

10.08.09

Welcome to Speeding Up Your California Solar Initiative Application Form

**We will be starting the webinar momentarily
Thank you for your patience**

To download today's presentation, please visit www.pge.com/solareducation





Agenda

PG&E Overview

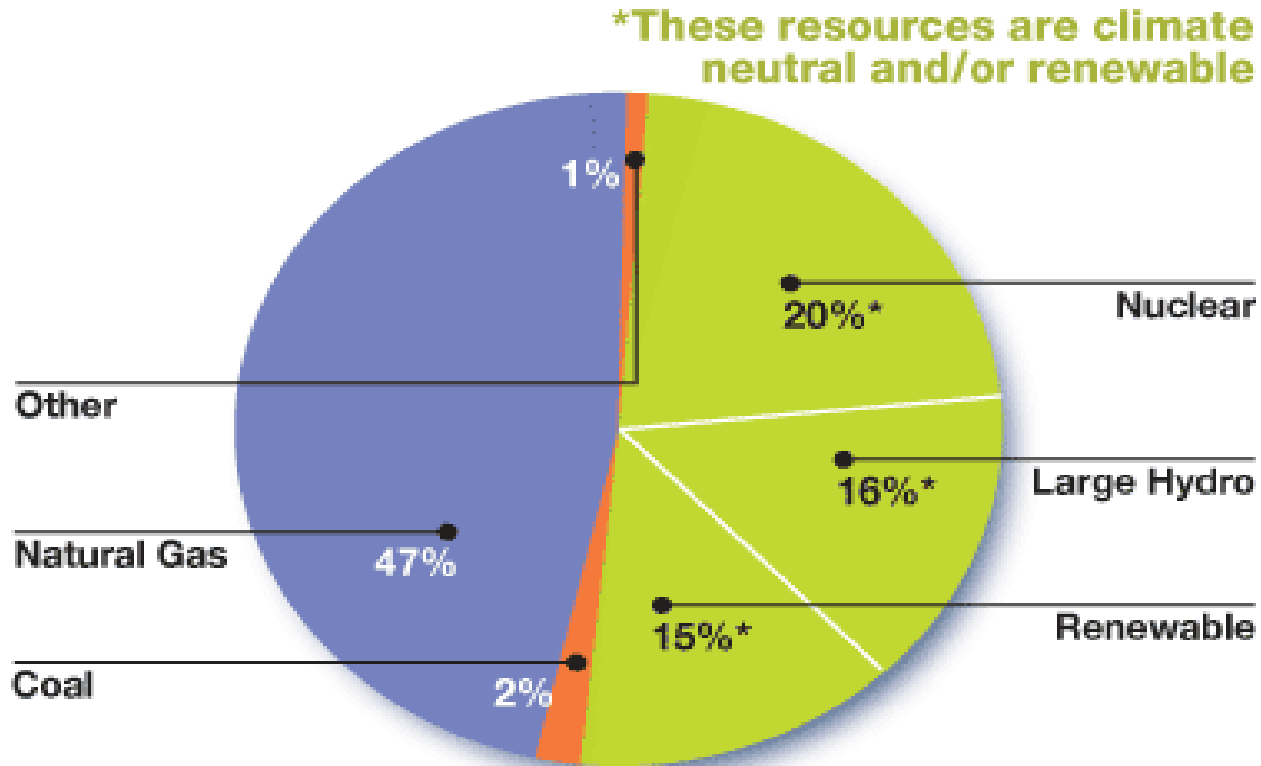
CSI Overview and Update

Common Mistakes



PG&E's 2009 Projected Power Mix

on average over 50% of the energy delivered comes from sources that emit almost no carbon dioxide

