

Agenda Report

December 17, 2012

TO: Honorable Mayor and City Council

THROUGH: Municipal Services Committee (December 11, 2012)

FROM: Water and Power Department

SUBJECT: AUTHORIZE THE CITY MANAGER TO ENTER INTO POWER SALES AGREEMENTS WITH THE SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY FOR THE PURCHASE OF 13 MEGAWATTS OF SOLAR ENERGY FROM THE SILVERADO PROJECTS

RECOMMENDATION:

It is recommended that the City Council:

1. Find that the recommended contract authorization is exempt from the California Environmental Quality Act ("CEQA") pursuant to State CEQA Guidelines Section 15061(b)(3) (General Rule);
2. Authorize the City Manager to enter into Power Sales Agreements with the Southern California Public Power Authority ("SCPPA") to purchase renewable energy and capacity from a 13/40 (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 13MW;
3. Find that this contract is exempt from competitive bidding pursuant to City Charter Section 1002(h), contracts with other governmental agencies or their contractors; and
4. Find that this contract is exempt from competitive selection pursuant to Pasadena Municipal Code Section 4.08.049.A.3, contracts with other governmental entities.

MUNICIPAL SERVICES COMMITTEE RECOMMENDATION:

On December 11, 2012, the Municipal Services Committee recommended that the City Council authorize the City Manager to sign the proposed agreement.

BACKGROUND:

The City of Pasadena has adopted a number of aggressive 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% by 2020. These goals were adopted by the City Council as part of PWP's Integrated Resource Plan ("IRP").

In order to secure a diverse portfolio of the least-cost renewable resources available, PWP partners with other SCPPA member utilities to solicit and evaluate bids from project developers through an ongoing series of Requests for Proposals ("RFP"). For selected project bids, SCPPA enters into a contract with the project developer to purchase all or part of the project as needed to satisfy participating members' interest. The participating members, in turn, enter into a contract with SCPPA to purchase their desired share of the project.

The Silverado Projects consist of two 20MW solar photovoltaic generating stations, named the Antelope Big Sky Ranch Project and the Summer Solar Project. The energy produced by the Silverado Projects will be delivered directly into the California Independent System Operator ("CAISO") grid and qualify to meet the state's highest value Portfolio Content Category 1 (also called "bucket 1") renewable energy requirements. They are expected to be certified by the CAISO to meet a portion of PWP's resource adequacy and local capacity requirements obligations, two very desirable attributes that many renewable projects do not provide. Under the proposed contract, the facilities necessary to achieve CAISO capacity certification must be constructed no later than 2018.

SCPPA will enter into an agreement with the developer to purchase all of the energy and capacity produced for 25 years. Such longer contract terms are becoming more prevalent for renewable resources because they help maintain price stability and lower contract rates. The longer term will help PWP stagger the expiration of contracts in the future. The contract will include "first right of offer" provisions to enable SCPPA to purchase the Silverado Projects in the event the developer decides to sell the project in the future.

Three participating SCPPA member municipal utilities, including PWP and the Cities of Azusa and Riverside, intend to purchase their respective shares of Silverado Projects through individual agreements with SCPPA. Each of the two Silverado Project sites will have a separate, identical form of contract.

Under the proposed Power Sales Agreements with SCPPA, PWP will purchase a 32.5% share (13MW of 40MW) of the Silverado Projects' output from SCPPA for 25 years. As it is currently unclear when and whether the project's capacity will be certified by the CAISO, the Power Sales Agreement has been separated into two products as follows:

1. **Renewable energy and environmental attributes:** PWP will purchase its 13/40 share of energy produced at a starting price of \$77.34/MWh, escalated at 1.5% per year to \$112.22/MWh in the 25th year. Full production would provide an estimated 32GWh of energy per year (approximately 2.7% of PWP's retail energy sales); and,
2. **Generation capacity attributes:** Once new facilities installed by Edison are certified by the CAISO, PWP will purchase the CAISO capacity compliance attributes for an additional \$5.10/MWh, escalated at 1.5% per year to \$7.25/MWh in the 25th year.

There will be no incremental transmission costs to deliver the energy to the City of Pasadena ("Pasadena"), and no currently known integration costs that are typically associated with out of state wind and solar projects.

The combined cost of energy and capacity is favorable compared to other projects under consideration by SCPA and will be significantly lower than the \$95/MWh (and up) energy price of the previously approved La Paz solar project from which SCPA has recently withdrawn. The cost of photovoltaic solar generated energy has dropped significantly over the past few years and the cost of this Project compares favorably with the geothermal, wind, and landfill gas renewable projects contracts PWP has executed through SCPA as shown in Table 1.

