

# California Solar Initiative

## Solar Forum 2007

February 9, 2009



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# General Overview of CSI

- **The California Solar Initiative (CSI) program is designed to provide incentives for the installation and operation of solar photovoltaic (PV) projects**
  - Authorized by the California Public Utilities Commission (CPUC) and Senate Bill 1
  - Total CSI budget of \$2.165 billion authorized by CPUC
  - CPUC commitment to a long term 10-year program
  - Provides incentives to residential retrofit and non-residential retrofit and new construction solar projects
  - Transitions from capacity based incentives to performance based incentives
  - Formally launched January 1, 2007
  - Replaces solar incentives previously offered through the Self-Generation Incentive Program and CEC Emerging Renewables Program

# History of CA Solar Incentives

- California Energy Commission (CEC) Emerging Renewables Program (ERP)
  - Provided Incentives for PV system (1998 - 2001)
  - Provided Incentives for PV system < 30kW (2001 - 2006)
- CPUC Self-Generation Incentive Program (SGIP)
  - Provided Incentives for PV systems  $\geq$  30 kW (2001-2006)
- CSI integrates the CEC ERP and CPUC SGIP into one solar incentive program, except for:
  - Residential New Construction Projects which will be funded through the CEC New Solar Homes Partnership

# CSI Budget

- Total authorized CPUC CSI budget is \$2.165 Billion
- Regional CSI incentive budgets are as follows:

Pacific Gas and Electric Company	\$946M
Southern California Edison Company	\$996M
San Diego Regional Energy Office	\$223M

# Eligible Customers

- Eligible customer projects must be within the service territory of and must receive retail level electric service from:
  - Pacific Gas and Electric (PG&E)
  - Southern California Edison (SCE)
  - San Diego Gas & Electric (SDG&E)
    - The San Diego Regional Energy Office (SDREO) administers the CSI in the SDG&E Service Territory
- Municipal electric utility customers are not eligible to receive incentives from the designated Program Administrators

# Eligible Projects

- Residential Retrofit Projects
- Non-Residential Retrofit and New Construction Projects
- Minimum System Size of 1 kW
- Maximum System Size of 5 MW
  - Incentives will be capped to the first MW
- Installed capacity at site may not exceed actual energy consumed during previous 12 months
  - Maximum System Capacity = 12-months previous kWh usage / (0.18 x 8760 hr/year)
  - New Construction and Future Load Growth must be substantiated

# CSI Incentive Rates

## ***Incentive structure:***

- Rebates automatically decline based upon reservations received
- Higher rebates for non-taxable entities

		EBPP Payments (per watt)			PBI Payments (per kWh)		
MW Step	Statewide MW in Step	Residential	Commercial	Gov't/ Nonprofit	Residential	Commercial	Gov't/ Nonprofit
1	50	n/a	n/a	n/a	n/a	n/a	n/a
2	70	\$2.50	\$2.50	\$3.25	\$0.39	\$0.39	\$0.50
3	100	\$2.20	\$2.20	\$2.95	\$0.34	\$0.34	\$0.46
4	130	\$1.90	\$1.90	\$2.65	\$0.26	\$0.26	\$0.37
5	160	\$1.55	\$1.55	\$2.30	\$0.22	\$0.22	\$0.32
6	190	\$1.10	\$1.10	\$1.85	\$0.15	\$0.15	\$0.26
7	215	\$0.65	\$0.65	\$1.40	\$0.09	\$0.09	\$0.19
8	250	\$0.35	\$0.35	\$1.10	\$0.05	\$0.05	\$0.15
9	285	\$0.25	\$0.25	\$0.90	\$0.03	\$0.03	\$0.12
10	350	\$0.20	\$0.20	\$0.70	\$0.03	\$0.03	\$0.10

