Effects of the PG&E LTRFO/Novation Proposed Decisions

The Long Term RFO and Novation Proposed Decisions (PDs):

(1) **Gamble long term reliability** on the assumption that resources will be available to meet renewable integration needs, once-through cooled facility retirements and economic rebound load growth;

(2) **Jeopardize the competitive RFO process**; and

(3) **Reject the combination of winning projects** that best meets customers' long term procurement needs.

The Proposed Decisions Gamble Long-Term Reliability

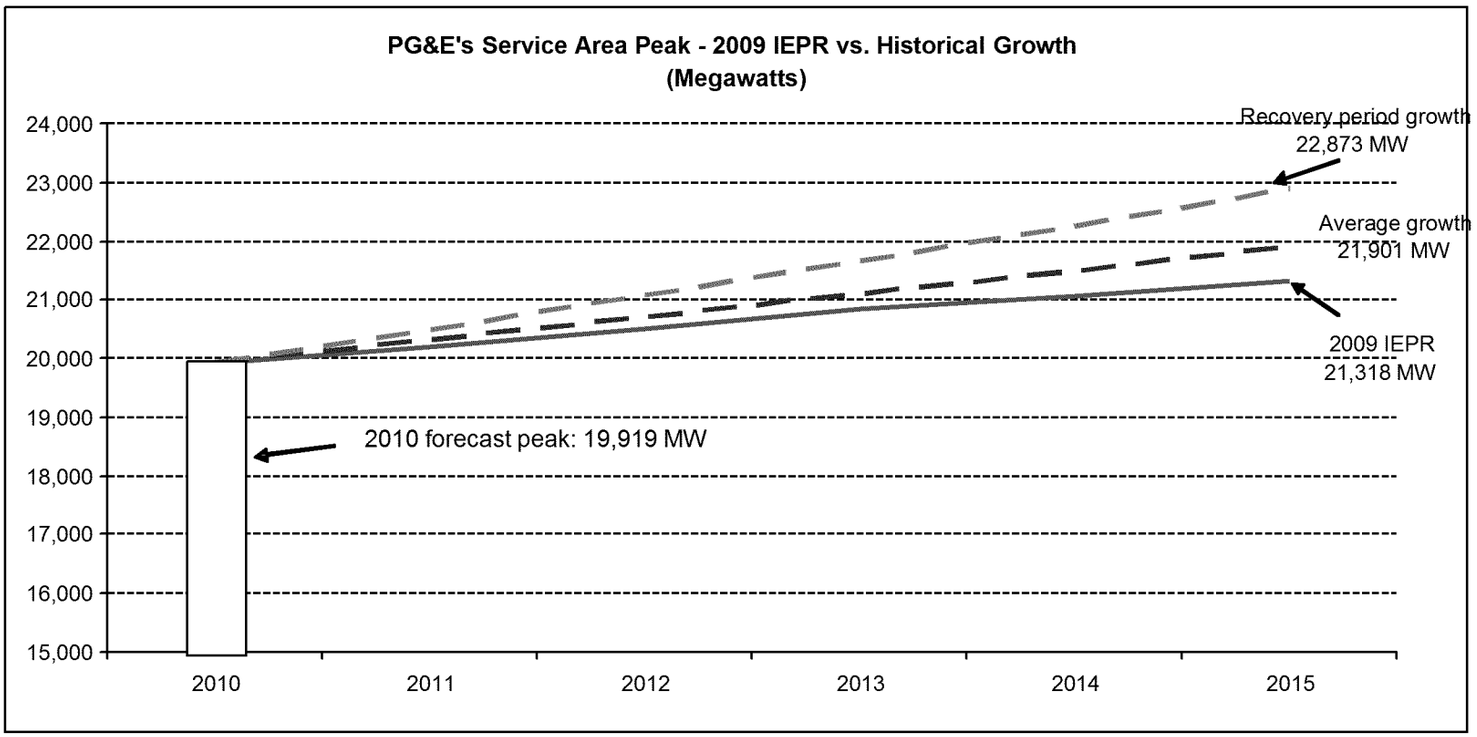
- The winning LTRFO projects fit within the need range approved by the Commission. **The Commission approved a range for PG&E recognizing that reliability need is based on imperfect information.**
- **The authorized need range assumes all approved projects show up**
- Parties have cherry-picked facts to advocate the low end of the range, but ignored facts that demonstrate even a greater need
  - The 2006 LTPP need determination did not address the integration needs for 20% or 33% RPS targets.
  - By 2020, the CAISO area may need up to 5000 MW of regulation, balancing and ramping services from flexible gas-fired resources and storage to integrate intermittent renewables into the grid*
  - State Water Resources Control Board now requires 1,400 MW MORE retirements by 2017 than assumed in the 2006 LTPP Decision

Need	Minimum (15% PRM)	Maximum (17% PRM)
2006 LTPP	800	1,200
Failed Projects	312	312
Total Capacity Need	**1,112**	**1,512**
2008 Winning Projects		
Mariposa	184	184
Marsh Landing	719	719
Oakley	586	586
Total LTRFO Capacity	**1,489**	**1,489**
Reliability Need	**-377**	**23**

*Source: KEMA, Inc. 2010. Research Evaluation of Wind and Solar Generation, Storage, and Demand Response on the California Grid. Prepared for the California Energy Commission. CEC-500-2010-010.

