

Resolution No. 9402
Resolution of the Council of the City of Palo Alto Establishing a Local Solar
Plan to Provide Four Percent of the City's Total Energy Needs by 2023

R E C I T A L S

A. In an effort to combat climate change, in December 2007 the City of Palo Alto ("City") adopted the Climate Protection Plan, which set aggressive greenhouse gas (GHG) emission reduction goals to be achieved by the year 2020.

B. The City currently offers rebates as required by state law through its "PV Partners" program. The City's goal under the PV Partners program is to install 6.5 megawatts ("MW") of solar photovoltaic ("PV") by 2017 through issuance of \$13 million in rebates. As of September 30, 2013, 3.9 MW of solar PV have been installed, representing 0.7% of the City's annual energy needs. An additional 2.5 MW of new electricity from solar installations funded via PV Partners are pending completion. The funds set aside for PV Partners rebates are expected to be exhausted by the end of 2014.

C. The City also offers net energy metering incentives as required by state law, to customers who install solar PV systems on their premises, up to a cap of five percent of the City's peak annual load. The City expects to meet the cap by 2017.

D. The City provides incentives to encourage installation of solar hot water heating systems as required by state law. Adoption of solar hot water heating systems in Palo Alto is low due to high adoption cost.

E. Through Palo Alto Clean Local Energy Accessible Now ("Palo Alto CLEAN") Program, the City offers payment for electricity generated from solar PV systems where the electricity is not used on site but is sold to the City to meet the City's Renewable Portfolio Standard. To date, Palo Alto CLEAN has had no participation, however 3 MW are expected to be installed by end of 2015.

F. Local solar systems achieve many benefits for Palo Alto, including: reducing the amount of renewable energy the City must buy for the community, which helps keep all CPAU customers' rates down; avoiding the cost of losses from transmitting and distributing electricity from distant power facilities; and reducing the need to build expensive transmission lines throughout the state, thus improving grid reliability. CPAU customers and the community as a whole also realize other strategic benefits when local solar generation facilities are developed, including increased localized distribution system resiliency, and increased rain protection and shade at many solar facility locations.

G. The City has been recognized as a leader in promoting solar PV energy in Palo Alto, and desires to continue to promote and facilitate the acceleration of solar in Palo Alto in a cost effective and safe manner in order to capture the financial, environmental and systemic benefits of local solar development.

H. Staff presented the Local Solar Plan to the Utilities Advisory Commission (UAC) on February 12, 2014 and the UAC voted unanimously (five in favor and two absent) to recommend that the City adopt the Local Solar Plan.

I. On March 18, the Finance Committee voted unanimously (4-0) to recommend that Council approve a resolution adopting the Local Solar Plan and prioritizing the development of a community solar share program over a solar donation program.

The Council of the City of Palo Alto RESOLVES as follows:

SECTION 1. The Council hereby adopts the resolution establishing the Local Solar Plan as described in Exhibit A, prioritizing the development of a community solar share program over the solar donation program.

SECTION 2. The Council finds that adoption of the Local Solar Plan to increase the penetration of local solar installations from about 0.7% of the City's total energy needs in 2013 to 4% by 2023 will offer the following benefits for the Palo Alto community:

1. Reduction in participating customers' utilities bills;
2. Reduction in the amount of renewable energy the City must buy for the community, which helps keep all CPAU customers' rates down;
3. Avoidance of the cost of line losses from transmitting and distributing electricity from distant power facilities;
4. Reduction in the need to build expensive transmission lines throughout the state, thus reducing transmission costs;
5. Increased localized distribution system resiliency; and
6. Increased rain protection and shade at many solar facility locations, which can reduce air conditioning costs and increase community well-being.

SECTION 2. The Council finds that adoption of the Local Solar Plan will not impact fiscal year 2014 budget resources. The Council will consider any funding needs and assess ratepayer impacts, if any, for each of the Local Solar Plan's component programs as those programs are brought forward.

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SECTION 3. The Council finds that the adoption of this resolution does not constitute a project under Section 21065 of the California Environmental Quality Act (CEQA) and the CEQA Guidelines, and therefore, no environmental assessment is required. Construction and installation of individual solar systems on buildings in the community may be subject to CEQA review and will be addressed as needed, as each of the Local Solar Plan's individual sub-programs are brought forward.