# CSI MW Step Allocations

Step	mW in Step	PG&E (MW)		SCE (MW)		SDG&E/SDREO (MW)	
		Res	Non-Res	Res	Non-Res	Res	Non-Res
1	50	-	-	-	-	-	-
2	70	10.1	20.5	10.6	21.6	2.4	4.8
3	100	14.4	29.3	15.2	30.8	3.4	6.9
4	130	18.7	38.1	19.7	40.1	4.4	9.0
5	160	23.1	46.8	24.3	49.3	5.4	11.1
6	190	27.4	55.6	28.8	58.6	6.5	13.1
7	215	31.0	62.9	32.6	66.3	7.3	14.8
8	250	36.1	73.2	38.0	77.1	8.5	17.3
9	285	41.1	83.4	43.3	87.8	9.7	19.7
10	350	50.5	102.5	53.1	107.9	11.9	24.2
<b>Total</b>	<b>1750</b>	<b>252.4</b>	<b>512.3</b>	<b>265.6</b>	<b>539.5</b>	<b>59.5</b>	<b>120.8</b>
<b>Total by Utility</b>		764.8		805.0		180.3	
<b>Percent</b>		43.7%		46.0%		10.3%	

# General Overview of CSI

As of January 1, 2007, the CSI program pays:

- Expected Performance-Based Buydown (EPBB) incentives for PV projects < 100 kW
  - EPBB is an up-front incentive based on an estimate of the system's future performance
  - EPBB combines the benefits of rewarding PV System performance with the administrative simplicity of a one-time incentive paid at the time of project installation
- Performance-Based Incentives (PBI) for PV projects  $\geq$  100 kW
  - Monthly payments based on measured kWh output of solar power produced over a 5-year period

# Expected Performance Based Buydown (EPBB)

- Applies to Systems < 100 kW
- Paid upfront, based on the following incentive rates
  - \$2.50 per watt for Residential and Commercial installations
  - \$3.25 per watt for Government and Non-Profit installations
- **EPBB Incentive** = EPBB Incentive Rate x System Rating x Design Factor
- **Design Factor** = Simulated solar output of proposed system/Simulated solar output for optimal system
  - Takes into consideration location, orientation, tilt and shading effects on system performance

# Performance Based Incentives (PBI)

- Applies to systems  $\geq 100$  kW
- Paid monthly over a 5-year period, based on the following incentive rates:
  - \$0.39 per kWh for Residential and Commercial installations
  - \$0.50 per kWh for Government and Non-Profit installations
- $\text{PBI Incentive} = \text{PBI Incentive Rate} \times \text{Measured PV System Energy Output}$
- Reservation Amount will vary by capacity factor used
  - $\text{Reservation Amount} = \text{PBI Incentive Rate} \times .18 \times 8760 \times \text{CSI System Size} \times 5 \text{ year (fixed systems)}$
  - $\text{Reservation Amount} = \text{PBI Incentive Rate} \times .22 \times 8760 \times \text{CSI System Size} \times 5 \text{ year (tracking systems)}$
- Customers may opt into PBI for systems  $< 100$  kW

# Performance Based Incentives (PBI)

- Building Integrated Photovoltaics (BIPV) are solar electric systems in which the PV panels constitute part of the buildings roof or façade
- All BIPV projects will be paid PBI per CPUC direction

# Current CSI Reservation Status

**PG&E CSI Applications Received as of Feb 6, 2007:**

Pacific Gas and Electric Company (MW)									
Step	Statewide MW in Step	Original Target		Target with Reallocated MW from previous Steps		Reservations Issued		Applications Received	
		Res	Non-Res	Res	Non-Res	Res	Non-Res	Res	Non-Res
1	50	-	-	-	-	-	-	-	-
2	70	10.1	20.5	10.1	31.1	0.1	16.7	0.0	33.3
3	100	14.4	29.3	-	-	-	-	-	-
4	130	18.7	38.1	-	-	-	-	-	-
5	160	23.1	46.8	-	-	-	-	-	-
6	190	27.4	55.6	-	-	-	-	-	-
7	215	31	62.9	-	-	-	-	-	-
8	250	36.1	73.2	-	-	-	-	-	-
9	285	41.1	83.4	-	-	-	-	-	-
10	350	50.5	102.5	-	-	-	-	-	-
Total	1800	252.4	512.3	10.1	31.1	0.1	16.7	0.0	33.3

