Community Solar and Resilience Centers: Overview and Summary of Utility Programs

June 7, 2021

Purpose

The purpose of this document is to serve as a reference to community-based organizations taking part in the Equitable Energy Transitions project, funded by the Strategic Growth Council through a grant to UCLA and Liberty Hill Foundation.

Information in this document is designed to help in the overall planning process around the development of Community Solar and Resilience Centers.

Scope

The following topics are covered:

1. Review of the key characteristics of Community Solar and Resilience Centers – pages 2-3.
2. Discussion of utility programs that may support Community Solar and Resilience Centers, especially in under-served communities – pages 4-5.
3. A summary table showing how SCE and the Clean Power Alliance (CPA) are offering these programs in their territories, including program and project size limits – pages 6-8.

Limitations

- Many of the programs and rules discussed in this document are currently under review by the California Public Utilities Commission (CPUC) and are subject to future changes. The CPUC currently has proceedings open on the Net Energy Metering (NEM) tariff, Microgrids, and Rule 21, among many other topics.
- ***This document is meant for general education only***. It is not a legal discussion of these issues, and there are many other program details and limitations that aren't included here. Please consult with a utility representative and/or a licensed solar installer before making any financial commitments. You may also want to advocate for the CPUC and utilities to create a simpler / more understandable system to facilitate community solar and resilience centers!

COMMUNITY SOLAR

Goal:
Generate clean energy to supply needs of renters and other households that cannot install on-site solar.

Features:

- A solar photovoltaic (PV) installation, usually on a publically-owned or community-oriented parcel such as a school, library, place of worship, etc.
- Installed in front of the meter (IFOM) – this means it's on the utility's side and is controlled by them
- Serves as a small solar energy generation plant
- Not physically connected to the buildings of the enrolled participants
- Power generated is "virtually" allocated to enrolled participants
- May include a battery which is operated to optimize value to the grid and return on investment (although battery storage is not allowed by some programs)
- Will not provide energy to participants during a grid outage

Related Utility Programs:

- Community Solar is only feasible to do as part of a special utility program, such as the **DAC-GT** and **CSGT**, discussed further below.
- The **SOMAH** program, also discussed further below, is a potential option for CBOs who want to help multi-family affordable housing property owners install solar on-site for the benefit of the building's residents.

Other Considerations:

- Utility programs may have a minimum or maximum size limit for PV (in terms of megawatts, or MW) for a Community Solar project.
- Currently, utility programs do not allow battery storage as part of the system, per the CPUC's decision. This may change in the future, but the CPUC needs to hear from stakeholders.
- The Community Solar Opportunities Tool will tell you how many people or renter households can be served by a given size system, based on the average residential electricity consumption in the area. While larger systems can support more people, the effort and resources required to sign people up will also increase proportionally.

RESILIENCE CENTER

Goal:

Provide a place of refuge and support for the community during a grid outage, which may be caused by another type of emergency like a heatwave, wildfire, or earthquake. Also called "Resilience Hub."

Features:

- The simplest type of Resilience Center is a single building / parcel, with solar PV and battery storage installed behind the meter (BTM). Anything more complex (like connecting multiple parcels) may encounter problems during the interconnection application.
- Special equipment requirements include an "island-capable" smart inverter, and a "transfer switch" which allows for disconnection from the grid during an outage and continued operation of the solar panels, and also allow reconnection to the grid when the outage is over.
- The system can be programmed such that (during normal, non-emergency operations) it charges the battery during peak solar times when electricity costs are low, and draws from the battery during peak times when electricity is more expensive. This reduces the utility bill and helps pay back the cost of the battery.

Related Utility Programs:

- SCE does not currently have any special programs, but appears to allow for simple Resilience Centers (one building / parcel) to be established under its **Net Energy Metering (NEM) tariff**. Such an installation would be subject to Rule 21 interconnection requirements, and the 15% circuit capacity threshold would be applicable[1]. Projects less than 1MW have a simpler application process.
- The CPA currently has an initiative called the **Power Ready Resilience Program**, but it is aimed at its local government members and the first call for projects closed in March 2021; however, there will be subsequent rounds for this program.
- The **Self-Generation Incentive Program (SGIP)** could be a funding source for batteries.

Other Considerations:

- When planning a Resilience Center, the types of services that will be offered on site will need to be identified, and their impact on the energy demand of the building during grid outage conditions will need to be estimated. These services might include: air conditioning, food provision, medical treatment or accommodation of special medical needs, charging of personal phones and computers, overnight stays, etc. Any expanded use of the facility during normal operations will also need to be considered when planning the size of the solar PV system and battery.

[1] The 15% circuit capacity threshold is a screening tool used by SCE as part of its interconnect application process. Proposed projects which exceed the currently available circuit capacity would require a more complex, costly, and time-consuming application and may require costly grid upgrades before allowed to be built.

