

California Solar Rebate Programs

SDHF Conference

Go Solar – Go Green Workshop

October 12, 2007



Benefits of Solar

- Environment
 - Clean, renewable energy that helps the environment
- Consumers
 - Predictable utility costs
 - Bill savings
- Developers/Builders
 - Rebates from the CPUC and CEC
 - Energy-efficiency rebates from utility companies
 - Expanded net operating income from reduced utility costs
 - Additional sources of equity through tax credits



CA Solar Rebate Programs

- Governor Schwarzenegger's \$3.3 Billion “Million Solar Roofs Program” (SB1)
 - Build a self-sustaining solar market
 - Install solar on 1 million rooftops
 - Create 3,000 megawatts (MW) of new, solar-produced electricity by 2017



CA Solar Rebate Programs

- 2 rebate programs for the installation of photovoltaic (PV) systems:
 - The California Solar Initiative (CSI)
 - California Public Utility Commission (CPUC)
 - Nonresidential and existing residential developments
 - The New Solar Homes Partnership (NSHP)
 - California Energy Commission (CEC)
 - New residential construction



California Solar Initiative

- 10-year, \$216 billion program
 - \$216 million set-aside for affordable devts
 - Higher per watt rebate for affordable devts
- Administered by the local utility companies
- Rebates up to \$3.25 per watt
- Technical assistance
- PV on existing residential development
- 18 month reservation period for affordable developments (12 months for >10kW)



Incentives for Affordable Devts

- Two types of CSI incentives based on PV system size:
 - Expected Performance-Based Buydown (EPBB) incentive
 - Systems <100 kW (<50 kW in 2008 and <30 kW in 2010)
 - Up-front payment of up to \$3.25 per watt
 - Based on the expected performance of the system
 - EPBB Calculator—estimates payment based on site-specific installation aspects
 - Performance Based Incentive (PBI)
 - Systems \geq 100 kW
 - Monthly payments up to \$.50 per watt over a five-year period
 - Based on metered output
 - Smaller systems may opt for PBI incentive
- Incentives will decline as specific cumulative megawatt volume reservations have been reached, closing by the year 2016.



CSI Incentive Amounts by Step

EPBB Payments (per watt)

	MW	Res	Com	Gov't/NP
1	50	n/a	n/a	n/a
2	70	\$ 2.50	\$ 2.50	\$ 3.25
3	100	\$ 2.20	\$ 2.20	\$ 2.95
4	130	\$ 1.90	\$ 1.90	\$ 2.65
5	160	\$ 1.55	\$ 1.55	\$ 2.30
6	190	\$ 1.10	\$ 1.10	\$ 1.85
7	215	\$ 0.65	\$ 0.65	\$ 1.40
8	250	\$ 0.35	\$ 0.35	\$ 1.10
9	285	\$ 0.25	\$ 0.25	\$ 0.90
10	350	\$ 0.20	\$ 0.20	\$ 0.70

PBI Payments (per kWh)

	Res	Com	Gov't/NP
	n/a	n/a	n/a
	\$ 0.39	\$ 0.39	\$ 0.50
	\$ 0.34	\$ 0.34	\$ 0.46
	\$ 0.26	\$ 0.26	\$ 0.37
	\$ 0.22	\$ 0.22	\$ 0.32
	\$ 0.15	\$ 0.15	\$ 0.26
	\$ 0.09	\$ 0.09	\$ 0.19
	\$ 0.05	\$ 0.05	\$ 0.15
	\$ 0.03	\$ 0.03	\$ 0.12
	\$ 0.03	\$ 0.03	\$ 0.10



Who is Eligible?

