

GoSolarSF

PROGRAM HANDBOOK



San Francisco
**Water
Power
Sewer**

Services of the San Francisco
Public Utilities Commission

GoSolarSF

Bringing Solar Power to San Francisco

GoSolarSF Program Handbook
 July 1, 2019 – January 1, 2020, (Rev 1, see below)

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Rev 1: (July 25, 2019) revised page 13, Upcoming Incentive Level Table now lists all incentive classes subject to future reductions.

1. Introduction: GoSolarSF Program

1.1. Program Overview

The GoSolarSF program has been established by the City and County of San Francisco (“the City”) to encourage installations of solar power systems by offering one-time incentive payments to reduce project costs for homeowners, businesses and non-profit organizations. The program provides jobs to disadvantaged San Franciscans and supports solar projects for low-income households. GoSolarSF is administered by the San Francisco Public Utilities Commission (SFPUC) Power Enterprise and is based on the Solar Energy Incentive Program ordinance, which outlines a 10-year program with the objective of a budget of \$2 million to \$5 million annually.

The Fiscal Year 2019-2020 budget is divided among four incentive types: 1) Nonprofit, including local government, & Nonprofit Residential, 2) Business & Residential, excluding low-income and including Multi-Unit Residential Virtual Net Metering and Net Energy Metering Aggregation (NEM-A), 3) Low-Income Residential, and 4) Low-Income Residential DAC-SASH (Disadvantaged Communities - Single-family Affordable Solar Homes).

This GoSolarSF Program Handbook describes the detailed requirements for receiving funding for the installation of solar photovoltaic (PV) system projects under GoSolarSF, including participant and system eligibility, the incentive structure, and technical system requirements. Additional requirements and obligations for participants are set forth in the “Terms and Conditions for Participation in the City and County of San Francisco GoSolarSF Program Administered by the San Francisco Public Utilities Commission (Terms and Conditions).”

In prior years, the GoSolarSF program built on the California Public Utilities Commission’s (CPUC) California Solar Initiative (CSI) State Rebate program and required that applicants obtain an approved reservation from the CSI before applying to GoSolarSF. Since the CSI has met its goals and, for the most part, is no longer offering funding in Northern California, the SFPUC incorporated the requirements of the CSI into this GoSolarSF Program Handbook and uses an online application system. (In addition to the online application, participants will have to upload the Terms and Conditions document, with an executed signature page, and an Application Signature Page.) Upon completion, applications will be reviewed and approved online.

1.2. GoSolarSF Application Process

The GoSolarSF application process is a two-step procedure for securing an incentive and is administered online through a PowerClerk platform at <https://sfpuc.powerclerk.com>. After completing the online application, the Application Signature Page and Terms & Conditions Signature Page are signed and uploaded, along with the Terms and Conditions document, and any supplemental documents required to conclude the application process.

In Step 1, an incentive is reserved prior to completing the solar installation. In Step 2, the reserved incentive payment is requested after interconnecting the new solar system to the local grid by submitting the Incentive Claim Form in PowerClerk.

Please refer to Section 4 of this handbook for a detailed explanation of the GoSolarSF Application Process.

1.3. GoSolarSF Handbook Structure

Following this introduction, the GoSolarSF Handbook provides more detailed descriptions of eligibility and participation, incentive structure and application processes as well as more technical program information. Section 2.1.1 sets forth definitions of possible program participants. Section 5 includes appendices of acronyms and additional definitions, program contact information and information about the DAC-SASH program.

2. Program Eligibility Criteria and Requirements

2.1. Applicants and Property Types Eligible for Incentives

To be eligible for a GoSolarSF incentive, recipients must be actively enrolled in the CleanPowerSF program or be an existing Hetch Hetchy customer. GoSolarSF incentive payments are provided to residential, commercial, and non-profit (including local government) applicants for installations on properties physically located within San Francisco. Solar incentive payments are not granted to state or federal government entities.

For residential, business, and non-residential non-profit applicants, one incentive is available per electric meter, meaning that installations serving more than one meter in a building are eligible for more than one incentive. Non-profit multi-unit residential incentives are available per service site. Multi-unit Residential Virtual Net Metering and Net Energy Metering Aggregation (NEM-A) incentives are available per building.

2.1.1. GoSolarSF Program Participants

Host Customer

Host Customer shall mean an individual or entity that meets all of the following criteria: 1) has legal rights to occupy the Site, 2) is the utility customer of record at the Site, 3) except in the case of a rental property, is the owner of the Site, 4) is connected to the electric grid, and 5) is the recipient of the net electricity generated from the Project. Except in the case of a rental property, the Host Customer must execute the Signature Pages of the Terms and Conditions and the signature must correspond to the signature listed on the Solar Purchase Agreement.

Applicant

For the purposes of this GoSolarSF program the Applicant is the entity that completes and submits the GoSolarSF Program application through the on-line application system and serves as the main contact person for GoSolarSF throughout the application process. While a Host Customer may more generally be considered an applicant s/he must designate a third party to act as the official Applicant on her/his behalf. Third party Applicants may be an engineering firm, Solar Contractor, equipment distributor, equipment lessor or another type of individual or entity.

In the event the Applicant is not also the Installer, and subcontracts the installation to a Solar Contractor, the purchase agreement must clearly state that the installation will be subcontracted and list the name, address, CSLB number, and SF Business Registration Certificate Number of the Solar Contractor.

System Owner

System Owner shall mean the owner of the Project at the time the Solar Incentive Payment is paid. For example, when a vendor sells a turnkey system to a Host Customer, the Host Customer is the System Owner. In the case of a leased system, the lessor is the System Owner. The System Owner must execute the Signature Pages.

Solar Contractor

Solar systems must be installed by contractors from the GoSolarSF Certified Installer List. The GoSolarSF Certified Installer List is regularly updated and can be downloaded from the GoSolarSF website. In all cases, systems must be installed in conformance with the manufacturers' specifications and with all applicable electrical and building codes and standards.

Site Owner

Site Owner shall mean all Persons who own the Site. In the case of a rental property, the Site Owner must execute the Signature Pages.

2.2. GoSolarSF Workforce Development Program Certified Installers

Installations receiving GoSolarSF incentive payments must be performed by a GoSolarSF Certified Contractor. To become a GoSolarSF Certified Contractor, Contractors are required to work in good faith with the City's Office of Economic and Workforce Development (OEWD) to employ San Francisco residents. All Contractors must submit a completed Workforce Projection Form and Core Employee List to OEWD to become certified.

A list of GoSolarSF-certified installers is available at www.solarsf.org by clicking on the 'Certified Installer List' link.

2.3. PV Equipment Eligibility

2.3.1. Eligibility of Existing PV Systems

While GoSolarSF recommends that applicants reserve an incentive prior to completing the solar installation, the program will accept retroactive incentive applications within one year of installation of the solar PV system (not date of interconnection), as long as the installer was on GoSolarSF's Fully Certified Installer List at the time of installation and at the time of application.

2.3.2. Eligibility of Other Solar Electric Generating Systems

Currently, GoSolarSF only accepts applications for solar PV systems (i.e., systems that cause direct conversion of sunlight to electricity) to receive incentives, although the program may be expanded in the future to include other customer-owned Distributed Energy Resources, such as PV, energy efficiency, and battery storage.

2.3.3. System Size

The minimum system size eligible for an incentive is 1 kW CEC-AC; there is no limit on maximum system size. The maximum incentive amount is capped at \$50,000 per service site.

GoSolarSF uses the CEC-AC rating standards, including inverter DC-to-AC losses, to determine eligibility. To calculate the CEC-AC rating, PowerClerk uses the following formula:

System Size Rating (kilowatts) = Quantity of PV Modules x CEC Rating of PV Modules x CEC Inverter Efficiency Rating / 1000 (watts/kilowatt)

GoSolarSF requires a minimum Design Factor of 68%. The design factor is not part of the incentive calculation.

2.4. Energy-Efficiency Requirements

2.4.1. Existing Residential and Commercial Buildings

An Energy Efficiency Audit and documentation thereof is required to be eligible for an incentive. Acceptable audit protocols consist of an online audit, telephone audit, or onsite audit provided by the Lawrence Berkeley National Lab¹ or PG&E² (if the Host Customer is a PG&E customer). These entities may provide additional audit tools for customers. Certified third-party providers of energy efficiency audits may also provide audits at the expense of the Host Customer or Site Owner. After an audit is performed, documentation of the completed Energy Efficiency Audit must be submitted to GoSolarSF as part of the Reservation Request.

2.4.2. Energy Efficiency Exemptions

2.4.2.1. Exemptions for Existing Residential Buildings

For an existing home, an energy efficiency audit is not required if one of the following circumstances is met. A copy of the documentation of meeting one of these circumstances must be submitted with the Reservation Request:

- 1) Having an acceptable energy audit report during the past three years. Examples of acceptable energy audit reports include: A copy of an energy audit report summary completed through the Applicant's local utility company or certified third-party; a home inspection report from an independent vendor or consultant; or a Home Energy Rating Summary (HERS) from a certified HERS rater.
- 2) Proof of Title 24 energy efficiency compliance that was issued within the past three years.

2.4.2.2. Exemptions for Existing Commercial Buildings

For an existing commercial building, an energy efficiency audit is not required if one of the following circumstances is met. A copy of the documentation of meeting one of these circumstances must be submitted with the Reservation Request:

- 1) Proof of compliance with Title 24 requirements during the last 12 months prior to applying for the GoSolarSF incentive.
- 2) Having a current ENERGY STAR label.

2.4.2.3. Exemptions for New Construction Commercial Buildings

Newly constructed commercial buildings shall meet energy efficiency levels required by the Building Energy Efficiency Standards (Title 24, Part 6) in effect at the time the application for a building permit is submitted. Documents used to demonstrate Title 24 compliance must be submitted to GoSolarSF.

2.4.2.4. Exemptions for DAC-SASH Applicants

Applicants applying for DAC-SASH shall comply with the energy efficiency requirements for the program established by CPUC. Proof of compliance must be submitted to GoSolarSF.

¹ <http://hes.lbl.gov/consumer/>

² <http://www.pge.com/en/myhome/saveenergymoney/analyzer/index.page>

2.5. Warranty and Performance and Permanency Requirements

2.5.1. Warranty Requirements

All solar PV systems that receive an incentive must have a warranty of not less than 20 years on modules and 10 years on inverters to protect against defects and undue degradation of electrical generation output.

- All solar PV equipment for electricity generation (PV modules and solar collectors) shall have a minimum 20-year manufacturer performance warranty to protect against degradation of electrical generation output of more than 15% from their originally rated electrical output.
- All contractors shall provide a minimum 10-year warranty to provide for no-cost repair and replacement of the system for any expenses not otherwise covered by the manufacturer.
- All contractors shall provide a minimum 10-year warranty to protect the purchaser against more than a 15% degradation of electrical generation output that may occur as a result of faulty installation.
- Meters must have a one-year warranty to ensure against defective workmanship, system or component breakdown. For meters that are integrated into the inverter, the meter warranty period must be 10 years.

2.5.2. Performance and Permanency Requirements

Equipment installed under the GoSolarSF program is intended to be in place for the duration of its useful life. Only permanently installed systems are eligible for incentives. This means that the Project Proponent must adequately demonstrate both physical and contractual permanence prior to receiving an incentive.

Physical permanence is to be demonstrated in accordance with industry practice for permanently installed equipment. Equipment must be secured to a permanent surface. Any indication of portability, including but not limited to temporary structures, quick disconnects, unsecured equipment, wheels, carrying handles, dolly, trailer, or platform will render the system ineligible for an incentive.

In the event the host customer/system owner elects to remove the solar system from the project site prior to the duration of its useful life, the removal will result in violation of the Terms and Conditions and require that the GoSolarSF incentive be returned.

2.6. Interconnection to Distribution System

Solar electric generating systems receiving a GoSolarSF incentive must be connected to the local electric distribution system.³ The system interconnection, operation, and metering requirements for solar PV systems must be in accordance with the service provider's rules for customer generating facility interconnections. For example, most Applicants are PG&E customers—to connect a solar PV system to the PG&E distribution system, Host Customers and/or System Owners will be required to execute certain documents such as, but not limited to, an Application to Interconnect a Generating Facility and a Generating Facility Interconnection Agreement or Net Energy Metering (NEM) Agreement with PG&E.

³ In rare cases, GoSolarSF may provide incentives for off-the-grid systems.

Proof of interconnection is required prior to receiving an incentive payment. Typically, the electric service provider will issue a Permission to Operate (PTO) letter to the Host Customer (or Site Owner if the property is rented), who must then submit it to GoSolarSF prior to the expiration date of the incentive reservation.

It is the sole responsibility of the System Owner and Host Customer (or Site Owner if the property is rented) to seek and obtain approval to interconnect the solar electric system to the local electric distribution system from the local distribution utility. To prevent any delays in system operation, System Owners and Host Customers (or Site Owners) participating in GoSolarSF should immediately contact the applicable Electric Utility to seek guidance on how to apply for interconnection and submit interconnection applications as soon as the information to do so is available.

2.7. Metering Requirements

2.7.1. Meter Requirements and Accuracy

GoSolarSF requires accurate energy production meters for all Projects that receive incentives. This section contains information on the minimum metering and monitoring requirements for participation in GoSolarSF. These minimum metering requirements were developed to increase owner knowledge of system performance, foster adequate system maintenance, and thereby ensure that incentives result in expected levels of solar generation.

For systems receiving a GoSolarSF incentive, a basic meter with accuracy of ± 5 percent is required.

2.7.2. Meter Testing Standards and Certification

The accuracy rating of all $\pm 5\%$ meters must be certified by the manufacturer of the $\pm 5\%$ meter or an independent testing body (i.e., a NRTL such as UL or TUV). All test results or NRTL documentation supporting the certification must be maintained on file for inspection by GoSolarSF or the CEC. The System Owner must provide a copy of the original meter testing certificate to GoSolarSF if requested.

2.7.3. Meter Display

All meters must provide a display showing the measured net generated energy output and measured instantaneous power. This display must be easy to view and understand. This display must be physically located either on the meter, inverter, or on a remote device.

2.8. Site Review/Audit Requirements

It is the intent of GoSolarSF to provide incentives for reliable, permanent systems that are professionally installed and comply with all program rules. GoSolarSF will conduct audits/site reviews periodically to verify that systems are installed as represented in the application, are operational, are interconnected, and conform to the eligibility criteria of the program.

GoSolarSF will contact the Applicant to schedule the site review. All site reviews will be performed by trained personnel. By applying for a GoSolarSF incentive Installers and Host Customers agree to allow the SFPUC to verify the system.

Both a single line drawing and total solar resource factor (TSRF) report may be required upon request.

2.9. Equipment Certification, Rating Criteria & Design Factor Calculation

2.9.1. Equipment Certification and Rating Criteria

PV system components (modules, inverters, and system performance meters) must be certified through the California Energy Commission's PV system certification program. The CEC provides a list of currently certified eligible equipment on the Go Solar California site at <http://www.gosolarcalifornia.ca.gov/equipment/> or through its Call Center: (800) 555-7794. The GoSolarSF PowerClerk system has the CEC list of eligible equipment loaded into the equipment section of the online application process.

The SFPUC will confirm that equipment identified in the Reservation Request meets eligibility requirements prior to providing a Reservation Notice confirming the incentive reservation.

Eligibility requirements for components are summarized below:

- PV modules must be listed on the CEC's Eligible Equipment List
- Inverters must be listed on the CEC's Eligible Equipment List
- Meters: External meters must be listed on the CEC's Eligible Equipment List

GoSolarSF will use the California Energy Commission's CEC-AC method to determine the system rating. The following formula determines the incentive for Business, Non-profit and VNM:

Incentive Payment = Reserved Incentive Rate x System Rating⁴

2.9.2. Design Factor Calculation

The Design Factor is a ratio comparing a proposed system to a reference system. Very simply, it reflects:

Design Factor = $\frac{\text{Proposed System}}{\text{Reference System}}$

As mentioned above, the design factor will not be included as part of the incentive payment calculation. Instead, a minimum design factor of 68% is required on all projects receiving a GoSolarSF incentive.

The design factor for each project will be calculated by the PowerClerk system.

We recommend the monthly shading rather than the minimal shading option be used when entering the Shading Derate Factor in PowerClerk to ensure accuracy of estimated production. To calculate the GoSolarSF incentive, all proposed PV systems must have a true azimuth orientation between **90 degrees and 270 degrees** facing Southeast and Southwest..

⁴ CEC-AC System Rating (kilowatts) = Quantity of Modules x CEC Rating of Photovoltaic Modules x CEC Inverter Efficiency Rating / 1000 (watts/kilowatt)

PV Installation

Tracking
Fixed Array

Array Azimuth
209° 209° South Reference

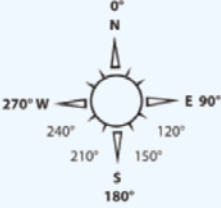
Array Tilt
5° 5° Roof Pitches

Assigned Inverter
ABB, 3.0 kW (Model PVI-3.0-OUTD-S-US-Z-A (240V))

Shading
Monthly Shading *

Shading Derate Factors (%) Note: 100% = no shading

Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
99	100	100	100	100	100	100	100	100	100	100	99



2.10. Field Verification

The Solar Contractor must perform field verification prior to submission of the incentive Claim Form, following the guidelines below:

- 1) **Measure Solar Irradiance:** Solar irradiance shall be measured using an irradiance meter. When making this measurement, the verifier shall place the irradiance meter in a plane that is parallel to the PV modules. The verifier should position the irradiance meter on top of the PV modules or on the roof next to the PV modules. If the verifier is not able to get on the roof, he or she shall position the irradiance meter such that it is in full sun and is in a plane that is parallel to the PV modules. Digital protractors or other instruments may be used to position the irradiance meter properly.
- 2) **Measure Temperature:** Ambient air temperature shall be measured with a digital thermometer in the shade. The instrument shall have an accuracy of $\pm 2^\circ$ C.
- 3) Multiply performance percentage times CEC-AC wattage of the array to determine minimal acceptable system performance.
- 4) Observe and record actual output as shown on the PV system's meter. The inverter may cycle between multiple readings (total kWh of production, AC power output, etc.), so the verifier will need to wait until the power is displayed and record this reading; several readings should be made to make sure that they are consistent and stable.
- 5) Properly functioning systems will have actual outputs higher than the minimal acceptable system performance.

Note: Ensure all values are in watts or kilowatts depending on the readout of the meter.

Exception: Systems with two or more strings with the same tilt and azimuth connected to the same inverter may do the following instead:

- a. Complete a visual check of the system to ensure the modules and all other system components are bolted securely, and all wiring connections have been made properly according to the system schematic, manufacturer's instructions, and applicable electrical code requirements.
- b. Check that the polarity of all source circuits is correct.
- c. The open circuit voltages of source circuits shall be tested and measured to be within 2 percent of each other.
- d. The short circuit currents shall be tested and measured to be within 5 percent of each other.

For Multiple Orientation Arrays:

Multiple orientation arrays are those with parallel strings, each with an equal number of modules, in different orientations (azimuth and tilt) connected to the same inverter. When parallel strings in different orientations are connected to the same inverter, each orientation and solar irradiance shall be measured separately in a plane parallel to each orientation. The expected AC power output is determined separately for each orientation and the sum is used for verification purposes.

3. GoSolarSF Incentive Structure

3.1. Determination of Applicable Incentive Type

As shown in the Incentive Categories chart (pg. 11), GoSolarSF offers one base residential incentive level [Basic]. Additional residential supplemental incentives are available for low-income households and for applicants contracting with a City Installer.

'Environmental Justice or CalHome Loan' Supplemental Incentives are available to all applicants located in San Francisco's environmental justice zip codes (94124 or 94107), including Low-Income DAC-SASH, and to property owners enrolled in the CalHome loan program under the California Department of Housing and Community Development.

A capacity-based incentive is provided to businesses, non-profit organizations, multi-unit residential properties using virtual net metering, and properties using Net Energy Metering Aggregation (NEM-A).

To establish whether a solar project qualifies for a Residential or Business incentive, the applicable incentive will be determined based on the following project information: System Owner, Host Customer, and type of electric account on the meter.

- To qualify as Residential, two out of three of the project information requested must be Residential.
- To qualify as Business, two out of three of the project information requested must be Business.

For example:

- System Owner = Business
- Host Customer = Residential
- Type of Electric Service = Business

Two of the above are Business, thus, the incentive would be Business.

To determine whether your business needs to register in San Francisco, please visit the Treasure and Tax Collector website (<http://sftreasurer.org/registration>).

For low income applicants, denial of eligibility for a low-income incentive does not affect eligibility for any of the other residential incentives.

INCENTIVE CATEGORIES:

Residential Incentive: Select basic residential incentive and then add on supplemental incentives if applicable.	
CleanPowerSF & Hetch Hetchy Basic	Available to any resident installing solar generation on his/her own property located within San Francisco and actively enrolled in CleanPowerSF or is an existing Hetch Hetchy customer. (Residential Basic customers that interconnect on a NEM-A tariff remain eligible for the Residential Basic and eligible Supplemental incentives.)
Supplemental Incentives: If applicable, add one of the following incentives to the basic incentive above:	
Environmental Justice or CalHome Loan	Available to residential installations located in San Francisco's environmental justice zip codes, 94107 and 94124. Also available to property owners enrolled in the CalHome loan program under the California Department of Housing and Community Development.
City Installer	Available to San Francisco residents who contract with an installer holding a current San Francisco business registration certificate showing a San Francisco address as the principal place of business. To establish a principal place of business in San Francisco, as distinct from an office, a business must demonstrate that: <ol style="list-style-type: none"> 1. the majority of its principals are based in the San Francisco office and <ol style="list-style-type: none"> a. either it pays San Francisco payroll taxes on at least 51% of its total payroll or b. has a Certificate of Eligibility that makes it an exempt Clean Energy Technology business (SF Business and Tax Regulation Code section 906.2), and (ii) it would pay San Francisco payroll taxes on at least 51% of its total payroll absent operation of the Clean Energy Technology tax exemption.
Low-Income DAC-SASH (Disadvantaged Communities-Single-Family Affordable Solar Homes Program)	Available to DAC-SASH applicants. The DAC-SASH program is a low-income program of the state of California, administered by GRID Alternatives. GRID is the only organization that may administer DAC-SASH incentives. Applicants may be eligible for a no-cost system. Households that qualify for the DAC-SASH program must apply for the Low-Income DAC-SASH incentive and cannot apply for the GoSolarSF Low-Income Non-DAC-SASH incentives. To qualify, the household must be below CARE/FERA income guidelines and the homeowners must live in one of the top 25 percent most disadvantaged communities statewide using the CalEnviroScreen 3.0 map. For more information, visit gridalternatives.org or call 510-731-1333 . (See Appendix D in this Handbook.)
Low-Income Non-SASH	Available to applicants who do not qualify for SASH and who are CalHome loan participants or City residents who are certified by the SFPUC as earning at or below the City's median income.
Other Incentives: Business, Nonprofit, Nonprofit Residential, Multi-Unit Residential Virtual Net Metering, or Net Energy Metering Aggregation (NEM-A).	
Business Incentive	Available to for-profit and nonprofit entities operating in San Francisco. Nonprofits may apply for a higher incentive through the nonprofit program below.
Nonprofit/Municipal Incentive	Available for installations of non-residential buildings owned by nonprofits or government entities, and operated by nonprofits.
Nonprofit Residential Incentive	Available for installations of multi-unit residential buildings owned and operated by nonprofit organizations. For-profit building owners are eligible if 75% of the units are designated as affordable housing for a period of no less than 30 years.
Multi-Unit Residential Virtual Net Metering	Available for multi-unit residential buildings using virtual net metering (VNM), including condominium and duplex properties. Tenants who live in multi-unit buildings and opt into the VNM program can share the net electricity produced by an on-site solar system and receive a direct credit on their energy bill.
Net Energy Metering Aggregation (NEM-A):	Available for solely-owned buildings with multiple meters on the same property, or on adjacent or contiguous properties, that use renewable generation to serve the aggregated load behind all eligible meters and receive the benefits of Net Energy Metering. (Non-profit organizations with a NEM-A Tariff are provided the option choose applicable non-profit incentives in lieu of the NEM -A incentive.)

3.2. GoSolarSF Incentive Levels

For Calendar Year 2019 the following incentive levels apply:

INCENTIVE LEVELS FOR CALENDAR YEAR 2019

RESIDENTIAL INCENTIVE LEVELS	
CleanPowerSF & Hetch Hetchy Basic	\$200/kW. Cap: 4.0/kW per meter.
Add on if eligible: Environmental Justice or CalHome Loan	\$100/kW. Cap: 4.0/kW per meter.
Add on if eligible: City Installer	\$250/kW. Cap: 4.0/kW per meter.
Add on if eligible: Low-Income	\$2,000/kW. Cap: 4.0/kW per meter.
OTHER INCENTIVE LEVELS: Business, Nonprofit, Nonprofit Residential, Multi-Unit Residential Virtual Net Metering, or Net Energy Metering Aggregation (NEM-A).	
Business:	\$200/kW. Cap: \$10,000 per meter and \$50,000 per service site.
Nonprofit/Municipal:	\$1,000/kW. Cap: \$50,000 cap per service site.
Nonprofit Residential:	\$1,000/kW. Cap: \$50,000 per service site.
Multi-Unit Residential Virtual Net Metering:	\$200/kW. Cap: \$200 multiplied by the number of assessed units at the building plus \$10,000. Under no circumstances will a building receive more than \$50,000.
Net Energy Metering Aggregation (NEM-A):	\$200/kW. Cap: \$10,000 per meter and \$50,000 per service site.

Upcoming Incentive levels / Calendar Year:	Jan 2020	Jan 2021
Basic Residential, Business, Multi-Unit Residential Virtual Net Metering, and Net Energy Metering Aggregation	\$100/kW	TBD

PROJECTED \$100/kW REDUCTION BY CALENDAR YEAR

3.3. Total Eligible Project Costs

No project can receive total incentives (incentives from GoSolarSF combined with incentives or other benefits from other programs) that exceed total eligible project costs. The Applicant must submit project cost and expected incentive/benefit details to report total eligible project costs and to ensure that total incentives do not exceed out-of-pocket expenses for the Host Customer or System Owner. Total eligible project costs cover the solar energy system and its ancillary equipment. Equipment and other costs outside of the project envelope, as listed below, are considered ineligible project costs.

For large, multifaceted projects where the solar energy system costs are embedded, applications must include a prorated estimate of the total eligible costs for the solar energy system.

The following costs may be included in total eligible project cost if incurred by the Host Customer or the System Owner:

- Solar equipment capital costs, including tracking systems and other ancillary equipment associated with the solar energy system.
- Engineering and design costs for solar energy systems.
- Construction and installation costs. For projects in which the generation equipment is part of a larger project, only the construction and installation costs directly associated with the installation of the energy generating equipment are eligible.
- Engineering feasibility study costs.
- Interconnection costs, including electric grid interconnection application fees and metering costs associated with interconnection
- Building permitting costs.
- Warranty and/or maintenance contract costs associated with eligible project cost equipment.
- Sales tax and use tax.
- On-site system measurement, monitoring and data acquisition equipment.
- Customers may claim certain mounting surface costs as eligible project costs. Costs may include mounting surfaces for the photovoltaic module/solar collector and/or the materials that provide the primary support for the modules. Only the percentage of mounting surface directly under the photovoltaic module/solar collector is eligible.
- Cost of capital included in the system price by the vendor, contractor or subcontractor (the entity that sells the system) is eligible if paid by the Host Customer or System Owner.

Examples of ineligible costs include but are not restricted to:

- Roofing
- Electrical panel upgrades (including Power Quality, special Metering equipment)
- Electrical or mechanical engineering work beyond basic design.
- Structural/seismic studies and upgrades
- Fees associated with relocation of other utilities
- Agency fees other than PV inspections
- Landscaping including tree removal or grading of property
- Extended warranties beyond manufacturers standard equipment guarantees.
- Environmental issues (noise, vibration, etc.)
- Battery storage equipment
- Off-grid inverter

In cases in which an installation contract encompasses all costs associated with the installation of a solar generating system and additional measures such as energy efficiency, other renewable generating technologies, etc., the contractor must delineate the costs for each measure separately in the agreement.

3.3.1. Reportable Project Costs

All systems receiving a GoSolarSF incentive are required to enter the costs identified below in the GoSolarSF online database, PowerClerk, in order for GoSolarSF to track and maintain solar energy system cost data.

- PV Module – the cost for the number of modules installed
- Inverter – the cost for the number of inverters installed
- Permitting Fees – only include the cost of the permitting fees charged by the permitting agency (do not include any costs associated with time and labor in applying for permits)
- Balance of System (BOS) – all other eligible costs associated with the installation of the PV System. Please see Section 3.3 for a description of eligible project costs
- Interest rate if the project is leased, financed, or a PPA

3.3.2. Solar Financing Options and Cost Comparisons

The product structure in most PPA contracts typically does not list the interest rate being charged; however, because the interest rate is implied through a payment escalator over the course of the contract term, the cost of financing must be clearly stated in all PPA contracts and/or supporting documentation.

Inclusion of a cost comparison (PPA vs. Purchase) is required in step #1 on all solar contracts.

3.4. Maximum Project Cost Covered by Incentive

The total amount of incentives (state and GoSolarSF) may cover no more than 95% of the total project cost. The property owner/host customer must contribute a minimum of 5% of the total project funding. This does not apply to DAC-SASH program participants.

No San Francisco incentive will be paid out under any circumstances in excess of 100% of net system cost after state incentives, irrespective of the limits described in the incentive tables.

3.5. Limitations on Installed Cost

The goals of the GoSolarSF program include supporting a reduction in PV system installed costs over time, as well as protecting the interests of our customers. Projects installing PV systems through this program are expected on average to have their installed cost/kW fall each year [Total Project Cost (\$)/CEC-AC (kW) = \$/kW].

To support these goals GoSolarSF sets an installed cost limit (the average calculated cost of installed residential systems according to the below methodology), and when this limit is exceeded requires justification documentation for why system cost exceeds the limit, and the Customers acknowledgement.

Required justification and customer acknowledgement is to be submitted by completing the Cost Justification and Acknowledgment Form which is accessed on the GoSolarSF webpage at www.solarsf.org. No projects exceeding the limit will be awarded incentives without sufficient

justification and a Host Customer (or Site Owner if rented) acknowledgment. GoSolarSF may perform a site inspection to verify the documentation and reserve the right to audit the final project costs. GoSolarSF has sole discretion to deny incentives for projects exceeding the limit.

Effective July 1, 2019 for the Fiscal Year 2019-2020 the installed cost limit is \$5,850/kW.

GoSolarSF uses the following methodology to determine the average installed cost limit:

- The installed cost limit is calculated by using the twelve-month average based on GoSolarSF data of host customer owned systems sized 1 kW -3 kW in San Francisco.
- Third party-owned systems are excluded from the data set used to calculate the installed cost limit, but all systems will be subject to the cost limit.
- The installed cost limit is equal to the average installed cost of these systems per kW (CEC-AC).

The Project Proponent must complete the Cost Justification and Acknowledgement Form by providing information to demonstrate to GoSolarSF and the Customer that the project requires a special configuration or components that raises project costs above the installed cost limit, outlining the system components, configuration, or labor requirements that cause the project to exceed the installed cost limit.

The Host Customer (or Site Owner if property is rented) is required to sign the Cost Justification and Acknowledgement Form to acknowledge the explanation of the costs and its exceeding the average calculated installed cost limit.

3.6. Determining DAC-SASH Eligibility

Project Proponents qualifying as low-income should refer to Appendix D to determine if the household is likely to be eligible for the SASH incentive program. Project Proponents can use the income limits table, and the CalEnviroScreen 3.0 map to determine the likelihood of eligibility. If it seems as though the household qualifies, the Site Owner must contact GRID Alternatives, the DAC-SASH Program Administrator, at www.gridalternatives.org or 510-731-1333 or 866-921-4696 for further information. As the Program Administrator of the DAC-SASH program GRID Alternatives has the sole authority to determine eligibility.

It is the intent of GoSolarSF to leverage State and Federal funding first; therefore, **households that qualify for the DAC-SASH program must apply for the Low-Income DAC-SASH incentive and may not apply for the Low Income Non-DAC-SASH incentives.**

Solar contractors who install solar systems prior to screening for SASH eligibility will be responsible for all project costs incurred excluding the GoSolarSF incentive.

If the household does not qualify for DAC-SASH but qualifies as low income, then the Site Owner should get bids from at least three solar installers, as described in Section 1.

4. Application Process for GoSolarSF Projects

As mentioned earlier, GoSolarSF operates a two-step procedure for securing a GoSolarSF Incentive. In the first step, an incentive is reserved from the program budget in advance of completing an installation by submitting the application and required documents. In the second step, the reserved incentive payment is requested after interconnection of the system to the

local grid by submitting an incentive Claim Form.

4.1. Pre-Application Steps

CleanPowerSF Program

To be eligible for a GoSolarSF incentive, recipients must be actively enrolled in the CleanPowerSF program or be an existing Hetch Hetchy customer. A key benefit of enrolling in CleanPowerSF is getting a premium net surplus compensation rate for the excess electricity generated.

Energy Efficiency Audit

Making a home or business energy efficient before installing solar is an essential first step. Energy-saving actions—such as changing incandescent bulbs to compact fluorescent lamps (CFLs), and replacing old, inefficient appliances—are the best way to save energy and money while providing real, lasting benefits to the environment. Energy efficiency measures also help reduce the size of the solar PV system needed, saving customers money in up-front installation costs.

See Section 2.4 of this handbook for more information on how to complete an Energy Efficiency Audit.

Selecting a Contractor

As stated in the Eligibility section, installations receiving GoSolarSF incentive payments must be performed by contractors who are fully certified for the workforce development program overseen by OEWD (see Section 2.2). A list of GoSolarSF-certified installers is available at www.solarsf.org by clicking on the 'Certified Installer List' link.

Licensed contractors are key to getting the most productive solar PV system for any home or business. The contractor's CSLB license must be current to qualify. The Solar Contractor will apply for the incentives on the customer's behalf and arrange for the system to be interconnected to the local power grid. The Solar Contractor may also apply for local permits. Solar Contractors typically help with the energy efficiency audit, and provide free site evaluations, comprehensive quotes and payback information. A Solar Contractor should be able to evaluate factors that will affect PV system performance, such as the roof size, orientation (tilt and direction) of the system, shading and other factors. It is customary for a Solar Contractor to visit the customer's home to best determine the location and size of the system, as well as choose the most appropriate incentive type.

GoSolarSF strongly encourages applicants to shop around for an installer – contact and request a project bid from more than one of the certified installers on the list. It is best practice to acquire at least three bids before choosing a contractor.

4.2. Step 1: Application

Once the Host Customer (or Site Owner, if property is rented) has decided to install a solar PV system, completed an Energy Efficiency Audit, and contracted with a GoSolarSF Workforce Development Certified Installer, an Application may be submitted online via PowerClerk. GoSolarSF documents can be accessed on the website at www.solarsf.org.

The Application should be submitted with the following documentation:

- **Terms and Conditions (T&C) document with T&C Signature Page and Application Signature Page** attached to the T&C, to acknowledge understanding of and agreement with the GoSolarSF program rules and the Terms and Conditions. Homeowners who are listed on the property title are required to sign the T&C and signatures must be consistent with signatures listed on purchase agreement.
- **Documentation of an Energy Efficiency Audit (or documentation of exemption)**
- **Solar Purchase Agreement (must include):**
 - Site Address
 - Equipment Components
 - System Size
 - Total System Cost
 - Warranties (10yr & 20yr)
 - GoSolarSF Incentive Amount
- **Insurance Policy Declaration.** See Article 8, Insurance, in the Terms and Conditions for specific coverage requirements. For projects over 30kW, the City and County of San Francisco and its officers, agents and employees must be added to the insurance policy as an additional insured.
- **Energy bill** from within the last 6 months for the site address (please submit all the pages from one complete bill).

If all the documents listed above are not submitted at the time of application, a Host Customer/System Owner has up to 30 days to submit the missing documents; otherwise the reservation is considered incomplete and will be cancelled.

Rented Residential Properties

- **Tenant Consent Form:** For rented Residential properties, the Site Owner, rather than the Host Customer, must sign the application and signature page, and informed consent to the project must be obtained from the Tenant. **If the informed consent is not submitted at the time of application, the Property Owner has up to 30 days to submit; otherwise the reservation is considered incomplete and will be cancelled.** Tenant Consent forms can be accessed on the website at www.solarsf.org by clicking on the link to Tenant Consent form.

If Host Customer is Not the Utility Customer of Record

- **Letter of Explanation:** In circumstances where the Host Customer is not on the electric service account for the Site, a letter of explanation must be sent to GoSolarSF explaining the relationship of the Host Customer to the person(s) on the utility service bill and interconnection agreement.

Nonprofit Applicants

- **Regulatory Agreement or Declaration of Restrictions:** For Nonprofit Residential applicants, if site is owned by for-profit business with affordable housing status.

- **Proof of Nonprofit Status:** A letter stating the entity has 501(c) status for all Nonprofit Non-Residential applicants.

If Cost Exceeds the Limitation on Installed Cost

- **Cost Justification and Acknowledgment Form:** For all applicant types, if project cost exceeds \$ 5,850 per kW. . The form can be accessed on the website at www.solarsf.org by clicking on the link to High Cost Justification and Acknowledgment Form. GoSolarSF has sole discretion to deny incentives for high cost projects.

Low-Income (non-SASH) Applicants

- Signed GoSolarSF Supplemental Low-Income Application Form: For Residential applicants applying for Low-Income supplemental incentive.
- This form **requires the following supporting documents:**
 - Most Recent Energy Bill
 - Two Most Recent Paystubs for Each Household Member 18 or over
 - Most Recent Federal Income Tax Return for Each Household Member 18 or over
 - See application form for additional requirements.

Please note that all low-income documents may be either:

- Uploaded into PowerClerk with the incentive application, or
- Mailed to the following address:
SFPUC
525 Golden Gate Avenue, 7th Floor
San Francisco, CA 94102
Attn: GoSolarSF

GoSolarSF staff will evaluate and approve low-income status for purposes of the GoSolarSF program.

Residential applicants who have already obtained a low-income application approval letter from the SFPUC that is dated within the last six months do not need to reapply.

To be deemed a **Low-Income (Non-SASH)** household, the annual household gross income may not exceed the following income guidelines adjusted by household size:

Household Size	Annual Gross Income
1	\$ 68,950
2	\$ 78,800
3	\$ 88,700
4	\$ 98,500
5	\$106,400
6	\$114,300
7	\$122,150
8	\$130,050

Low-Income DAC-SASH Applicants

1. **DAC-SASH - Incentive Reservation & Payment Assignment Authorization Letter**
2. **DAC-SASH Contract Costs Breakdown**
3. **As noted above in Section 3.6:**

Households that qualify for the DAC-SASH program **must** apply for the Low-Income DAC-SASH incentive and may not apply for the Low Income Non-SASH incentives.

Reservation Notice

The Applicant will receive an auto-reply from PowerClerk upon submission of a completed application. Applications will be processed in the order received when complete. Incentives will be awarded on a first-come-first-served basis.

The SFPUC will contact an Applicant within 45 days* of receipt of an application either to approve or deny a reservation. Additional information may be requested for verification during this time. The Applicant must provide the requested missing or additional information within 30 days.

If approved, the SFPUC will send a Reservation Notice via email, confirming that funds are being reserved for six months and identifying documents that must be submitted after the project is completed to receive payment.

If the project is ineligible for the incentive requested, the SFPUC will reserve funds for the highest incentive level for which a project is eligible. The incentive reserved will be shown in the Reservation Notice.

4.3. Step 2: Incentive Claim

After completion of the solar installation, the Applicant must submit the Incentive Claim Form with the required supporting documents online via PowerClerk. **If the documents listed below are not submitted at the time of Incentive Claim submission, the Host Customer/System Owner has up to 30 days to submit; otherwise the reservation will be cancelled.**

The **Incentive Claim Form**, an online form in PowerClerk, must be submitted and the following documentation must be uploaded into PowerClerk:

- A completed **W-9 tax form** from the designated payee (available at www.irs.gov) only if payee is not a current vendor with the City
- A copy of the **Permission to Operate (PTO)** notice verifying interconnection to the local electric distribution system

Additional documentation may be included with the Incentive Claim Form, if applicable:

- **Payment Designation:** For all applicant types, if the designated payee has changed after completing Step 1
- **Explanation of change of project cost**

Incentive Expiration

An incentive reservation has a lifetime of six months from the date of the Reservation Notice. This means all Step 2 documents, including the PTO, must be submitted no later than the expiration date. If a reservation expires, a new application must be submitted.

In some cases, extensions may be granted to non-profit incentive applicants participating in the MASH or NSHP programs with proof of construction/permitting delays. In the case of new construction, an extension up to three months could be granted if proof of project delay is provided.

Solar Incentive Payment

The Solar Incentive Payment will be issued approximately 60 days* from the date the payment application is complete. Prior to payment, a site review may be conducted for projects selected at random, or for non-typical projects, at SFPUC's discretion. After payment has been expended to the designated payee, Form 1099 will be issued at year-end. All requests to amend Form 1099 should be directed to the City & County Controller's Office.

* Please be aware that although it is our goal to stay within these timeframes for processing, that goal may not be met during periods of unusually high activity.

5. Infractions and Failures

A project can receive an infraction or failure based on the GoSolarSF Project Review or the onsite field verification.

5.1. Issuance of Infractions

An infraction can be issued to the Applicant, Solar Contractor, System Owner, and/or Host Customer for the following reasons but are not limited to:

- The incentive amount submitted in the incentive claim documentation differs from that of the onsite inspection incentive results between 5-10%
- Neglecting to provide required documentation on a consistent basis, such as Host Customer contact information
- Neglecting to respond to requested information within the 30-day time period on a consistent basis
- Failure to screen for DAC-SASH eligibility
- Frequent failure to accurately screen for low-income eligibility

5.2. Issuance of Failures

A failure can be issued to the Applicant, Solar Contractor, System Owner, and/or Host Customer for the following reasons but are not limited to:

- The incentive amount submitted in the incentive claim documentation differs from that of the onsite inspection incentive results greater than 10%
- Three Infractions as defined in section 5.1
- Re-inspections (due to contested result) found to have the same results as the original inspection

- System is found non-operational at the time of inspection due to equipment failure
- Installation of PV modules, inverters and/or performance meters not on the CEC's list of eligible equipment or otherwise ineligible for incentives
- Failing to disclose the actual contractor performing work on Installation Contract

5.3. Notification of Probationary Status

The GoSolarSF program has two classifications for Applicants, Solar Contractors, and System Owners for the purposes of determining probation and/or program removal based on failures:

1. High volume: Solar Contractors with more than \$10,000 of incentive applications within a 6-month period.
2. Low volume: Solar Contractors with a maximum of \$10,000 of incentive applications within a 6-month period.

For high volume Solar Contractors:

- Probation status will be applied if 1.5% of all completed projects within the previous 12 month rolling period have received failures.
- Removal from GoSolarSF Program will be enforced if 2.5% of all completed projects within the previous 12 month rolling period have received failures.

For low volume Solar Contractors:

- Probation status will be applied if two failures were received within the previous 12 month rolling period.
- Removal from GoSolarSF Program will be enforced if three failures were received within the previous 12 month rolling period.

If a Solar Contractor is placed on probation, it will remain under that status for a period of one year.

5.4. Grounds for Immediate Disqualification from the GoSolarSF Program

An Applicant, Solar Contractor, System Owner, and/or Host Customer may be immediately disqualified from participating in the GoSolarSF program if any of the following events occur:

- A Solar Contractor that operates under a false CSLB license number or another contractor's CSLB license number
- An applicant fails to disclose another funding source(s) that materially affects the project's qualification for the GoSolarSF incentive
- The Solar Contractor installs used or stolen PV modules and/or any other system components
- Forged paperwork
- Providing any false information to the Program Administrator or any GoSolarSF program participant (Applicant, Solar Contractor, System Owner, Seller and/or Host Customer)

5.5. Notifications and Sanctions

The GoSolarSF staff will notify the Applicant, Solar Contractor, System Owner, Seller, and Host Customer if the Program Administrator determines that an infraction or failure has occurred.

If a GoSolarSF project results in the imposition of an infraction or failure on an Applicant, Solar Contractor, System Owner, and/or Host Customer, the Program Administrator will notify all of the related entities on the project application of the reasons for the determination.

Once notified of an infraction or failure due to onsite field verification or the application process review, the Applicant, Host Customer, or System Owner will either accept the results or dispute the results through the dispute resolution section found in Section 5.9.

5.6. Removal from Program for Excessive Failures

If it is determined that an Applicant, Solar Contractor, System Owner, and/or Host Customer is immediately disqualified from participating in the GoSolarSF program because of more than the acceptable number of failures pursuant to Section 5.3 then the Program Administrator will:

- Withhold confirmation of all projects in the Application Review #1 and #2, Incomplete Application, Pending Confirmation, and Final Application Review status;
- Pay GoSolarSF Incentive payments only for Reservations Confirmed before the date of the disqualification;
- Notify all parties identified on the application of the disqualification.
- Allow completion and payments of only pending applications of the entity being disqualified if no grounds for immediate disqualification exist under Section 5.4.

Disqualified parties who are allowed to reenter the GoSolarSF program will be placed on probation status after the designated removal period is complete and must send a written notification to the Program Administrators explaining in detail what actions were taken to reduce future failures and to ensure future program compliance. The notification must be received by the Program Administrator within 30 days prior to reentry into the GoSolarSF program.

5.7. Removal from Program for Immediate Disqualification

If an Applicant, Solar Contractor, System Owner, and/or Host Customer is immediately disqualified due to the reasons pursuant to Section 5.4 the following will occur:

- 1) Projects in the Application Review #1 and #2, Incomplete Application, Pending Confirmation, and Final Application Review status will not be Confirmed and all applications associated with the entity being disqualified will be suspended.
- 2) No GoSolarSF Incentive payment will be made to the entity that has been immediately disqualified; and
- 3) All parties identified on the application will be notified of their application's status.

If the Solar Contractor is disqualified from participating the GoSolarSF program due to the reasons outlined in Section 5.4 and if the system has not yet been installed, the Host Customer may hire a new Solar Contractor without losing the existing incentive reservation and may apply for an extension, if necessary.

5.8. Contractor Suspension due to CSLB License Suspension

The Program Administrator will verify that the Solar Contractor has an active license with the California State Contractors Licensing Board (CSLB), in accordance with the above requirement.

Suspended Solar Contractor License

If it is determined that a contractor's CSLB license was suspended during the application process or that the Solar Contractor has been suspended from the CSI Program, the following will occur:

- Reservations will not be confirmed; and all applications associated with the contractor will be suspended.
- No GoSolarSF incentive payment will be made unless the system was interconnected prior to the suspension.
- All parties identified on the application will be notified of the suspension;
- If the system has not yet been installed the Host Customer will be able to hire a new contractor without losing its current incentive reservation and apply for an extension, if necessary.
- Incentive payments will not be made to contractors whose license is expired or suspended.

If a suspended license occurs under a qualifying bond individual or responsible managing officer, as designated by the CSLB and has previously been suspended from the Program under a different company name, the new company will also be suspended from the Program.

If it is determined that an Applicant, System Owner, and/or Host Customer is suspended from the program, the Program Administrator will notify all parties involved in the application of the suspension. The Program Administrator will determine whether the project can be paid incentives or whether the project is ineligible to be paid incentives. If the project is deemed to be payable, the Program Administrator, in most cases, will only pay the Host Customer for the project.

5.9. Dispute Resolution

The Applicant, Solar Contractor, System Owner, Seller, and/or Host Customer may appeal in writing to the Program Administrator regarding notification of sanction. To appeal the notification, the disqualified entity must first contact the appropriate Program Administrator within 30 days to discuss the issue. If the disqualified entity has new information to provide the Program Administrator, then it must be provided to the Program Administrator within 30 days.

Appendices

Appendix A: Acronyms

This section provides a list of acronyms used in this Program handbook.

AC: Alternating Current

CEC: California Energy Commission

CEC-AC: California Energy Commission Alternating Current, refers to inverter efficiency rating

CPUC: California Public Utilities Commission

CSI: California Solar Initiative

DAC-SASH: Disadvantaged Communities-Single-Family Affordable Solar Homes

DC: Direct Current

kW: Kilowatt

kWh: Kilowatt-hour

MASH: Multifamily Affordable Solar Housing

MW: Megawatt

NSHP: New Solar Homes Partnership

PG&E: Pacific Gas and Electric Company

PMRS: Performance Monitoring and Reporting Service

PV: Photovoltaic

SASH: Single-Family Affordable Solar Homes (Now DAC-SASH)

SFPUC: San Francisco Public Utilities Commission

STC: Standard Test Conditions

Appendix B: Definitions

This section provides a list of definitions of key concepts used in this Program handbook.

Alternating Current (AC):

Electric current that reverses direction, usually many times per second. Opposite of direct current (DC). Most electrical generators produce alternating current. PV electric output calculations must always be made using the CEC-AC rating standards, which include inverter DC to AC conversion losses.

Applicant:

As defined in Section 2.1.1.

Azimuth:

The horizontal angular distance between the vertical plane containing a point in the sky and true south. All references to azimuth within GoSolarSF, unless expressly stated otherwise, refer to true, not magnetic, azimuth. For calculating the GoSolarSF incentive, all proposed PV systems with a true azimuth orientation between 180 degrees and 270 degrees facing south, southwest or west will be compared to a reference system with the same orientation as the proposed system.

California Energy Commission (CEC):

State agency that handles energy policy and planning. Created in 1974 and headquartered in Sacramento, the Commission has responsibility for activities that include forecasting future energy needs, promoting energy efficiency through appliance and building standards, and supporting renewable energy technologies.

California Public Utilities Commission (CPUC):

Regulates a number of industries including the electric utility industry that impact public well-being. Among other activities, the CPUC establishes service standards and safety rules and authorizes rate changes.

CEC-AC Rating:

GoSolarSF will use the California Energy Commission's CEC-AC method to measure nominal output power of photovoltaic cells or modules to determine the system's rating in order to calculate the appropriate incentive level. The CEC-AC rating standards are based upon 1,000 Watt/m² solar irradiance, 20 degree Celsius ambient temperature, and 1 meter/second wind speed. The CEC-AC Watt rating is lower than the Standard Test Conditions (STC).

City:

The City and County of San Francisco.

CleanPowerSF:

The City and County of San Francisco's Community Choice Aggregation program.

Design Factor:

A ratio comparing a proposed system's expected generation output with that of a baseline system. GoSolarSF uses a 68% Design Factor to determine eligibility.

Direct Current (DC):

The continuous flow of electricity through a conductor such as a wire from high to low potential. In direct current, the electric charges flow always in the same direction, which distinguishes it from alternating current (AC). Under the GoSolarSF program, photovoltaic electric output calculations must always be made using the CEC-AC rating standards, which include inverter DC to AC conversion losses.

Electric Utility:

The Host Customer's local electric transmission and distribution service provider for the project site; For most Host Customers in San Francisco, this refers to Pacific Gas and Electric Company (PG&E).

Electrical Distribution Grid:

A network of power stations, transmission circuits, and substations conducting electricity. Under the GoSolarSF program, eligible renewable energy systems are permanently interconnected and operating parallel to the electrical distribution grid of the Electric Utility.

Hetch Hetchy Power:

A water system owned and operated by the SFPUC that generates renewable hydroelectric, solar, and biogas electricity to San Francisco's Municipal facilities, services and customers.

Host Customer:

As defined in Section 2.1.1.

Inverter:

An electric conversion device that converts direct current (DC) electricity into alternating current (AC) electricity.

Inverter Efficiency:

The AC power output of the inverter divided by the DC power input.

Kilowatt (kW):

A unit of electrical power equal to 1,000 watts, which constitutes the basic unit of electrical demand. The watt is a metric measurement of power (not energy) and is the rate (not the duration over which) electricity is used. 1,000 kW is equal to 1 megawatt (MW). Throughout this Handbook, the use of kW refers to the CEC-AC wattage ratings of kW alternating current inverter output.

Meter:

A device used to measure and record the amount of electricity used or generated by a consumer. The GoSolarSF program requires accurate solar production meters for all solar projects that receive incentives. Systems receiving a GoSolarSF incentive require a meter accurate to within $\pm 5\%$.

Nationally Recognized Testing Laboratory (NRTL):

The Occupational Safety and Health Administration's (OSHA) Directorate of Science, Technology, and Medicine operates a program that certifies private sector organizations as NRTLs, which subsequently judge that specific equipment and materials ("products") meet consensus-based standards of safety for use in the U.S. workplace.

Net Energy Metering (NEM) Agreement:

An agreement with the local utility, which allows customers to reduce their electric bill by exchanging surplus electricity generated by certain renewable energy systems such as the PV systems GoSolarSF subsidizes. Under net metering, the electric meter runs backwards as the customer-generator feeds extra electricity back to the utility.

Net Energy Metering Aggregation (NEM-A):

Allows a single customer with multiple meters on the same property, or on property adjacent or contiguous to it, to use renewable generation to serve their aggregated load behind all eligible meters and receive the benefits of Net Energy Metering.

Nonprofit:

An entity not conducted or maintained for the purpose of making a profit, and that is registered as a 501(c) corporation. No part of the net earnings of such entity accrues or may lawfully accrue to the benefit of any private shareholder or individual.

Although a Homeowners' Association may be tax exempt, it cannot be considered a non-profit organization because the HOA is owned by a collective of unit owners and does not operate for the benefit of the general public, i.e., provide a community benefit. For more information, please refer to the following website: <http://www.irs.gov/pub/irs-tege/eotopicr82.pdf>.

Pacific Gas and Electric Company (PG&E):

An investor-owned utility that provides natural gas and electricity to most of Northern California.

Payee:

The person, or company, to whom the GoSolarSF Incentive check is made payable.

Photovoltaic (PV):

A technology that uses a semiconductor to convert light directly into electricity.

Project:

The solar photovoltaic project at the Site, as described more fully in the GoSolarSF application documents.

Project Proponent:

In the case of a non-rental property, the System owner together with the Host Customer, and in the case of a rental property, the System Owner together with the Site Owner. The liability of the Persons that comprise the Project Proponents to the City under these Terms and Conditions shall be joint and several.

Reservation Notice:

The notice given by GoSolarSF to the Host Customer (or Site Owner if property is rented) that the application was accepted and the City is reserving a solar incentive payment of a defined amount for six months.

Service Site:

The entire facility, building, or group of buildings at which the organization or business operates and provides services.

Signature Page:

The hard copy signed document uploaded by the Project Proponent into PowerClerk with the application documents setting forth the address of the Site and the Project Proponent's agreement to abide by the Terms and Conditions.

Site:

The Host Customer's premises, including the building on which the Project will be located as described more fully in the Terms and Conditions.

Site Owner:

As defined in Section 2.1.1.

Solar Contractor:

As defined in Section 2.1.1.

Solar Incentive Payment:

Any and all funds allocated or disbursed to the Project Proponent by the City under GoSolarSF.

System Owner:

As defined in Section 2.1.1.

Tenant:

The person(s) that has legal rights to occupy the Site and is the recipient of the net electricity generated from the solar equipment. If the Tenant is not the utility customer of record at the Site, a letter of explanation must be sent to GoSolarSF explaining the relationship of the Tenant to the person(s) who is on the utility service bill.

Virtual Net Energy Metering (NEMV):

NEMV allows a building with multiple meters that are individually metered to use renewable generation (e.g. solar panels) to receive bill credits to offset each benefiting account bill. The generation meter monitors the amount of total solar generation, while separate meters monitor each unit and common area's energy consumption. Units within the building and common areas

are allocated a percentage of the solar-generated electricity as predetermined by the building owner or manager.

Warranty:

A promise, either written or implied, that the material and workmanship of a product are without defect or will meet a specified level of performance over a specified period of time. In GoSolarSF, inverters must carry a 10-year warranty, modules must carry a 20-year warranty, and meters must carry a one-year warranty. Meters that are integrated in the inverter must carry a 10-year warranty. The warranty may be provided in combination by the manufacturer and Solar Contractor.

Appendix C: Program Contact Information & Other Useful Resources

GoSolarSF Program Administrator	
<p>SFPUC Power Enterprise</p> <p>Telephone: (415) 554-3434</p> <p>Mailing Address: GoSolarSF SFPUC Power Enterprise 525 Golden Gate Avenue, 7th Fl. San Francisco, CA 94102</p>	<p>www.solarsf.org</p> <p>Email: GoSolarSF@sfgwater.org</p>
DAC-SASH Program Manager	
<p>GRID Alternatives</p> <p>Telephone: (510) 731-1333 Toll Free: (866) 921-4696</p> <p>Mailing Address: 1171 Ocean Ave. Suite 200 Oakland, CA 94608</p>	<p>www.gridalternatives.org</p> <p>Email: baoutreach@gridalternatives.org</p>
CleanPowerSF & NEM Program	
<p>CleanPowerSF Program CleanPowerSF Call Center</p> <p>Telephone: (415) 554-0773</p>	<p>www.cleanpowersf.org</p> <p>Email: cleanpowersf@sfgwater.org</p>
PG&E Utility Interconnection & NEM Contact	
<p>Pacific Gas & Electric Company (PG&E) Solar Customer Service Center</p> <p>Telephone: (877) 743-4112</p>	<p>www.pge.com/gen</p> <p>Email: gen@pge.com</p>
Other Useful Resources	
<p>List of GoSolarSF-certified solar installers:</p>	<p>www.solarsf.org</p>
<p>PowerClerk, online application tool:</p>	<p>https://sfpuc.powerclerk.com</p>

Appendix D: Disadvantaged Communities: Single-Family Affordable Solar Homes (DAC-SASH) Program

A household is **likely** eligible for the DAC-SASH program if two criteria are met:

- 1) the household income meets the limits in the table below, and
- 2) household is located in one of the top 25 percent most disadvantaged communities statewide using the CalEnviroScreen 3.0 map (see following Page).

If the household meets the income limits below, the Applicant should then use the CalEnviroScreen 3.0 map to determine whether the location requirement is met. If it seems as though the household qualifies by both criteria, the property owner should contact **GRID Alternatives at www.gridalternatives.org or 510-731-1333 for further information. Please note that as the Program Administrator of the DAC-SASH program GRID Alternatives has the sole authority to determine eligibility.**

Households that qualify for the DAC-SASH program **must** apply for the Low-Income DAC-SASH incentive and may not apply for the GoSolarSF Low-Income Non-DAC-SASH incentive. If the two criteria described above are met, the applicant is likely eligible for DAC-SASH and should contact GRID Alternatives. As the Program Administrator of the DAC-SASH program GRID Alternatives has the sole authority to determine eligibility.

**For more information contact GRID Alternatives, the DAC-SASH Program Manager, at:
www.gridalternatives.org
 510-731-1333**

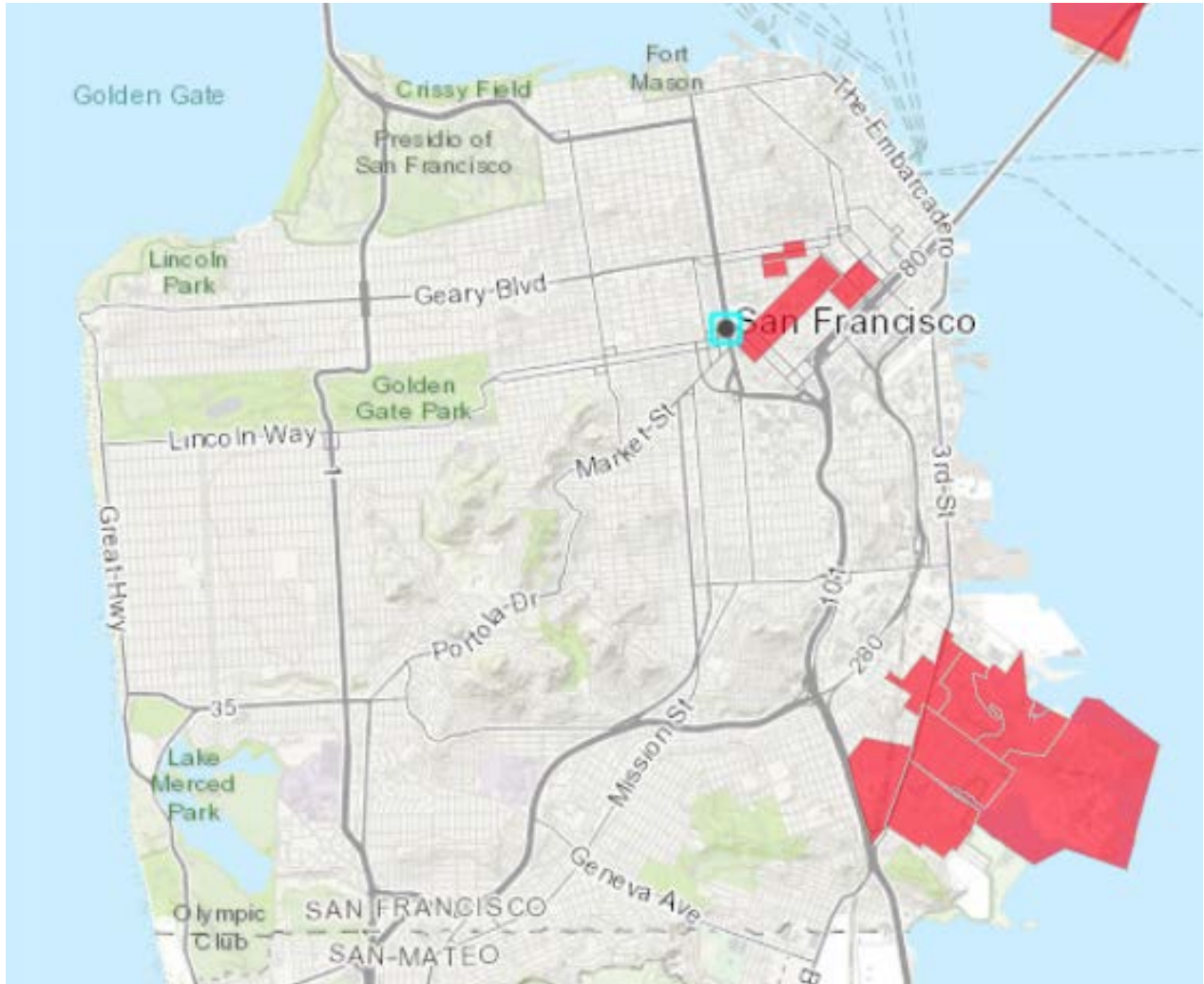
(Please allow 3-5 business days for a reply.)

If the household does not qualify for DAC-SASH but qualifies as low-income, then the property owner should refer to the GoSolarSF Certified Installer List (visit www.solarsf.org and click on Certified Installer List) and get bids from at least three solar installers. The solar installer will assist with the GoSolarSF application process.

California Official 2019 State Income Limits:

Household Size	Annual Gross Income
1-2	\$33,820
3	\$53,325
4	\$64,375
5	\$75,425
6	\$86,475
7	\$87,525
8	\$108,575
Additional Persons	+ \$11,050 each

Eligibility Map – CalEnviroScreen 3.0



Source: <http://oehha.maps.arcgis.com/apps/View/index.html?appid=c3e4e4e1d115468390cf61d9db83efc4>