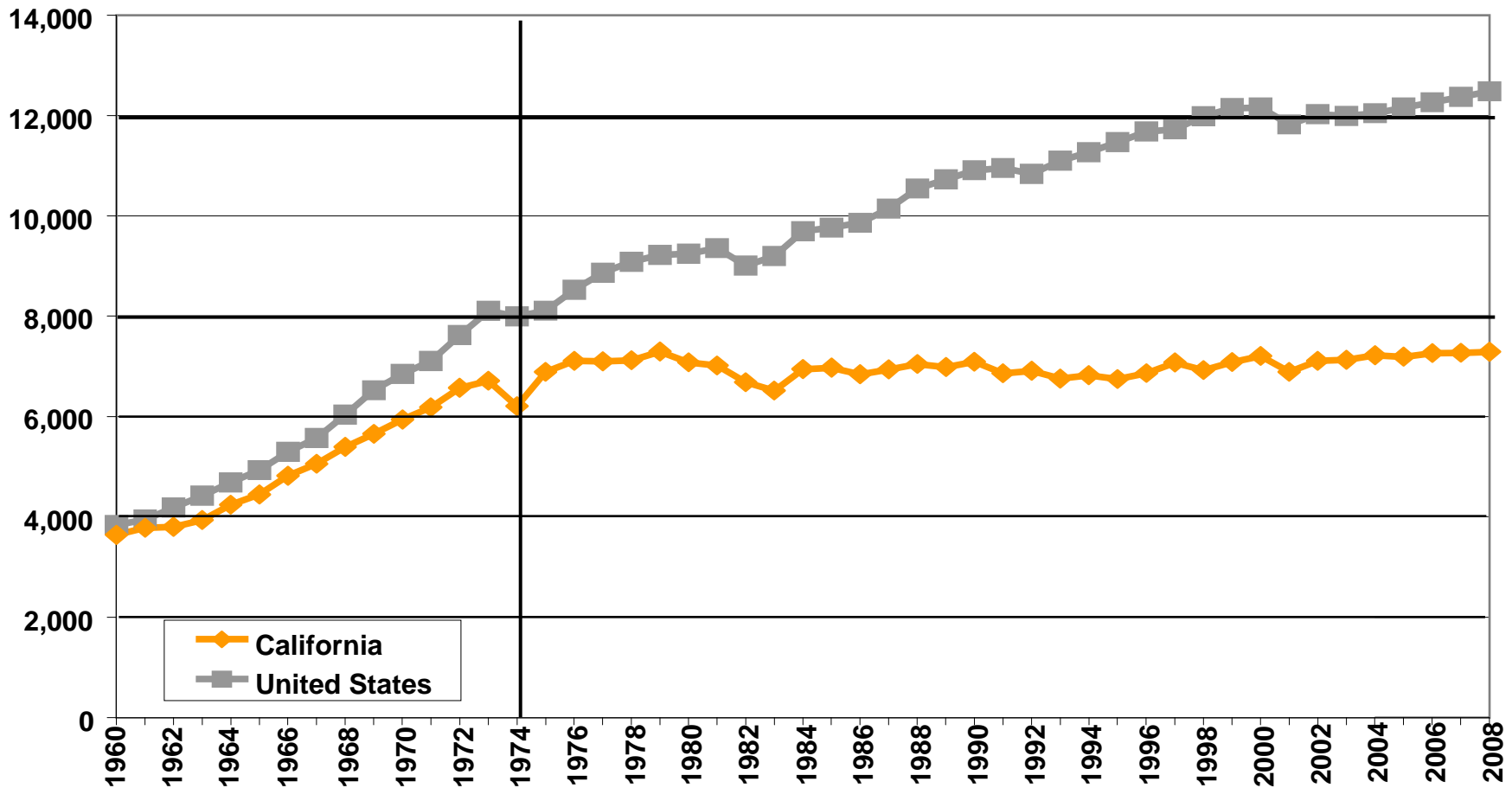


Note: Power mix includes all PG&E-owned generation plus all of PG&E's power purchases.



30+ Years of Energy Efficiency Success

Over the past 30 years, California per capita energy use has remained relatively flat compared to the 50% increase in U.S. per capita energy use.





Solar to Date

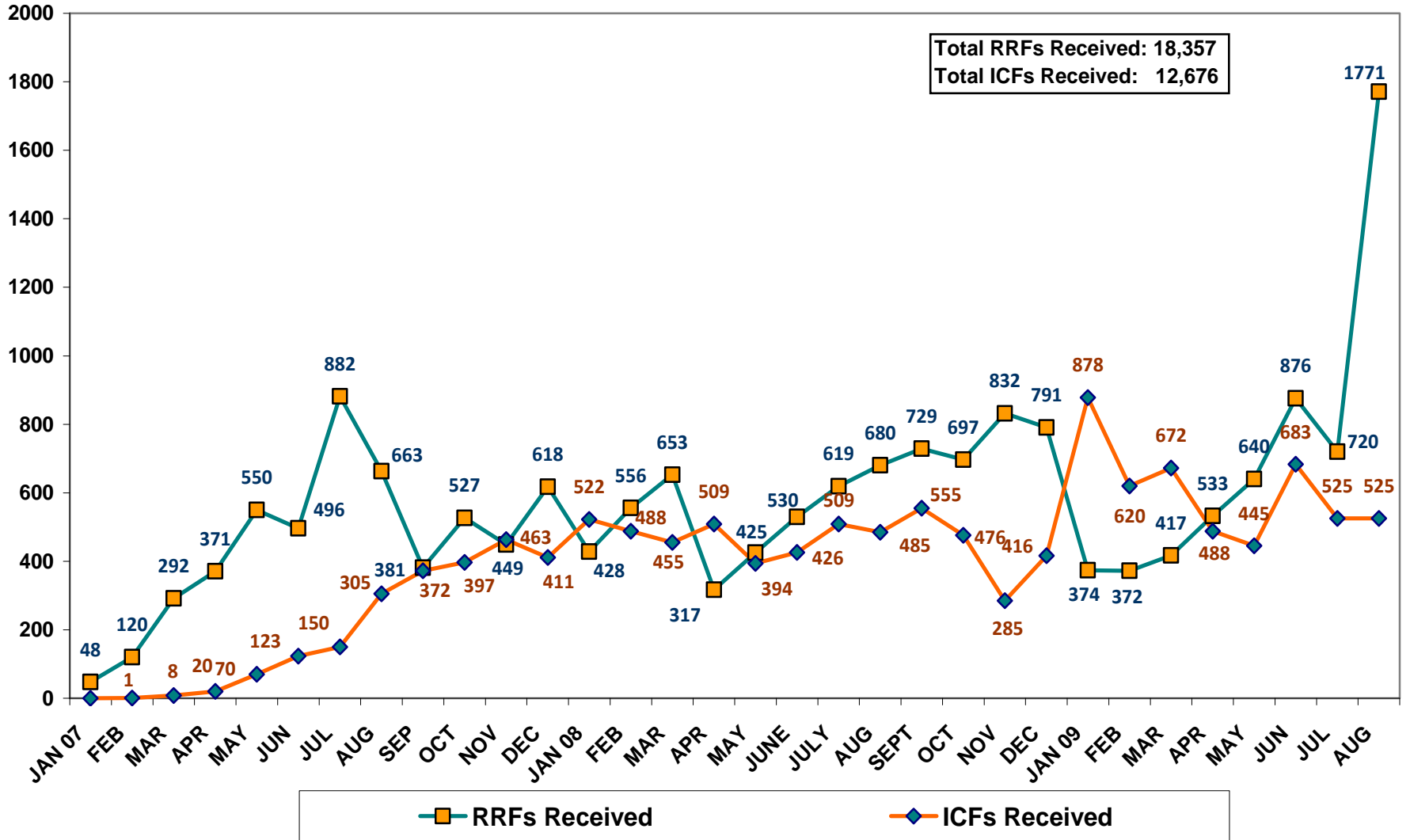
PG&E territory represents approximately 50% of all grid-tied solar systems in the United States

CSI Program success...

- **Over 18,500 Projects Received**
- **Over 12,500 Projects Completed totaling over \$275 Million in incentives paid**
- **Continuous improvements made to streamline process**
- **Reduced paperwork by more than 50%**
 - **Working towards going paperless in the future**



CSI Applications Received





What's New in CSI?

Last Update: July 2009

Additional Energy Efficiency Requirements and Documentation

- Promotes energy efficiency improvements and highest energy production per ratepayer dollar

Field Verification Sign-off by Contractor

- To ensure system is operating properly

New Testing Method for PV Modules

- New PTC calculations for SB1 compliance

Removal of Original signature requirement on paperwork

Removal of Documents: Proof of PMRS, Project Cost Breakdown Worksheet/Affidavit, System Description Worksheet (Non-Res >10kW) and others.

