



Board Report

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Agenda Number: 48.

**CONSTRUCTION COMMITTEE
NOVEMBER 19, 2015**

**SUBJECT: ROOF REPLACEMENT IN CONJUNCTION WITH SOLAR POWER
PURCHASE AGREEMENT PROJECT**

**ACTION: APPROVE USE OF DESIGN-BUILD CONTRACTING DELIVERY APPROACH
FOR ROOF REPLACEMENTS**

RECOMMENDATION

A. FINDING that utilizing design-build delivery pursuant to Public Utilities Code (“PUC”) Section 130242 will achieve private sector efficiencies in the **integration of the design, project work, and components related to the construction and installation of new roofs at Divisions 11 and 22 to later enable the installation of solar photovoltaic (“PV”) systems at Divisions 9, 11, 22 and the Expo Yard;**

(REQUIRES TWO-THIRDS VOTE)

B. AUTHORIZING the Chief Executive Officer to solicit a design-build contract for **design, construction and installation of new roofs for Divisions 11 and 22**, pursuant to PUC Section 130242

C. INCREASING the Life of Project Budget for the **Lighting Retrofit at two Rail Divisions project** (CP#204801) from \$1,557,000 by \$2,648,100 to include design and construction of new roofs for Divisions 11 and 22; the new LOP amount will be \$4,205,100.

ISSUE

Pursuant to Metro’s Renewable Energy Policy attached as Attachment A, Metro has committed to a 66% renewable energy use goal by 2020. One of the strategies that Metro has employed to achieve that goal is to install solar PV systems on its facilities at various Metro properties (see Funding and Operating Sustainability-Related Infrastructure report, attached as Attachment B). Staff has conducted assessment and evaluation studies to determine optimal locations among Metro’s real property assets for the installation of solar PV systems. As a result of such studies, Metro Divisions 9, 11, 22, and the Expo Yard have been proposed as the sites for the future installation of rooftop solar PV systems by a third party, to be selected through a competitive solicitation process (such proposed project will be referred to in this report as the “Solar PPA Project”). The solar PV systems

would generate energy for Metro's consumption that will offset a portion of the utility-provided energy at such sites, and result in energy cost savings.

During the investment study conducted at Divisions 9, 11, 22, and the Expo Yard, it was determined that roof replacement ("Roof Replacement Work") is necessary to support the installation of PV equipment at Divisions 11 and 22. This is necessary for two reasons: 1) the roofs at these Divisions are nearing their end of useful life and are already being scheduled to be replaced and 2) existing structures need to be reinforced to accommodate the future solar PV systems load.

Metro is authorized to enter into design-build contracts pursuant to PUC Section 130242, which requires that the Board make a finding that the work will achieve private sector efficiencies, which is why staff are seeking to use the DB method of construction. As discussed further in this report, staff is seeking Board authority to solicit a design-build contract for the Roof Replacement Work at Divisions 11 and 22, in order to ready these two sites for the future installation of the solar PV systems

DISCUSSION

As described above, the proposed Roof Replacement Work is necessary in order to facilitate the installation of the Solar PPA Project. The Solar PPA Project (and related Roof Replacement Work) is consistent with the agency's intent to reduce the cost of energy as outlined in Metro's Environmental Policy and Energy Conservation and Management Plan. Completion of the Solar PPA Project will allow Metro to get closer to fulfilling our renewable energy goals, decrease our carbon footprint, increase our energy independence, and reduce our operational costs. An estimate of projected energy cost savings to be realized from the Solar PPA Project is provided in [Attachment C](#). In order to facilitate the Solar PPA Project, staff will need to issue two concurrent solicitations, one for the Roof Replacement Work (via a design-build contracting delivery approach) and one for the Solar PPA Project (via a power purchase transaction with ancillary property license agreement). This section of the report provides a discussion of these two proposed means of project delivery.

Solar PPA Project

Staff anticipates that the Solar PPA Project will be implemented by way of a public-private partnership in the form of a solar PV Power Purchase Agreement ("PPA") transaction authorized pursuant to Government Code ("GC") Section 4217.10 *et seq.* GC Section 4217.10 *et seq.* permits public agencies (including Metro) to (i) develop energy conservation, cogeneration, and alternate energy supply sources on the public agency's property, provided that certain findings are met under the statute, and (ii) request proposals from qualified persons for energy conservation projects and award such contracts through a competitive best value Request for Proposal (RFP) selection process that may take into account, among other things, the experience of the contractor, the type of technology employed by the contractor, and the cost to the agency. A PPA transaction is among the various alternative financing strategies that have been identified by staff for project delivery, as described in the attached report on Alternative Financing Mechanisms for Energy Projects dated May 15, 2013, attached as [Attachment D](#). In a PPA transaction, Metro would license or lease its property to a third

party solar energy provider (“Power Provider”). The Power Provider installs the solar PV system on Metro’s property, and Metro purchases solar energy from the Power Provider at a negotiated cost, which cost is projected to be less than the anticipated marginal cost to the agency that would have otherwise been consumed from other sources. The Power Provider, selected through a competitive solicitation process pursuant to Section 4217.10 *et. seq.*, will design, finance, and furnish the solar PV system, and maintain the system for at least twenty (20) years. The amount of energy produced by the solar PV system and the net monetary savings to Metro shall be guaranteed in the form of PPA performance incentives that focus on kilowatt hours to be generated and costs avoided.

