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TO: Barbara Levin Bergman  
Chair, Ways & Means Committee

THROUGH: Robert E. Guenzel  
County Administrator

FROM: Kerry Sheldon  
Administration

DATE: November 7, 2007

SUBJECT: Contract with Chevron Energy Solutions to conduct a  
Comprehensive Energy Analysis

**BOARD ACTION REQUESTED:**

It is requested that the Washtenaw County Board of Commissioners authorize the County Administrator's signature on the contract with Chevron Energy Solutions to produce a Comprehensive Energy Analysis at a cost of \$75,000.

**BACKGROUND**

In 2004, Washtenaw County undertook a comprehensive energy efficiency project that implemented numerous measures at 18 facilities, including the replacement of boilers, chillers, air handling units, and other mechanical equipment; installation of direct digital controls and real-time energy monitoring capabilities; and a solar photovoltaic array at the Western County Service Center.

The project has now entered the measurement and verification phase, and the results are favorable: data (compiled through utility bill comparison and real-time trending) show that the County has avoided nearly \$450,000 in energy costs since the project's inception. In fact, given that utility rates have increased since commencement of work, it is likely that the County's true savings well exceed this dollar figure.

The project was undertaken in partnership with Chevron Energy Services, an energy services company (ESCO) that specializes in this type of work, which is typically known as "performance contracting." Performance contracting is characterized by several unique aspects. First, the central tenet of performance contracting is the identification of quantifiable energy savings that can be redirected toward the initial project's cost. In other words, detailed engineering analyses are generated to identify the efficiencies to be gained through a certain measure; once the measure is implemented, the dollars

that would have been paid to the utility company for the energy costs of operating the original equipment are merely redirected to paying for the new equipment's capital costs, which are typically funded up-front via a bond issuance.

Of course, this method can be risky if the savings are not guaranteed. The aspect of guaranteed savings is another unique characteristic of performance contracting, which is predicated on a long-term relationship between the ESCO and the client, beginning the analysis of opportunities (the CEA phase), continuing with the installation and commissioning of equipment (the implementation phase), and resulting in the measurement and verification of energy savings, which typically lasts four years. In the case of the County's 2004 performance contract, for instance, Chevron guaranteed over \$215,000/year in energy cost savings and an additional stipulated savings of approximately \$75,000/year. Stipulated savings are generally considered appropriate for project elements such as maintenance and materials savings, and/or elements where precisely monitoring the outcome would be more costly than the savings themselves, such as can be the case in smaller facilities. The County recently completed the first year of the four-year measurement and verification period (as specified in the 2004 implementation contract), and we have found that the project is delivering the predicted results.

#### **DISCUSSION:**

The Washtenaw County Correctional Facility was largely excluded from the 2004 energy efficiency project in anticipation of the facility's impending expansion and renovation. Now that said expansion and renovation are underway, the County is presented with the opportunity to review the energy demands of the facility, and to investigate opportunities both for efficiency gains and alternative energy usage. The Correctional Facility is the most energy-intensive building in the County's portfolio, and natural gas pricing has rapidly risen over the past few years. Therefore, staff were intrigued by the idea of investigating an alternative means for heating the building, and for identifying any other potential measures that would result in efficiencies over the long-term. At the same time, infrastructure improvements for the facility have been identified well in excess of the amount budgeted; utilizing a performance contract to selectively extract the elements that could be repaid through energy savings makes sense both in terms of the current project as well as for purposes of budgeting for long-term capital improvement needs.

A biomass heating system is appealing for several reasons: one, the cost of the feedstock (as measured by dollar per energy unit) is less than one-third that of natural gas. This savings alone could amount to over \$100,000/year at the Correctional Facility, according to preliminary estimates. Two, biomass feedstock is a renewable resource, and as such can be considered carbon-neutral. Three, biomass can be locally sourced; several companies in the County are viable vendors. Four, biomass emissions are almost identical to the emissions for natural gas in terms of all criteria pollutant categories.

Request for Proposals (RFP) # 6362 was issued on September 17, 2007 for a Comprehensive Energy Analysis (CEA) that will generate engineering and financial analyses associated with the construction of a biomass-fueled Central Heating and Cooling Plant as well as for any other energy efficiency improvements that are identified in the CEA process. Upon evaluating the proposals, the review panel determined that Chevron Energy Solutions was the preferred vendor, and recommended that the project be awarded to them. During the Board of Commissioners' seven-day review period required by professional services contracts that exceed \$25,000, Commissioner Karen Lovejoy Roe requested that the issue be brought to the Ways & Means Committee for a formal vote.

