



City of Palo Alto

City Council Staff Report

(ID # 5939)

Report Type: Consent Calendar

Meeting Date: 8/17/2015

Council Priority: Environmental Sustainability

Summary Title: High Winds Renewable Resource 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 with Iberdrola Renewables, LLC

From: City Manager

Lead Department: Utilities

Recommendation

Staff recommends that Council:

1. Approve the Off-Taker Generation Percentage Protection Amendment (Amendment) (Attachment A) to the Power Purchase Agreement (PPA) with Iberdrola Renewables, LLC (Iberdrola) concerning the High Winds Wind Energy Center (Project); and
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.

Executive Summary

In November 2004, Council approved the PPA with Iberdrola (formerly known as PPM Energy, Inc.) to obtain a portion of the electric output of a 162 megawatt (MW) wind energy generating facility in Solano County over a 23 year and 7 month term. The Project began delivering energy to Palo Alto in December 2004. Under the PPA, the amount of renewable energy that is delivered to Palo Alto is equal to 12.35% of the Project's total metered output, which represents 20 MW. Three other entities have rights under long-term PPAs to receive the remaining 87.65% of the Project's output.

In 2014, the California Independent System Operator (CAISO) introduced a new market construct which makes curtailing the Project on a discretionary basis possible. One of the other

Project off-takers¹ currently has the contractual ability to economically dispatch² some, or all, of its share of the Project's output. It is possible that the other Project off-takers may have the same ability in the future. An off-taker might choose to curtail in situations where price for that power falls below a certain threshold.

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 12.35% 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 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.

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 has since been increased to providing at least 33% of the City's retail sales volumes from renewable energy by 2015.) In its efforts to achieve those targets, the City executed the High Winds Energy Center PPA—its first ever renewable energy PPA—in November 2004 ([CMR 424:04](#), Resolution 8472).

The High Winds Project is a 162 MW facility located in Solano County, and the City's contracted share of the Project is 20 MW, which equals 12.35% of the total resource. The City began receiving energy deliveries from the High Winds Project on December 1, 2004, and the contract term is set to run through June 2028. On average, the Project provides enough energy to the City to meet about 5% 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

¹ An off-take agreement is an agreement between the owner of a resource and a buyer of a resource to sell/purchase portions of the resource's future production. In this case, the City is one of the project participants, or "off-takers," that buys the energy generated from the wind project.

² Economic dispatch is the determination of the optimal output of an electricity generation facility, to meet the system load, at the lowest possible cost, subject to transmission and operational constraints. In the present situation, economic dispatch refers to the determination of one of the Project's off-takers to reduce (or curtail) its share of the Project's output (i.e., issue a "dispatch down" order) in the event that the value of the Project's output becomes very low, or negative.

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 into the operation of the electric grid system. 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 an hour earlier.

Proposed PPA Amendment

Under the FMM, CAISO is now planning to implement economic dispatch capability for resources with multiple off-takers, such as the High Winds Project, which has four off-takers. Typically these four off-takers each simply receive their pro rata share of whatever energy the project generates in a given time interval. However, with the new CAISO economic dispatch capability, one of the Project off-takers has the ability to direct Iberdrola to shut down all or a portion of its share of the Project. (It might do so in a situation where the Project's locationally determined price for a certain period becomes 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, only one Project off-taker has the ability to economically dispatch the resource; the City does not currently have this capability.

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 (12.35%), 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 162 MW Project and chooses to curtail all of that capacity, the Project would effectively become a 112 MW resource. Under the current PPA language, the City would receive 12.35% of that amount, or 13.83 MW, rather than the full 20 MW share that Palo Alto was to receive under the PPA but for the curtailment.

In order to address this situation, the City and Iberdrola 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 Iberdrola as though there had been no such curtailment instruction, in order to maintain Palo Alto's intended 12.35% share (20 MW) of the Project output. The proposed Amendment thereby protects the amount of generation to which Palo Alto is entitled under the PPA.

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 target of meeting at least 33% of the electric sales from renewable energy (Staff Report 2710). Approval of the proposed Amendment would also further the City's efforts to achieve a carbon neutral electric supply portfolio entirely through the acquisition of additional "hard resources" that supply the City with both energy and environmental attributes (Staff Report 3550).

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: High Winds Off-taker Generation Percentage Protection Amendment (PDF)

ATTACHMENT A

OFF-TAKER GENERATION PERCENTAGE PROTECTION AMENDMENT

This OFF-TAKER GENERATION PERCENTAGE PROTECTION AMENDMENT (this "Amendment") is entered into this _____ day of _____, 2015, by and between Iberdrola Renewables, LLC (f/k/a PPM Energy, Inc.) ("Seller") and The City of Palo Alto ("Purchaser") and amends that certain Long-Term Power Purchase Agreement (Wind Power) between them (the "PPA"; initially capitalized terms used and not defined herein are defined in the PPA) concerning the High Winds Wind Energy Center (the "Project"), with reference to the following:

WHEREAS, Purchaser is one of several off-takers from the Project; and

WHEREAS, the PPA provides that Seller shall sell and Purchaser shall purchase as Purchaser's Metered Output a fixed percentage of Metered Output; and

WHEREAS, 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

WHEREAS, the California Independent System Operator ("CAISO") is planning to implement economic dispatch capability for resources with multiple off-takers, such as the Project; and

WHEREAS, the Parties wish to avoid any impact to Purchaser's Metered Output due to economic dispatch by a different off-taker;

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

1. The following definition of "Other Off-Taker Economic Dispatch" is added:

"Other Off-Taker Economic Dispatch" means a change to Metered Output due to an economic dispatch instruction by a purchaser of Project output other than Purchaser.

2. The following is added to the end of the definition of "Purchaser's Metered Output":

If there is an Other Off-Taker Economic Dispatch for any period of time, Purchaser's Metered Output shall be calculated by Seller as though there had been no such Other Off-Taker Economic Dispatch, in order to maintain Purchaser's intended 12.35% share.

3. In Section 4.2, replace "12.35%" with "Purchaser's Metered Output" each place it occurs.

4. 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.

IBERDROLA RENEWABLES, LLC

CITY OF PALO ALTO

LEGAL
7/2

By: 

By: _____

Name: Diana Scholtes

Name: _____

Title: Diana Scholtes
Authorized Representative

Title: _____

Date of Signature: 6/23/15

Date of Signature: _____

By: 

Name: Robin Brown

Title: Authorized Representative

Title: _____

Date of Signature: 6/23/15