

OFFICE OF THE CITY ADMINISTRATIVE OFFICER

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Council District: outside City limits

To: The Mayor
The City Council

From: Miguel A. Santana, City Administrative Officer



Reference: Communication from the Department of Water and Power Board of Commissioners dated October 10, 2012

Subject: **POWER SALES AGREEMENT WITH SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY NO. BP 12-014 AND RELATED AGENCY AGREEMENT NO. BP 12-015 FOR THE COPPER MOUNTAIN SOLAR 3 PROJECT**

SUMMARY

The Department of Water and Power (DWP) Board of Commissioners (Board) requests:

- Approval, by ordinance, to enter into a Power Sales Agreement (PSA) No. BP 12-014 between DWP and the Southern California Public Power Authority (SCPPA) to purchase 210 megawatts (MW) of solar power energy annually from SCPPA resulting in an average annual expenditure for purchased energy of \$40.2 million for 20 years. The PSA also enables SCPPA to enter into a Power Purchase Agreement (PPA) with Copper Mountain Solar 3, LLC, the owner of Copper Mountain Solar 3 Project (CMS3) and a wholly-owned subsidiary of Sempra U.S. Gas and Power (Sempra), to obtain the renewable energy and environmental attributes towards Renewable Portfolio Standard (RPS) targets of DWP and the City of Burbank (collectively referred to as the Participants). The PSA includes an option for SCPPA to purchase the facility in the future;
- Approval, by ordinance, to enter into an Agency Agreement (AA) No. BP 12-015 between DWP and SCPPA which designates DWP as the Project Manager to administer the CMS3 Project including fiscal matters on behalf of and for the benefit of the Participants. DWP will charge and receive reimbursements from SCPPA for this service based on each Participant's share of the CMS3 Project;
- Approval of authorization for the DWP Board to act on amendments without further approval by the Mayor and City Council, including any recommendations that SCPPA purchase CMS3 and any approval of the costs of SCPPA purchasing the facility that would be borne by the Department.

CMS3 Project total capacity is expected to be 250 MW with Participant shares consisting of DWP receiving up to 210 MW (or 84 percent) of the energy output and the City of Burbank receiving up

to 40 MW (or 16 percent) of the energy output. Renewable energy from CMS3 would represent 1.9 percent of the Department's RPS requirement in 2020 and will be enough energy to initially serve more than 76,000 homes. The energy from CMS3 will be added to the Department's existing energy grid and will not replace the existing base load supply. It is noted by the DWP that the PPA includes a condition that execution of the proposed PSA is to occur prior to the end of December 2012 to avoid impacting the proposed Commercial Operation Date (COD) of December 31, 2015.

City Council approval of PSA and AA is required pursuant to City Charter Sections 373 regarding rules for long-term contracts and 674(a) (1) and (2) regarding the purchase of power generating capacity. The proposed resolution, PSA, and AA have been reviewed by the City Attorney and approved as to form and legality. Since the Agency Agreement will be administered by DWP staff, City Charter Section 1022 regarding the use of independent contractors is not applicable.

BACKGROUND

In 2002, the California Legislature passed Senate Bill (SB) 1078 which established the California Renewable Portfolio Standard. SB 1078 requires privately owned utilities and encourages public owned utilities to increase their use of renewable energy resources until 20 percent of generation is obtained from renewables by the year 2017. Senate Bill SB2 1X, the California Renewable Energy Resources Act furthers SB 1078 by requiring both privately and publicly owned utilities, such as DWP, to increase their use of Renewable energy resources to 25 percent by the year 2016 and 33 percent by 2020. The DWP Board adopted the 2011 Integrated Resources Plan (IRP) which includes the following RPS Policy targets that achieve compliance with regulatory mandates:

RPS Policy and Compliance Targets	
Renewable Energy Amount (Average)	Compliance Targets
20%	Jan. 1, 2011 to Dec. 31, 2013
25%	Jan. 1, 2016 to Dec. 31, 2016
33%	Jan. 1, 2020 to Dec. 31, 2020
33%	Each year after 2020

DWP's IRP presents several potential strategies for meeting the regulatory requirements and policy objectives for increasing renewable energy generation and reducing greenhouse gases.

SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY

The Southern California Public Power Authority (SCPPA) is a non-profit joint powers authority. SCPPA was formed in 1980 for the purpose of planning, financing, developing, acquiring, constructing, operating and maintaining projects for the generation and transmission of electric energy. The members include the municipal utilities of the cities of Anaheim, Azusa, Banning, Burbank, Cerritos, Colton, Glendale, Los Angeles, Pasadena, Riverside, Vernon and the Imperial Irrigation District. SCPPA is governed by a Board of Directors, which consists of representatives

from each of its members. The management of SCPPA is under the direction of an Executive Director, who is appointed by the Board. SCPPA's role has evolved over the years to include legislative advocacy at the state and national levels. SCPPA currently holds capacity entitlements in various projects including the following projects and 100 percent of the output is sold and controlled by its member utilities.

SCPPA Projects

- Palo Verde Power Plant (DWP Participant)
- Hoover Upgrading Power Project
- Southern Transmission System (DWP Participant)
- Mead-Adelanto Transmission Project (DWP Participant)
- (*PROPOSED*) Copper Mountain Solar 3 Project (DWP Participant)

REQUEST FOR RENEWABLE ENERGY PROPOSALS

In January 2011, DWP and multiple utilities participated with the Southern California Public Power Authority (SCPPA) to issue a Request for Proposal (RFP) for the purchase and/or acquisition of renewable energy sources and 220 proposals were received. The purpose of the proposal process was to assess the availability of renewable energy projects and environmental attributes. DWP evaluated the proposals and intends to implement projects that satisfy the intent of the 2011 Integrated Resource Plan (IRP), which outlines DWP's goals for utilizing different resources for energy production.

The Department intends to achieve the RPS requirements and goals by utilizing a combination of existing projects, DWP RFPs for renewable energy projects, and Southern California Public Power Authority (SCPPA) sponsored projects. A significant number of the responses were for existing projects that are sited at facilities that did not require extensive development and regulatory approvals. The existing renewable projects include small hydro, biomass, and wind projects. The proposed CMS3 Project is one of the 220 proposals selected by several SCPPA members based on established criteria.

THE COPPER MOUNTAIN SOLAR 3 PROJECT

The CMS3 Project is a fixed axis photovoltaic solar facility located in Boulder City, Nevada, that will be connected directly with the DWP transmission system at the nearby Marketplace Substation, which is controlled by an organization that includes SCPPA. Through separate power sales agreements between SCPPA and each Participant, SCPPA will sell all of the renewable energy received from the CMS3 Project and will pass through to each Participant in accordance with its respective output share, the rights, benefits, and obligations provided under the PPA. The proposed PSA between DWP and SCPPA authorizes the purchase of up to 210 MW of solar renewable energy from SCPPA along with the environmental attributes and generating capacity rights of the CMS3 Project with a contractual term of 20 years.

PROJECT COST AND SOURCE OF FUNDING

The current Power System financial plan that provided the basis of the Incremental Rate Ordinance No. 112273 (CF No. 12-1504), adopted October 5, 2012, considered the purchase of solar energy to comply with RPS requirements and included a placeholder for two solar projects similar to this proposal for CMS3 and a separate proposal for the 250MW K-Road Solar Project. Rate impacts of the two placeholder solar projects were forecasted to affect fiscal year 2013-14 and fiscal year 2014-15. Since the CMS3 Project COD is December 2015, which is after the dates for placeholder solar projects, the associated rate impact is forecasted to affect the second half of fiscal year 2015-16.

DWP states that the cost of renewable solar energy and environmental attributes from CMS3 is expected to cost approximately \$43 million for each of the first five years with the annual average cost reducing to \$40.2 over 20 years as the solar panel generation output degrades over time. The fixed price per megawatt hour (MWh) is \$95.75 and the estimated rate impact will be approximately \$0.0012 per kilowatt hour (kWh) by fiscal year 2015-16. The impact on a typical residential customer's bill is forecasted to be \$0.60 per month.