INTRODUCED AND PASSED: April 21, 2014

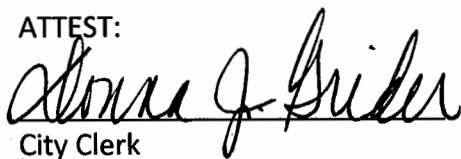
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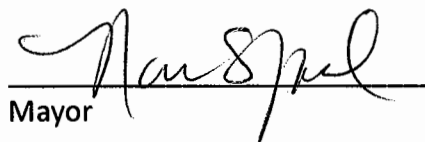
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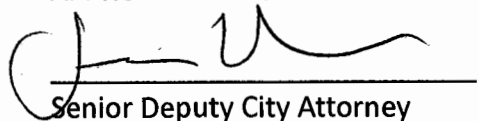
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ATTEST:

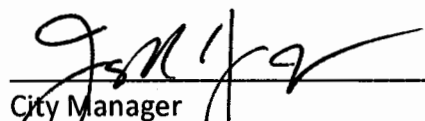

City Clerk


Mayor

APPROVED AS TO FORM:


Senior Deputy City Attorney

APPROVED:


City Manager


Director of Utilities


Director of Administrative Services

City of Palo Alto Utilities – Local Solar Plan

Goal

To increase the installation of local solar photovoltaic facilities to provide 4 percent of the City's total energy needs by 2023.

Objectives

1. Facilitate the development of local, safe and cost-effective solar in Palo Alto to meet the diverse needs of the community
2. Reduce the cost of installing solar in Palo Alto and become a leader in promoting renewable distributed generation through solar installations
3. Understand the community's solar potential and diverse needs and develop solar programs accordingly
4. Remove internal obstacles to minimize cost and achieve greater solar potential
5. Promote solar installations in a cost effective and safe manner
6. Leverage industry resources to the extent possible
7. Deploy industry best practices

Strategies

1. **Remove internal system and institutional barriers which increase "soft" costs and may impede adoption of solar in Palo Alto**
 - a. Work with the Development Center, Planning and Utilities to identify further improvements to streamline the solar permitting process.
 - b. Promote advancements in the City's permitting process to community and solar developers.
2. **Develop proper policies, incentives, price signals and rates to encourage solar installation**
 - a. Solar Policy and Rate Design – explore rate structures that balance cost of service with the City's policy to promote the development of new solar systems in Palo Alto.
 - i. When evaluating new solar policies, evaluate the impact, if any, on non-solar ratepayers.
 - b. City of Palo Alto Utilities (CPAU) Billing System – explore modifications to the billing system and/or evaluate:
 - i. Incorporating net metering information on the monthly bills
 - ii. Virtual net metering to allow the sharing of net metering bill credits across accounts
 - c. CPAU Incentives – assess providing rebates or other incentives after the SB1 mandated expenditures are exhausted, the Federal Investment Tax Credit has been reduced from 30% to 10% and the net-metering cap has been met, to continue to encourage local solar installations.

- d. Leverage available resources for solar policy and program development
 - i. Participate in the Federal Department of Energy's American Solar Transformation Initiative to receive free services including development of a customized solar road map
 - ii. Request assistance from existing membership in Solar Electric Power Association and ESource
 - iii. Consider partnering with regional cities, counties and the State of California in developing solar programs
- e. Advocate at a local, regional and state level for effective rules, regulations and legislation to promote cost effective and fair solar development
 - i. Coordinate with other municipal utilities through the Northern California Power Agency (NCPA) and the California Municipal Utilities Association (CMUA) on state legislation related to solar

3. Assess technical and market potential of solar in Palo Alto

- a. Review commercial and residential sites to determine solar technical potential
- b. Determine cost drivers for installing solar in Palo Alto
- c. Utilize other industry studies to develop a feasible and marketable potential
- d. Develop a database of solar potential
- e. Assess the impacts of PV on CPAU's distribution system

