City of Palo Alto

City Council Staff Report

(ID # 5849)

Report Type: Action Items **Meeting Date: 5/27/2015**

Council Priority: Environmental Sustainability

Summary Title: Palo Alto CLEAN Program Updates and Extension

Title: Finance Committee Recommendation that Council: (1) Add a 25-Year Contract Term Option in Addition to the Palo Alto Clean Local Energy Accessible Now (CLEAN) Program's Existing 20-Year Contract Term Option; (2) Continue the CLEAN Program for Solar Resources at a Contract Price Reduced from 16.5¢/kWh to the Avoided Cost of the Solar Energy Generated (10.3 ¢/kWh to 10.4 ¢/kWh) with a Program Cap of 3 Megawatts; and (3) Expand the CLEAN Program's Eligibility to Non-Solar Renewable Energy Resources with a Program Cap of 3 Megawatts at a Contract Price Equal to the Avoided Cost of the Non-Solar Energy Generated (9.3 ¢/kWh to 9.4 ¢/kWh) (Continued from May 18, 2015)

From: City Manager

Lead Department: Utilities

Recommended Motion

I move that Council:

1. Adopt a resolution (Attachment A) to make the following changes and amend the CLEAN Program Eligibility Rules and Regulations accordingly:

    a. Add a 25-Year Contract Term Option in Addition to the CLEAN Program's Existing 20-Year Contract Term Option;

    b. Continue the Palo Alto CLEAN Program for solar energy resources, reducing the contract price from 16.5 cents per kilowatt-hour (¢/kWh) to a contract price equal to the avoided cost of solar energy resources of 10.3 ¢/kWh for a 20-year contract, and 10.4 ¢/kWh for a 25-year contract term, and to continue with a CLEAN Program limit for solar energy resources of 3 megawatts (MW);

c. Expand the CLEAN Program to allow non-solar eligible renewable energy resources to participate, and offer such resources a contract price equal to their avoided cost of 9.3 cents per kilowatt-hour (¢/kWh) for a 20-year contract, and 9.4 ¢/kWh for a 25-year contract term, with a program limit of 3 MW;

2. Direct staff to return to the Finance Committee after reviewing ways to continue the PV Partners for residential use; and

3. Approve the attached amended CLEAN Program Power Purchase Agreement (PPA) (Attachment B) to implement the recommended changes to the CLEAN Program and delegate authority to the City Manager to make any such additional changes as are approved by the City Attorney's office, and are otherwise necessary to implement any of the recommended changes identified in this staff report that are approved by Council or are otherwise necessary to implement Council's action on this item.

Recommendation

The Finance Committee recommends that the City Council:

1. Adopt a resolution (Attachment A) to make the following changes and amend the CLEAN Program Eligibility Rules and Regulations accordingly, as attached to the resolution as Exhibit A-1:

    a. Add a 25-Year Contract Term Option in Addition to the CLEAN Program's Existing 20-Year Contract Term Option;

    b. Continue the Palo Alto CLEAN Program for solar energy resources, reducing the contract price from 16.5 cents per kilowatt-hour (¢/kWh) to a contract price equal to the avoided cost of solar energy resources of 10.3 ¢/kWh for a 20-year contract, and 10.4 ¢/kWh for a 25-year contract term, and to continue with a CLEAN Program limit for solar energy resources of 3 megawatts (MW);

    c. Expand the CLEAN Program to allow non-solar eligible renewable energy resources to participate, and offer such resources a contract price equal to their avoided cost of 9.3 cents per kilowatt-hour (¢/kWh) for a 20-year contract, and 9.4 ¢/kWh for a 25-year contract term, with a program limit of 3 MW;

2. Direct staff to return to the Finance Committee after reviewing ways to continue the PV Partners for residential use; and

3. Approve the attached amended CLEAN Program Power Purchase Agreement (PPA) (Attachment B) to implement the recommended changes to the CLEAN Program and delegate authority to the City Manager to make any such additional changes as are approved by the City Attorney's Office, and are otherwise necessary to implement any

of the recommended changes identified in this staff report that are approved by Council or are otherwise necessary to implement Council's action on this item.

The recommendation from the Finance Committee differs from the recommendation made by the Utilities Advisory Committee (UAC). At its December 2014 meeting, the UAC supported staff's initial recommendation to continue the Palo Alto CLEAN Program for solar resources at the current 16.5 ¢/kWh contract price, with a program limit of 3 MW for solar energy resources. However, the UAC did not support staff's recommendation to expand the CLEAN Program's eligibility to non-solar renewable energy resources.

The Finance Committee's recommendation that Council reduce the CLEAN Program price for solar resources (from 16.5¢/kWh to 10.3¢/kWh or 10.4 ¢/kWh, depending on contract term length) also has implications for a City project (Solar Installations on City-Owned Parking Garages) and a City program (the Community Solar Program) currently in negotiations and under development by City staff. Should Council elect to adopt the Finance Committee recommendation to reduce the contract price under the CLEAN Program for solar resources, it's possible that one or both of these initiatives will no longer be able to move forward.

Executive Summary

In March 2012, the Council adopted the Palo Alto CLEAN (Clean Local Energy Accessible Now) program (also commonly referred to as a feed-in tariff, or FIT, program). The program was designed to address the Long-term Electric Acquisition Plan (LEAP) Objective to enhance supply reliability through the pursuit of local generation opportunities, and to complement the City of Palo Alto Utilities' (CPAU's) existing PV Partners solar rebate program. Palo Alto CLEAN created an additional alternative for property owners by enabling them to build a new solar system on their property and sell the energy to CPAU under a long-term, fixed-rate contract rather than participate in the PV Partners program and use the energy on site.

Addition of 25-Year Contract Term Option to the CLEAN Program

A number of solar project developers have indicated to staff that the CLEAN Program might be somewhat more attractive to them (and their investors) if the PPA term were extended from 20 to 25 years in part, to synchronize the term of the PPA with the 25-year expected life of solar panels. The City does not have a strong preference for one contract term or the other; therefore, the UAC and the Finance Committee both recommend allowing developers to choose either a 20-year or 25-year contract term at the time they execute a CLEAN Program PPA.

Reduction in Contract Price for Solar Resources from 16.5¢/kWh to 10.3 or 10.4¢/kWh

At its December 2014 meeting, the UAC supported staff's initial recommendation to continue the Palo Alto CLEAN Program for solar resources at the current 16.5 ¢/kWh contract price, with a program limit of 3 MW for solar energy resources. However, the Finance Committee now recommends a reduction of the contract price to avoided cost. For solar resources, the avoided cost of their output is 10.3 ¢/kWh for a 20-year term and 10.4 ¢/kWh for a 25-year term; for

non-solar renewable energy resources, the avoided cost of their output is 9.3 ¢/kWh for a 20-year term and 9.4 ¢/kWh for a 25-year term.

The recommendation to reduce the contract price for local solar resources from 16.5¢/kWh to their avoided cost level represents a deviation from existing Council policy. When establishing the CLEAN Program price of 16.5 ¢/kWh in December 2012, Council reviewed the market value of local solar and determined that there were additional financial and environmental benefits to increasing local solar generation, such as reducing the need to construct new transmission lines, improving grid reliability, and encouraging local economic development. In recommending a reduction in the CLEAN Program contract price, Finance Committee members cited, among other things, more general trends in the reduction of the avoided cost of solar energy and the lower prices the City is paying for long-term PPAs for solar energy generated by larger projects.

The Palo Alto CLEAN Program has no deadline for participation and solar developers continue to express interest in it, but no applications have been received for the CLEAN Program as of mid-April 2015. However, City staff is currently in the process of developing and negotiating a project (Public Works Department - Solar installations on City-Owned Parking Garages) which is a potential participant in the CLEAN Program, and a program (Utilities Department - the Community Solar Program) which involves a PPA that is based on the CLEAN Program PPA. Reducing the CLEAN Program contract price as recommended in this staff report has notable implications for both the Public Works project and Utilities program:

- *Solar Installations on City-Owned Parking Garages (Public Works)*: Reducing the contract price for solar resources would dramatically reduce the attractiveness of a lease agreement the Public Works Department is currently negotiating to facilitate the installation of rooftop solar at five City-owned parking garages. The prospective lessee intended to install solar projects that would be eligible to participate in the CLEAN Program at the 16.5 ¢/kWh contract price.

- *The Community Solar Program (Utilities)*: The community solar program, an element of the Council-adopted Local Solar Plan, is currently under development and could be adversely affected by the decision to reduce the CLEAN price.

Staff has continued its marketing efforts to commercial customers and property owners, both for the PV Partners program and the CLEAN Program, but expects that most growth in commercial solar installations will come from customers participating in the PV Partners program. Although the CLEAN Program is available to all, including residential, customers, staff expects residents will continue to install PV systems that generate electricity for use on-site and have the advantages of lowering utility bills through net metering.

Expansion of CLEAN Program Eligibility to Non-Solar Resources

The Finance Committee also recommends expanding the CLEAN Program and for the first time opening the program up to non-solar eligible renewable energy resources, with separate 3 MW program limits applying to each of the two different types of resources. Further, the Finance Committee recommends offering both types of resources contract rates equal to the avoided cost of their energy over terms of 20 or 25 years. For non-solar resources, the avoided cost of their output is 9.3 ¢/kWh for a 20-year term and 9.4 ¢/kWh for a 25-year term.

At its December 2014 meeting, the UAC rejected staff's recommendation to expand the CLEAN Program to non-solar resources, citing a lack of supporting justification for expanding the CLEAN Program's eligibility to non-solar renewable energy resources.

The recommendation to expand the CLEAN Program to include non-solar renewable energy generation resources is consistent with staff's indications both at the time the CLEAN Program was first introduced in 2012 and at the time that Council terminated the Power from Local Ultra-clean Generation Incentive (PLUG-In) program in June 2014. The recommendation to expand the CLEAN Program to compensate non-solar renewable resources at their avoided cost level is also consistent with adopted Council policy.

Background

The PV Partners Program

CPAU has a long and successful history of supporting solar power. It initiated the PV Partners program in 1999, and in 2007 the program was expanded to meet the requirements of the State's Million Solar Roofs Bill (Senate Bill 1 (SB1), 2006). Under the PV Partners program CPAU provides rebates to residential and commercial customers who install solar to offset their own electricity use. The PV Partners program has been successful at stimulating solar development, with 6.0 MW of local solar capacity installed by nearly 694 participants as of the end of December 2014. Palo Alto is one of the top ten utilities nationwide in PV installations per customer.

Through the PV Partners program, CPAU already provides substantial financial support for local solar installations. CPAU's total SB1 program budget for 2008 through 2017 is $13 million and the total program goal is 6.6 MW. When this goal is achieved the energy generated by the program annually will be 11.2 GWh (1.1% of Palo Alto load). The cost of the program is roughly $1.3 million per year for the rebates plus the cost of administration and the lost distribution system revenue associated with net metering. At the same time, the local solar generation reduces CPAU's total supply costs by approximately $1.15 million per year by reducing the cost of energy purchases, transmission, and capacity so that the rate impact is less than 0.2% per year while rebates are being paid. Due to SB1, PV Partners is a state mandated program, and regardless of the rate impact, CPAU is required to offer it until the total program budget of $13 million has been exhausted. The PV Partners program rebates for residential PV systems were fully reserved on August 9, 2014 and the $1.6 million in remaining funds for commercial PV systems is expected to be reserved by the end of 2015.

The CLEAN Program

In March 2012, the City expanded its support for local distributed generation by launching Palo Alto CLEAN with a price of 14 ¢/kWh for a 20-year contract (Staff Report 2548, Resolution 9235). The CLEAN Program expanded the options available to property owners beyond the existing PV Partners program by enabling them to sell energy directly to CPAU under a long term contract instead of using the energy on-site. Initially, the CLEAN Program generated a high level of interest from solar developers who wanted to lease rooftops in Palo Alto in order to build a solar system and sell the energy to CPAU. However, it soon became apparent that the 14 ¢/kWh price was insufficient to enable third-party developers to earn their target returns while still offering attractive rooftop lease rates. In December 2012, Council extended the CLEAN Program and increased the rate to 16.5 ¢/kWh for a 20-year contract (Staff Report 3316, Resolution 9308). In February 2014, Council extended the CLEAN Program again at the rate of 16.5 ¢/kWh for a 20-year contract, increased the program capacity limit to 3 MW, and requested that staff return to review the program after one year or when the 3 MW cap was reached (Staff Report 4378, Resolution 9393).

The CLEAN Program has no deadline for participation and solar developers continue to express interest in it, but (as noted above) no applications have been received for it as of mid-April 2015. However, CPAU has provided assistance to the Public Works Department to work with Clean Coalition, a local nonprofit organization, to issue a Request for Proposals to lease the rooftop space on the top decks of five city-owned parking garages (three downtown and two on Cambridge Avenue) in order to install solar canopies, which would provide an estimated 1.5 MW of local solar capacity. Staff interviewed all three respondents to the Request for Proposals, selected the top vendor, and (at the time of this writing) is negotiating a site lease for the project and preparing it for potential Council approval. Since the CLEAN Program requires participants to have site control before applying for the program, the vendor will become eligible and is expected to apply to the CLEAN Program, should the City Council approve the site lease.

Despite the lack of participation to date, there have still been positive outcomes from the CLEAN Program offering. The CLEAN Program prompted developers to take a serious look at the cost of developing solar projects in Palo Alto, and some of them shared that information with CPAU staff. At the same time, the solar project permitting processes at the development center have been improved based on input gathered from solar developers. In addition, a number of public utilities across the country have called CPAU to discuss how to follow Palo Alto's lead and develop a CLEAN Program in their own service areas.

Similar Feed-in Tariff Programs in California

Other municipalities in California have developed feed-in tariff (FIT) programs similar to Palo Alto CLEAN, and some have succeeded in getting actual projects built. The key difference between Palo Alto CLEAN and other FIT programs around the state is that most other programs are geared toward ground-mounted or parking structure-based solar installations, rather than

the significantly more costly rooftop installations. But given how built-out Palo Alto land is, there are very few opportunities to build solar generation resources anywhere but on rooftops.

The Los Angeles Department of Water and Power (LADWP) has a FIT program with a 100 MW capacity goal (FIT 100) that has been active over the past three years utilizing a declining market price structure. This program began in May 2012, and the initial contract prices were established based on developer bids (the weighted average contract rate was 17.5 ¢/kWh). Once the capacity allocated to this first price tranche was fully reserved, the contract price was reduced to 17 ¢/kWh, and was subsequently reduced in 1 ¢/kWh increments after the capacity in each tranche was fully allocated. As shown in Table 1 below, LADWP's FIT 100 program has seen a strong market response exceeding each capacity offering. However, high project cancellation rates have been observed at each price level as projects encountered uneconomic costs, and the level of market response has rapidly decreased as the offer price has declined. In fact, the final tranche opened up in March 2015 at an offer price of 13 ¢/kWh, and to date it has received only nine applications totaling 5.6 MW (out of the 25 MW being offered).

Table 1 – LADWP FIT 100 Procurement Summary

Offering Date	Price	Capacity Offered (MW)	Active (MW)	Cancelled (MW)	Operating (MW)
May 2012	17.5 ¢/kWh (average)	10	0	5.6	1.6
Feb 2013	17 ¢/kWh	20	15.1	28.2	1.6
July 2013	16 ¢/kWh	20	15.2	20.8	2.2
Mar 2014	15 ¢/kWh	20	14.1	11.4	0
Aug 2014	14 ¢/kWh	15	11.6	0.9	0
Mar 2015	13 ¢/kWh	25	5.6	0	0

Source: LADWP Fifth FIT Allocation Board Presentation, December 2014

Among smaller California utilities, Marin Clean Energy (MCE) also operates a FIT program similar to Palo Alto CLEAN. MCE's program has a 10 MW capacity target, and like the LADWP FIT 100 program, it utilizes a declining market price structure based on total capacity procured. The MCE program also began operating in 2012, and quickly executed a contract for a 1 MW rooftop solar PV project located at the San Rafael airport; the contract rate was 13.77 ¢/kWh, and the project is now operating. The MCE FIT program has a couple of additional parking structure-based solar PV projects under development, and the offer rate is now at 12 ¢/kWh.

Discussion

Palo Alto CLEAN Program Price for Local Solar – History and Proposal

When establishing the CLEAN price of 16.5 ¢/kWh in December 2012, Council reviewed the market value of the local solar energy and determined that there were additional financial and environmental benefits to increasing local solar generation. In February 2014, when Council re-affirmed the 16.5 ¢/kWh price, staff estimated the cost of buying renewable energy outside of Palo Alto and transmitting it to Palo Alto was 9.9 ¢/kWh (including renewable energy value, transmission and capacity) for a 20-year contract. Therefore, purchasing the energy generated

from 3 MW of local solar projects at 16.5 ¢/kWh was expected to cost about $320,000 per year more than buying the same energy outside of Palo Alto (and having it transported to Palo Alto). This was equivalent to a 0.27% increase in the electric utility's costs. Council determined that this additional cost was acceptable as a means to encourage local solar installations and in light of the additional benefits of encouraging local solar generation.

In June 2014, the City executed a long-term Power Purchase Agreement (PPA) to buy renewable energy from a 25 MW solar energy project near Bakersfield at a cost of about 6.9 ¢/kWh (Staff Report 4791, Resolution 9416). The cost to deliver that energy to Palo Alto, combined with the capacity related benefits that local solar would provide, is projected to be an additional 3.4 ¢/kWh, for a total value of local solar energy of 10.3 ¢/kWh. Based on this value, or avoided cost, the cost of continuing the 16.5 ¢/kWh CLEAN price for 3 MW of solar PV projects would be about $310,000 per year more than buying the same energy outside of Palo Alto, or $6.2 million over the 20-year contract term. This is equivalent to a 0.26% increase in the electric utility's costs.

Table 2 below shows the history of the Palo Alto CLEAN price since the program started as well as the Finance Committee's recommended CLEAN contract price for local solar for a 20-year contract term, which is equal to local solar energy's avoided cost of 10.3 ¢/kWh.

Table 2 – Palo Alto CLEAN Program Prices for Local Solar

Council Approval	Avoided Cost of Local Solar Generation * (¢/kWh)	CLEAN Price for 20 years (¢/kWh)	Annual Excess Cost (Rate Impact)	Total Excess Cost over 20-year Term
March 2012	13.553	14.0	$15,000 (0.01%) for 2 MW cap	$300,000
December 2012	11.6	16.5	$160,000 (0.10%) for 2 MW cap	$3.2 million
February 2014	9.9	16.5	$332,500 (0.27%) for 3 MW cap	$6.45 million
UAC Dec. 2014 Recommendation	10.3	16.5	$310,000 (0.26%) for 3 MW cap	$6.2 million
Current Proposal: Finance Committee Recommendation	**10.3**	**10.3**	**$0**	**$0**
** The cost of buying renewable energy outside of Palo Alto and transmitting it to Palo Alto.*				

Reduction in the CLEAN Program Contract Price

However, as discussed in more detail in the "Committee Review and Recommendation" section below, the Finance Committee recommends that the CLEAN contract price for local solar resources be reduced to the avoided cost level (10.3 ¢/kWh for a 20-year contract term). At the avoided cost price, if any developers of local solar projects did participate in the CLEAN Program there would be no cost impact on CPAU ratepayers. Some members of the Finance Committee

suggested that the extra cost of the CLEAN Program funds could be used instead to replenish the PV Partners rebate funds available to residential customers installing solar panels on their homes. However, because the residential PV Partners rebate funds were fully reserved in August 2014 (and the application process to receive these funds subsequently shut down), staff feels that there would be significant logistical and equity issues associated with re-initiating the residential PV Partners program. Funds could, however, be used to start a new solar rebate program when current PV Partners funds are exhausted.

- *Implications of CLEAN Program Contract Price Reduction: CLEAN Program Participation*

As discussed above, the Palo Alto CLEAN Program has yet to receive an application from a solar PV project, even after two years of offering a contract rate of 16.5 ¢/kWh. Industry groups, such as the CLEAN Coalition, attribute low participation levels to the comparatively high rates that property owners in Palo Alto charge for leasing their rooftop space, as well as the lack of space available to install ground-mounted or parking structure-based projects. However, as the cost of solar panels and other balance of system costs continue to decline over time, staff believes that the 16.5 ¢/kWh price would soon prove sufficient to attract program participants—even beyond the aforementioned parking garage rooftop lease project. On the other hand, reducing the CLEAN contract price to the avoided cost level would undoubtedly eliminate any possibility that the program would experience any participation for the foreseeable future. In effect, the program would exist in name only—although maintaining the program in this state would nonetheless require that some level of staff time and resources continue to be devoted to it.

