

OFFICE OF THE CITY ADMINISTRATIVE OFFICER

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To: The Council

From: Miguel A. Santana, City Administrative Officer 

Reference: Communication from the Board of Water and Power Commissioners dated August 6, 2009

Subject: **PROPOSED POWER PURCHASE AGREEMENT NO. BP 09-13 AND GROUND LEASE NO. BP 09-13GL FOR THE NILAND SOLAR FARM PROJECT**

SUMMARY

The Department of Water and Power (DWP) requests approval of Board Resolution No. 010-055 authorizing the Department to enter a 30-year agreement for the purpose of purchasing electric energy from a future power facility to be built by Niland Solar Farm, LLC (Niland LLC) which includes an option to purchase the facility at the end of eight or ten years. The facility will be built on DWP-owned land in Niland, California; therefore, a Ground Lease is included in the request. The following details the request:

- Approval to enter into a Power Purchase Agreement (PPA) No. BP 09-13 between DWP and Niland LLC, which authorizes DWP to purchase the rights to 55 megawatts (MW) of capacity and all associated renewable solar energy attributes from the Niland Solar Farm Project (Niland Solar). Initial energy deliveries are expected to begin on July 1, 2010; however, the official Commercial Operation Date (COD) will be no later than May 1, 2011 and will continue for a period of 30 years;
- Approval to enter into a Ground Lease (GL) No. BP 09-13GL between DWP and Niland LLC which provides for the lease of the project site located on DWP-owned land in Niland, California to Niland solar Farm, LLC for the purposes of building this solar energy farm, which shall provide the energy purchased in the PPA for a period of 30 years; and,
- Approval by ordinance of the PPA and limited authorization for the Board of Water and Power Commissioners (Board) to act on non-policy amendments without further approval by the Mayor and City Council to avoid delays in the operation of the project. Issues involving policy decisions will continue to be submitted to the Mayor and City Council.

City Council approval of the PPA and the GL is required pursuant to City Charter Sections 606 regarding rules for long-term contracts and 674(a) (1) and (2) regarding the purchase of power generating capacity; subject to the City Attorney approving the Board Resolution as to form and legality. The DWP and Niland LLC have completed a Mitigated Negative Declaration, which requires

DWP and Niland LLC to take certain actions to minimize the environmental impacts of Niland Solar on the surrounding community. These issues have been acknowledged by both DWP and Niland LLC and action will be taken to comply with all the provisions of the California Environmental Quality Act (CEQUA) Mitigated Negative Declaration. Since the Power Purchase Agreement provides for the purchase of energy and the construction of Niland Solar will not be under the control of DWP staff, City Charter Section 1022 regarding the use of independent contractors is not applicable. If DWP decides to purchase the facility, the staffing required for Operation and Maintenance of Niland Solar will be a small core staff.

BACKGROUND

In 2002, the California Legislature passed Senate Bill (SB) 1078 which established the California Renewable Portfolio Standard (RPS). SB 1078 requires privately owned utilities and encourages public owned utilities, such as DWP, to increase their use of renewable energy resources until 20 percent of generation is procured from renewable sources by the year 2017. Between 2003 and 2004, the Council and DWP developed and adopted a new RPS framework and policy for DWP. On June 29, 2005, the Council approved a goal of obtaining 20 percent of DWP's energy from renewable sources by July 2017. Subsequently, the DWP Board of Commissioners (Board) further accelerated the RPS goal of achieving 20 percent of energy from renewable power resources to 2010 instead of 2017 and 35 percent by 2020. Currently, the Governor of California has ordered all State Agencies to achieve a goal of 33 percent by 2020 and legislation has been introduced to also require privately owned utilities to achieve the 33 percent goal.

REQUEST FOR RENEWABLE ENERGY PROPOSALS

DWP intends to achieve the 20 percent RPS goal by utilizing a combination of existing projects, recent DWP requests for renewable energy projects, RFP projects and Southern California Public Power Authority (SCPPA) sponsored projects. DWP issued a Request for Proposals (RFP) in January 2007 for the purchase and/or acquisition of renewable energy sources. Of the sixty responses that were received, fifteen proposals had the capability to provide renewable energy from sources such as solar, wind, biomass, landfill gas, geothermal and other sources. The proposed Solar Power Project is one of the fifteen proposals and one of the three solar proposals.

SOLAR GENERATION COMPONENT OF THE RENEWABLE PORTFOLIO STANDARDS

There are three approaches to implementing the DWP solar plan. The Customer Incentive Program, which provides for rooftop installations and a loan option to the customers; the Utility Built Program, which will be built by DWP starting on the rooftops of City-owned facilities; and the Feed in Tariff Program, which allows third party solar program providers to sell energy to LADWP. The advantage of the third party Agreements are the tax incentives available to the private developer that are not available to government entities. There will be different provisions incorporated into the various third party solar agreements determined by the various financial and physical components of the projects. Many will include a buyout option to DWP to own the solar energy generation equipment or to continue to purchase the energy over the long term. Niland Solar is the initial project of the solar

projects under the Feed in Tariff Program. This PPA will provide 11 percent of the 500 MW of Large Scale Solar PPAs and 5 percent of the overall solar capacity envisioned in the Solar Plan.

DWP's long term Large Scale Solar Generation Plan is a component of the overall Renewable Portfolio Standards. The objectives of the program include minimizing the customer rate impacts through economies of scale, testing multiple strategies, and deploying the most cost effective programs.

Solar benefits include:

- Provides peak energy;
- Solar capacity can be phased in and able to ramp up capacity incrementally;
- Southwest region of the United States has an abundant solar supply;
- The current overabundance of solar panels and reduced demand due to the economic conditions benefits the seller with a lower price of energy;
- The up front capital cost is surpassed by the lower ongoing maintenance cost;
- The customer solar roof program reduces the impacts of transmission and distribution infrastructure;
- Solar decommissioning is simpler, quicker, and has less environmental impact.

THE NILAND SOLAR FARM PROJECT PROPOSAL

The Niland Solar Farm Project (Niland Solar) will be developed on 970 acres of DWP owned land located in Niland, California in Imperial County (on the southeastern side of the Salton Sea). The proposed Niland Solar project consists of solar panels attached to a grade-level concrete foundation. The proposed photovoltaic (PV) panels allow for the direct conversion of light into electricity. As stated by Niland LLC, the project's main feature will be thin film PV modules that have successfully performed in utility scale installations for over 20 years.

The Solar Farm's 55 Megawatt (MW) will enable DWP to meet about .4 percent of the renewable resource requirements. However, the solar farm will be phased in and constructed in approximately 10 MW sections with each section taking approximately one month to construct. The Full Operation Date is not expected until May 1, 2011; therefore, the entire capacity of the facility cannot be counted toward the 2010 twenty percent goal. Yet, DWP expects to receive at least 20 MW of the total capacity by December 2010. The phasing component of the construction plan beginning on July 1, 2010 will allow DWP to count the 20 MW of electricity toward achieving the twenty percent RPS goal by the end of 2010. Assuming the average household consumes 6.12 MWh per year and that DWP is expected to receive 128,000 MWh from the Niland Solar Farm Project per year, the project would generate sufficient energy for approximately 17,000 households annually. The significant terms are as follows:

- The projected Commercial Date of Operation is May 1, 2011 and a 30 year term power purchase agreement;
- The amount of power provided is 55 MW;