Long Term Reliability Gamble:
Small changes in economic recovery make a big MW difference

- Growth during recovery periods = 3,000 MW
- Average historical growth = 1,900 MW
- 2009 IEPR projected growth = 1,400 MW
- Difference between 2007 and 2009 IEPR peak forecast = less than 500 MW



Pacific Gas and Electric Company

* Historic growth rates are calculated using actual 1990-2008 peak reported in the 2009 IEPR's Form 1.3 - PG&E Planning Area's coincident peak demand.

The Proposed Decisions Gamble Long-Term Reliability

- No new conventional resources are likely to be built through competitive processes in Northern California until 2017-2018
- If the CPUC does not move forward with the proposed projects, it risks needing emergency backup procurement to avoid putting reliability at risk
- Developers face more permitting and development uncertainties than ever before in California
  - CPUC Process Delays (next System Need determination will be Q4 2011)
  - PSD Delays under current rules (Russell City Energy Center)
  - New EPA Air Permit Regulations in July 2011 will change the game
  - Changes to Transmission Planning, Permitting & Project Selection
- A Commission-approved contract does not guarantee a project will be built, but without a Commission-approved contract, few developers – if any – can or will keep a new project moving forward
- The Long Term RFO PD will kill the Oakley Project even if it is approved as a backup against other project failure

The Proposed Decisions Jeopardize the Competitive Process

- Generation developers and investors will be reluctant to participate in future RFOs if winning projects are pushed out by less competitive proposals
- The LTRFO PD's rejection of a winning 2008 LTRFO bid (the Oakley project), and the effective substitution of non-LTRFO winning projects based on re-adjusted need numbers, **jeopardizes the entire competitive process for new generation development in California**
- If, after the LTRFO is concluded, a winning participant's offer is rejected based on claims that PG&E's service area need "**may**" have changed, developers in the future will be hesitant to participate in RFOs where, at the end of the process, the ***entire basis for the RFO can be reopened***
- Undermining the competitive process only adds to the other permitting & transmission siting uncertainties developers face

The Proposed Decisions Reject the Winning Project Combination

- Opponents of the Oakley project ask the Commission to ignore the competitive process and reject the winning projects with the best market value for customers
- PG&E's proposed projects together comprise a balanced portfolio that will meet ***both capacity and energy needs***, and ensures that no one generator has market power in PG&E's service territory. ***The combination of projects currently selected in the LTRFO and Novation Proposed Decisions will not achieve these goals***
  - Is the mix of energy resources designed to produce a low cost outcome under not just base case market conditions, but also high gas price conditions? High carbon cost conditions? Dry hydro?
  - In focusing on peakers, the Commission risks building a resource mix for PG&E customers that is energy constrained
- **PG&E is a net purchaser of energy now, and will continue to be in 2015 and beyond**

LTRFO Winning Projects Best Integrate Renewables

Project (Combustion Turbine=CT; Combined Cycle=CC)	Cooling (for Combined Cycles)	Heat Rate, Without Duct Firing (BTU/kWh, ISO conditions)	Ramp Rate (MW/minute)	Start Time (Minutes) (from non-operation to full load operation without duct firing) Hot	Warm	Cold	Maximum Operating Hours/Yr	Maximum Starts/Yr	Ancillary Service 3	Ramp Range (MW, ISO conditions) [1]	Bay Area R.A.?
Mariposa (CT)	n/a	Redacted								**24** – 194	Yes
Oakley Generating Station (CC)	Dry	Redacted		Redacted				300	Redacted	**166 – 304** **351** – 62 4	Yes
Marsh Landing (CT)	n/a			12	12	12	**1,705**	167		**120** – 80 1	Yes
GWF Tracy (CC)	Dry			Redacted			Redacted			**96 – 261**, (323)	No
Los Esteros (CC)	Wet									**54 – 231**, **(294)**	Yes
Russell City (CC)	Wet									**175 – 275,** (299) **357 – 552,** (601)	Yes
Contra Costa 6	Wet / OTC						See Note 2	See Note 2		**45** – 337	Yes

1. Second (bracketed) upper range is maximum capacity when duct firing, which can be provided at a higher heat rate.
2. Maximum Operating Hours/Yr and Maximum Starts/Yr is controlled by overall NOx Bubble Limits imposed by the BAAQMD for the Contra Costa, Pittsburg and Potrero facilities.
3. Units that have Automatic Generation Control (AGC) can provide the ancillary services regulation up and regulation down.

Net Value Comparison of All Proposed New Resources

	Projected On-Line	Customer Net Value	July Rating
Long Term RFO		Redacted	
Marsh Landing	2013		719 MW
Mariposa	2012		184 MW
Oakley	2014		586 MW
			1,489 MW
DWR Contract Novation (2)			
GWF Tracy (1)	2013		145 MW
Los Esteros	2013		106 MW
			251 MW
Russell City	2013		579 MW

Notes:
1) Valuations exclude Bay Area RA incremental value. All resources except GWF provide Bay Area RA.
2) Customer net value and ratings for the novations are for incremental generation. Customer net values, considering the entire units for each novation is Redacted