- *Implications of CLEAN Program Contract Price Reduction for the Solar Installations on City-Owned Parking Garages Project (Public Works)*

In March 2014, the City released a Request for Proposals (RFP) for the installation and operation of a solar PV system at one or more of the five City-owned parking structures (Staff Report 4540). The RFP was structured to solicit projects that could be eligible to participate in the Palo Alto CLEAN Program providing an estimated 1.5 MW of local solar capacity. At the time of this writing, Public Works staff is completing negotiations for a site lease for the project and was preparing to present terms to Council for approval. The negotiation of this lease, however, was predicated on the notion that the ultimate rooftop solar installations would receive a CLEAN contract at a price of 16.5 ¢/kWh for a 20-year contract term. If the CLEAN Program price is reduced at this point, and the parking garage rooftop solar projects are no longer able to receive the assumed 16.5 ¢/kWh contract price, it would result either in the cancellation of the lease and the solar installations or a very significant reduction in the lease payments of approximately $154,000 per year to the City that are currently contained in the draft lease agreement. Furthermore, taking this action at the culmination of the year-long solicitation and negotiation process may damage the reputation of the City in the solar industry, at least with the companies focused on the development of commercial-scale projects.

- *Implications of CLEAN Program Contract Price Reduction for the Community Solar Program (Utilities)*

As part of the Local Solar Plan, which was established by Council in April 2014 (Staff Report 4608, Resolution 9402), CPAU staff is currently working on the development of a voluntary community solar share program, which would be available to all electric ratepayers and would primarily benefit community members who do not have good solar access but have the desire to participate in a local solar project. Staff released an RFP in July 2014 for proposals of a CPAU-branded community solar program totaling 1 to 3 MW in capacity and selected the top vendor. Staff has been discussing the program details and negotiating a professional services contract and a PPA with the vendor; assuming the PPA is approved by Council, the developer would then build the project and market it to ratepayers, who would be able to pay a flat fee to "own" a portion of the system.

Thus far, these PPA negotiations have been conducted under the assumption that the community solar PPA price will be set at the same level as the CLEAN Program price for solar projects, which was 16.5 ¢/kWh at the time the PPA negotiations started. If the CLEAN contract price is reduced to the avoided cost level, and the community solar PPA price is reduced to the same level, it may impact the project and the community solar program. The City could decide to set a different contract price for the output from the community solar project, but would have difficulty explaining how it could offer a different contract price to the community solar project that to other local solar projects through the CLEAN Program.

Adding a 25-Year Contract Term Option

Since the inception of the CLEAN Program, staff has held numerous meetings and conversations with solar developers who are eager to participate in the program. Recently, staff distributed a survey to a large number of local solar developers inquiring about program modifications that they would like to see. A number of these developers indicated that the CLEAN Program might be somewhat more attractive to them (and their investors) if the PPA term were extended from 20 to 25 years in part, to synchronize the term of the PPA with the 25-year expected life of solar panels. The City does not have a strong preference for one contract term or the other; therefore, the UAC and the Finance Committee both recommend allowing developers to choose either a 20- or 25-year contract term at the time they execute a CLEAN Program PPA.

Table 3 – Cost of Palo Alto CLEAN Program at 16.5 ¢/kWh Price by Contract Term

Contract Term	Avoided Cost of Local Solar Generation * (¢/kWh)	CLEAN Price (¢/kWh)	Annual Excess Cost for 3 MW	Total Excess Cost over Term
20 years	10.3	16.5	$310,000	$6.2 million
25 years	10.4	16.5	$305,000	$7.6 million
** The cost of buying renewable energy outside of Palo Alto and transmitting it to Palo Alto.*				

Of course, at a CLEAN price equal to the avoided cost of local solar generation (10.3¢/kWh for a 20-year term or 10.4 ¢/kWh for a 25-year term), the annual excess cost would be zero and there would be no rate impact.

Expanding CLEAN Eligibility to Non-Solar Renewable Energy Resources at their Avoided Cost

When Council first approved the Palo Alto CLEAN Program in March 2012, the impetus for the program was the community's desire for a feed-in tariff program to encourage greater rates of large rooftop solar PV development in Palo Alto. At the time, there was little to no potential seen for other types of renewable energy resources to be sited locally, due to lack of resource potential and developable land. However, in the March 2012 staff report (Staff Report 2548), staff noted that, "[w]hile the first year of the program is restricted to solar systems on large rooftops, future program years may include a wider range of renewable technologies and may be available to smaller projects." In addition, in June 2014 Council terminated the PLUG-In program (Staff Report 4878, Resolution 9440), which was designed to encourage high efficiency renewable and non-renewable local distributed generation projects. Besides the program having no participants and being inconsistent with the City's recently adopted Carbon Neutral Plan, another reason cited in the report for the program's termination was that the City "anticipates expanding [the Palo Alto CLEAN Program] to other [non-solar] local renewable electric supplies."

As new technology and energy storage systems are developed, local renewable energy generation, including technology beyond local solar, in combination with storage systems, has the potential to provide resiliency to the City's electric distribution system. Further, local renewable energy generation that participates in the CLEAN Program provides long-term supply cost certainty and value to the entire community—benefits that are not provided when such energy is sold to the City on a short-term basis or used on-site.

For these reasons, the Finance Committee recommends expanding the program's eligibility criteria to include all eligible renewable energy resources (as defined by state law), rather than limiting participation to solar resources. Doing so would permit the proposed anaerobic digester facility near the Baylands to apply to the CLEAN Program if the Regional Water Quality Control Plant (RWQCP) decides to sell all of that resource's output to CPAU, rather than using it on-site to meet the RWQCP's energy needs. Expanded eligibility beyond solar resources would also allow other locally-sited resources to participate in the program, so long as they meet the state's definition of a renewable resource[1] and satisfy all of the City's other zoning and permitting requirements. In addition, Palo Alto would not be the first utility in the country to allow non-solar resources to participate in a feed-in tariff program. LADWP, MCE, and Sonoma

[1] The state's renewable resource definitions are articulated in Section 399.12(e) of the Public Utilities Code and Section 25741 of the Public Resources Code. Examples of eligible renewable resources (besides solar) include wind, landfill gas, biomass, geothermal, small hydroelectric and ocean/tidal resources. Electricity generated by a fuel cell is eligible as well, provided that the fuel cell uses a renewable fuel to produce this output.

Clean Power also operate FIT programs that are open to all resources that are deemed to be renewable under state law.[2]

A contract price to these non-solar projects that is equal to the estimated cost of buying renewable energy outside of Palo Alto and transmitting it to Palo Alto (9.3 ¢/kWh for a 20-year contract, or 9.4 ¢/kWh for a 25-year contract[3]) is consistent with prior Council action to price non-solar renewable resources at avoided cost. The City Council's May 12, 2014 motion stated that the proposed anaerobic digester facility should be compensated at "the local market price for Northern California for green electricity" for any electrical generation that the facility produces and sells to CPAU (Staff Report 4744). Because the contract price for these resources will be equal to the value of renewable energy generation to the City, their participation in the Palo Alto CLEAN Program will not have any rate impact on customers.

While staff believes that there is unlikely to be much uptake from non-solar resources due to the lack of non-solar resource potential and the high cost of land in Palo Alto, the Finance Committee recommends that the non-solar renewable resources be subject to a 3 MW participation cap, which is separate from the 3 MW cap for solar resources. Even though Public Works staff expects that a potential anaerobic digester is unlikely to participate in the CLEAN Program, as it would be more financially beneficial to use its output onsite to meet the RWQCP's electricity needs, expanding the program will provide another option for consideration when evaluating the economics of that technology.

Committee Review and Recommendation

UAC Consideration and Recommendation

The UAC considered staff's recommendation at its December 10, 2014 meeting. (Staff's initial recommendation to the UAC was to continue the CLEAN Program for solar energy resources at the 16.5 ¢/kWh contract price; add a 25-year contract term option; expand the program the non-solar renewable energy resources; offering non-solar resources a contract price based on the avoided cost of their energy; and impose no program limit on non-solar resources.) While expressing overall support for the Palo Alto CLEAN Program, and expressing no concerns about staff's recommendation to add a 25-year contract term option to the program and continue to offer the 16.5 ¢/kWh contract price to solar energy resources, some Commissioners voiced concerns about staff's proposal to expand the program to non-solar renewable energy resources.

[2] See MCE's FIT program: http://www.mcecleanenergy.org/feed-in-tariff/, and Sonoma Clean Power's ProFIT program: https://sonomacleanpower.org/profit/.

[3] The avoided cost estimate for non-solar resources assumes that the resource will be producing energy essentially around the clock all year long, which is, for example, how an anaerobic digester facility would be expected to operate. This is in contrast to solar energy resources, which only produce power during the middle of the day, when wholesale energy prices are significantly higher. This difference in the generation profiles of the various resources is the reason for the 1.0 ¢/kWh premium in the avoided cost of solar energy compared to non-solar energy.

For example, some Commissioners indicated concerns about potential unanticipated consequences resulting from opening the program to such resources, in terms of the type and scale of projects that might participate. The Commission expressed general support for including a program cap on participation by non-solar resources. Commissioners also stated their interest in seeing a fuller discussion of the rationale and potential impacts of opening the program up to non-solar resources before providing their formal endorsement of such a proposal.

After its discussion, the UAC voted 3-2 (with Vice Chair Waldfogel and Commissioners Eglash and Hall voting yes, Chair Foster and Commissioner Melton voting no, Commissioner Cook abstaining, and Commissioner Chang absent) to recommend that the City Council:

1. Continue the Palo Alto CLEAN Program at the current price of 16.5 cents per kilowatt-hour (¢/kWh) for a 20-year contract, add a 25-year contract term option with a 16.5 ¢/kWh price, and continue with a program limit of 3 megawatts (MW) for solar resources; and,
2. Direct staff to return to the Council with a review of the program in one year or at the time the program capacity is filled, whichever comes first.

The approved minutes from the UAC's December 10, 2014 meeting are provided as Attachment C.

Finance Committee Consideration and Recommendation

In response to the UAC's comments, staff modified its proposal to the Finance Committee by including a program participation cap of 3 MW on non-solar renewable energy resources. (Otherwise, staff presented the same recommendation to the Finance Committee as it presented to the UAC.) In addition, staff expanded the discussion on the proposal to extend the CLEAN Program to non-solar resources in its report to the Finance Committee—specifically, noting the Council's May 12, 2014 motion establishing the compensation rate to be paid by CPAU to the anaerobic digester for electricity sales, and elaborating on the participation eligibility requirements for non-solar resources and the historical background for expanding the program's eligibility criteria.

The Finance Committee considered staff's and the UAC's recommendations at its March 17, 2015 meeting (Staff Report 5428). Committee members expressed no concerns with the proposals to add a 25-year contract term option or to expand the CLEAN Program's eligibility criteria to include non-solar eligible renewable energy resources. However, Committee members expressed serious concern about the proposal to continue offering the CLEAN Program contract price of 16.5¢/kWh for solar resources, rather than a lower rate closer to the current avoided cost of that solar energy.

Finance Committee members noted that as the value (avoided cost) of solar energy decreases, the excess cost that ratepayers must pay to support the 16.5 ¢/kWh rate increases, and they indicated an unwillingness to continue to pay this excess cost to procure solar energy generated

located in Palo Alto. They also cited the low price the City paid for long-term PPAs for solar energy generated by larger projects and questioned whether it was better for the environment to have solar locally versus much larger projects in such places as Fresno. Several Committee members expressed a desire to reduce the CLEAN contract price to the avoided cost level for solar resources, and discussed the potential to use the funds that would have supported the excess cost associated with the 16.5 ¢/kWh rate to benefit residential ratepayers—for example, by replenishing the rebate funds available to residential customers through the PV Partners program. Some Committee members also expressed skepticism about the additional benefits of local solar energy resources that existing Council policy had identified and used to justify paying a contract price greater than the avoided cost of the energy.

After discussion, the Finance Committee voted unanimously (4 to 0) to recommend that the Council:

1) Continue the Palo Alto CLEAN Program at a price for solar renewable projects at the avoided cost of 10.3 cents per kilowatt-hour for 20 years and 10.4 cents per kilowatt-hour for 25 years;

2) Amend the Palo Alto CLEAN Program eligibility rules and requirements to allow non-solar eligible renewable energy resources to participate and offer local non-solar renewables at a price of 9.3 cents per kilowatt-hour for 20 years and 9.4 cents per kilowatt-hour for 25 years, with a cap on the program of 3 megawatts; and

3) Direct staff to return to the Finance Committee after reviewing ways to continue the PV Partners Program for residential use.

The draft excerpted minutes from the Finance Committee's discussion of the Palo Alto CLEAN Program at its March 17, 2015 meeting are provided as Attachment D.

Resource Impact

Staff estimates that the current cost of buying energy from solar resources outside of Palo Alto is 10.3 ¢/kWh (including transmission and capacity) for a 20-year contract, or 10.4 ¢/kWh for a 25-year contract. Purchasing the energy generated by local solar projects at contract prices equal to these avoided cost values would not impact the cost to Utility customers. On the other hand, purchasing the output from 3 MW of local solar projects at a contract price of 16.5 ¢/kWh would cost about $310,000 per year more than buying the same energy outside of Palo Alto. This is equivalent to a 0.26% increase in the electric utility's total costs, and staff has determined that the system average electric rate would have to increase by 0.03 ¢/kWh as a result. This is equivalent to a bill impact of $1.50 per year for the median residential customer using 410 kWh/month, or $2.30 per year for a residential customer using 650 kWh/month.

Expanding the program to local, non-solar renewable energy projects is not expected to impact the cost to Utility customers since the recommended contract price for those projects is equal to the value of acquiring such energy outside the City.

In addition to the energy cost impacts described above, staff time is associated with marketing and project review. The project review can be absorbed with existing staff over the life of the program, and costs will be recovered through project review fees. The marketing efforts are expected to require about 0.1 FTE of staff time and may involve an additional budget for marketing materials, which would be requested through the annual budget process. The marketing work will be absorbed by existing staff, but will decrease time spent on other customer account management and efficiency program delivery activities.

Policy Implications

The recommendation to continue the Palo Alto CLEAN Program and expand it to non-solar eligible renewable energy resources supports the City's carbon neutral electric supply portfolio policy as well as the LEAP Objective to enhance supply reliability through the pursuit of local generation opportunities.

However, the recommendation to reduce the Palo Alto CLEAN contract price for solar resources from 16.5 ¢/kWh to the avoided cost level of 10.3 ¢/kWh for a 20-year contract, or 10.4 ¢/kWh for a 25-year contract, represents a change in emphasis in adopted Council policy—which has previously noted the additional financial and environmental benefits to increasing local solar generation that are not captured in the avoided cost calculation.

Environmental Review

Adoption of the attached resolution is not subject to California Environmental Quality Act (CEQA) review under California Public Resources Code section 21080(b)(8), because the contract price adopted reflects the reasonable cost of the CLEAN Program's operating expenses. Approval of the amended CLEAN Program Eligibility Rules and Requirements and the amended CLEAN Program PPA is not a project under CEQA, and therefore, no environmental assessment is necessary.

Attachments:

- Attachment A: Resolution Expanding the Palo Alto CLEAN Program's Eligibility to Non-Solar Renewable Energy Resources and Adding a 25-Year Contract Term Option (with Exhibit A-1 Revised Program Rules) (PDF)
- Attachment B: Updated Palo Alto CLEAN Power Purchase Agreement (PDF)
- Attachment C: Final Excerpted Minutes of the December 10 2014 UAC Meeting (PDF)
- Attachment D: Draft Excerpted Minutes of the March 17 2015 Finance Committee Meeting (PDF)

NOT YET APPROVED

Resolution No. _____

Resolution of the Council of the City of Palo Alto Reducing the Contract Price for the Palo Alto Clean Local Energy Accessible Now (CLEAN) Program from 16.5 ¢/kWh to between 10.3-10.4¢/kWh for Solar Resources, Expanding the CLEAN Program's Eligibility to Non-solar Renewable Energy Resources and Adding a 25-Year Contract Term Option

R E C I T A L S

A. On March 5, 2012, the City approved the Palo Alto Clean Local Energy Accessible Now (CLEAN) Program (or feed-in tariff). Under the Palo Alto CLEAN Program, participants who build a new solar generating system in Palo Alto may obtain a long-term, fixed-price contract with the City to sell the energy from the system to the City's electric utility.

B. The first program year of Palo Alto CLEAN commenced on April 2, 2012 and was originally set to terminate on December 31, 2012.

C. On February 3, 2014, Council approved Resolution 9393, which continued Palo Alto CLEAN with a contract price of 16.5cents per Kilowatt-hour (kWh) and established a maximum total Palo Alto CLEAN Program cost commitment of $20,000,000 over the life of the program. This amount was sufficient for a program cap of 3 megawatts (MW) of generating capacity.

D. The City wants to continuing to offer the program for solar resources with the existing 3 MW cap of generating capacity, while adding a 25-year contract term option and simultaneously reducing the contract price offered from 16.5 cents per kWh to 10.3 cents per kWh for a 20-year contract or 10.4 cents per kWh for a 25 year contract .

E. The City also wants to open the program to local, non-solar eligible renewable energy resources and offer contract prices of 9.3 cents per kWh for a 20-year contract term or 9.4 cents per kWh for a 25-year contract term for such resources.

F. The City intends that non-solar, local eligible renewable energy resources not be counted toward the Palo Alto CLEAN Program's 3 MW generating capacity cap for solar resources, but be subject to a separate 3 MW generating capacity cap of its own.

The Council of the City of Palo Alto ("City") RESOLVES:

SECTION 1. To modify the CLEAN Program to:

a. Add a 25-Year Contract Term Option in Addition to the CLEAN Program's Existing 20-Year Contract Term Option;

b. Continue the Palo Alto CLEAN Program for solar energy resources, reducing the contract price from 16.5 cents per kilowatt-hour (¢/kWh) to a contract price

equal to the avoided cost of solar energy resources of 10.3 ¢/kWh for a 20-year contract, and 10.4 ¢/kWh for a 25-year contract term, and to continue with a CLEAN Program limit for solar energy resources of 3 megawatts (MW); and

c. Expand the CLEAN Program to allow non-solar eligible renewable energy resources to participate, and offer such resources a contract price equal to their avoided cost of 9.3 cents per kilowatt-hour (¢/kWh) for a 20-year contract, and 9.4 ¢/kWh for a 25-year contract term, with a program limit of 3 MW.

SECTION 2. To implement such changes, the Council adopts revised Palo Alto CLEAN Program Eligibility Rules Requirements, set forth in Exhibit A-1 attached to this Resolution.

SECTION 3. The Council authorizes the City Manager or his designee to sign contracts for the output of one or more solar, or other non-solar eligible renewable energy resource meeting the CLEAN Program Eligibility Rules and Requirements described in Section 1. The total CLEAN Program cost commitment made by the City during the life of the program shall not exceed $75,000,000, which is sufficient for a program cap of 3 MW of local solar generating capacity and 3 MW of local, non-solar generating capacity over a 25-year contract term.

SECTION 4. The Council finds that the adoption of this resolution is not subject to California Environmental Quality Act (CEQA) review under California Public Resources Code section 21080(b)(8), because the rate adopted reflects the reasonable cost of the CLEAN Program's operating expenses. Approval of the amended CLEAN Program Eligibility Rules and Requirements is not a project under CEQA, and therefore, no environmental assessment is necessary

INTRODUCED AND PASSED:
AYES:
NOES:
ABSENT:
ABSTENTIONS:

ATTEST:

_____ _____
City Clerk Mayor

APPROVED AS TO FORM: APPROVED:

_____ _____
Senior Deputy City Attorney City Manager

_____

NOT YET APPROVED

Director of Utilities

_____

Director of Administrative Services

ATTACHMENT B

POWER PURCHASE AGREEMENT
ELIGIBLE RENEWABLE ENERGY RESOURCE
(Palo Alto Clean Local Energy Accessible Now Program)

This Power Purchase Agreement - Eligible Renewable Energy Resource, dated, for convenience, _____, 20___(the "Effective Date"), is entered into by and between the CITY OF PALO ALTO, a California chartered municipal corporation, and_____, a_____corporation (individually, a "Party" and, collectively, the "Parties").