See CSI Handbook for more information on all changes



Future Improvements

PowerClerk

- Removal of Excel Forms, target date of Jan 2010
 - Moving towards PowerClerk submissions only
 - One location for application forms to ensure it is always up to date
- Paperless application submittal, target date of Dec 2010
 - Required documentation attachment via PDF format
- Upload Feature, test environment available
 - Upload application data into PowerClerk from 3rd party software
- New checkbox to indicate new panels being added to previously installed inverter qualified under SB1
- Addition of MASH Application, rolling out end of Oct 2009

Program

- 1-Step Application being developed
 - Allows submittal after interconnection is complete



Reservation Request Required Documents

1. Completed Reservation Request Form and Program Contract with Signatures
2. Documentation of an Energy Efficiency Audit (or Title 24 documentation or other exemptions)
3. Printout of EPBB Tool Calculation (www.csi-epbb.com)
4. Copy of Executed Agreement of Solar System Purchase and Installation
5. Copy of Signed Disclosure Agreement*

3 Step Application

6. Application Fee



Additional Required Documents, If Applicable

7. Copy of Commitment Agreement*
8. Electrical System Sizing Documentation
9. Copy of Executed Alternative System Ownership Agreement

3 Step Application

10. Certification of tax-exempt status
11. PERF-1 Form Certificate signed by a CEPE*
12. Building Site Plan*
13. Copy of New Construction Building Permit*



Incentive Claim Required Documents

1. Complete Incentive Claim Form with Signatures
2. Performance Monitoring & Reporting Service (PMRS) Documentation:
 - Copy of Executed Performance Data Provider (PDP) contract or PMRS Cost Cap Exemption Documentation
3. Signed Field Verification Certification Form**

If Applicable

4. Copy of Retrocommissioning Report Agreement*
5. Updated EPBB Calculation Printout

**Effective for Reservation Request Applications first received on or after July 1, 2009



Common Mistakes

Missing or incorrect information on the Application

Missing or incorrect documentation



Where to find information on the PG&E Bill

Page 1 of Bill

Pacific Gas and Electric Company WE DELIVER ENERGY.™ Energy Statement

99901234567890100000234630000023463

1 Account Number	Date	Amount Due	Due Date	Amount Enclosed
1234567890-1	01/30/2008	\$234.63	02/21/2008	

001:4.90.14462 1 AV 0.238

JANE SAMPLE
123 MAIN ST
SAN JOSE CA 99999-1000

PG&E
BOX 997300
SACRAMENTO CA
95899-7300

201.1205

Please return this portion with your payment. Thank you.

- 1) Account Number
- 2) Mailing Address
- 3) Host Customer Name

Page 3 or 4 of Bill

* (Electric Account Detail)

Telephone Assistance
1-800-743-5000
Assistance is available by telephone 24 hours per day, 7 days per week.

Local Office Address

ACCOUNT SUMMARY

Service	Service Dates
Gas	01/01/2008 - 01/30/2008
Electric	01/01/2008 - 01/30/2008

Pacific Gas and Electric Company WE DELIVER ENERGY.™

JANE SAMPLE

456 MARKET ST
SAN JOSE, CA 99999

ELECTRIC ACCOUNT DETAIL *

Service ID# : 1357913579
Rate Schedule: E1 TB Residential service
Billing Days: 30 days

Serial	Rotating Outage Blk	Meter #	Prior Meter Read	Current Meter Read	Difference	Meter Constant	Usage
Z	10	63L788	61,553	62,093	540	1	540 Kwh

Charges

01/01/2008 - 01/30/2008

Electric Charges	Usage	Amount
Baseline Quantity	246.00000 Kwh	
Baseline Usage	246.00000 Kwh @ \$0.11560	
101-130% of Baseline	73.80000 Kwh @ \$0.13142	
131-200% of Baseline	172.20000 Kwh @ \$0.22166	
201-300% of Baseline	48.00000 Kwh @ \$0.30507	
Total		\$90.95

- 4) Physical Address
- 5) Service ID Number
- 6) Meter Number



Application Fields

1. Host Customer		2. Applicant (if not Host Customer)	
Customer/Company Name <small>(As listed on electric bill)</small>		Company Name	
Contact Name		Contact Name	
Mailing Address <small>(Suite/Apt, Street)</small>		Mailing Address <small>(Suite/Apt, Street)</small>	
	<small>(City, State, Zip)</small>		<small>(City, State, Zip)</small>
Email		Email	
Phone		Phone	
Fax		Fax	
Does the Host Customer have legal ownership of the building and/or property where the proposed PV system will be located? <input type="checkbox"/> YES <input type="checkbox"/> NO			
If no, please indicate who owns the building and/or property, the contractual relationship with the Host Customer and the contract period			
3. System Owner (if not Host Customer)		4. Contractor	
Company Name		Company Name	
Contact Name		License Number	
Mailing Address <small>(Suite/Apt, Street)</small>			
	<small>(City, State, Zip)</small>		
		5. Seller	
Email		Company Name	
Phone		License Number	
Fax			

Host Customer*: the customer of record (person listed on the bill) at the location where the system will be installed.

Applicant: the entity/person that completes and submits the CSI application and serves as the main contact person for the CSI Program.

System Owner*: the owner of the system at the time the incentive is paid.

Contractor: the entity/person who does the physical installation of the system. If the work is subcontracted, the subcontractor's info must be indicated here and on the contract.

Seller: the entity that sells the equipment to be installed

*If Host and System Owner are different, please provide a relationship letter or explanation

Page 1



Project Site Section

6. Project Site Information			
Project Type: <input type="checkbox"/> Retrofit		<input type="checkbox"/> New Construction (Non-Residential Only)	
Incentive Type: <input type="checkbox"/> Residential		<input type="checkbox"/> Commercial <input type="checkbox"/> Government, Non-profit, or Public Entity	
Site Address (Suite/Apt, Street)			
(City, State, Zip)			
County		Est. Building Sq. Ft.	
Electric Utility Service Account Number(s)		Meter Number(s)	
Is there any existing generation at this Site, including nonfunctioning and/or emergency back up generation <input type="checkbox"/> YES <input type="checkbox"/> NO			
If yes, describe the type of technology for Existing Generation			
Has this project Site received previous incentives for installed PV generation? <input type="checkbox"/> YES <input type="checkbox"/> NO			
Amount	Description		

Please answer or check all applicable boxes in all sections

Incentive Type is determined by rate schedule

All customer/account information should match what is listed on the PG&E bill:

- Project Site should be physical address
 - If there is a different mailing address, there is a separate section for that under Host Customer
- Meter Number
- Service ID number or Account Number
 - Service ID is preferred over the Account Number since one account can have multiple Service ID numbers

If PG&E records are incorrect (i.e. physical address has changed), customer call 1-800-PGE-5000 to correct.