***\*Note: 2006 SGIP Reservations over 50 MW Step 1 Trigger are included in CSI Step 2. MWs that have dropped out of Step 1 are included in Step 2 MW limit.***

# 2-Step vs. 3-Step Reservation Process

- **2-Step Reservation Process**
  - Residential System of any size
  - Non-Residential System size <10 kW
  - No Application Fee
  
- **3-Step Reservation Process**
  - Non-Residential System size >10 kW
  - Subject to Application Fee
  - Customers may opt-in to Expedited 3-Step
  
- **Reservation Period**
  - 12-months for retrofit projects
  - 18-months for new construction/government/non-profit

# 2 Step Process

## Step 1: Reservation Request

- Application and CSI Program Contract
- Proof of Electric Utility Service
- System Description Worksheet
- Energy Efficiency Audit Documentation (exemptions available)
- EPBB Tool Calculation Printout
- Copy of Agreement to Purchase and Install Solar
- Copy of Application for Interconnection
- Host Customer Insurance for systems  $\geq$  30 kW

# 2 Step Process

## Step 1: Reservation Request

- Additional Documentation, if Applicable:
  - Tax-Exempt Status/AB 1407 Compliance (govt/non-profit)
  - Copy of Alternative System Ownership (if 3rd party owned)
  - System Owner Insurance for systems  $\geq$  30 kW
  - Electrical System Sizing (new/expanded load)

# 2 Step Process

## Step 2: Incentive Claim

- Signed Incentive Claim Form
- Proof of Authorization to Interconnect and Final Interconnection Agreement
- Copy of Building Permit and Final Inspection sign-off
- Final Project Cost Breakdown Worksheet
- Final Project Cost Affidavit

# 3 Step Process

## Step 1: Reservation Request

- CSI Application
- Proof of Electric Utility Service
- System Description Worksheet
- Energy Efficiency Audit Documentation (exemptions available)
- EPBB Tool Calculation Printout
- Application Fee
  - $\text{CSI System Size} \times \text{Current } \$/W \text{ Incentive Rate} \times 1\%$
  - Refunded upon Completed Installation
  - Forfeited if Project is Cancelled or Withdrawn after receipt of a Reservation

Refer to **CSI Handbook, Section 4.2**

# 3 Step Process

## Step 1: Reservation Request

- Additional Documentation, if Applicable:
  - Tax-Exempt Status/AB 1407 Compliance (government/non-profit)
  - Electrical System Sizing (new/expanded load)

# 3 Step Process

## Step 2: Proof of Project Milestone

- Completed Proof of Project Milestone Checklist
- Signed CSI Program Contract
- Host Customer Certificate of Insurance for Systems  $\geq 30$  kW
- Copy of Completed Interconnection Application
- Copy of Executed Contract for System Purchase and Installation
- Project Cost Breakdown Worksheet

# 3 Step Process

## Step 2: Proof of Project Milestone

- Additional Documentation, if Applicable:
  - Copy of Executed Contract for System Purchase and Installation
  - Copy of Executed Alternative System Ownership (if Owner is not Host)
  - System Owner Certificate of Insurance (if Owner is not same as Host) for systems  $\geq 30$  kW
  - Revised System Sizing Calculations (if applicable)
  - Revised Incentive Calculation Worksheet (if applicable)
  - Copy of RFP or solicitation (Govt, Non-profit, public entities)

# 3 Step Process

## Step 3: Incentive Claim

- Signed Incentive Claim Form
- Proof of Authorization to Interconnect and Final Interconnection Agreement
- Copy of Building Permit and Final Inspection sign-off
- Proof of Warranty
- Final Project Cost Breakdown Worksheet
- Final Project Cost Affidavit

# New CSI Requirements

- Time of Use (TOU) Rates
- Energy Efficiency Audits
- Installer Requirements
- Ten Year Warranty Requirements
- Metering Requirements
- Inspection Requirements

