



# **RENEWABLES PORTFOLIO STANDARD**

## **2005 SOLICITATION**

### **BIDDERS CONFERENCE**

*August 18, 2005*

# *Agenda*

- I. Intro and Agenda
- II. Overview
- III. Quantitative Evaluation
- IV. Contract and Offer Forms
- V. Transmission
- VI. Solicitation Documents
- VII. Q & A

# *Overview*

# *Differences from 2004 Solicitation*

- No deposit upon bid submittal
- Utility ownership alternatives
- Contract modifications on delivery point and imbalance energy
- Single contract document
- Independent Evaluator

# RFO Goals

Target: 700 – 1400 GWhrs/Year

Product	Type	Performance Requirements
Baseload	Unit-Firm	7 x 24 Minimum 80% annual Capacity Factor
Peaking	Unit-Firm	5 x 8 ♦ June-September Minimum 95% Capacity Factor
Dispatchable	Unit-Firm	Day-Ahead Minimum 95% Availability Factor June-September
As-Available	Intermittent	Eligible technologies only Minimum annual volume

# ***PG&E Renewables Need***

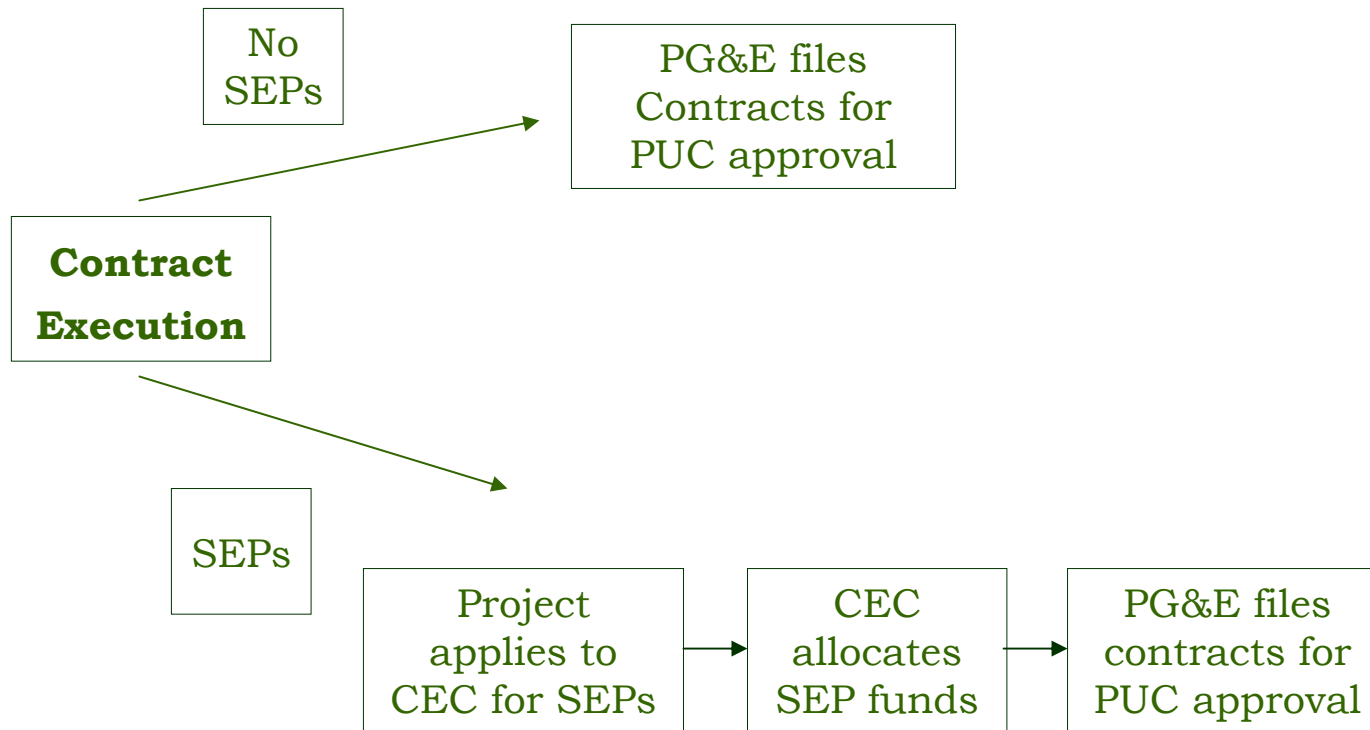
- Relative order of need:
  - Peaking
  - Dispatchable
  - Baseload
  - As-Available

