



# City of Palo Alto

## City Council Staff Report

(ID # 7033)

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**Report Type: Consent Calendar**

**Meeting Date: 6/27/2016**

**Council Priority: Environmental Sustainability**

**Summary Title: Shiloh I Wind Off-Taker Generation Percentage Protection Amendment**

**Title: Approval and Authorization for the City Manager or his Designee to Execute the Off-Taker Generation Percentage Protection Amendment to the City's Power Purchase Agreement (PPA) With Shiloh I Wind Project LLC (Shiloh PPA) and Delegation of Authority to the City Manager to Execute Documents Necessary to Administer the Shiloh PPA and the City's Five PPAs Associated with Landfill Gas to Energy Projects**

**From: City Manager**

**Lead Department: Utilities**

### **Recommendation**

Staff recommends that Council:

1. Approve the Purchaser's Off-Taker Generation Percentage Protection Amendment (Amendment) (Attachment A) to the Power Purchase Agreement (PPA) with Shiloh I Wind Project LLC (Seller) concerning the Shiloh I Wind Project (Project);
2. Delegate to the City Manager or his designee the authority to execute on behalf of the City the Amendment, and any other documents necessary to administer the PPA that are consistent with the Palo Alto Municipal Code and City Council approved policies; and
3. Delegate to the City Manager or his designee the authority to execute on behalf of the City any documents necessary to administer the PPAs with Ameresco Santa Cruz Energy LLC, Ameresco Half Moon Bay LLC, Ameresco Keller Canyon LLC, Ameresco Johnson Canyon LLC, and Ameresco San Joaquin LLC that are consistent with the Palo Alto Municipal Code and City Council approved policies.

## **Executive Summary**

In October 2005, Council approved the PPA with Seller (a wholly owned subsidiary of Iberdrola Renewables, LLC, formerly known as PPM Energy, Inc.) to obtain a portion of the electric output of a 150 megawatt (MW) wind energy generating facility in Solano County over a 15 year and 7 month term. The Project began delivering energy to Palo Alto in June 2006. Under the PPA, the amount of renewable energy that is delivered to Palo Alto is equal to 16.66% of the Project's total metered output, which represents 25 MW. Several other entities have rights under long-term PPAs to receive the remaining 83.34% of the Project's output.

In 2014, the California Independent System Operator (CAISO) introduced a new market construct which allows it to curtail intermittent resources such as the Project. Off-takers of the Project are therefore now capable of submitting economic bids to the CAISO in order to curtail some or all of their share of the Project's output. An off-taker might choose to curtail in situations where the Locational Marginal Price (LMP) for that power falls below a certain threshold. For example, if the price was negative for a period of time (which has happened), then rather than getting compensated for the generation, the off-taker would have to pay for the generation.

If and when one of the other Project off-takers curtails some or all of its share of the Project, the total output of the Project is reduced. Under the current PPA language, since Palo Alto's share is based on a percentage of the Project's total output, curtailment by another Project off-taker reduces the amount of energy that Palo Alto actually receives. The proposed Amendment is intended to keep Palo Alto's share of metered output whole by providing that if another off-taker economically dispatches, Palo Alto's share of output is calculated as if there had been no such curtailment in order to maintain Palo Alto's 16.66% share. The proposed Amendment thereby protects the amount of energy delivered to Palo Alto and ensures it is not affected by the decision of another Project off-taker to curtail its portion of the Project's output.

Staff therefore recommends that the Council approve the proposed Amendment to the PPA, which is necessary to protect the City's share of the Project output if curtailment by another off-taker occurs, and will result in no resource impact on the City. This is identical to the modification made in 2015 to the High Winds Energy Center PPA ([Staff Report 5939](#)).

Staff also recommends delegating authority to the City Manager to execute routine contract amendments and administrative documents, such as this one, for the Project as well as for the City's five long-term PPAs with landfill-gas-to-energy (LFGTE) projects.

