



OFFICE OF THE CITY MANAGER

March 17, 2014

To: Honorable Mayor and City Council

Through: Municipal Services Committee (March 11, 2014)

From: Michael J. Beck
City Manager

Subject: **AUTHORIZE THE CITY MANAGER TO AMEND THE POWER SALES AGREEMENTS WITH THE SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY FOR THE PURCHASE OF SOLAR ENERGY FROM THE SILVERADO PROJECTS**

On March 11, 2014, the Municipal Services Committee recommended that the City Council authorize the City Manager to amend the Power Sales Agreements with the Southern California Public Power Authority ("SCPPA") for the purchase of solar energy from the Silverado projects.

Additionally, the Committee requested that Pasadena Water and Power Department ("PWP") provide more detail as to why the proposed amendment was preferred to pursuing a replacement contract with an alternative supplier and collecting liquidated damages from the Silverado projects if Silverado was unable to meet its performance obligations (i.e., build the projects on time).

It is important to note that SCPPA entered into a contract with Silverado to purchase all of the output. Under separate contracts, three SCPPA members including Azusa, Pasadena and Riverside ("Participants") are purchasing portions of the energy from SCPPA. All three Participants must agree whether or not to amend the existing contracts. Liquidated damages would potentially be payable to SCPPA only if all three Participants agree not to authorize the amendments.

Staff from each of the Participants agree that the Silverado projects are preferred alternatives and the SCPPA Board of Directors approved the contract amendment with Silverado on February 20, 2014. Staff from all three Participants are currently in the process of seeking authority from their respective City Councils to sign amended contracts with SCPPA, with decisions expected by April 1, 2014.

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PWP staff reviewed approximately eighty (80) solar energy proposals received by SCPPA as a result of the Renewable Energy Request for Proposals process between January 1, 2013 and February 13, 2014. While these proposals provided SCPPA with valuable insight and leverage in renegotiating terms for the Silverado projects, none of the competitively priced proposals align as well as the amendment with PWP's overall needs. The proposed amended contract with SCPPA for the Silverado projects provides the most attractive combination of price, size, location, capacity benefit, and degree of advanced project development.

While SCPPA has received a few solar project offers that are priced similarly to the proposed Silverado amendment price (though generally higher), initial reviews indicate each has potentially significant flaws and must be thoroughly vetted before further consideration. Typical challenges with alternative bids include:

- Less desirable location or point of interconnection (higher cost of congestion, losses, risk of transmission outages, curtailment, etc.);
- Resource Adequacy Capacity and/or Local Capacity Attributes is not available or only available at an additional price;
- Project size is too large for PWP and other SCPPA members have not expressed sufficient interest to make the project viable;
- Project is not located in the California Independent System Operators ("CAISO") Balancing Authority – significant additional transmission costs and barriers, and Resource Adequacy Capacity would not be assured;
- Unknown/inexperienced developer and/or project viability questionable;
- Transmission and/or interconnection problems in the project area.

Without the proposed amendments, Silverado will likely miss its key milestones under the Power Purchase Agreement beginning September 1, 2014 and potentially incur liquidated damages to SCPPA in the amount of \$4,000 per day, subject to refund if Silverado achieves commercial operation by December 31, 2014. If commercial operations do not commence by December 31, 2014, the damages increase to \$10,000 per day. Finally, if Silverado fails to achieve commercial operation by December 31, 2015 then SCPPA may, in its sole discretion, terminate the Agreement.

Silverado has posted letters of credit in the amount of \$500,000 per project (\$1,000,000 total) as project development security with SCPPA. Although this performance security is not a contractual cap to Silverado's damages, recovery of additional amounts is highly uncertain. Since PWP's participation is 32.5% of the projects, PWP can assume that its recovery would likely be no more than \$325,000, or less than 0.5% of the total contract value.