ICF: Payee Section

3. Payee Information	
<input type="checkbox"/> Host	Company Name
<input type="checkbox"/> System Owner	Contact Name
<input type="checkbox"/> Third Party:	Tax Payer ID
Tax Status for Payee of Incentive (check one):	Mailing Address (Suite/Apt, Street)
<input type="checkbox"/> Individual/Sole Proprietor	(City, State, Zip)
<input type="checkbox"/> Partnership	Email
<input type="checkbox"/> Corporation	Phone
<input type="checkbox"/> L.L.C. (Corporation)	Fax
<input type="checkbox"/> L.L.C. (Non-Corporation)	
<input type="checkbox"/> Exempt	

Please ensure payee information is completed consistently and accurately for tax purposes

- If any of the following tax information changes for your company, please update us as soon as possible:
 - Payee Company Name (Legal)
 - Payee Tax ID
 - Payee Tax Status
 - Payee Mailing Address



ICF: PMRS/PBI Section

5. Performance Monitoring & PBI Meter Information

Check the appropriate box:

I have requested a PMRS exemption for this project (EPBB Only).

I have a PMRS and will provide data to CSI per CSI Handbook.

Performance Monitoring Provider: Performance Data Provider:

Performance Meter Information (PBI only):

Meter Number	Meter Manufacturer	Meter Model	Meter Serial #
1	<input type="text"/>	<input type="text"/>	<input type="text"/>

EPBB Projects: Check one of the boxes

- If exempt, must include proof, i.e. copy of quote from eligible provider showing total cost
 - Must be recent, preferably within 12 months
- If PMRS purchased or included, must indicate Performance Monitoring Provider name only
 - No further documentation required

PBI Projects: Check second box and fill in all sections

- Must include a copy of an executed contract with a PMRS/PDP provider for 5 years
 - Provider name, project site, cost and all other terms
 - CEC approved meter make, model and serial number
 - Copy of signatures for all involved parties



Additional Sections

7. Project Incentive Calculation and Cost Information

Project System Size: 0.000 kW
 Eligible CSI System Size: 0.000 kW

Project Costs	
Module Cost:	
Inverter Cost:	
Permitting Cost:	(Actual perm)
Balance of System:	
Total Project Cost:	\$ - #DI

Project Cost Breakdown Worksheet not required

4 Cost Components must still be indicated on appl

- Module Cost
- Inverter Cost
- Permitting Cost (even if it is \$0 or not paid by customer)
- Balance of System (all remaining cost)

[Add PV Modules](#) [Add Inverter](#) [Add Other](#)

Allow Addition of Pre-SB1 Components

Component Description	Cost
1 Inverter(s) - SMA America, 4.0 kW (Model SB4000US (240V))	\$3,157.28
X 20 PV Module(s) - Sanyo Electric, 210W (Model HIP-210NKHA5)	\$12,629.20
X 1 System Costs(s) - Installation Costs, Permitting Fees	\$319.20
X 1 System Costs(s) - Installation Costs, Balance of System	\$17,658.32
	\$33,764.00

10. CSI Program Warranty

The undersigned declares that the system includes a minimum 10-year warranty provided in combination by the manufacturer and installer to protect the purchaser against defective workmanship, system or component breakdown, or degradation in electrical output of more than fifteen percent from their originally rated electrical output during the ten-year period. The warranty must cover the solar generating system only, including PV modules (panels) and inverters, solar collectors, tracking mechanisms, heat exchangers, pumps, heat driven cooling systems associated with the solar system and provide for no-cost repair or replacement of the system or system components, including any associated labor during the warranty period.

For self-installed systems, the undersigned declares that the system includes a minimum 10-year warranty on the equipment to be installed to protect the purchaser against breakdown or electrical output degradation of major system components. In this case, the warranty need not cover the labor costs associated with removing or replacing major components because any repairs would be done by the self-installer or at the self-installer's expense.

Additionally, meters must have a one-year warranty to protect against defective workmanship, system or component breakdown, or degradation in electrical output of more than fifteen percent from their originally rated electrical output during the warranty period. For meters that are integrated into the inverter, the meter warranty period must be 10 years.

Host Customer Initial: _____ Date: _____

System Owner (if not, Host Customer) Initial: _____ Date: _____

Please remember to have the Host Customer (and System Owner, if different) initial the warranty section



EPBB Calculators

- Archived vs. Current Calculator

- Archived calculator can only be used for changes to an existing project, if the Reservation Request was received prior to July 1, 2009 and if the module model number remains the same.
- Current calculator must be used for all new Reservation Request made after July 1, 2009 or for existing projects where module model number has changed.

- Remember to enter the correct zip code on Calculator as listed on the bill

- May effect the design factor of the system

- Make sure the exact model number of the equipment is selected

- Many are very similar, but may have different ratings/efficiencies

California Solar Initiative

Center for Sustainable Energy

Incentive Calculator

Current Standard PV

Save as a PDF

Proposed

Test

94103

San Francisco

PG&E

Residential

EPBB

PV System Specifications:

Sharp:NE-170U1

170.0W STC, 149.1W PTC, 151.5W PTC, adj 1

Number of Modules: 25

Mounting Method: >6" average standoff

DC Rating (kW STC): 4.2500

DC Rating (kW PTC): 3.7275

Inverter: SMA America:SB4000US (240V)

