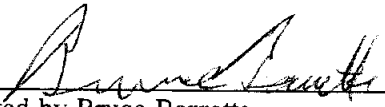




# City of Carson Report to Mayor and City Council

September 16, 2014  
New Business Discussion

**SUBJECT: PRESENTATION AND UPDATE ON THE CITY'S COMPREHENSIVE ENERGY EFFICIENCY PROGRAM**

  
Submitted by Bruce Barrette  
Interim Director of Public Works

  
Approved by Nelson Hernandez  
City Manager

## **I. SUMMARY**

At the March 18, 2014 City Council meeting, the City Council authorized staff to retain Chevron Energy Solutions (Chevron ES) as the City of Carson's contractor to prepare a comprehensive energy efficiency program and to identify financing mechanisms. Since that meeting date, staff has been working with Chevron ES to develop the scope of work and to prepare a contract for phase one of the program. On August 5, 2014, a contract services agreement was executed by the City Manager to begin phase one of the program. Shortly after signing the phase one contract, staff was informed that Chevron ES was going to be sold to OpTerra Energy Services, Inc. (OpTerra ES). Since staff does not anticipate major changes to the core work group that has been assigned to the City's project, the City Manager has given consent to Chevron ES to assign the contract to OpTerra ES. If, however, major changes do occur that are deemed to be unsatisfactory, the City will have the option to terminate the contract.

Phase one requires OpTerra ES to conduct an energy efficiency and energy management assessment for all City-Owned facilities and to prepare a report which will include findings, recommendations, project costs, a measurement and verification plan, and financing options. The contract states that this task will be completed within 120 calendar days. Subsequent to the delivery of the report, the City Council will have the option of selecting which project(s) it would like OpTerra ES to implement. At that time, a second contract, which would be phase two of the program, will need to be negotiated with OpTerra ES to engineer, procure, install, and construct the energy-saving equipment, and provide training services to City staff.

Furthermore, staff intends to update the City Council on this project periodically, when major milestone are met. If, however, a major milestone is missed, staff will update the City Council accordingly, and provide an explanation.

## **II. RECOMMENDATION**

LISTEN to the presentation.

18

**III. ALTERNATIVES**

TAKE another action the City Council deems appropriate.

**IV. BACKGROUND**

In accordance with City Council direction on August 6, 2013, staff released a Request for Qualifications (RFQ) in November 2013 to solicit qualified companies to provide a proposal for an energy efficiency program which included a solar photovoltaic (PV) power generating component and financing mechanism. On January 14, 2014, six companies submitted responses to the RFQ and Chevron ES ranked highest after all proposals were assessed by the City's evaluation team. At the March 18, 2014 City Council meeting, the City Council authorized staff to retain Chevron ES, and on August 5, 2014 the City Manager executed a contract services agreement with Chevron ES to complete phase one of a two phase program.

Shortly after signing a contract services agreement with Chevron ES, Chevron ES was sold; it is now named OpTerra ES. The remainder of this agenda report recognizes OpTerra ES as the City's contractor to perform phase one and phase two of the program.

**A. Phase One – Energy Efficiency and Energy Management Assessment**

OpTerra ES' first task will be to conduct an energy efficiency and energy management assessment. They will perform a detailed review of the City's existing audits and energy data to gain a better understanding of the City's utility usage. They will perform inspection surveys of all City-Owned facilities in order to understand the City's current infrastructure. They will also identify potential energy conservation measures (ECMs) and opportunities for renewable generation technologies, such as a solar PV power system.

The assessment will include, but not be limited to, investigating the following technologies: solar photovoltaic (PV) system(s); lighting fixture retrofits; lighting controls; solar hot water installation; solar thermal pool heating; energy efficient swimming pool equipment; air handling units; chiller upgrades/replacements; cooling tower upgrade/replacement; water conservation measures such as water meters, irrigation system/controls, upgraded lavatories, and toilets; and vehicle charging stations.

OpTerra ES will survey and test major energy using equipment such as heating, ventilating and air conditioning (HVAC) equipment, controls and automation, boilers, heat exchangers, pool pumps, and compressors. It will perform lighting measurements at locations where new lighting will be proposed. It will investigate the existing conditions of the electrical systems

and survey the utility rate structure at each site to determine if it would be beneficial to consolidate meters and/or install additional meters to separate the electrical loads. It will perform site surveys, shading analysis, a preliminary structural analysis, roof suitability and electrical inspections for the development of solar PV system(s). The scope also requires that it prepare a measurement and verification plan which would explain the process in which the selected ECMs can be measured and verified.

Following the survey and investigation period, OpTerra ES will cooperatively work with staff to review the retrofit options proposed in the assessment and assemble a package of options which are compatible with the City's investment and infrastructure improvement goals. It will submit to the City a report which will include, but not be limited to, a table summarizing the recommended ECMs along with descriptions, project costs, first year cost avoidance (in dollars and energy units), simple payback and financing options.

If it is determined that it would not be advisable to proceed with the program, the report will discuss the information gathered and why it is not advisable to proceed. If it is determined that implementation of a program would be warranted, the report would state this finding and present recommendations regarding the ECM(s) that would be needed to maximize the financial benefits. The report will also identify ways that the ECMs, renewable energy, and other program elements could be utilized to leverage opportunities to promote the City, local businesses, and public-private partnerships.

OpTerra ES will also be required to make two presentations to discuss the report and recommendations to the City Council at scheduled public meetings, one of which will be a City Council Workshop.

#### **B. Phase Two – Implementing ECMs**

Subsequent to the completion of phase one, and the determination that the ECMs are warranted, the City Council will have the option to select one or more ECMs to implement. The implementation of the selected ECMs would involve the City entering into another contract with OpTerra ES for, amongst other things, engineering, procurement, installation, and construction. During this phase, the overall design and construction costs, the value added service of administration, and the profit for OpTerra ES are all built into the total project costs. Typically these types of projects are paid for by the savings realized from the overall energy efficiency improvements which typically have seven to twenty year payback periods, depending on the type of improvement. OpTerra ES can also, for a fee that is rolled into the overall

project cost, provide a performance guarantee that will essentially ensure that the energy efficiency improvements will generate utility savings to pay for the improvement as forecasted. OpTerra ES measures and verifies the actual savings against the guaranteed savings. If the energy savings do not occur, then OpTerra ES would reimburse the City for the amount of the shortfall. If, however, the City Council decides that it is not ready to proceed with a project after the completion of phase one, the City Council is under no obligation to negotiate a second contract with OpTerra ES.

In summary, staff is taking this opportunity to update the City Council on the progress staff has made towards completing the comprehensive energy efficiency program, as well as updating the City Council on some company changes and contract assignments. Staff will continue to update the City Council when major milestones are met and/or missed.

**V. FISCAL IMPACT**

None.

**VI. EXHIBITS**

None.

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TO:Rev07-02-2014

Reviewed by:

City Clerk	City Treasurer
Administrative Services	Public Works
Community Development	Community Services

**Action taken by City Council**

Date \_\_\_\_\_ Action \_\_\_\_\_