

ORIGINAL



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**BEFORE THE ARIZONA CORPORATION COMMISSION**

9 COMMISSIONERS

10 BOB STUMP, Chairman  
 11 GARY PIERCE  
 12 BREND A BURNS  
 ROBERT L. BURNS  
 SUSAN BITTER SMITH

|  |                             |
|--|-----------------------------|
| 13 IN THE MATTER OF THE APPLICATION OF | DOCKET NO. E-01345A-13-0248 |
| 14 ARIZONA PUBLIC SERVICE COMPANY      |                             |
| 15 FOR APPROVAL OF NET METERING COST   | APS NOTICE OF FILING DATA   |
| 16 SHIFT SOLUTION                      | REQUESTS AND RESPONSES      |

17 In response to the letter from Commissioner Susan Bitter Smith requesting parties  
 18 to file all data requests and responses in this docket, APS hereby files a supplemental  
 19 data request response.

20 **RESPECTFULLY SUBMITTED** this 23th day of September, 2013.

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Arizona Corporation Commission

DOCKETED

SEP 23 2013

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By:   
 Thomas A. Loquvam  
 Deborah R. Scott  
 Attorneys for Arizona Public  
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1 ORIGINAL and thirteen (13) copies  
2 of the foregoing filed this 23th day of  
September 2013, with:

3 Docket Control  
4 ARIZONA CORPORATION COMMISSION  
1200 West Washington Street  
Phoenix, Arizona 85007

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**ARIZONA CORPORATION COMMISSION  
STAFF'S FIRST SET OF DATA REQUESTS  
REGARDING THE APPLICATION OF ARIZONA PUBLIC SERVICE  
COMPANY FOR APPROVAL OF NET METERING COST SHIFT SOLUTION  
DOCKET NO. E-01345A-13-0248  
AUGUST 1, 2013**

**Staff 1.32:** APS asserts that it could build equivalent sized solar resources at a lower cost than a similar-sized aggregation of customer-owned and sited DG. Please provide documentation (actual RFP proposals or service offers) to support this assertion.

**Supplemental  
Response:**

Riverside Public Utilities in the City of Riverside, California recently entered into two new solar purchase power agreements with all-in fixed kWh prices below 7.0 cents/kWh over the term of the contract. This PPA price supports APS's estimate that the wholesale market price for utility-scale resources that can be interconnected at the distribution level is in the range of 7 to 9 cents/kWh. Please see the Riverside Public Utilities Board Memorandum attached as APS15263. The September 6, 2013 memorandum can be found at:

<https://riversideca.legistar.com/LegislationDetail.aspx?ID=1473038&GUID=AAC38F20-44F1-4A2B-8E0B-BFF837430D34&Options=&Search>



# RIVERSIDE PUBLIC UTILITIES

## Board Memorandum

**BOARD OF PUBLIC UTILITIES**

**DATE:** September 6, 2013

**ITEM NO:** 8

**SUBJECT:** **POWER SALES AGREEMENTS BETWEEN SOUTHERN CALIFORNIA PUBLIC POWER AUTHORITY AND THE CITY OF RIVERSIDE – RECURRENT ENERGY'S CLEARWATER AND COLUMBIA TWO SOLAR PHOTOVOLTAIC PROJECTS**

**ISSUE:**

The item for Board of Public Utilities consideration is the conceptual approval of the Power Sales Agreements between Southern California Public Power Authority (SCPPA) and the City of Riverside for the Recurrent Energy's Clearwater and Columbia Two Solar Photovoltaic projects.

**RECOMMENDATIONS:**

That the Board of Public Utilities approve and recommend that the City Council:

1. Approve the 20-year Power Sales Agreements (PSAs) between SCPPA and the City of Riverside to provide renewable solar photovoltaic energy and Renewable Energy Credits from Recurrent Energy's Clearwater and Columbia Two Solar Photovoltaic projects;
2. Authorize the City Manager, or his designee, to execute any future amendments to the PSAs under terms and conditions substantially similar or superior to these PSAs;
3. Authorize the Public Utilities General Manager, or his designee, to execute any documents necessary to administer the PSAs that are consistent with the established policies by the City Council; and
4. Authorize the City Manager or his designee to terminate the PSA for circumstances provided in the PSAs (e.g., Projects are no longer viable, or the annual performance standard is not met).

**BACKGROUND:**

Riverside has been very supportive of the use of renewable energy to serve the retail energy requirements and has historically adopted more stringent requirements than those imposed on IOUs. Riverside Public Utilities' (RPU) current Renewable Portfolio Standard (RPS) requires that it supply 20%, 25% and 33% of retail energy needs using renewable resources by 2010, 2015 and 2020, respectively.

In 2012, California's Senate Bill (SB) X1-2, mandated that all electric utilities, including RPU, procure increasing amounts of renewable power (primarily from in-state resources) to serve its retail needs during specific compliance periods. Such targets must reach 33% renewable resources no later than calendar year (CY) 2020.

To achieve these RPS goals, RPU has successfully contracted with several renewable projects in the last two years and staff is continuously seeking out additional viable renewable projects. Three weeks ago, Recurrent Energy approached SCPPA with a unique opportunity - the Clearwater and Columbia Two Solar PV projects (Projects), a combined 35 megawatt (MW) solar photovoltaic (PV) projects located in Kern County. SCPPA proposes to enter into a Power Purchase Agreements (PPA) with Recurrent Energy for a combined 35 MW of the Projects on behalf of the participating SCPPA members

and then in turn will enter into individual PSAs with the participating SCPPA members under the same terms and conditions of the SCPPA-Recurrent PPA.