Number of Inverters: 1

Inverter Efficiency (%): 96.00 %

Shading: Minimal Shading

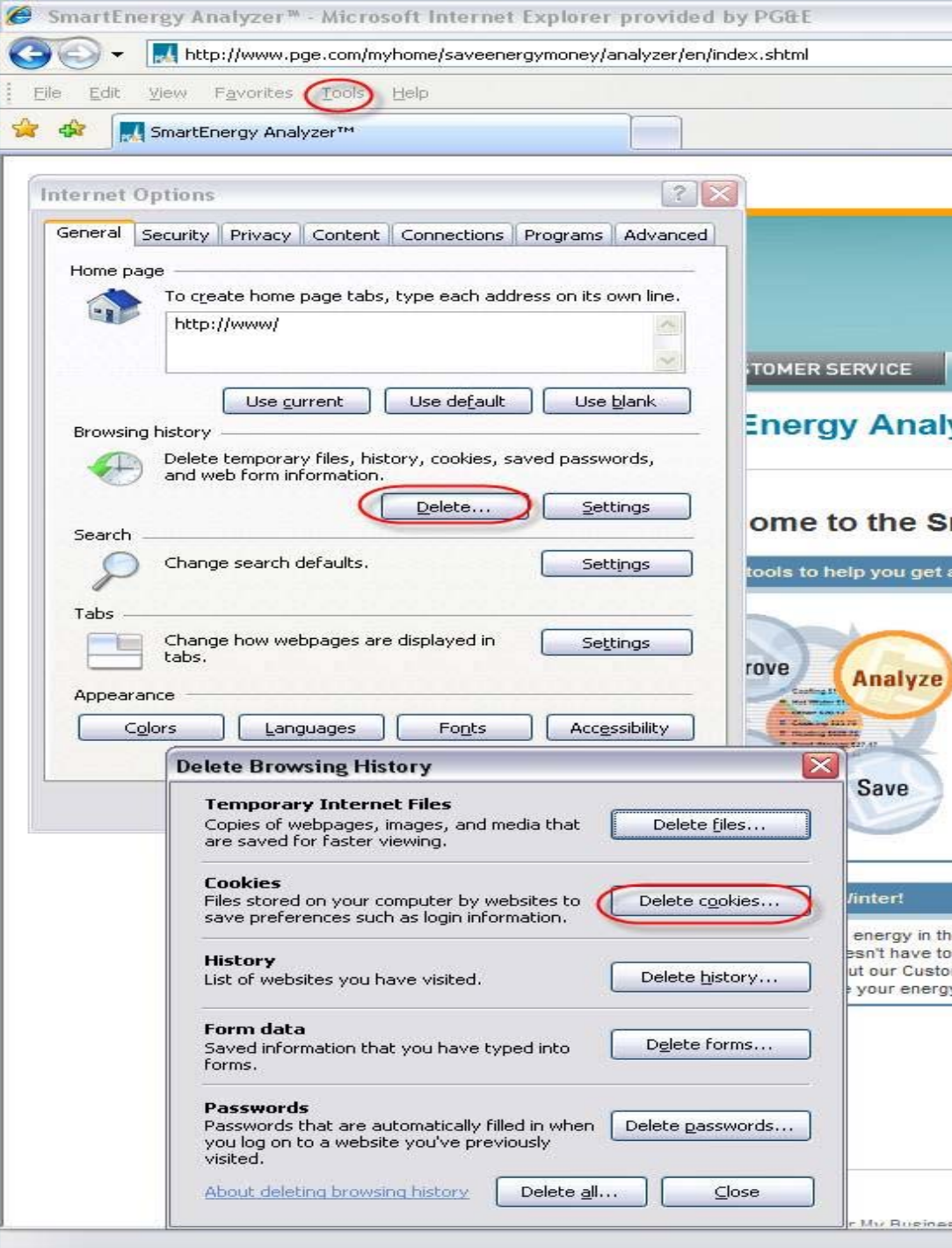
Array Tilt (degrees): 19

Array Azimuth (degrees): 180 True North 0°

Optimal Tilt (proposed azimuth): 20

Optimal Tilt (facing South): 20

- Equipment submitted to CSI must match equipment on GIS application



Incorrect Information 20 on the Energy Audit

Information may be stored in your browser called cookies.

This may cause the incorrect zip code or address to automatically populate when returning to online Energy Audit

To correct this, you must delete the cookies from your computer.

In your browser toolbar, click “Tools”, select “Internet Options”, and select “Delete Cookies”

A link with instructions can be found on the Energy Analyzer webpage



Energy Efficiency Disclosure Agreement

- New requirement for all Reservation Request made after July 1, 2009
- Please make sure you are using the correct form: Residential or Non-Residential
- Customer must initial each line item and sign the bottom
- Complete address must be indicated on the first line item
- Fourth line item is referring to the same energy audit already required by the program
- Although encouraged to do so, the customer is not required to act on or complete any of the energy efficiency recommendations

California Solar Initiative Program Residential Energy Efficiency Disclosure Agreement		
By installing all cost effective energy efficiency measures before installing a solar energy system, the owner/tenant can lower the overall system size and cost.		
Initial beside each line, fill in the blanks, and sign below. Submit this form and a copy of the energy audit with the California Solar Initiative Reservation Request Form.		
Please select your Program Administrator		
<input type="checkbox"/> SCE	<input type="checkbox"/> PG&E	<input type="checkbox"/> CCSE
_____	I am the owner/tenant (circle one) of the home at: _____, CA, and I am applying for incentives for the PV system to be installed on this home.	
_____	I have reviewed my available 12 months of energy usage from my utility company.	
_____	I used the following services or tools to learn about energy efficiency measures that could be installed at my home: For Existing Residential Customers: Utility Links <input type="checkbox"/> http://www.pge.com/myhome/saveenergymoney <input type="checkbox"/> http://energyaudit-sdgc.sernpra.com/index.asp <input type="checkbox"/> http://www.sce.com/residential/rebates-savings <input type="checkbox"/> Other: _____ Third Party Links <input type="checkbox"/> http://www.gosolarcalifornia.ca.gov <input type="checkbox"/> http://www.aceee.org <input type="checkbox"/> http://www.fypower.org <input type="checkbox"/> http://www.energystar.gov	
_____	I had an energy audit completed on the home that identified cost effective energy efficiency improvements, and estimated energy savings.	
_____	I have been informed of rebates and other incentives to help offset the costs of installing energy efficiency measures from my utility company, if not. Please visit your Utility's rebate and savings web site for more information. http://www.pge.com/myhome/saveenergymoney http://www.sdgc.com/residential/rebates.shtml http://www.sce.com/residential/rebates-savings	
_____	I installed the following measures on my home: _____ _____ _____ _____	
_____	I intend to install the following measures on my home: _____ _____ _____ _____	
bx _____	_____ (date).	
Host Customer Signature _____ Title _____ Date _____		



