

MAYOR & COUNCIL AGENDA COVER SHEET

MEETING DATE:

October 19, 2009

CALL TO PODIUM:

Peter Geiling

RESPONSIBLE STAFF:

Peter Geiling
James D. Arnoult

AGENDA ITEM:

(please check one)

<input type="checkbox"/>	Presentation
<input type="checkbox"/>	Proclamation/Certificate
<input type="checkbox"/>	Appointment
<input type="checkbox"/>	Public Hearing
<input type="checkbox"/>	Historic District
<input checked="" type="checkbox"/>	Consent Item
<input type="checkbox"/>	Ordinance
<input type="checkbox"/>	Resolution
<input type="checkbox"/>	Policy Discussion
<input type="checkbox"/>	Work Session Discussion Item
<input type="checkbox"/>	Other:

PUBLIC HEARING HISTORY:

(Please complete this section if agenda item is a public hearing)

Introduced	
Advertised	
Hearing Date	
Record Held Open	
Policy Discussion	

TITLE:

Resolution of the Mayor and City Council Authorizing the City Manager to Enter into a Contract for City Facilities Energy Audits and Energy Efficiency Conservation Block Grant (EECBG) Support Services

SUPPORTING BACKGROUND:

Request: This is to request the Mayor and City Council authorize the City Manager to enter into a contract with EMO Energy Solutions for professional services providing City Facilities Energy Audits and EECBG Support.

Background: In late April 2009, the City was notified it was eligible for \$578,000 in EECBG funds. The City's application to the Department of Energy was due on June 25, 2009. The application required collection of data which was best provided by an outside consultant. City staff drafted an RFP and solicited responses between May 20 and May 27, 2009 for Energy Audits and EECBG application support services. A selection committee comprised of City staff reviewed and rated nine proposals.

Firm	Final Ranking	Average Scores	Proposed Costs
EMO Energy Solutions	1	90	\$51,975
Clean Currents	9	57	\$149,985
Facility Energy Consultants	8	63	\$55,514
*Constellation Energy	6	73	\$15,000 plus perform. contract fees
EMG Corporation	2	85	\$120,550
*Johnson Controls	3	84	\$55,000 plus perform. contract fees
Nexant	5	79	\$326,430
Horizon Engineering	4	82	\$99,570
Premier Energy Services	7	72	\$71,000

*Energy performance contract fees are received over a period of time for a percentage of energy savings.

The selection committee determined EMO was the most highly qualified firm to perform the work for the following reasons:

- 1) EMO's experience with energy efficiency audits and LEED projects.
- 2) EMO's knowledge of the EECBG Grant process.
- 3) A strong project manager with the necessary experience.
- 4) Best value in performing services for proposed cost.

City staff signed a contract on June 12, 2009 for tasks I through III for \$18,020 of the proposed \$51,975 allowing the City to meet the EECBG application deadline. The remaining tasks costing \$33,955, IV through VI, are subject to City Council's approval. The entire contract work scope is attached.

Fiscal Impact: There are sufficient funds budgeted in the Capital Improvement Program Budget.

DESIRED OUTCOME:

Vote on Resolution

**SECTION II - SCOPE OF ENERGY AUDITING AND EECBG GRANT SUPPORT SERVICES
REQUEST FOR PROPOSAL (RFP) 2009 - 027**

WORK SCOPE

The City operates approximately thirty buildings totaling approximately 450,000 square feet. The Facilities and Capital Projects Department is responsible for maintaining and operating these buildings. The City has completed energy upgrades and commissioned a LEED certified facility. The proposed contractor will provide services in support of the EECBG Grant encompassing the twelve largest and/or most public facilities.

OBJECTIVES

The objective of the energy audit is to identify and develop modifications that will reduce the energy and water use and/or cost of operating a building. The contractor will perform the following the ASHRAE “Procedures for Commercial Building Energy Audits”, based upon ASHRAE Research Project RP-669 and ASHRAE Special Project SP-56. The results should be presented in a format that will provide the information needed by the City to decide if any, some, or all of the recommended modifications should be implemented. An energy analysis includes the following steps:

Task I – Pre-application support: The consultant will provide technical assistance required for completing EECBG application process including completion of the documents included in Section IV. (Complete by June 22, 2009).

Task I Deliverables (Due June 22, 2009):

1. Completed EECBG Application and required back-up information.

Task II – Baseline utility and emissions data for all major City facilities:

The contractor will develop or confirm an energy/water use baseline for City facilities in accordance with ASHRAE Level I and Level II analysis.