# Time of Use (TOU) Rate Requirements

- Customers who install solar are required to take their electric service under applicable TOU tariffs in order to receive CSI Incentives
- Non-TOU customers can apply to CSI, but must take TOU service prior to incentive payment

# Available PG&E TOU Rates

- Residential
  - E7<sup>1</sup> is the most popular TOU rate for NEM customers who can minimize usage noon-6pm Mon-Fri.
  - E6 is available for NEM customers previously considering the non-TOU E1 schedule.
- Commercial, Industrial (General Service)
  - A6, A10 (TOU2), E19V2 are the most common TOU options
- Agricultural<sup>2</sup>
  - AG4, AG5, AGR, AGV are all TOU rates for agricultural customers
- Check [www.pge.com/tariffs](http://www.pge.com/tariffs) to review view the tariff sheets

**Note 1:** E7 is for new solar customers who take service on Schedule NEM on or after January 1, 2007. It will be closed to all new NEM customers when a) PG&E's 2007 General Rate Case Phase 2 decision is implemented, or when five thousand new solar customers have enrolled on the rate in the period starting January 1, 2007, whichever of a) or b) occurs first. NEM customers electing service on all schedules other than E-7 or EL-7, prior to January 1, 2007, are not eligible to take service under the E-7 or EL-7 tariffs after January 1, 2007.

**Note 2:** subject to customer's account satisfying eligibility requirements listed in Applicability section of the tariff sheet.

# Energy Efficiency Requirements

- Host Customers must perform an energy efficiency audit to be eligible for CSI incentives
- Host Customer are exempt if they:
  - Provide documentation of an energy efficiency audit performed at the facility in the last three years
  - Submit proof of Title 24 energy efficiency compliance within the past three years Measurement & Evaluation
  - Demonstrate they have one of the following two national certifications of energy efficiency for the facility:
    - Energy Star
    - LEED

# Energy Efficiency Requirements

- PG&E audits:
  - Residential audits:
    - Phone Audit: Call the Smarter Energy Line (SEL) at 1-800-933-9555
    - On line: [Home Energy Analyzer](#)
  - Non-Residential audits:
    - Phone Audit: Call the Business Customer Center (BCC) at 1-800-468-4PGE(4743)
    - On line audits: Business Energy Analyzer
    - Onsite: Contact your local Pacific Gas and Electric Company division Account Representative, or call the Business Customer Center at 1-800-468-4PGE (4743)
- Third party provided audits are acceptable provided:
  - At the customers expense

# CSI Installer & Warranty Requirements

- **CSI Installer Requirements**
  - Must be listed with Program Administrators to be eligible
  - Must have active A, B, C-10, or C-46 license
  - Must maintain Commercial General Liability, Workers Compensation and Auto Insurance requirements
  - Refer to CSI Handbook:
    - Section 2.1.4 - Installer Eligibility
    - Section 2.6.2 - Installer Insurance Requirements
  
- **CSI Warranty Requirements**
  - All systems must have minimum 10-year warranty effective January 1, 2007
  - Refer to CSI Handbook, Section 2.4

# CSI EPBB Tool and Online Application Tool Overviews

- **CSI EPBB Tool:**
  - Online at: [www.csi-epbb.com](http://www.csi-epbb.com)
  - Developed by AESC
  - Overview presented by Ron Ishii
  
- **CSI Online Application Tool**
  - Clean Power Research PowerClerk
  - Overview presented by Tom Hoff

# CSI Metering

- CSI Metering Requirements
  - EPBB vs. PBI Accuracy Requirements
    - +/- 2% Revenue Grade
    - +/- 5% Non-Revenue Grade
    - Listed on the CEC website
  - Appendix B: Table 16 Specifications
  - Cost Caps
    - 1% for 30kW and below, 0.5% above 30kW
  - Meter Warranty Requirements
    - 2007: One-Year Warranty
    - 2008+: Five-Year Warranty
  - Remote Communication Capable
    - Unless qualified as exceeding the cost caps for Performance Monitoring and Reporting Service (PMRS), meter must have remote communications capability

