



## **Staff Report**

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### DISCUSSION AND DIRECTION FOR SOLAR (PHOTOVOLTAIC) AT THE BELMONT LIBRARY

Honorable Mayor and Council Members:

#### **Summary**

Staff is requesting direction from Council regarding the installation of a solar photovoltaic system for the generation of electricity on the roof of the Belmont Library. In addition to the information contained in this report, Tim Schaefer, of Magis Advisors, will be present at the meeting to provide more detailed information on the options available to the City for installing a solar photo voltaic system for the building.

#### **Background**

In the fall of 2006 the State of California passed legislation (AB32: Global Warming Solutions Act) that mandates significant reductions in greenhouse gas emissions from “stationary sources” such as power plants and petroleum refineries. Although AB32 targets specific industries, local governments will be expected to do their part in reducing greenhouse gas emissions. AB32 calls for a return to 1990 greenhouse gas emission levels by 2020 (a 25% reduction from today’s levels). The long term target for emission reduction is an ambitious 80% by 2050.

The most direct and economical options to reduce emissions are to use less energy overall and to use cleaner methods of generating energy. To that end the City has undertaken steps to address the first option through the completion of a facility energy audit and the implementation of the recommendations in the audit, the purchase of fuel efficient and alternative fuel vehicles, sustainable purchasing and waste reduction. The second option, the use of cleaner forms of energy generation (renewable energy), has not been attempted to date. This report and presentation addresses this option.

#### **Discussion**

Over the past year staff has researched the various issues associated with the installation of a solar photovoltaic (PV) system on the roof of the Belmont Library. The research indicates that the roof on the library will support a solar panel system that can generate a minimum of 100 kilowatts (kW) of electricity for the facility or about 13,000 (kilowatt hours) kWh per month. This equates to approximately 50% of the electricity used in the building. The PV system would be connected to the existing electrical grid. If a solar PV system is installed the electric bill for

the Library would be credited for the amount of electricity generated by the solar PV system up to the amount of electricity metered for the building.

In addition to the technical aspects of designing the most appropriate system for installation the most significant challenge to the placement of a PV system is in how to fund the project. Generally, two methods for funding are available to the City:

1. Direct Purchase
  - Use existing funding source (unidentified)
  - Borrow the money
  - City owns and operates the PV system
2. Power Purchase Agreement
  - City leases or licenses the roof top to a company that builds the PV system at no cost to the City
  - City agrees to purchase the electricity generated by the system at a pre-negotiated price for the duration of the contract
  - City has option to purchase the PV system

Mr. Schaefer will provide more detail and analysis regarding these two funding methods at the meeting.

### **General Plan/Vision Statement**

To provide for the efficient use of energy resources in activities carried out or regulated by the City.

New approaches to land use and building design and construction that are water and energy efficient and minimize waste should be supported.

### **Fiscal Impact**

There is no fiscal impact associated with this report. If Council directs staff to proceed with the project the costs to develop requests for proposals or qualifications and analyze the proposals for a recommendation to Council would not exceed \$10,000.

### **Public Contact**

Posting of City Council agenda.

### **Recommendation**

It is recommended that the City Council provide direction to staff as to whether to proceed with developing and soliciting proposals to develop a solar PV system for the Belmont Library.

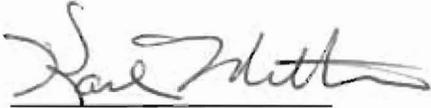
### **Alternatives**

1. Refer to staff for more information.
2. Take no action.

**Attachments**

None

Respectfully submitted,



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Project Manager



Jack R. Crist  
City Manager

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