**Table 1
 Renewable Energy Contracts Price Comparison**

Resource Name/Type	Contract Execution	Contract Energy Price ¹ by Calendar Year (\$/MWh)					
		2012	2013	2014	2015	2020	2025
Proposed Silverado Project	2012				77.34	83.32	89.76
WM Biomethane	2011	94.92	94.92	94.92	94.92	94.92	
Sequent Biomethane	2011	94.92	94.92	94.92	94.92	94.92	
EDF Biomethane	2011	98.00	98.00	98.00	98.00	98.00	
UPC (Milford) Wind	2009	68.53	69.72	70.94	72.19	78.73	85.86
Ormat Geothermal Phase 2	2008	79.60	80.80	82.01	83.24	89.67	96.60
Chiquita Canyon LFG	2006	65.25	65.25	65.25	65.25	65.25	65.25
Fortistar Methane	2006	73.97	76.27	78.63	81.07		
Ormat Geothermal Phase 1	2005	62.87	63.82	64.77	65.74	70.83	76.30
Iberdrola Renewables	2003	53.50	53.50	53.50	53.50	53.50	
2012 Market Forecast ² ("brown power")			43.98	47.19	49.1	64.19	94.22

Current offers under negotiations \$72 - \$110 per MWh with 1.5% annual escalators

- 1) Contract prices exclude costs of transmission, losses, and integration fees
- 2) Market forecast price shown is applicable to solar resource energy output profile.

PWP's share of energy from the Silverado Projects will replace more than one-half of the energy that was expected from La Paz, enabling PWP to continue its progress

towards achieving the goal of supplying 40% percent of its retail energy sales with renewable resources by 2020 and reducing greenhouse gas emissions. PWP expects that energy from the Silverado Projects, combined with that expected from current long-term renewable energy supply contract commitments, will serve approximately 21.2% of retail sales in 2015, and 19.2% in 2020 as shown in Table 2.

Table 2
Current Renewable Energy Portfolio Summary (GWh)

Calendar Year	2014	2015	2020	2025
Azusa Hydro	5	5	5	5
PPM Wind	18	18	18	-
Minnesota Methane LFG	43	43	-	-
Ormat Geothermal	17	17	18	17
UPC (Milford) Wind Phase 1	12	12	12	12
Chiquita Canyon LFG	39	39	39	39
EDF Biomethane	14	14	14	-
Sequent Biomethane	28	29	38	-
Waste Management Biomethane	41	41	41	-
Proposed Silverado Project		32	32	32
Total Renewable Supply	217	250	217	105
Retail Sales	1,186	1,180	1,128	1,135
% Renewable	18.3%	21.2%	19.2%	9.3%

Solar photovoltaic generation systems are a proven technology with minimal development risk. While the energy output is intermittent due to solar and weather conditions, production generally aligns well with PWP’s electric demand.

Like all other long-term commitments, the proposed agreement carries financial and compliance risks. As the contract carries no up-front capital or annual fixed-cost commitment, these risks are primarily related to the possibility that: (1) future alternative renewable resources may have a lower price and/or (2) the Silverado Projects do not produce the output expected.

In order to continue making progress towards important environmental goals, SCPPA and PWP are currently negotiating with other project developers that have submitted bids in response to SCPPA Request for Proposal’s. PWP anticipates that additional renewable energy contract recommendations will be forthcoming in early 2013.

COUNCIL POLICY CONSIDERATION:

The proposed agreement is 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, and the 2012 Power

Integrated Resource Plan. The Project will help PWP achieve regulatory compliance as well as City Council goals in a cost-effective manner.

ENVIRONMENTAL ANALYSIS:

The proposed agreements 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. Further, while no physical construction is contemplated by the actions proposed in this staff report, further CEQA review may apply to construction projects in the future.

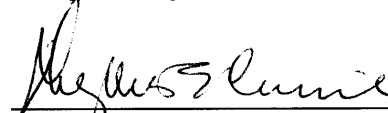
FISCAL IMPACT:

The Project is expected to commence operation in FY 2015 and add an average of \$600,000 per year or \$0.0005 per kWh to the retail energy cost in the first five years of operations. Over this same period, the Project will increase the monthly bill for a typical residential customer using 500 kWh per month by an average of \$0.26 per month from \$86.46 to \$86.72.

Currently, the cumulative impact of all existing renewable contracts in the energy portfolio is about \$5.8 million per year or 0.5¢ kWh. With this agreement, the cumulative impact will increase to about \$6.4 million per year or 0.6¢ per kWh in fiscal year 2015.

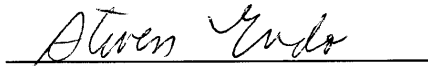
All costs associated with these contracts will be recovered in the Energy Charge component of Pasadena's electric energy rates.

Respectfully submitted,



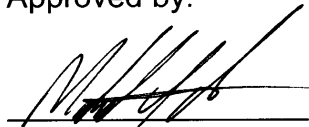
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