

# Renewable Market Adjusting Tariff (ReMAT) Feed-In Tariff (FIT)

**Program Overview**

**August 8, 2013**

Date (2013)	Event
July 23	E-PWF & E-SRG closed to new participants
July 24	E-ReMAT became effective
August 8	<b><i>Webinar 1 – Program Overview</i></b>
August 16	Webinar 2 – Application & Program Period Process with Intro to Online Platform
TBD	“Mock launch” of online platform
TBD	Webinar 3 – Program Details
October 1	Begin accepting ReMAT applications (PPRs)
November 1	Start of the first bi-monthly Program Period

## Program Overview

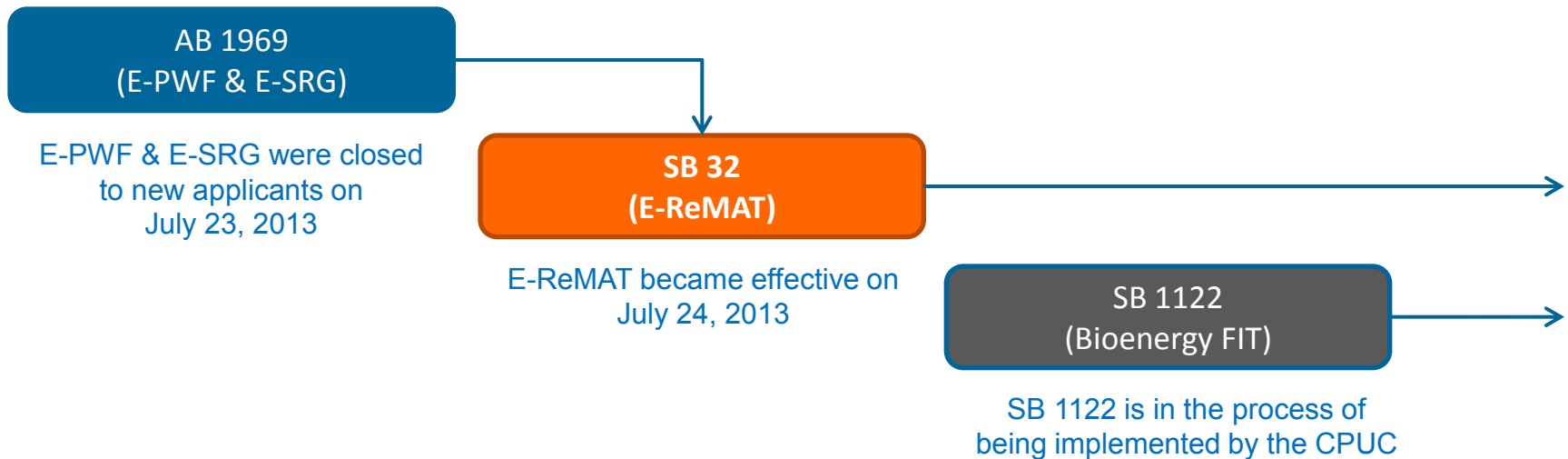
Topic	Presenter
<b>ReMAT Program Overview</b>	Carlos Abreu, Renewable Energy
<b>Electric Interconnection Overview</b>	Will Chung, Electric Generation Interconnection
<b>Intermission</b>	--
<b>Q&amp;A</b>	PG&E team

- Participants should e-mail their questions to the Feed-in Tariffs mailbox at [Feed-inTariffs@pge.com](mailto:Feed-inTariffs@pge.com) during the webinar.
- Questions will be answered during the Q&A session at the end of the Webinar. PG&E may not address all of the questions at that time.
- After the Webinar, PG&E will compile and post a Q&A document on PG&E's website at: [www.pge.com/rfo/remat](http://www.pge.com/rfo/remat)
- The audio portion of the Webinar will be posted on PG&E website at: [www.pge.com/rfo/remat](http://www.pge.com/rfo/remat)

- To fully understand the ReMAT FIT program, both the E-ReMAT Tariff and ReMAT Power Purchase Agreement (PPA) must be read.
- This presentation is intended to provide summary level information on the ReMAT Program and is not a substitute for reading both the Tariff and the PPA.
- To the extent that there are any inconsistencies between the information provided in this presentation and the E-ReMAT Tariff and ReMAT PPA, the Tariff and PPA shall govern.

