



Meeting Date: 03/02/2010

ACTION	TYPE OF ITEM
<input type="checkbox"/> Approved Recommendation	<input checked="" type="checkbox"/> Info/Consent
<input type="checkbox"/> Ord. No(s). _____	<input type="checkbox"/> Report
<input type="checkbox"/> Res. No(s). _____	<input type="checkbox"/> Public Hearing (Info/consent)
<input type="checkbox"/> Other _____	<input type="checkbox"/> Study Session

Prepared By: Grant Dunne, Management Analyst III *Grant Dunne* Agenda Item No. I-4
 Reviewed By: City Manager *[Signature]* City Attorney *[Signature]* Finance *[Signature]* Public Works *[Signature]*

DATE: February 16, 2010

TO: City Council

FROM: Lou Balderrama, City Engineer *[Signature]*
Public Works Department

SUBJECT: Appropriation of Funds from the United States Department of Energy American Recovery and Reinvestment Act Energy Efficiency Conservation Block Grant Program

RECOMMENDATION

That City Council approve the appropriation of funds in the amount of \$1,699,500 from the Energy Efficiency and Conservation Block Grant Program (EECBG) under the United States Department of Energy (DOE) American Recovery and Reinvestment Act (ARRA) for energy efficiency studies and citywide energy audit as submitted with the awarded grant application and as specified in this staff report.

DISCUSSION

On March 26, 2009, the DOE announced the availability of a financial assistance funding opportunity for state and local government entities under the ARRA of 2009. On June 16, 2009 the City Council approved in concept the Oxnard Plan for Energy Resource Alternatives (OPERA) and authorized the City Manager to execute the required application for the City’s formula-based funding under the EECBG for the amount of \$1,699,500 and submit the application to the Department of Energy. On December 29, 2009 the City was notified by the DOE of its EECBG award of \$1,699,500.

The purpose of the EECBG Program is to assist eligible entities in creating and implementing strategies to increase energy efficiency, reduce fossil fuel emissions, create new jobs, accelerate deployment of market-ready distributed renewable energy technologies and leverage the resources of public and private entities to maximize the resulting energy, economic and environmental benefits.

The following identifies the energy efficiency public projects and conservation project studies that were applied for funding under the EECBG Program and are described detail in Attachment No. 1:

- Illuminated Street Name Sign Conversions
- Construction of the Intelligent Transportation System Traffic Management Center

Date: February 16, 2010

Subject: Appropriation of Funds from the United States Department of Energy American Recovery and Reinvestment Act Energy Efficiency Conservation Block Grant Program

Page: 2 of 2

- Waste to Energy Conversion Study
- Wastewater Treatment Plant Activated Sludge Fine Air Diffuser System Study
- Wastewater Cogeneration Alternatives Study
- Citywide Detailed Energy Audit

Update to the Oxnard Plan for Energy Resource Alternatives (OPERA)

OPERA, a proposed strategy for Oxnard's development of an energy-efficiency and conservation plan, was a requirement of the EECBG and submitted with the grant application. The objective of the OPERA is to identify and evaluate energy conservation project opportunities throughout the City that can take advantage of alternative funding sources available today, and analyze future energy conservation project opportunities by both leveraging EECBG funding and positioning projects to take advantage of future DOE and California Energy Commission funding over the next several years.

Currently, OPERA has evaluated fourteen (14) energy efficiency projects and conservation studies including the six (6) projects identified in this report that are funded by the EECBG Program. The remaining eight (8) projects consist of preliminary audit studies that recommend retrofitting energy related equipment at City buildings and facilities ranging from the installation of highly efficient lighting and heating/air conditioning upgrades, to more productive motors with variable speed drives, and centralized energy management systems. The studies report that the projects collectively have a potential of reducing the City's energy consumption by 15% and energy cost savings of \$275,000 per year.

The Public Works Department is proceeding with performance measure contracts with Energy Efficiency Service Companies (ESCO) to procure, install and maintain the equipment and to monitor energy efficiencies recommended by the preliminary audit studies. The savings in energy costs will be used to pay back the capital investment made by the ESCO provider over the project's payback period. If the project does not provide returns on the investment, the ESCO provider is responsible to pay the difference.

The Citywide Detailed Energy Audit, one of the six projects funded by the EECBG, will reevaluate the eight (8) preliminary audit studies before staff finalizes performance measure contracts with ESCO providers to move forward with these projects. The Citywide Energy Audit will also research and investigate new energy efficient project improvements that will allow the City to move forward on future work to reduce energy consumption and generate energy cost savings.

FINANCIAL IMPACT

The special budget appropriation will increase FY 2009-10 appropriations in the amount of \$1,699,500 from the EECBG Program to the energy efficiency and conservation study projects as described in Attachment No.1

Attachment No. 1 - Description of Energy Efficiency and Conservation Study Projects

Attachment No. 2 - Special Budget Appropriation

Energy Efficiency Improvement Projects Fund By the EECBG Program

1. Illuminated Street Name Sign Conversions

At traffic signalized intersections there are overhead street name signs installed to identify the streets. At a typical 4-leg intersection there are four street name signs hanging from mast arms. Previously, it was standard practice to have the signs printed on translucent plastic and installed on a device with a fluorescent light bulb inside that allowed the light to shine through the plastic and illuminate the street name. Due to electrical costs, more and more municipalities are converting all illuminated street name signs to highly reflective metal signs that do not consume electricity. Converting the remaining illuminated street name signs to the highly reflective metal signs is projected to cost \$300,000.

