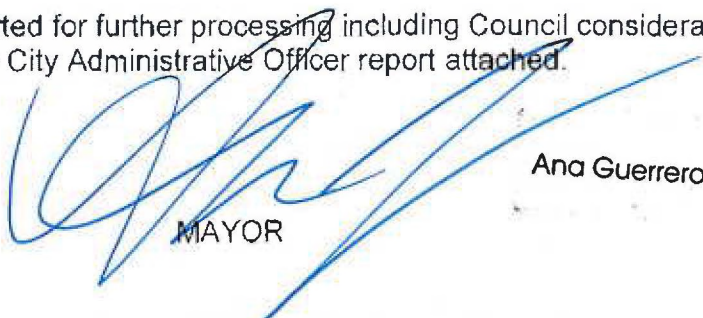


POWER SYSTEM
DEC 02 2015
EXECUTIVE OFFICE

TRANSMITTAL		0150-09860-0001
TO Marcie L. Edwards, General Manager Department of Water and Power	(PPD)	DATE NOV 24 2015
FROM The Mayor		COUNCIL FILE NO. COUNCIL DISTRICT
AMENDMENT TO THE MOAPA SOLAR PROJECT POWER PURCHASE AGREEMENT BP 12-017		
Approved and transmitted for further processing including Council consideration. See the City Administrative Officer report attached.		
 MAYOR		Ana Guerrero

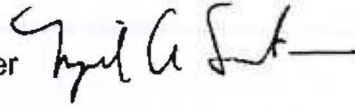
OFFICE OF THE CITY ADMINISTRATIVE OFFICER

Date: November 24, 2015

CAO File No. 0150-09860-0001
Council File No. 12-1614
Council District: outside City limits

To: The Mayor

From: Miguel A. Santana, City Administrative Officer



Reference: Communication from the Department of Water and Power dated September 15, 2015; referred by the Mayor for report on September 18, 2015

Subject: **AMENDMENT TO THE MOAPA SOLAR PROJECT POWER PURCHASE AGREEMENT BP 12-017**

SUMMARY

The Department of Water and Power (DWP; Department) requests approval of a proposed resolution authorizing the DWP Board of Commissioners (Board) to execute an Amendment to the Power Purchase Agreement (PPA) BP 12-017, including the Purchase Option, between Moapa Southern Paiute Solar, LLC (Moapa), formerly known as K Road Moapa Solar, LLC, and the Department of Water and Power.

The original 25-year PPA (C.F. 12-1614), approved by the Mayor and Council in 2012, with Moapa provides for the purchase of renewable solar energy with a purchase price of \$91.69 per megawatt hour (MWh). Included in the current PPA is a purchase option for the Department to acquire the Moapa solar facility at identified intervals, beginning at year 10 of the term, with minimum and maximum valuation amounts in each option year. Additional provisions allow for the purchase of a transmission line to connect to a DWP-owned substation as well as a delegation of authority to act on non-policy amendments to the PPA without further approval.

Moapa requested the proposed Amendment to facilitate its financing activities in anticipation of a potential merger or acquisition by another developer. The Amendment includes discounted rates for purchased and curtailed energy as well as modified terms for the potential purchase of the solar facility. Specifically, approval of the proposed Amendment will:

- Reduce the cost of purchased energy by \$4.00 per MWh from \$91.69 to \$87.69 per MWh resulting in an annual costs savings of \$2.65 million for a total cost savings of approximately \$66 million over 25 years;
- Modify the Purchase Option pricing structure allowing the appraised fair market value (FMV) to exceed the previously agreed upon maximum purchase price without obligating DWP to purchase;
- Provide DWP the capability to curtail or reduce energy deliveries, if not necessary to meet the DWP energy demand, up to 12,500 MWh annually at no cost and an additional 12,500 MWh at a reduced cost of \$43.85 per MWh, instead of the current \$91.69 per MWh, resulting in a savings of up to \$1.74 million annually for a total savings of up to \$43.5 million over 25 years;

- Reduce the project management and administrative costs associated with the purchase of a transmission line resulting in an estimated one-time savings of \$1.5 million;
- Provide advanced consent of a list of 11 companies approved by DWP for the potential sale or transfer of interests in Moapa; and
- Continue a delegation of authority to the Board to approve revisions and amendments that are ministerial, administrative, or technical in nature, provided that the changes do not increase DWP cost obligations or extend the term of the Agreement.

