



BOC Meeting Date
August 5, 2009

Commission Districts Affected
All Districts

General Services

Requested Action (Identify appropriate Action or Motion, purpose, cost, timeframe, etc.)

Request approval to apply for and accept a U.S. Department of Environmental Protection Agency – Climate Showcase Communities Grant in the amount of \$500,000 on behalf of Fulton County. Funds will be used to promote energy efficiency by implementing cost-effective energy efficiency and conservation programs to improve the quality of the work environment, optimize service reliability and enhance the safety of the workplace. A 50% in-kind cost-sharing match of \$250,000 is required.

Requirement for Board Action (Cite specific Board policy, statute or code requirement)

O.C.G.A. § 36-10-1 requires all official contracts entered into by the County governing authority with other persons in behalf of the County shall be in writing and entered on its minutes.

Is this Item Goal Related? (If yes, describe how this action meets the specific Board Focus Area or Goal)

Yes No This item supports the Board of County Commissioner's goals: 6.4.3.a - Reduction in water consumption and 6.4.3.b - Reduction in electrical consumption.

Summary & Background

(First sentence includes Agency recommendation. Provide an executive summary of the action that gives an overview of the relevant details for the item.)

The County Manager's Office recommends approval.

Climate Showcase Communities Summary

In June 2009, the U. S Department of Environmental Protection Agency (EPA) opened a competitive grant program for local and tribal governments that established and implemented replicable model climate change initiatives to reduce greenhouse gas emissions in communities. The total estimated funding for this competitive opportunity is approximately \$10,000,000. The maximum amount Fulton County may apply for is \$500,000. The performance period for this award is up to three years.

The "Climate Showcase Communities" (CSC) Grant is a competitive grants program that supports development of model, replicable strategies that will likely result in maximum energy efficiency improvements, reduction in fossil-fuel emissions and generate local economic benefits. The EPA grant application was coordinated with Environment and Community Development and the Green Team. The below projects were selected from an energy audit of Fulton County buildings conducted in 2008.

Fulton County will use its "Climate Showcase Communities" Grant award to fund three (3) projects:

1. Traffic Control Center Project: The installation of rack mounted servers and hardware will enable County staff to control and make repairs to traffic signal lights remotely. Completion of Project 1 will permit real-time data and video communication with signalized intersections and will reduce staff travel to repair traffic signals. Estimated Benefits: Include a reduction in the annual miles traveled by staff to repair traffic signals which reduces fuel consumption, reduced idling at malfunctioning traffic signals

Agency Director Approval

Typed Name and Title

Stephanie Yearby, Interim Director

Phone

404-612-8337

Signature

Andrew Stokes / For

Date

7/29/2009

Agency Director Approval

by the traveling public and a reduction in the county's overall greenhouse gas emissions (CO₂) annually.

2. Retrofit of an estimated additional 8% of County facilities with Leadership in Energy and Environmental Design - Existing Buildings (LEED-ED): Operations & Maintenance (O&M) energy efficient devices, such as, automatic flush valves, occupancy sensors, light emitting diode (LED) exit signs; retrofit heating, ventilation and air conditioning (HVAC) units and programmable thermostats and time clocks. Completion of Project #2 should realize an annualized reduction in County's building electrical kWh consumption by 15% or 19,622,230 kWh and greenhouse gases by an estimated 1%.

3. Retrofit the East Atlanta Library with a green energy source (solar energy) to supply electricity to power the computer lab in the library. There will be a community education component to increase citizen's knowledge and understanding about the practical usages of commercial and residential solar energy in our daily lives. Completion of Project #3 should realize annualized reduction in the county's building carbon footprint (kWh – electricity) by 15% or 35,490 kWh.

Targeted Project Sites:

Facility Retrofit Sites

Roswell Neighborhood Senior Center
 New Horizons Neighborhood Senior Center
 Camp Truitt Neighborhood Senior Center
 Justice Tower Building
 General Services Transportation and Warehouse
 Abernathy Arts Center
 West Ends Arts Center
 Sandtown Gym/ Park Building
 Fire Station #23
 South Training Center

Other Projects

Traffic Control Center located at Aviation Boulevard
 East Atlanta Library solar energy retrofit at 400 Flat Shoals Avenue
 Retrofit County buildings with energy efficient equipment and to LEED- O&M certify buildings, keeping with the County's commitment to reduce greenhouse gas emissions (GHG).