To properly obtain the deliverables required for Task II it is expected the successful contractor will need to perform, but not limited to, some if not all and possibility other subtasks to acquire the necessary end results and recommendations for Phase II. Those subtasks are as follows:

1. Obtain the needed energy billing data from the City and/or local distribution company.
2. Examine utility bills for the past three years and establish base year consumption for electricity, natural gas, fuel oil, steam, water, etc. in terms of energy units (kWh, kW, ccf, gallons, lbs., etc.) and in terms of total dollars and dollars per unit.

3. Describe the process to determine the base year (averaging, selecting most representative contiguous 12 months, etc.). Base year will be calendar year 2006.
4. Consult with facility personnel to account for any anomalous schedule or operating conditions on billing that could skew the base year representation.
5. Account for periods of time when equipment was broken or malfunctioning in calculating the base year.
6. State how future plans for the building may affect the baseline energy and water usage and how the baseline will be adjusted.
7. List factors that may be adjusted such as cooling degree days, heating degree days, square footage changes, or changes to operating hours.

Task II Deliverables (Due 60 calendar days after issuance of Notice to Proceed):

1. Contractor-developed baseline for key City facilities based upon best practices.
2. Provide short and long-term commodity acquisition plans.
3. Report on findings and recommendations of the Level I and Level II ASHRAE analysis.

Task III – Level III ASHRAE analysis: Contractor shall meet with City staff to confirm City facilities to be included in a Level III ASHRAE analysis. Contractor shall coordinate with staff in developing the Energy Efficiency and Conservation Strategy required for the EECBG application.

Task III Deliverables (Due 90 calendar days after issuance of Notice to Proceed)

1. Completed Energy Efficiency and Conservation Strategy. Components include but are not limited to the following:
 - a. Plan partners and any leveraged funds from private or other public sources
 - b. Baseline energy use and (Green House Gas) GHG emissions inventory and forecast
 - c. Goals/objectives for total energy use and emissions reductions, and energy efficiency increase (including deployment of renewable technologies)
 - d. Actions/plans/strategies and implementation schedule to meet goals
 - e. Expected outcomes and benefits of plan:
 - i. Jobs created and/or retained
 - ii. Energy saved
 - iii. Renewable energy capacity
 - iv. GHG emissions reduced
 - v. Energy cost savings
 - vi. Funds leveraged

- f. Obstacles to reaching goals and strategies to remove obstacles
 - g. Policies and/or administrative actions adopted or needed to support actions/plans/strategies/targets/schedule
 - h. Evaluation, monitoring and verification plan
 - i. Plan for how activities will be sustained beyond grant period
 - j. Plans for the use of funds by adjacent eligible units of local governments that receive grants under the program; and plans to coordinate and share information with the state in which the eligible unit of local government is located regarding activities carried out using the grant to maximize the energy efficiency and conservation benefits under this part.
2. Written follow-up responses to possible DOE questions and information requests.
 3. Confirmed list of facilities to include in a Level III ASHRAE analysis.

Task IV – Detailed Energy Audits: The contractor will perform a detailed technical assessment/audit of City identified energy deficiencies, energy needs and energy conservation measures/initiatives (ECMs). Contractor will provide specific recommendations for energy efficiency upgrades and renewable energy alternatives that will include estimated costs, energy/water use/cost savings, GHG emissions reductions, and estimated pay-back period. The contractor will assess and determine the feasibility or potential for energy conservation, water conservation and renewable energy measures that are lifecycle cost-effective. The contractor will identify energy deficiencies, energy needs and potential energy conservation measures (ECMs) within the examined facilities. The contractor will create a prioritized list of projects, using a decision matrix that addresses both short and long-term investment opportunities. The prioritized list of projects will be based upon return on investment and cost savings analysis. It is expected that the successful contractor will be conducting site visits at the identified facilities to ascertain this initial ECMs audit.

The energy audit process is divided into three tasks: work performed prior to the survey, work performed during the survey, and the report/analysis (post survey work). The assessment will be conducted within the framework of an ASHRAE Level III assessment.

Work to be performed prior to the site visits

1. Conduct interviews with key personnel at each facility. Determine building square footage, energy sources, operational criteria, energy and utility concerns, future construction plans, equipment malfunctions, and previous/planned energy-using equipment changes. Discuss any other relevant information required for the facility survey. Follow-up discussions may be necessary to corroborate data. Preparation before the site-visits will allow for the most efficient use of time while on-site.

2. Analyze the available utility billing data obtained in Phase I for the past three years, if possible. This data will be used to confirm operating practices ascertained from the telephone interviews and to spot any abnormalities in utility energy consumption and/or peak electrical demand. These utility abnormalities can be valuable in identifying potential energy and demand saving opportunities.
3. Review any available benchmarking information for the facilities to be visited. Reviewing benchmarking information will help identify facilities that may have excessive energy use compared with similar benchmarked buildings.
4. Coordinate and schedule site visits. Visits will be scheduled in groupings to minimize travel costs to the extent possible.