The environmental attributes purchased as part of the price of energy will permit DWP to accumulate Renewable Energy Credits (RECs) as a credit to the DWP Renewable Portfolio Standard (RPS) goal. In the event the CMS3 Project energy no longer qualifies as renewable energy, the PPA between SCPPA and CMS3 allows SCPPA to reduce the full payment of \$95.75 per MWh to approximately \$45.60 per MWh. Furthermore, CMS3 would be obligated to fix the CMS3 Project to generate qualifying renewable energy since the PPA provides for no substitution of non-qualified renewable energy. According to the Department, the fixed price of \$95.75 per MWh is currently competitive with other bids received by SCPPA that meet established criteria. However, DWP also states that the future price of solar energy is uncertain due to rapidly advancing technology within the solar industry that has substantially lowered the cost and increased the efficiency of solar panels, benefiting the Department with lower costs for solar energy.

Current tax laws allow for the federal Investment Tax Credits (ITCs) to apply to private entities that develop and operate a qualifying renewable energy generation facility. DWP states that the CMS3 Agreement has been structured to allow SCPPA Participants to indirectly receive the benefits associated with ITCs through lower energy purchase costs. According to the Department, the average value of the ITCs to DWP is approximately \$8.4 million per year or \$168 million over the 20 year term.

The significant terms of the PSA are as follows:

- COD is estimated in December 2015;
- Amount of power provided to DWP is 210 MW;
- Fixed price per megawatt hour (MWh) is \$95.75;
- SCPPA has an option to purchase CMS3 at the tenth, fifteenth, or twentieth anniversary of COD.

OPTION TO PURCHASE CMS3 PROJECT

SCPPA has an option to purchase CMS3 at the tenth, fifteenth, or twentieth anniversary of COD. The price is based on the fair market value of the facility at the time of purchase, with floor and ceiling prices summarized in the table below.

Options to Purchase CMS3		
Year	Floor Price	Ceiling Price
10	\$339 million	\$398 million
15	\$262 million	\$315 million
20	\$140 million	\$168 million

Although it is the policy of the Department to own renewable power facilities and this Agreement does not guarantee ownership and does not provide DWP a direct option to purchase, the energy from the project will allow DWP to meet its goals of increasing the use of renewable energy by 2020 until new sources can be acquired or built.

RISK MANAGEMENT

The PPA provides for CMS3 to deliver solar energy on a long term basis; therefore, it is in the best interest of DWP and SCPPA to partner with a viable company to provide this energy. One indication of the capability of a company to adhere to a long term commitment is its credit rating. The DWP advises that CMS3, LLC, the owner of CMS3 Project, is a wholly-owned subsidiary of Sempra U.S. Gas and Power, LLC, which is a subsidiary of Sempra Energy, a California Corporation. Sempra Energy has a Standard and Poor's credit rating of BBB+ and a Moody's rating of Baa1.

Sempra Energy currently provides service to more than 20 million California customers through its other subsidiaries San Diego Gas & Electric Co. and Southern California Gas Co. Sempra U.S. Gas & Power develops and operates clean energy facilities throughout the U.S. with a focus on zero and low-emission fuels. The company has projects totaling 1,408 MW in different phases of development including the Copper Mountain Solar 1 Project with 58 MW in service and the Copper Mountain Solar 2 Project with 64 MW in service and 86 MW in construction.

TRANSMISSION

Electricity generated from CMS3 will be delivered through a new eight-mile long transmission line to be constructed by CMS3 that connects to the Marketplace Substation in Boulder City, Nevada. The Marketplace Substation is owned by the Mead-Phoenix and Mead-Adelanto ownership groups. SCPPA members (including LADWP) are largest part of those ownership groups. Other owners besides SCPPA include Salt River Project, Arizona Public Service, and Western Area Power Administration. The existing capacity on the Marketplace-Adelanto 500 kV Transmission Line will be utilized to deliver energy from the Marketplace Substation into Los Angeles.