- Retail electric distribution customers
- Sites served by Pacific Gas and Electric, Southern California Edison, San Diego Gas & Electric, or Bear Valley Electric utilities
- Highest incentive level (\$3.25/watt)
 - Residential development must have 20% affordability for at least 45 years



PV System Requirements

- 1kW AC or larger
- Generate enough electricity to offset all or part of the development's electrical load without exceeding the expected need (based on previous 12 months)
- Interconnected to the utility distribution grid
- CEC certified components (PV modules, inverters and meters)
- Warranty against defects (including labor)
 - 10 years for inverters and modules
 - 1 year for meters (5-year warranty after January 1, 2008)



Energy Efficiency Requirements

- Utility Company energy efficiency audit
 - Online
 - Telephone
 - Energy audit within the past 3 years
 - Title 24 energy efficiency compliance within the past 3 years
- Proof must be submitted with application



How to Apply for CSI Rebates

Pacific Gas & Electric (PG&E)

PG&E Integrated Processing Center

P.O. Box 7265

San Francisco, CA 94120-7265

www.pge.com/solar

E-mail Address: solar@pge.com

Contact Person: CSI Program Manager

Telephone: 1-800-743-5000

Fax: 415-973-2510

Southern California Edison (SCE)

2131 Walnut Grove Avenue, G03, 3rd Floor, B10

Rosemead, California 91770

Irwindale, CA 91702

www.sce.com/rebatesandsavings/CaliforniaSolarInitiative/

E-mail Address: greenh@sce.com

Contact Person: CSI Program Manager

Telephone: 1-800-799-4177

Fax: 626-302-6253

California Center for Sustainable Energy

Attn: CSI Program Manager

8690 Balboa Avenue Suite 100

San Diego, CA 92123

www.energycenter.org

E-mail Address: csi@energycenter.org

Contact Person: John Supp, Program Manager

Telephone: 858-244-1177/(866)-sdenergy

Fax: 858-244-1178



New Solar Homes Partnership

- 10-year, \$400 million program
 - Higher per watt rebate for affordable devts
- Managed by the CEC
- Rebates up to \$3.50 per watt
- Technical assistance
- PV systems on new residential construction
- 36-month reservation period for affordable developments



Incentives for Affordable Devts

- Expected Performance-Based Incentive (EPBI)
 - Up-front payment up to \$3.50 per watt
 - Based on the estimated performance of the PV system
 - NSHP PV Calculator
- Incentives will decline as specific cumulative megawatt volume reservations have been reached, closing by the year 2016.



NSHP Incentive Levels for Affordable Developments

Individual Unit	Common Area	Reserved Volume*
(per watt, reference system)	(per watt, reference system)	(MW-AC)
\$3.50	\$3.30	1.5
\$3.15	\$2.97	1.8
\$2.80	\$2.64	2.2
\$2.45	\$2.31	2.5
\$2.10	\$1.98	3
\$1.75	\$1.65	3
\$1.40	\$1.32	4
\$1.05	\$0.99	5
\$0.70	\$0.66	6
\$0.35	\$0.33	7
TOTAL		36



Who is Eligible?

- Builders and developers
- Sites served by Pacific Gas and Electric, Southern California Edison, San Diego Gas & Electric, or Bear Valley Electric utilities
- Highest incentive level (\$3.50/watt)
 - Residential developments must have 20% affordability for at least 45 years



PV System Requirements

- 1kW AC or larger
- Interconnected to the utility distribution grid
- Generate enough electricity to offset all or part of the development's electrical load without exceeding the expected need
- CEC certified system components (PV modules, inverters and meters)
- 10-year warranty on all major components



Energy Efficiency Requirements

- The developer may comply with either of two tiers of energy efficiency:
 - Tier I – 15 percent reduction in the residential building’s combined space heating, cooling, and water heating energy compared to the current *Title 24 Standards*;
 - Tier II – 35 percent reduction in the residential building’s combined space heating, cooling, and water heating energy AND 40 percent in the residential building’s space cooling (air conditioning) energy compared to the current *Title 24 Standards*.
- *Energy Star* builder installed appliances
- Investor-owned utilities provide technical assistance and financial incentives to builders commensurate with the energy savings resulting from each tier.
- Certified Energy Plans Examiner (CEPE) must complete and certify energy-efficiency documentation for the NSHP and utility new construction energy efficiency programs.



How to Apply for NSHP Rebates

California Energy Commission

New Solar Homes Partnership

1516 Ninth Street

Sacramento, CA 95814-5512

E-mail Address:

renewable@energy.state.ca.us

Telephone: 1-800-555-7794



Learn More about CSI & NSHP

- Visit: www.gosolarcalifornia.ca.gov/
- Narisha Bonakdar:
nbonakdar@housingca.org
(916) 447-0503 ext. 109