Upon completion of the analysis of the best solar PV system/PPA, staff will seek Board approval for the award of the PPA contract compliance with the requirements of GC Section 4217.10 *et seq.*

Roof Replacement Work

The roofs at Divisions 11 and 22 were installed 26 and 21 years ago, respectively. Maintenance service requests files reviewed by staff show repairs made due to roof leaks, drywall repair, repainting, and mold remediation among others. It is therefore timely that the repair off these roofs occur in conjunction with the Solar PPA Project. The Roof Replacement Work will be conducted according to or consistent with all applicable codes, and furthermore, the technical specifications will require that the roofs have the structural capacity to accommodate solar PV system facilities.

The Roof Replacement Work will be solicited via a design-build contracting delivery approach. Utilization of a design-build process is allowed under Public Utilities Code Section 130242, which provides for award of a design-build contract to the lowest responsive and responsible bidder. The primary benefit of the design-build process is a shortened project schedule where the design-builder is able to start demolition/construction while the design is being completed as well as including additional efficiencies in project management, administration and coordination, all of which benefits, facilitate, and expedite project completion.

The design-build contracting delivery approach was selected for the Roof Replacement Work based on the following considerations:

- A single point of responsibility for design and construction will increase the time and management efficiency on the implementation of the projects;
- Staff project development resources are limited, so more budgeted projects can be accomplished by adding design-build capability;
- Metro's design risks are shifted to design-builder, while changes related to design are minimized;
- The project requires standard or minimal design effort and is therefore more conducive to being implemented by design-build contractors with general engineering and contracting capacity.

Approval of the action described in this report would allow staff to proceed with a solicitation utilizing the design-build contracting delivery approach pursuant to Public Utilities Code Section 130242 for the Roof Replacement Work.

DETERMINATION OF SAFETY IMPACT

This Board action will not have an adverse impact on safety standards for Metro. It will however increase safety for Metro maintenance and contractor personnel that may be required to maintain the PV equipment as well as other projects that should become more energy and operationally efficient.

FINANCIAL IMPACT

The current FY16 budget for this project is \$554,000. The FY16 \$1,000,000 funding increase for this project will partially come from Project Number 450003, Miscellaneous Contingency-Capital Construction, in Cost Center 8510. The additional \$1,648,100 will be included as part of the FY17 Capital Program for a total project budget of \$2,648,100.

Since this is a multi-year capital project, the cost center manager and Executive Director, Program Management and the Executive Officer, Environmental Compliance and Sustainability will be responsible for budgeting in future years.

Impact to Budget

The initial \$1,000,000 source of FY16 funds for this project will come from Project 450003, Miscellaneous Contingency-Capital Construction and the Green Fund which is used to support the execution of sustainability-related infrastructure projects. The balance of the FY16 funding required for this project comes from Proposition A 35% cash/bonds. The additional future funding for the LOP increase will also be Proposition A 35% cash / bonds which impacts Rail Operating and Capital budgets.

The Solar PPA Project will be funded and financed by the Power Provider who will be awarded the PPA contract at a later date, following Board approval. Staff will provide additional information at the time that staff seeks Board approval for awarding of the contract for the Roof Replacement Work and Solar PPA Project.

ALTERNATIVES CONSIDERED

Metro has committed to using up to 66% of its energy from renewable energy sources. Installation of solar panels at our facilities has been employed for some time. We have an opportunity through this project to replace roofs that are at the end of their useful life at Divisions 11 and 22 as an integral part of our renewable energy program.

The Board may reject the request to contract for the Roof Replacement Work; and consequently force Metro to wait until an unknown future time that the roofs are replaced before we can install any

solar PV systems. This will have a cumulative effect on our achievement of our renewable energy use goal.

NEXT STEPS

After the recommended Board Action is approved, staff will release an Invitation for Bids (IFB) to solicit a design-build contractor to install the new roofs at Divisions 11 and 22. In parallel, staff will also release an RFP to solicit a Power Provider to install, operate and maintain the solar PV systems at Divisions 9, 11, 22 and the Expo Yard. Upon evaluation of the IFB bids and RFP proposals for each respective solicitation, staff will seek Board approval prior to awarding or the two contemplated contracts. Approval of the two contracts will include determinations of compliance with the requirements of PUC Section 13242 (for the Roof Replacement Work) and GC Section 4217.10 *et seq.* (for the Solar PPA Project).

ATTACHMENTS

Attachment A - Renewable Energy Policy

Attachment B - Funding and Operating Sustainability-Related Infrastructure report dated September 18, 2014

Attachment C - Solar PPA Estimated Energy and Operational Costs Avoided Over 25- years

Attachment D - Report on Alternative Financing Mechanisms for Energy Projects dated May 15, 2013

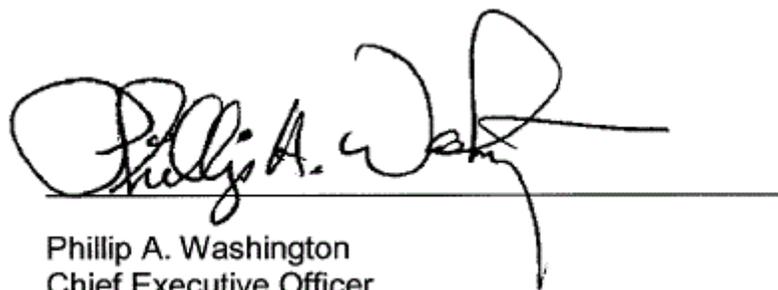
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