Work performed during the survey(s)

1. Meet with key personnel to briefly describe how the energy examination will be performed, determine the order in which different areas will be visited (e.g. boiler room first, floor by floor walkthrough, then any air handling units or other equipment on the roof or in a mechanical penthouse) and to answer any preliminary questions. Discuss the building parameters, energy concerns, pertinent equipment, operating schedules, number of occupants and other relevant factors that may impact the final analyses. Document schedule and occupant variations during typical weekdays, weekend days, for various periods of the year and in different areas of the facility. Also, have in attendance the person (building engineer, facility manager or maintenance technician) most familiar with the facility's equipment and operation. *This person should be included in the building walk-through, or at least available to answer questions about key equipment that arise during the walk-through.* The following is a partial list of questions that will be asked during the interview. Note that some of this information will also be obtained/verified during the initial survey in Task I and Task II.

Interview Topics

Operating hours *and* equipment operating hours
Occupancy
Location of meters
Availability of prints and drawings
Equipment size and age
Emergency backup generator configuration and operation (zoned for certain areas, such as surgical rooms or a computer room).
Motor and air handling unit lists and specifications, if available
Temperature controls and set-points
New or planned equipment changes
Energy management systems
Computer room or other separate AC systems
Expansion plans

Maintenance contracts
Conservation measures planned or completed
Utility concerns/problems
Any specific practices that are known to be wasteful of energy or water that have not been addressed

2. Conduct an on-site inspection of the facility. Walk through the building examining all major energy and water-using systems including: lighting, HVAC, water heating, motors, building envelope, refrigeration, cooking, process systems, faucets and toilets, and building controls. Record the following information for energy-using equipment having Energy Conservation Measure (ECM) potential: nameplate information, age, condition, operating problems, operating schedules and set-points on HVAC controls. Inspect the utility systems and verify that the utility meter numbers correspond with the billing accounts. If possible, gather information from boiler or chiller logs or from the energy management system in order to get a representative sample of equipment loading based on outdoor temperature. This will be important for modeling the boiler and chiller systems in order to determine savings potential for relevant ECMs.
3. After the survey meet briefly with the appropriate personnel to discuss preliminary findings and to request additional information if required. Make plans to either get copies of drawings.

Analysis/Report

Based on the interview, site observations and analyses, a list of potential ECMs (including renewable resources) and water conservation measures will be developed. Equipment recommended will include ENERGY STAR® and/or other energy-efficient products designated by the City. The potential savings for each measure will be calculated based on standard industry Best Practices. Implementation cost will be estimated from *Means* or an equivalent authoritative source. A lifecycle cost analysis will be performed on each potential project to determine its priority in the decision matrix. Other factors such as siting concerns, equipment availability, maintenance and reliability will also be addressed in the decision matrix. The matrix will be divided to show short term (tentatively set at 5 years simple payback or less) and long-term (greater than 5 years simple payback) investment opportunities.

Task IV Deliverables: (Due within 120 days after issuance of contract Notice to proceed)

1. Confirm methodology for Task II and Task III.
2. Short and long-term investments based upon approved Task II baseline to accomplish investments using return on investment and savings.
3. Prioritized list of investments within the plan, identifying energy deficiency/needs correction and ECM's based upon a decision matrix to be formulated.

4. Identify ECMs. For each ECM identify provide a finding and recommendation, provide a preliminary estimate of energy or water cost savings, including analysis methodology, supporting calculations and assumptions used to estimate savings.
5. Provide a site-specific evaluation of combined heat and power (co-generation) application potentials.
6. Implementation Strategy
7. Provide a quotation for Phase III requirements based upon all the findings and recommendations of Phase II of the identified ECMs.

Based upon City's final selection of which ECMs upon which to proceed to Task V, negotiations will be conducted based upon the quotation received for the costs to perform Task V.

Task V – Post Construction verification and reporting. Contractor shall create measurement and verification protocols to use in the future reporting requirements to include but not limited to jobs created and/or retained, energy saved, renewable energy capacity, GHG emission reduced, cost savings.

Task VI – Post-construction education programs – Consultant shall develop educational materials and provide staff training on specific energy efficiency considerations for key City facilities.

