

WEST BASIN MUNICIPAL WATER DISTRICT

NOVEMBER 17, 2005 - Water Resources
Little, Baker

NOVEMBER 28, 2005 - Board Meeting

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Approved by: Richard Nagel

ACTION CALENDAR

SOLAR ENERGY SYSTEM IMPLEMENTATION

SUMMARY:

In January 2005, West Basin with the assistance of Powerlight Inc. submitted an application to Southern California Edison (SCE) for a grant to construct a 1.0 megawatt solar energy system through their Self-Generation Incentive Program. The application requested approximately \$3.5 million from SCE to construct a \$7.3 million solar energy system.

In August 2005, the Board authorized an application fee payment of \$17,489 to SCE for West Basin to remain on the waiting list and complete a feasibility study to determine the economics of moving forward with a Photovoltaic (PV) solar power energy project. The District's consultant energy team (CDM) performed an analysis of the Powerlight energy proposal and worked with Powerlight to refine the project's scope, costs and payback. In addition, CDM considered typical solar power installations as a comparison to Powerlight's proposal.

Results of the study indicate that implementation of a PV solar energy system would be feasible at the West Basin Water Recycling Plant (WBWRP). In order to maximize the efficiency and economics of the project, the PV system was downsized from the original 1.0 megawatt system to an approximately 0.5 megawatt system. The system would be installed on top of existing and future concrete water storage structures within the WBWRP.

The financing scenario showed that the payback for a system of this magnitude would be approximately 13 years. Implementation of the PV solar energy system would shave peak demands and reduce impacts of escalating electricity costs producing long-term operating cost savings. The estimated capital cost for installation of the PV solar energy system is \$3.4 million less SCE's incentives of approximately \$1.8 million for a total estimated District cost of \$1.6 million.

Implementation of a PV solar energy system is well suited to a design-build approach as most solar industry vendors are set-up for a "turn-key" type of installation. A "Request for Proposals" would need to be developed and submitted to various qualified vendors. It is estimated that the PV solar energy system could be implemented within one-year.

From the analysis performed on the WBWRP site, it is evident that there are opportunities for additional savings with implementation of solar energy systems at other District facilities. Additional grant applications can be pursued in the future to determine the feasibility of implementing additional PV solar energy systems at these locations.

FISCAL IMPACTS:

Costs associated with the PV Solar Energy System would be paid for through the District's construction fund.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed by the Water Resources Committee on November 17, 2005 and was recommended for approval at the November 28, 2005 Board meeting.

RECOMMENDED MOTION:

That the Board authorizes staff to develop and distribute a "Request for Proposals" to various solar power vendors for the design-build of a PV Solar Power Energy System at the West Basin Water Recycling Plant.

LIST OF EXHIBITS:

None.

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