## **Background**

In October 2002 the Council approved the City's first Renewable Portfolio Standard (RPS), setting goals of meeting 10% of the City's load through renewable energy purchases by 2008, and 20% by 2015. (The RPS target was later increased to 33% by 2015, and the City is also subject to the statewide requirement to achieve a 50% RPS level by 2030.) In its efforts to achieve those targets, the City executed the Shiloh I Wind Project PPA—its fifth renewable

energy PPA, and its second PPA with Iberdrola Renewables—in October 2005 ([CMR 386:05, Resolution 8559](#)).

The Shiloh I Wind Project is a 150 MW facility located in Solano County, and the City's contracted share of the Project is 25 MW, which equals 16.66% of the total resource. The City began receiving energy deliveries from the Project on June 1, 2006, and the contract term is set to run through December 2021. On average, the Project provides enough energy to the City to meet about 7% of its total annual load.

### **Discussion**

In May 2014, the CAISO launched a new Fifteen Minute Market (FMM) for bidding and scheduling generation resources in order to comply with the Federal Energy Regulatory Commission's (FERC) Order 764. The purpose of this intra-hour scheduling market was to facilitate the integration of intermittent resources such as wind and solar. Prior to this point, CAISO had operated on an hourly scheduling market system, which was a distinct disadvantage to intermittent resources, whose actual generation patterns frequently varied significantly from the amount of generation that was forecasted on an hour-ahead basis.

### **Proposed PPA Amendment**

Under the FMM, the CAISO has begun to implement economic dispatch capability for intermittent resources with multiple off-takers, such as the Project. Typically these individual off-takers each simply receive their pro rata share of whatever output the project generates in a given time interval. However, with the new CAISO economic dispatch capability, any of the Project off-takers will have the ability to direct the Seller to shut down all, or a portion of, its share of the Project. (It might do so in a situation where the Project's LMP for a certain period became negative—meaning that the off-taker would essentially be paying the CAISO to take the energy that its share of the Project was generating, rather than being compensated by the CAISO for that output.) At this time, some of the other Project off-takers have the ability to economically dispatch their shares of the Project while the City does not have this capability. However, staff is working with the Seller to provide the City with this capability in the coming months.

Because the PPA currently defines the share of the Project's energy generation that the City is entitled to as a percentage of total Project output (16.66%), if another off-taker reduces the Project's output by curtailing its portion, the City would receive less than its intended share of the output. For example, if one off-taker has rights to a 50 MW share of the 150 MW Project and chooses to curtail all of that capacity, the Project would effectively become a 100 MW resource. Under the current PPA language, the City would receive 16.66% of that amount, or 16.66 MW, rather than the full 25 MW share that Palo Alto was to receive under the PPA but for the curtailment.

In order to address this situation, the City and the Seller desire to modify the PPA only with respect to this one issue. The proposed language modifies the definition of the term "Metered

Output” such that if another off-taker economically dispatches its share of the Project for any period of time, the City’s “Metered Output” is calculated by the Seller as though there had been no such curtailment instruction, in order to maintain Palo Alto’s intended 16.66% share (25 MW) of the Project output. The proposed Amendment thereby protects the amount of generation to which Palo Alto is entitled under the PPA. The proposed Amendment language is also nearly identical to the language approved by Council in August 2015 to protect the City’s share of the output of the High Winds Energy Center.

#### Delegation of Authority

At this time, the City has 13 executed PPAs in place for renewable energy facilities (two wind resources, five LFGTE resources, and six solar resources). For seven of those PPAs, the City Council has delegated to the City Manager (or his designee) the authority to execute amendments and any other documents necessary to administer the PPAs that are consistent with the Palo Alto Municipal Code and City Council approved policies. This delegation of authority saves a significant amount of staff time, enabling staff to more efficiently manage these contracts by handling routine contractual matters (such as this amendment) on an administrative basis. Staff therefore recommends extending this delegation of authority to the remaining PPAs (the Shiloh PPA and the five LFGTE PPAs) that have not yet been granted it by the City Council.

#### **Resource Impact**

Approving the recommendation is not expected to result in any resource impact to the City. Declining to approve the recommendation could result in the City receiving less renewable energy from the Project, resulting in additional replacement energy having to be procured from the market in order for the City to satisfy its load and RPS requirements.