Other Helpful Tips

Reservation Request/Incentive Claim

- All Reservation Request received after July 1, 2009 will require the Field Verification Form
 - Sign off by the contractor to ensure the system is operating properly
- If there is no historical usage or usage history will not support system size, please provide proper documentation:
 - If system is between 5-10kw, provide square footage to calculate adequate load (2 watts per sq ft)
 - Comprehensive list of appliances/equipment, wattage and expected usage or hours of operation
 - Title 24 documentation (no older than 3 years)
 - Building simulation program reports such as eQUEST, EnergyPro, DOE-2, and VisualDOE
 - Detailed engineering calculations
- Tax Exempt Letter should be on the company letterhead and should explicitly state the organization is a tax-exempt entity and does not receive federal tax benefits (Gov't, Non-Profit and Public Entities)
 - It is not sufficient to just state they are exempt from paying taxes specifically on the CSI incentive
- Make sure to use updated version of the forms (last update was July 15, 2009)
- Indicate if there are multiple arrays on the application forms by separating them



Resources

Applications:

www.pge.com/csi

www.pge.powerclerk.com

EPBB Calculation Tool:

www.csi-epbb.com

Go Solar California:

(Eligible equipment and contractors)

www.gosolarcalifornia.ca.gov

General Solar Inquiries

1-877-PGE-4112

www.pge.com/solar

PG&E CSI Hotline for Application Inquiries

415-973-3480

solar@pge.com

Energy Efficiency Information

www.pge.com/myhome/saveenergy



Future Webinars/Classes

Fri, Oct 9, 11am-12pm-Demystifying Installation Variables and the California Solar Initiative Inspection Process -Internet

Tue, Oct 13, 5-6pm-PG&E and Solar-Internet

Wed, Oct 14, 6-8pm-Solar Power Basics for Residential Customers-SF PEC

Wed, Oct 14, 9am-12pm-Integrating Energy Efficiency and Renewables in Commercial Retrofits-SF-PEC

Fri, Oct 16, 9am-4:30pm-Basics of Photovoltaic (PV) Systems for Grid-Tied Applications-Stockton—ETC

Tue, Oct 20, 12-1pm-Financial Analysis-Internet

Tue, Oct 20, 6pm-8pm-Solar Water Heating Basics-SF PEC

Wed, Oct 21, 11-12pm-PowerClerk Updates-Internet

Thu, Oct 22, 6pm-7pm-Solar Water Heating Basics-Internet

Fri, Oct 23, 9am-3:30pm-California Solar Initiative Workshop-Internet and SF PEC

Refer to the Pacific Energy Center training website for a complete list of upcoming classes

<http://www.pge.com/solarclasses>



Questions

??????

10.08.09

Please stay tuned for the

Interconnection Process Simplification Webinar

We will be starting momentarily

**The slides for today's presentation can be downloaded/printed at
www.pge.com/solareducation**





Agenda


- Overview of PG&E's NEM interconnection process
- What you need to know about NEM interconnections
- Why systems over 30 kW need to be identified
- Helpful resources to reduce Interconnection turnaround time
- Q&A



PG&E and our Business

What we do:

Deliver safe, reliable, and environmentally responsible gas and electricity to approximately 15 million Californians

 <p><i>PG&E's Service Area in California</i></p>	Electric and gas distribution customers	5.1 MM electric 4.2 MM gas
	Electric transmission circuits	18,610 miles
	Gas transmission backbone	6,136 miles
	Electric generation capacity	6,000 MW



Generation Interconnection Services (GIS)

Point of contact for customer (or authorized agent) to interconnect any generation.

- **Standard NEM:** A solar and wind energy program for customers whose generator size is 30 kilowatts or less
- **Expanded NEM:** A solar and wind energy program for Agricultural and Demand Rate customers whose generator is of any size and for Residential and Small Commercial rate customers whose generator capacity is over 30 kilowatts

Coordinates interconnection activities, including engineering reviews, metering, access issues, and customer contracts. Issues Permission To Operate.



How to apply

Standard NEM

- Agreement Form 79-1101

Expanded NEM

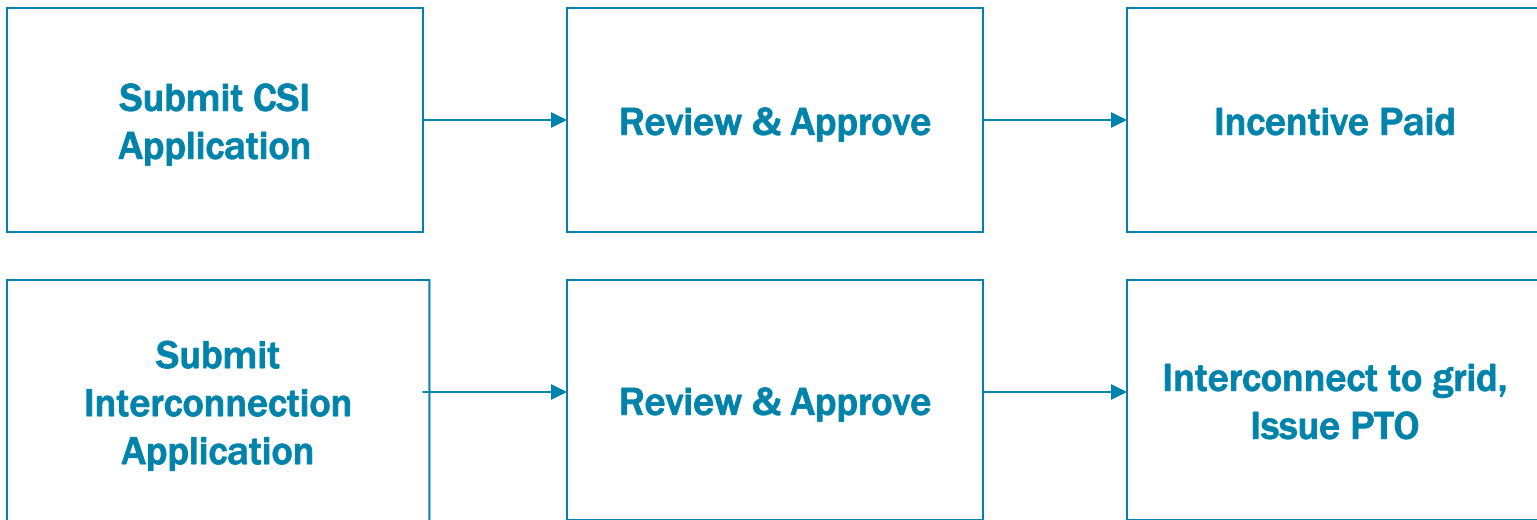
- 3 Forms: Application 79-974, Supplemental Application 79-998 and Interconnection Agreement Form 79-978