Fiscal Impact / Funding Source

(Include projected cost, approved budget amount and account number, source of funds, and any future funding requirements.)

If funded, \$500,000 will be awarded to the Fulton County General Services and Public Works Departments.

Exhibits Attached

(Provide copies of originals, number exhibits consecutively, and label all exhibits in the upper right corner.)

Exhibit 1: EPA "Climate Showcase Communities" Grant Program Summary
 Exhibit 2: EPA "Climate Showcase Communities" Grant Application
 Exhibit 3: List of County Facilities identified for Energy Conservation and Retrofits (To be provided separately).

Source of Additional Information

(Type Name, Title, Agency and Phone)

Andrew Stokes, Interim Deputy Director of Operations (404) 612-3739

"Climate Showcase Communities" Grant Program Summary

Application Name: Fulton County, Georgia

Award Number: _____

1. Summary Information Page

a. **Project Title:** Greenhouse Gas Emissions Reduction Project

b. **Applicant Information:**

Applicant Name: Fulton County Board of Commissioners

Address: 141 Pryor Street Ste G-119
Atlanta Georgia 30303

Contact Person: Stephanie Yearby, Interim Director - General Services Department

Phone #: 404-612-8337 **Fax:** 404-730-5897

Email: Stephanie.yearby@fultoncountyga.gov

c. **Funding Requested:** \$500,000

d. **Total Project Cost:** \$750,000 (**\$250,000 In-Kind Match**)

e. **Project Period:** January 2010 – December 2013

f. **Estimate of potential greenhouse gases reductions or other outputs that demonstrate quantifiable greenhouse gas reductions:**

Fulton County recognizes that a fundamental change in the way communities power our global economy is necessary to positively impact global climate change. Indeed, local communities throughout the nation must embrace the use of solar energy technologies as a practical and readily available alternative to fossil fuels. Moreover, this green energy source accomplishes several additional important objectives, such as, increasing national security, improving the environment while reducing the carbon footprint in our communities. Fulton County estimates this proposal will achieve a 1% annualized reduction in greenhouse gases (GHG) emissions and expand its use of green energy technologies.

2. **Narrative Proposal Work-Plan**

- i. **Detailed project summary, description of specific actions and methods to be undertaken and the responsible institutions, including associated work products and an estimated time line for each task.**

Project #1- Retrofit the East Atlanta Library with Solar Energy

General Building Information:

East Atlanta Library
400 Flat Shoals Avenue
Atlanta, Georgia 30316

Building Square Footage: 8,000

Scope of the Project:

This project proposes to retrofit the East Atlanta Library with a green renewable power source, solar electricity to power its computer lab. The project links with an existing complementary activity, in that, the East Atlanta Library is a certified LEED Silver facility. There will be a community education component consisting of educational tours to increase awareness about the benefits associated with solar energy use. General Services and the East Atlanta Library will partner with the Board of Education and the Human Services Department of Fulton County to provide information tours. The purpose of the tours is to increase the knowledge and understanding of middle/high school students and senior citizens about the practical residential and commercial benefits of solar energy use in our daily lives. Three educational kiosks will be installed in the library to provide additional interactive learning opportunities for community residents about the history and practical application of solar energy. This "showcase" initiative is developed as a demonstration project which may be included as part of the County's recently approved capital construction for 8 library projects. This project is readily replicable in large, small, urban or rural communities. Below are the specifications for the retrofit kit for this facility:

Proposed Equipment Specifications:

- 25.2 kW Grid-tie System, 25,200 watts or equivalent
- Grid-tie photovoltaic (PV) Power system designed for commercial application
- (1) 26X200w high-quality PV modules
- (3) Sunny Boy SB7000US inverters
- (1) UniRac solar mount
- (3) SB316F DC disconnect switches or equivalent
- (6) 100' #10 AWG sub-array switches or equivalent
- Educational kiosks (3)

Contractual Services: Electrical drawing, tech supports and installation

Expected Outcomes:

At project completion the following annualized estimated benefits are projected:

- Estimated 1% annualized reduction in the building's CO₂ emissions (electrical)
- Estimated 15% or 35,490 kWh annualized reduction in energy consumption

- Heighten of the county resident’s awareness and educational knowledge of solar

Job Creation: 1 FTE

Budget: Estimated project is \$100,000 Request \$100,000 in EPA funds

Responsible Institution: Fulton County General Services Department

Schedule: Estimated Project Completion - October 2011

Project #2 – Traffic Control Center (TCC) Upgrade

General Building Information:

Public Works Facility

780 Marietta Street

Atlanta, Georgia 30331

Scope of the project:

This proposal will expand the County’s Traffic Control Center (TCC) ability to communicate with signaled intersections. The project calls for the installation of rack mounted server unit with digital displays and software. The plan also requires the installation of remote Ethernet communication devices at each signalized intersection to communicate with the newly installed hardware. This initiative is readily replicable in large, small, urban or rural communities.

Expected Outcomes:

At project completion the following annualized estimated benefits are to be realized:

- Instant real-time data and video communication with all signalized intersections countywide.
- Reduction site visits by an estimated 50% or 11,002 miles per month.
- Reduce fuel oil consumption by estimated 50% or 1174.65 gallons per month
- Reduction in vehicle maintenance cost

Jobs Creation: .1 FTE

Budget: Estimated project cost is \$80,000. Request \$80,000 in EPA funds

Responsible Institution: Fulton County Public Works Department

Schedule: Estimated project completion - December 2011

Project # 3 – Retrofit County Building

General Building Information:

Fulton County operates 612 facilities throughout the county with a total sq ft of 6,665,565; housing a minimum of 1,756 occupants. These facilities house the following:

- 1,134 restroom facilities; 333 urinals & 1,602 toilets.
- 499 exterior low sodium pressured sport lamps
- 63 time clocks and 73 thermostats
- 359 split systems HVAC units countywide
- 30 chillers

Scope of the project:

Retrofit county facilities with automatic flush valves, occupancy sensors, LED exit signs and retrofit HVAC units with programmable thermostats and time clocks. Funds will expand Fulton County’s capacity to retrofit an additional 8%-10% of county facilities with automatic flush valves, occupancy sensors, LED exit signs, retrofits to HVAC systems and programmable

thermostats time sensors. This initiative is readily replicable in large, small, urban or rural communities.

Expected Outcomes:

At project completion, estimated annualized benefits should be:

- Reduction in the County's electrical kWh consumption by 15% or 19,622,230 kWh.
- Reduction in water consumption by 50% or 543,213 gallons.
- Reduction of over 3,000 pounds of ozone (depleting refrigerant will be taken out of use).

Job Creation: 3.5

Budget: Estimated project cost \$296,565. Request \$296,565 in EPA funds

Responsible Institution: Fulton County General Services Department

Schedule: Estimated project completion - Spring 2012

ii. Discussion of how the proposed project addresses one or more of the priority areas identified in Section 1.B.

Fulton County will use awarded EPA funds to implement a green renewable power source (solar electricity) at the East Atlanta Library; upgrade the County's Traffic Control Center with the hardware and software to remotely interface with traffic signals and retrofit its buildings with energy efficient equipment to reduce greenhouse gas emissions. It is estimated these projects will reduce Fulton County's CO₂ emissions by an estimated 1% annually. This proposal addresses several EPA priority areas including 1) use of other clean energy supply option, 2) reduction of vehicles miles traveled and 3) energy performance in municipal operations. The East Atlanta Library's use of solar energy to power the computer lab addresses priority area # 1; the TCC project meets priority area # 2 since this project reduces the number of miles staff travel and vehicle CO₂ emissions to repair traffic signals through real time remote troubleshooting and equipment analysis capabilities at the TCC. The retrofit of County buildings meets priority area # 3 through the installation of energy efficiency and conservation retrofits.

iii. Discussion of how the proposed project addresses the following elements (as applicable) in Section 1. Part B Scope of Work:

reduced emissions of greenhouse gases;

