



Please stay tuned for the <sup>1</sup>

# Interconnection Process Simplification Webinar

We will be starting momentarily

*last updated 3.4.13*



# Agenda


- Overview of PG&E's NEM Program
- 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&amp;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



# Net Energy Metering



Net Energy Metering is a retail tariff for Solar Customers to bank retail credit for periods where electric output is more than retail load resulting in an export to the grid. *(In 2012, NEM became more than solar.)*

During the evening or periods of time when the inverter is offline, the customer purchases power from PG&E but uses credit that was gained during periods of time when the solar system was online.

PV systems are designed to net zero at the end of the year.



# 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** (*September 2012 version*)

## Expanded NEM

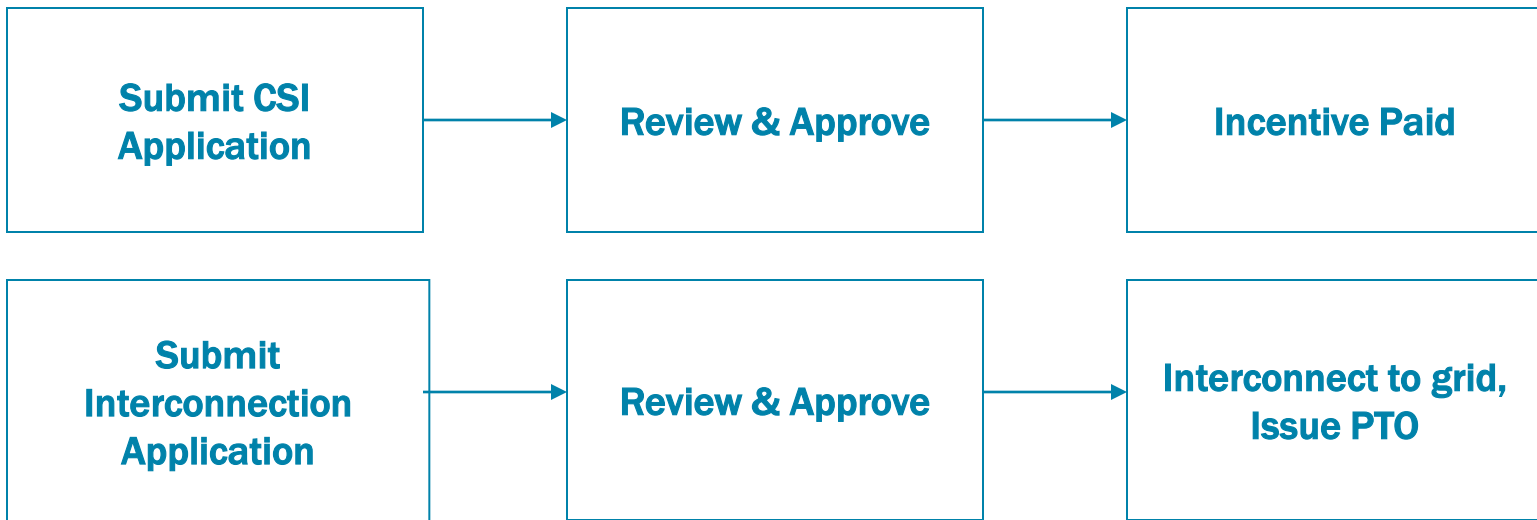
- **3 Forms: Application 79-974, Supplemental Application 79-998 and Interconnection Agreement Form 79-978**

## Required documentation:

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



# Interconnection Application vs. CSI Application <sup>7</sup>



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

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 or reprogram SMARTmeter (*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.



# Items that can slow down the process

## AC Disconnect Switch requirements

### Services Up to 600 Volts

- *Residential and small commercial applicants with generating facilities on their premises who want to take advantage of PG&E's standard net energy metering (NEM) program must become familiar with the following requirements*

### Additional Requirements for Small Power Generators (Qualifying Facilities) and Co-Generation Interconnections Including NEM Interconnection Installations

- *An ac disconnect is required for all K-base meters of any amperage rating*
- *A fusible ac disconnect switch will be required for generators that do not have overcurrent protection at the point of interconnection*
- *As specified in Electric Rule 21, "Generating Facility Interconnections," and by PG&E, the generating facility is required to have a ganged, manually-operated ac disconnect switch that meets the following requirements.*
- *Easily accessible when requested by PG&E and lockable in the open position.*
- *Allows visible verification that separation has been accomplished.*
- *Located 10 feet or less from PG&E's electric revenue meter at the point of common coupling or interconnection and easily seen from the panel.*
- *Has a permanent approved sign(s) with a map to show the location of the ac disconnect switch. Applicants must attach the sign next to PG&E's electric revenue meter at the point of common coupling.*
- *Installed at a vertical height of between 48-inches (minimum) and 75-inches (maximum) from the ground to the top of the switch.*



