City of Carson
Report to Mayor and City Council

May 21, 2013
Unfinished Business

SUBJECT: REPORT ON LOCAL GOVERNMENT FINANCING OPTIONS FOR ENERGY EFFICIENCY PROJECTS SUCH AS STREET LIGHTING RETROFITS AND ON-SITE RENEWABLE ENERGY GENERATION (SOLAR SYSTEMS)

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David C. Biggs

Approved by David C. Biggs
City Manager

I. SUMMARY

This item was approved at the May 7, 2013, City Council meeting; however, a request was made to bring this item back to the Council for further discussion.

Saving energy through energy efficiency improvements can cost less than generating, transmitting and distributing energy from power plants, and provides multiple economic and environmental benefits. Energy efficiency also helps reduce air pollution and green house gas emissions, improves energy security and independence, and creates jobs. The City of Carson can promote energy efficiency by developing and implementing strategies that improve the efficiency of our facilities and operations. This report seeks to inform you of the various financing options that are available to local governments to facilitate the implementation of energy efficiency projects. The Engineering Services Division is currently compiling a list of energy efficiency projects in the areas of street lighting retrofits and renewable energy generation (solar systems) with the intent to fund the projects through one or more of the financing approaches that are discussed in the background section of this report.

II. RECOMMENDATION

RECEIVE and FILE.

III. ALTERNATIVES

TAKE another action the City Council deems appropriate.

IV. BACKGROUND

Like any investment, efforts to finance energy efficiency projects benefit from thinking ahead about the pros and cons of different options. For example, what is the best way to pay for a project: through the City's General Fund or by working with an energy service company? What are the payback periods and return on investments for the different financing approaches? Are financial incentives available that reduce the project's costs?

Energy efficiency retrofits cover a wide range of projects, from upgrading water pumps and motors to heating and air conditioning systems to interior and exterior lighting. Identifying the estimated energy and dollar savings per year and over the lifetime of the project, the initial cost of the project, possible rebates or other financial incentives, reduce maintenance costs, and the payback period can help decide which approach is the most appropriate. For example, installing high-efficiency light-emitting diode (LED) or induction lamps and fixtures can reduce maintenance costs and produce energy savings because LEDs and/or induction lights last longer, require less frequent maintenance and use less energy than other types of lighting.

The financing options discussed below will give you some general information about the approaches that are available to fund energy efficiency projects.

General Fund. Using the City's General Fund can be the simplest way to pay for energy efficiency retrofits if the funds are available. The financial benefits accrue more quickly and go directly to the City.

Bonds. Some agencies use general obligation bonds to finance major energy efficiency improvements. Because the bonds are repaid from project energy savings, the City should consider requiring performance guarantees as part of the installation contract.

Utility Financing and Incentives. California's investor-owned utilities (IOUs) offer public agencies a variety of different financing incentives to help reduce the cost of energy efficiency retrofits. These include rebates for energy retrofits of lighting, refrigeration, pumps, motors, and heating, ventilation and air-conditioning (HVAC) systems. The rebates help lower the initial cost and shorten the payback period.

The IOU energy efficiency retrofit loan program known as **On-Bill Financing (OBF)** offers zero-interest loans. Eligible projects must use utility-approved products or technology and be enrolled in a utility rebate or incentive program. The utility may wish to inspect the project before and after the upgrade or retrofit is installed. Agencies pay back the financed amount with the energy savings that result from the project, which are reflected on their monthly utility bill. Payments are usually less than the estimated monthly dollar savings.

Revolving Loan Funds. Revolving loan funds, where the net savings from a City project are used to fund future City projects, provide an ongoing funding stream for subsequent energy efficiency retrofit projects. Some agencies direct 100% of net savings to the revolving fund, while others split the net savings between the revolving fund and other uses, such as the agency's General Fund.

State and Federal Sources. The State of California and the federal government frequently offer grants and free or low-interest loans to finance energy efficiency projects. There are no known grants that are available at this time. The California Energy Commission (CEC) is accepting a one percent loan application on a first-come, first-served basis for eligible energy efficiency projects. Loans for energy projects must be repaid from energy cost savings within 15 years, including principal and interest (approximately 13 years simple payback). Approved projects should anticipate a funding date of June 2014.

It should also be noted that there are energy partnership programs that are available through the CEC to help local agencies, usually at no cost to the agency (up to $20,000.00). This program offers services to help find ways for agencies to become more energy wise, and they assist with energy audits, reviewing proposals and designs, developing equipment performance specifications, etc.

Private Sector Sources ***(Public Agency Master Lease, Power Purchase Agreement (PPA), Energy Service Companies (ESCO's).***

Public Agency Master Lease provides local governments with a financing option available through Southern California Regional Energy Center (SoCalREC). SoCalREC was established by Los Angeles County and the City of Huntington Beach in collaboration with Southern California Edison and the U.S. Department of Energy. This program is funded in part by California utility ratepayers and administered by Southern California Edison under the auspices of the California Public Utility Commission.

SoCalREC's Master Lease Initiative provides capital to finance energy efficiency improvements through a streamlined and standardized process and is not on a reimbursement basis. Public agencies can take advantage of low interest rates (Treasury index plus spread, depending on market and City's credit (typical range 2.75-4.5%)) to finance both energy efficiency and other sustainability projects using a simple standardized process that can be tailored to meet individual needs. SoCalREC Public Agency Master Lease financing is provided through private lenders and may be used in conjunction with other utility or public financing, rebates and incentives.

Power Purchase Agreements (PPA) is another financing approach available to organizations to benefit from onsite renewable energy systems or improve energy efficiency without making large up-front capital investments. Under the PPA model, the energy efficiency or renewable energy assets are legally owned by an entity separate and apart from the owners of the facility. In the most common form of PPA, a building owner allows a third party to install a solar photovoltaic (PV) system on its property and agrees to purchase the power

produced for a fixed price and term, typically 15-25 years. The building owner benefits from a low and stable electricity price, a smaller carbon footprint, and a highly visible renewable energy technology on their premises. Additionally, the third-party owner can monetize the tax credits or renewable energy credits associated with the system's production to create additional value for the building owner. This model can be very useful for tax-exempt agencies, who would otherwise not be able to take advantage of federal investment tax credits (ITC) for renewable energy systems.

Energy Service Companies (ESCOs) are private companies that provide assessment and installation of energy efficiency retrofits. The customer pays for the project with the expected savings from reduced energy usage. Important things to consider when evaluating an ESCO approach include whether the equipment's lifetime will exceed the payback period, who maintains the equipment during the ESCO contract, who owns the equipment when the project cost has been repaid and a performance guarantee to protect the agency if the equipment does not perform as promised.

Cities and Counties across the State continually seek ways to maximize resources and energy efficiency offers a number of money-saving advantages. These same agencies are making great strides in reducing energy use and reaping in the energy savings and reduced maintenance costs. As stated earlier, the Engineering Services Division intends to compile a list of energy efficiency projects in the areas of street lighting retrofits and renewable energy generation (solar systems) and will be presenting these projects along with the most appropriate financing options to the City Council at subsequent meetings either for specific consideration or as part of the annual update of the five year Capital Improvement Program.

V. FISCAL IMPACT

None.

VI. EXHIBITS

None.

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TO:Rev09-04-2012

Reviewed by:

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

Action taken by City Council

Date_____ Action_____

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