2. Construction of the Intelligent Transportation System (ITS) Traffic Management Center (TMC)

The ITS Master Plan is intended to help maximize the efficiency of our existing streets and improve public safety and response. The Oxnard ITS will provide the ability to collect and process real-time traffic information, disseminate this traffic information to the public agency stakeholders, and receive traffic information from other agency stakeholders. The objective is the communication between all traffic signals to a centralized control location where green time, the amount of time the light is green for a given direction, can be efficiently managed, then communicating existing traffic conditions to drivers. Engineering involves processing incoming information, determining the best allocation of green time and providing drivers useful information. Mitigating traffic will help to reduce idle-time and, therefore, reduce pollution and conserve energy used in transportation. The City will need to construct a TMC to house the equipment needed to run the ITS system as well as the control room where the TMC operator(s) carry out traffic monitoring tasks and other day-to-day activities. The projected cost to construct the TMC is \$340,000.

3. Wastewater Treatment Plant Activated Sludge Fine Air Diffuser System Study

The Oxnard Wastewater Treatment Plant's existing Activated Sludge Fine Air Diffuser System includes 14,400 individual ceramic dome diffusers mounted on a PVC grid manifold system. The System was put into service in 1998, and has been in continuous operation for nearly 20 years. This study will evaluate energy efficient replacement system alternatives and to make recommendations as to the most viable options. The projected cost of the study is \$300,000.

4. Waste to Energy Conversion Study – Material Conservation Programs

The Waste to Energy Conversion Study will provide a demonstration project that converts solid waste to useful forms of energy that can be produced, including heat, steam, electricity, and natural gas and liquid fuels. The process involves non-combustible methods using biological and composting techniques that decompose the solid waste into energy sources. Similar studies indicate that converting solid waste into energy sources generates a mere 5% residual; thus, reducing waste disposal going to the landfill by 95%. The projected cost of the study is \$300,000.

5. Wastewater Cogeneration Alternatives Study

The Oxnard Wastewater Cogeneration System is comprised of three Waukesha internal combustion engines coupled with three 500 kilowatt (kW) generator sets for a total generation capacity of 1.5 kilovolts (kV). The Cogeneration System was constructed in the mid 1970's and commissioned to full operation in 1981. This system has been in continuous operation for approximately 30 years. The study will evaluate energy efficient replacement system alternatives and to make recommendations as to the most viable options. This study is expected to lead to additional energy savings, significant operations and maintenance savings, and improved regulatory compliance. The projected cost of the study is \$300,000.

6. Citywide Detailed Energy Audit

The purpose of the Citywide Detailed Energy Audit is to conduct a detailed energy study necessary to confirm the preliminary energy and resource savings estimates for the City's facilities and systems for the capital improvement projects proposed as part of the Oxnard Plan for Energy Resource Alternatives strategy. As a parameter of the study, project-financing options (including capital lease programs) will be evaluated in a manner that leverages to the maximum extent possible the EECBG formula funding the City is slated to receive. Solar photovoltaic generation will be evaluated where applicable. The projected cost of the audit is \$100,000.

CITY OF OXNARD
REQUEST FOR SPECIAL BUDGET APPROPRIATION

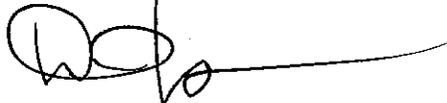
To the City Manager:

March 2, 2010

Request is hereby made for an appropriation of total \$ 1,699,500

Reason for appropriation: To provide an appropriation for grant revenue received from United States Department of Energy relating to the Energy Efficiency Conservation Block Grant Program (EECBG)

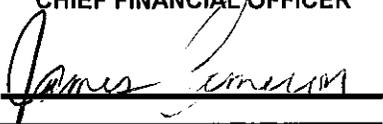
<u>FUND</u>	<u>DESCRIPTION/ACCOUNT</u>	<u>AMOUNT</u>
	Project Energy Efficiency Conservation Block Grant U.S. Department of Transportation	(1,699,500)
	Project Citywide Detailed Energy Audit	159,500
	Project Illuminated Street Name Sign Conversions	300,000
	Project Construction of the Intelligent Transportation Traffic Management Center	340,000
	Project Wastewater Treatment Plant Activated Sludge Fine Air Diffuser System Study	300,000
	Project Waste to Energy Conversion Study Material Conversion Programs	300,000
	Project Wastewater Cogeneration Alternatives Study	300,000
	Net Estimated Change to Fund Balance	<u>0</u>



 Manager

REQUIRES CITY COUNCIL APPROVAL

CHIEF FINANCIAL OFFICER



Disposition

Approved _____

Rejected _____

Transfer by Journal Voucher _____

 City Manager