This proposal reduces GHG emissions by an estimated 1% annually through the implementation of several cost-effective energy saving and conservation strategies including retrofit buildings, upgrades the County's Traffic Control Center and use of a green energy source to power a computer lab in the library. An immediate expected outcome of this proposal will involve an expansion of Fulton County's retrofit of buildings which supports a reduction in kWhs, therms and water consumption, thus, reducing greenhouse gas emissions by an estimated 1% annually and its utilities operating cost.

capacity-building within local and tribal agencies;

This proposal will enhance the County's energy and climate management capacity through its funding of 5 employees for LEED certification and 4 for the Building Operators Certification (BOC). Average annual savings are estimated to be 172,000 kWh per year, equivalent to \$12,000

annually at national electricity rates for each BOC participating employee. Capacity-building will be further supported through Fulton County's continued participation in the *Atlanta Regional Energy Collaborative*. This collaborative consist of regional stakeholders, including Georgia Environmental Facilities Authority (GEFA), Atlanta Regional Planning Commission (ARC), Fulton County, City of Atlanta and several additional local city and county governments. This collaborative promotes regional energy and climate management collaboration and community education on such issues as air quality, energy conservation and environmental impacts.

ability of the project to achieve ongoing reductions;

One of the principal ways this proposal will assist Fulton County to achieve ongoing reductions is through its funding 5 employees for LEED certification and 4 for the Building Operators Certification (BOC). The LEED certification of 5 county employees will sustain the County's capacity to support future capital construction projects to meet LEED industry standards. The BOC certification will enhance the county's efforts to conserve and reduce energy consumption. Moreover, Fulton County's "Green Team" and the Fulton County Citizens Commission of the Environment (FCCCE) are aggressively moving forward with promoting policies to establish county building standards pertaining to space temperature settings, lighting levels, purchase of earth-friendly of goods and services, fleet operations and a variety of other green activities. It is projected that a "Green Policy" will be presented to the Board of County Commissioners in 2010.

linkages with broader environmental, economic, health, and social benefits;

This proposal addresses broader environmental benefit since solar energy is a clean energy source that does not pollute the air or water supply and does not produce toxins, such as, carbon dioxide, nitrogen oxide, sulfur dioxide, or mercury like so many other forms of energy. The county recognizes that solar energy will also mitigate global warming, acid rain, and smog within our communities. The community education associated with the East Atlanta Library project will serve to increase the community's knowledge and understanding of the practical daily usages of commercial and residential solar power. The economic benefit of this project is an estimated creation of 5.5 green jobs that protect the air quality in our communities. Additionally, this project is expected to protect public health by reducing premature deaths, asthma attacks and other respiratory ailments, lost work days and many other health impacts every year that are related to poor air quality.

partnerships across multiple stakeholder groups;

Fulton County is a member of International Council for Local Environmental Initiatives (ICLEI) and the Georgia Association of Counties (GAC). Fulton County will provide ICLEI and GAC with updated information on this project's progress toward achieving its targeted reduction in energy consumption and greenhouse gas emissions. Fulton County will continue to partner with local and state entities, such as, Georgia Environmental Facility Authority (GEFA), Atlanta Regional Commission (ARC) and other metro jurisdictions to identify ways to promote regional collaboration and community education on such issues as air quality, energy conservation and environmental impacts. Fulton County currently is a participating jurisdiction in a regional energy collaborative coordinated by ARC and GEFA. This collaborative provides opportunities for local

governments, private and non-profit sectors to discuss energy and climate management issues. Current membership includes eight metro Atlanta city and county governments.

replicability; and

It's our contention this proposal is an attractive and easily replicable project for large, small, urban and/or rural communities given its emphasis on building retrofits to improve energy efficiency and conservation and its focus on improving the environment. Moreover, the use of solar energy as a green energy source demonstration project is not limited to powering library computer labs but presents jurisdictions with the flexibility for many usages in a variety of different settings.

links to complementary activities

In June 2009, Fulton County's General Services Department submitted an Energy Efficiency and Conservation Block Grants application (EECBG) to the U. S. Department of Energy to fund cost-effective energy efficiency and conservation programs in county facilities. Additionally, this project would fund implementation of a portion of Phase I of Fulton County's *Strategic Energy & Climate Management Sustainability Plan*. Part of this plan consists of retrofit of county buildings and the exploration of how to expand the use of green energy sources, such as, solar energy to reduce the County's carbon footprint. Moreover, this project aligns with Fulton County's "Green Team" and the Fulton County Citizens Commission of the Environment's (FCCCE) aggressive efforts to promote energy conservation policies and community education to reduce greenhouse gas emissions.

iv. Explanation of project benefits to the public, potential audience (s) served.