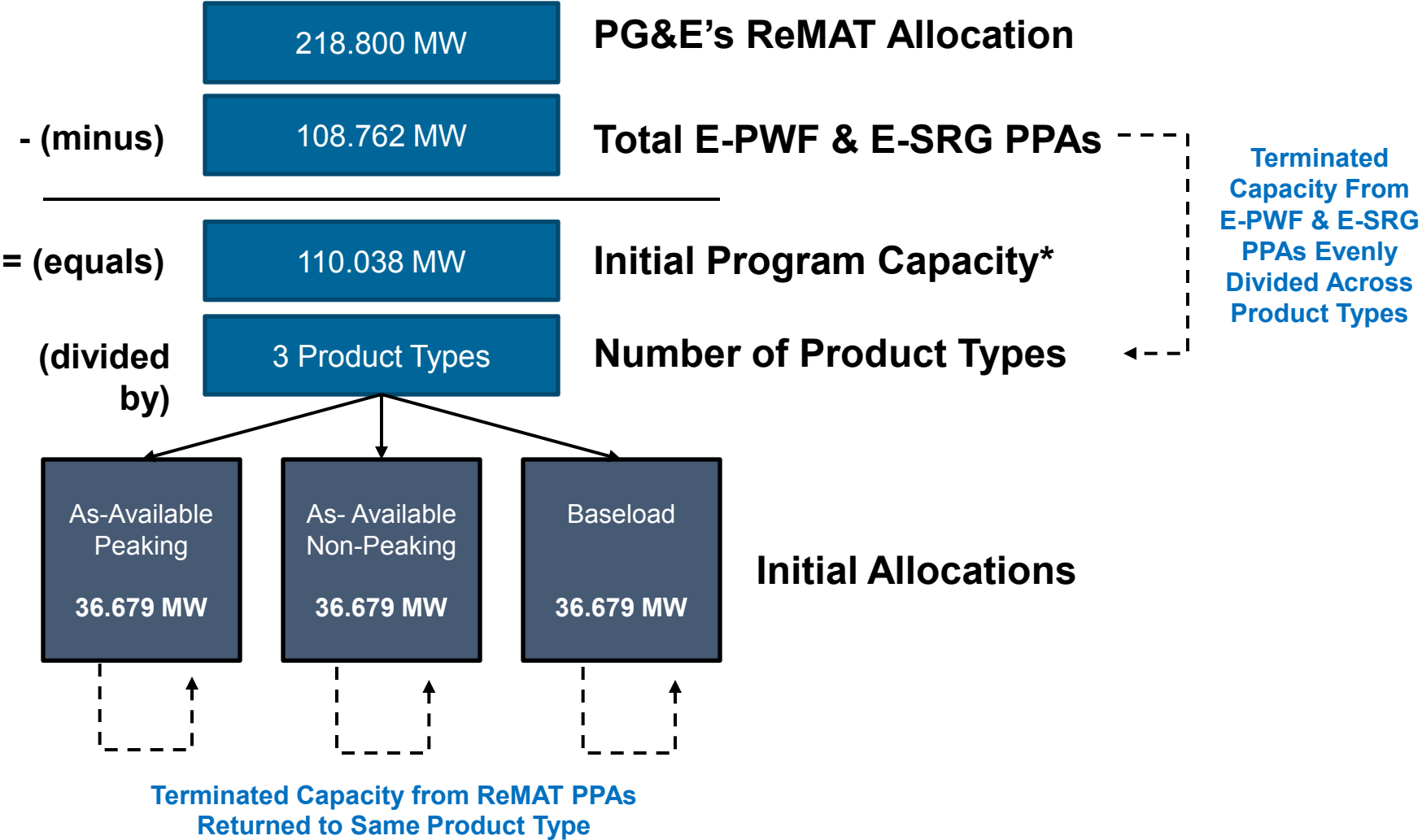
# Program Overview

## Renewable Feed-In Tariffs (FITs)



## Renewable Market Adjusting Tariff (ReMAT)

- **Program Capacity:** ReMAT is being implemented by IOUs (per CPUC Decisions) to comply with the IOU's portion of the 750 MW state-wide feed-in tariff program mandated by SB 32. PG&E was allocated 218.8 MW.
- **Project Size:** ReMAT is available to new and existing renewable energy projects sized up to 3 MW (AC) that are interconnected to PG&E's distribution system.
- **Application:** A Program Participation Request or PPR (i.e. application) must be submitted to participate in ReMAT. ReMAT Queue Numbers are assigned to PPRs based on the date and time a PPR was submitted, with the exception of the first five business days of the program when the queue number sequence will be randomized.
- **Price:** The price offered for each Product Type will adjust in each Program Period based on Subscription (i.e. price acceptance).
- **PPA Execution:** Non-negotiable PPAs will be awarded each Program Period based on price acceptance and ReMAT Queue Number.



\*As of July 24, 2013

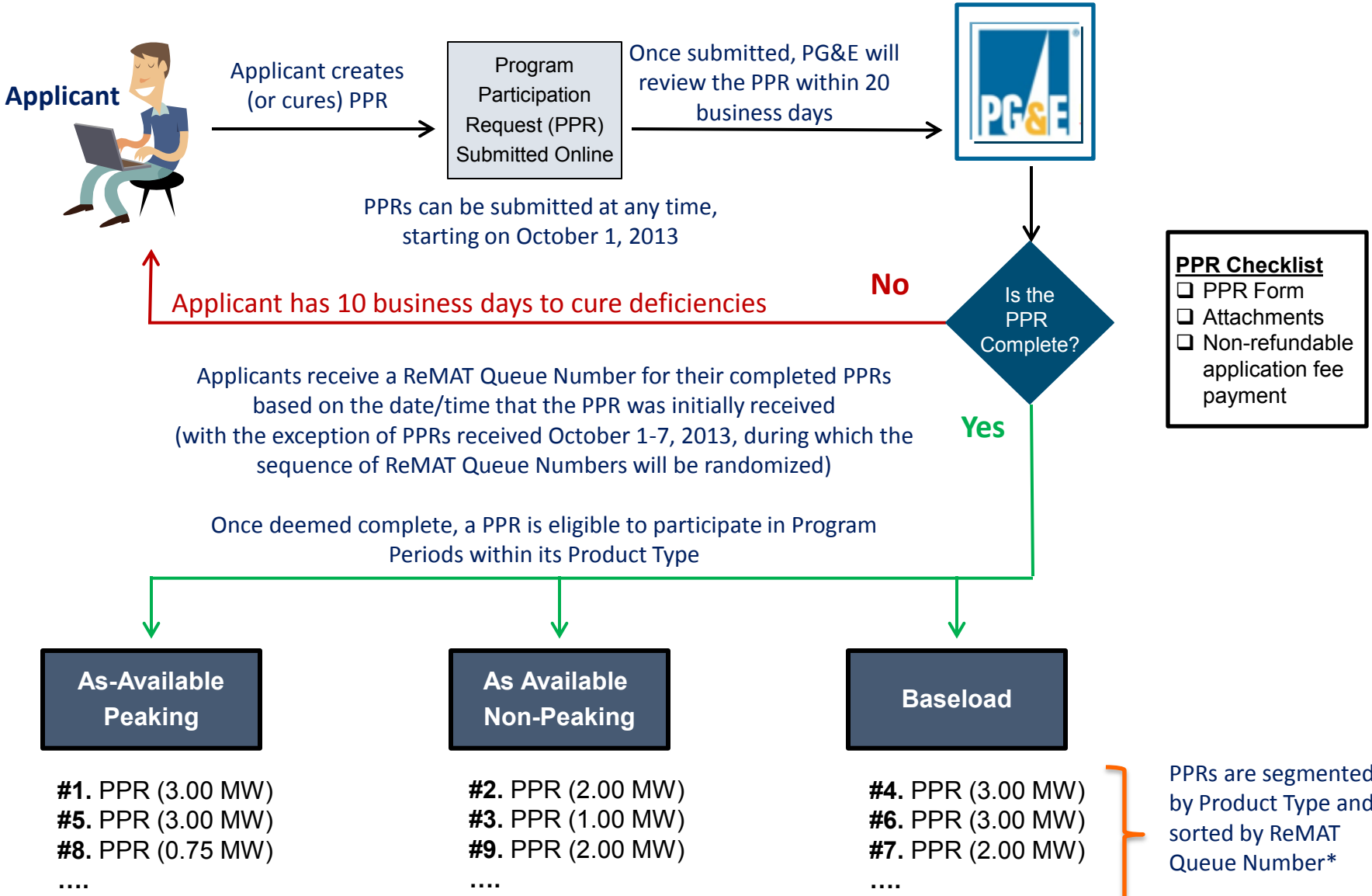


Each Program Period is two months in duration

Program Periods	As-Available Peaking 36.679 MW	As- Available Non-Peaking 36.679 MW	Baseload 36.679 MW
1 (Nov-Dec 2013)	5 MW	5 MW	5 MW
2 (Jan-Feb 2014)	5 MW	5 MW	5 MW
3 (Mar-Apr 2014)	5 MW	5 MW	5 MW
4 (May-Jun 2014)	5 MW	5 MW	5 MW
5 (Jul-Aug 2014)	5 MW	5 MW	5 MW
6 (Sept-Oct 2014)	5 MW	5 MW	5 MW
7 (Nov-Dec 2014)	5 MW	5 MW	5 MW
8 (Jan-Feb 2015)	1.679 MW	1.679 MW	1.679 MW
....			

Five MWs will be offered in each Product Type per Program Period, unless fewer MWs remain in that Product Type

The final Program Period is the Period which ends twenty-four (24) months after the end of the Period in which the total remaining capacity for any Product Type reaches zero or a de minimis amount approaching zero for the first time.



\*Note: The ReMAT Queue will not be made public

# ReMAT Pricing Mechanism (Contract Price)

Subscription for Program Period MWs*:	Bi-monthly Period Price Adjustment
< 20% (0.0-0.9 MW)	Price Increase
20-99% (1.0-4.9 MW)	No adjustment
>=100% (5.0+ MW)	Price Decreases

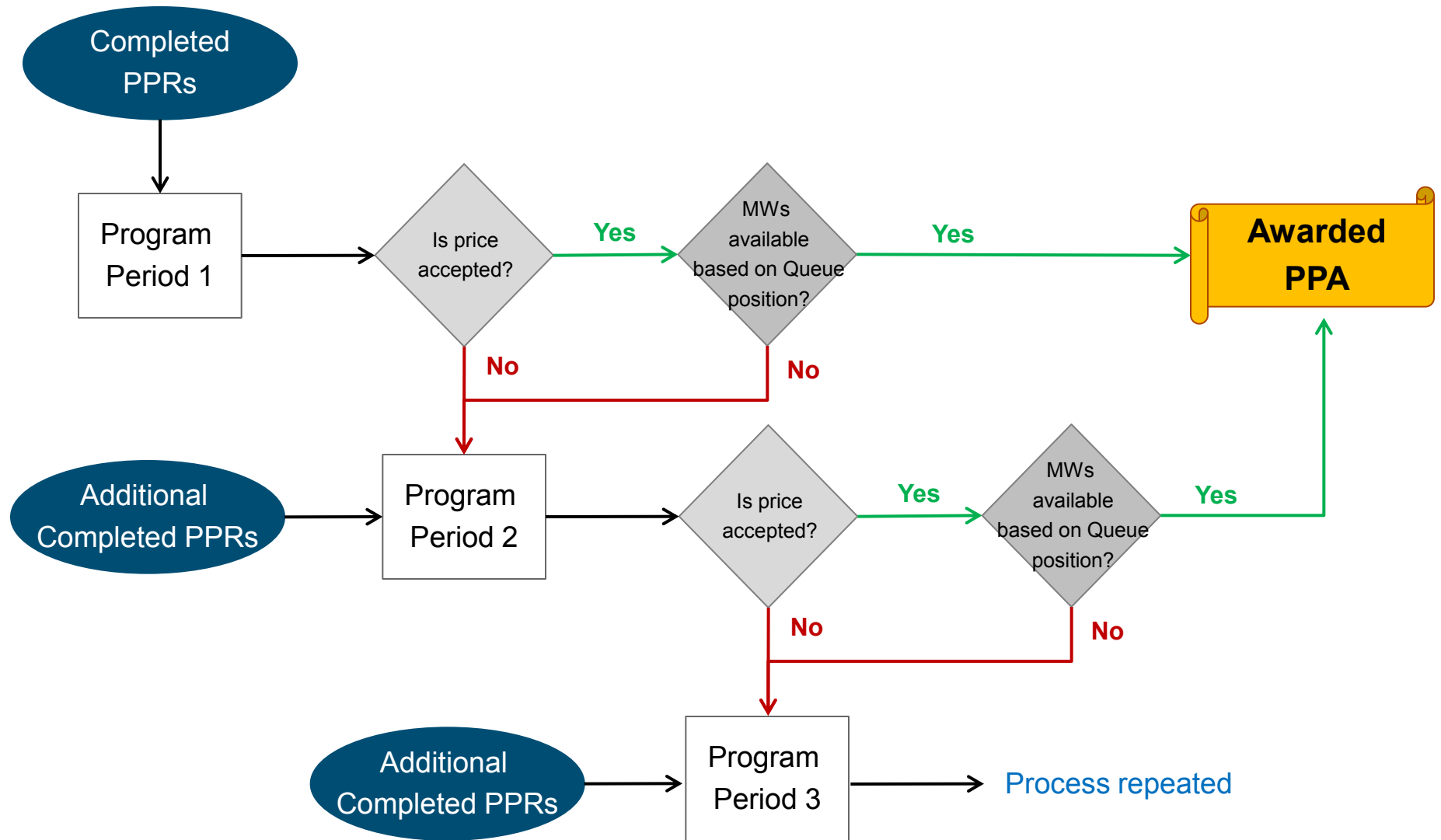
\*Subscription % = Total MWs that accepted price / MWs available per Program Period. MW figures, based on availability of 5 MWs in a Program Period.

- **Price Increases:** +\$4, then +\$8, then +\$12 (cap), assuming an uninterrupted series of increases
- **Price Decreases:** -\$4, then -\$8, then -\$12 (cap), assuming an uninterrupted series of decreases
- **Series of Adjustments:** Adjustment resets to +/- \$4 if there is an interruption to the series of increases or decreases
- **Minimum Queue Participation:** Price cannot adjust if less than five projects from five different unaffiliated Applicants are in the ReMAT Queue for a Product Type

## Pricing Illustration



\*\* Starting price set per CPUC decision



NOTE: Applicants keep their Queue Numbers for future Program Periods until they are awarded a PPA or they become ineligible.

Program Period 1	As-Available Peaking	As- Available Non-Peaking	Baseload
<b>Contract Price</b>	\$89.23	\$89.23	\$89.23
<b>Available Capacity</b>	5 MW	5 MW	5 MW
<b>ReMAT Queue</b> (Price accepted by Applicant) (Price rejected by Applicant) (✓ PPA executed)	3.00 MW – Reject 3.00 MW – Accept ✓ 0.75 MW – Reject 1.50 MW – Reject 1.50 MW – Accept ✓ 3.00 MW – Accept 0.25 MW – Accept 3.00 MW – Reject 2.00 MW – Accept ...	2.00 MW – Reject 1.00 MW – Reject 2.00 MW – Accept ✓ 0.25 MW – Reject 3.00 MW – Reject 3.00 MW – Reject 0.50 MW – Accept ✓ 1.00 MW – Reject 1.75 MW – Reject ...	3.00 MW – Reject 3.00 MW – Reject 2.00 MW – Reject 1.50 MW – Reject 3.00 MW – Reject 0.75 MW – Reject 0.50 MW – Reject 1.00 MW – Reject 2.00 MW – Reject ...
<b>Subscription (% = Total MWs that accepted price / 5 MW)</b>	100%+	50%	0%
<b>Executed Capacity</b>	4.5 MW	2.5 MW	0 MW
<b>Capacity Added Back due to Terminations</b>	0 MW	0 MW	0 MW
<b>Remaining Program Capacity</b>	36.679 MW – 4.5 MW executed + 0 MW terminated = 32.179 MW	36.679 MW – 2.5 MW executed + 0 MW terminated = 34.179 MW	36.679 MW – 0 MW executed + 0 MW terminated = 36.679 MW

	As-Available Peaking	As- Available Non-Peaking	Baseload
Program Period 2			
<b>Contract Price</b>	<b>\$85.23 (↓)</b>	<b>\$89.23 (↔)</b>	<b>\$93.23 (↑)</b>
<b>Available Capacity</b>	5 MW	5 MW	5 MW
<b>ReMAT Queue</b>  (Price accepted by Applicant) (Price rejected by Applicant) (✓ PPA executed) (PPA already awarded)	3.00 MW – Accept ✓ <del>3.00 MW</del> 0.75 MW – Reject 1.50 MW – Reject <del>1.50 MW</del> 3.00 MW – Reject 0.25 MW – Reject 3.00 MW – Reject 2.00 MW – Accept ✓ ...	2.00 MW – Reject 1.00 MW – Accept ✓ <del>2.00 MW</del> 0.25 MW – Accept ✓ 3.00 MW – Reject 3.00 MW – Reject <del>0.50 MW</del> 1.00 MW – Accept ✓ 1.75 MW – Accept ✓ ...	3.00 MW – Reject 3.00 MW – Reject 2.00 MW – Reject 1.50 MW – Reject 3.00 MW – Reject 0.75 MW – Accept ✓ 0.50 MW – Reject 1.00 MW – Reject 2.00 MW – Reject ...
<b>Subscription (% = Total MW that accepted price / 5 MW)</b>	100%	60%	15%
<b>Executed Capacity</b>	5 MW	3 MW	0.75 MW
<b>Terminated Capacity Added</b> (e.g. 1.5 MW E-SRG PPA terminated)	0.5 MW	0.5 MW	0.5 MW
<b>Remaining Program Capacity</b>	32.179 MW – 5.0 MW executed + 0.5 MW terminated = 27.679 MW	34.179 MW – 3.0 MW executed + 0.5 MW terminated = 31.679 MW	36.679 MW – 0.75 MW executed + 0.5 MW terminated = 36.429 MW

<b>Key Requirements</b>	
<b>Project Location</b>	The Project must be physically located within PG&E's electric service territory.
<b>Eligible Renewable Energy Resource</b>	The Project must be an Eligible Renewable Energy Resource as defined in PUC Section 399.12.
<b>Project Size/Contract Capacity</b>	The Contract Capacity for the Project cannot exceed 3.0 MW (AC).
<b>Interconnection</b>	<ul style="list-style-type: none"> <li>• Project must be interconnected to PG&amp;E's distribution system.</li> <li>• Wholesale Distribution Tariff (WDT) or CPUC Rule 21 can be used.</li> <li>• Must have completed Phase I or System Impact Study, or passed Fast Track screens or Supplemental Review.</li> <li>• Must meet definition of "strategically located".               <ul style="list-style-type: none"> <li>- Defined as (transmission system) Network Upgrades of \$300,000 or less.</li> </ul> </li> </ul>
<b>Site Control</b>	Applicant must have 100% site control for the Project and submit a map showing the boundary of the Site for which the Applicant has control.

<b>Key Requirements</b>	
<b>Developer Experience</b>	At least one member of the development team must have completed at least one project of similar technology and capacity.
<b>Daisy-Chaining</b>	The Project must be the only exporting project being developed, owned, or controlled by the Applicant on any single or contiguous pieces of property.
<b>Metering</b>	Projects must be electrically independent and separately metered.
<b>Qualifying Facility</b>	The Project must be a Qualifying Facility, as defined by the Federal Energy Regulatory Commission. This classifies ReMAT as a PURPA PPA.
<b>Other Incentives</b>	Project cannot have received California Solar Initiative (CSI) or Self Generation Incentive Program (SGIP) incentives within the past 10 years.



<b>Key Requirements</b>	
<b>Net Energy Metering (NEM)</b>	If awarded a ReMAT PPA, Applicant must terminate participation in NEM for the Project prior to the ReMAT PPA's Commercial Operation Date.
<b>Commercial Operation Date (COD)</b>	If awarded a ReMAT PPA, the estimated Commercial Operation date must not exceed 24 months following execution of the PPA.
<b>Deliverability</b>	Projects may be Energy-Only or have Full Capacity Deliverability Status. However, different Time of Delivery (TOD) Payment Allocation Factors will be applicable.

# Electric Interconnection

Before you start...

- Know your tariff obligations. Participant is responsible for timely applications and timely completion of applicable process.

- **Interconnection Processes**

- Fast Track
- Independent Study
- Cluster Study

- **Deliverability Options**

- Requested with your interconnection request
- Annual Deliverability Assessment
- Resource Adequacy Deliverability for Distributed Generation

## Rule 21 (CPUC Jurisdictional)

- Applies to exporting generation that sells its energy to PG&E under a PURPA PPA, such as the ReMAT PPA
  - Generating Facilities are not eligible under Rule 21 without entering into a PURPA PPA

## PG&E Wholesale Distribution Tariff (WDT) (FERC Jurisdictional)

- Applies to Exporting generation that sell its energy to anyone other than itself such as PG&E
    - Generating Facilities interconnecting under the WDT are not prohibited from entering into a PURPA PPA
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## Transition from Rule 21 to WDT

- Projects that originally enter the interconnection process under Rule 21 but do not enter into a PURPA PPA are not eligible to interconnect under Rule 21 and must withdraw its interconnection request. They can then enter the WDT interconnection process pursuant to Section 5.8.1.1 of Attachment I to PG&E's WDT.
- Projects that originally enter the interconnection process under Rule 21 that fail to qualify for the Electrical Independence Test must submit an interconnection request under the WDT Cluster Study Process. Once they complete the study process, they can opt for a Rule 21 Generation Interconnection Agreement (GIA) pursuant to Section 5.8 1.2 of Attachment I to PG&E's WDT.

## Applies to Rule 21 and WDT

Fast Track	Window	Initial Review	Supplemental Review	Interconnection Agreement	Timeline
WDT	No Window	15BD	20BD	~6 months	~9 months
Rule 21	No Window	15BD	20BD	~6 months	~9 months

Independent Study	Window	System Impact Study	Facilities Study	Interconnection Agreement	Timeline
WDT	No Window	60BD	60BD	~6 months	~16 months
Rule 21	No Window	60BD	60BD	~6 months	~16 months

Note: BD = business days

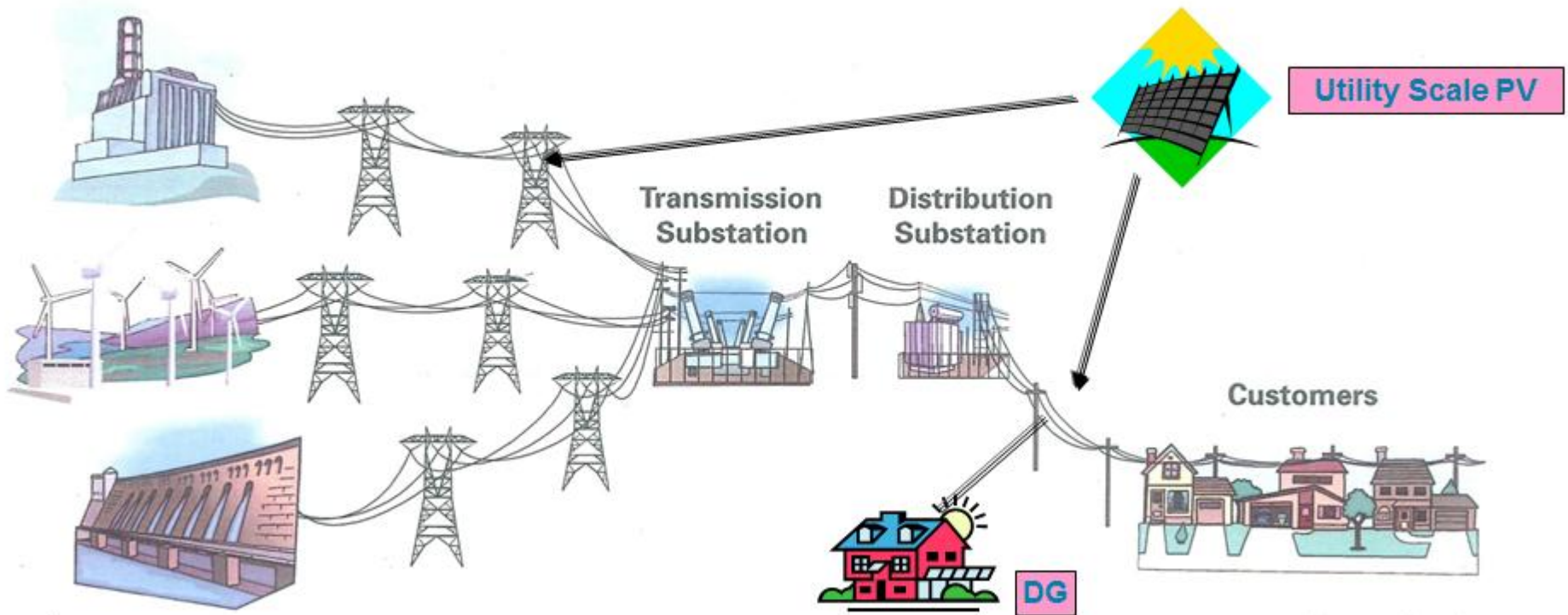
## Applies to WDT Only

PG&E WDT Cluster	Application Window	Phase I	Phase II	Interconnection Agreement
4	Closed	Completed	Completed	Completed
5	Closed	Completed	Target August 2013	Target April/May 2014
6	Closed	Target October 2013	Target August 2014	Target April/May 2015
7	March 2014	Target October 2014	Target August 2015	Target April/May 2016

Magnitude of System Modifications greatly vary by site location and generator characteristics

- Types of Modifications:
  - Interconnection Facilities – Modifications solely for a single Interconnection Request – Customer Funded
  - Distribution Upgrades – Modification to PG&E’s distribution grid – Customer Funded
  - Network Upgrades (Transmission System) – Modifications to the PG&E’s CAISO controlled grid (Reliability and Delivery Network Upgrades) – Mix of Customer and PG&E Funded

## Generating Stations



## Requested with your interconnection request

**Rule 21 (CPUC) Interconnection:** Energy-Only available

### WDT (FERC) Interconnection

- **Fast Track Study Process:** Energy-Only available
- **Independent Study or Cluster Study Process:** Full Capacity or Energy-Only available

## Annual Deliverability Assessment:

Generating Facilities previously studied as Energy-Only (both Rule 21 and WDT) can submit a request to PG&E in the Cluster Study window (March of every year for PG&E).

- This process is covered in Section 4.22.2 of Attachment I to PG&E's WDT

## Resource Adequacy Deliverability for Distributed Generation:

Eligible Distributed Generating Facilities (both Rule 21 and WDT) can submit a request to PG&E for the CAISO's process on an annual basis (CAISO will issue a market notice to registered customers).