# Schedule

Table V: PG&E RFO Schedule

Date	Event
August 4	PG&E Issues Request for Offers
August 11	Participants file Notice of Intent to Bid
August 18	Pre-Bid Conference
September 15	Deadline for Participants to Submit Bids
October	PG&E selects Shortlist of Bids: Consults with PRG
December	Once MPR is issued, PG&E and Participants execute Agreements subject to Regulatory Approval
January 2006	PG&E submits Agreements for Regulatory Approval

# *RPS Regulatory Process*



# What's an Offer?

- Participants may submit up to six discrete Offers for each Project. Offers may vary by:
  - Size
  - Commercial Operation Date
  - Delivery Term
  - Credit Terms
- Offers **must** include variations with and without Production Tax Credit (if applicable). These variations do not count toward the six allowed Offers.
- Ownership Offers do not count toward the six allowed Offers. Ownership Offers must include:
  - Firm Fuel Cost
  - O&M Proposal with Firm Pricing

# ***Evaluation Criteria***

Market Valuation	50%
Portfolio Fit	20%
Credit	20%
Project Status	5%
Technology Viability	5%
Transmission Adders, Integration Costs	Incorporated into Quantitative Analysis
RPS Qualitative Factors	Qualitative
Changes to Form Agreements	Case-by-Case

# Credit

**Table X.1: Performance Assurance Standards**

Score	10 Yr Contract	15 Yr Contract	20 Yr Contract
20 Points	(1) Security Deposit: Development: \$20/kw Operations: 6 mos. Revenue (2) Credit Assurance (3) Replacement Cost Collateral	(1) Security Deposit: Development: \$20/kw; Operations: 9 mos. Revenue (2) Credit Assurance (3) Replacement Cost Collateral	(1) Security Deposit: Development: \$20/kw; Operations: 12 mos. Revenue (2) Credit Assurance (3) Replacement Cost Collateral
10 Points	(1) Security Deposit: Development: \$20/kw; Operations: 3 mos. Revenue	(1) Security Deposit: Development: \$20/kw; Operations: 4 ½ mos. Revenue	(1) Security Deposit: Development: \$20/kw; Operations: 6 mos. Revenue
0 Points	No Performance Assurance	No Performance Assurance	No Performance Assurance

*Note: Revenue is calculated as the maximum potential revenue for the Operations period*

Security Deposit means cash or Letter of Credit during development. Post-commercial operation, Security Deposit, Credit Assurance, and Replacement Cost Collateral shall be in the form of cash, Letter of Credit, or an acceptable guaranty.

# *Turnkey Ownership*

- Participants may propose to develop, permit, and construct a facility for purchase by PG&E upon commercial operation of the facility.
- Turnkey options for central station solar technologies and small hydro are preferred.

# *Buyout Ownership Option*

- Participants may submit, in conjunction with a PPA, an additional Offer with an option price for PG&E to acquire the facility at the end of either Year 5 or Year 10.
- Buyout Option Offer must be accompanied by a stand-alone PPA Offer.

# *Quantitative Evaluation*

# *Quantitative Evaluation*

## ■ Market Valuation

- Comparison of offer pricing to the market value of the energy deliveries

## ■ Portfolio Fit

- Comparison of the online data and generation profile to PG&E's hourly, seasonal and annual positions

# *Time of Delivery (TOD) Factors*

Table VIII.2: Time of Delivery (TOD) Periods and Factors

<b>Monthly Period</b>	<b>Super-Peak</b>	<b>Shoulder</b>	<b>Night</b>
June – September	1.543	1.024	0.747
Oct. – Dec., Jan. & Feb.	1.310	1.065	0.787
Mar. - May	1.104	0.920	0.673

# *Contract Offer Forms*

# *Contract Structure*

## Three Individual Power Purchase and Sale Agreements

- As-Available (eligible to participate in EIRP)
- As-Available (not eligible to participate in EIRP)
- Unit Firm

# Standard Terms & Conditions

No Modification	PG&E Contract Reference
CPUC Approval	Article One Definitions, "CPUC Approval"
Definition and Ownership of RECs	Article One Definitions, "Environmental Attributes," and Section 3.2 "Environmental Attributes."
SEP Awards and Contingencies	Section 10.1 (a) and (b)
Contract Term	See the Delivery Term options in Section 3.1 (b) for both As-Available PPAs and Section 3.1 (c) of the Unit Firm PPA
Eligibility	Section 10.15 (b)
Applicable Law	Section 10.6