The following table summarizes the costs savings totaling \$111 million provided in the proposed Amendment.

	Energy Cost (per MWh)	Annual Cost (millions)	Total Costs over 25 year Term (millions)
Purchased Energy			
Current PPA	\$91.69	\$60.88	\$1,522
Proposed Amendment:			
-Reduced Cost of Energy	\$87.69	\$58.23	\$1,456
Purchased Energy Cost Savings Subtotal	\$4.00	\$2.65	\$66
Curtailed Energy			
Current PPA	\$91.69	\$2.29	\$57.3
Proposed Amendment:			
-No Cost up to 12,500 MWh	-	-	-
-Discounted rate from 12,501 to 25,000 MWh	\$43.85	\$0.55	\$13.8
Curtailed Energy Cost Savings Subtotal		\$1.74	\$43.5
One-time Project Admin Cost Savings			\$1.5
TOTAL COST SAVINGS			\$111

The term of the PPA is 25 years from the solar facility completion date, or Commercial Operation Date (COD), which is scheduled for December 31, 2016. The PPA is for the purchase of renewable solar energy from the COD, no later than December 31, 2016, through December 30, 2041. The proposed Amendment will not change the term of the PPA.

The Moapa solar facility is located on the Moapa Indian Reservation thirty miles north of Las Vegas, Nevada. The total expected energy generation capacity of 250 MW will provide sufficient solar renewable energy per year to serve more than 113,000 homes. The facility is projected to contribute 2.9 percent towards the Department's Renewable Portfolio Standard (RPS) energy goals. Additional background information is included in the Appendix.

City Council approval, by ordinance, of the proposed resolution is required pursuant to City Charter Section 674(a) (1) and (2) regarding power contracts and Section 373 for long-term contracts. The City Attorney has approved the proposed resolution and Amendment as to form and legality.

RECOMMENDATIONS

That the Mayor:

1. Approve the proposed resolution and ordinance, amending the Purchase Power Agreement (PPA) No. BP 12-017, including the Purchase Option, between DWP and Moapa Southern Paiute Solar, LLC, for the purchase of renewable solar energy; and
2. Return the proposed resolution to the Department for further processing, including Council consideration.

FISCAL IMPACT STATEMENT

The proposed Amendment to the Power Purchase Agreement will have no direct impact on the City General Fund. Approval of the proposed resolution will result in a total cost savings of approximately \$111 million over the 25-year term of the Agreement which benefits the Power Revenue Fund. The proposed Amendment complies with the Department's financial policies.

TIME LIMIT FOR COUNCIL ACTION

The City Attorney advises that there is no time limitation for items approved by ordinance.

APPENDIX

PURCHASE OPTIONS

Under the terms of the PPA, DWP will have the option to purchase the solar facility at the end of the 10th, 15th, 20th, or 24th anniversary dates from the Commercial Operation Date (COD), provided that DWP gives its notice to exercise the Purchase Option six months after the above mentioned dates. The Purchase Option does not include the land under the solar facility because Moapa leases the land from the owners, the Moapa Indian Tribe. DWP indicates that at the time of the closing of a purchase, the lease agreement allows for the lease to be reassigned to DWP from the Moapa Indian Tribe. Council approval, in accordance with Charter Section 373, will be required if DWP proposes to acquire the project because DWP would be required to assume the assignment of the long-term land lease instead of Moapa. Section 4.2 of the PPA, referring to the Purchase Option, specifically states that further authorizations from the Board and the City Council will be required for DWP to exercise the Purchase Option. The Purchase Option price will be based on the FMV of the facility at the time of purchase with a pre-determined floor and ceiling price summarized in the table below. The proposed Amendment modifies the Purchase Option allowing the appraised FMV to exceed the previously agreed upon maximum/ceiling purchase price. However, DWP will continue to not be obligated to purchase the solar facility regardless of the appraised FMV.

Solar Facility Purchase Options

Year	Floor price	Ceiling price
10	\$339 Million	\$398 Million
15	\$262 Million	\$315 Million
20	\$140 Million	\$168 Million
24	\$110 Million	\$135 Million

Although it is the policy of the City to own renewable power facilities and this PPA does not guarantee ownership, the energy from the project will allow DWP to meet its goals of increasing the use of renewable energy by 2020 until new sources can be acquired or built.

CURTAILMENT

DWP may curtail or reduce energy delivered as a result of adverse system conditions determined by DWP. Moapa must provide the capability to implement such curtailments. However, according to the terms of the original PPA, Moapa would receive payment as though the energy was delivered except in the event of a Force Majeure condition at the solar facility or within the BLM transmission corridor.

The proposed Amendment will provide a reduction in the cost that DWP would otherwise be obligated to pay for energy that is not necessary to meet the DWP energy demand. According to the terms of the proposed Amendment, DWP will have no cost for up to 12,500 MWh of curtailed energy annually. Additionally, DWP will pay a reduced rate of \$43.85 per MWh for further curtailment of 12,501 to 25,000 MWh annually. This is a cost savings that was not included in the original PPA.

Under the terms of the original PPA, the cost of 25,000 MWh of curtailed energy at \$91.69 per MWh is approximately \$2.29 million annually. Based on the terms of the proposed Amendment, DWP will

have no cost for the first 12,500 and will pay \$43.85 per MWh for an additional 12,500 MWh for a total cost of \$548,000 annually. As depicted in the table below, this results in an annual cost savings of up to \$1.74 million and a total costs savings of up to \$43.5 million over the 25 year term of the Agreement.

Costs of Curtailed Energy

	Energy Cost (per MWh)	MWh	Annual Cost (millions)	Total Costs for 25 year Term (millions)
Current PPA	\$91.69	25,000	\$2.29	\$57.3
Proposed Amendment:				
-No Cost up to 12,500 MWh	\$0.00	12,500	\$0	\$0
-Discounted rate from 12,501 to 25,000 MWh	\$43.85	12,500	\$0.55	\$13.8
Curtailment Cost Savings			\$1.74	\$43.5

TRANSMISSION

The delivery of power to DWP will be through the Crystal-McCullough-Victorville Substation, which is owned by DWP. Moapa will build the transmission line and facility that passes through the Bureau of Land Management (BLM) transmission corridor and connects to the DWP owned Substation. DWP will be able to purchase this connecting transmission line for a price not to exceed \$18 million. The proposed Amendment includes a reduction of the project management and administrative costs associated with the purchase of a transmission line resulting in a one-time savings of approximately \$1.5 million.

PRE-APPROVED LIST OF PURCHASERS

The Department anticipates a potential merger or change in control of Moapa. As a result, the proposed Amendment provides DWP approval rights of any purchaser(s) of assets or ownership of more than 50 percent. Moapa submitted a list of potential purchasers to be considered by DWP. Below is a non-exclusive list of companies that DWP has determined are financially qualified and capable of operating and maintaining the solar site facility. DWP provides pre-approval of the following eleven purchasers. Any change of assets or ownership to a purchaser not included on the pre-approved list is subject to prior written consent by DWP.

- Southern Power Company
- Berkshire Hathaway Energy
- Exelon
- Consolidated Edison
- NextEra Energy Resources
- Dominion Resources
- Duke Energy
- GE Financial Services
- Enbridge
- Google
- 8point3 Energy Partners

RENEWABLE ENERGY MANDATES

In 2002, the California Legislature passed Senate Bill (SB) 1078 which established the California Renewable Portfolio Standard. SB 1078 requires privately owned utilities and encourages public owned utilities to increase their use of renewable energy resources until 20 percent of generation is obtained from renewables by the year 2017. The RPS Policy was amended in December 2013 to comply with regulatory requirements of the California Renewable Energy Resources Act, also known as SB2 (1X) which requires publicly owned utilities, such as the DWP, to supply 25 percent of its energy from renewable sources by 2016 and 33 percent by 2020. The following table includes the RPS Policy targets that achieve compliance with regulatory mandates:

RPS Policy and Compliance Targets	
Renewable Energy Amount (Average)	Compliance Targets
20%	Dec. 31, 2013
25%	Dec. 31, 2016
33%	Dec. 31, 2020
33%	Each year after 2020

As of November 2015, DWP reports it is at 20.35 percent renewable energy. This solar facility is projected to contribute an additional 2.9 percent towards DWP’s renewable energy goals. In light of pending legislation (SB 350), it is anticipated that DWP will be revisiting the RPS goals to potentially raise its renewable energy amount to 50 percent by 2030.

REQUEST FOR RENEWABLE ENERGY PROPOSALS

In January 2011, DWP and multiple utilities participated with the Southern California Public Power Authority (SCPPA) to issue a Request for Proposal (RFP) for the purchase and/or acquisition of renewable energy sources and 220 proposals were received. The purpose of the proposal process was to assess the availability of renewable energy projects and environmental attributes. DWP evaluated the proposals and intends to implement projects that satisfy the intent of the Integrated Resource Plan (IRP), which outlines DWP’s goals for utilizing different resources for energy production.

MOAPA SOLAR PROJECT

One of the 220 proposers received during the SCPPA RFP process was Moapa Southern Paiute Solar, LLC (Moapa), formerly known as K Road Moapa Solar, LLC, who proposed a power purchase agreement and/or acquisition of the generation facility which will be built by Moapa. Although the SCPPA team, including DWP, negotiated the proposed PPA including the purchase option and the transmission line purchase; the location of the facility and the DWP’s transmission system narrowed the interested participants to only DWP’s participation. Therefore, in order to limit administrative costs and centralize management functions, DWP decided to enter into an exclusive Agreement with Moapa. On September 24, 2012, the Board approved Resolution No. 013073 and on November 20, 2012, the City Council approved (C.F. 12-1614) the 25-year solar power PPA with Moapa for the 250

MW output of the solar facility and its associated environmental attributes to be located on the Moapa Indian Reservation thirty miles north of Las Vegas, Nevada.

The solar facility is located on 2,500 acres of tribal land, which is leased to Moapa for 50 years. The actual expected life of the facility before large maintenance is required is approximately 30 years. The number of solar panels is expected to total 910,000, and the solar facility's expected total energy output will range from approximately 631,000 to 760,000 MWh per year. The completion date or Guaranteed COD is scheduled for December 31, 2016.

Under the terms of the proposed Amendment, the energy will be priced at a fixed rate of \$87.69 per MWh. The estimated cost of the renewable solar energy and the environmental attribute purchases over the 25-year term of the PPA is expected to total approximately \$1.5 billion. DWP anticipates purchasing from Moapa the 500 kV transmission line connecting to the Crystal-McCullough-Victorville Substation for an amount not to exceed \$18 million. In accordance with the PPA, prior to the purchase of this transmission line, the energy cost will be \$89.19 per MWh to include the cost of transmission. The Department reports that funds are identified in the current budget for the purchase of the transmission line.

The environmental attributes purchased as part of the price of energy would permit DWP to accumulate Renewable Energy Credits (RECs) as a credit to the DWP Renewable Portfolio Standard (RPS) goal. In addition, current tax laws allow for the federal Investment Tax Credits (ITCs) to apply to private entities that develop and operate a qualifying renewable energy generation facility. DWP states that the Moapa PPA has been structured to receive the benefits associated with the ITCs through lower energy purchased prices. According to the Department, the average value of the ITCs to DWP under the Moapa PPA is approximately \$13 million per year or \$325 million over the 25 year term.

CANCELLATION OF AGREEMENT

The Agreement provides for scenarios in which DWP can terminate the Agreement with Moapa. One of the scenarios is the Force Majeure Event that is commonly found in many agreements and provides for cancellation due to an uncontrollable condition such as a disaster or act of God, preventing one of the parties from performing obligations listed in the Agreement. The PPA provides performance securities for various stages of construction and through the life of the facility, which DWP can draw on if certain conditions are not met. A failure to meet the following milestones will result in the following damages:

- Failure to begin on the Notice to Proceed - \$5,000/day up to \$5 Million
- Failure to meet the Initial Delivery Milestone - \$15,000/day up to \$5 Million
- Failure to meet Facility COD - \$40,000/day up to \$ 5 Million

In order to better secure the credit risk, DWP obtained a Performance Bond (also referred to as a Performance Security in the PPA) in the amount of \$5 Million.