- The CAISO's Tariff covering this process is pending FERC acceptance via Docket ER12-2643



- **Post-Interconnection Agreement:** PG&E and customer engineer, design, procure and construct (EPC) electrical interconnection (implementation kickoff could occur as late as five months following an agreed upon IA). Timeline for completion dependent on scope of capital improvements assigned to project.
  - PG&E engineers capital improvements per Interconnection Agreement
  - Customer engineers electrical system on customer side of meter and any upgrades to be customer-built and deeded
- **Post-EPC:** PG&E, CAISO and customer coordinate a pre-parallel inspection and commissioning to achieve commercial operation
- **Note some Critical Path Items:**
  - Long Lead Time Material Procurement
  - Clearance Window (typically between September to April each calendar year)
  - California Public Utilities Commission (CPUC) and County Permitting (could cause a project to take an additional two to three years to complete)
  - Land acquisition
  - Environmental Evaluation and Permitting

# Intermission

Q&A

# Appendix

AB 1969 (E-PWF & E-SRG)	SB 32 (E-ReMAT)	SB 1122 (Bioenergy FIT)
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2006

**AB 1969 signed into law; establishes feed-in tariff (FIT) in Public Utilities Code (PUC) Section 399.20**

- 250 MW total program capacity (IOUs only)
- Available only to public water/ wastewater facilities
- Project sizes of 1.5 MW or less in each IOU's service territory
- Priced at the Market Price Referent (MPR)

2008

**FIT in Section 399.20 expanded**

- 500 MW total program capacity (IOUs only). PG&E's allocation is 209.206 MW
- Non-water/wastewater facilities allowed to participate
  - E-PWF tariff (public water/wastewater facilities): 104.603 MW
  - E-SRG tariff (all other small renewable generators): 104.603 MW

2009

**SB 32 signed into law**

- Will expand FIT in PUC Section 399.20

2011

PG&E's existing E-SRG tariff allocation (104.6 MW) becomes fully subscribed (Sept 2011). Waitlist created

2012

**First CPUC Decision on implementation of SB 32 (May 24, 2012)**

- 750 MW total program capacity (IOUs & POUs). PG&E's allocation is 218.8 MW (minus E-PWF & E-SRG PPAs)
- Maximum project size increased to 3 MW
- Pricing based on Renewable Market Adjusting Tariff (ReMAT)

**SB 1122 signed into law**

- Additional 250 MW in IOU FIT capacity for bioenergy projects under PUC Section 399.20

2013

E-PWF & E-SRG tariffs closed to new participants on July 23, 2013

**Second CPUC Decision on implementation of SB 32 (May 23, 2013)**

- E-ReMAT PPA & tariff filed on June 24, 2013
- E-ReMAT effective on July 24, 2013

- **PG&E Energy Procurement**

- **PG&E RFO webpage:** <http://www.pge.com/rfo>
- **Renewable FIT webpage:**  
<http://www.pge.com/b2b/energysupply/wholesaleelectricssuppliersolicitation/standardcontractsforpurchase/>
- **ReMAT webpage:** <http://www.pge.com/rfo/remat>
  - **E-ReMAT Tariff:**  
[http://www.pge.com/includes/docs/pdfs/b2b/energysupply/wholesaleelectricssuppliersolicitation/standardcontractsforpurchase/ReMAT\\_Tariff.pdf](http://www.pge.com/includes/docs/pdfs/b2b/energysupply/wholesaleelectricssuppliersolicitation/standardcontractsforpurchase/ReMAT_Tariff.pdf)
  - **ReMAT PPA:**  
[http://www.pge.com/includes/docs/word\\_xls/b2b/energysupply/wholesaleelectricssuppliersolicitation/standardcontractsforpurchase/ReMAT\\_PPA.doc](http://www.pge.com/includes/docs/word_xls/b2b/energysupply/wholesaleelectricssuppliersolicitation/standardcontractsforpurchase/ReMAT_PPA.doc)
- **PG&E Contact Information**
  - **Renewable FIT Email:** [Feed-inTariffs@pge.com](mailto:Feed-inTariffs@pge.com)
  - **Renewable FIT Hotline:** (415) 973-1444

- **PG&E Electric Generation Interconnection (EGI)**

- **Interconnecting to the PG&E Electric Grid:** <http://www.pge.com/b2b/newgenerator/>
- **Online application for Wholesale Distribution & Rule 21 Export Applications:**  
<http://www.pge.com/mybusiness/customerservice/nonpgeutility/generateownpower/egi/>
- **Questions:** [wholesalegen@pge.com](mailto:wholesalegen@pge.com)

- **California Energy Commission (CEC):** <http://www.energy.ca.gov/>
  - **Renewables:** [http://www.energy.ca.gov/renewables/renewable\\_links.html](http://www.energy.ca.gov/renewables/renewable_links.html)
- **California Independent System Operator (CAISO):** <http://www.caiso.com>
- **California Public Utilities Commission (CPUC):** <http://www.cpuc.ca.gov>
  - **FIT webpage:** <http://www.cpuc.ca.gov/PUC/energy/Renewables/hot/feedintariffs.htm>
- **Federal Energy Regulatory Commission (FERC):**  
<http://www.ferc.gov/default.asp>
  - **Qualifying Facility:** <http://www.ferc.gov/industries/electric/gen-info/qual-fac/what-is.asp>