# Standard Terms & Conditions (cont.)

May be Modified by Parties	PG&E Contract Reference
Confidentiality (modify only for additional disclosure)	Sections 10.10 and 10.11, “Confidentiality” and “RPS Confidentiality.”
Performance Standards/Requirements (CPUC may impose limits on changes.)	Section 3.1 (i) for As-Available PPAs and Section 3.1 (j) for the Unit Firm PPA
Product Definitions (CPUC may impose limits on changes.)	Schedule P
Non-Performance or Termination Penalties and Default (CPUC may impose limits.)	Article 5
Credit Terms	Article 8
Contract Modifications	Section 10.8
Assignment	Section 10.5

# *Commercial Overview*

- Seller proposes Contract Price for sale of energy and capacity in its Offer
- Seller is or hires its own Scheduling Coordinator
- All deliveries are made by SC-to-SC trades
- Delivery Point is NP-15, SP-15, or ZP-26 (will consider out-of-state)
- Seller receives the Contract Price – as adjusted by TOD Factors

# Monthly Payments

The Contract Price for each megawatt hour (MWh) of Delivered Energy in each Contract Year shall be as follows:

Contract Year	Contract Price (\$/MWh)

Note: The product offered by Participant should be an all-in energy and capacity price, except with regard to Dispatchable Products, as will be discussed later.

# *Time of Delivery (TOD)*

## *Factors*

<b>Monthly Period</b>	<b>Super-Peak</b>	<b>Shoulder</b>	<b>Night</b>
June – September	1.543	1.024	0.747
Oct. – Dec., Jan. & Feb.	1.310	1.065	0.787
Mar. - May	1.104	0.920	0.673

# ***TOD Periods (cont'd)***

## Monthly Period Definitions

*The Monthly Periods are defined as follows:*

- June – September
- Oct. – Dec., Jan. & Feb.
- March - May

## Time of Day Period Definitions

*The Time of Day Periods are defined as follows:*

1. **Super-Peak** (5x8) = HE (Hours Ending) 13 – 20 Pacific Prevailing Time (PPT), Monday – Friday (except NERC holidays)
2. **Shoulder** = HE 7 – 12, 21 and 22 PPT, Monday – Friday (except NERC holidays); and HE 7 – 22 PPT Saturday, Sunday and all NERC holidays
3. **Night** (7x8) = HE 1 - 6, 23 and 24 PPT all days (including NERC holidays)

# Performance Adjustments

To avoid incurring any Performance Adjustments, Seller must meet the following Capacity Factors over all the hours comprising each of the TOD Periods ("Performance Requirements"):

Monthly Period	1. Super-Peak	2. Shoulder	3. Night
June – September	95%	90%	80%
Oct. – Dec., Jan. & Feb.	90%	85%	65%
March - May	80%	75%	65%

# Performance Adjustments

To the extent that Seller fails to satisfy the Performance Requirements specified, Seller shall pay to Buyer "Performance Adjustments." For each 1 percent by which the Capacity Factor in each TOD Period is less than the Performance Requirement for such TOD Period, Seller shall pay to Buyer the following percentages of the applicable Maximum Monthly TOD Payment ("Performance Adjustment Factors"):

Monthly Period	1. Super-Peak	2. Shoulder	3. Night
June – September	3.00	2.00	1.25
Oct. – Dec., Jan. & Feb.	2.50	1.75	1.25
March - May	1.50	1.25	1.00

# ***Dispatchable Products: Capacity Price***

The Capacity Price for each kilowatt of Contract Capacity in each Contract Year shall be:

<b>Contract Year</b>	<b>Capacity Price(\$/kW-year)</b>

# *Capacity Payment*

To receive the full Monthly Capacity Payment for a given month, the Project must demonstrate an Availability Factor for that month equal to or greater than the applicable Minimum Availability Factor, as specified in the table on the next slide.

To the extent that Seller fails to demonstrate the Minimum Availability Factor for any month, Seller shall be liable for Performance Adjustments.