The Projects are priced substantially lower, 10 to 15% lower, than the comparably sized projects in the recent SCPPA renewable Request for Proposal (RFP) process and significantly lower, 30% lower, than similar solar PV projects Riverside signed power purchase agreements with late last year. Staff attributes the very competitively priced offer by Recurrent Energy to several factors:

1. The continued decline in the equipment and labor costs of solar PV projects; and
2. Significantly lower than anticipated transmission interconnection costs for projects located in Kern County; and
3. The "in-fill" nature of the Projects as part of a much larger solar PV project site, most of which is in advanced stages of development and already contracted for with other purchasers. Thus, "in-fill" projects require almost no additional incremental development costs.

Recurrent Energy is in the final site development stage and wishes to contract for the remaining Projects expeditiously before it issues engineering and construction contracts. Recurrent Energy requires an aggressive timeline for approval of the PSAs, no later than September 30, 2013. Staff aggressively negotiated through SCPPA and believes that the PSAs are in substantially final form with some remaining issues still to be addressed. Therefore, staff is requesting that the Board of Public Utilities approve the transactions subject to approval of the final PSAs by the City Council in order to meet the developer's aggressive timeline. Staff will update the Board when all approvals have been obtained.

The Recurrent Energy's Projects will aid RPU in achieving the RPS goals and partially replace the existing Bonneville Power Administration peaking agreement, expiring on May 1, 2016, as well as having the following desirable characteristics and favorable terms, including:

**Economy of Scale of Joint SCPPA Project:** The two Projects are part of a 100 MW portfolio, out of which 20 MW has been contracted by Southern California Edison (SCE) and another 45 MW has been contracted by the California Department of Water Resources. The remaining 35 MW will likely be shared by Riverside (26 MW), Pasadena (6 MW) and Azusa (3 MW) through SCPPA. As noted above, SCPPA will enter into a Power Purchase Agreements (PPA) with Recurrent Energy for a combined 35 MW of the Projects on behalf of the participating SCPPA members and then in turn will enter into individual PSAs with the participating SCPPA members under the same terms and conditions of the SCPPA-Recurrent PPA.

**Developer's Experience:** With a 2 gigawatt (GW) project pipeline, over 700 MW of contracted projects and 260 MW of projects in operation, Recurrent Energy has one of North America's largest solar portfolios.

**Project Site Locations:** The projects are located in Kern County, California. Recurrent has firm site control of a combined 340 acres for both projects via option to purchase agreements.

**Characteristics and the Size of the Project:** Up to 26 MW of peaking renewable power to partially replace the existing 60 MW diversity exchange peaking agreement with Bonneville Power Administration (BPA), which expires on May 1, 2016, and meet projected future load growth.

**Interconnection:** The Large Generator Interconnection Agreement (LGIA) for the entire portfolio of 100 MW was signed in July 2013, allowing SCE to finalize designs and kick off construction of the interconnection facilities required for the projects. No deliverability network upgrades are required.

**Term of the PSA:** Twenty-year PSAs commencing on the Commercial Operation Date (COD) currently anticipated at the end of 2014.

**Pricing:** The all-in price for the energy, capacity and environmental attributes is fixed at \$69.98 per megawatt/hour (MWh) over the term of the contract.

**Mitigation of Development Risks:** The PPAs include enforceable development milestone dates with significant financial penalties, ranging from \$3,000 to \$5,000/day, if dates are missed, or in the more severe cases, Riverside can unilaterally terminate the PPAs.

**Mitigation of Future Renewable Integration Costs and Performance Risks:** Recurrent Energy will share future cost exposures assessed by the California Independent System Operator (CAISO) to integrate renewable resources of up to \$250,000/year. RPU will pay its proportional share of costs exceeding \$250,000. In exchange, RPU has a unilateral right to extend the PPAs under favorable terms and conditions at the end of the term. The PPAs establish minimum annual performance standards. Failure to meet the standards may result in significant monetary penalties up to and including termination of the PPAs.

**Sharing of Regulatory Costs:** Recurrent Energy will share in potential regulatory costs, up to \$500,000/project/year with a maximum \$2,000,000 over the term, to defend against future laws or regulations that negatively impact the economic value of this resource (e.g., solar PV projects are no longer considered to be a renewable resource).

**First Right of Offer:** Recurrent Energy must first offer to sell the Projects to SCPPA/RPU before Recurrent Energy can sell the projects to third parties.

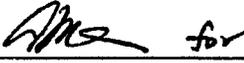
**Contribution Toward RPU's RPS Goal:** RPU's share of the Projects will generate approximately 65,000 MWh of renewable energy, or 3.25% of Riverside's RPS requirements in 2015. The projects qualify as an in-state renewable resource under SB X1-2 rules.

**FISCAL IMPACT:**

The annual cost of power under the PSAs is estimated to be approximately \$4.5 million beginning in Fiscal Year 2014/15. This cost is fixed with no annual escalation for 20 years. Staff will incorporate the costs of the PSAs in future power supply budgets.

Prepared by: Reiko A. Kerr, Public Utilities Assistant General Manager/Resources  
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Approved by: Belinda J. Graham, Assistant City Manager  
Approved as to form: Gregory P. Priamos, City Attorney

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