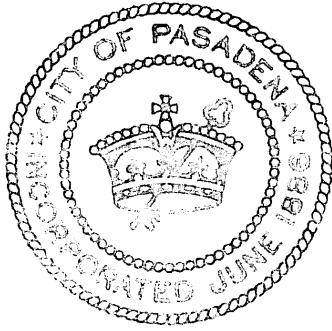
Hypothetically, if the Participants elected to pursue an alternative long-term solar contract while allowing the existing Silverado contract to run its course, it is possible that PWP could meet its renewable procurement with similar cost savings and potentially collect liquidated damages from the Silverado projects. It is also possible that both the Silverado and alternative projects would have materialized, leading to excessive renewable energy procurement at unnecessarily higher overall cost.

Considering the uncertainties of alternative supply options and the costs and risks associated with leaving the existing contracts in place, the proposed contract amendment is the best course of action for the City.

Approved by:



MICHAEL J. BECK
City Manager



Agenda Report

March 17, 2014

TO: Honorable Mayor and City Council

THROUGH: Municipal Service Committee (March 11, 2014)

FROM: Water and Power Department

SUBJECT: AUTHORIZE THE CITY MANAGER TO AMEND THE POWER SALES AGREEMENTS WITH THE SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY FOR THE PURCHASE OF SOLAR ENERGY FROM THE SILVERADO PROJECTS

RECOMMENDATION:

It is recommended that the City Council:

1. Find that the recommended contract amendment authorization is exempt from the California Environmental Quality Act ("CEQA") pursuant to State CEQA Guidelines Section 15061(b)(3) (General Rule); and
2. Authorize the City Manager to amend the Power Sales Agreements with the Southern California Public Power Authority ("SCPPA") for the purchase of renewable energy and capacity from a 32.5% share of the Antelope Big Sky Ranch Solar Project and the Summer Solar Project ("Silverado Projects") in Lancaster, California, for a total of up to 13 MW for a term of 25 years after the commercial operation date. Neither competitive bidding nor competitive selection is required pursuant to City Charter Section 1002(h), and Pasadena Municipal Code Section 4.08.049.A3, contracts with other governmental entities.

EXECUTIVE SUMMARY:

On December 17, 2012, the City Council authorized the City Manager to enter into Power Sales Agreements with SCPPA for the purchase of renewable energy and capacity from a 32.5 percent share (up to 13 MW of the 40 MW combined total) of solar energy from the Silverado Antelope Big Sky Ranch and Summer Solar projects in Lancaster, California.

Due to changes in electrical infrastructure and equipment costs affecting the Silverado Projects, SCPPA and the project developer have negotiated new terms for the contract including an average 25% levelized price reduction (from \$94.34/MWh to \$71.25/MWh) as consideration for relocating the project sites, a new point of delivery for the energy, and the associated 18-24 month delay in project completion. The price reduction is expected to reduce energy costs by approximately \$19.5 million over the 25 year contract term.

Under the proposed contract amendment, PWP expects to procure approximately 32,000 MWh per year, or approximately 2.7% of retail sales, of category 1 renewable energy from the Silverado Projects at a cost of approximately \$2.3 million per year.

BACKGROUND:

The City of Pasadena has adopted a number of environmental goals applicable to the Pasadena Water and Power Department ("PWP"), including a Renewable Portfolio Standard ("RPS") goal to supply 40 percent of its retail energy sales with renewable resources by 2020. Meeting the RPS goal is a key component of PWP's plan to reduce greenhouse gas emissions 40 percent by 2020. These goals were adopted by the City Council as part of PWP's Integrated Resource Plan ("IRP") in 2009.

A reconfiguration of the project interconnection is required because a number of new wind and solar renewable energy projects are being developed that could cause overloads on the local 66kV sub-transmission system, where the Silverado Projects were originally intended to deliver power. Furthermore, the California Independent System Operator ("CAISO") and Southern California Edison ("SCE") have proposed to reclassify these 66kV lines from "transmission" to "distribution," which would remove these facilities from CAISO control and eliminate cost reimbursement for a portion of the interconnection facilities. These issues and cost impacts were highly uncertain when the original contract was signed.

To avoid potentially incurring the substantial cost associated with necessary upgrades, Silverado proposed to amend the original power purchase agreements with SCPPA. The amendments would allow Silverado to relocate the projects to other nearby sites in order to interconnect at the 220kV Antelope substation, also in Lancaster, where reimbursement of the network upgrade portion of the interconnection costs would be assured.