RECITALS

1. The Buyer has adopted and implemented its CLEAN Program, which allows an owner of a qualifying electric generation system to sell to the Buyer the power output of a small-scale distributed generation Eligible Renewable Energy Resource, subject to the CLEAN Program's rules and requirements.

2. The Seller owns or operates and desires to interconnect its Facility in parallel with Buyer's Distribution System and sell the Energy produced by its Facility, net of Station Service Load, directly to the Buyer in furtherance of the CLEAN Program.

3. The Parties do not intend this Agreement to constitute an agreement by the Buyer to provide retail electrical service to the Seller.

4. The Parties wish to enter into a power purchase agreement for the sale and purchase of the Output of the Facility. The Parties will enter into a separate "Interconnection Agreement" in connection with this Agreement.

NOW THEREFORE, in consideration of the foregoing recitals and the following covenants, terms and conditions, the Parties agree, as follows:

AGREEMENT

1.1 DEFINITIONS

The initially capitalized terms, whenever used in this Agreement, have the meanings set forth below, unless they are otherwise herein defined. The terms "include," "includes," and "including," when used in this Agreement, shall mean, respectively, "include, without limitation," "includes, without limitation" and "including, without limitation."

"**Agreement**" means this Power Purchase Agreement – Eligible Renewable Energy Resource between the Buyer and the Seller.

"**Business Day**" means any day except a Saturday, Sunday, or a day that the City observes as a regular holiday under Palo Alto Municipal Code section 2.08.100(a).

"**Buyer**" refers to the City of Palo Alto, California, with a principal place of business at 250 Hamilton Avenue, Palo Alto, California 94301.

"**Buyer's Distribution System**" means the wires, transformers, and related equipment used by the Buyer to deliver electric power to the Buyer's retail customers, typically at sub-transmission level voltages or lower.

"**CAISO**" means the California Independent System Operator Corporation, or successor entity.

"**CAISO Tariff**" means the CAISO FERC Electric Tariff, as amended.

"**Capacity**" means the ability of a generator at any given time to produce Energy at a specified rate, as

measured in megawatts ("MW") or kilowatts ("kW"), and any reporting rights associated with it.

"**Capacity Attributes**" means any current or future defined characteristic, certificate, tag, credit, or ancillary service attribute, whether general in nature or specific as to the location or any other attribute of the Facility, intended to value any aspect of the Contract Capacity of the Facility to produce Energy or ancillary services, including contributions towards Resource Adequacy (including those requirements defined in Section 40 of the CAISO Tariff) or reserve requirements (if any), and any other reliability or power attributes.

"**CEC**" means the California Energy Resources Conservation and Development Commission, or successor agency.

"Certificate of RPS Eligibility" means a certificate issued by the CEC as evidence of RPS Certification of the Facility.

"City" means the government of the City of Palo Alto, California.

"**CLEAN Program**" refers to the Palo Alto Clean Local Energy Accessible Now Program, a renewable energy program established by the City by adoption of resolution number_____, dated_____, of the Palo Alto City Council, whereby the Buyer will purchase from the Seller the Output of Eligible Renewable Energy Resources that meet specified criteria set forth in the City's applicable ordinances and resolutions.

"**Commercial Operation**" means the period of operation of the Facility, once the Commercial Operation Date has occurred.

"**Commercial Operation Date**" means the date specified in the Commercial Operation Date Confirmation Letter, which the Parties execute and exchange in accordance with this Agreement.

"**Contract Capacity**" means the installed electrical Capacity available upon the Commercial Operation Date of the Facility in an amount, as specified in Exhibit "PPA-A." "Contract Capacity" is measured at the Buyer's revenue meter at the Delivery Point and is net of any Station Service Loads, any applicable Facility step-up transformer losses, and distribution losses on Buyer's Distribution System up to the Delivery Point.

"**Contract Price**" means the price paid by the Buyer to the Seller for the Output generated at the Facility and received by the Buyer, as set forth in Exhibit "PPA-A."

"CPUC" means the California Public Utilities Commission, or successor agency.

"**Delivery Point**" means the point of interconnection to Buyer's Distribution System, where the Buyer accepts title to the Output.

"**Delivery Term**" has the meaning set forth in Section 14.2 hereof.

"**Eligible Renewable Energy Resource**" means an electric generating facility that is defined and qualified as an "eligible renewable energy resource" under California Public Utilities Code Section 399.12(e) and California Public Resources Code Section 25471, respectively, as amended.

"**Energy**" means electrical energy generated from the Facility and delivered to Buyer's Distribution System with the voltage and quality required by the Buyer, and measured in megawatt-hours ("MWh") or kilowatt-hours ("kWh"), as metered at the Delivery Point.

"**Facility**" means the qualifying renewable energy generation equipment and associated power conditioning and interconnection equipment that deliver the Output to the Buyer at the Delivery Point.

"**FERC**" means the Federal Energy Regulatory Commission, or successor agency.

"**Forced Outage**" means an unplanned outage of one or more of the Facility's components that results in a reduction of the ability of the Facility to produce Capacity.

"**Force Majeure**" means an event or circumstance, which prevents a Party from performing its obligations under this Agreement, and which is not in the reasonable control of, or the result of negligence of, the Party claiming Force Majeure, and which by the exercise of due diligence is unable to overcome or cause to be avoided. "Force Majeure" shall include: (a) An act of nature, riot, insurrection, war, explosion, labor dispute, fire, flood, earthquake, storm, lightning, tidal wave, backwater caused by flood, act of the public enemy, terrorism, or epidemic; (b) Interruption of transmission or generation services as a result of a physical emergency condition (and not congestion-related or economic curtailment) not caused by the fault or negligence of the Party claiming Force Majeure and reasonably relied upon and without a reasonable source of substitution to make or receive deliveries hereunder, civil disturbances, strike, labor disturbances, labor or material shortage, national emergency, restraint by court order or other public authority or governmental agency, actions taken to limit the extent of disturbances on the electrical grid; or (c) Other similar causes beyond the control of the Party affected, which causes such Party could not have avoided by the exercise of due diligence and reasonable care. A Party's financial incapacity, the Seller's ability to sell the Output at a more favorable price or under more favorable conditions, or the Buyer's ability to acquire the Output at a more favorable price or under more favorable conditions or other economic reasons shall not constitute an event of Force Majeure. "Force Majeure" does not include a Forced Outage to the extent such event is not caused or exacerbated by an event of Force Majeure, as described above, and does not include the Seller's inability to obtain financing, permits, or other equipment and instruments necessary to plan for, construct, or operate the Facility.

"**Good Utility Practice**" means those practices, methods and acts that would be implemented and followed by prudent operators of electric energy generating facilities in the western United States, similar to the Facility, during the relevant time period, which practices, methods and acts, in the exercise of prudent and responsible professional judgment in the light of the facts known at the time the decision was made, could reasonably have been expected to accomplish the desired result consistent with good business practices, reliability, and safety. The Seller acknowledges that its use of Good Utility Practice does not exempt it from performing any of its obligations arising under this Agreement. "Good Utility Practice" includes, at a minimum, those professionally responsible practices, methods and acts described in the preceding paragraph that comply with manufacturers' warranties, restrictions in this Agreement, the interconnection requirements of Buyer, the requirements of governmental authorities, and WECC and NERC standards. "Good Utility Practice" also includes the taking of reasonable steps to ensure that:

(a) Equipment, materials, resources, and supplies, including spare parts inventories, are available to meet the Facility's needs;

(b) Sufficient operating personnel are available at all times and are adequately experienced and trained and licensed as necessary to operate the Facility properly and efficiently, and are capable of responding to reasonably foreseeable emergency conditions at the Facility and emergencies whether caused by events on or off the Facility's site;

(c) Preventive, routine, and non-routine maintenance and repairs are performed on a basis that ensures reliable, long-term and safe operation of the Facility, and are performed by knowledgeable, trained, and experienced personnel utilizing proper equipment and tools;

(d) Appropriate monitoring and testing are performed to ensure equipment is functioning as designed; and

(e) Equipment is not operated in a reckless manner, in violation of manufacturer's guidelines or in a manner unsafe to workers, the general public, or the connecting utility's electric system or contrary to environmental laws, permits or regulations or without regard to defined limitations such as, flood conditions, safety inspection requirements, operating voltage, current, volt ampere reactive (VAR) loading, frequency, rotational speed, polarity, synchronization, and control system limits; and equipment and components are designed and manufactured to meet or exceed the standard of durability that is generally used for electric energy generating facilities operating in the western United States and will function properly over the full range of ambient temperature and weather conditions reasonably expected to occur at the Facility site and under both normal and emergency conditions.

"**Green Attributes**" refers to the definition set forth in the Standard Terms and Conditions, Appendix A-2, as amended, Decision D.07-02-011, as modified by D.07-05-057, of the CPUC, which incorporates the definition of "Environmental Attributes" set forth in the Standard Terms and Conditions, Appendix A-1, as amended, D. 04-06-014. "Green Attributes" includes any and all credits, benefits, emissions reductions, environmental air quality credits, offsets, and allowances, howsoever entitled, attributable to the generation from the Facility, and its displacement of conventional energy generation, whether existing now or arising in the future. "Green Attributes" includes RECs, as well as (1) any avoided emissions of pollutants to the air, soil or water, such as sulfur oxides ("SOx"), nitrogen oxides ("NOx"), carbon monoxide ("CO") and other pollutants; (2) any avoided emissions of carbon dioxide ("CO2"), methane ("CH4"), nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and other greenhouse gases ("GHGs") that have been determined by the United Nations Intergovernmental Panel on Climate Change, or otherwise by law, to contribute to the actual or potential threat of altering the Earth's climate by trapping heat in the atmosphere; and (3) the reporting rights to these avoided emissions such as Green Tag Reporting Rights and RECs. "Green Tag Reporting Rights" are the right of a Green Tag Purchaser to report the ownership of accumulated Green Tags in compliance with federal or state law, if applicable, and to a federal or state agency or any other party at the Green Tag Purchaser's discretion, and include those Green Tag Reporting Rights accruing under Section 1605(b) of the Energy Policy Act of 1992 and any present or future federal, state, or local law, regulation or bill, and international or foreign emissions trading program. Green Tags are accumulated on a kWh basis and one Green Tag represents the Green Attributes associated with one (1) MWh of Energy. "Green Attributes" do not include (i) any Energy, Capacity, reliability, or other power attributes of the Facility, (ii) production or investment tax credits associated with the construction or operation of the Facility and other financial incentives in the form of credits, grants, reductions, or allowances associated with the Facility that are applicable to a state or federal income taxation obligation, (iii) fuel-related subsidies or "tipping fees" that may be paid to Seller to accept certain fuels, or local subsidies received by the generator for the destruction of particular pre-existing pollutants or the promotion of local environmental benefits, or (iv) emission reduction credits encumbered, used or created by the Facility for compliance with or sale under local, state, or federal operating and/or air quality permits or programs. If the Facility is a biomass or landfill facility and the Seller receives any tradable Green Attributes based on the Facility's greenhouse gas reduction benefits or other emission offsets attributed to its fuel usage, the Seller shall provide the Buyer with sufficient Green Attributes to ensure that there are zero net emissions associated with the production of electricity from the Facility. "Green Attributes" includes any other environmental credits or benefits recognized in the future and attributable to Energy generated by the Facility during the Term that may not be represented by Green Tag Reporting Rights or RECs, unless otherwise excluded herein. Any Green Attributes provided under this Agreement shall be documented by RECs, or any other representation of the environmental benefits of the Output, the monthly cumulative total of which shall be provided to the Buyer, as specified herein.

"**Interconnection Agreement**" refers to the agreement between the Buyer and the Seller, specific to the interconnection of the Facility to Buyer's Distribution System.

"**NERC**" means the North American Electric Reliability Corporation, or successor organization.

"**NCPA**" means Northern California Power Agency, a California joint action agency, or successor agency.

"**Output**" means all Capacity associated with Contract Capacity and associated Energy made available from the Facility, as well as any Capacity Attributes, Green Attributes, or other attributes existing now or in the future associated with Contract Capacity and/or associated Energy. "Output" does not include production or investment tax credits associated with the construction or operation of the Facility and other financial incentives in the form of credits, grants, reductions, or allowances associated with the Facility that are applicable to a state or federal income taxation obligation.

"**Planned Outage**" means an outage, scheduled in advance, of one or more of the Facility's components that results in a reduction of the ability of the Facility to produce Capacity.

"**Pre-Certification Price**" means the contract price to be paid for all Energy delivered to the Buyer prior to the RPS Certification Date, as specified in Exhibit "PPA-A".

"**Renewable Energy Credit**" or "**REC**" has the meaning set forth in Section 399.12(h)(1) and (2) of the California Public Utilities Code, and includes a certificate of proof that one unit of electricity was generated by an Eligible Renewable Energy Resource. Currently, RECs are used to convey all Green Attributes associated with electricity production by a renewable energy resource. RECs are accumulated on a kWh basis and one REC represents the Green Attributes associated with the generation of 1 MWh (1,000 kWhs) from the Facility. For purposes of this Agreement, the term REC shall be synonymous with the term Green Tag, green ticket, bundled or unbundled renewable energy credit, tradable renewable energy certificates, or any other term used to describe the documentation that evidences the renewable and Green Attributes associated with electricity production by an Eligible Renewable Energy Resource.

"Renewables Portfolio Standard" or **"RPS"** means the standard adopted by the State of California pursuant to Senate Bill 2 1st Extraordinary Session (SBX1 2, Chapter 1, Statutes 2011-12), and California Public Utilities Code Sections 399.11through 399.31, inclusive, as may be amended, setting minimum renewable energy targets for local publicly owned electric utilities.

"**Reservation Deposit**" means the monetary deposit submitted by the Seller (or the Facility sponsor on behalf of the Seller) to secure a reservation of the CLEAN Program's prices. The Reservation Deposit is set forth in Exhibit "PPA-A."

"**Resource Adequacy**" means a requirement by a governmental authority or in accordance with its FERC-approved tariff, or a policy approved by a local regulatory authority, that is binding upon either Party and that requires that Party to procure a certain amount of electric generating capacity.

"**RPS Certification**" means certification by the CEC that the Facility qualifies as an Eligible Renewable Energy Resource for RPS purposes, and that all Energy produced by the Facility qualifies as generation from an Eligible Renewable Energy Resource, as evidenced by a Certificate of RPS Eligibility.

"RPS Certification Date" means the date on which the RPS Certification begins, as specified in the Certificate of RPS Eligibility.

"Seller" means _____ with a principal place of business at _____, _____, _____.

"**Station Service Load**" means the electrical loads associated with the operation and maintenance of the Facility, which may at times be supplied from the Facility's Energy.

"**Term**" has the meaning set forth in Section 14.1 hereof.

"WECC" means the Western Electricity Coordinating Council, the regional entity responsible for coordinating and promoting regional bulk electric system reliability in the Western Canada and the United States, or any successor organization.

2.0 SELLER'S GENERATING FACILITY, PURCHASE PRICE AND PAYMENT

2.1 Facility. This Agreement governs the Buyer's purchase of the Output from the Facility, as described in Exhibit "PPA-A." The Seller shall not modify the Facility to increase or decrease the Contract Capacity after the Commercial Operation Date.

2.2 Products Purchased. During the Delivery Term, the Seller shall sell and deliver, or cause to be delivered, and the Buyer shall purchase and receive, or cause to be received, the Output from the Facility. The Seller shall not have the right to procure the Output from sources other than the Facility for sale or delivery to the Buyer under this Agreement or to substitute the Output.

2.3 Delivery Term. The Delivery Term shall commence on the Commercial Operation Date under this Agreement, and shall continue for an uninterrupted period of [twenty (20) or twenty-five (25)] years. This period will commence on the first day of the calendar month immediately following the Commercial Operation Date. As evidence of the Commercial Operation Date, the Parties shall execute and exchange the "Commercial Operation Date Confirmation Letter," attached hereto as Exhibit "PPA-B." The Commercial Operation Date shall be the date on which the Parties acknowledge, in writing, that the Facility starts operating and is otherwise in compliance with applicable interconnection and system protection requirements, including the final approvals by the City's building department official.

2.4 Payment for Products Purchased.

2.4.1 Deliveries Prior to RPS Certification Date. Once the Facility has achieved Commercial Operation, if the CEC has not issued a Certificate of RPS Eligibility for the Facility or the Facility has not been registered with the appropriate entity for the tracking of Green Attributes, the Buyer will pay the Seller for the Output by multiplying the Pre-Certification Price by the quantity of Energy.

2.4.2 Deliveries After RPS Certification Date. Once the Facility has achieved Commercial Operation, the CEC has issued a Certificate of RPS Eligibility for the Facility, and the Facility has been registered with the appropriate entity for the tracking of Green Attributes, the Buyer shall pay the Seller for all Output on or after the RPS Certification Date by multiplying the Contract Price by the quantity of Energy.

2.4.3 True-up Upon Issuance of Certificate of RPS Eligibility. Once the Facility has achieved Commercial Operation, the CEC has issued a Certificate of RPS Eligibility for the Facility, and the Facility has been registered with the appropriate entity for the tracking of Green Attributes, the Buyer will pay the Seller an amount equal to the difference between the Contract Price and the Pre-Certification Price for the Output (a) that was delivered on or after the RPS Certification Date and (b) for which the Seller has already received payment at the Pre-Certification Energy Price.

2.4.4 Energy in Excess of Contract Capacity. The Seller shall not receive payment for any Energy or Green Attributes delivered in any hour to the Buyer in excess of the following amount of energy (in kilowatt-hours): 110% of the Contract Capacity (in kilowatts) multiplied by one hour. Any payment in excess of this amount shall be refunded to the Buyer, on demand.

2.5 Billing. The Buyer shall pay the Seller by check or electronic funds transfer, on a monthly basis, within thirty (30) days of the meter reading date.

2.6 Title and Risk of Loss. Title to and risk of loss related to the Output shall be transferred from the Seller to the Buyer at the Delivery Point. The Seller warrants that it will deliver to the Buyer the Output free and clear of all liens, security interests, claims, encumbrances or any interest therein or thereto by any person, arising prior to the Delivery Point.

2.7 No Additional Incentives. The Seller warrants that it has not received any other incentives funded by the Buyer's ratepayers and it further agrees that, during the Term, it shall not seek additional compensation or other benefits from the Buyer pursuant to the following programs of the Buyer: (a) Photovoltaic (PV) Partners Program; (b) Power from Local Ultra-Clean Generation Incentive (PLUG-In) Program; or (c) other similar programs that are or may be funded by the Buyer's ratepayers.

3.0 RPS CERTIFICATION; GREEN ATTRIBUTES

3.1 CEC Certification. The Seller, at its own cost and expense, shall obtain the RPS Certification within six (6) months of the Commercial Operation Date. The Seller shall maintain the RPS Certification at all times during the Delivery Term. The foregoing provision notwithstanding, the Seller shall not be in breach of this Agreement and the Buyer shall not have the right to terminate this Agreement, if the Seller's failure to obtain or maintain the RPS Certification is due to a change in California law, occurring after the Commercial Operation Date, so long as the Seller has used commercially reasonable efforts to obtain and maintain the RPS Certification and the Seller's actions or omissions did not contribute to its inability to obtain and maintain the RPS Certification.

3.2 Obligation to Deliver Green Attributes. The Seller shall sell and deliver to the Buyer, and the Buyer shall buy and receive from the Seller, all right, title, and interest in and to Green Attributes associated with Energy, produced by the Facility and delivered to the Buyer at the Delivery Point, whether now existing or that hereafter come into existence during the Term, except as otherwise excluded herein; provided, the Buyer shall not be obligated to purchase and pay the Seller for any Green Attributes associated with any amount of the Output, that is generated by any fuel which is not renewable and which cannot be counted for the purpose of the production of Green Attributes. The Seller agrees to sell and make all such Green Attributes available to the Buyer to the fullest extent allowed by applicable law, in accordance with the terms and conditions of this Agreement. The Seller warrants that the Green Attributes provided under this Agreement to the Buyer shall be free and clear of all liens, security interests, claims and encumbrances.

3.3 Conveyance of Green Attributes. The Seller shall provide Green Attributes associated with the Facility, which shall be documented and conveyed to the Buyer in accordance with the procedure described in Exhibit "PPA-D."

3.4 Additional Evidence of Green Attributes Conveyance. At the Buyer's request, the Seller shall provide additional reasonable evidence to the Buyer or to third parties of the Buyer's right, title, and interest in the Green Attributes and any other information with respect to Green Attributes, as may be requested by the Buyer.