According to American Lung Association data, Fulton County is ranked 24th in Georgia as one of the most ozone-polluted counties. It is estimated this proposal will enhance the County's capacity to remotely troubleshoot traffic signal malfunctions which reduces car idling at malfunctioning traffic signals by the traveling public. Moreover, it will reduce the number of miles traveled by Public Works Department staff to repair traffic signals; thus, resulting in a further reduction in CO₂ emissions. Some of the economic benefits the County would realize include monthly fuel savings due to the reduced number of staff on-site repair trips required by 5 utility vehicles to repair traffic signals. The project will further spur economic benefit through the creation of an estimated 5.5 green jobs that protect the air quality for citizens in Fulton County and adjacent communities. Additionally, the retrofit of buildings will reduce water and energy consumption County buildings, thus, countering the rising utility cost for taxpayers. This proposal is will protect public health by reducing premature deaths, asthma attacks and other respiratory ailments to seniors and the medically fragile. In summary, this proposal is estimated to reduce the County's CO₂ by 1% annually, reduce energy consumption (kWhs and gallon) by 15%; reduce employees lost work days due to health impacts associated with air quality and provide long-term cost savings to County.

v. Description of the applicant's organization and experience related to the proposed project; and plan for achieving the project objectives

The General Services Department manages an annual budget of \$634 million and is responsible for providing building maintenance, facility management, operations support services, airport management, grounds maintenance, land acquisition and energy efficient capital construction management. The department manages 612 buildings which consist of 6,300,000 sq ft and is responsible for preparing short and long range planning of all capital development and facility maintenance projects. General Services will provide administrative and operational oversight for County and contracted personnel responsible for project implementation and contract reporting for this energy proposal. In 1993 Fulton County hired an Energy Management Engineer and the following year (1994), the Board of Commissioners resolved that future capital construction projects would be energy efficient and energy wise buildings. Since 1994, 25 capital construction projects have been completed as energy wise and efficient designed facilities. The County's energy wise flagship facility is the East Atlanta Library which was certified as LEED Silver in 2004. Fulton County was awarded EPA's *Energy Star Label* for two buildings in 2000. In 2004, a private energy management firm completed a countywide energy audit of county buildings. As a result of the audit, a five (5) year energy conservation program was launched which is estimated to reduce energy cost by 15% or \$2,400,000 per year and reduce the county's carbon footprint by an estimated 1% annually. The County's 2008 energy bill exceeded \$24,000,000, thus, further affirming the County's need to develop energy efficient and energy wise capital projects.

If funded, General Services will utilize its internal project management and financial management systems, and where appropriate, contract with the private sector to achieve this project's objectives. The Fulton County Finance Department possess decades of demonstrated experience in effectively managing large federal grants and complying with grantor reporting requirements. The project management team will submit for the Director's approval a project plan which will include a list of contract deliverables, implementation timeline and responsible staff associated with each activity. Monthly meetings will be held with key stakeholders to ensure compliance and fidelity to contracted deliverables. A rigorous reporting protocol will be instituted to track and capture project outcomes and document progress toward compliance with grantor reporting requirements.

vi. Description of staff expertise/qualifications, staff knowledge, and resources or the ability to obtain them, to successfully achieve the goals of the proposed project. (e.g. expertise in managing local gov't environmental education programs, training in energy or climate management, or other relevant programmatic experience.

The General Services Department consists of highly technical staff with expertise in a variety of construction management activities, including management of the County's annual Capital Improvement Program (CIP). The department direct and oversees a diverse set of functions, such as, facility engineering, grounds maintenance building maintenance, land acquisition and transportation and logistics. Additionally, the department has overall responsibility for capital construction design and development projects for the County.

Below is a list of key staff personnel involved with this project: