – 11.

Description: Onsite Renewable Technologies Install an approx. 16 KW photovoltaic roofing system, a wind turbine for electrical generation, and solar powered building sign at the new OCIA to showcase several locally produced emerging energy technologies. **Activities:** Onsite Renewable Technology; **Est. Budget:** \$271,300; **Benefits:** Economic development / Energy conservation and expenditure reduction / Energy production; **Impact Period:** Immediate benefits with Long-term impact; **Estimated Energy Saved:** 541,711 kWh; **Estimated GHG reductions:** 419; **Job Creation / Retention:** 3 FTE; The time frame for the project is FY2010 – 11.

Description: Transportation Provide the local community and

U.S. Department of Energy
**ENERGY EFFICIENCY AND CONSERVATION BLOCK GRANT (EECBG) PROGRAM
 STRATEGY REPORT**

Grantee: Oakland County, Michigan - continued -

Date: 11/23/2009

DUNS #: 136200362

Program Contact Email: holdswortha@oakgov.com

traveling public with an alternative to extensive travel for business meetings, via Commuter Office Space and Teleconference Audio Visual Equipment. Activities: Onsite Renewable Technology; Est. Budget: \$126,500; Benefits: Economic development / Energy conservation; Impact Period: Immediate benefits with Long-term impact; Estimated Energy Saved: 495,950 kWh; Estimated GHG reductions: 384; Job Creation / Retention: 1 FTE; The time frame for the project is FY2010 – 11. Description: Lighting Parking lot and pedestrian lights at the new OCIA will be replaced with LED fixtures. Existing poles and mountings will be reused. Activities: Onsite Renewable Technology; Est. Budget: \$224,300; Benefits: Economic development / Energy conservation; Impact Period: Immediate benefits with Long-term impact; Estimated Energy Saved: 7,750,866 kWh; Estimated GHG reductions: 6,002; Job Creation / Retention: 2 FTE; The time frame for the project is FY2010 – 11.

3. Describe how your government is taking into account the proposed implementation plans and activities for use of funds by adjacent units of local government that are grant recipients under the Program (response not mandatory for Indian Tribes).

Oakland County has a long history of cross-boundary collaboration with its local cities, villages, and townships (CVTs). A web page devoted to our many successes was created and can be viewed at:

http://www.oakgov.com/services_index/government/cvt_services.html. The “Capital and Cooperative Initiatives Revolving Fund (CCIRF) Program” was implemented to foster inter-governmental cooperation among the CVTs by paying for independent consultants to conduct business case studies with two or more CVTs who wish to consolidate their services / departments. Oakland County plans to initiate a CCIRF project with any CVTs interested in collaborating on building energy audits, jointly implementing energy efficiency / retrofitting and conservation projects, public education, material conservation programs, and fostering the use of renewable energy technologies in government buildings within the County. Further, Oakland County plans to work closely with MITN – Michigan Inter-governmental Trade Network (<http://www.govbids.com/scripts/mitn/public/home1.asp>) – to establish a cooperative “green” purchasing program among our local cities, villages, and townships (CVTs) via extended, competitively bid contracts with vendors who can provide the kinds of products and services that would be used in energy efficiency and conservation projects. Lastly, Oakland County plans to host an Energy Conservation Summit with its CVTs and industry leaders (see http://www.oakgov.com/services_index/government/cvt_services_2006igc_summit.html and http://www.oakgov.com/peds/program_service/es_prgm/greensummit.html for examples of similar summits). The summit will educate the participants on the advantages and approaches to energy conservation; share the County's Energy Management Procedures and Green Team accomplishments; foster collaboration among the participants when pursuing energy conservation; and promote the MITN and CCIRF efforts discussed above. Coming out of the Summit, we will establish a blog and other forms of on-going communications to further the cause of energy conservation across the County.

4. Describe how your government will coordinate and share information with the state in which you are located regarding activities carried out with grant funds to maximize energy efficiency and conservation benefits (response not mandatory for Indian Tribes).

Oakland County plans to invite members of the Michigan Department of Energy, Labor & Economic Growth/Bureau of Energy Systems (see <http://www.michigan.gov/dleg/0,1607,7-154-25676-211624--,00.html>) to its Energy Conservation Summit (see #3 above) and include them in its blog and other forms of on-going communications. Note that we intend to use any remaining EECBG funds from the initial grant to pursue the projects identified by the energy audit with the highest ROI projects. We also intend to pursue competitive grants for County-wide projects, such as the following: o Establish a revolving fund and foster the use of performance contracting or on-bill financing for local government, non-profit, residential, and commercial entities to pursue building energy audits, identify and implement energy efficient technologies, and establish conservation programs. o Public education o Material conservation programs, including source reduction and recycling programs, as well as waste conversion technologies that lead to increases in energy efficiency. Note that the County currently promotes recycling programs like SOCCRA

U.S. Department of Energy
**ENERGY EFFICIENCY AND CONSERVATION BLOCK GRANT (EECBG) PROGRAM
 STRATEGY REPORT**

Grantee: Oakland County, Michigan - continued -

Date: 11/23/2009

DUNS #: 136200362

Program Contact Email: holdswortha@oakgov.com

(<http://www.socrra.org/srr.htm/>) among the local cities, villages, and townships (CVTs). o Use of renewable energy technologies in government buildings, including solar energy and wind energy. Note that the County established an Emerging Sectors Program (<http://www.oakgov.com/econ/sectors/energy/index.html>) with Green Technologies as one of its primary focuses. o Establish a cooperative "green" purchasing program among our local cities, villages, and townships (CVTs) Most of these projects would be pursued as intergovernmental efforts as described #3 above.

5. Describe how this strategy has been designed to ensure that it sustains benefits beyond the EECBG funding period.

Beyond the on-going energy reductions associated with each project described above, and the County's preventative maintenance program to ensure that all equipment performs optimally, the County will achieve sustainability and continuously improve the energy efficiency of its facility operations by:

- o Implementing the new Energy Management Procedures (see Attachment 2) and ensuring they remain in force
- o Posting the results of the Energy Management Procedures and the projects funded by the EECBG grant on the County's web site as an incentive to avoid sub-standard performance
- o Establishing a web site blog to solicit suggestions for energy conservation from employees and the public
- o Tasking the County's Green Team with reviewing the success of the projects above, identifying new projects and technologies to implement, and fostering a culture of energy conservation among all County employees.

Leveraging of Other Resources: The County will take full advantage of Detroit Edison's (DTE) Energy Optimization program (see <http://dteenergy.mediaroom.com/index.php?s=43&item=384>) to secure additional funding that will supplement the EECBG grant funding. Also, the County's current Capital Improvement Program (CIP) includes project funding that can be leveraged using EECBG grant funds to achieve reductions in energy consumption (e.g., chiller replacements). A copy of the latest CIP is available upon request. Lastly, the Oakland County International Airport is actively seeking funding for its new terminal above and beyond the \$1,022,900 included in our EECBG application. That funding will be combined with the EECBG funds to ensure the successful construction of a LEED certified terminal.

6. The President has made it clear that every taxpayer dollar spent on our economic recovery must be subject to unprecedented levels of transparency and accountability. Describe the auditing or monitoring procedures currently in place or that will be in place (by what date), to ensure funds are used for authorized purposes and every step is taken to prevent instances of fraud, waste, error, and abuse.

The Facilities Management Department is currently developing a web site which will include a Green Team (an interdisciplinary group of employees who meet monthly to discuss ways to reduce energy consumption) web page. This page will highlight the County's new Energy Management Procedures and discuss the mission of the Green Team. It will also feature various projects the Green Team has undertaken to reduce energy costs, and promote the proposed EECBG projects. Additionally, future DOE-grant funded projects will be posted to this web page, including those described in #2 above. Other related projects will also be posted, e.g., cooperative "green" purchasing among our local cities, villages, and townships (CVTs); energy conversion technologies implemented (e.g., photovoltaic roofing panels) using products of local green technology businesses. Finally, all periodic reports required by the DOE for the EECBG grant will be posted to this web page, along with energy conservation data resulting from the Energy Management Procedures and EECBG projects. As for auditing procedures, the County has a two phased internal review process that all grants are subject to. First, when grants are initially being submitted, the Human Resources, Fiscal Services, Risk Management, Corporation Counsel, and Auditing Departments must review the application and sign off on it. The Chairman of the Board of Commissioners then signs off on the submission of the application. After the grant is awarded, Financial Analysts from Fiscal Services oversees all expenditures and Federal reporting during the grant's life. Further, the County's Auditing staff independently review the expenditures, and an annual audit by the County's independent auditor serves as a third check-and-balance against any fraud, waste, error, or abuse.