#### **Policy Implications**

Approval of the Consent and the proposed Amendment is in conformance with the City’s Long-term Electric Acquisition Plan (LEAP), specifically the City’s RPS strategy, which entails reducing the carbon intensity of the electric portfolio through the acquisition of renewable energy supplies while ensuring that the retail rate impact for renewable purchases does not exceed 0.5 ¢/kWh on average ([Staff Report 2710](#)). The recommended action is also consistent with the Utilities Strategic Plan objective of reducing costs.

#### **Environmental Review**

Approval of the Consent and the Amendment does not meet the definition of a project under the California Environmental Quality Act (CEQA), pursuant to Public Resources Code Section 21065.

#### **Attachments:**

- Attachment A: Amendment No 2 to Palo Alto Shiloh PPA (PDF)

# ATTACHMENT A

## SECOND AMENDMENT TO LONG-TERM POWER PURCHASE AGREEMENT FOR OFF-TAKER GENERATION PERCENTAGE PROTECTION FOR THE SHILOH WIND PROJECT

This SECOND AMENDMENT TO LONG-TERM POWER PURCHASE AGREEMENT FOR OFF-TAKER GENERATION PERCENTAGE PROTECTION FOR THE SHILOH WIND PROJECT (this “Second Amendment”) is entered into this \_\_\_ day of June, 2016, by and between Shiloh I Wind Project LLC (“Seller”) and The City of Palo Alto (“Purchaser”) and amends that certain Long-Term Power Purchase Agreement (Shiloh Wind Project) dated October 11, 2005, as amended by that certain Amendment No. 1 to Long-Term Power Purchase Agreement dated September 14, 2009, between them (the “PPA”; initially capitalized terms used and not defined herein are defined in the PPA) concerning the Shiloh Wind Energy Center (the “Project”), with reference to the following:

### **RECITALS:**

1. Purchaser is one of several off-takers from the Project; and
2. The PPA provides that Seller shall sell and Purchaser shall purchase as Purchaser’s Metered Output a fixed percentage of Metered Output; and
3. The PPA provides that “Metered Output is intended to represent the quantity of electrical energy generated by the Project on an ‘as delivered’ basis”; and
4. The California Independent System Operator (“CAISO”) has implemented economic dispatch capability for resources, such as the Project; and
5. The Parties wish to avoid any impact to Purchaser’s Metered Output due to economic dispatch by a different off-taker; and

**NOW, THEREFORE**, in consideration of the mutual covenants herein contained, the PPA is amended as follows:

1. Section 1 Definitions. The definition of “Purchaser’s Metered Output” shall be deleted in its entirety and replaced with the following:

“**Purchaser’s Metered Output**” shall mean Purchaser’s MW Share multiplied by the Metered Output.

2. Section 1 Definitions. The definition of “Other Off-Taker” shall be added as follows:

“**Other Off-Taker**” shall mean any Person other than Purchaser with a contract to purchase energy from the Project.

3. Section 1 Definitions. The definition of “Other Off-Taker Economic Dispatch” shall be added as follows:

“**Other Off-Taker Economic Dispatch**” means a change to Metered Output due to an economic dispatch instruction by an Other Off-Taker(s).

4. Section 1 Definitions. The definition of “Purchaser’s MW Share” shall be added as follows:

“**Purchaser’s MW Share**” means 16.66%; *provided*, that if there is an Other Off-Taker Economic Dispatch for any period of time, then Purchaser’s MW Share shall mean the ratio, calculated to the thousandths of a MW (i.e., rounded to three decimal places), of (i) 25 MW, to (ii) the 150 MW minus Other Off-Taker(s)’ curtailed capacity (in MW).

5. Section 4.8 Partial Curtailment Allocation. Section 4.8 shall be changed by removing “16.66%” and replacing it with “Purchaser’s MW Share.”

6. All other provisions of the PPA are reaffirmed and not amended hereby.

IN WITNESS WHEREOF, the parties have executed this Amendment as of the date and year first above written.

**SHILOH I WIND PROJECT LLC**

**CITY OF PALO ALTO**

By: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date of Signature: \_\_\_\_\_

Date of Signature: \_\_\_\_\_

Approved as to form:

By: \_\_\_\_\_

By: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Date of Signature: \_\_\_\_\_