

California Solar Incentive Programs



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What is CSI?

- The California Solar Initiative provides a financial incentive for the installation of solar on a home or business
- CSI incentives vary by incentive type, customer segment and system size
- Incentive amounts gradually reduce over time
- Funding is reserved, then once installation is complete, the incentive payment is made

CSI Background and History

In 2006, SB 1 was signed into law to authorize Go Solar California, which includes CSI & New Solar Homes Partnership (NSHP). Both programs launched in 2007.

- \$3.3 billion aimed at installing 3,000 MW of grid-installed solar
- CSI covers all non-residential projects and existing residential projects in Investor Owned Utility (IOU) territories
- NSHP covers residential new construction

CSI Eligibility

Project must be:

- Within service territory of and received retail electric service from Pacific Gas and Electric (PG&E), Southern California Edison (SCE) and San Diego Gas and Electric (administered by the CCSE)*
- Retrofit Residential (Single Family homes and Multifamily properties)**
- Retrofit and New Construction Non-Residential (Commercial, Industrial, Agricultural and Government)

System must be:

- Minimum System Size of 1 kW
- Maximum System Size of 5 MW
 - Incentives will be capped to the **First** MW
- System size must be \leq previous 12 month usage history (kWh) for system over 5 kW
 - Unless there is added load: new appliances, added square footage, etc.
 - System size 5-9.9 kW, square footage can be used
(2 kw x square feet = annual kWh)

*Municipal electric utility customers check with your provider for solar incentives

** New construction residential projects are administered separately under the New Solar Homes Partnership

CSI Incentive Structure

There are two types of Incentives:

Expected Performance-Based Buydown (EPBB)

- EPBB is a one time, up-front payment based on an estimate of the system's future performance

Or...

Performance-Based Incentives (PBI)*

- PBI are monthly payments for 5 years based on actual performance of the system as measured by a separate performance meter

*Any system larger than 50 kW are required to select for the PBI Incentive

Note: Effective January 1, 2010 any system larger than 30kW are required to select the PBI Incentive

CSI Incentives for Multifamily Housing

- There is no specific solar incentive funding for market-rate multifamily housing
- Incentives vary based on customer type: residential, gov/non-profit, or commercial
- MF Housing projects typically offset common load. Challenges include:
 - Limited roof space
 - 1 solar system per meter rule usually makes it cost-prohibitive for tenant units
 - Split incentives – building owners finance the project, tenants receive financial benefits of solar

Multifamily Affordable Solar Housing



Low Income Solar Program Background

- The Low Income Solar Program will provide education and incentives for installing solar PV systems in eligible low income structures (single-family homes and multifamily housing)
- \$216 M (10% of the rate-payer funded CSI Budget) was set aside for Low Income Solar
- There are two distinct programs:
 - \$108M for Single Family Affordable Solar Housing Program (SASH)
 - Administered statewide by GRID Alternatives
 - \$108M for Multifamily Affordable Solar Housing Program (MASH)
 - Administered by PG&E, SCE and CCSE

MASH Program Goals

- Stimulate adoption of solar power in the affordable housing sector
- Improve energy utilization and overall quality of affordable housing through application of solar and energy efficiency technologies
- Decrease electricity use and costs without increasing monthly household expenses for affordable housing building occupants
- Increase awareness and appreciation of the benefits of solar among affordable housing occupants and developers

MASH Eligibility

In addition to meeting the CSI eligibility requirements, MASH projects must:

- Meet the definition of low income residential housing per Public Utilities Code 2852 (either of the following):
 - (A) Residential housing financed with low-income housing tax credits, tax-exempt mortgage revenue bonds, general obligation bonds, or local, state, or federal loans or grants, and for which the rents of the occupants who are lower income households, as defined in Section 50079.5 of the Health and Safety Code, do not exceed those prescribed by deed restrictions or regulatory agreements pursuant to the terms of the financing or financial assistance.
 - (B) A residential complex in which at least 20 percent of the total units are sold or rented to lower income households, as defined in Section 50079.5 of the Health and Safety Code, and the housing units targeted for lower income households are subject to a deed restriction or affordability covenant with a public entity that ensures that the units will be available at an affordable housing cost, as defined in Section 50052.5 of the Health and Safety Code, or at an affordable rent, as defined in Section 50053 of the Health and Safety Code for a period of at least 30 years.
- Have an occupancy permit of 2 years or more
 - If you are working on a major rehab, check with New Solar Homes Partnership for eligibility