CANCELLATION OF AGREEMENT

The Agreement provides for scenarios in which DWP can terminate the Agreement with CMS3. One of the scenarios is the Force Majeure Event that is commonly found in many agreements and provides for cancellation due to an uncontrollable condition such as a disaster or act of God, preventing one of the parties from performing obligations listed in the Agreement. The Agreement with CMS3 provides performance securities for various stages of construction and through the life of the facility, which DWP can draw on if certain conditions are not met. In order to better secure the credit risk, SCPPA obtained a Performance Bond (also referred to as Performance Security) in the amount of \$12 million furnished on the effective date. A failure to meet the following milestones will result in the damages as listed below:

CMS3 Milestones and Penalty Schedule	Cost per Day	Maximum Cost
Start construction by June 1, 2013	\$33,000	\$12,000,000
Partial COD (125 MW) by December 31, 2014	\$33,000	\$12,000,000
Full COD by December 31, 2015	\$66,000	\$12,000,000

COSTS OF OTHER SOURCES OF ENERGY

The typical industry cost of energy ranges from \$48/MWh to \$152/MWh, not including the transmission costs, which can add up to \$17/MWh to the cost. DWP advises that the costs continue to escalate at a rate greater than inflation and that the average price of the energy proposed in the CMS3 PSA of \$95.75 per MWh or \$0.09175 per kWh is competitive. A recent survey of industry-wide energy prices comparing the approximate costs per MWh for other sources of energy and prices reflected in the Department's proposed 2012 IRP are provided below for comparison with the energy cost under the CMS3 PSA.

<u>Source of Energy</u>	<u>Cost per MWh</u>
Coal	\$48
Small Hydropower	\$76
Natural Gas	\$80-\$170 (depends on capacity and cost of gas)
Geothermal	\$65-\$106
Biomass	\$68-\$110
Solar	\$116-\$152

PROPOSED USAGE OF SOLAR GENERATED ENERGY

The DWP electric generation can be separated into three basic categories: base, intermediate and peak load units. Base load units derive their energy from operating generation stations on a constant (24 hours a day, 7 days a week) basis, historically needed to supply the DWP customers a majority of the time. Intermediate load units are utilized to satisfy periodic energy demand fluctuations. Peak load units are utilized to address short term seasonal or emergency needs.

Solar energy is affected by seasonal and meteorological variations that impact the availability of

the sun; however, the facility is sited in an area which has a high probability of generating solar energy seven days a week during daylight hours. The energy will not be utilized in the same manner as the Department's base energy generation because of the intermittent nature of solar energy; however, it will be used to supplement the base energy during peak hours and during high temperature periods.

The above mentioned aspects of the proposed resolution, agreements, and this report, are based upon revised information received from the Department subsequent to the initial request submittal.

RECOMMENDATIONS

That the Council, subject to the concurrence of the Mayor:

1. Approve, by ordinance, execution of (i) Power Sales Agreement No. BP 12-014 between DWP and the Southern California Public Power Authority to purchase up to 210 megawatts of solar power annually through the Copper Mountain Solar 3, LLC for power from the Copper Mountain Solar 3 Project located in Boulder City, Nevada which includes an option for the Southern California Public Power Authority to purchase the facility in the future; and (ii) Agency Agreement No. BP 12-015 between DWP and Southern California Public Power Authority which designates DWP as the Project Manager to administer the project on behalf of and for the benefit of the project participants, the City of Burbank and DWP;
2. Approve authorization of the DWP Board to act on amendments, under Power Sales Agreement No BP 12-014, without further approval by the Mayor and Council, including any recommendations that SCPPA purchase Copper Mountain Solar 3 Project and any approval of the costs of SCPPA purchasing the facility that would be borne by the Department.

FISCAL IMPACT STATEMENT

The proposed Agreements will have no direct impact on the City General Fund. The Power Revenue Fund will provide an average annual expenditure of \$40.2 million for 20 years, or \$804 million total over the 20 year duration of the Agreement. Funding is budgeted in the Power Revenue Fund's Fuel and Purchased Power Budget. DWP states that the estimated rate impact for this project will be approximately \$0.0012 per kWh beginning in Fiscal Year 2015-16.

Time Limit for Council Action

The City Attorney advises that there is no time limitation for items approved by ordinance.