Required documentation:

- Single Line Diagram
- Signed off Building Permit
- Copy of recent electric bill for project site
- Payment for meter fee, if applicable
- For Expanded NEM only:
 - Declarations Page of Home Owner Insurance
 - Third Party Authorization Form



Interconnection Application vs. CSI Application



The Interconnection Application is a separate, but parallel process to CSI Application.

Equipment submitted with the CSI application and the Interconnection Application must match.

CSI Incentive will not be paid until PTO is issued.



Net Energy Metering Support for Solar

32

Provides for two main types of solar interconnections: NEM and non-NEM options for the customer.

Initiates NEM Billing Process through the interconnection process.

- Allows exports to utility grid which are credited at retail electricity rate

No standby charges

No interconnection study fees

Exemption from Nonbypassable Charges

NEM projects

- Over 96% of systems are interconnected within 12 business days upon receipt of all required paperwork and project passes first inspection.



Field Inspection

Check system to ensure built as designed on Single Line Diagram (SLD) (Expanded NEM Projects only).

Verify that meter location/disconnect is safe for PG&E personnel access (free from unrestrained animals, locked gates, etc...).

Verify installation of AC disconnect and appropriate signage, if applicable (Expanded NEM).

Install bi-directional meter (NEM customers).

Install Net Gen Output Meter (NGOM) for PBI, if requested.



Timeline and commonly missed items

What can slow an application down?

- Project size over 30 KW submitted for Standard NEM and does not qualify.
- Meter/Service ID number on application does not match that which is tied to account or bill.
- Name on application does not match PG&E Bill account name. Call:1-800-743-5000 to add/change name on acct.
- Application has no rate schedule selected.
- Final building permit (BP) does not match application address.
- Single Line Drawing (SLD) has no equipment information: make, model, rating, or... how many PV modules are connected to each inverter.
- Reprogram cost of \$228 for Time of Use (TOU) not included.



Items that slow down the process

Disconnect Access

- Customer's bi-directional meter must be installed in a safe, 24/7 PG&E-accessible location, unobstructed by locked gates or pets.
- Meter access must be maintained at all times for reading/system maintenance.
- Any animals owned by the customer, including pet dogs, should not have access to these areas to avoid hindering PG&E service personnel from completing their work.



Systems over 30 kW (Expanded NEM)

All PV systems require an engineering review

Systems over 30 kW or multiple homes may impact the local electric circuit operations; requiring PG&E equipment changes

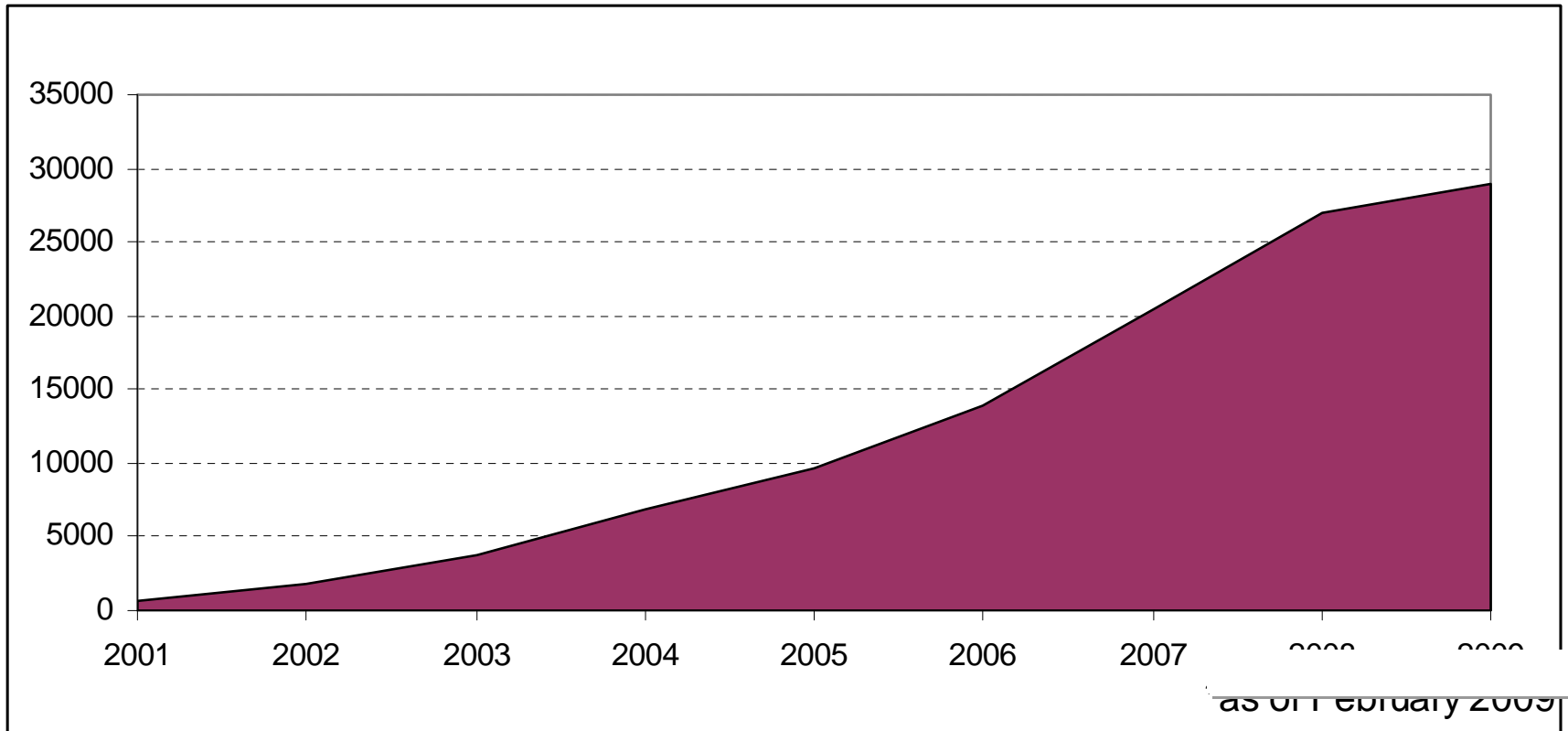
Infrastructure changes may require long lead items or construction