While the original contract price for the Silverado Projects was competitive at the time the agreements were executed, recent solar photovoltaic ("PV") proposals received by SCPPA and solar PV contracts executed by PWP have been priced significantly lower. The request by Silverado to amend the original agreements provided an opportunity to renegotiate the pricing to levels substantially lower and more reflective of current market conditions.

Table I summarizes the changes that are proposed to be incorporated into the proposed amendments.

**Table I
Summary of Proposed Amendments**

	CURRENT CONTRACTS	AMENDED CONTRACTS
All-in Levelized Price:	\$94.34/MWh	\$71.25/MWh
Detailed Price:	Energy: \$77.34/MWh (year 1) Local Resource Adequacy Capacity: \$5.10/MWh (year 1) Escalation: 1.5% Scheduling Coordinator Credit: \$1.30/MWh (paid by Silverado to SCPPA)	Energy: \$66.15/MWh Local Resource Adequacy Capacity: \$5.10/MWh No Escalation No Scheduling Coordinator Credit
Estimated Life of Contract Savings (PWP Share):		\$19,489,342
CAISO Fee Reimbursement Cap:	\$150,000/year per project (Excess repaid at end of term)	\$125,000/year per project \$500,000/lifetime per project (Excess repaid at end of term)
Expected Commercial Operation Date ⁽¹⁾ :	12/1/2014	6/1/2016
Outside Commercial Operation Date ⁽²⁾ :	12/31/2014	12/31/2016
Point of Interconnection:	Antelope Substation 66kV Del Sur Substation 66kV	Antelope Substation 230kV

⁽¹⁾ Contractor subject to liquidated damages if project is not operational by the Expected Commercial Operation Date

⁽²⁾ Purchasers may terminate contract if project is not operational by the Outside Commercial Operation Date

Due the intermittent generation output from solar resources, the CAISO imposes various charges when these resources are scheduled. The CAISO charges these fees, which can vary substantially over time, to the “scheduling coordinator” that submits the schedule to the CAISO. Silverado has agreed to reimburse SCPPA for such fees in the form of a cash credit up to an annual and lifetime limit for each project as shown in Table I. Once the caps are exceeded, Silverado will reimburse such fees in the form of additional energy deliveries after the 25 year contract delivery term is completed.

Table II summarizes the contract price for various renewable resources authorized by the City Council, as well as the price for the Silverado Projects under the proposed contract amendment. Forecast market prices for non-renewable “brown power” are also for comparison.

**Table II
Renewable Energy Contract Price Comparison**

Resource Name/Type	Contract Execution Year	Contract Energy Price ⁽¹⁾ by Calendar Year (\$/MWh)				
		2015	2016	2017	2020	2025
Amended Silverado Solar ^{(2) (3)}	2014		\$71.25	\$71.25	\$71.25	\$71.25
Original Silverado Solar ^{(2) (3)}	2012	\$81.14	\$82.38	\$83.63	\$87.51	\$94.37
Recurrent Energy Projects ^{(2) (3)}	2013	\$69.98	\$69.98	\$69.98	\$69.98	\$69.98
Kingbird Solar	2013	-	\$68.50	\$68.50	\$68.50	\$68.50
WM Biomethane ⁽²⁾	2011	\$94.92	\$94.92	\$94.92	\$94.92	-
Sequent Biomethane ⁽²⁾	2011	\$94.92	\$94.92	\$94.92	\$94.92	-
EDF Biomethane ⁽²⁾	2011	\$98.00	\$98.00	\$98.00	\$98.00	-
Milford Wind ⁽³⁾	2009	\$72.19	\$73.45	\$74.74	\$78.73	\$85.86
Ormat Geothermal Phase 2 ⁽³⁾	2008	\$83.24	\$84.49	\$85.76	\$89.67	\$96.60
Minnesota Methane	2006	\$81.07	\$83.58	-	-	-
Chiquita Canyon LFG ^{(2) (3)}	2006	\$65.25	\$65.25	\$65.25	\$65.25	\$65.25
Ormat Geothermal Phase 1 ⁽³⁾	2005	\$65.74	\$66.73	\$67.73	\$70.83	\$76.30
Iberdrola Renewables	2003	\$53.50	\$53.50	\$53.50	\$53.50	-
2013 Market Forecast ⁽⁴⁾ (brown power)		\$46.19	\$48.50	\$50.92	\$58.95	\$75.23