- The average cost of energy under the agreement is \$120 MW for energy annually with a reduction in the cost adjustment escalator from 3.5 to 1.75 percent in exchange for DWP providing the interconnection facility, environmental documentation, and a nominal lease rate on the land;
- The DWP has an the option to purchase Niland Solar at the end of seven or at the end of ten years for the greater of the Fair Market Value or \$165 million;
- Ownership will ensure a stable priced, long-term supply rather than power purchase agreements that must be periodically re-negotiated with the uncertainty of future availability or price.
- DWP projects that total annual expenditures, including transmission plus Operations and Maintenance costs to DWP, will depend on one of the following three option scenarios:
 - **Scenario 1) Energy Only, Full 30 Year Term**
 - Unit Price is \$120 per MWh with a 3.5 percent annual escalator;
 - The annual cost for 128,000 MWh is approximately \$15,300,000 in the first year;
 - The cost over 30 years would total \$730 million
 - If the annual price escalator were negotiated down through concessions to 1.75 percent the cost over 30 years would total \$555 million.
 - **Scenario 2) Year Eight Purchase Option**
 - The annual cost for 128,000 MWh is approximately \$15,300,000 in the first year;
 - The annual cost for the renewable energy purchase over the shortened seven year term of the PPA is approximately \$119 million with a 3.5 percent annual escalator;
 - At the beginning of the eighth year DWP would purchase the facility and the above terms would end;
 - The cost to purchase Niland Solar in the eighth year be at least \$165 million or the Fair Market Value, whichever is greater;
 - **Scenario 3) Year Ten Purchase Option**
 - The annual cost for 128,000 MWh is approximately \$15,300,000 in the first year;
 - The annual cost for the renewable energy purchase over the shortened ten year term of the PPA is approximately \$160 million with a 1.75 percent annual escalator;
 - At the beginning of the tenth year DWP would purchase the facility and the above terms would end;
 - The cost to purchase Niland Solar in the tenth year including the costs up to this point will be at least \$325 million or the Fair Market Value, whichever is greater;

- DWP will provide a fixed amount of \$1 million to defray project development costs borne by the seller over the first seven years of the Agreement. This amount will be credited against any purchase price should DWP chose to exercise that option provided for in the PPA.
- DWP will lease land it owns in Niland, California to Niland LLC for purposes of the PPA. DWP may elect to charge a minimal amount of rent for use of this land in exchange for a reduced energy price escalator.

TRANSMISSION

DWP will build a substation at the Niland Solar site. A transmission line between the Niland station and the existing Mead Adelanto Station in Nevada does not currently exist. However, the Department states a transmission line will be available by the time Niland Solar Farm begins to generate electricity. Electrical energy from Niland Solar will be delivered from Mead Adelanto to the Western Area Power Authority (WAPA), which requires agreements with the Imperial Irrigation District. WAPA will transmit the energy to DWP-owned transmission lines. Although these agreements are still in development, the costs can be estimated at \$4 million annually.

RISK MITIGATION MEASURE

Niland Solar Farm LLC, headquartered in Tempe Arizona, is a limited company created by First Solar, Inc. under the laws of Delaware specifically to build Niland Solar Farm. First Solar, Inc. the parent company and formerly OptiSolar of Hayward CA, is a thin film industry giant with offices in California, Arizona, Ohio, New Jersey, Germany, and Malaysia. The PPA complies with DWP financial policies with regard to credit standards for interest rate mitigation products. First Solar is not rated by S&P, Moody's or Fitch at this time but they have a very strong balance sheet evidenced by their cash position. They are the second largest PV manufacturer in the world and they are listed on Nasdaq Exchange.

CANCELLATION OF AGREEMENT

Termination is allowed under the following circumstances:

- Early Termination by Mutual Agreement – may be terminated by mutual written agreement of the parties;
- Termination for Default – with regard to payment or performance on behalf of the Buyer or the seller; and
- All Bonds and the interest have been paid in full or adequate provision for such payment has been made and the bonds are no longer outstanding.

COSTS OF OTHER SOURCES OF ENERGY

The typical industry cost of large scale solar energy project ranges from \$120/MWh to \$177/MWh, not including the transmission costs, which add another \$10 to \$15 per MWh to the cost. The overall cost is based on the Ground Lease which guarantees a lower average price per MWh in the proposed Niland Solar Agreement of \$120/MWh. A recent DWP survey of industry-wide energy prices for other sources of energy is provided below for comparison with the price of energy under the Niland Solar Agreement:

<u>Source of Energy</u>	<u>Cost per MWh</u>
Coal	\$30-\$40
Natural Gas	\$40-\$170 (depends on capacity and cost of gas)
Small Hydro	\$70-\$100
Photovoltaic	\$120-\$170
Geothermal	\$70-\$100
Biomass	\$60-\$95
Wind	\$70-\$120