# CSI Metering

**Table 16  
Metering Summary**

	<u>5% Meter</u> (Inverter Integrated)	2% Meter (Standalone Meter)	PMRS
EPBB < 10kW	Required	Optional	Required*
EPBB ≥ 10kW and <20 kW	N/A	Required	Required*
EPBB > 20 kW	N/A	Required	Required
PBI (All System Sizes)	N/A	Required	Required

Notes:

- PMRS stands for Performance Monitoring and Reporting System

\*Required unless the cost of the PMRS fall above the cost cap (the cost of the minimum metering, communication, and reporting system over the first five years for each solar installation size grouping shall be less than 1% of total installed cost for systems up to 30 k and 0.5% for larger systems. See CPUC Decision D.06-08-028). The customer seeking exemption must demonstrate to the Program Administrator that they were not able to satisfy the metering requirements within the applicable cost cap.

N/A = Not Applicable

# CSI Metering

## ➤ Data Requirements

- PBI to Utility
  - Monthly kWh produced and instantaneous kW
  - Submitted via approved Meter Data Management Agent (MDMA)
  - Check with your Utility service provider on accepted formats
- Performance Monitoring & Reporting Service (PMRS)
  - Monthly kWh produced and instantaneous kW
  - Data to be maintained by PMRS provider per Handbook requirements
  - PMRS providers listed with the CEC

# CSI Metering

- Utility vs. Third-Party Metering & Data Communication
  - Customers may contract with either the utility or qualified 3<sup>rd</sup> party providers.
    - Can use any qualified provider for the meter installation, so long as the meter is CEC approved (See CPUC web site for certified Meter Service Providers).
    - Customer responsible for installing meter socket for utility-provided meters.
    - PBI participants using 3<sup>rd</sup> party data management providers must use a utility-approved Meter Data Management Agent to transfer PBI data to the utility for incentive payment.
  - Customers should decide early in the process who will provide meter & MDMA services to avoid delays, minimize cost and ensure compatibility.

# CSI Metering

- Eligible Equipment, MSP's, MDMA's, and PMRS Listings
  - Eligible Meters – Listed on CEC website:  
*[http://www.consumerenergycenter.org/cgi-bin/eligible\\_meters.cgi](http://www.consumerenergycenter.org/cgi-bin/eligible_meters.cgi)*
  - MSP – Listing on CPUC website:  
*<http://www.cpuc.ca.gov/static/energy/electric/electric+markets/metering/msps.htm>*
  - MDMA – Listed on CPUC website:  
*<http://www.cpuc.ca.gov/static/energy/electric/electric+markets/metering/mdmas.htm>*
  - PMRS – Listed on CEC website:  
*<http://www.consumerenergycenter.org/erprebate/monitors+rsp.html>*

# CSI Inspections

- **Systems greater than 1 kW and less than 30 kW:** These systems will have a field verification inspection on a random basis.
- **Systems greater than 30 kW and less than 100 kW that are participating in EPBB:** 100% of these systems will be inspected
- **Systems that are greater than or equal to 100 kW but are less than 1 MW, or are participating in PBI:** These systems will have a field verification inspection on a random basis.
- **Systems greater than 1 MW:** 100% of these systems will be inspected (as the PBI payment will be prorated)
- A mandatory site inspection is required for all relocated equipment. System Owners that have received an EPBB incentive and have relocated their system must orient their relocated equipment to produce at least the same generation as their initial incentive payment was based upon

# CSI Inspections

- Inspections will check for:
  - Verification that equipment nameplates and counts match those submitted on the Incentive Claim Form
  - Measurements to verify that system tilt, orientation, and shading values are consistent with values used in the EPBB calculator and submitted along with the Incentive Claim Form
  - Measurement of solar irradiation, ambient temperature, and solar system output to verify system performance against the expected output from the PV Calculator