RELEVANT UTILITY PROGRAMS

1. Programs Related to Community Solar

The CPUC mandated utilities to offer various solar programs in disadvantaged communities under Decision 18-06-027 (which implemented AB 327, Perea 2013). Details can be found at: https://www.cpuc.ca.gov/SolarInDACs/ . The three programs under this decision are:

- **Green Tariff (DAC-GT)** allows eligible residential customers to enroll to have their electricity needs met by utility-scale clean energy generation and receive a 20% bill discount. The utilities put out "requests for offers" (RFOs) for new solar generation to supply this new demand.
- The **Community Solar Green Tariff (CSGT)** This program enables eligible residential customers to benefit from a local solar project and receive a 20% bill discount. The utilities put out "requests for offers" (RFOs) for new solar generation to supply this new demand. Construction of these projects requires a local sponsor and must include workforce development elements.
- Single-family Solar Homes (DAC-SASH) enables income-qualified homeowners in DACs to receive no-cost rooftop solar installations. (Does not support community solar or resilience centers).

The CPUC set specific MW limits per IOU for each program, and also required that there be at least 2 RFOs per year by each utility for the CSGT program. Bill discounts provided to enrollees are subsidized through ratepayer funds.

The **Green Tariff Shared Renewables (GTSR)** program (enacted under SB 43, Wolk 2014) is intended to expand access to renewable energy to those who can't install on-site generation, and to create a mechanism whereby institutional, commercial, and groups of individuals can meet their electricity needs from renewables. Program implementation by the CPUC is documented under a number of different decisions, summarized here: https://www.cpuc.ca.gov/General.aspx?id=12181. This program also includes a set-aside for Environmental Justice projects – located in the top 20% of CalEnviroScreen census tracts. The enabling statute prohibits the cost of GTSR from being borne by customers who haven't elected GTSR service; this is known as a ratepayer indifference restriction. The programs described above under AB 327 do not have such a restriction.

The **Solar on Multi-family Affordable Homes (SOMAH) Program** provides financial incentives for installing solar PV energy systems on multifamily affordable housing. The program is intended to deliver clean power and credits on energy bills to hundreds of thousands of California's affordable housing residents. Details can be found at: https://calsomah.org/. The program is designed to be transparent and accountable to the communities it serves. It is administered by a team of nonprofit organizations, which provides a host of no-cost services to maximize participation and community benefit. Services include comprehensive technical assistance for property owners, tenant education resources and job training. A community advisory council provides input into program development and helps ensure the program maximizes benefits to communities.

2. Programs Related to Battery Storage

The **Self-Generation Incentive Program (SGIP)** offers rebates for installing battery storage systems at either residential or non-residential facilities, to function as backup during a power outage.

- The SCE Fact Sheet for businesses is here: https://www.sce.com/sites/default/files/custom-files/SGIP%20Non-Residential%20Fact%20Sheet_WCAG%201.pdf
- CPUC program website: https://www.cpuc.ca.gov/sgipinfo/

3. Programs Related to Resilience / Microgrids

The **Power Ready Resilience Program** is specific to the Clean Power Alliance (CPA) as a benefit to its member agencies (cities and counties). This program is not mandated by the CPUC and there is no similar program offered by SCE.

- For CBOs working in CPA-member cities / county unincorporated, there may be an opportunity to engage with your city or county regarding candidate sites for subsequent calls for projects.
- The CPA has engaged a contractor to run economic calculations to find sites that "pay for themselves" based on historic energy use at the site and other conditions of the program.

In SCE territory, simple resilience centers (one account / parcel) can connect through the **Net Energy Metering (NEM) program.** NEM provides electricity bill credits for exports of energy to the grid during the times when solar PV generation exceeds on-site demand. The energy produced, minus the energy consumed, equals net energy. Customers must be on a time-of-use (TOU) tariff.

- Basic information on NEM is at the CPUC website: https://www.cpuc.ca.gov/General.aspx?id=3800
- The SCE website for the non-residential NEM program is: sce.com/business/generating-your-own-power/net-energy-metering

SUMMARY OF CPA AND SCE PROGRAMS

Table 1. Clean Power Alliance (CPA) Programs

<table>
<tr><th>Program</th><th>Overview</th><th>Location</th><th>Program Name</th><th colspan="2">Generation Caps and Projects Size Limits</th><th>Schedule</th></tr>
<tr><td>(CPUC-established) Disadvantaged Community Green Tariff (DAC-GT)</td><td rowspan="2">Eligible individuals can sign up to get 100% renewable power, with a 20% discount on their bill.</td><td>Project must be IFOM, within a DAC*. Enrollees can be in any DAC in the same utility territory.</td><td rowspan="2">CPA Power Share</td><td rowspan="2">Total cap of 15 MW across both programs (appx 6,800 customers) for both programs</td><td>Project size between 500kW and 13 MW</td><td rowspan="2">First RFO was due on March 15, 2021