MASH Incentives

There is one type of MASH Incentive:

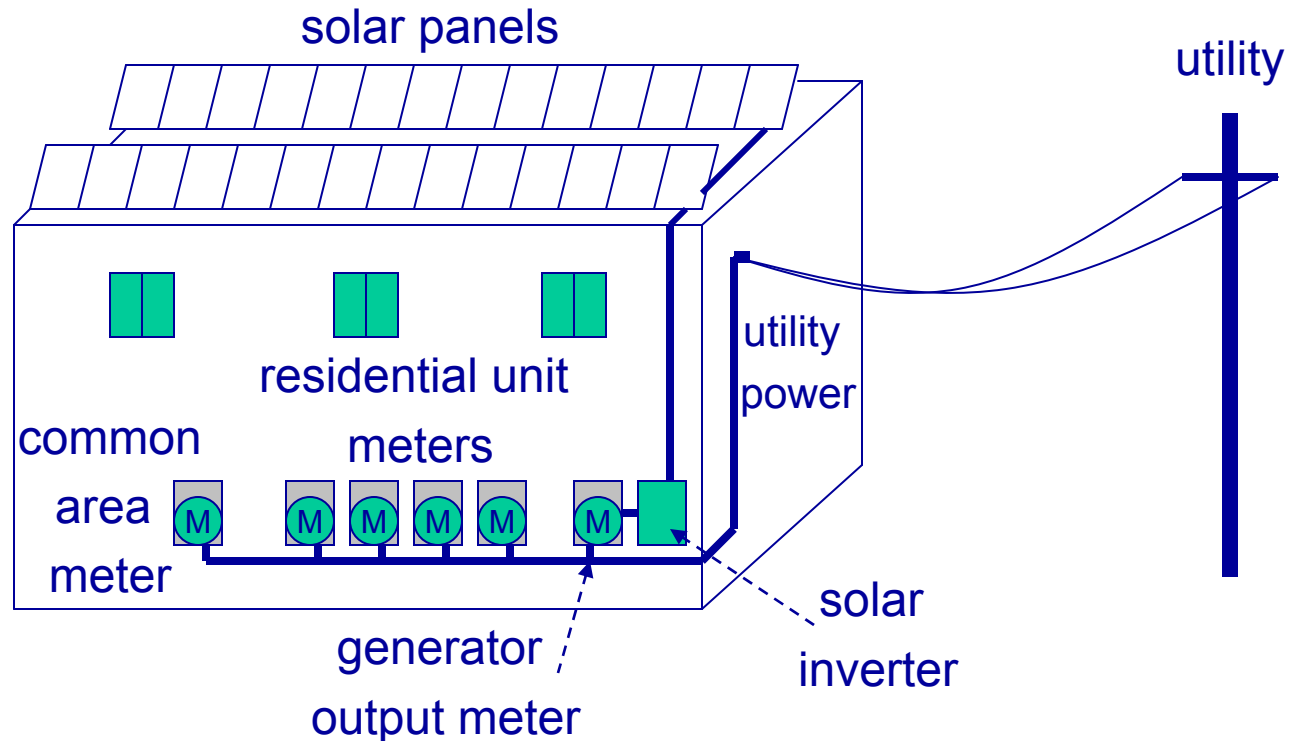
Expected Performance-Based Buydown (EPBB) - one time, up-front payment based on an estimate of the system's future performance

| <u>Three levels of incentives</u> | | |
|--|-------------------------------|--|
| Track 1A: Common Load Offset | Track 1 B: Tenant Load Offset | Track 2: Grant-style incentives (Coming Soon) |
| \$3.30/Watt | \$4.00/Watt | \$/Watt Varies |

MASH Incentives are not subject to a MW Trigger

Virtual Net Metering (VNM)

solar generator



Virtual Net Metering (VNM)

- New Tariff available to MASH participants
- Credits from a single solar system at a Site are allocated across multiple accounts
- The Investor Owned Utilities (IOUs) filed a proposed VNM tariff on 2/13/09
 - Advice Letter was suspended by CPUC; supplemental filing 4/10
- MASH decision directed CPUC to consider expansion of VNM to all multitenant buildings