# Failed Inspections

- **Material mechanical failure:** A failure that results in a decline in the expected performance of the system (i.e., one or more of the system components is not operating properly).
- **Immaterial mechanical failure:** minor failures that can be corrected within 60 days.
- **Material compliance failure:** the system as verified does not match the application's stated system and/or the system does not meet the CSI program eligibility requirements (i.e., the EPBB characteristics are incorrect, the system components or number of components are incorrect, etc.)
- **Immaterial compliance failure:** failures that have no impact on the expected performance of the system and can be corrected within 60 days (i.e. submission of erroneous system data)

# Failed Inspections

- If an entity fails 3 inspections, they will be disqualified from the CSI Program
- Failed inspection for mechanical failures: 60 calendar days will be allowed to bring the system into compliance after a failed inspection, subject to re-inspection
- High volume installers (> 200 installed systems per year):
  - If the installer accumulates two strikes, the entity will be placed on probation. If no additional strikes are accumulated within the first year, their first strike is removed and they continue on probation until the second strike's probation year ends. If they acquire no additional strikes, the second strike is removed, and they will be restored to a zero-strike status.

# CSI Inspections Forms

Photovoltaic System Inspection Form SDREO CSI Program		Project Name	0
		Application Number	0
<b>Pre-Inspection</b>  Design Capacity* <input type="text" value="0.000"/> kW  System Operational Date: <input type="text"/>  Array ID <input type="text"/> <b>Photovoltaic Modules</b> Manufacturer <input type="text"/> Model # <input type="text"/> Equipment Location <input type="text"/> Type of PV Cells <input type="text"/> Module Output** <input type="text"/> Watts Number of Modules <input type="text"/> Total Module Output <input type="text" value="0.000"/> kW <b>Inverter / PCU</b> Equipment Location <input type="text"/> Manufacturer <input type="text"/> Model # <input type="text"/> Size (kW) <input type="text"/> Peak Inverter Efficiency <input type="text"/> Number of Units <input type="text"/> UL Label <input type="text"/>	<b>On-site Inspection</b>  Calc'd Max Power Output* <input type="text" value="0.000"/> kW Power Output at Inspection <input type="text"/> kW System Operational Date: <input type="text"/>  Array ID <input type="text" value="0"/> <b>Photovoltaic Modules</b> Manufacturer <input type="text"/> Model # <input type="text"/> Equipment Location <input type="text"/> Type of PV Cells <input type="text"/> Module Output** <input type="text"/> Watts Number of Modules <input type="text"/> Total Module Output <input type="text" value="0.000"/> kW <b>Inverter / PCU</b> Equipment Location <input type="text"/> Manufacturer <input type="text"/> Model # <input type="text"/> Size (kW) <input type="text"/> Peak Inverter Efficiency <input type="text"/> Number of Units <input type="text"/> UL Label <input type="text"/>		
Calculated Field shown as <input type="text"/>		<b>Inspected By</b> <input type="text" value="0"/> <b>O.C.</b> <input type="text"/>	
<small>*Total System Output = Total Output x Peak Inverter Efficiency            **Module output rated at PVUSA Test Conditions</small>			

Photovoltaic System Inspection Form SDREO CSI Program		Project Name	0
		Application Number	0
<b>On-site Inspection</b>			
<b>System Checklist</b> <input type="checkbox"/> Connected to Grid <input type="checkbox"/> Permanent installation <input type="checkbox"/> Serves One Site <input type="checkbox"/> Flush Mounted <input type="checkbox"/> Racked <input type="checkbox"/> Anchored <input type="checkbox"/> Self Ballasted <input type="checkbox"/> Battery Backup	<b>Photograph Checklist</b> <input type="checkbox"/> Main Components <input type="checkbox"/> Equipment Nameplates <input type="checkbox"/> Inverter Nameplates <input type="checkbox"/> UL Approval Markings <input type="checkbox"/> Interconnection Equipment <input type="checkbox"/> Obstacles to Sunlight <input type="checkbox"/> Questionable Workmanship <input type="checkbox"/> Safety Hazards		
<b>Ambient Conditions at time of Measured Output</b> Temperature <input type="text"/> °F Solar Irradiation <input type="text"/> W/m <sup>2</sup> Time <input type="text"/>			
<b>Carport Support Structures</b> <input type="checkbox"/> Structure is new <input type="checkbox"/> Structure's uses without PV includes walls or roof <div style="float: right;"> <input type="checkbox"/> Pilot / Demonstration System <input type="text" value="no"/>  <input type="checkbox"/> Used Equipment <input type="text" value="no"/> </div>			
<b>Notes / Comments (Discrepancies, Special conditions, safety issues, other observations)</b>  <hr/> <b>System Location (sketch or describe)</b>  example provided below:			