OUTLINE

The key elements of the building energy audit/analysis are as follows:

1. Analysis of two or more years of utility consumption and cost, review of building plans, and a walk-through of the building itself to establish:
 - a. Type of building, principal use, and area, and square feet.
 - b. Energy Utilization Index (EUI): (annual energy use) kBtu/sq. ft. per year.
 - c. Cost index: \$/sq. ft per year.
 - d. Breakdown of various spaces within the building by function, hours of use, and area.
 - e. Determine if efficiency may be affected by building functions that differ from the original functional intent of the building.
 - f. Determine if any maintenance problems or practices may affect efficiency.
 - g. Comparison of energy and cost indices of the building with one or more databases.
2. Description and analysis of the energy-using systems of the building, resulting from on-site observation, measurement, and engineering calculations, including:
 - a. Envelope
 - b. Lighting

- c. HVAC
- d. Domestic hot water
- e. Food preparation
- f. Conveying systems
- g. Other systems

3. As a result of engineering analysis and economic calculations, develop:

- Breakdown of the components of annual energy use and cost.
- Recommended energy conservation measures, including predicted savings and cost to implement.
- A description and cost estimate of repairs that are needed in order for energy conservation measures to be effective.
- A description and cost estimate of measurement and verification methods needed to determine the actual effectiveness of measures.
- Energy analysis summary
 - o Present energy use and cost
 - o Ultimate target for energy use and cost
 - o Savings from recommended measures
 - o Comparison of current recommendations to ultimate target

Resolution Request Form

**REQUEST FORM FOR RESOLUTIONS PERTAINING
TO EXPENDITURES FROM THE CITY BUDGET
(CONTRACTS/PURCHASES, TRANSFER FUNDS)**

(Please attach the Mayor and Council Agenda Cover Sheet to this Form. For contracts/purchases, the Cover Sheet MUST include a list of all bidders and bid amounts.)

Requested by: Peter Geiling Date of City Council Meeting: October 19, 2009

AUTHORIZING

Purchase _____ Award Contract X Transfer Funds _____ Negotiate / Execute a Contract _____

RFP INFORMATION:

Advertisement Date May 20, 2009

Newspaper(s) Washington Post, Baltimore Times, eMaryland Marketplace

Bids Received (date) May 27, 2009

DESCRIPTION OF ITEM(S):

(Be specific; include quantity, item name, model number, etc.)

Award a contract for City Facilities Energy Audits and Energy Efficiency Conservation Block Grant (EECBG) Grant Support Services, RFP #2009-027.

CONTRACTED/PURCHASE FROM:

Company Name: EMO Energy Solutions

Street Address: 3141 Fairview Park Dr., Suite 355

P. O. Box Number: _____

City/State/Zip: Falls Church, VA 22042

CONTRACT/PURCHASE AMOUNT: \$51,975 (of which \$18,020 is presently encumbered)

Check One: In the Estimated Amount of X Not to Exceed _____

FUNDS TO BE EXPENDED FROM: Operating Budget _____ Capital Improvements Budget ✓

Acct. No. 3149 – 591100 – 10-1, \$33,955, Currently encumbered \$18,020.

(For Finance Department use only; not to be included in the Resolution)

VERIFICATION OF AVAILABILITY OF FUNDS

Available X Not available _____

[Signature]
Finance Dept.

10/13/09
Date

RESOLUTION NO. _____

RESOLUTION OF THE MAYOR AND CITY COUNCIL
AUTHORIZING THE CITY MANAGER TO ENTER INTO A CONTRACT FOR CITY
FACILITIES ENERGY AUDITS AND ENERGY EFFICIENCY CONSERVATION
BLOCK GRANT (EECBG) GRANT SUPPORT SERVICES

WHEREAS, a Request For Proposal (RFP) for City Facilities Energy Audits and Energy Efficiency Conservation Block Grant (EECBG) Grant Support Services was duly advertised in the May 20, 2009 issue of the *Washington Post*, *Baltimore Times*, and *eMaryland Marketplace*, and proposals were received on May 27, 2009 from nine firms; and

WHEREAS, the proposals were reviewed and references checked and verified according to the RFP criteria; and

WHEREAS, EMO Energy Solutions was the most responsive and responsible offer; and

WHEREAS, the Mayor and Council have determined to award a contract for the work to the highest rated firm meeting City specifications:

NOW, THEREFORE, BE IT RESOLVED, by the Mayor and City Council of Gaithersburg, that the City Manager is hereby authorized to enter into a contract for City Facilities Energy Audits and Energy Efficiency Conservation Block Grant (EECBG) Grant Support Services to EMO Energy Solutions, 3141 Fairview Park Dr., Suite 355, Falls Church, Virginia 22042, in the estimated amount of Fifty-One Thousand Nine Hundred Seventy-Five Dollars (\$51,975); said funds to be expended from the Capital Improvements Budget.

ADOPTED by the Mayor and City Council this 19th day of October, 2009.

SIDNEY A. KATZ, MAYOR and
President of the Council

THIS IS TO CERTIFY that the foregoing
Resolution was adopted by the City Council
in public meeting assembled on the 19th day
of October.

Angel L. Jones, City Manager