San Diego Solar Equity Program (SDSEP)

Program Handbook

Version 2



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Glossary

Area Median Income (AMI)	The median or "middle" total household income for a given area. It is dependent on the location and household size, and it changes annually.
Communities of Concern	Per the San Diego <u>Climate Equity Index</u> , a Community of Concern is a census tract with Very Low, Low, or Moderate Access to Opportunity based on a combination of environmental metrics.
Host Customer	Host customer is the homeowner who will be receiving the solar PV installation
Incentive Claim Stage	The second step in the program after the solar PV is installed and receives permission to operate from SDG&E [®] . The Solar Contractor submits an Incentive Claim Form and supporting documentation to confirm completion of the project per program requirements and receive the incentive payment.
Kilowatt (kW)	Unit of measurement for power
Kilowatt-Hours (kWh)	Unit of measurement for energy (power applied over time)
Prevailing Wage	Prevailing wages are set by the Department of Industrial Relations, in conjunction with labor collective bargaining agreements, and are determined by job classification.
Photovoltaic (PV) Panel	This is the technical term for solar panels. Photovoltaics generate electricity from light.
Reservation Request Stage	The first step in the program where the Solar Contractor helps the Host Customer apply online, submit supporting documentation and reserve an incentive through SDSEP.
Single-Family Home	Detached, stand-alone homes as well as duplex, triplex and quadplex buildings. This also includes mobile and manufactured homes.
Solar Contractor	The solar or electric company who will be installing the solar PV system for the Host Customer



1 Introduction: San Diego Solar Equity Program (SDSEP)

This Program Handbook describes the requirements and necessary steps to receive the solar incentive for qualifying photovoltaic (PV) systems through the San Diego Solar Equity Program (SDSEP). This handbook will be updated and version-marked throughout the lifetime of the program to accurately reflect current program requirements.

1.1 Background

In July 2021, the City of San Diego and San Diego Gas & Electric[®] (SDG&E[®]) developed a new franchise agreement. As part of the Energy Cooperation Agreement (ECA) within this contract, SDG&E committed a total of \$10 million shareholder funds, \$1 million annually over 10 years, to provide monetary assistance to income-qualifying City of San Diego residential customers to install solar PV panels on their homes. These funds finance the San Diego Solar Equity Program (SDSEP), which is designed and administered by the Center for Sustainable Energy (CSE), the Program Administrator (PA). Up to 10% of the \$1 million per year is allocated to program administration and the remaining \$900,000 is reserved for customer incentives.

SDSEP provides income-qualifying SDG&E customers located in Communities of Concern¹ a financial incentive to cover most if not all the cost to install a PV system on their homes. The financial incentive is set at \$4 per watt for up to 6.5 kilowatt (kW) systems. The incentive process has two steps: 1) Reservation Request and 2) Incentive Claim. The incentive is paid once the system is installed and has received Permission to Operate from SDG&E. To qualify for an incentive, the Host Customer, Solar Contractor, and PV equipment must satisfy eligibility requirements outlined in this document.

¹Communities of Concern as defined by the San Diego Climate Equity Index, available at https://www.sandiego.gov/climateequity.



2 Program Eligibility Requirements

2.1 Customer Eligibility Requirements

2.1.1 Income

SDSEP is an income-qualifying incentive program. To be eligible, the applying Host Customer must have a total household² income of 120% or less of the San Diego County Area Median Income (AMI) for the application year³. The total household income must meet this requirement for at least the 12 months preceding the date of application. The \$900,000 annual total incentive budget is allocated across three eligible income bands as follows:

- Approximately 60% to households with a total income of less than 80% AMI
- Approximately 20% to households with a total income between 80% AMI and 100% AMI
- Approximately 20% to households with a total income of 100% AMI up to 120% AMI

Household income is subject to verification and the Host Customer is required to provide supporting documentation. Proof of enrollment in the California Alternate Rates for Energy (CARE) Program, the Family Electric Rate Assistance (FERA) Program, the Energy Savings Assistance (ESA) Program, the Low-Income Home Energy Assistance Program (LIHEAP), the Department of Energy Weatherization Assistance Program (DOEWAP), the Housing Repair Loans and Grants Program, or other income-qualified programs may be accepted in lieu of household income verification.

2.1.2 Geographic Location

To qualify for the program, the Host Customer must reside in the City of San Diego and in a census tract that is a Community of Concern per the City of San Diego's Climate Equity Index (CEI). Communities of Concern are census tracts that have very low-, low-, or moderate access to opportunity because they face the largest environmental, socioeconomic, mobility, and health equity barriers.

³ San Diego County Area Median Income (AMI) and Income Limits are available at https://www.sandiegocounty.gov/sdhcd/rental-assistance/income-limits-ami/



² Household as defined by the US Census (see definition at <u>census.gov</u>)

2.1.3 Property Type

Host Customers must be single-family homeowners. The program defines "single-family" as not only owner-occupied, stand-alone homes, but also owner-occupied duplex, triplex and quadplex buildings. The allowable system size is scaled to accommodate these home configurations, and this is described in further detail in Section 2.3.4 Maximum Allowable System Size below. Additionally, mobile and manufactured homes are eligible for the program if their roofs can support a permanent solar installation.

2.1.4 No Existing Solar PV Systems

Eligible properties cannot have an existing solar PV system. SDSEP applies only to Host Customers who are installing entirely new solar PV systems, not adding to or replacing an existing system.

2.2 Solar Contractor Eligibility Requirements

2.2.1 Participation in Solar Contractor Workshop

To install solar PV systems under SDSEP, Solar Contractors must be listed on the <u>Eligible Solar</u> <u>Contractor List</u>. Interested Solar Contractors are added to the Eligible Solar Contractor List by initially attending a mandatory Solar Contractor Workshop, hosted by the PA and submitting a Solar Contractor Intake Form at the end of this workshop. Solar Contractor Workshops will be held annually to reflect program updates and changes. Participating Solar Contractors must attend the Solar Contractor Workshop each year to remain on the Eligible Solar Contractor List. Inclusion on the Eligible Solar Contractor List means that the solar contractor has met the minimum requirements necessary to participate in the program. The PA in no way endorses or guarantees any solar contractor or their work.

2.2.2 Solar Contractor Project Caps

Solar Contractors are only permitted to complete five projects through SDSEP annually, and no more than five applications should be submitted at a time. If one or more of the initial five applications is not approved at the Reservation Request stage, the Solar Contractor can submit alternate applications with new Host Customers.

2.2.3 Certified Solar Contractor

Participating Solar Contractors must be certified to install solar systems per the <u>California</u> <u>Contractors State Licensing Board (CSLB)</u>. This includes active licenses A, B, C-10, or C-46.

2.2.4 Prevailing Wage

Participating Solar Contractors are required to pay prevailing wage, as defined by the <u>California</u> <u>Department of Industrial Relations (DIR)</u>, to all staff working on the project. At the Reservation Request stage, the Solar Contractor is required to submit a signed attestation committing to pay



prevailing wage. Additionally, for the first project the Solar Contractor applies for incentives through the SDSEP, the Solar Contractor will be required to participate in a pre-construction meeting with a prevailing wage consultant. This pre-construction is required to occur during the documentation collection period before the reservation can be reserved. In the pre-construction meeting, the consultant and the Solar Contractor will review prevailing wage requirements, including how to determine rates for different labor categories and how to track certified payroll. This is a one-time requirement for the first application a Solar Contractor submits before it is approved for the Reservation Request stage, but the PA reserves the right to audit as needed to enforce compliance with this requirement. Failure to comply with the prevailing wage requirements will requirements will result in removal from the Eligible Solar Contractor List.

2.2.5 Commitment to Energy Efficiency Education

Participating Solar Contractors must discuss energy efficiency with the customer during the initial consultation phase. No energy efficiency upgrade or action is required by the customer, but the Solar Contractor must ensure the Host Customer has a basic understanding of energy efficiency including their current energy needs and the future energy needs their solar PV system will need to support. The PA will provide an <u>energy efficiency education handout</u> on the <u>Resources</u> page of the program website that can be used to help meet this requirement.

2.2.6 Job Training

Solar Contractors are not required to provide job training to be eligible for this program; however, it is highly encouraged and incentivized. Providing job training is a value added to the available incentive per project up to the cap of the system cost. This is discussed in further detail in the Incentives section below (Additional Incentives – Job Training).

2.3 Solar Generating Equipment Eligibility Requirements

The only technology eligible for SDSEP is solar PV systems. Below are the specific equipment eligibility requirements for the program.

2.3.1 New Equipment

All major system components must be new and must not have been previously placed in service in any other location or for any other application.

2.3.2 California Energy Commission Approved Equipment List

The major system components, PV modules, inverters and meters must be listed on the California Energy Commission's <u>Solar Equipment Lists</u>. The Solar Equipment Lists include equipment that meet national safety and performance standards and are updated regularly.



Components purchased for a system must be eligible at the time the SDSEP application is submitted by the Solar Contractor. The PA will review the Reservation Request Form and all supporting documentation to ensure the equipment identified meets eligibility requirements prior to approval. If the Solar Contractor begins or completes the installation before receiving the Reservation Approval Notice, significant and costly changes may be needed for the system to comply with the eligibility criteria.

2.3.3 System Ownership

Qualifying solar PV systems must be Host Customer Owned (HCO) systems. Third Party-Ownership is not eligible for program incentives at this time.

2.3.4 Maximum Allowable System Size

SDSEP provides incentives for eligible solar PV systems up to 6.5 kW for detached, single-family homes, mobile homes, and manufactured homes. Duplexes are eligible for up to 12 kW total, triplexes are eligible for up to 17 kW and quadplexes are eligible for up to 23 kW. The solar PV system size that will be incentivized is measured using the Expected Performance Based Buy Down (EPBB) <u>Calculator</u>. The incentive is calculated based on the California Solar Initiative Alternating Current (AC) System size. The Solar Contractor must enter the proposed system in the EPBB calculator to determine this system size. It is calculated by multiplying the California Energy Commission (CEC) AC system size by the design factor, determined by the location, tilt and azimuth of the system. The Solar Contractor is required to submit a PDF of the EPBB calculator as supporting documentation with the Reservation Request Form during the Reservation Request stage.

2.3.5 System Installation

All systems must be installed by a SDSEP eligible Solar Contractor. In all cases, system installations must conform to the manufacturer's specifications with all applicable electrical and building codes and with appropriate electrical standards.

2.3.6 System Performance Meter

All systems must be installed with a performance meter so the Host Customer can determine the amount of energy produced by the system. The meter must measure the total energy produced by the system in kilowatt-hours (or watt hours), must retain the kilowatt-hour production data in the event of a power outage, and must provide a display of system output that the customer can easily understand. A system need not include a separate meter if the system is installed with an inverter that contains internal metering and display equipment that meets the meter requirements above.



For duplexes, triplexes, and quadplexes, if the units are individually metered, the system will either need to be installed under the Virtual Net Energy Metering (VNEM) tariff or installed as separate systems and tied to each meter through standard NEM, to ensure the owner and any tenants all benefit from the solar system equally.

2.3.7 Grid Interconnection and Permanency

Eligible solar PV systems must be permanently interconnected to the electrical distribution grid of SDG&E[®]. Systems installed under SDSEP are intended to be in place for the duration of the system's useful life; therefore, only physically permanent systems are eligible for incentives. Portable systems are not eligible. Physical permanence is demonstrated by attachment to a permanent surface with no indication of portability, including, but not limited to, quick disconnects or unsecured equipment.

The system interconnection must comply with applicable electrical codes and the interconnection requirements of SDG&E. Prior to submitting an Incentive Claim Form for payment, SDG&E must approve the system interconnection and provide Permission to Operate (PTO).

2.3.8 Warranty Requirements

Equipment incentivized and installed through SDSEP must come with the following minimum warranties:

- 10-year warranty for string inverters
- 20-year warranty for microinverters
- 20-year warranty for modules
- 10-year workmanship

All systems must have minimum warranties as listed above to protect the Host Customer against system or component breakdown. The warranties must cover and provide for no-cost repair or replacement of the system or any defective components, including any associated labor. The warranties must also cover the solar PV modules and inverters against breakdown or degradation of electrical output by more than ten percent from their originally rated electrical output during the warranty period.

A minimum 10-year workmanship warranty to provide for no-cost repair and replacement of the system for any expenses not otherwise covered by the manufacturer is also required.

The PA will verify warranty requirements via review of the installation contract submitted during the Reservation Request stage.



2.3.9 Field Inspections

The PA will review applications it receives to verify the information provided in the application is accurate. The PA may also conduct field inspections during the Incentive Claim stage to verify systems are operating properly and installed as specified in the Reservation Request stage. All solar PV systems shall be permitted, inspected, and approved by the local city or county authority having jurisdiction.

3 Incentives

3.1 Solar Incentive Offered

Technology Type	Size Category	Incentive Offered	
Photovoltaics	Up to 6.5 kW	\$4.00 per Watt	

The maximum allowable solar incentive will be calculated using the following formula:

California Solar Incentive AC System Size = CEC-AC rating x Design Factor x Incentive Rate

For example, the California Solar Incentive AC System Size for a PV system with a CEC-AC rating of 6,000 W (6 kW) and a 94% design factor would be calculated as follows:

6,000 W x 0.94 = 5,640 W

SDSEP incentive would be calculated as follows:

5,650 W x \$4.00/W = \$22,560

Note that under no circumstance will the incentive from SDSEP exceed the net purchase price of the system as submitted and approved in the Reservation Request stage.

3.2 Eligible Solar Installation Costs

The following costs may be included in the total eligible project cost:

- Solar equipment capital costs
- Engineering and design costs for the solar energy system
- 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.
- All interconnection costs (if applicable), including:



- o Electric grid interconnection application deposits
- \circ $\;$ Metering costs associated with interconnection
- Building permitting costs
- Warranty and/or maintenance contract costs associated with eligible project cost equipment (including any prepaid or extended warranties)
- Sales and use tax
- Performance Monitoring and Reporting Service (PMRS) equipment and/or services
- Certain mounting surface costs
 - Costs may include mounting surfaces for the PV modules and/or materials that provide the primary support for the PV modules. Only the percentage of mounting surface directly under the solar PV modules is eligible.

3.2.1 Additional Eligible Costs

• Electrical panel upgrades, as needed to support PV installation on the home.

3.3 Incentive Determination

3.3.1 Available Funds

Total available incentive amounts vary based on the Host Customer's income band as indicated in the application. The \$900,000 annual incentive is roughly allocated as follows:

- Up to 60% (\$540,000) for the households with a total income of less than 80% AMI
- Up to 20% (\$180,000) for households with a total income between 80% AMI and 100% AMI
- Up to 20% (\$180,000) for households with a total income of 100% AMI up to 120% AMI

Incentives will be provided on a first-come, first-serve basis until the \$900,000 of incentive funding per year is depleted. At the current incentive rate of \$4/Watt, assuming the average sized system is 6.5 kW and the full electrical panel and job training incentives are utilized on all projects, SDSEP can provide incentives for about 30 PV systems annually.

3.3.2 Incentive Rate Per Watt

The incentive is a flat rate of \$4/Watt California Solar Incentive AC, and it is consistent across all three income bands. This rate is intended to cover 100% of the system cost and may be adjusted in future iterations based on the industry average cost for installing solar PV systems.

3.3.3 Additional Incentives – Panel Upgrades

The Host Customer can apply for up to \$3,500 additional funding to cover the costs associated with upgrading electrical panels, as necessary, to allow for the installation of a solar PV system at their residence.



3.3.4 Additional Incentives – Job Training

If the participating Solar Contractor provides 40 hours of paid job training time to at least one trainee, they are eligible to apply for up to \$1,000 additional incentive up to the cap of the system cost. Eligible training hours do not need to be solely spent on the specific program project and can be across the Solar Contractor's other non-SDSEP projects.

4 Application Process

4.1 Overview

To start the process to reserve incentive funds, the Solar Contractor must have completed an initial site walk at the Host Customer's residence and must have a contract with the Host Customer. On behalf of the Host Customer, the Solar Contractor submits an <u>Incentive Application</u> <u>Intake Form</u> through the SDSEP website. This web-based form generates a pre-populated Reservation Request Form which is attached to the submission confirmation email.

The PA will contact the Solar Contractor and Host Customer within three (3) business days of receipt of the Incentive Application Intake Form with a secure Box link for document submission and next step instructions. The Solar Contractor and Host Customer must review, sign, and submit the Reservation Request Form along with supporting documents to the PA via the Box link.

Once the application and all supporting documents are reviewed and approved by the PA, a Reservation Approval Notice will be provided by email to the Solar Contractor and Host Customer that identifies the amount of funds reserved. Please note, the funding is not reserved until the PA sends the Reservation Approval Notice email. The Solar Contractor then has 12 months to install an eligible system, receive PTO from SDG&E[®], and submit the Incentive Claim Form and supporting documentation.

Once SDG&E has issued an interconnection approval and the system is operational, the Solar Contractor submits the Incentive Claim Form with supporting documentation. After the PA determines the final system is eligible, the incentive payment will be sent out to the Payee listed on the Incentive Claim Form.

Details about required documents and timelines for each step of the application process are defined in greater detail in the sections below.



4.2 Reservation Request

Funding is reserved for Host Customers who have a signed contract with an eligible SDSEP Solar Contractor and are committed to purchase and install an eligible PV system. A Reservation Approval Notice provides the Host Customer assurance the reserved funds will be available when the claim is made. Reservation Approvals are made only for completed applications on a first-come, first-serve basis. Incomplete applications will not be processed until all required documentation is provided. The reservation period is for 12 months. No payment will be made unless the installed system meets all applicable SDSEP requirements, even if funds are reserved.

4.2.1 Reserving an Incentive

The first step in the incentive reservation process is to complete the web-based Incentive Application Intake Form on the SDSEP website. This form is typically completed by the Solar Contractor on behalf of the Host Customer. At this step, a signed contract between the Solar Contractor and Host Customer is required, as well as a print-out or PDF of the EPBB calculator used to determine the system size. After completing and submitting the Incentive Application Intake Form, the Host Customer and the Solar Contractor will receive an auto-generated email with a pre-populated Reservation Request Form.

Within three (3) business days of submission, the PA will email the Host Customer and Solar Contractor a unique Box link and Reservation Request Checklist listing the documents required to complete the Reservation Request. The Host Customer and Solar Contractor must submit a signed Reservation Request Form and provide all the supporting documentation within 15 calendar days. The reservation process will be delayed if incomplete and/or incorrect information is received. If incorrect documents or documents are missing after the PA reviews the application, the Solar Contractor and Host Customer will have an additional 15 calendar days upon notice of the incomplete or missing documents to resolve the issue. If the issue is not resolved in this time frame, the application may be cancelled.

The Reservation Request will be approved based on the date it is deemed complete and not the date it was first submitted. Funds are not reserved until the Host Customer and the Solar Contractor receive the Reservation Approval Notice email from the PA. Upon reservation of the incentive, the project has 12 months to complete installation of the solar PV system. Requests for an extension will be reviewed on a case-by-case basis and extensions are not guaranteed.

The following documents are required at the Reservation Request stage and those with asterisks are required at submission of the Incentive Application Intake Form:

• Reservation Request Form with Signatures



- Including signed Terms and Conditions
- Terms and Conditions with Signatures
- Installation Contract*
- Print out of Expected Performance Based Buydown (EPBB) Calculator*, including:
 - Module quantity and model numbers
 - o Inverter quantity and model numbers
 - Design parameters
 - California Solar Initiative AC System Size (to calculate the incentive)
- Income Verification
- Letter of Authorization
 - To allow the PA to collect 12 months of utility data from SDG&E®
- Prevailing Wage Attestation

Duplex, triplex, and quadplex applications are treated the same as typical detached home applications. The Host Customer is the homeowner, and their information will be used to verify income eligibility. However, if the duplex, triplex or quadplex is individually metered, the Host Customer will need to submit a signed Letter of Authorization for their unit and a signed Letter of Authorization for the full building.

4.2.2 Supporting Documents

4.2.2.1 Reservation Request Form with Signatures

After the Incentive Application Intake Form is submitted, a pre-populated Reservation Request Form will be emailed to the Host Customer and Solar Contractor. All sections must be completed, and the Host Customer and Solar Contractor are required to sign the Reservation Request Form.

The following information is included:

- Host Customer Contact Information
- Secondary Contact Information (if desired)
- Host Customer Eligibility Information
- Solar Contractor Information
- Solar PV Equipment Information
- Incentive Amounts



• Signatures of Host Customer and Solar Contractor⁴

Appendix 1 – Reservation Request Form includes a blank copy of the <u>Reservation Request Form</u>. Applications must be submitted through the web-based Incentive Application Intake Form on the program website; however, the blank Reservation Request Form can be used by the Solar Contractor as needed to collect information from the Host Customer.

4.2.2.2 Installation Contract

At the time of submitting the Incentive Application Intake Form, the Solar Contractor must attach a copy of the system or equipment purchase agreement(s) or installation contract(s) between the Host Customer and Solar Contractor. This may include one contract where the equipment and installation are provided by the same company or two or more contracts for separate purchase(s) of equipment and a contract for labor. All installation contracts must comply with the <u>Contractors State License Board (CSLB)</u> requirements. The equipment purchase agreement(s) and installation contracts must constitute signed agreement(s) to proceed with the purchase and installation of the specified system, including identification and signatures of the buyer and seller. The agreement(s) must clearly identify or state the following:

- The quantity, make, and model number as shown on the CEC's lists of <u>eligible equipment</u> for PV modules, inverters, and system performance meters
- The physical address of the location where the equipment is to be installed; and
- The payment terms, the total cost of the system to be installed, the expected incentive amount from SDESP, and any other limited conditions of sale.

To reduce concerns with signing a contract before an incentive is approved, the agreement(s)/contract(s) may include a statement indicating the agreement is conditional upon receiving the expected incentive reservation approval.

All systems must come with a 10-year warranty for string inverters, a 20-year warranty for microinverters, and a 20-year warranty for modules to be eligible to receive incentives through SDSEP, and these warranties should be reflected in the contract.

⁴ In addition to submitting a signed copy of the Reservation Request Form, the Host Customer and Solar Contractor will need to submit a signed copy of the program Terms and Conditions. The Terms and Conditions are referenced in the Reservation Request Form, and require the Host Customer and Solar Contractor to 1) confirm that they have read and understand the program requirements and 2) that all provided information is true to the best of their knowledge.



4.2.2.3 Print out of Expected Performance Based Buydown (EPBB) Calculator

The EPBB calculator should be used to calculate the system size that will be used to calculate the solar incentive, factoring in the design factor based on system azimuth, tilt and location. The printout of the EPBB calculator is required at the Incentive Application Intake Form submission.

Appendix 2 – Expected Performance Based Buydown (EPBB Calculator) includes an example of the EPBB calculator print-out.

4.2.2.4 Income Verification

The Host Customer is required to provide documentation confirming that the household size and total household income listed on the Incentive Application Intake Form is accurate. The Host Customer must fill out a Household Income Summary Form that includes the total household size and a list of all household members 18 years or older. The Host Customer must submit the most recent Form 1040 (Individual Income Tax Return) for each adult household member (18 years old and older). If a Form 1040 is not available, the Host Customer should submit the most recent W-2 Form (Wage and Tax Statement) for that individual. If a W2 is not available, the Host Customer must submit twelve (12) months of pay stubs for that individual.

If the applicant is participating in one or more other income-qualified programs, including but not limited to California Alternate Rates for Energy (CARE), Family Electric Rate Assistance Program (FERA), Energy Savings Assistance (ESA), Low Income Home Energy Assistance Program (LIHEAP), and Department of Energy Weatherization Assistance Program (DOEWAP), the applicant may submit proof of participating in lieu of income verification.

4.2.2.5 Letter of Authorization

The Letter of Authorization gives the PA permission to collect utility information from SDG&E[®] on the customer's behalf. This data will only be used to verify proper sizing of the solar system. The form is on the SDG&E website and a copy is included in Appendix 3 – Letter of Authorization for reference.

4.2.2.6 Prevailing Wage Attestation

As outlined in the Program Eligibility Requirements section above, participating Solar Contractors are required to pay prevailing wage on the project in accordance with California Law. At the Reservation Request stage, the Solar Contractor must sign an attestation confirming understanding of the prevailing wage requirements and that the PA reserves the right to audit as needed.



4.3 Incentive Claim

4.3.1 Claiming an Incentive

To receive incentive payment, the Solar Contractor must submit the Incentive Claim Form and supporting documentation within 12 months of the Reservation Approval Notice. Once a system is installed and received PTO from SDG&E[®], the following documents must be submitted to claim the incentive payment:

- Incentive Claim Form
- Permission to Operate (PTO) Letter from SDG&E
- Job Training Attestation (if applicable)
- Updated EPBB print out (if system components and/or design has changed)
- Optional documentation if selected for field inspections
 - Single line diagram
 - Photos of module arrays and inverters

4.3.2 Changes to the System as Reserved

SDSEP expects a system to be installed as described in the Reservation Request, but it recognizes that minor changes may result during installation and that extensions or other substantive changes may be necessary in extraordinary circumstances. Minor changes do not require prior approval but must be documented on the Incentive Claim Form. Minor changes include small increases and decreases in the size of the system (while staying within the SDSEP limits) or changes from one make or model of a certified component to another. Any changed incentive amount that occurs is subject to availability of funding.

Substantive changes or expiration date of reservation require prior approval by the PA and can be considered if requested in writing. Each request must describe the need for the change and must document the following:

- 1. Circumstances beyond the control of the Solar Contractor and Host Customer that prevent the system from being installed as described at the Reservation Request stage.
- 2. Neither the Host Customer nor the Solar Contractor knew or had reason to know of the above circumstances at the time the current reservation was issued.
- 3. The Host Customer or Solar Contractor has incurred documented costs or expenses equaling no less than 25 percent of the original reserved system's total cost; and said costs or expenses are unrecoverable unless the requested changes are approved. (These costs can be incurred either through the purchase of system equipment or by other construction costs expressly for the purpose of installing the reserved system.)



- 4. There are no other known obstacles in the way of completing the project within the extension period.
- 5. The requested change would otherwise comply with all eligibility requirements of the program.

Extension requests and other substantive changes must be filed before the reservation expires. Any requests made 30 or fewer days before the reservation expiration date shall include an explanation of why a timelier request was not possible under the circumstances. The SDSEP PA will notify requesting parties of a decision on their request.

4.3.3 Supporting Documents

4.3.3.1 Incentive Claim Form

When the project is completed with installation and the system receives the Permission to Operate (PTO) letter from SDG&E[®], the Solar Contractor must submit an Incentive Claim Form. All sections must be completed, and the Host Customer and Solar Contractor are required to sign the Incentive Claim Form.

The following information is included on the Incentive Claim Form:

- Host Customer Contact Information
- Secondary Contact Information (if desired)
- Host Customer Eligibility Information
- Solar Contractor Information
- Solar PV Equipment Information
- Incentive Amounts
- Signatures of Host Customer and Solar Contractor

The intent of the Incentive Claim Form is to confirm the amount of funding reserved on the Host Customer's behalf. Any changes to the information provided on the previously submitted Reservation Request Form must be noted in the space provided. If additional space is required to note such changes, additional pages may be attached to the form. All changes, especially changes in equipment, from the original application may affect the eligibility and amount of the incentive. The Incentive Claim Form is provided in Appendix 4 – Incentive Claim Form, and it is also available under the Resources section of the program website.



4.3.3.2 PTO Letter from SDG&E®

A copy of the PTO Letter from SDG&E must be provided to demonstrate the utility approved the operation of the system at the site of the installation.

4.3.3.3 Job Training Attestation

A Job Training Attestation must be submitted if the Solar Contractor pursues the job training incentive and provides 40 hours of paid job training to at least one job trainee (refer to Additional Incentives – Job Training).

4.3.3.4 Updated EPBB Calculator Print Out

If the system components and/or design has changed since the Reservation Request stage, the Solar Contractor must submit an updated EPBB print-out or PDF.



Appendix 1 – Reservation Request Form



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Application ID / ID de la Solicitud

Reservation Request Form / Formulario de Solicitud de Reserva

Instructions: This San Diego Solar Equity Program (SDSEP) Reservation Request Form is reflective of the information entered in the online application process through the Incentive Application Intake Form. Please review thoroughly for accuracy of information before signing, and if there are errors, please notify us at <u>sdsolarequity@energycenter.org</u>. Once the form has been signed by all parties, upload this document to the Box folder provided via email by the Program Administrator, Center for Sustainable Energy.

Instrucciones: Este Formulario de Solicitud de Reserva del Programa de Equidad Solar de San Diego (SDSEP, por sus siglas en inglés) refleja la información proveída en la solicitud en línea llamada Formulario de Admisión de la Solicitud para el Incentivo. Por favor revise cuidadosamente la exactitud de la información antes de firmar, y si hay errores, por favor notifíquenos al correo electrónico: <u>sdsolarequity@energycenter.org</u>. Una vez que el formulario haya sido firmado por todas las partes, suba este documento al folder de Box proveído por correo electrónico por el Administrador del Programa, Center for Sustainable Energy.

NOTE: The application for incentive reservation is not complete until this form and all other required documentation is uploaded to the Box folder as directed by the Program Administrator. When the application is approved, the Host Customer and Solar Contractor will receive written confirmation via the Reservation Approval Notice email.

NOTA: La solicitud para reservar el incentivo no estará completa hasta que este formulario y toda la documentación requerida haya sido subida al folder de Box indicado por el Administrador del Programa. Cuando la solicitud sea aprobada, el Propietario de Vivienda y el Contratista Solar recibirán la confirmación por escrito en la Notificación de Aprobación de Reserva por correo electrónico.

Host Customer Contact Information / Datos del Propietario de Vivienda

Primary Contact Name / Nombre del Contacto Primario:				
First Name / Nombre	Last Name / Apellido			
Primary Phone / Teléfono Primario:	Primary Email / Correo Electrónico Primario:			
Phone Number / Número de Teléfono	Email Address / Dirección de Correo Electrónico			
Secondary Contact Name / Nombre de Contacto	Secundario:			
First Name / Nombre				
	Last Name / Apellido			
Secondary Phone / Teléfono Secundario:	Last Name / Apellido Secondary Email / Correo Electrónico Secundario:			
Secondary Phone / Teléfono Secundario: Phone Number / Número de Teléfono				
	Secondary Email / Correo Electrónico Secundario:			

Host Customer Eligibility Information / Información de Elegibilidad del Propietario de Vivienda

Is there an existing solar photovoltaic system installed on the property? ¿Hay un existente sistema solar fotovoltaico en la propiedad?

Property Type (Select one of the following: Detached, single-family home, Duplex, Quadruplex, Mobile home, Manufactured home) Tipo de Propiedad (Escoja de una de las siguiente opciones: Unifamiliar, dúplex, casa cuádruple, casa móvil, casa prefabricada):

Household Size (enter a number 1 to 10) / Número de Personas en la Vivienda (ponga un número del 1 al 10):

Total Household Income / Ingreso Total Familiar:

Does the household participate in one of the following income-qualified programs? (Select one of the following: CARE, FERA, ESA, LIHEAP or DOEWAP) / ¿Participa el hogar en uno de los siguientes programas para hogares determinados por los ingresos familiares? (Escoja de una de las siguientes opciones: CARE, FERA, ESA, LIHEAP o DOEWAP):

Solar Contractor Information / Datos del Contratista Solar

Company Name / Nombre de la Compañía:			
Contractor State License Board Number / Número de la Junta Estatal	de Licencias de Contratistas:		
Contact Name / Nombre del Contacto:			
First Name / Nombre Last Name / Apellido			
Phone / Teléfono:	Phone / Teléfono:		
Email Address / Dirección de Correo Electrónico:			
Email Address / Direccion de Correo Electronico: Have you discussed energy efficiency with the Host Customer, including explaining their current and future energy needs? ¿Ha hablado con el Propietario de Vivienda sobre la eficiencia energética y proporcionado una explicación de sus actuales y futuras necesidades de energía eléctrica?:			

Are you pursuing the additional job training incentive? ¿Va a solicitar para el incentivo adicional de capacitación laboral?

Solar PV Equipment Information / Información Sobre el Equipo Solar Fotovoltaico

CEC-AC Rating / Clasificación (kW):

Design Factor / Factor del Diseño (del sistema):

California Solar Initiative AC System Size / Tamaño del Sistema AC de la Iniciativa Solar de California (kW):

Incentive / Incentivo

Incentive Rate / Valor del Incentivo:

Solar Incentive Amount / Monto del Incentivo Solar:

Electrical Panel Upgrade Cost / Costo de la Actualización del Panel Eléctrico:

Job Training Incentive / Incentivo de Capacitación Laboral:

Requested Incentive Amount / Monto del Incentivo Solicitado:

By signing this document, you commit to understanding and accepting the Terms and Conditions of the program. Al firmar este documento, se compromete a entender y aceptar los Términos y Condiciones del programa.

Host Customer Name (print) / Nombre del Propietario de Vivienda (letra de imprenta)

Host Customer Signature / Firma del Propietario de Vivienda

Date / Fecha

Solar Contractor Name / Nombre del Contratista Solar

Solar Company / Compañía Solar

Solar Contractor Signature / Firma del Contratista Solar

Date / Fecha



Appendix 2 – Expected Performance Based Buydown (EPBB Calculator)



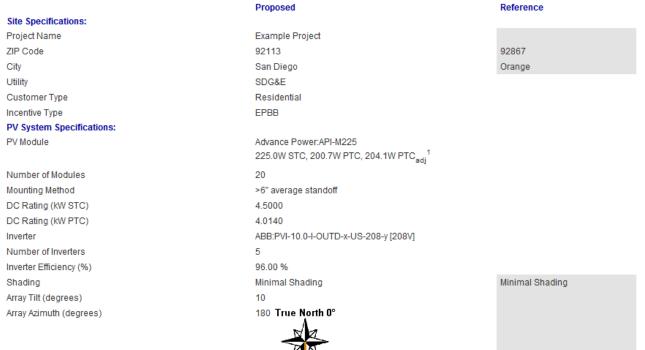
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Incentive Calculator - CSI Standard PV

The CSI-EPBB calculator is a tool available to participants of the CSI Program to determine the EPBB Design Factor and calculate an appropriate incentive level based on a reasonable expectation of performance for an individual system. The CSI-EPBB Calculator has also been created for consumer's to educate themselves on the differences of solar system design and how changes to the PV system's specifications will produce different kilowatt hour results over the course of a year. Please be aware that actual performance of an installed PV system is based on numerous factors, including some factors that may not be considered in the CSI-EPBB Calculator. While this calculator relies on industry-standard assumptions, and is driven by NREL's PV Watts v. 2 calculator, there may be other factors that affect the output of your PV System.

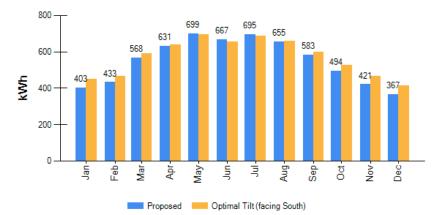


17

17

Optimal Tilt (proposed azimuth) Optimal Tilt (facing South)

Estimated Monthly Production



17

	Proposed	Reference
Results		
Annual kWh	6,615 (a)	
at optimal tilt	6,836 (b)	
facing south at optimal tilt	6,836 (c)	6,862 (d)
Summer Months	May-October	May-October
Summer kWh	3,793 (e)	
at optimal tilt	3,817 (f)	
facing south at optimal tilt	3,817 (g)	3,966 (h)
CEC-AC Rating	3.853 kW	
Design Correction ²	99.371%	
Geographic Correction ³	99.621%	
Installation Correction ⁴	100.000%	
Design Factor ⁵	98.995%	
C SI Rating ⁶	3.814 kW	
Incentive Rate	\$0.00/Watt	
Incentive ⁷	\$0	
	The CSI Program has closed and is no longer accepting ap	plications.
Report Generated on	9/15/2022 10:43:14 PM	

Notes:

- Design Correction: This is the ratio of the summer output of the proposed system (e) and the summer output of the summer optimal system at the proposed location (f).
 Geographic Correction: This is the ratio of the annual output of the summer optimal south facing system at the proposed location (c) and the annual output of the
- summer optimal south facing system at the reference location (d).
- Installation Correction: This is the ratio of the adjusted PTC rating and the unadjusted PTC rating.
 Design Factor: This is the product of the Design Correction, Geographic Correction, and Installation Correction.
- Design Factor: This is the product of the Design Correction, Geographic Correction, CSI Rating: This is the product of the Design Factor and the CEC-AC Rating.
- Concerning this is the product of the Design Pactor and the CECAC Raining.
 Incentive: This is the total incentive for the proposed system. It is the product of the CSI Rating and the Incentive Rate. Please be aware that the final CSI incentive rate that is reserved for you will be determined by your CSI Program Admir
 - Please be aware that the final CSI incentive rate that is reserved for you will be determined by your CSI Program Administrator at the time your reservation request (RR) application is approved, and may be lower than the current incentive rate shown in the CSI Statewide Trigger Point Tracker. Please note that final incentive amounts are subject to change based upon the configuration of the as-built system. (Per the CSI Handbook, no projects or applications are reserved CSI funding until all required information has been submitted and approved in writing by the Program Administrator.)
- 8. As of 6/20/08, the CSI-EPBB calculator performs rounding as follows:
 - O Estimated kWh production is rounded to the kWh
 - O CEC-AC rating is rounded to the watt
 - O CSI rating is rounded to the watt
 - O Design factor is rounded to 5 significant digits
 - O Incentive is rounded to the dollar

E-mail csi-epbb@aesc-inc.com with questions or comments.

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PTC_{adj}: The adjusted PTC rating is calculated based on the installation method and panel specifications. See the User Guide Appendix A for details on the adjusted PTC calculation.

Appendix 3 – Letter of Authorization



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AUTHORIZATION TO: RECEIVE CUSTOMER INFORMATION OR ACT ON A CUSTOMER'S BEHALF



	THIS IS	A LEGALLY BINDING CON (Please Print		EFULLY	
I,	NAME			TITLE (IF APP	
of _			(Custon		ollowing mailing address
	NAME OF CUSTOMER OF RE	CORD			and de baarbee anneins
	MAILING ADDRESS	CITY	STATE	ZIP	, and do hereby appoint
		of			
	NAME OF THIRD PARTY			MAILING AI	DDRESS
	CITY			STATE	ZIP
to ac	t as my agent and consultant (Agent)) for the listed acc	count(s) and in	the categories	indicated below:
ACC	OUNTS INCLUDED IN THIS AUTHOR				

1.			
	SERVICE ADDRESS	CITY	SERVICE ACCOUNT NUMBER
2.			
	SERVICE ADDRESS	CITY	SERVICE ACCOUNT NUMBER

(For more than two accounts, please list additional accounts on a separate sheet and attach it to this form)

INFORMATION, ACTS AND FUNCTIONS AUTHORIZED – This authorization provides authority to the Agent. The Agent must thereafter provide specific written instructions/requests (e-mail is acceptable) about the particular account(s) before any information is released or action is taken. In certain instances, the requested act or function may result in cost to you, the customer. Requests for information may be limited to the most recent 12 month period.

I (Customer) authorize my Agent to act on my behalf to perform the following specific acts and functions (initial all applicable boxes):

1. Request and receive billing records, billing history and all meter usage data used for bill calculation for all of my account(s), as specified herein, regarding utility services furnished by the Utility¹.

- 2. EPA Benchmarking (authorizes usage information to be uploaded to the EPA's ENERGY STAR Portfolio Manager®).
- 3. Request and receive copies of correspondence in connection with my account(s) concerning (initial all that apply):
 - a. Verification of rate, date of rate change, and related information;
 - b. Contracts and Service Agreements;
 - c. Previous or proposed issuance of adjustments/credits; or
 - d. Other previously issued or unresolved/disputed billing adjustments.
- 4. Request investigation of my utility bill(s).
 - 5. Request special metering, and the right to access interval usage and other metering data on my account(s).
 - 6. Request rate analysis.
 - 7. Request rate changes.
 - 8. Request and receive verification of balances on my account(s) and discontinuance notices.
 - 9. Other acts and functions (please specify) _

¹ The Utility will provide standard customer information without charge up to two times in a 12 month period per service account. After two requests in a year, I understand I may be responsible for charges that may be incurred to process this request. Revised 1/2014
Form 185-1000

AUTHORIZATION TO: RECEIVE CUSTOMER INFORMATION OR ACT ON A CUSTOMER'S BEHALF

I (CUSTOMER) AUTHORIZE THE RELEASE OF MY ACCOUNT INFORMATION AND AUTHORIZE MY AGENT TO ACT ON MY BEHALF ON THE FOLLOWING BASIS² (initial one box only):

C

One time authorization only (limited to a one-time request for information and/or the acts and functions specified above at the time of receipt of this Authorization).

One year authorization - Requests for information and/or for the acts and functions specified above will be accepted and processed each time requested within the twelve month period from the date of execution of this Authorization.

Authorization is given for the period commencing with the date of execution until

(Limited in duration to three years from the date of execution.) Requests for information and/or for the acts and functions specified above will be accepted and processed each time requested within the authorization period specified herein.

RELEASE OF ACCOUNT INFORMATION:

The Utility will provide the information requested above, to the extent available, via any one of the following. My (Agent) preferred format is (check all that apply):

- Hard copy via US Mail (if applicable).
- Facsimile at this telephone number:
- Electronic format via electronic mail (if applicable) to this e-mail address:

__(print name of authorized signatory), declare under penalty of I (Customer), perjury under the laws of the State of California that I am authorized to execute this document on behalf of the Customer of Record listed at the top of this form and that I have authority to financially bind the Customer of Record. I further certify that my Agent has authority to act on my behalf and request the release of information for the accounts listed on this form and perform the specific acts and functions listed above. I understand the Utility reserves the right to verify any authorization request submitted before releasing information or taking any action on my behalf. I authorize the Utility to release the requested information on my account or facilities to the above Agent who is acting on my behalf regarding the matters listed above. I hereby release, hold harmless, and indemnify the Utility from any liability, claims, demands, causes of action, damages, or expenses resulting from: 1) any release of information to my Agent pursuant to this Authorization; 2) the unauthorized use of this information by my Agent; and 3) from any actions taken by my Agent pursuant to this Authorization, including rate changes. I understand that I may cancel this authorization at any time by submitting a written request. [This form must be signed by someone who has authority to financially bind the customer (for example, CFO of a company or City Manager of a municipality).]

AUTHORIZED CUSTOMER SIGNATURE

TELEPHONE NUMBER

Executed this _____ day of _____

at CITY AND STATE WHERE EXECUTED

I (Agent), hereby release, hold harmless, and indemnify the Utility from any liability, claims, demand, causes of action, damages, or expenses resulting from the use of customer information obtained pursuant to this authorization and from the taking of any action pursuant to this authorization, including rate changes.

	AGENT SIGNATURE	TELEPHONE NUMBER
COMPANY		
Executed this	day of YEAR	

 $^{^{\}rm 2}$ If no time period is specified, authorization will be limited to a one-time authorization Revised 1/2014

Appendix 4 – Incentive Claim Form

COMING SOON



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Appendix 5 – Tips for Homeowners

This appendix provides some basic guidelines for those who are not familiar with renewable energy systems and may be interested in learning more.

List of Solar Contractors in San Diego

San Diego Solar Equity Program (SDSEP) maintains an updated List of Eligible Solar Contractors in the San Diego region who have completed a Solar Contractor Workshop and fully understand the program requirements. Inclusion on the List of Eligible Solar Contractors means that the solar contractor has met the minimum requirements necessary to participate in the program. The Center for Sustainable Energy, the Program Administrator, in no way endorses or guarantees any Solar Contractor or their work. Check out the Eligible Solar Contractor List posted on the Resources page of the SDSEP website to determine which Solar Contractor would be best for you and check out the tips below if you need further guidance.

Tips for Choosing a Solar Contractor

Get multiple bids

A "bid" is a proposed cost for the equipment and labor costs of purchasing and installing the solar photovoltaic (PV) system. It is important to evaluate multiple bids and compare each Solar Contractor's proposed cost for equivalent systems before contracting with a Solar Contractor. Each Solar Contractor is only permitted to install five systems under the SDSEP annually, so if a Solar Contractor you contact is not available, consider another Solar Contractor on the list.

Get references or visit business review sites

Get references from previous customers of the Solar Contractor and review past work to confirm the Solar Contractor's reputation within your community. You can also go to a business review site to get a better understanding of a Solar Contractor's reputation and review comments or complaints.

Project deposit

SDSEP is an equity-focused solar incentive program intended to cover the majority of the cost of the solar system for the Host Customer. Some Solar Contractors may request an initial deposit from the Host Customer as part of the contract process, which would be returned when the incentive is claimed at the end of the project. However, not all Solar Contractors will require a deposit and you are within your right to only contract with a Solar Contractor who does not



^{Center for} Sustainable Energy® SDSEP Program Handbook V.2 - October 2022 Appendix require a deposit. If you do decide to contract with a Solar Contractor who requires a deposit, never pay more than 10% down or \$1,000—whichever is less.

How Much Energy Does a Photovoltaic (PV) System Produce?

Be sure to compare the expected energy output of the proposed solar system before choosing a Solar Contractor. The expected energy output from a solar system (measured in kWh⁵) is a much better indicator of the system performance than the system rated capacity (measured in kW⁶). Also, be sure to verify that your system has an easy-to-read meter installed that measures the energy produced in kilowatt-hours. The utility meter only provides the net energy used at your home and does not tell you how much energy your system produces.

Determining how much electricity a photovoltaic (PV) system will produce is based on the orientation and tilt of the system and shade from trees, chimneys or other objects. In San Diego, an average 1-kilowatt of solar panels installed on your roof, at the optimal orientation and tilt for maximum annual energy production, will produce between 1400-1700 kilowatt hours per year. For purposes of estimating the energy output of the PV system, it is reasonable to use the middle of that range: 1550 kilowatt-hours per year. This estimate accounts for the following factors that can affect the energy output of the system:

Factor	Description
Dirt and Dust	Dirt and dust that accumulate on the PV modules can account for energy loss in energy production. If the panels are cleaned regularly, losses due to dirt and dust could be zero.
Temperature	Increased temperatures reduce the energy output of all PV modules. For example, PV systems in the desert will be more affected by high temperatures than systems installed in temperate coastal zones.
Energy Loss in Wires	Connecting a PV system to your home electrical system requires running some length of electrical wiring. Energy is lost in transfer along the wires between system components.

⁶ kW is kilowatt, a unit of measurement for power



⁵ kWh is kilowatt-hours, a unit of measurement for energy (power applied over time)

Factor	Description
	The longer the length of wires connecting your PV system to your electrical meter, the greater the energy lost in transfer.
Shade	In many residential settings, the presence of shade is inevitable. Speak with a Solar Contractor to determine how shade will affect the performance of your system.
Orientation/Tilt	The direction and angle of the installed system will affect the amount of electricity it can produce and the time of year it will produce the most. To maximize annual production, placing the system facing South at about a 33-degree incline is best. To maximize summer production, placing the system facing South at about an 18-degree incline is best.



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One mission — DECARBONIZE.[®]

The Center for Sustainable Energy[®] (CSE) is an independent nonprofit that is transforming markets for clean transportation and distributed energy through software-enabled program design and administration. CSE has administered over \$2 billion in incentive programs for governments, utilities and the private sector across the U.S.

EnergyCenter.org