# Items that can slow down the process (*contd.*)

## Access

- **Easily accessible when requested by PG&E.**
  - *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**

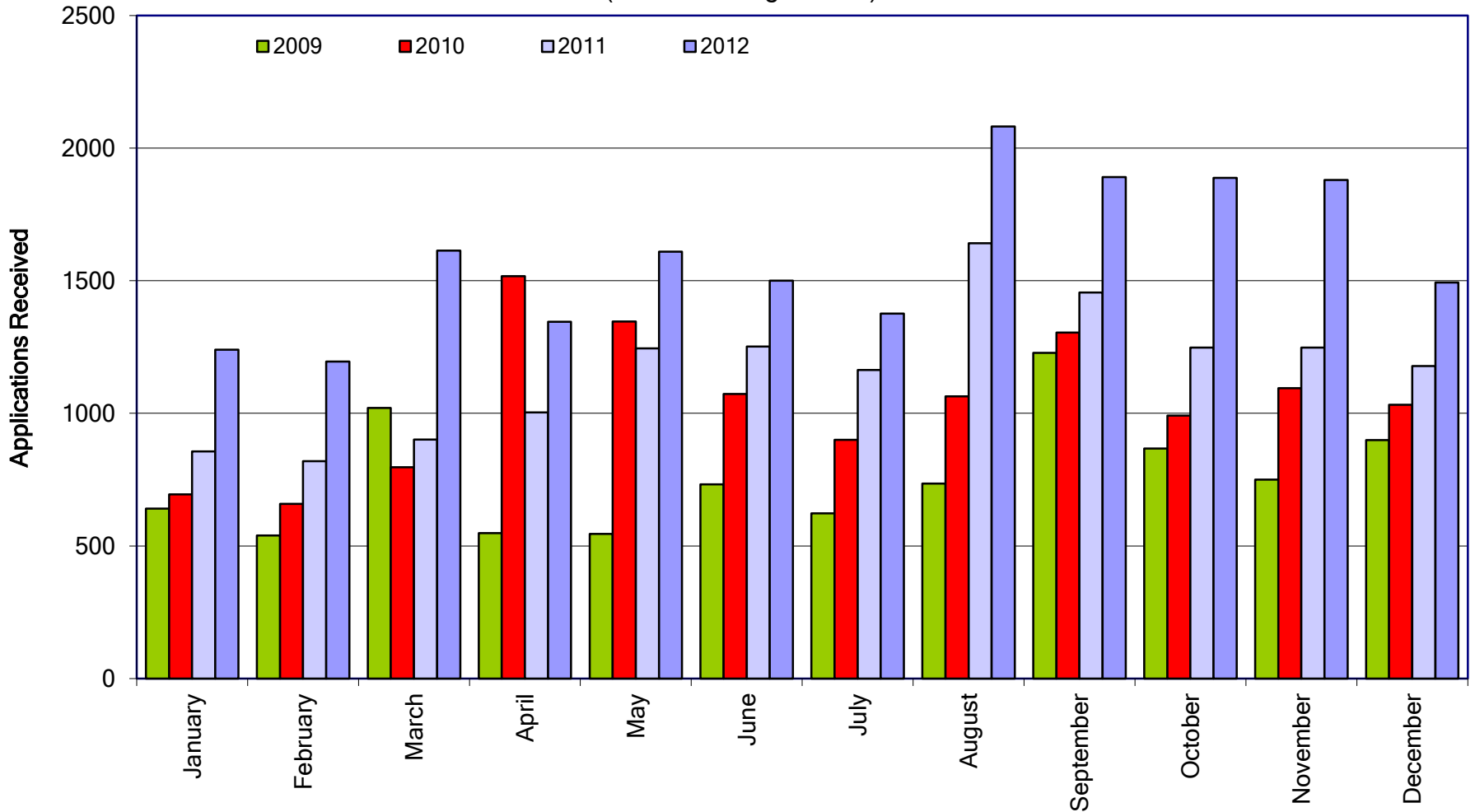
**Infrastructure changes may require long lead items or construction**