⁽¹⁾ Contract prices exclude costs of transmission, losses, and integration fees. All contract prices include applicable cost of System Resource Adequacy and Local Resource Adequacy capacity, if provided

⁽²⁾ These contracts provide, or are expected to provide, Local Resource Adequacy capacity

⁽³⁾ Contract is through the Southern California Public Power Authority (“SCPPA”)

⁽⁴⁾ The Market Forecast is for energy only and does not include the value of Resource Adequacy capacity

COUNCIL POLICY CONSIDERATION

The proposed agreement amendments are consistent with the City’s Urban Accords Goals with respect to renewable energy and greenhouse gas emission reduction goals, the General Plan Energy Element, the City Council’s Strategic Planning Goals, the 2012 Power Integrated Resource Plan and PWP’s RPS Procurement Plan. The Projects will help PWP achieve regulatory compliance as well as City Council goals in a cost-effective manner.

ENVIRONMENTAL ANALYSIS:

The proposed agreement amendments are determined to be exempt from the CEQA process pursuant to State CEQA Guidelines Section 15061(b)(3), the general rule that CEQA applies only to projects which have the potential for causing a significant effect on the environment. Where it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment, the activity is not subject to CEQA. The proposed action is for the City to enter into amendments of agreements with SCPPA to purchase power from the Silverado Projects, which are proposed for construction and operation in the County of Los Angeles. The City of Pasadena does not have the authority to approve/entitle the Silverado Projects. Such authority rests with the County of Los Angeles, and the County is responsible for preparing the CEQA documents to consider the environmental impacts of the projects. The City's proposed Power Sales Agreements do not commit the County to approving the Silverado Projects and, thus, no physical construction is contemplated or would be authorized, by the actions proposed in this staff report.

FISCAL IMPACT:

With this proposed amendment, PWP expects to procure approximately 32,000 MWh of category 1 renewable energy from the Silverado Projects each year commencing mid-FY 2017 at a cost of approximately \$2.3 million. The annual production and cost is anticipated to decline by approximately 0.5% annually after the first year.

Due to the delay in project completion PWP may need to procure additional renewable resources from FY2015 to FY2017 to meet RPS goals; however, such replacement procurement is expected to have a lower premium than that associated with the original contract price, therefore reducing or deferring any electric rate impacts associated with the Silverado Projects.

Table III summarizes the estimated average net cost premium and rate impacts associated with PWP's existing portfolio of City Council authorized renewable energy supply contracts resource portfolio over the next five fiscal years. Due to the elimination of price escalation under the proposed amendment, annual savings compared to the current contract terms will increase each year and reach approximately \$1.3 million in the final year of the contract

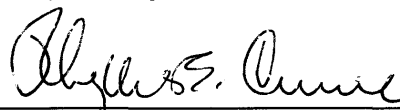
**Table III
Renewable Energy Contracts Price Comparison**

Expected Cost or Rate Impact	Current Contract Terms	With Proposed Amendments	Increase/ (Decrease)
Renewable Premium (\$/year)	\$8,900,000/year	\$8,600,000/year	\$(300,000)/year
Average Rate Impact of Renewable Premium (\$/kWh)	\$0.00783/kWh	\$0.00756/kWh	\$(0.00027)/kWh
Average Monthly Bill for 500 kWh/month customer (\$/mo)*	\$87.89/mo	\$87.75/mo	\$(0.14)/mo
Renewable Premium Portion 500 kWh/month customer (\$/mo)	\$3.92/mo	\$3.78/mo	\$(0.14)/mo

**The monthly bills do not include any potential changes in electric rates that have been proposed or may occur in the future.*

All costs associated with this agreement will be recovered in the Energy Charge component of Pasadena's electric energy rates.

Respectfully submitted,



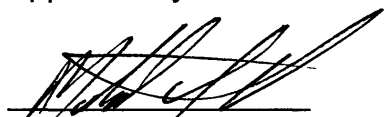
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