3.5 Modification of Green Attributes Conveyance Procedure. The Buyer may unilaterally modify Exhibit "PPA-D" in order to reflect changes necessary in the Green Attributes conveyance procedures, so that the Buyer may be able to receive and report the Green Attributes, purchased under this Agreement, as belonging to the Buyer.

3.6 Reporting of Ownership of Green Attributes. The Seller shall not report to any person or entity that the Green Attributes sold and conveyed to the Buyer belong to any person other than the Buyer. The Buyer may report under any applicable program that Green Attributes purchased by the Buyer hereunder belong to it.

3.7 Greenhouse Gas Emissions. The Seller shall comply with any laws and/or regulations regarding the need to offset emissions of GHGs by delivering to the Buyer the Energy from the Facility with a net zero GHG impact.

4.0 CONVEYANCE OF CAPACITY ATTRIBUTES

4.1 Conveyance of Resource Adequacy Capacity. The Seller shall not report to any person or entity that the Resource Adequacy Capacity, as defined in the CAISO Tariff) associated with the Facility, if any, belongs to a person other than the Buyer, which may report that Resource Adequacy Capacity purchased hereunder belongs to it to fulfill the Resource Adequacy requirements, as defined in Section 40 of the CAISO Tariff, as amended, or any successor program. The Seller shall take those actions described in Section 6.0 hereof, as applicable, to secure recognition of Resource Adequacy Capacity by the CAISO.

4.2 Conveyance of Other Capacity Attributes. In addition to the obligations imposed on the

Seller under Section 4.1, the Seller will undertake any and all actions reasonably needed to enable the Buyer to effect the recognition and transfer of any Capacity Attributes in addition Resource Adequacy, to the extent that such Capacity Attributes exist now or will exist in the future; provided, if such actions require any actions beyond the giving of notice by the Seller, then the Buyer shall reimburse all out-of-pocket costs and charges of such actions.

4.3 Reporting of Ownership of Capacity Attributes. The Seller shall not report to any person or entity that the Capacity Attributes sold and conveyed to the Buyer belong to any person other than the Buyer. The Buyer may report under any such program that such Capacity Attributes purchased hereunder belong to it.

5.0 METERING AND OPERATIONS

5.1 Timing of Outages. The Seller may not schedule or take any Planned Outage from 12:00 p.m. through 7:00 p.m. Pacific Time during the months of June through October.

5.2 Outage Reporting.

5.2.1 Buyer Request. The Seller is not required to report any Planned Outage or Forced Outage, unless the Buyer first submits a written request to the Seller to commence Outage reporting. Upon receipt of such a request, the Seller shall report all subsequent Planned Outages and the Forced Outages according to the procedures described in subsections 5.2.2 and 5.2.3, and shall continue such reporting until (a) the termination of this Agreement for any reason, or (b) the Buyer subsequently provides written notice to the Seller that the Seller may cease such reporting in the future.

5.2.2 Planned Outage Notifications. The Seller shall notify the Buyer at least 72 hours in advance of any Planned Outage that would result in a reduction in the effective Output of the Facility during the period over which the Planned Outage is scheduled. Notification shall be provided by e-mail to the e-mail address (or addresses) set forth in Exhibit "PPA-F."

5.2.3 Forced Outage Notifications. Within 24 hours of the occurrence of a Forced Outage of the Facility that impacts the ability of the Facility to produce Energy, the Seller shall notify the Buyer of the Forced Outage, including the Capacity of the Facility that is impacted, and the expected duration of the Forced Outage. Within 24 hours of the return of the Facility to service following the Forced Outage, the Seller shall notify the Buyer of the return-to-service details. Notification shall be made by e-mail to the address (or addresses) set forth in Exhibit "PPA-F."

5.3 Metering. The Buyer shall furnish and install one or more standard watt-hour meters to read Energy generated by the Facility, and it will charge a meter fee to the Seller to cover the costs associated with the meter's purchase and installation. As requested, the Seller shall provide and install a meter socket in accordance with the Buyer's metering standards. The Buyer reserves the right to install additional metering equipment at its sole cost and expense.

6.0 PARTICIPATING GENERATORS

6.1 Applicability. This Section 6.0 shall apply if the Facility meets the definition of a "Participating Generator," as may be defined by the CAISO Tariff. This Section 6.0 shall not apply if the definition applies to the Facility only upon the election by the Seller. For the purposes of this Section 6.0, all special terms not otherwise defined in Section 1.0 are defined in the CAISO Tariff.

6.2 Participating Generator Agreement. The Buyer will notify the CAISO of the Seller's interconnection to Buyer's Distribution System. If the CAISO requires it, the Seller, at its own expense, shall negotiate and enter in to two contracts, a "Participating Generator Agreement" and a "Meter Services Agreement for CAISO Metered Entities," with the CAISO.

6.3 Scheduling Coordination. If the CAISO requires the Seller to enter in to a Participating Generator Agreement, then the Seller shall designate NCPA as the Buyer's scheduling coordinator. The Buyer, acting in its sole discretion, may replace NCPA as the scheduling coordinator for the Facility. If NCPA ceases to be the scheduling coordinator for the Facility and the Buyer has not, upon fourteen (14) days' prior written notice of inquiry from the Seller, appointed a replacement scheduling coordinator, then the Seller shall have the right to appoint a replacement scheduling coordinator on the Buyer's behalf. Thereafter, the Buyer shall enter into all reasonable and appropriate agreements with such replacement scheduling coordinator at its own costs.

6.4 Scheduling Procedure. The Buyer may require the Seller to provide the Buyer with Energy forecasts on a periodic basis, as may be necessary for the Buyer to account for expected Facility generation in its daily power scheduling process. The requirements are set forth in Exhibit "PPA-C."

6.5 Modification of Scheduling and Outage Notification Procedure. The Buyer may unilaterally modify Exhibit "PPA-C" to reflect changes necessary in the scheduling and Outage notification procedures. The Buyer shall give the Seller reasonable notice of any such changes.

6.6 Provision of Other Equipment. If the Seller is required to enter into a Participating Generator Agreement with the CAISO, then the Seller, at its own cost and expense, shall provide and maintain data transmission-grade phone line and telecommunications equipment at the meter location that complies with applicable requirements of the CAISO, the Buyer, and NCPA. Any meter installed by the Seller shall comply at all times with the CAISO's metering requirements. If the Seller fails to provide or maintain any such required equipment or data connection, then the Buyer shall acquire, install and maintain the same at the Seller's sole cost and expense.

6.7 Designation as Resource Adequacy Resource. The Buyer may submit a written request to the Seller to obtain the CAISO's designation of the Facility as a Resource Adequacy Resource. Upon receipt of such request, the Seller shall provide such information and undertake such steps as may be required by the CAISO in order to complete such an assessment. If the Buyer makes such a request, then the Buyer shall be responsible for the following: (1) any costs charged to the Seller by the CAISO as a condition of applying for or receiving designation as a Resource Adequacy Resource, including any deposits required during the study process or the cost of any related studies or deliverability assessments performed by the CAISO; (2) the capital, installation, and maintenance costs of any additional equipment required by the CAISO as a condition of receiving designation as a Resource Adequacy Resource; (3) the costs of any Network Upgrades, as defined in the CAISO Tariff, as may be required by the CAISO, provided, the Buyer shall receive any subsequent repayments from the CAISO or the Participating Transmission Owner related to such upgrades; and (4) any charges or penalties assessed by the CAISO as a consequence of the Facility's designation as a Resource Adequacy Resource.

6.8 CAISO Charges. The Buyer shall be solely responsible for paying all costs and charges associated with the receipt of Energy under this Agreement, at the Delivery Point, and for the transmission and delivery of Energy from the Delivery Point to any other point downstream of the Delivery Point, including transmission costs and charges, competition transition charges, applicable control area service charges, transmission congestion charges, inadvertent energy flows, any other CAISO charges related to the transmission of such Energy by the CAISO and any charge assessed or collected in the future pursuant to any utility tariff or rate schedule, however defined, for transmission or transmission-related service rendered by or for any transmission-owning or operating entity. The Seller will undertake any and all actions reasonably needed to allow the Buyer to comply with any obligations, and minimize any potential liability, under the CAISO tariff. If and to the extent that the Seller fails to comply with the notice provision in Exhibit "PPA-C," concerning Outages, or with its obligations as outlined in the previous sentence, the Seller shall be wholly responsible for all imbalances, deviations, or any other CAISO charges or penalties associated with such Outage or other CAISO Tariff obligation.

6.9 Inclusion in Metered Subsystem. At the option of the Buyer, the Facility may be included within NCPA's metered sub-system in connection with the scheduling of power over the CAISO grid and related functions; provided, however, that such inclusion shall have no adverse effect on the Facility's operations or the Seller (or any such effect shall be fully mitigated by the Buyer). The Seller will undertake any and all actions reasonably needed to allow the Buyer to comply with any obligations, and

minimize any potential liability, under the CAISO Tariff; provided, that if such actions require any actions beyond the giving of notice to be provided by the Buyer, then the Buyer shall reimburse the Seller for all out-of-pocket costs and charges of such actions.

7.0 COMMERCIAL OPERATION DATE; REFUND OF RESERVATION DEPOSIT

7.1 Commercial Operation Date. The Facility shall achieve Commercial Operation by the Commercial Operation Date deadline (the "Deadline"), which is one (1) year from the Effective Date.

7.2 Reservation Deposit. The Buyer acknowledges that, as of the Effective Date or other date established by the Buyer, the Seller has provided the Reservation Deposit to the Buyer.

7.2.1 If the Commercial Operation Date occurs on or prior to the Deadline, the Buyer shall refund to the Seller the Reservation Deposit without interest.

7.2.2 If the Commercial Operation Date commences within seventy (70) days of the Deadline, the Seller, as liquidated damages and not as a penalty, shall relinquish its claim to a ten percent (10%) portion of the amount of the Reservation Deposit for every full week transpiring between the Deadline and the Commercial Operation Date, but the total amount to be relinquished to the Buyer shall not exceed 100% of the Reservation Deposit.

7.2.3 If the Facility has not achieved Commercial Operation within seventy (70) days of the Deadline, then the Buyer may terminate this Agreement without liability of either Party to the other Party by giving written notice of termination to the Seller.

7.2.4 If the Seller gives notice of termination to terminate the Agreement before Commercial Operation occurs, then the Buyer shall refund a percentage of the Reservation Deposit equal to the following: the percentage to be refunded will equal A/B, where A equals the number of days between the date of the Seller's notice of termination, received by the Buyer, and the Deadline, and B equals the number of days between the Effective Date and the Deadline.

7.3 Return of Reservation Deposit. The Buyer shall return to the Seller the Reservation Deposit, without interest, in the event that (a) the Buyer furnishes written notice of the costs of interconnection (defined in the Interconnection Agreement to include the costs related to the Interconnection Facilities and Distribution Upgrades) to the Seller and (b) within thirty (30) days of receipt of the notice regarding costs of interconnection, the Seller provides the Buyer with written notice that the Seller does not intend to sign the Interconnection Agreement and does intend to proceed with the project.

8.0 REPRESENTATION AND WARRANTIES; COVENANTS

8.1 Representations and Warranties. On the Effective Date, each Party represents and warrants to the other Party that:

8.1.1 It is duly organized, validly existing and in good standing under the laws of the jurisdiction of its formation;

8.1.2 The execution, delivery and performance of this Agreement is within its powers, have been duly authorized by all necessary action and do not violate any of the terms and conditions in its governing documents, any contracts to which it is a party or any law, rule, regulation, order or the like applicable to it;

8.1.3 This Agreement and each other document executed and delivered in accordance with this Agreement constitutes its legally valid and binding obligation enforceable against it in accordance with its terms;

8.1.4 It is not bankrupt and there are no proceedings pending or being contemplated by it or, to its knowledge, threatened against it which would result in it being or becoming bankrupt;

8.1.5 There is not pending or, to its knowledge, threatened against it or any of its affiliates, if any, any legal proceedings that could materially adversely affect its ability to perform its obligations under this Agreement; and

8.1.6 It is acting for its own account, has made its own independent decision to enter into this Agreement and as to whether this Agreement is appropriate or proper for it based upon its own judgment, is not relying upon the advice or recommendations of the other Party in so doing, and is capable of assessing the merits of, and understands and accepts, the terms, conditions and risks of this Agreement.

8.2 General Covenants. Each Party covenants that, during the Term:

8.2.1 It shall continue to be duly organized, validly existing and in good standing under the laws of the jurisdiction of its formation;

8.2.2. It shall maintain (or obtain from time to time as required, including through renewal, as applicable) all regulatory authorizations necessary for it to legally perform its obligations under this Agreement; and

8.2.3 It shall perform its obligations under this Agreement in a manner that does not violate any of the terms and conditions in its governing documents, any contracts to which it is a party or any law, rule, regulation, order or the like applicable to it.

8.3 Covenant by Seller. The Seller covenants that, during the Term:

8.3.1 If the Eligible Renewal Energy Resource or the Facility is considered an 'eligible qualifying facility' under applicable law and has a net power production capacity of greater than one (1) megawatt, then the Seller covenants and agrees that, within thirty (30) days of the Effective Date or longer period allowed by law, it will complete and file Form No. 556 or other similar form with FERC as the same may be required by law."

9.0 GENERAL CONDITIONS

9.1 Facility Care and Interconnection. During the Delivery Term, the Seller shall execute and maintain an "Interconnection Agreement" with the Buyer, whereby the Seller shall pay and be responsible for designing, installing, operating, and maintaining the Facility in accordance with all applicable laws and regulations and shall comply with all applicable Buyer, WECC, FERC, and NERC requirements, including applicable interconnection and metering requirements. The Seller shall also comply with any modifications, amendments or additions to the applicable tariff and protocols. The Seller also shall arrange and pay independently for any and all necessary costs under the Interconnection Agreement with the Buyer.

9.2 Standard of Care. The Seller shall: (a) operate and maintain the Facility in a safe manner in accordance with its existing applicable interconnection agreements, manufacturer's guidelines, warranty requirements, Good Utility Practice, industry norms (including standards of the National Electrical Code, Institute of Electrical and Electronic Engineers, American National Standards Institute, and the Underwriters Laboratories, and in accordance with the requirements of all applicable federal, state and local laws and the National Electric Safety Code, as such laws and code norms may be amended from time to time; (b) obtain any governmental authorizations and permits required for the construction and operation thereof. The Seller shall make any necessary and commercially reasonable repairs with the intent of optimizing the availability of electricity to the Buyer. The Seller shall reimburse the Buyer for any and all losses, damages, claims, penalties, or liability that the Buyer incurs as a result of the Seller's failure to obtain or maintain any governmental authorizations and permits required for the construction and operation of the Facility throughout the Term.

9.3 Access Rights. The Buyer, its authorized agents, employees and inspectors shall have the right to inspect the Facility on reasonable advance notice during normal business hours and for any purposes reasonably connected with this Agreement or the exercise of any and all rights secured to the Buyer by law, including, without limitation, its ordinances, resolutions, tariffs, utility rate schedules or utilities rules and regulations. The Buyer shall make reasonable efforts to coordinate its emergency activities with the safety and security departments, if any, of the Facility's operator. The Seller shall keep the Buyer advised of current procedures for communicating with the Facility operator's safety and security departments.

9.4 Protection of Property. Each Party shall be responsible for protecting its own facilities from possible damage resulting from electrical disturbances or faults caused by the operation, faulty operation, or non-operation of the other Party's facilities and such other Party shall not be liable for any such damages so caused.

9.5 Insurance. During the Term, the Seller shall obtain and maintain and otherwise comply with the insurance requirements, as set forth in Exhibit "PPA-E."

9.6 Buyer's Performance Excuse; Seller Curtailment.

9.6.1 Buyer Performance Excuse. The Buyer shall not be obligated to accept or pay for the Output during Force Majeure that affects the Buyer's ability to accept Energy.

9.6.2 Seller Curtailment. The Buyer may require the Seller to interrupt or reduce deliveries of Energy: (a) whenever necessary to construct, install, maintain, repair, replace, remove, or investigate any of its equipment or part of the Buyer's Distribution System or facilities; or (b) if the Buyer determines that curtailment, interruption, or reduction is necessary due to a System Emergency, as defined in the CAISO Tariff, an unplanned outage on Buyer's Distribution System, Force Majeure, or compliance with Good Utility Practice.

9.7 Notices of Outages. Whenever possible, the Buyer shall give the Seller reasonable notice of the possibility that interruption or reduction of deliveries may be required.

9.8 No Additional Loads. The Seller shall not connect any loads not associated with Station Service Loads at the location of the Facility in a manner that would reduce Energy provided from the Facility to the Buyer hereunder. The Seller shall obtain separate retail electric service under the Buyer's rate schedules for the service of such additional loads.

10.0 FORCE MAJEURE

10.1 Effect of Force Majeure. A Party shall be excused from its performance under this Agreement to the extent, but only to the extent, that its performance hereunder is prevented by Force Majeure. A Party claiming Force Majeure shall exercise due diligence to overcome or mitigate the effects

of Force Majeure; provided, that nothing in this Agreement shall be deemed to obligate the Party affected by Force Majeure (a) to forestall or settle any strike, lock-out or other labor dispute against its will; or (b) for Force Majeure affecting the Seller only, to purchase electric power to cure Force Majeure.

10.2 Remedial Action. A Party shall not be liable to the other Party if the Party is prevented from performing its obligations hereunder due to Force Majeure. The Party rendered unable to fulfill an obligation by reason of Force Majeure shall take all action necessary to remove such inability with all due speed and diligence. The nonperforming Party shall be prompt and diligent in attempting to remove the cause of its failure to perform, and nothing herein shall be construed as permitting that Party to continue to fail to perform after that cause has been removed. Notwithstanding the foregoing, the existence of Force Majeure shall not excuse any Party from its obligations to make payment of amounts due hereunder.

10.3 Notice of Force Majeure. In the event of any delay or nonperformance resulting from Force Majeure, the Party directly impacted by Force Majeure shall, as soon as practicable under the circumstances, notify the other Party, in writing, of the nature, cause, date of commencement thereof and the anticipated extent of any delay or interruption in performance.

10.4 Termination Due to Force Majeure. If a Party will be prevented from performing its material obligations under this Agreement for an estimated period of twelve (12) consecutive months or longer due to Force Majeure, then the unaffected Party may terminate this Agreement, without liability of either Party to the other, upon thirty (30) Days' prior written notice at any time during Force Majeure.

11.0 INDEMNITY

11.1 Indemnity by the Seller. The Seller shall indemnify, defend, and hold harmless the Buyer, its elected and appointed officials, directors, officers, employees, agents, and representatives against and from any and all losses, claims, demands, liabilities and expenses, actions or suits, including reasonable costs and attorney's fees, resulting from, or arising out of or in any way connected with claims by third parties associated with (A) (i) Energy delivered at the Delivery Point; (ii) the Seller's operation and/or maintenance of the Facility; or (iii) the Seller's actions or inactions with respect to this Agreement, and (B) any loss, claim, action or suit, for or on account of injury, bodily or otherwise, to, or death of, persons, or for damage to or destruction of property belonging to the Buyer or other third party, excepting only such loss, claim, action or suit as may be caused solely by the willful misconduct or gross negligence of the Buyer, its agents, employees, directors or officers.

11.2 Indemnity by the Buyer. The Buyer shall indemnify, defend, and hold harmless the Seller, its directors, officers, employees, agents, and representatives against and from any and all losses, claims, demands, liabilities and expenses, actions or suits, including reasonable costs and attorney's fees resulting from, or arising out of or in any way connected with claims by third parties associated with acts of the Buyer, its officers, employees, agents, and representatives, relating to: (A) Energy delivered by the Seller under this Agreement after the Delivery Point, and (B) any loss, claim, action or suit, for or on account of injury, bodily or otherwise, to, or death of, persons, or for damage to or destruction of property belonging to the Seller or other third party, excepting only such loss, claim, action or suit as may be caused solely by the willful misconduct or gross negligence of the Seller, its agents, employees, directors or officers.

