



Los Angeles  
Department of  
Water & Power

RESOLUTION NO. \_\_\_\_\_

BOARD LETTER APPROVAL

Handwritten signature of Michael S. Webster in blue ink.

**MICHAEL S. WEBSTER**  
Executive Director – Power System  
Engineering and Technical Services

Handwritten signature of Marcie L. Edwards in blue ink.

**MARCIE L. EDWARDS**  
General Manager

**DATE:** November 20, 2015

**SUBJECT:** Power Purchase Agreement (PPA) Between Los Angeles Department of Water and Power (LADWP) and the Los Angeles Department of Public Works, Bureau of Street Lighting (BSL) for the Solar to Grid Program

**SUMMARY**

The attached PPA with BSL is for the purchase of energy and associated Renewable Energy Credits (RECs), for the installation of up to 9000 Solar to Grid Electrolier Generation Systems (STGS) on streetlight poles within the City of Los Angeles (City).

The PPA provides the terms and conditions pursuant to which BSL will install, interconnect, and identify solar photovoltaic (PV) modules and inverter systems. The purchase of energy and associated RECs is subject to the terms and conditions of the PPA. BSL is responsible for registering the STGS with the California Energy Commission (CEC) and ensuring the RECs will be qualified as Portfolio Content Category 1 eligible.

STGS Unit Nameplate Rating: up to 250 Watt-DC  
Total Installed Capacity: up to 2.3 Megawatt (MW) (CEC-ac)  
Expected Annual Production: 4,025,000 kilowatt-hour (kWh) per year

The attached PPA for the Solar to Grid Program would allow BSL to install utility grade metering satisfactory to the requirements of WREGIS, and would enable LADWP to count the energy produced from all STGS units towards its renewable energy mandates. BSL would be able to generate revenue by monetizing its streetlight poles and contributing towards the City's environmental initiatives. The units would be installed on streetlight poles in visible areas where the people of Los Angeles can feel engaged with the City's green energy transformation and modernization.

City Council approval by Ordinance is required in accordance with Charter Section 674.

## **RECOMMENDATION**

It is recommended that the Board of Water and Power Commissioners adopt the attached Resolution recommending Los Angeles City Council (City Council) approval by Ordinance to enter into a PPA with BSL for the purchase of renewable energy from their Solar to Grid Program.

## **FINANCIAL INFORMATION**

Currently BSL has received enough funding for about 500 installations, but anticipates increased funding enough to fund all 9000 installations within three years. Based on a 25-year PPA at a price of \$0.15/kWh (based on FiT pricing for existing systems under 150kW), which is guaranteed for 3 years, the estimated annual cost to LADWP for the purchase of energy, RECs, and administration cost is \$603,750, translating to \$12,075,000 over the 25-year term. BSL will reimburse LADWP for costs associated with the interconnection of the STGS.

All design, engineering, construction, inspection, and maintenance costs will be paid by BSL. LADWP will invoice BSL for the engineering review and approval of each STGS plan, as well as for streetlight maintenance crews to conduct inspection, testing, and Co-Gen tagging for each service point. BSL will be responsible for the costs associated with installation, connection, and maintenance of the solar systems and meters.

Each quarter, BSL will submit an invoice indicating the total amount of energy produced for each month, the amount of registered RECs, as well as attestation showing that all the RECs were transferred to LADWP's Western Renewable Energy Generation Information System (WREGIS) account.

## **BACKGROUND**

LADWP is subject to a Renewables Portfolio Standard (RPS) per Senate Bill 2 1X (SB2 [1X]), and Senate Bill 350 (SB350), which mandate the amount of electricity it provides to its retail customers to come from renewable sources for at least 33 percent of its retail electricity sales by December 31, 2020 and 50 percent by December 31, 2030, respectively.

In 2009, LADWP was approached by several solar solution vendors that were responding to LADWP's Rolling Renewables Request for Proposal (RFP) to install solar PV with integrated inverters on power distribution poles as a component of its Utility Built Solar Program. The feasibility of installing these units on power distribution poles was questioned given the already crowded environment and the clearance requirements mandated by CPUC's General Order 95. After conducting due diligence on the feasibility of installing these units on power poles it was determined that streetlight poles would be a more feasible location for a larger scale deployment.

In December 2010, BSL and LADWP entered into an agreement for a Pilot Program to test the feasibility of installing several STGS units on streetlight poles in the City and interconnecting them into LADWP distribution grid. To date 50 units have been installed with no reported electrical or safety issues. The energy production from these units has been monitored by BSL through the integrated smart grid communication module, but these units are not metered with utility grade meters as required by the CEC for compliance and reporting of RECs.

On June 24, 2011, BSL sent formal correspondence to the General Manager of LADWP proposing to partner with LADWP to install STGS units on a large scale to generate renewable energy and reduce carbon emissions.

On August 10, 2011, LADWP responded to the letter indicating its interest in pursuing the proposal with BSL. LADWP requested BSL to develop a financial plan to support the development of approximately 2 MW of capacity over three phases prior to developing an agreement with LADWP.

In November 2011, BSL developed a financial plan for their proposal and submitted it to the Los Angeles City Administrative Officer (CAO) for review.

On June 18, 2012, the CAO issued a report (CAO File No. 0220-04719-000) that indicated the financial viability of the BSL proposal and recommending BSL to pursue an agreement with LADWP. Subsequently, LADWP and BSL developed protocols to implement the proposal.

The attached PPA for the Solar to Grid Program would allow BSL to install utility grade metering satisfactory to the requirements of WREGIS, and would enable LADWP to count the energy produced from all STGS units towards its RPS mandates. BSL would be able to generate revenue by monetizing its streetlight poles and contributing towards the City's environmental initiatives. The units would be installed on streetlight poles in visible areas where the people of Los Angeles can feel engaged with the City's green energy transformation and modernization. Because these units will be connected to existing low-voltage streetlight circuits, a separate Interconnection Agreement will not be provided. Instead, interconnection requirements and guidelines are outlined in Appendix G of the PPA.

Per Charter Section 674, City Council approval by Ordinance is required. Accordingly, attached is the CAO report dated August 28, 2015.

### **ENVIRONMENTAL DETERMINATION**

In accordance with the California Environmental Quality Act (CEQA), it has been determined that the Solar to Grid Program is exempt pursuant to the General Exemption described in CEQA Guidelines Section 15061(b)(3). The General Exemption applies in situations where it can be seen with certainty that there is no possibility that the activity in question may have significant effect on the environment.

## **CITY ATTORNEY**

The Office of the City Attorney reviewed and approved the attached PPA and Resolution as to form and legality.

## **ATTACHMENTS**

- Resolution
- Draft Ordinance
- PPA
- CAO Report