The cost of the CEA is \$75,000, which will be rolled into the total project cost of constructing the Central Heating and Cooling Plant (and any other agreed-upon energy efficiency measures) if the County elects to move forward with implementation. If the County elects *not* to move forward with implementation following the completion of a favorable CEA, the County will be required to compensate Chevron Energy Solutions for the CEA at that time.

The completed CEA will serve as the base document for entering into a contract with Chevron Energy Solutions for implementation of the project(s). The implementation contract will be brought before the Board of Commissioners for authorization prior to execution. Under current time frame, a vote would be requested at the first meeting in December if possible.

**IMPACT ON HUMAN RESOURCES:**

None.

**IMPACT ON BUDGET:**

If the County moves forward with implementation (at which time a separate contract will be brought before the Board for authorization prior to execution), the cost of the CEA will be rolled into the total project cost of the implementation. If the County elects not to move forward with implementation of the project, the County will pay Chevron Energy Solutions \$75,000 at time of decision.

**IMPACT ON INDIRECT COSTS:**

None.

**IMPACT ON OTHER COUNTY DEPARTMENTS OR OUTSIDE AGENCIES:**

The project will be undertaken in partnership with Support Services, primarily the Project Management and Facilities Operations and Maintenance Divisions.

**CONFORMITY TO COUNTY POLICIES:**

This action conforms with County policies.

**ATTACHMENTS/ APPENDICES:**

Resolution



A RESOLUTION AUTHORIZING THE ADMINISTRATOR'S SIGNATURE ON A CONTRACT WITH CHEVRON ENERGY SOLUTIONS TO CONDUCT A COMPREHENSIVE ENERGY ANALYSIS AT THE CORRECTIONAL FACILITY AT 2001 HOGBACK ROAD, ANN ARBOR

November 7, 2007

WHEREAS, in 2004, Washtenaw County undertook an enterprise-wide energy efficiency project that implemented measures ranging from boiler and chiller replacements to real-time energy monitoring systems in eighteen County facilities; and

WHEREAS, the Washtenaw County Correctional Facility was largely excluded from this project in anticipation of that facility's impending expansion and renovation; and

WHEREAS, now that said expansion and renovation is in the architectural and engineering phase, it is timely to consider the component of energy usage at the facility; and

WHEREAS, Request for Proposals (RFP) # 6362 was issued on September 17, 2007 for a Comprehensive Energy Analysis (CEA) that will generate engineering and financial analyses associated with the construction of a biomass-fueled Central Heating and Cooling Plant as well as for any other energy efficiency improvements that are identified in the CEA process; and

WHEREAS, a biomass-fueled Central Plant would provide both economic and environmental benefits, as the feedstock is less expensive than natural gas, produces comparable emissions, can be locally sourced, and is a renewable resource; and

WHEREAS, upon evaluating the proposals, the review panel recommends Chevron Energy Solutions be awarded the project; and

WHEREAS, the cost of the CEA is \$75,000, which will be rolled into the total project cost of constructing the Central Heating and Cooling Plant (and any other agreed-upon energy efficiency measures) if the County elects to move forward with implementation; and

WHEREAS, if the County elects *not* to move forward with implementation following the completion of a favorable CEA, the County will be required to compensate Chevron Energy Solutions for the CEA at that time; and

WHEREAS, the completed CEA serves as the base document for entering into a contract with Chevron Energy Solutions for implementation of the project(s), the contract for which will be brought before the Board of Commissioners for a vote, currently scheduled for the first meeting in December if possible; and

WHEREAS, during the Board of Commissioners' seven-day review period required by professional services contracts that exceed \$25,000, Commissioner Karen Lovejoy Roe requested that the issue be brought to the Ways & Means Committee for a formal vote;

WHEREAS, this resolution has been reviewed by the Administrator's Office, Corporation Counsel, and the Ways & Means Committee;

NOW THEREFORE BE IT RESOLVED that the Washtenaw County Board of Commissioners authorizes the County Administrator's signature on the contract with Chevron Energy Solutions for \$75,000 to conduct a Comprehensive Energy Analysis in regard to the construction of a

biomass-fueled Central Heating and Cooling Plant at the Correctional Facility at 2201 Hogback Road in Ann Arbor.