12.0 LIMITATION OF DAMAGES

EXCEPT AS OTHERWISE PROVIDED IN THIS AGREEMENT THERE IS NO WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND ANY AND ALL IMPLIED WARRANTIES ARE DISCLAIMED. LIABILITY SHALL BE LIMITED TO DIRECT ACTUAL DAMAGES ONLY, SUCH DIRECT ACTUAL DAMAGES SHALL BE THE SOLE AND EXCLUSIVE REMEDY AND ALL OTHER REMEDIES OR DAMAGES AT LAW OR IN EQUITY ARE WAIVED UNLESS EXPRESSLY HEREIN PROVIDED. NEITHER PARTY SHALL BE LIABLE FOR CONSEQUENTIAL, INCIDENTAL, PUNITIVE, EXEMPLARY OR INDIRECT DAMAGES, LOST PROFITS OR OTHER BUSINESS INTERRUPTION DAMAGES, BY STATUTE, IN TORT OR

CONTRACT, UNDER ANY INDEMNITY PROVISION OR OTHERWISE. UNLESS EXPRESSLY HEREIN PROVIDED, AND SUBJECT TO THE PROVISIONS OF SECTION 11 (INDEMNITY), IT IS THE INTENT OF THE PARTIES THAT THE LIMITATIONS HEREIN IMPOSED ON REMEDIES AND THE MEASURE OF DAMAGES BE WITHOUT REGARD TO THE CAUSE OR CAUSES RELATED THERETO, INCLUDING THE NEGLIGENCE OF ANY PARTY, WHETHER SUCH NEGLIGENCE BE SOLE, JOINT OR CONCURRENT, OR ACTIVE OR PASSIVE.

13.0 NOTICES

Notices shall, unless otherwise specified herein, be given, in writing, and may be delivered by hand delivery, United States mail, overnight courier service, facsimile or electronic messaging (e-mail) to the addresses set forth in Exhibit "PPA-F.". Whenever this Agreement requires or permits delivery of a "notice" (or requires a Party to "notify"), the Party with such right or obligation shall provide a written communication in the manner specified below. A notice sent by facsimile transmission or electronic mail will be recognized and shall be deemed received on the Business Day on which such notice was transmitted if received before 5 p.m. Pacific Time (and if received after 5 p.m., on the next Business Day) and a notice by overnight mail or courier shall be deemed to have been received two (2) Business Days after it was sent or such earlier time as is confirmed by the receiving Party unless it confirms a prior oral communication, in which case any such notice shall be deemed received on the day sent. A Party may change its addresses by providing notice of same in accordance with this provision. A Party may request a change to Exhibit "PPA-F" as necessary to keep the information current.

14.0 TERM, TERMINATION EVENT AND TERMINATION

14.1 Term. The Term shall commence upon the execution by the duly authorized representatives of each of the Parties, and shall remain in effect until the conclusion of the Delivery Term, unless terminated sooner pursuant to the terms and conditions of this Agreement. All indemnity rights shall survive the termination of this Agreement for twelve (12) months.

14.2 Delivery Term. The Delivery Term of the Agreement is _____ years and is defined as the period of time from the Commercial Operation Date through the expiration or early termination of this Agreement.

14.3 Termination Event.

14.3.1 The Buyer shall have the right, but not the obligation, to terminate this Agreement upon the occurrence of any of the following, each of which is a "Termination Event": (a) The Facility has not achieved Commercial Operation within seventy (70) days following the Deadline; (b) After the Commercial Operation Date, the Seller has not sold or delivered Energy from the Facility to the Buyer for a period of twelve (12) consecutive months; (c) If the Facility does not obtain RPS Certification within six (6) months of the Commercial Operation Date and maintain RPS Certification as required by Section 3.2; or (d) The Seller breaches any other material obligation of this Agreement.

14.3.2 The Seller shall have the right, but not the obligation, to terminate this Agreement upon the occurrence of any of the following, each of which is a "Termination Event": (a) The Buyer fails to make a payment due and payable under this Agreement within thirty (30) days after written notice that such payment is due; or (b) The Buyer breaches any other material obligation of this Agreement. The preceding sentence notwithstanding, the Seller may terminate this Agreement without cause at any time prior to the Commercial Operation Date, subject to the provisions of Section 7 of this Agreement.

14.4 Time to Cure. None of the events described in Section 14.2.1 and 14.2.2 shall constitute a Termination Event if the Buyer or the Seller cures the event, failure, or circumstance within thirty (30) days after receipt of written notification sent by the other Party, seeking termination, or such longer period as may be necessary to cure so long as the Party subject to the Terminating Event is exercising diligent efforts to cure.

14.5 Termination.

14.5.1 Declaration of a Termination Event. If a Termination Event has occurred and is continuing, the Party with the right to terminate shall have the right to: (a) send notice, designating a day, no earlier than thirty (30) days after such notice is deemed to be received (as provided in Section 13), as an early termination date of this Agreement (the "Early Termination Date"), unless the Seller has timely communicated with the Buyer and the Parties have agreed to resolve the circumstances giving rise to the Termination Event; (b) accelerate all amounts owing between the Parties; and (c) terminate this Agreement and end the Delivery Term effective as of the Early Termination Date.

14.5.2 Release of Liability for Termination Event. Upon termination of this Agreement pursuant to this section neither Party shall be under any further obligation or subject to liability hereunder, except with respect to the indemnity provision in Section 11 hereof, which shall remain in effect for a period of 12 months following the Early Termination Date.

14.6 No Limitation on Damages. Nothing in this Agreement shall be deemed or construed to limit a Party's right to recover damages from the other Party, except as otherwise provided in this Agreement.

15.0 RELEASE OF DATA

Except as may be exempt from disclosure under applicable law, the Seller authorizes the Buyer to release to any regulatory authority having jurisdiction over the Facility or a Party, or to any request made pursuant to the California Constitution or the California Public Records Act, information regarding the Facility, including the Seller's name and location, operational characteristics, the Term of this Agreement, the Facility resource type, the scheduled Commercial Operation Date, the actual Commercial Operation Date, the Contract Capacity, payments made to the Seller and Energy production information. The Seller acknowledges that this information may be made publicly available.

16.0 ASSIGNMENT

Neither Party shall assign this Agreement or its rights hereunder without the prior written consent of the other Party, which consent shall not be unreasonably withheld.

16.1 Upon the written request of the Seller, the Buyer will execute a "Lender Consent and Agreement" between the Seller and the Seller's lender(s), if any, in the form acceptable to the Parties; provided, for illustration purposes only, an exemplar is attached hereto as Exhibit "PPA-G."

16.2 Notwithstanding the foregoing, no Consent and Agreement shall be required for:

16.2.1 Any assignment or transfer of this Agreement by the Seller to an affiliate of the Seller, provided that such affiliate's creditworthiness is equal to or better than that of Seller, as reasonably determined by the non-assigning or non-transferring Party; or

16.2.2 Any assignment or transfer of this Agreement by the Seller or the Buyer to a person succeeding to all or substantially all of the assets of such Party, provided that such person's creditworthiness is equal to or greater than that of such Party, as reasonably determined by the non-assigning or non-transferring Party.

16.2.3 Notification of any assignment or transfer of this Agreement under Section 16.2.1 or 16.2.2 shall be given to the non-assigning or non-transferring Party in accordance with Exhibit "PPA-F."

17.0 APPLICABLE LAW, VENUE, ATTORNEYS' FEES, AND INTERPRETATION

This Agreement will be governed by and construed in accordance with the laws of the State of California. The Parties will comply with applicable laws pertaining to their obligations arising under this

Agreement. In the event that an action is brought, the Parties agree that trial of such action will be vested exclusively in the state courts of California or in the United States District Court for the Northern District of California in the County of Santa Clara, State of California. The prevailing party in any action brought to enforce the provisions of this Agreement may recover its reasonable costs and attorneys' fees expended in connection with that action. If a court of competent jurisdiction finds or rules that any provision of this Agreement, the Exhibits, or any amendment thereto is void or unenforceable, the unaffected provisions of this Agreement, the Exhibits, or any amendment thereto will remain in full force and effect. The Parties agree that the normal rule of construction to the effect that any ambiguity is to be resolved against the drafting party will not be employed in the interpretation of this Agreement or any Exhibit or any amendment thereof.

18.0 SEVERABILITY

If any provision in this Agreement is determined to be invalid, void or unenforceable by any court having jurisdiction, such determination shall not invalidate, void, or make unenforceable any other provision, agreement or covenant of this Agreement and the Parties shall use their best efforts to modify this Agreement to give effect to the original intention of the Parties.

19.0 COUNTERPARTS; INTERPRETATION OF CONFLICTING PROVISIONS

This Agreement may be executed in one or more counterparts, each of which shall be deemed an original and all of which shall be deemed one and the same Agreement. Delivery of an executed counterpart of this Agreement by facsimile or portable document format ("PDF") transmission will be deemed as effective as delivery of an originally executed counterpart. Each Party delivering an executed counterpart of this Agreement by facsimile or PDF transmission will also deliver an originally executed counterpart, but the failure of any Party to deliver an originally executed counterpart of this Agreement will not affect the validity or effectiveness of this Agreement. In the event of a conflict between the Agreement and any, some or all of the Exhibits, the document imposing the more specific duty or obligation will prevail.

20.0 GENERAL

No amendment to or modification of this Agreement shall be enforceable unless reduced to writing and executed by both Parties. This Agreement shall not impart any rights enforceable by any third party other than a permitted successor or assignee bound to this Agreement. Waiver by a Party of any default by the other Party shall not be construed as a waiver of any other default. The headings used herein are for convenience and reference purposes only.

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21. EXHIBITS

The following exhibits shall be deemed incorporated in and made a part of this Agreement.

Exhibit "PPA-A" - Facility Description, Prices, and Reservation Deposit
Exhibit "PPA-B" - Commercial Operation Date Confirmation Letter
Exhibit "PPA-C" - Scheduling and Outage Notification Procedure
Exhibit "PPA-D" - Green Attributes Reporting and Conveyance Procedures
Exhibit "PPA-E" - Insurance Requirements
Exhibit "PPA-F" - Notices
Exhibit "PPA-G" - Form of Lender Consent and Agreement

IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed by their authorized representatives as of the Effective Date.

CITY OF PALO ALTO **SELLER**

APPROVED AS TO FORM _____

_____
Senior Deputy City Attorney

APPROVED

_____
City Manager

_____
Director of Utilities

EXHIBIT "PPA-A"

Facility Description, Rates, and Reservation Deposit

Program Rates

Contract Term:	Twenty (20) or twenty-five (25) years
Contract rate:	$0.103 per kWh for solar resources, 20-year contract term
	$0.104 per kWh for solar resources, 25-year contract term
	$0.093 per kWh for non-solar resources, 20-year contract term
	$0.094 per kWh for non-solar resources, 25-year contract term
Pre-certification rate:	$0.08 per kWh

Reservation Deposit

Reservation Deposit ($20/kW of Contract Capacity) $_____

Service address: _____

Facility Description:

_____
_____
_____
_____

Contract Capacity: _____ kW (CEC-AC), based on solar array rating (Panel rated output at PV USA test conditions x inverter efficiency)

Facility primary fuel/technology: _____

EXHIBIT "PPA-B"

Commercial Operation Date Confirmation Letter

In accordance with the terms of the Power Purchase Agreement (Palo Alto CLEAN), dated _____ (the "Agreement") by and between the City of Palo Alto, as the Buyer, and _____, as the Seller, this Confirmation Letter serves to document the Parties' agreement that (i) the conditions precedent to the occurrence of the Commercial Operation Date have been satisfied, and (ii) the Buyer has received Energy, as specified in the Agreement, as of _____, _____. The actual installed Contract Capacity is _____kW.

This Confirmation Letter shall confirm the Commercial Operation Date, as defined in the Agreement, as of the date referenced in the preceding sentence.

IN WITNESS WHEREOF, each Party has caused this letter to be duly executed by its authorized representative as of the date of last signature provided below:

Buyer	**Seller**
By: _____	**By**: _____
Name:	**Name:** _____
Title: Director of Utilities	**Title:** _____
Date: _____	**Date:** _____

In recognition of the Commercial Operation Date relative to the Effective Date of the Agreement by and between the Buyer and the Seller, the Seller hereby calculates the amount to return, if any, of the Seller's deposit, as follows:

Original Reservation Deposit Amount: $_____

Commercial Operation Date Deadline: _____

□ Commercial Operation Date is prior to Deadline

□ Commercial Operation Date occurred _ weeks following the Deadline, meaning that % of the Reservation Deposit is relinquished by Seller per Section 7.2.2 of the Power Purchase Agreement.

Amount (if any) of Reservation Deposit to return to the Seller is: $_____

EXHIBIT "PPA-C"

Scheduling and Outage Notification Procedure

C.1 Applicability. This Exhibit" PPA-C" shall apply if the Facility is subject to Section 6.0 of this Agreement.

C.2 Annual Operations Forecast

C.2.1 By the tenth (10th) day September of each calendar year, the Seller will provide NCPA with an annual operations forecast detailing hourly expected generation and all proposed planned Outages for the next calendar year. The annual operations forecast for the calendar year shall be provided by not later than ninety (90) days prior to the scheduled Commercial Operation Date of the Generating Facility.

C.2.2 NCPA may request modifications to the annual operations forecast at any time, and the Seller shall use good faith efforts to accommodate the requested modifications.

C.2.3 The Seller shall not conduct Planned Outages at times other than as set forth in its annual operations forecast, unless approved in advance by NCPA, which approval shall not be withheld or delayed unreasonably.

C.2.4 The Seller shall not schedule or conduct Planned Outages from 12:00 p.m. through 7:00 p.m. Pacific Time during the months of June through October.

C.3. Short Term Operations Forecasts

C.3.1. Quarterly Operations Forecast

C.3.1.1 By the fifth (5th) day of January, April and July of each Contract Year, the Seller shall provide a calendar quarter-operations forecast by hour of expected generation and all proposed Planned Outages for the next full calendar quarter and the twelve (12) months following that calendar quarter. As an example, by January 5, 2014, the Seller would provide a calendar quarter-operations forecast by hour of expected generation for the period, April 1, 2014 through June 30, 2014, and identify all proposed Planned Outages for the period, April 1, 2014 through June 30, 2015.

C.3.1.2 NCPA will approve or require modifications to the proposed calendar quarter-operations forecast within ten (10) days of receipt of the forecast.

C.3.1.3 If required by NCPA, the Seller will provide a modified calendar quarter-operations forecast within seven (7) days after receipt of required modifications from NCPA.

C.3.2 Weekly Update

C.3.2.1 By 14:00 of each Wednesday, the Seller shall provide an electronic update, in a format specified by NCPA, to the calendar quarter-operations forecast for the following seven (7) days (Thursday through the next Wednesday).

C.3.2.2 The weekly update shall include hourly expected generation and all proposed planned Outages for the relevant seven (7) day period.

C.4 Outage Detail for Annual and Short Term Operations Forecasts. Outage information provided by the Seller shall include, at a minimum, the start time and stop time of the Outage, capacity out of service (kW), the equipment that is or will be out of service, and the reason for the Outage.

C.5 General Scheduling Protocols

C.5.1 Daily Modifications to Forecasts. Unless otherwise mutually agreed, the Seller may make changes to the weekly update to the calendar quarter-operations forecast by providing such changes to NCPA prior to 08:00 of the day that is two (2) Business Days before the active scheduling day as determined by the WECC prescheduling calendar. Example: For power that is scheduled for generation or delivery on Friday, March 29, 2014, changes must be submitted to NCPA by 08:00 on Wednesday, March 27, 2014.

C.5.2 Hourly Modifications to Active Schedules. Unless otherwise mutually agreed, the Seller may request changes to active schedules by providing such changes to NCPA with a minimum of four (4) hours' notice prior to the applicable CAISO market deadline (e.g. Hour Ahead Scheduling Process ("HASP") Scheduling deadline, as defined in the CAISO Tariff). Active day Schedule changes are not binding. Changes to active Schedules are limited to two (2) changes per day, excluding forced Outages, unless otherwise agreed to between the Parties. One request for a Schedule change, of one-hour or multiple-hours duration, constitutes one Schedule change. Example: For power that is scheduled for generation or delivery in hour ending 15:00 (for the period from 14:01 to 15:00), changes must be submitted to NCPA by 10:00.

C.5.3. Unforeseen Circumstances. At the Seller's request, NCPA may, but is not required to, modify the Schedules for the Generation Facility Output due to unforeseen circumstances in accordance with the above scheduling timeline constraints described in this Exhibit PPA-C.

C.5.4. Absence of Forecasts. In the absence of forecasts and schedules as required by this Agreement or this Exhibit, NCPA shall utilize the most current information the Seller provides in the development and submission of Schedules.

C.6 Outage Reporting Protocols

C.6.1. Notification. The Seller shall notify NCPA of all planned or forced Outages of the Generating Facility to ensure compliance with the CAISO Outage Coordination and Enforcement Protocols.

C.6.1.1 Outage information provided by the Seller shall include, at a minimum, the start time and stop time of the Outage, Capacity out of service (kW), equipment out of service, and the reason for the Outage.

C. 6.1.2 Seller shall provide the Planned Outages not included in the annual operations forecast, the calendar quarter-operations forecast, or the weekly update, to NCPA at least four (4) Business Days prior to the start of the requested outage.

C. 6.1.3 At any time prior to the start of a Planned Outage, the CAISO may deny the Outage due to a System Emergency (as defined in the CAISO Tariff) or as otherwise permitted under the CAISO Tariff. If NCPA receives notice that the CAISO has denied an Outage in accordance with the CAISO Tariff, NCPA will notify the Seller as soon as possible and the Seller shall modify the planned Outage as required by the CAISO.

C.6.2 Commencement of an Outage. The Seller shall not begin any Planned Outage without the prior approval of NCPA and the CAISO.

C.6.3 Forced Outages

C.6.3.1 The Seller shall report the Forced Outages to NCPA within twenty (20)

minutes of such Outages.

C.6.3.2 The Seller's notice of a Forced Outage sent to NCPA shall include the reason for the Outage (if known), expected duration of the Outage, and the Capacity reduction.

C.6.3.3 By the end of the next Business Day following the day on which a Forced Outage has occurred, the Seller shall provide to NCPA a detailed written report, specifying the reason for the Outage, expected duration of such Outage, capacity reduction, and actions taken to mitigate such Outage.

C.6.4 Return to Service. The Seller shall notify NCPA as soon as possible, but in any case before the Generating Facility is returned to service.

C.7 Notices. All Scheduling notices and Schedules shall be submitted to NCPA by phone, fax or email, or other means as may be mutually agreed by the Parties, to the persons designated in Exhibit "PPA-F."

C.8 Changes in Scheduling and Outage Procedure. The Buyer shall revise Exhibit "PPA-C," or, as appropriate, give written notice to the Seller regarding the revision, and issue a new Exhibit "PPA-C," which shall then become part of the Agreement to reflect changes in the scheduling and outage notification procedure.

EXHIBIT "PPA-D"

Green Attributes Reporting and Conveyance Procedures

D.1 Additional Definitions for the Conveyance of Green Attributes

D.1.1 "Certificate Transfers" means the process, as described in the WREGIS Operating Rules, whereby a WREGIS account holder may request that WREGIS Certificates from a specific generating unit shall be directly deposited to another WREGIS account.

D.1.2 "WREGIS Certificates" means a certificate created within the WREGIS system that represents all Renewable and Green Attributes from one MWh of electricity generation from an Eligible Renewable Energy Resource that is registered with WREGIS.

D.1.3 "WREGIS Operating Rules" means the document published by WREGIS that governs the operation of the WREGIS system for registering, tracking, and conveying, among others, RECs produced from Eligible Renewable Energy Resources that shall be registered with WREGIS.

D.1.4 "WREGIS" means Western Renewable Energy Generation Information System.

D.2 RECs. Green Attributes shall be conveyed by the Seller to the Buyer through RECs, which shall be registered tracked and conveyed to the Buyer, using WREGIS.

D.3 WREGIS Registration. Prior to the Commercial Operation Date, the Buyer will register the Facility in the Buyer's WREGIS account on behalf of the Seller. The Buyer shall charge back to the Seller any costs of registering and maintaining the registration of the Facility with WREGIS. The Seller shall provide to the Buyer any documents required by WREGIS and assign the Seller's rights to register the Facility in WREGIS, using agreements provided by WREGIS.

D.4 Buyer's WREGIS Account. The Buyer shall, at its sole expense, establish and maintain the Buyer's WREGIS account sufficient to accommodate the WREGIS Certificates produced by the output of the Facility. The Buyer shall be responsible for all expenses associated with (A) establishing and maintaining the Buyer's WREGIS Account, and (B) subsequently transferring or retiring WREGIS Certificates.