# *Dispatchable: Capacity Payment (cont'd)*

## **Time of Availability (TOA) and Minimum Availability Factors**

<b>Month</b>	<b>TOA Factor</b>	<b>Minimum Availability</b>
January	8%	90%
February	5%	90%
March	4%	70%
April	4%	70%
May	4%	70%
June	8%	95%
July	14%	95%
August	15%	95%
September	11%	95%
October	9%	90%
November	9%	90%
December	9%	90%

# *Transmission*

# *Transmission*

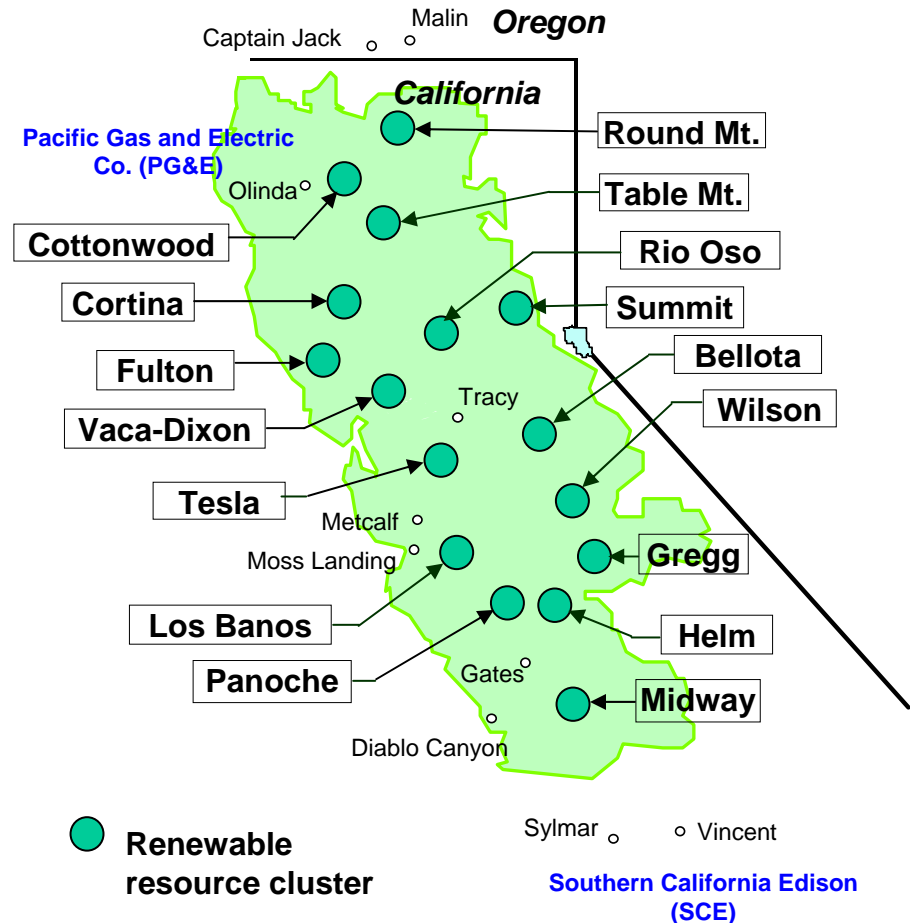
- Transmission Availability and Cost - Part of RFO Evaluation
- Purpose – Provide information for bidders to adjust proposals
  - => Least Cost Best Fit

# ***Consideration of Transmission Cost in Bid Ranking (D.04-06-013 and D. 05-07-040)***

- Generator Cost responsibility - Include in bid price
  - Direct Assignment Facilities (Gen-tie)
    - ❖ Identify if desire PG&E to evaluate potential for sharing
  - Wheeling Charges in non-PTO systems
  
- Cost Responsibility – Ratepayer
  - Network Upgrades
  - Transmission Adders at Clusters from:
    - ❖ CAISO Interconnection Process (SIS/FS)
    - ❖ Transmission Ranking Cost Report

# PG&E Substations

*Associated  
with  
Renewable  
Resource  
Clusters*



# *Transmission Ranking*

## *Cost*

- For Projects that have **not** completed the SIS/FS
- Solely for bid ranking in this solicitation
- Based on Proxy facilities
- Successful bidders must complete the ISO Interconnection Process

# ***Transmission Ranking***

## ***Cost Table IX.1***

- Table IX.1 – Transmission Ranking Cost
- North of PG&E Service Area – Round Mt.
- South of PG&E Service Area – Midway
- East of PG&E Service Area - Summit