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



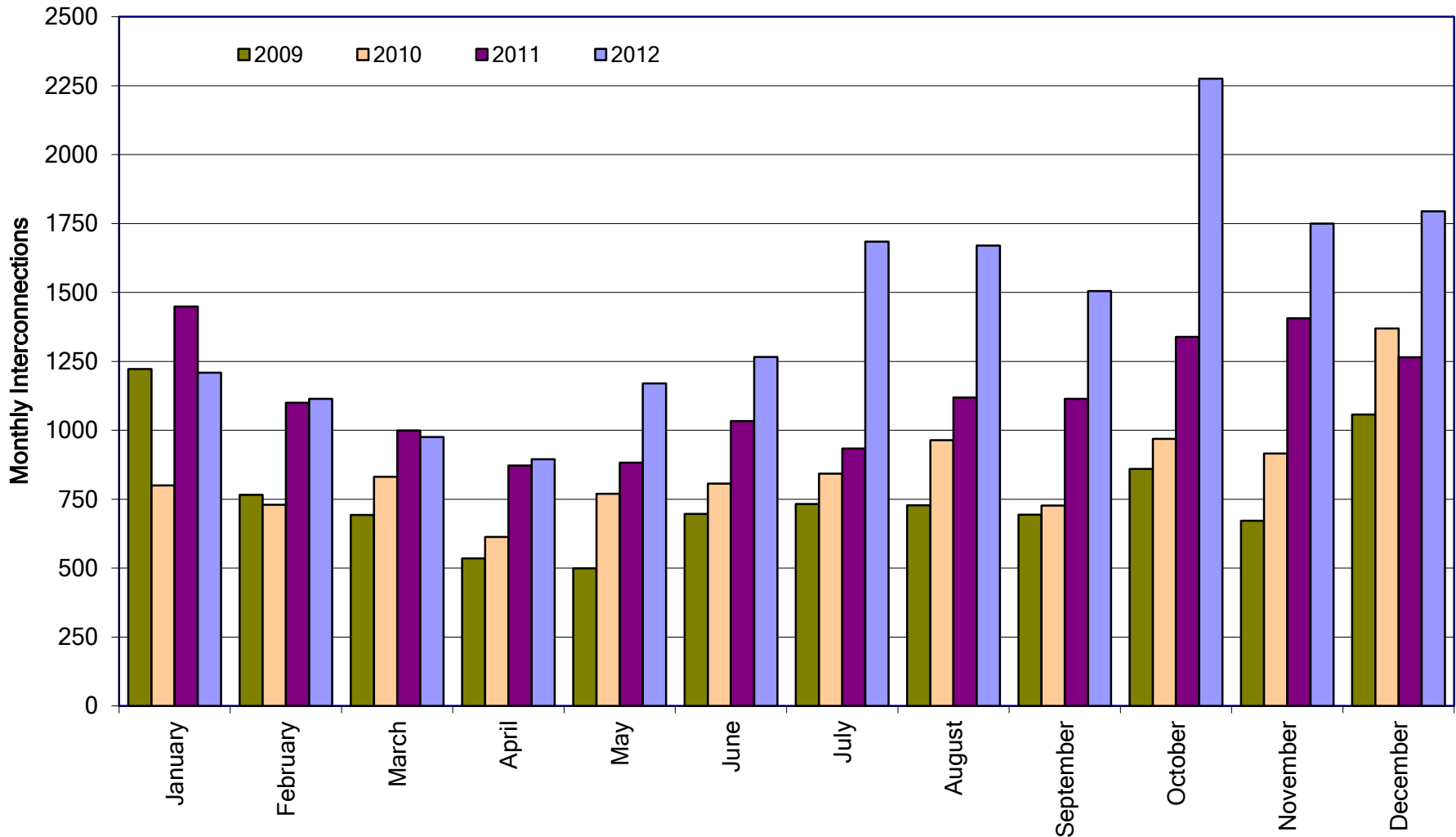
# The Pace of NEM

Total NEM Applications Received  
(Now Including VNEM!)



# The Pace of NEM, Part II

Total NEM Interconnections  
(including VNEM)





# 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

## Generation application sites:

- **GIS Net Energy Metering (NEM) Application site:**

[www.pge.com/b2b/newgenerator/netenergymetering/](http://www.pge.com/b2b/newgenerator/netenergymetering/)

- **GIS Expanded Net Energy Metering (Expanded NEM) Application site:**

[www.pge.com/mybusiness/customerservice/nonpgeutility/generateownpower/netenergymetering/expandednem](http://www.pge.com/mybusiness/customerservice/nonpgeutility/generateownpower/netenergymetering/expandednem)

- **GIS Rule 21 Application site:**

[www.pge.com/b2b/newgenerator/distributedgeneration/generationrule21/#wherecanifindanelectricrule21application](http://www.pge.com/b2b/newgenerator/distributedgeneration/generationrule21/#wherecanifindanelectricrule21application)

## Contacts:

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

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

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

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

PG&E Solar Website: [www.pge.com/solar](http://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.