POLICY VS NON-POLICY ISSUES

The DWP is requesting Council authority to amend the agreement in the future for non-policy issues. The Department anticipates that the majority of any future amendments to the project would be routine or administrative in nature and requests this provision to avoid delays in the completion and/or operation of the project. These are issues that could unnecessarily delay the daily operations of the power generation that commonly occur, although they would not change the overall intent of the Agreement. Examples of non-policy issues include situations such as the number of hours per day the Project would transport energy to the Delivery Point (delivery schedule) or a modified outage schedule. However, policy-related issues such as an increase in the projected quantity of power that is purchased under the Agreement will continue to be submitted to the Mayor and Council for approval.

Although the above provision has given DWP to administer the RPS program, it is appropriate at this time to receive a report from the Department on the status of each of the projects and require an annual status report on any developing issues or concerns. The report should include any changes required by legislation; economic conditions, resource availability, technology advancements, and supply and demand pressure on the market affect power demand.

The Council has approved the following ten renewable energy projects:

- Tieton Hydro
- Willow Creek Wind
- Pine Tree Wind
- Sepulveda Canyon Hydro
- Pebble Springs Wind

- Milford Wind
- PPM Wind
- Powerex Hydro
- Penrose Landfill Gas
- Waste Management Landfill Gas

These Projects should be included in the requested report.

CONCLUSION

The Niland Solar Farm Project will contribute to the goal of the Mayor, City Council and the State of California to increase the generation of electric energy from renewable resources. DWP plans to provide at least 20 percent of its energy generation from renewable sources by the year 2010. This Project, when combined with other DWP scheduled renewable projects, will increase the amount of renewable energy provided in their current portfolio to approximately 19 percent.

RECOMMENDATIONS

That the Council, subject to the concurrence of the Mayor and approval of the documents by the City Attorney:

1. Authorize the Department of Water and Power to:
 - a. Enter into a Power Purchase Agreement No. BP 09-13 between DWP and Niland Solar Farm LLC, which authorizes DWP to purchase the rights to 55 megawatts (MW) of capacity and all associated renewable solar energy attributes from the Niland Solar Farm Project. Initial energy deliveries are expected to begin on July 1, 2010, for a period of 30 years from the Commercial Operation Date (COD) no later than May 1, 2011;
 - b. Enter into a Ground Lease (GL) No. BP 09-13GL between DWP and Niland Solar LLC, which provides for the leasing of DWP-owned land in Niland, California to Niland Solar Farm, LLC for the purposes of generating solar energy purchased in the Power Purchase Agreement for a period of 30 years; and;
2. Approve by ordinance the Power Purchase Agreement and limited authorization for the Board of Water and Power Commissioners (Board) to act on non-policy amendments without further approval by the Mayor and City Council to avoid delays in the operation of the project. Issues involving policy decisions, including exercising purchase options, will continue to be submitted to the Mayor and City Council.
3. Instruct the Department of Water and Power to submit to the Mayor and Council a annual report on the status of the all the projects authorized under the Renewable Portfolio Standards Program.

FISCAL IMPACT STATEMENT

The proposed Agreements will have no direct impact on the City General Fund. The Power Revenue Fund will provide an annual expenditure of \$15,300,000 annually, escalated at up to no more than 3.5 percent per year for 30 years under Scenario 1. Alternatively, under Scenario 2, at the start of the eighth year, DWP will purchase the Niland Solar for \$165 million and \$1 million for Operations and Maintenance annually. If the purchase occurs under Scenario 3, the cost for Niland Solar could total \$323 million including the costs of the first 9 years of the PPA. Funding is available in the Power Revenue Fund's Fuel and Purchased Power Budget.

Time Limit for Council Action

Pursuant to Charter Section 606 "Process for Granting Franchises, Permits, and Entering Into Leases" and the Los Angeles Administrative Code Section 10.5, "Limitation and Power to Make Contracts", unless the Council takes action disapproving a contract longer than 30 days after submission to Council, the contract shall be deemed approved.

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