Next RFO has not yet been announced, but RFIs can be submitted</td></tr>
<tr><td>(CPUC-established) Community Solar Green Tariff (CSGT)</td><td>Project must be IFOM, within a DAC* and have a local sponsor. Enrollees must live within 5 miles of the solar site and within a DAC. Must include workforce development.</td><td>3 MW cap (est. only 3-4 projects) Project size of less than or equal to 3 MW</td></tr>
<tr><td>(CPA-sponsored) Resilience Hubs</td><td>Net energy meter (NEM) rate with at least 4-hrs battery backup for critical loads</td><td>One in each member agency’s territory</td><td>CPA Power Ready</td><td colspan="2">Cap not applicable. Project must “pencil out”. No upfront cost to agency – same electricity bill as before the project.</td><td>Candidate sites submitted on Feb 28. Site selection planned for Spring 2021.</td></tr>
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* DAC is defined as the top 25% of CalEnviroScreen or one of 22 census tracts in the top 5% of the CalEnviroScreen’s Pollution Burden that doesn't have an overall CalEnviroScreen score. For DAC-GT, 100% of the subscribers must be CARE/FERA eligible customers. For CSGT, the first 50% of subscribers are limited to CARE / FERA eligible customers.

Table 2. Southern California Edison (SCE) Programs

Program	Solicitation Name	Overview	Location	Customer Tariff Name	SCE Program Capacity Allocation	Project Size Limits	Schedule
Disadvantaged Community Green Tariff (DAC-GT) *(CPUC-established)*	Disadvantaged Communities Green Tariff (DAC-GT) and Community Solar Green Tariff (CSGT) Request for Offers (RFO)	Eligible* individuals can sign up to get 100% renewable power, with a 20% discount on their bill.	Project must be located within SCE territory and interconnected IFOM, within a DAC*. Enrollees can be in any DAC in the same utility territory.	Green Saver	56.5 MW	≥ .5 MW to ≤ 20MW	Spring & Fall https://www.sce.com/procurement/solicitations
Community Solar Green Tariff (CSGT) *(CPUC-established)*	Disadvantaged Communities Green Tariff (DAC-GT) and Community Solar Green Tariff (CSGT) Request for Offers (RFO)		Project must be located within SCE territory and interconnected IFOM, within a DAC* and have a local sponsor. Enrollees must live within 5 miles of the solar site and within a DAC. Must include workforce development.	Local Green Saver	14.63 MW	No Minimum to ≤ 4.39 MW	
Green Tariff Shared Renewables (GTSR) *(CPUC-established)*	Community Renewables - Renewable Auction Mechanism (CR-RAM)	Community Renewables allows SCE customers to work directly with developers to subscribe to a portion of a renewable energy project and receive bill credits**[2] based on their portion of the project's generation.	All Projects must be located within SCE territory and interconnected IFOM. CR-Environment Justice (EJ) Projects must be located in the 20% most impacted communities.	1. Green Rate 2. Community Renewables	269 MW Total: 45 MW reserved for EJ Projects Only 224 MW un-reserved	CR Projects: ≥ .5 MW to ≤ 20MW _____ CR-EJ Projects: ≥ .5 MW to ≤ 1 MW	Fall https://www.sce.com/procurement/solicitations

* DAC is defined as the top 25% of CalEnviroScreen or one of 22 census tracts in the top 5% of the CalEnviroScreen's Pollution Burden that doesn't have an overall CalEnviroScreen score. For DAC-GT, 100% of the subscribers must be CARE/FERA eligible customers. For CSGT, the first 50% of subscribers are limited to CARE / FERA eligible customers.

** The SCE bill credit varies per rate type and per facility, but the credit is expected to be approximately 4.7 to 5.9 cents/kWh. (Note: credits can change and are subject to approval by the CPUC)

Program	Solicitation Name	Overview	Location	Customer Tariff Name	SCE Program Capacity Allocation	Project Size Limits	Schedule
Resilience Hubs	There are no SCE programs analogous to the CPA's program (i.e., specifically for resilience hubs), but SGIP might be useful						
Self-Generation Incentive Program (SGIP)	Incentives to install BTM battery storage in DACs	Within a DAC, AND either Tier 2 or 3 high fire threat district OR affected by 2 PSPS events. Also, must meet certain facility type criteria (see note below)		Resiliency Equity Budget Rebate Rate: One dollar ($1.00) per Watt hour. Rebate covers close to 100% of the cost of an average energy storage system. Facility upgrades not included.			Currently there is funding available, but this is subject to change. Available funding status can be found here: https://www.selfgenca.com/home/program_metrics/

Note: Additional criteria for SGIP:

- Be a police station; fire station; emergency response provider; emergency operations center; 911 call center; medical facility; private and public natural gas, electric, water, wastewater, or flood facility; jail or prison
- Be a grocery store, supermarket, or corner store with less than $15 million in annual gross receipts
- Be an independent living center, food bank, utility designated PSPS assistance center; cooling center; homeless shelter

SCE's SGIP fact sheet for non-residential systems: https://www.sce.com/sites/default/files/custom-files/SGIP%20Non-Residential%20Fact%20Sheet_WCAG%201.pdf
Map to check eligibility for SGIP (potentially eligible areas in San Fernando, Highland Park, and Adams Square, among others)
https://www.arcgis.com/home/webmap/viewer.html?webmap=dddcf3c4d64e48cbaa0886aba2fc20ac&extent=-129.6533,29.5757,-108.12,43.135