# Table IX.1

Substation Associated With Cluster Of Potential Generation	Level	Super-peak, Peak and Shoulder			Night			Base Load & As Available		
		Year Round			Year Round			Year Round		
		Maximum MW of Potential Generation in each Level	Cost of Proxy Network Upgrades to accommodate MW Level of Potential Generation (\$ millions in 2005 dollars)		Maximum MW of Potential Generation in each Level	Cost of Proxy Network Upgrades to accommodate MW Level of Potential Generation (\$ millions in 2005 dollars)		Maximum MW of Potential Generation in each Level	Cost of Proxy Network Upgrades to accommodate MW Level of Potential Generation (\$ millions in 2005 dollars)	
Proxy Voltage Support Devices*	Other Proxy Transmission upgrades		Proxy Voltage Support Devices*	Other Proxy Transmission upgrades		Proxy Voltage Support Devices*	Other Proxy Transmission upgrades			
Fulton 230 kV	1	700	37	0	200	11	0	200	11	0
	2				350	18	19	350	18	19

Cost of Proxy Voltage Support Devices are to be prorated in proportion to the size of the project.

# Example

- Two bids received:
  - A: 150 MW
  - B: 150 MW
- Bid A has lower cost (or higher point total for value)

## Transmission Adder to be used in Evaluation

<b>Bid</b>	<b>Level</b>	<b>Gen Capacity (MW)</b>	<b>Proxy VAR Support (\$Million/MW)</b>	<b>Other Proxy Network Upgrades (\$Million)</b>
A	1	150	0.05	0
B	1	50	0.05	0
B	2	100	0.05	\$19

"In ranking RPS bids, PG&E, SCE, and SDG&E shall each allocate costs of transmission upgrades that would be used by more than one RPS project on a pro rata basis, based on the percentage of transfer capacity added by the proposed upgrade that would be used by the RPS project: This pro rata allocation of upgrade costs shall be applied only if sufficient renewables potential exists, as identified by the California Energy Commission, to fully utilize the transmission facility sometime in the future."

# *Solicitation Documents*

# *Solicitation Process*

- Offers must be received by PG&E **on Thursday, September 15, 2005 at 3:00 p.m. (PPT)**
- Both Electronic and Hard Copies
  - Hard copies (3 Bound & 1 Unbound) overnight or hand-delivered to:

RPS Solicitation  
Power Contracts Department  
Pacific Gas & Electric Company  
245 Market Street, Room 1245B, Mail Code N12E  
San Francisco, CA 94105

- Electronic copies of the documents must be in the form of a compact disc (CD) accompanying the hard copy of the documents.

# ***Bidding Forms and PPA***

- Required Forms (Sec. VII.B, pp 12-16)
  - Signed RPS Solicitation Protocol Agreement (Attachment A)
  - Fully Completed Offer Form (Attachment D)
    - Buyout Offers must also include a fully completed term sheet (Attachment J).
    - Turnkey Offers must also include a fully completed term sheet (Attachment K), instead of a Power Purchase Agreement.
  - Participant Credit-Related Information Form (Attachment E)
  - Attachments to Offer Form Required by Sections VII.B.3.-VII.B.12

# ***Bidding Forms and PPA (cont'd)***

- Required Forms (Sec. VII.B, pp 12-16)
  - Applicable Form of Master Purchase and Sale Agreement (Attachments G, H, and I). Bidders are required to thoroughly review these documents and specifically note and identify any proposed exceptions or modifications to these documents (Sec. VII.B.13 a. and b.)
- FERC Order 2004 Waiver

# ***CEC Requirements***

- RPS Eligible Renewable Energy Resources (ERR) must be CEC Certified
  - CEC Certification/Pre-Certification should be applied for/obtained now - prior to bidding
- Supplemental Energy Payments (SEPs) are awarded by the CEC
  - Apply to CEC for SEPs when PPAs are executed
- ERRs must report their renewable generation to a CEC Generation Tracking System

# ***Communications, Website Interaction***

- All RFO documents are available and can be downloaded from PG&E's website at: [www.pge.com/renewableRFO](http://www.pge.com/renewableRFO)
- All announcements, updates and Q&As will also be posted on the website
- PG&E prefers that communications be in the form of an email directed to: [RenewableRFO@pge.com](mailto:RenewableRFO@pge.com)
- For procedural and administrative matters, call Dave Landes at (415) 973-9326

# Q & A