4. Implement policies and programs to increase solar system installations on CPAU customer sites with good solar access

- a. Continue to promote the PV Partners program to achieve the 6.5 MW of installation by 2017, per CA SB1
- b. Continue to promote the Palo Alto CLEAN (feed-in-tariff) program and revamp the marketing of Palo Alto CLEAN to facilitate the coordination of potential sites with developers and property owners/managers to achieve some level of participation
 - i. Annually re-assess the avoided cost of local renewable energy and recommend adjustments to the CLEAN offer price and contract terms, as appropriate
 - ii. Investigate developers' concerns with Palo Alto CLEAN program rules
 - iii. Continue to educate commercial property owners about the CLEAN program
- c. Evaluate solar project financing options
 - i. Coordinate with the California FIRST Property Assessed Clean Energy (PACE) program which allows solar system owners to borrow funds for the PV installation and pay it back on their property tax bills over a term equal to the expected system life (20 years).
 - ii. Partner with local lenders to offer solar financing¹

¹ See an example of such a program from New Jersey's Public Service Enterprise Group her: <http://www.pseg.com/home/save/solar/index.jsp>

5. Facilitate and/or develop new programs to encourage new participants to develop local solar installations.

- a. Develop a solar donation program for community members to donate to public sector and non-profit organizations which may benefit from solar, but can't afford the investment on their own.
 - i. Work with PAUSD and other non-profits to identify sites. Potential installation sites include public sector and non-profit locations which are ineligible to receive federal tax subsidies.
 - ii. Evaluate alternative mechanisms to provide donations to sustain the program, including:
 - (1) Reformulating the suspended PaloAltoGreen electric program as a mechanism to provide ongoing donations;
 - (2) Developing a bill donation mechanism to raise funds; or
 - (3) Developing on-line or crowd-funded sources to raise ongoing funds.
- b. Develop a community solar share program for the benefit of community members that do not have good solar access but have the desire to invest in local solar.
 - i. Evaluate program design options that allow CPAU customers to invest in a share of a new larger-scale solar PV installations located in Palo Alto
 - ii. Evaluate options for providing value back to customer investors, including:
 - (1) Evaluate CPAU's ability to provide monthly payments (in \$) on the customer's Utilities bill
 - (2) Evaluate CPAU's ability to offer "virtual net metering" so that energy produced (in kWh) from a solar system could be reflected on customers' Utilities bills. [Note that the billing system challenges may be substantial for this option.]
 - (3) Evaluate providing payments to customers via a third-party administrator separate from the Utilities bill.
 - iii. Evaluate outsourcing the administration of the community solar program to provide the following:
 - (1) Develop the community solar program
 - (2) Perform program marketing
 - (3) Identify installation sites
 - (4) Manage the solar installation contract
 - (5) Own, operate and maintain the PV installation (or contract with a third-party)
- c. Investigate group-discount solar PV program options to allow/facilitate Palo Alto residents to pool their buying power to secure significant discounts, making installing solar on their home simple and more affordable.
 - i. Leverage existing group-discount programs offered to regional residents and company employees.

6. Maximize solar installations on City-owned facilities

- a. Assist Public Works in evaluating leasing City-owned facilities with low electric consumption (elevated garages and surface parking lots) to a solar developer who

could install solar PV systems and would be compensated under the Palo Alto CLEAN program.

- b. Assist Public Works in investigating installing net-metered solar on City-owned sites to reduce the City's annual electric costs (and benefit the General fund).

7. Educate the community on the benefits of solar through information and demonstration projects

- a. Develop solar demonstration projects on City and public facilities
- b. Promote the benefits of PV systems together with fuel switching (replacing end-of-life gas appliances with electric appliances or replacing a gasoline vehicle with an electric vehicle or a plug-in hybrid vehicle) strategies to reduce greenhouse gas emissions.
- c. Investigate developing a "one-stop-shop" model (e.g., Wave-one).
- d. Develop "how to go solar" promotional materials which allows customers to evaluate several solar options.
- e. Develop direct marketing for small commercial/business customers.
- f. Develop a database of solar projects installed throughout the community as "case studies" and promote them through CPAU's web site.
- g. Promote new innovative solar technologies using the CPAU Emerging technology Program
 - i. Thermoelectric paint
 - ii. PV & batteries
 - iii. Building-integrated PV (BIPV)
 - iv. White roofs
 - v. Microgrids
 - vi. Solar shingles
 - vii. Solar thermal