Advise PG&E of planned installation time and get system in the queue



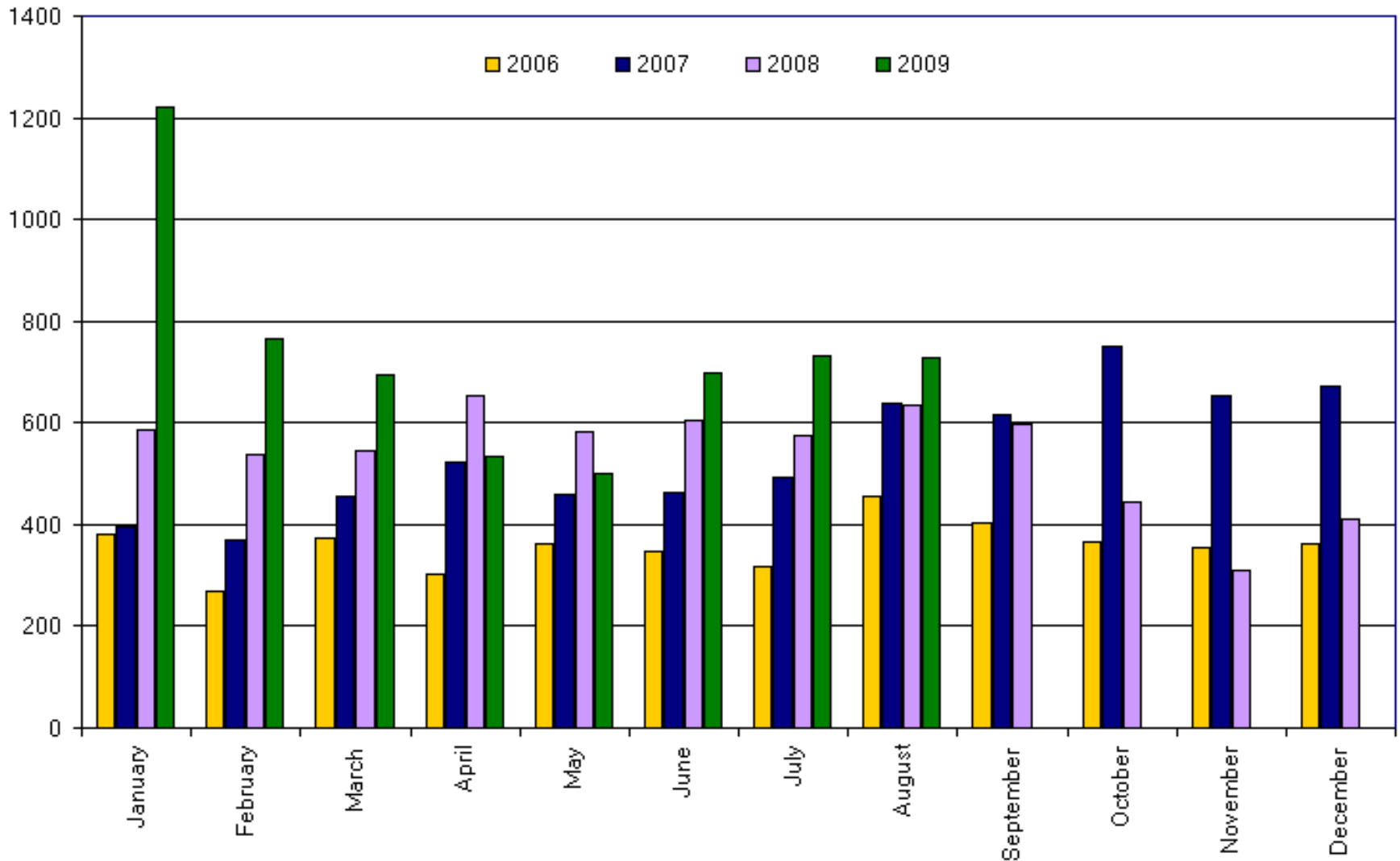
Cumulative PG&E Solar Interconnections

Over 30,000 grid tied solar installations more interconnections of grid tied systems in US than any other utility.





Total Monthly PG&E Solar Interconnections





PG&E GIS Acronyms

NEM: Net Energy Metering

NGOM: Net Generation Output Meter

PTO: Permission To Operate

SCSC: Solar Customer Service Center

BP: Signed Off Building Permit

POI: Proof of Insurance

AC Disc: Alternating Current Generator Disconnect (Not DC or Inverter Disconnect)

SLD: Single Line Drawing

TOU: Time of Use Rate or Meter

ESP: Energy Service Provider

OAS: Otherwise Applicable (rate) Schedule



PG&E Resources

Standard NEM: <http://www.pge.com/standardnem/>

Expanded NEM: <http://www.pge.com/expandednem/>

GIS Hotline: Email: gen@pge.com, or (415) 972-5676

CSI Website: <http://www.pge.com/csi>

CSI Hotline: Email: solar@pge.com or (415) 973-3480

Solar Customer Service Center (SCSC): (877) 743-4112

PG&E Solar Website: www.pge.com/solar



Questions or Comments?

Thank you
for joining us today.

Please take a moment to provide us
your feedback on today's webinar.