D.5 Qualified Reporting Entity. The Buyer shall be the Qualified Reporting Entity (as such term is defined by WREGIS) for the Facility, and shall be responsible for providing the metered Output data to WREGIS.

D.6 Reporting of Environmental Attributes. In lieu of the Seller's transfer of the WREGIS Certificates using Certificate Transfers from the Seller's WREGIS account to the Buyer's WREGIS account, the Buyer shall report the Facility as being held directly in its WREGIS account, which will preclude the Seller from reporting the Facility in its own WREGIS account.

D.6.1 By avoiding the use of Certificate Transfers, there will be no transaction costs to the Seller or the Buyer for the Certificate Transfers that would otherwise be used.

D.6.2 WREGIS Certificates for the Facility will be created on a calendar month basis in accordance with the certification procedure established by the WREGIS Operating Rules in an amount equal to the Energy generated by the Project and delivered to the Buyer in the same calendar month.

D.6.3 WREGIS Certificates will only be created for whole MWh amounts of energy generated. Any fractional MWh amounts (i.e., kWh) will be carried forward until sufficient generation is accumulated for the creation of a WREGIS Certificate and all such accumulated

MWh of Environmental Attributes will then be available to Buyer.

D.6.4 If a WREGIS Certificate Modification (as such term is defined by WREGIS) will be required to reflect any errors or omissions regarding the Green Attributes from the Facility, then the Buyer will manage the submission of the WREGIS Certificate Modification.

D.6.5 Due to the expected delay in the creation of WREGIS Certificates relative to the timing of invoice payments under Section 2, the Buyer will normally be making an invoice payment for the Output for a given month in accordance with Section 2 before the WREGIS Certificates for such month may be created in the Buyer's WREGIS account. Notwithstanding this delay, the Buyer shall have all right and title to all such WREGIS Certificates upon payment to the Seller in accordance with Section 2.

D.7 Changes in Green Attributes Reporting and Conveyance Procedures. The Buyer shall revise this Exhibit "PPA-D," as appropriate, give written notice to the Seller regarding the revision, and issue a new Exhibit "PPA-D," which shall then become part of this Agreement in the event that:

D.7.1 WREGIS changes the WREGIS Operating Rules (as defined by WREGIS) after the Effective Date or applies the WREGIS Operating Rules in a manner inconsistent with this Exhibit "PPA-D" after the Effective Date; or,

D.7.2 WREGIS is replaced as the primary method that the Buyer uses for conveyance of Green Attributes, or additional methods to convey all Green Attributes, are required.

EXHIBIT "PPA-E"

Insurance Requirements

CONTRACTORS TO THE CITY OF PALO ALTO (CITY), AT THEIR SOLE EXPENSE, WILL FOR THE TERM OF THE CONTRACT OBTAIN AND MAINTAIN INSURANCE IN THE AMOUNTS FOR THE COVERAGE SPECIFIED BELOW, **AFFORDED BY COMPANIES WITH A BEST'S KEY RATING OF A-:VII, OR HIGHER, LICENSED OR AUTHORIZED TO TRANSACT INSURANCE BUSINESS IN THE STATE OF CALIFORNIA.**

AWARD IS CONTINGENT ON COMPLIANCE WITH CITY'S INSURANCE REQUIREMENTS, AS SPECIFIED, BELOW:

REQUIRED	TYPE OF COVERAGE	REQUIREMENT	MINIMUM LIMITS	
			EACH OCCURRENCE	AGGREGATE
YES YES	WORKER'S COMPENSATION AUTOMOBILE LIABILITY	STATUTORY STATUTORY		
YES	COMMERCIAL GENERAL LIABILITY, INCLUDING PERSONAL INJURY, BROAD FORM PROPERTY DAMAGE BLANKET CONTRACTUAL, AND FIRE LEGAL LIABILITY	BODILY INJURY PROPERTY DAMAGE BODILY INJURY & PROPERTY DAMAGE COMBINED.	$1,000,000 $1,000,000 $1,000,000	$2,000,000 $2,000,000 $2,000,000
YES	COMPREHENSIVE AUTOMOBILE LIABILITY, INCLUDING, OWNED, HIRED, NON-OWNED	BODILY INJURY - EACH PERSON - EACH OCCURRENCE PROPERTY DAMAGE BODILY INJURY AND PROPERTY DAMAGE, COMBINED	$1,000,000 $1,000,000 $1,000,000 $1,000,000 $1,000,000	$1,000,000 $1,000,000 $1,000,000 $1,000,000 $1,000,000
NO	PROFESSIONAL LIABILITY, INCLUDING, ERRORS AND OMISSIONS, MALPRACTICE (WHEN APPLICABLE), AND NEGLIGENT PERFORMANCE	ALL DAMAGES	$1,000,000	
YES	**THE CITY OF PALO ALTO IS TO BE NAMED AS AN ADDITIONAL INSURED**: PROPOSER, AT ITS SOLE COST AND EXPENSE, SHALL OBTAIN AND MAINTAIN, IN FULL FORCE AND EFFECT THROUGHOUT THE ENTIRE TERM OF ANY RESULTANT AGREEMENT, THE INSURANCE COVERAGE HEREIN DESCRIBED, INSURING NOT ONLY PROPOSER AND ITS SUBCONSULTANS, IF ANY, BUT ALSO, WITH THE EXCEPTION OF WORKERS' COMPENSATION, EMPLOYER'S LIABILITY AND PROFESSIONAL INSURANCE, **NAMING AS ADDITIONAL INSURES CITY, ITS COUNCIL MEMBERS, OFFICERS, AGENTS, AND EMPLOYEES.**		

I. INSURANCE COVERAGE MUST INCLUDE:

A. A PROVISION FOR A WRITTEN THIRTY DAY ADVANCE NOTICE TO CITY OF CHANGE IN COVERAGE OR OF COVERAGE CANCELLATION; AND

B. A CONTRACTUAL LIABILITY ENDORSEMENT PROVIDING INSURANCE COVERAGE FOR CONTRACTOR'S AGREEMENT TO INDEMNIFY CITY – SEE, SAMPLE AGREEMENT FOR SERVICES.

II. SUBMIT CERTIFICATE(S) OF INSURANCE EVIDENCING REQUIRED COVERAGE, **OR** COMPLETE THIS SECTION AND IV THROUGH V, BELOW.

A. NAME AND ADDRESS OF COMPANY AFFORDING COVERAGE (NOT AGENT OR BROKER):

_____

B. NAME, ADDRESS, AND PHONE NUMBER OF YOUR INSURANCE AGENT/BROKER:

_____

C. POLICY NUMBER(S):

_____

D. DEDUCTIBLE AMOUNT(S) (DEDUCTIBLE AMOUNTS IN EXCESS OF $5,000 REQUIRE CITY'S PRIOR APPROVAL):

_____

III. AWARD IS CONTINGENT ON COMPLIANCE WITH CITY'S INSURANCE REQUIREMENTS, AND PROPOSER'S SUBMITTAL OF CERTIFICATES OF INSURANCE EVIDENCING COMPLIANCE WITH THE REQUIREMENTS SPECIFIED HEREIN.

IV. ENDORSEMENT PROVISIONS, WITH RESPECT TO THE INSURANCE AFFORDED TO "ADDITIONAL INSURES"

A. PRIMARY COVERAGE

WITH RESPECT TO CLAIMS ARISING OUT OF THE OPERATIONS OF THE NAMED INSURED, INSURANCE AS AFFORDED BY THIS POLICY IS PRIMARY AND IS NOT ADDITIONAL TO OR CONTRIBUTING WITH ANY OTHER INSURANCE CARRIED BY OR FOR THE BENEFIT OF THE ADDITIONAL INSURES.

B. CROSS LIABILITY

THE NAMING OF MORE THAN ONE PERSON, FIRM, OR CORPORATION AS INSURES UNDER THE POLICY SHALL NOT, FOR THAT REASON ALONE, EXTINGUISH ANY RIGHTS OF THE INSURED AGAINST ANOTHER, BUT THIS ENDORSEMENT, AND THE NAMING OF MULTIPLE INSUREDS, SHALL NOT INCREASE THE TOTAL LIABILITY OF THE COMPANY UNDER THIS POLICY.

C. NOTICE OF CANCELLATION

1. IF THE POLICY IS CANCELED BEFORE ITS EXPIRATION DATE FOR ANY REASON OTHER THAN THE NON-PAYMENT OF PREMIUM, THE ISSUING COMPANY SHALL PROVIDE CITY AT LEAST A THIRTY (30) DAY WRITTEN NOTICE BEFORE THE EFFECTIVE DATE OF CANCELLATION.

2. IF THE POLICY IS CANCELED BEFORE ITS EXPIRATION DATE FOR THE NON-PAYMENT OF PREMIUM, THE ISSUING COMPANY SHALL PROVIDE CITY AT LEAST A TEN (10) DAY WRITTEN NOTICE BEFORE THE EFFECTIVE DATE OF CANCELLATION.

V. PROPOSER CERTIFIES THAT PROPOSER'S INSURANCE COVERAGE MEETS THE ABOVE REQUIREMENTS:

THE INFORMATION HEREIN IS CERTIFIED CORRECT BY SIGNATURE(S) BELOW. SIGNATURE(S) MUST BE SAME SIGNATURE(S) AS APPEAR(S) ON SECTION II, ATTACHMENT A, PROPOSER'S INFORMATION FORM.

Firm: _____

Signature: _____

Name: _____
(Print or type name)

Signature: _____

Name: _____
(Print or type name)

NOTICES SHALL BE MAILED TO:

PURCHASING AND
CONTRACT ADMINISTRATION
CITY OF PALO ALTO
P.O. BOX 10250
PALO ALTO, CA 94303.

EXHIBIT "PPA-F"

Notices

Contract Administration

BUYER:
City of Palo Alto
Utilities Resource Management
250 Hamilton Avenue
Palo Alto, CA 94301
Ph: 650-329-2689
Email: UtilityCommoditySettlements@CityofPaloAlto.Org

SELLER:

Billing and Settlements

BUYER:
City of Palo Alto
Utilities Resource Management
250 Hamilton Avenue
Palo Alto, CA 94301
Ph: 650-329-2689
Email: UtilityCommoditySettlements@CityofPaloAlto.Org

SELLER:

Forecasting and Outage Reporting under Section 6 of this Agreement

Planned Outages:

BUYER:
Northern California Power Agency Real-Time Dispatch
651 Commerce Drive
Roseville, CA 95678
Ph: 916-786-3518

SELLER:

Forced Outages

BUYER:
Northern California Power Agency Real-Time Dispatch
651 Commerce Drive
Roseville, CA 95678
Ph: 916-786-3518

SELLER:

Forecasting and Scheduling

BUYER:
Northern California Power Agency
Operations and Pre-Scheduling
651 Commerce Drive
Roseville, CA 95678
Ph: 916-786-0123

SELLER:

EXHIBIT "PPA-G"

Form of Lender Consent and Agreement

This CONSENT AND AGREEMENT (this "Consent"), dated as of _____, 20__, is entered into by and among the CITY OF PALO ALTO, a California chartered municipal corporation (the "City"), _____, a _____ corporation (the "Lender)," by its agent, _____ (the "Administrative Agent"), and _____, a _____corporation (the "Borrower") (collectively, the "Parties"). Unless otherwise defined, all capitalized terms have the meaning given in the Contract (as hereinafter defined).

RECITALS

A. Borrower intends to develop, construct, install, test, own, operate and use an approximately _____MW electric generating facility located in the city of Palo Alto in the State of California, known as the _____ Project (the "Project").

B. In order to partially finance the development, construction, installation, testing, operation and use of the Project, Borrower has entered into that certain financing agreement dated as of __ (as amended, amended and restated, supplemented or otherwise modified from time to time, the "Financing Agreement"), among Borrower, the financial institutions from time to time parties thereto (collectively, the "Lenders") , and Administrative Agent for the Lenders, pursuant to which, among other things, Lenders have extended commitments to make loans and other financial accommodations to, and for the benefit of, Borrower.

C. The City and Borrower have entered into that certain Power Purchase Agreement, dated as of _____(attached hereto and incorporated herein by reference, as amended, amended and restated, supplemented or otherwise modified from time to time in accordance with the terms thereof and hereof, the "Power Purchase Agreement").

D. The City and Borrower have entered into that certain Interconnection Agreement, dated as of _____ (attached hereto and incorporated herein by reference, as amended, amended and restated, supplemented or otherwise modified from time to time in accordance with the terms thereof and hereof, the "Interconnection Agreement").

E. Pursuant to a security agreement executed by Borrower and Administrative Agent for the Lenders (as amended, amended and restated, supplemented or otherwise modified from time to time, the "Security Agreement"), Borrower has agreed, among other things, to assign, as collateral security for its obligations under the Financing Agreement and related documents (collectively, the "Financing Documents"), all of its right, title and interest in, to and under the Power Purchase Agreement and Interconnection Agreement to Administrative Agent for the benefit of itself, the Lenders and each other entity or person providing collateral security under the Financing Documents.

F. It is a requirement under the Financing Agreement that the Parties hereto execute this Consent.

AGREEMENT

NOW THEREFORE, for good and valuable consideration, the receipt and adequacy of which are hereby acknowledged, and intending to be legally bound, the Parties agree, as follows:

1. CONSENT TO ASSIGNMENT. The City acknowledges the assignment referred to in Recital E above, consents to an assignment of the Power Purchase Agreement and Interconnection Agreement pursuant thereto, and agrees with Administrative Agent, as follows:

(a) Administrative Agent shall be entitled (but not obligated) to exercise all rights and to cure any

defaults of Borrower under the Power Purchase Agreement or Interconnection Agreement, as the case may be, subject to applicable notice and cure periods provided in the Power Purchase Agreement and Interconnection Agreement. Upon receipt of notice from Administrative Agent, the City agrees to accept such exercise and cure by Administrative Agent if timely made by Administrative Agent under the Power Purchase Agreement or Interconnection Agreement, as the case may be, and this Consent. Upon receipt of Administrative Agent's written instructions and to the extent allowed by law, the City agrees to make directly to such account as Administrative Agent may direct the City, in writing, from time to time, all payments to be made by the City to Borrower under the Power Purchase Agreement or Interconnection Agreement, as the case may be, from and after the City's receipt of such instructions, and Borrower consents to any such action. The City shall not incur any liability to Borrower under the Power Purchase Agreement, Interconnection Agreement, or this Consent for directing such payments to Administrative Agent in accordance with this subsection (a).

(b) The City will not, without the prior written consent of Administrative Agent (such consent not to be unreasonably withheld), (i) cancel or terminate the Power Purchase Agreement or Interconnection Agreement, or consent to or accept any cancellation, termination or suspension thereof by Borrower, except as provided in the Power Purchase Agreement or Interconnection Agreement and in accordance with subparagraph 1(c) hereof, (ii) sell, assign or otherwise dispose (by operation of law or otherwise) of any part of its interest in the Power Purchase Agreement or Interconnection Agreement, except as provided in the Power Purchase Agreement or Interconnection Agreement, or (iii) amend or modify the Power Purchase Agreement or Interconnection Agreement in any manner materially adverse to the interest of the Lenders in the Power Purchase Agreement and Interconnection Agreement as collateral security under the Security Agreement.

(c) The City agrees to deliver duplicates or copies of all notices of default delivered by the City under or pursuant to the Power Purchase Agreement or Interconnection Agreement to Administrative Agent in accordance with the notice provisions of this Consent. The City shall deliver any such notices concurrently with delivery of the notice to Borrower under the Power Purchase Agreement or Interconnection Agreement. To the extent that a cure period is provided under the Power Purchase Agreement or Interconnection Agreement, Administrative Agent shall have the same period of time to cure the breach or default that Borrower is entitled to under the Power Purchase Agreement or Interconnection Agreement, except that if the City does not deliver the default notice to Administrative Agent concurrently with delivery of the notice to Borrower under the Power Purchase Agreement or Interconnection Agreement, then as to Administrative Agent, the applicable cure period under the Power Purchase Agreement or Interconnection Agreement shall begin on the date on which the notice is given to Administrative Agent. If possession of the Project is necessary to cure such breach or default, and Administrative Agent or its designee(s) or assignee(s) declare Borrower in default and commence foreclosure proceedings, Administrative Agent or its designee(s) or assignee(s) will be allowed a reasonable period to complete such proceedings so long as Administrative Agent or its designee(s) continue to perform any monetary obligations under the Power Purchase Agreement or Interconnection Agreement, as the case may be. The City consents to the transfer of Borrower's interest under the Power Purchase Agreement and Interconnection Agreement to the Lenders or Administrative Agent or their designee(s) or assignee(s) or any of them or a purchaser or grantee at a foreclosure sale by judicial or nonjudicial foreclosure and sale or by a conveyance by Borrower in lieu of foreclosure and agrees that upon such foreclosure, sale or conveyance, the City shall recognize the Lenders or Administrative Agent or their designee(s) or assignee(s) or any of them or other purchaser or grantee as the applicable party under the Power Purchase Agreement and Interconnection Agreement (provided that such Lenders or Administrative Agent or their designee(s) or assignee(s) or purchaser or grantee assume the obligations of Borrower under the Power Purchase Agreement and Interconnection Agreement, including, without limitation, satisfaction and compliance with all credit provisions of the Power Purchase Agreement and Interconnection Agreement, if any, and provided further that such Lenders or Administrative Agent or their designee(s) or assignee(s) or purchaser or grantee has a creditworthiness equal to or better than

Borrower, as reasonably determined by City).

(d) In the event that either the Power Purchase Agreement or Interconnection Agreement, or both is rejected by a trustee or debtor-in-possession in any bankruptcy or insolvency proceeding, and if, within forty-five (45) days after such rejection, Administrative Agent shall so request, the City will execute and deliver to Administrative Agent a new power purchase agreement or interconnection agreement, as the case may be, which power purchase agreement or interconnection agreement shall be on the same terms and conditions as the original Power Purchase Agreement or Interconnection Agreement for the remaining term of the original Power Purchase Agreement or Interconnection Agreement before giving effect to such rejection, and which shall require Administrative Agent to cure any defaults then existing under the original Power Purchase Agreement or Interconnection Agreement. Notwithstanding the foregoing, any new renewable power purchase agreement or interconnection agreement will be subject to all regulatory approvals required by law. The City will use good faith efforts to promptly obtain any necessary regulatory approvals.

(e) In the event Administrative Agent, the Lenders or their designee(s) or assignee(s) elect to perform Borrower's obligations under the Power Purchase Agreement and Interconnection Agreement, succeed to Borrower's interest under the Power Purchase Agreement and Interconnection Agreement, or enter into a new power purchase agreement or interconnection agreement as provided in subparagraph 1(d) above, the recourse of the City against Administrative Agent, Lenders or their designee(s) and assignee(s) shall be limited to such Parties' interests in the Project, and the credit support required under the Power Purchase Agreement and Interconnection Agreement, if any.

(f) In the event Administrative Agent, the Lenders or their designee(s) or assignee(s) succeed to Borrower's interest under the Power Purchase Agreement and Interconnection Agreement, Administrative Agent, the Lenders or their designee(s) or assignee(s) shall cure any then-existing payment and performance defaults under the Power Purchase Agreement or Interconnection Agreement, except any performance defaults of Borrower itself, which by their nature are not susceptible of being cured. Administrative Agent, the Lenders and their designee(s) or assignee(s) shall have the right to assign all or a pro rata interest in the Power Purchase Agreement and Interconnection Agreement to a person or entity to whom Borrower's interest in the Project is transferred, provided such transferee assumes the obligations of Borrower under the Power Purchase Agreement and Interconnection Agreement and has a creditworthiness equal to or better than Borrower, as reasonably determined by the City. Upon such assignment, Administrative Agent and the Lenders and their designee(s) or assignee(s) (including their agents and employees) shall be released from any further liability thereunder accruing from and after the date of such assignment, to the extent of the interest assigned.