MASH Program Status and Statistics

- Track 1 launched February 17, 2009
 - 15 applications received (as of 5/4)
 - 716kW; \$2.6M
- Track 2 is expected to launch later this year; pending CPUC approval
 - Supplemental Advice Letter filed 3/11, including Track 2 Grant Proposal Form

New Solar Homes Partnership



Program Overview

- Purpose: provide incentives and support activities for installing eligible solar photovoltaic (PV) systems on new homes
- Statewide: PG&E, SCE, SDG&E, BVES electric
- CEC: Guidebook, NSHP online tool, marketing & outreach, program rules
- Program started January 1, 2007 – 2016
- PG&E took over program administration on June 16, 2008; accepting only new applications
- Goal:
 - Create a self-sustaining market for solar homes where builders incorporate high levels of energy efficiency and high performing solar systems
 - 400 MW; \$400 million budget

Program Update

- New contract with the CEC for 2009-11
- New CEC NSHP Guidebook – Q2
- NSHP web tool enhancements – released April 10, 2009
- New 2009 -11 EE Program update – Q3
- New 2008 Title 24 Energy Standards – August 1, 2009
- Approaching incentive level drop – in effect 30 days after CEC’s public notice

Eligibility

- Who?
 - Builders, developers, and custom homeowners
- What?
 - Market segment – residential new construction
 - Custom homes
 - Production homes
 - Single and Multifamily buildings
 - Affordable housing
 - Technology – solar electric systems
 - Equipment – new and on the CEC’s list of eligible equipment

Incentives

- Incentives: one time, up-front, expected performance based (CEC PV EPBI calculator)
- Decline to zero over 10 years as megawatt goals/triggers are achieved
- Affordable Housing:
 - \$3.50/watt for residential units (36 months)
 - \$3.30/watt for common area (18 months)
- Market Rate:
 - \$2.50/watt: Base Incentive (18 months)
 - \$2.60/watt: Production housing with solar as a standard (36 months)

Requirements

- Ten year warranty requirement
- Grid connected and approved
- System size 1kW or larger (over 5kW requires justification)
- Third-Party Field Verification of energy efficiency measures and PV system
- Energy Efficiency (EE) requirements:
 - Tier 1: 15% better than Title-24
 - Tier 2: 35% better than Title-24, 40% cooling reduction
 - Both tiers require appliances offered by builder to be Energy Star (ES) if applicable
 - Must be completed by CEPE certified T-24 consultant

Integrating Energy Efficiency & Solar

- Builders encouraged to participate in PG&E's EE programs: Residential New Construction (RNC) and California Multifamily New Homes (CMFNH)
- PG&E's RNC program is aligned with NSHP Energy Efficiency Tiers
- Builder Benefit:
 - Incentives for both EE and Solar
 - Reduced paperwork
 - Ease of access
 - Differentiation from competition
- Customer Benefit:
 - Consumption – reduced energy use
 - Comfort – energy efficient home
 - Environment – reduced carbon footprint

How to Participate

- Before you apply:
 - Establish electric service from PG&E
 - Apply for interconnection
 - Participate in the Energy Efficiency Program for additional incentives
 - Review NSHP Guidebook
 - Visit our website
- How to apply:
 - Online tool (mail available) - www.newsolarhomes.org
- How to register a retailer/seller: submit NSHP-4 to the CEC: www.gosolarcalifornia.ca.gov

Resources

To Learn More...

Other Solar Webinars

- **CSI Workshop**
- **Basics of Photovoltaic Systems for Grid-Tied Applications**
- **Photovoltaic Site Analysis and System Sizing**
- **Interconnection Process**
- **Solar and Energy Efficiency**
- **Solar for the Entrepreneur**
- **Performance Data Provider and Performance Monitoring and Recording Service**
- **Solar Data Updates**

*Please refer to the Pacific Energy Center training website for the next available Internet class:
<http://www.pge.com/solarclasses>*

Resources (continued)

Applications:

www.pge.com/lowincomesolar

Inquiries:

solar@pge.com

EPBB Calculation Tool:

www.csi-epbb.com

California Energy Commission:

www.gosolarcalifornia.ca.gov