Photovoltaic System Inspection Form SDREO CSI Program		Project Name	0
		Application Number	0
<b>On-site Inspection</b>			
<b>PV Orientation Data</b> Array ID <input type="text" value="0"/> Which type of mounting system is used to orient the PV array towards the sun? Fixed <input type="checkbox"/> Orientation (i.e., Azimuth): <input type="text"/> see Fig. 1 Tilt from horizontal: <input type="text"/> Degrees  Manual / Seasonal Adjustment Orientation Only - Tilt fixed at <input type="text"/> Degrees <input type="checkbox"/> Tilt Only - Azimuth fixed at <input type="text"/> see Fig. 1 <input type="checkbox"/> Orientation & Tilt adjusted seasonally <input type="checkbox"/>  Automatic 1-Axis Tracking (e.g., Zone Works TrackRack) <input type="checkbox"/> Do you manually adjust tilt?    Yes / No    (circle one) <input type="text"/>  Automatic 2-Axis Tracking (e.g., WattSun AZ-100) <input type="checkbox"/>	<b>Figure 1: Azimuth Orientations</b> 		
<b>Notes / Comments</b> <input style="width: 100%; height: 100%;" type="text"/>			

# CSI Policy Perspective

- CSI Phase II Topics
  - Affordable Housing/Low Income
  - RD&D
- CSI Phase II Topics
  - Measurement & Evaluation
  - CSI Marketing, Education & Outreach
- CSI Program Forum
- Non-PV Solar Technologies
- SDREO Solar Water Heating (SWH) Pilot Program

# CSI Program Forum

- A public venue to identify and discuss ongoing CSI administration and implementation
- Will provide opportunity to develop consensus-based revisions to CSI Handbook
- CPUC Energy Division will convene first meeting (March) which are anticipated to be held quarterly. Issues identified at this point are:
  - BIPV, Metering New warranty requirements
  - Others?

# Future CSI Solar Thermal Incentives

- SDREO Pilot Solar Thermal Program (pending CPUC approval)
- SB1 allocates \$100.8M for Solar Thermal and Solar Water Heating (SWH) projects
- CSI Solar Thermal Incentives will only be available to technologies that displace electric usage
- CSI Program Administrators directed to hire technical experts to assess incentives and file CSI Handbook changes by April 1, 2007

# PG&E Contact Information

- Website: [www.pge.com/csi](http://www.pge.com/csi)
- Email Address: [solar@pge.com](mailto:solar@pge.com)
- Contact Person:  
Program Manager, Telephone: (800) 743-5000
- Fax: (415) 973-8300
- Mailing Address:  
PG&E Integrated Processing Center  
**California Solar Initiative Program**  
P.O. Box 7265  
San Francisco, CA 94120-7265

# Additional PG&E Resources

## Pacific Energy Center and Stockton Training Center:

- Solar Classes: <http://www.pge.com/solarclasses/>
  - Basics of Photovoltaic (PV) Systems for Grid-Tied Applications
  - Solar Water Heating Systems
  - Field Verification and Diagnostic Testing of Photovoltaic Systems for HERS Raters
  - Understanding Financial Analysis Methods for Photovoltaic (PV) Systems
- Resource Lending Library
- Diagnostic Tool Lending Library
  - Solar Pathfinder
  - Solmetric SunEye