2. REPRESENTATIONS AND WARRANTIES. The City hereby represents and warrants that as of the date of this Consent:

(a) It (i) is duly formed and validly existing under the laws of the State of California, and (ii) has all requisite power and authority to enter into and to perform its obligations hereunder and under the Power Purchase Agreement and Interconnection Agreement, and to carry out the terms hereof and thereof and the transactions contemplated hereby and thereby;

(b) the execution, delivery and performance of this Consent, the Power Purchase Agreement and the Interconnection Agreement have been duly authorized by all necessary action on its part and do not require any approvals, material filings with, or consents of any entity or person which have not previously been obtained or made;

(c) each of this Consent, the Power Purchase Agreement, and the Interconnection Agreement is in full force and effect;

(d) each of this Consent, the Power Purchase Agreement, and the Interconnection Agreement has been duly executed and delivered on its behalf and constitutes its legal, valid and binding obligation, enforceable against it in accordance with its terms, except as the enforceability thereof may be limited by (i) bankruptcy, insolvency, reorganization or other similar laws affecting the enforcement of creditors' rights generally and (ii) general equitable principles (whether considered in a proceeding in equity or at law);

(e) there is no litigation, arbitration, investigation or other proceeding pending for which the City has received service of process or, to the City's actual knowledge, threatened against the City relating solely to this Consent, the Power Purchase Agreement, or the Interconnection Agreement and the transactions contemplated hereby and thereby;

(f) the execution, delivery and performance by it of this Consent, the Power Purchase Agreement, and the Interconnection Agreement, and the consummation of the transactions contemplated hereby, will not result in any violation of, breach of or default under any term of any material contract or material agreement to which it is a party or by which it or its property is bound, or of any material requirements of law presently in effect having applicability to it, the violation, breach or default of which could have a material adverse effect on its ability to perform its obligations under this Consent;

(g) neither the City nor, to the City's actual knowledge, any other party to the Power Purchase Agreement or Interconnection Agreement, is in default of any of its obligations thereunder; and

(h) to the City's actual knowledge, (i) no Force Majeure Event exists under, and as defined in, the Power Purchase Agreement or Interconnection Agreement and (ii) no event or condition exists which would either immediately or with the passage of any applicable grace period or giving of notice, or both, enable either the City or Borrower to terminate or suspend its obligations under the Power Purchase Agreement or the Interconnection Agreement.

Each of the representations and warranties set forth herein shall survive the execution and delivery of this Consent and the consummation of the transactions contemplated hereby.

3. NOTICES. All notices required or permitted hereunder shall be given, in writing, and shall be effective (a) upon receipt if hand delivered, (b) upon telephonic verification of receipt if sent by facsimile and (c) if otherwise delivered, upon the earlier of receipt or three (3) Business Days after being sent registered or certified mail, return receipt requested, with proper postage affixed thereto, or by private courier or delivery service with charges prepaid, and addressed as specified below:

If to the City:
[_____]
[_____]
[_____]
Telephone No.: [_____]
Facsimile No.: [_____]
Attn: [_____]

If to Administrative Agent:
[_____]
[_____]
[_____]
Telephone No.: [_____]
Facsimile No.: [_____]
Attn: [_____]

If to Borrower:
[_____]
[_____]
[_____]
Telephone No.: [_____]
Facsimile No.: [_____]
Attn: [_____]

Any party shall have the right to change its address for notice hereunder to any other location within the United States by giving thirty (30) days written notice to the other parties in the manner set forth above.

4. ASSIGNMENT, TERMINATION, AMENDMENT. This Consent shall be binding upon and benefit the successors and assigns of the Parties hereto and their respective successors, transferees and assigns (including without limitation, any entity that refinances all or any portion of the obligations under the Financing Agreement). The City agrees (a) to confirm such continuing obligation, in writing, upon the reasonable request of (and at the expense of) Borrower, Administrative Agent, the Lenders or any of their respective successors, transferees or assigns, and (b) to cause any successor-in-interest to the City with respect to its interest in the Power Purchase Agreement or Interconnection Agreement to assume, in writing and in form and substance reasonably satisfactory to Administrative Agent, the obligations of City hereunder. Any purported assignment or transfer of the Power Purchase Agreement or Interconnection Agreement not in conjunction with the written instrument of assumption contemplated by the foregoing clause (b) shall be null and void. No termination, amendment, or variation of any provisions of this Consent shall be effective unless in writing and signed by the parties hereto. No waiver of any provisions of this Consent shall be effective unless in writing and signed by the party waiving any of its rights hereunder.

5. GOVERNING LAW. This Consent shall be governed by the laws of the State of California applicable to contracts made and to be performed in California. The federal courts or the state courts located in California shall have exclusive jurisdiction to resolve any disputes with respect to this Consent with the City, Assignor, and the Lender or Lenders irrevocably consenting to the jurisdiction thereof for any actions, suits, or proceedings arising out of or relating to this Consent.

6. COUNTERPARTS. This Consent may be executed in one or more duplicate counterparts, and when executed and delivered by all the parties listed below, shall constitute a single binding agreement.

7. SEVERABILITY. In case any provision of this Consent, or the obligations of any of the Parties hereto, shall be invalid, illegal or unenforceable, the validity, legality and enforceability of the remaining provisions, or the obligations of the other Parties hereto, shall not in any way be affected or impaired thereby.

8. ACKNOWLEDGMENTS BY BORROWER. Borrower, by its execution hereof, acknowledges and agrees that neither the execution of this Consent, the performance by the City of any of the obligations of the City hereunder, the exercise of any of the rights of the City hereunder, or the acceptance by the City of performance of the Power Purchase Agreement by any party other than Borrower shall (1) release Borrower from any obligation of Borrower under the Power Purchase Agreement or Interconnection Agreement, (2) constitute a consent by the City to, or impute knowledge to the City of, any specific terms or conditions of the Financing Agreement, the Security Agreement or any of the other Financing Documents, or (3) except as expressly set forth in this Consent, constitute a waiver by the City of any of its rights under the Power Purchase Agreement or Interconnection Agreement. Borrower and Administrative Agent acknowledge hereby for the benefit of City that none of the Financing Agreement, the Security

Agreement, the Financing Documents or any other documents executed in connection therewith alter, amend, modify or impair (or purport to alter, amend, modify or impair) any provisions of the Power Purchase Agreement.

CITY OF PALO ALTO

APPROVED AS TO FORM

_____
Senior Deputy City Attorney

APPROVED

_____
City Manager

_____
Director of Utilities

ADMINISTRATIVE AGENT

_____

BORROWER

_____

ATTACHMENT C

EXCERPTED FINAL MINUTES OF THE DECEMBER 10, 2014 UTILITIES ADVISORY COMMISSION MEETING

ITEM 2 (Original Agenda New Business Item 1): ACTION**:** Staff Recommendation that the Utilities Advisory Commission Recommend that Council Continue the Palo Alto Clean Local Energy Accessible Now (CLEAN) Program at the Rate of 16.5 cents per Kilowatt-hour for a 20-Year Contract and a Program Cap of 3 Megawatts, Add a 25-Year Contract Term Option, and Expand CLEAN Program Eligibility to Non-Solar Renewable Energy Resources

Senior Resource Planner Jim Stack summarized the history of the Palo Alto CLEAN program from when it was first adopted in March 2012 to the last updated price and program cap in February 2014. Stack indicated that the City released a Request for Proposals for lease agreements for City-owned parking structures and has selected a finalist who is expected to participate in the program at five facilities for a total of about 1.5 megawatts (MW).

Stack explained that the value of local solar has fallen since the program was first launched, but has increased slightly since last year's evaluation. He said that staff recommends that the current price of 16.5 cents/kilowatt-hour (¢/kWh) and program participation cap of 3 MW be recommended to Council. He also said that staff recommends allowing participants to choose either a 20-year or 25-year contract term, noting that some developers had requested a longer contract term given that it would align better with the solar module lifetime and product warranties.

Stack also said that staff recommends expanding the CLEAN program's eligibility to include non-solar local renewable resources, while offering these resources a contract price that is equal to their avoided cost (9.3 ¢/kWh for a 20-year term or 9.4 ¢/kWh for a 25-year term). He noted that expanding the program to non-solar resources has been discussed since the program's inception, but that it was initially not done due to the fact that the City already had a competing program (the Power from Local Ultra-clean Generation Incentive, or PLUG-In, program) in place for such resources. However, this program was terminated by Council earlier this year. Stack noted that the potential anaerobic digester facility that has been discussed for the wastewater treatment plant has been mentioned as a possible non-solar participant in the CLEAN program. Finally, Stack stated that staff recommends that there be no participation cap on non-solar resources participating in the CLEAN program, given that these resources will be compensated at their avoided cost and therefore not have any impact on ratepayers.

Commissioner Eglash asked if resources are paid only for the energy that is delivered, not based on their nameplate capacity. Stack said that this was the case; that payments are made only for energy received, as with a regular power purchase agreement (PPA). Commissioner Eglash

noted that this means the City does not have to worry about degradation of the solar panels over time.

Commissioner Eglash commented on the types of non-solar resources that would be eligible for the program, and asked about a hypothetical example of a system of lead-acid batteries that are charged at night using electricity from the grid, and whether that would be eligible to participate in the program. Stack stated that the program Eligibility Rules and Requirements stipulate that a resource must be deemed an "eligible renewable" resource under the California Public Utilities Code in order to participate.

Commissioner Eglash asked whether there are any risks that the City should consider in opening the program up to non-solar renewable energy resources, and also asked whether there are any other utilities that are allowing non-solar renewable energy resources to participate in their feed-in tariff programs. Senior Deputy City Attorney Jessica Mullan mentioned that the Los Angeles Department of Water and Power has a feed-in tariff program that is open to wind and biomass projects.

Commissioner Eglash asked whether a customer who wanted to install a small wind turbine on their property would have to go through a zoning review process in order to do that. Assistant Director Jane Ratchye stated that such a project would have to go through a regular City review process—possibly including an architectural review process and an environmental review process—just like any other development project.

Vice Chair Waldfogel asked whether a fuel cell using "green gas" would be considered a renewable resource by the California Energy Commission (CEC). Stack stated it would be considered a renewable resource, while Ratchye noted that it would likely be difficult to get physical "green gas" delivered to the City. Commissioner Eglash asked whether a fuel cell such as a Bloom Box that simply used a regular natural gas supply would be deemed eligible, and Stack stated that it would not. Vice Chair Waldfogel asked whether a Bloom Box that used gas from the City's PaloAltoGreen Gas program would be eligible. Stack stated that it would not, because that program uses environmental offsets to "green up" a regular natural gas supply, whereas the state Public Utilities Code requires that fuel cells use actual green gas in order to be deemed a renewable electricity supply.

Commissioner Eglash asked Stack for his opinion on whether the staff recommendation to open the CLEAN program to non-solar renewable energy resources was wise and well thought out. Stack responded that he thought it did make sense to open the program to non-solar resources rather than discriminate against them, and that as long as they can pass through the City's regular permitting and review processes they should be eligible to participate.

Commissioner Eglash stated his concern that opening the program up to any type of renewable resource, for a 20- or 25-year term, with no participation cap (for non-solar resources) exposed the City to risks that it may not have considered. However, he also noted that the City regularly signs long-term PPAs, locking in a contract price for an extended period of time.

Ratchye agreed that opening the CLEAN program to non-solar resources would not be significantly different from the City's regular PPA process. She also noted that staff would be returning to Council every year to review the program and its contract price, so the prices and terms being proposed right now would not be available forever. She also noted that staff does not expect significant participation from non-solar resources. She stated that the only real concern with the staff proposal was for a non-solar price that was based on the avoided cost of a baseload type of resource, such as an anaerobic digester, and that it might not accurately reflect the value of a renewable resource with a different generation profile such as a wind resource. Finally, she pointed out that one way to address the concern about participation of non-solar resources in the CLEAN program would be to impose a program participation cap on those resources.

Commissioner Eglash noted that in the case of regular PPAs, each project is reviewed by the UAC, the Finance Committee, and the full City Council. Whereas with the CLEAN program the City would be committing itself to projects of unlimited size without any additional review. He suggested that the UAC might want to consider requiring Council approval of larger projects. Ratchye responded that the UAC could certainly make that recommendation; however, it would defeat the purpose of a feed-in tariff program, which is to establish a known price and a standard contract and a set of participation criteria, and allow projects to participate in the program without going through the typical thorough review process. She also noted that the chances of a giant locally-sited project are incredibly remote.

Vice Chair Waldfogel commented that large projects would have long lead times to develop and that it would not be unreasonable to expect some negotiations to occur for such large projects.

Commissioner Hall stated that he has problems with the anaerobic digester being part of this program due to the fact that it could be a very large project and it should have to go through the regular PPA negotiation and review process. He also said that since the anaerobic digester would likely be a City-owned project (but not owned by Utilities) and therefore it would be a transfer price and this could be an issue for the public. However, he likes the idea of having a feed-in tariff program in place, and that in the future fuel cells could be a good technology to participate in the program as their prices come down.

Commissioner Foster noted that although there has not been any uptake for the program yet, he is supportive of continuing the program for solar at the 16.5 ¢/kWh price and that he supports adding a 25-year contract term option. He also noted that for solar projects, the incremental cost of those projects participating is very small for residential customers (he calculated the rate impact as 12.5 ¢/month for the median residential customer, assuming the CLEAN program was fully subscribed).

Commissioner Foster noted that the anaerobic digester is a large motivation for expanding the program to non-solar projects, and that it is a complicated project for the City. He noted that if that project participates in the CLEAN program it will bring certainty to one aspect of the project (the revenue it will receive for the power it generates) that is currently up in the air. He also stated that because the project will be compensated at its avoided cost he feels that the

arrangement is reasonable and therefore he supports the non-solar portion of the staff recommendation in addition to the solar portion.

Commissioner Melton stated that he is also comfortable with the staff proposal and that he is convinced that there will not be any off-the-wall projects coming out of this program, since any resource that wishes to participate must be defined by the state as an eligible renewable energy resource.

Commissioner Cook stated that he also likes the staff recommendation, but he would put a cap on the non-solar projects, such as 3 MW, in order to have more control on the City's exposure. For a compelling project that is larger than 3 MW, the developers would come to staff to discuss the project and staff could seek Council approval of the project or seek Council approval to raise the 3 MW cap. He also stated that he is not concerned about the transfer pricing issue, since the price is set at the avoided cost of the energy.

Commissioner Eglash commented that Commissioner Cook's recommendation did not signal that the City would reject projects larger than 3 MW, but that such projects would have to go through a more thorough review process.

Ratchye asked Stack to remind the Commission about the size of the anaerobic digester project. Stack stated that Public Works staff currently anticipates that the project will consist of three 800 kilowatt (kW) engines, with two engines operating and one idle at any point in time; therefore the project would have an operating capacity of about 1.6 MW.

Ratchye also reminded the Commission that when Council terminated the PLUG-In program earlier this year, staff told Council that after terminating that program, it would return to Council with a recommendation to expand the CLEAN program to include non-solar renewable energy resources such as the anaerobic digester.

ACTION:
Chair Foster made a motion to approve staff's recommendation. Commissioner Melton seconded the motion.

Commissioner Eglash, explaining that he doesn't feel that the UAC has received a full discussion and justification for non-solar projects, made a substitute motion to eliminate the non-solar aspect of the staff recommendation. His motion was to approve staff's recommendation parts 1.a. and 2 (Adopt a resolution to continue the Palo Alto CLEAN program at the current price of 16.5 cents per kilowatt-hour (¢/kWh) for a 20-year contract, add a 25-year contract term option with a 16.5 ¢/kWh price, and continue with a program limit of 3 megawatts (MW) for solar energy resources; and Direct staff to return to the Council with a review of the program in one year or at the time the program capacity is filled, whichever comes first.). Commissioner Hall seconded the substitute motion. The motion carried by a vote of 3-2 (with Chair Foster and Commissioner Melton voting no, Vice Chair Waldfogel and Commissioners Eglash and Hall voting yes, Commissioner Cook abstaining, and Commissioner Chang absent).

FINANCE COMMITTEE DRAFT MINUTES

Special Meeting
Tuesday, March 17, 2015

Chairperson Schmid called the meeting to order at 6:01 P.M. in the Council Chambers, 250 Hamilton Avenue, Palo Alto, California.

Present: Filseth, Kniss, Scharff, Schmid (Chair)

Absent:

2. Utilities Advisory Commission Recommendation that Council Continue the Palo Alto Clean Local Energy Accessible Now (CLEAN) Program at the Rate of 16.5 Cents per Kilowatt-hour for Solar Resources for a 20-Year Contract and a Program Cap of 3 Megawatts, and Add a 25-Year Contract Term Option; Staff Recommendation that Council Expand CLEAN Program Eligibility to Non-Solar Renewable Energy Resources with a Rate Equal to their Avoided Cost for 20- and 25-year Contracts and Program Cap of 3 Megawatts; and Approval of Amended CLEAN Program Power Purchase Agreement.

Valerie Fong, Utilities Director, noted that a representative from the Utilities Advisory Commission (UAC), Steven Eglash, was present at this meeting. Staff was going to give a brief overview of the Palo Alto Clean Local Energy Accessible Now (CLEAN) Program.

Jim Stack, Senior Resource Planner, said the CLEAN Program started three years ago, it was a Feed-in Tariff Program, a program that offered a guarantee of payments to renewable energy developers for the electricity they produce. When the CLEAN Program was approved three years ago, the PV Partners Program, Palo Alto's solar rebate program, was intended to assist people in installing solar systems on their rooftops or businesses, but the funds set aside were starting to run out. The CLEAN Program was intended to help people set up solar on their rooftops, following the expiration of the PV Partners Program funds. The CLEAN Program started at 14 cents/kilowatt-hour (kWh) for a 20 year contract term. The Program was limited to solar photovoltaic (PV) technologies, following the success with the

PV Partners Program; the CLEAN Program Participation Cap was set at four megawatts (MW). The first year of the CLEAN Program had no sign-ups. As a result, Council directed Staff to increase the contract rate from 14 cents to 16.5 cents/kWh. The initial 14 cent rate was set to be approximately equal to the value that Staff determined the energy would have to the City. The Program went from being an unsubsidized Program, to a Program with a bit of subsidy to encourage customers to participate; the Program Participation Cap was reduced from four to two MW at that time. A year later there were still no sign-ups, so in early 2014, Council renewed the Program at the same 16.5 cents/kWh rate but increased the participation cap from two to three MW. Staff started to hear that the economics of the Program were looking better. It was thought that there was no participation because the cost of doing solar projects in Palo Alto was too high. As the economics of solar improved, Staff was getting closer to receiving a project application. Some changes in the CLEAN Program parameters were the Program Participation Cap over the years, and how the value of local solar energy changed in Palo Alto over time. Palo Alto started with the value of solar energy being 13.5 cents/kWh. As the price of solar has declined, and the cost of transmission and capacity has changed, the City is now down to a rate of 10.3 cents/kWh for the value of solar energy. The combination of changes in the value of solar energy and the CLEAN price means that the Program is now expected to have a financial impact on the City and their customers if the Program was maxed out at the Program Cap because the CLEAN price has risen and the value of solar has decreased Staff presented the UAC with recommendations in December 2014. The UAC and Staff unanimously recommended that Staff continue the CLEAN program for another year at 16.5 cent/kWh rate for local solar energy resources. This was six cents per kWh higher than what Staff valued the energy produced in Palo Alto to be. The reason was local solar projects had additional benefits to the City, such as: economic benefits from investment in the City, job creation, a reduction in the need for constructing new transmission throughout the State, providing shade, and increasing the resiliency of the local electric system. Staff and the UAC also recommended continuing the Program Participation Cap at three MW for local solar projects; the final Item was adding a 25 year contract term, in addition to the current 20 year contract term that was offered to developers. This recommendation was based on feedback Staff received from solar developers that wanted to see some additional options. The suggestion of 25 years was made because it aligned with the warranty lifetime on solar panels and other equipment. There was little difference in the value of local solar energy when increasing the agreement term from 20 years to 25 years. Staff recommended offering the same 16.5 cent/kWh rate for the 20 year and the 25 year program. Staff also recommended expanding the CLEAN Program eligibility to include non-solar local renewable energy resources and implementing a separate three MW participation cap

for non-solar resources. There would be a three MW participation cap on solar, and a separate three MW participation cap for non-solar resources in the CLEAN Program. Finally, Staff recommended that the non-solar resources be compensated at a contract rate that was equal to the avoided cost of local renewable non-solar energy. For non-solar resources, this was going to be an unsubsidized Program: the rate for non-solar resources was 9.3 cents/kWh for 20 years and 9.4 cents/kWh for 25 years. When Staff went to the UAC with this recommendation in December, 2014, there was an original recommendation to not include the Program Participation Cap for non-solar resources at all because the price in the non-solar program equaled the avoided cost of the resource and there was no financial impact on the City; thus there was no need for a cap on the resources participating. The UAC was concerned about this recommendation, including the concern over the type and size of the resources that could potentially participate in this Program. There was a desire expressed to put a cap on the overall Program Participation for non-solar resources and a desire expressed to see a fuller discussion of the impact and the rationale of expanding this program to include non-solar resources. Staff responded to these concerns in the Staff Report by changing the recommendation from an un-capped Program for non-solar resources to a Program that had a three MW cap. The Staff Report included a more complete discussion of the proposal to expand non-solar resources, including clarifying that these resources needed to meet the State's legal definition for renewable resources. Staff also clarified the need to comply with normal zoning and permitting requirements in order to get a contract through this Program. Staff also noted that this proposal was consistent with Council's May 12, 2014 Motion that the proposed Anaerobic Digester Facility be compensated at the Avoided Cost level. Staff noted that the proposal was consistent with the previously stated intentions to expand the Program beyond solar and to include other renewable energy resources. Staff made note of some other Feed-in Tariff Programs operated by municipal utilities in the State that were open to non-solar resources. If the Program included non-solar resources, it would provide the option of price certainty to the Anaerobic Digester Facility should it decide to participate in the program and sell its energy to City of Palo Alto's Utilities, rather than use the energy on site.

Council Member Kniss requested more background and recalled a discussion on pricing.

Mr. Stack relayed that most of the City's renewable resources were contracted from larger resources outside Palo Alto; they were large 20-40 MW projects. The CLEAN Program was built to encourage projects within the City limits. Staff did not have to get the energy across the system to Palo

Alto but it improved the resiliency of the local system and that helped the City to meet their Resource Adequacy Requirement to procure capacity in the Bay Area. There was a lot of interest in solar energy over the years and an increasing desire to see large programs being built in Palo Alto.

Council Member Kniss clarified that she was really interested in pricing and recalled pricing being at 16.5 cents/kWh.

Ms. Fong gave a background about the Program and said the first year of the Program was priced at the Avoided Cost of 14.0 cents/kWh, which took into account that the energy had to be moved into Palo Alto. If these variables were embedded into the price it came out to roughly 14 cents/kWh. There were no takers. Staff heard from potential developers that a price more in the range of 16-18 cents/kWh might cause a project to develop in Palo Alto. Staff went through the Council and the Finance Committee (Committee) to suggest a rate of 16.5 cents/kWh, which at the time the CLEAN Coalition thought was a good price. A variable that stopped developers from developing in Palo Alto was the high rent for rooftop space, where solar panels were normally put. Developers remarked that they needed more incentive to afford building in Palo Alto in order to make a decent margin of return for a locally developed solar project. Council adopted the 16.5 cent/kWh price, but still there were no takers. In year three, Staff was not comfortable increasing the rate because the cost of renewables went down. At the same time Staff was hearing that in order to build in Palo Alto, 16 cents/kWh was needed. Staff recommended that the 16.5 cents/kWh rate be maintained. It was understood that the CLEAN Coalition, in conjunction with a local developer, were looking into City facilities for rooftop rentals. Staff was interested in seeing what projects the 16.5 cent/kWh rate would yield.

Council Member Kniss confirmed that there were still no takers.

Ms. Fong replied yes.

Chair Schmid wanted to hear from the representative from the UAC before a general discussion was launched.

Steve Eglash, Utilities Advisory Commission, Commissioner noted that he was not formally representing the UAC. He wanted to comment on the Feed-in Tariff and the path by which this information moved from the UAC to the Committee. A Feed-in Tariff was a highly flexible and powerful tool because by adjusting the price by which a person may commit to pay for

energy produced, a person was able to get any degree of involvement and participation that a person wanted. For example, if the price was fixed at a higher rate, there was going to be takers, and if it was fixed high enough, there would be as many takers as a person wanted. Palo Alto's approach over the years has been conservative because they set the price close to or slightly above alternate sources of Green Energy. This process protected what the City has been doing fiscally. He noted that there was never a strong enough argument to set the Feed-in Tariff rate significantly higher to insure involvement in the Program. He knew that many people, including himself, were not dismayed by the lack of takers and were happy with the way the Program played out. The reason was because Palo Alto said they were willing to pay a certain amount and no more for projects of this type: if there were takers at that price, they were happy, but if not, it meant that Palo Alto protected the money they were willing to invest in the Program. There were other cities and countries in the world that set their Feed-in Tariffs at much higher rates to try to get more solar deployed; there was never a strong feeling in Palo Alto to do that because doing that became a kind of wealth redistribution from the rate payers to solar developers and there were strong social reasons not to set the price at 20 or 30 cents/kWh. His second point was that the UAC received a slightly different Staff Memo than the Committee received; the Memo that the UAC received had a whole lot less background and justification proposing the expansion of the Program to non-solar. He was part of a majority that offered a Substitute Motion that eliminated the non-solar part of the Program. Staff has since provided additional information to this Committee. This Item has not come back before the UAC but he thought the Staff presentation and the Staff Report before the Committee did a great job of explaining why Staff was proposing an expansion of a Non-Solar Program. He thought the expansion was fine, prudent, conservative, it was consistent with established policy, he liked that it included a potential Anaerobic Digester, and Staff added a three MW cap in case there was some unforeseen consequence of expanding the Program.

Council Member Kniss suggested Council Member Scharff comment since he was the Liaison for the UAC.

Council Member Scharff did not see any problem with extending the Program to non-solar resources. The Council raised the Program price from 14 cents/kWh to 16.5 cents/kWh because there was almost no profit margin for developers at the lower rate. Things changed. The price of solar was falling, which was a bad deal for the rate payers. His concerns were fiscally related because for example, every time the City spent $1 million on an Electric Utility program, there was a one percent rate increase to the rate payers. The Program's subsidy level of $300,000 per year meant a rate

increase of .333 (recurring) cents, which was a reason why he was not really bothered that the Program had no takers. He also questioned the need for the Program in the Community. There was no problem with 16.5 cents/kWh versus 14 cents/kWh, it was getting to that stage that he had a problem with. He noted that Avoided Costs were falling and solar was becoming more and more cheap. A person locked into a Program for 25 years meant they were locked into a highly subsidized rate. He wanted to ask if Local System Resource Adequacy was really an argument and if having Resource Adequacy under three MW made any difference. His main concern was putting solar panels on City facilities, especially parking garages because technology was changing rapidly and the City may want to repurpose their parking garages, including tearing them down. This was a bigger problem if the City had to buy people out in the future, considering the cost. A reason there were not any takers was because the person was locking themselves into the development potential of that site, which was unable to be changed. An owner did not do that unless they had a building that was going to have more than a 25 year life that was useful.

Ms. Fong wanted to know if Staff should abandon the whole local solar strategy and requested clarification.

Council Member Kniss supported Council Member Scharff's comments. A home owner making a commitment over a long period of time thought they were going to get their money back or that they were doing something good for the environment. She was unclear which direction the Committee should go in and was not sure she wanted to make that decision at this time.

Council Member Filseth recalled mention of one project that might be coming soon and wanted to know if that involved the rooftop of a parking garage or if it was a homeowner project.

Mr. Stack answered that Staff was referring to a City facility garage rooftop. The Public Works Department released a Request for Proposal last year to lease rooftop space at several City parking garages.

Council Member Filseth understood that with this Program the City was subsidizing up to $300,000 per year in order to have solar generated in Palo Alto, as opposed to some place outside of the City.

Mr. Stack agreed.

Council Member Filseth spoke regarding 20 year contracts and said if the price of solar dropped to six or five cents/kWh in the next 10 years, then the size of the City's subsidy was going to go from $300,000 to $500,000.

Mr. Stack replied that was about right. The City was currently locking in long-term contracts for 25-30 years at about seven cents/kWh, which was just the cost of the energy, which did not include the cost of transporting the energy.

Council Member Filseth asked if the cost of transmission was about one cent/kWh.

Mr. Stack said the price rose to two or three cents/kWh for a 25 year term.

Ms. Fong remarked that almost the entire portfolio for the City was comprised of long-term contracts; if the market price went down, the portfolio was more out of market, and if the market prices went up, the portfolio was more in the market. This was a factor that was inherent in a contract because a person might end up either paying more or less than they originally bargained for.

Council Member Filseth thought that made sense and inquired if the City's contracts expired at staggered intervals.

Mr. Stack answered they expired between the years 2021 and 2040.

Council Member Filseth confirmed that the contracts would be resetting in that time bracket. He asked about expanding the Program to non-solar renewable sources and wanted to know if the primary target of that was the Anaerobic Digester.

Mr. Stack remarked that the Anaerobic Digester was the one non-solar project that Staff felt was conceivable in this Program. He said there could also be wind or biomass projects in this Program, but land in Palo Alto was not really viable for that.

Council Member Filseth commented that some of the ancillary benefits were that Staff should not propose 16.5 cents/kWh for non-solar because it did not have the ancillary benefits that solar had. He wanted to know which benefits applied to solar and which to the Digester or a wind turbine that someone might put on their roof.

Mr. Stack answered that the other projects would not have the shade benefit that solar had. People were more likely to get local economic benefit from solar and people were more likely to hire local workers, as opposed to a wind facility that would be built by a company not located in Palo Alto.

Council Member Filseth wanted to know what would happen if Palo Alto built an Anaerobic Digester, started running it and then realized that power was costing 20 cents/kWh; was the City required to buy that power.

Mr. Stack said yes. The two business models that were considered for the Anaerobic Digester were selling all of the output to the City, the facility would continue to buy power from the City, and then sell all the energy from the Anaerobic Digester to the City at a rate of 9.3 or 9.4 cents/kWh, regardless of what it was going to cost to generate the power. The other option was to use all the energy that the Anaerobic Digester produced on-site to off-set the energy that the facility used. The second option was more advantageous because the cost of the City's energy was higher than 9.3 cents/kWh, the price the City would be buying it at through the CLEAN Program.

Council Member Filseth remarked that if it was going to cost a person 20 cents/kWh to produce it, and if they could buy it at 10 cents/kWh, then they might buy it from outside.

Council Member Scharff noted that when this project came before the Council in 2012, he added an Amendment saying that the City was not going to pay more than the market price, plus the Avoided Cost for the Anaerobic Digester. Public Works was for the idea that if the energy cost 20 cents/kWh, then the City should buy at 20 cents/kWh; he did not want that to occur.

Council Member Filseth agreed because it made it harder to understand the transfer between the Utility, the City, the General Fund, and so forth.

Ms. Fong added the electric rate payers were indifferent to whether they bought the power from the Anaerobic Digester or someone else.

Council Member Filseth wanted to discuss putting solar on rooftops and being locked into rates because if the City was locked into buying power, was the supplier locked into selling the power.

Mr. Stack confirmed that both sides were locked in.

Council Member Filseth stated the central question was: what was it worth to the City to get solar power locally, as opposed to some place like Fresno, California. This argument did not apply to non-solar because it was at market rate. It was not a huge amount of money but it was the same as the previous amount of money.

Council Member Scharff clarified that the cost was more than that because of the Staff time.

Council Member Kniss added that there was the social justice issue that was also brought up.

Council Member Filseth understood there was not a huge subsidy going from 14 to 16 cents/kWh, but that might not be a bad thing.

Chair Schmid spoke regarding the Anaerobic Digester and inquired what would happen if markets fell by the time this Program came online. He wanted to know what would happen in the next few years if the market price was eight or nine cents/kWh.

Mr. Stack clarified that the Anaerobic Digester would get the nine cents/kWh, not 16 cents/kWh, since it was not a solar resource. The City paid what they estimated as the value of the energy, which was currently 9.3 or 9.4 cents/kWh.

Chair Schmid confirmed the Anaerobic Digester was going to get the rate quoted.

Mr. Stack said yes, it was not subsidized for the Non-Solar projects.

Ms. Fong clarified there were two rates being proposed, one was for solar facilities with the incentive that brought the price up to 16.5 cents/kWh, and the other was no incentive at the rate of 9.3 or 9.4 cents/kW.

Chair Schmid noted that there were zero participants in the CLEAN Program and 680 participants in the PV Partners Program, which primarily dealt with individual homes and residences.

Mr. Stack added that commercial customers also participated now.

Chair Schmid asked if the money behind this was running out and was going to disappear in one or two years.

Mr. Stack relayed that the funds for the Residential Program were gone and the Commercial funds were going to run out in about 2017.

Chair Schmid questioned why the residential customers were not joining the CLEAN Program and maintaining high rates for a long period of time; why were the 680 from PV Partners not joining the CLEAN Program.

Ms. Fong replied that residential customers with a couple solar panels on their roof found it more advantageous to go through the Rebate Program. Participation in the CLEAN Program with sales to the Utility was very different from the Net Metering Program, which was something that residential customers could get. Regarding the CLEAN Program, a participant had to sign an agreement and to meet certain obligations under the Power Purchase Agreement, which was not needed under the Rebate Program.

Chair Schmid wanted to know what the Rebate Program was and what was rebated.

Ms. Fong answered that the City paid some level of the Capital Cost to install the system, which was net energy metered.

Chair Schmid asked if there was a transfer in cash with the rebate.

Ms. Fong said there was an initial transfer because there was some capital funding put in the solar panel. Monthly or annually the City netted out the power generation, subtracted that amount from the total use, and then reflected that amount in people's bills. She noted that the Rebate Program was fully subscribed for residential customers under the Senate Bill One funds and said there were still some rebate dollars for commercial customers only. One suggestion from Staff was to help residential customers that might no longer qualify for the Rebate Program to purchase through the Group-Buy Program, which enabled customers to join together to get some economies of scale to buy the panels cheaper than they normally would on their own. A third option was the Community Solar Program, which Staff has not brought before the Committee yet.

Chair Schmid wanted to know if it was okay to take the subsidy in the CLEAN Program and present it to residents, possibly using that money to

increase the incentive for residents to put up new solar panels. He wondered if the City was going to end up with more MW of solar power.

Ms. Fong thought that since there were zero takers under the CLEAN Program, there would probably be more than zero. The Local Solar Program was a learning experience of how the Power Purchase Agreements worked for large scale local solar projects.

Chair Schmid explained that his social concern was the rate payers transferring because under the CLEAN Program the goal was to transfer to large developers. He wanted to know why the City was not transferring the same amounts to residents, which was distributed back to a much wider group of rate payers.

Ms. Fong felt that the Council expressed its preference through adoption of the solar strategy which contains different program elements.

Chair Schmid was concerned that the City was pushing this Program and said a parallel effort should be made to offer residents incentives.

Ms. Fong inquired if the Committee was not going to recommend Staff's proposal to the Council or whether there was an alternative price the Committee could recommend, or whether the Committee was saying "no" to the CLEAN Program.

Chair Schmid felt the amount that Staff was asking for was relatively modest and the goal of generating local solar energy was good. He wondered if the project should be focused on a few major developments, as opposed to the thousands of residents that were not using solar power at the moment.

Mr. Stack clarified that the Program was available to residential customers.

Chair Schmid thought the terms of a 20 or 25 years made the Program seem like a major investment.

Mr. Stack agreed.

Council Member Filseth felt that the long term commitment was a bigger barrier for the residents than some of the financial variables and he was not convinced of the value of having the project in Palo Alto, versus having it in Fresno, California. His question was at what price was it sensible to proceed

and suggested market price, plus 2.5-3 cents/kWh, or whatever the estimated transmission cost was. The Program was not going to get a lot of takers now, but technology was going to be different in five years.

Council Member Scharff thought the solar Program should continue, but at the Avoided Cost of 9.3 cents/kWh for a 20 year contract term, or 9.4 cents/kWh for a 25 year Program, the same as non-solar. He did not think there would be any takers now but he thought technology was changing rapidly and the price seemed to be falling. He was not sure why solar energy was preferred over wind. He disagreed with renewables that created a release of carbon because then the City had to buy Renewable Energy Certificates (REC) to offset that. This caused Palo Alto to pay extra money to offset the power with REC's. There was no reason to go forward with everything at the same price and he did not want the project to take place on garages.

Mr. Stack clarified the Avoided Cost for solar energy was 10.3 or 10.4 cents/kWh, which was slightly higher than the 9.3 or 9.4 cents/kWh for non-solar resources. The reasoning was solar energy was generated in the day time when prices were higher and the energy was more valuable for the City, as opposed to wind, which was generated more in the middle of the night, when market prices were lower.

Council Member Scharff questioned baseload resources, such as geothermal, and wondered if the Avoided Cost was higher. He heard concern from Staff because the City did not have enough baseload resources and were buying all the solar; the City may be flooding the market and have to pay fees because there were too many renewables. If all the energy was solar, there could be a problem.

Mr. Stack said that was true but at this point in time Staff was not seeing that. Staff's best estimate was 10.3 cents/kWh for solar and 9.3 cents/kWh for wind, or base load resources.

Council Member Scharff asked for clarification.

Mr. Stack reiterated that the avoided cost price for local renewable solar projects was 10.3 cents/kWh for 20 years.

Chair Schmid questioned about energy prices around the county, and said the peak energy price was in the late afternoon, between 12:00 P.M and 6:00 P.M.; he thought Staff said that was when the prices were low.

Mr. Stack said no, that was when the prices were highest, which could change in California because there could be so much solar generated that it drove prices down.

MOTION: Council Member Scharff moved, seconded by Chair Schmid to recommend that the Council: 1) continue the Palo Alto CLEAN Program at a price for solar renewable projects at the Avoided Cost of 10.3 cents per kilowatt-hour for 20 years and 10.4 cents per kilowatt-hour for 25 years; 2) to amend the Palo Alto CLEAN Program eligibility rules and requirements to allow non-solar eligible renewable energy resources to participate and offer local non-solar renewables at a price of 9.3 cents per kilowatt-hour for 20 years and 9.4 cents per kilowatt-hour for 25 years, with a cap on the program of 3 megawatts; and 3) direct Staff to return to the Finance Committee after reviewing ways to continue the PV Partners Program for residential use.

Ms. Fong wanted to clarify the prices stated were for a 20 year Power Purchase Agreement and it was slightly higher for a 25 year: 10.4 and 9.4 cents/kWh for the 25 year Program.

Council Member Scharff said that was fine. He thought this made more sense because the Program evolved when it was at 14 cents/kWh; conditions changed and this made more economic sense. This proposal was going to get the City more solar, instead of transferring the subsidy for business interests, when there was probably no need for subsidy; this transferred to home owners who live in a Palo Alto who want to show their commitment to being green.

Chair Schmid thought this made more sense, and would not generate a lot of big customers. Considering the PV Partners Program was good because Staff was going to look at the terms of the agreement that were going to be used to generate a response, and then come back to the Committee for a discussion.

Council Member Kniss mentioned Council Member Scharff's comments about extending the Program to home owners and questioned whether there was a demand for that at this point in time.

Mr. Stack felt that extending the PV Partners Program and providing more subsidies would encourage uptake in the Program.

Council Member Kniss mentioned how much the price of solar energy has come down, and given the drought, she thought it might drop faster. She hoped Staff was preparing for that future, especially if there was not a lot of rain and more heat. She wanted to know if the amount of heat affected the amount of energy that was received from the solar panels.

Mr. Stack replied that there was a minor effect and said there was less energy when it was really hot because electrical systems performed better at cooler temperatures; the energy output was more related to the sun and the cloud cover.

Council Member Kniss confirmed that the temperature difference was not going to change much.

Mr. Stack replied not much.

Council Member Kniss felt this discussion was worth considering because energy was a fast changing field.

Council Member Filseth thought what was done was good because there was a frame work in place with the CLEAN Program so that as the technology changed, if and when it became viable to develop significant solar generation, the City was ready.

Chair Schmid wanted to know if this recommendation was going to displace the Staff recommendation, or did the Committee want to present both the Committee and the Staff recommendation.

Council Member Scharff thought this Item needed to go on the Consent Calendar if there was a unanimous vote. It was good to honor the process because there was trouble getting through the Council meetings. If someone wanted to pull the Item and have the discussion, they could, but he did not believe in extending the Council meeting when discussion was not necessary.

Chair Schmid questioned whether, from Staff's perspective, if this was a major shift in the Program that needed the full Council endorsement.

Ms. Fong answered that this was a major shift in the Program but Staff will follow the direction of the Committee. She had hoped there would be some

incentive for local solar above 10.3 cents/kWh but staff would follow the direction of the Committee.

Chair Schmid stated that the Motion was for the Finance Committee to "recommend" to the full Council the Avoided solar Cost. He asked staff to return to the Finance Committee with additional program suggestions forthe PV Partners program.

MOTION PASSED: 4-0