



**Pacific Gas and
Electric Company™**

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March 21, 2008

ELECTRONIC DELIVERY

California Energy Commission
Docket Office, MS-4
Attn: Docket No. 08-IEP-1
1516 Ninth Street
Sacramento, CA 95814

Re: Docket # 08-IEP-1 (2008 Integrated Energy Policy Report)

Docket Office:

Attached are PG&E's comments on the workshop held March 11, 2008, regarding 2008 Integrated Energy Policy Report.

Please contact me should you have any questions. I can be reached at 415/973-4185.

Sincerely,


Kathy Treleven

Attachment

PG&E's Comments Regarding the CEC's March 11, 2008

IEPR Committee Workshop on Energy Efficiency and Forecasting

Pacific Gas and Electric Company welcomes the opportunity to work with the IEPR Committee and Commission staff to clarify the overlap between target energy efficiency saving per CPUC decision D. 04.09.060 and energy efficiency savings that are embedded in the Commission's adopted forecasts.

PG&E appeared at the March 11, 2008 workshop and gave a brief presentation which addressed in large part the four questions which were posed by the IEPR Committee. The presentation slides are appended here for your convenience. PG&E, in these comments, wishes to highlight the following issues:

- The Commission staff should complete the analysis needed to determine the amount of uncommitted energy efficiency embedded in its November 2007 revised load forecast as soon as possible, and in time to meet the projected Phase 1 decision of the 2008 Long-Term Procurement Plan (LTPP) proceeding, currently scheduled for November 2008. In addition to the 2008 LTPP, there are many other uses for the CEC load forecast, which were discussed at the March 11 workshop. There are a number of regulatory proceedings currently in progress that require a clear load forecast from the CEC. For example, CPUC's Rulemaking 06-04-009 implementing AB32, and Rulemaking 06-04-010 on the 2009-2011 energy efficiency programs rely on the CEC's load forecast. Therefore, it is important that the Commission expedites the work needed to clarify and determine the potential overlap of energy efficiency savings overlap in its load forecast.
- PG&E appreciates the work Commission staff has done this far in clarifying the amount of energy efficiency overlap in the residential and commercial market segments. However, the analysis completed thus far is not a complete picture of the overlap. As PG&E pointed out in its workshop presentation, the industrial and agricultural classes represent approximately 1/3 of total energy demand and, historically, have contributed a significant amount of the total energy efficiency savings. PG&E requests that the Commission staff be directed to complete the energy efficiency savings overlap analysis by estimating, by some means, the likely amount of overlap in the remaining market segments. If, due to resource constraints or other reasons, the Commission staff cannot complete this analysis by the end of September 2008, then PG&E requests that the Commission advise the CPUC and ISO that, for the purpose long-term planning exercises, the current 2008-2018 CED projections should be considered to be fully mitigated with respect to the CPUC energy efficiency targets per D.04.09.060. This should be done because, absent analysis to the contrary, the Commission staff cannot rule out, and IOU analysis strongly suggests that the current forecast is at least fully mitigated with respect to those targets.
- PG&E is concerned that issues of overlap may go beyond energy efficiency savings and extend to self-generation. In the recent LTPP, PG&E made an incremental reduction to the 2008-2018 CED projections to reflect PG&E's assessment of the impact of self-generation, especially small scale distributed generation such as small scale CHP and PV which were above the incremental levels of self-generation shown in the 2008-2018 CED tables. However, given the very low projected growth rates in energy demand in the Commission staff's forecasts, it seems very possible, even likely, that there was a significant amount of self-generation that was embedded in the CED modeling process which was above and beyond the level shown in the published tables. PG&E requests that the IEPR committee direct the staff to address this issue prior to the next round of CED modeling.

- PG&E request that in future CED projects the staff should include a fully mitigated energy demand forecast where fully mitigate is defined as consistent with the CPUC's currently adopted energy efficiency savings targets throughout the forecast horizon. This will help to reduce confusion among forecast users in the multiple applications in which the forecast is used which include not only electric procurement planning but also, electric generation, transmission and distribution planning, AB32 analysis, gas facilities assessments, and even analysis regarding updated energy efficiency savings targets. Ideally this fully mitigated forecast would be accompanied by detailed tables showing the amount of embedded energy efficiency savings by customer class and by region, the amount of self-generation reductions by customer class and by region and information on forecast error variance throughout the forecast horizon.

PG&E appreciates the CEC's focus on this important issue, and looks forward to continuing to work with the CEC staff and other parties to bring more clarity to forecasted demand so that the IEPR, energy efficiency proceedings, the long term planning proceeding and other cases may advance with a stronger underlying foundation.

**California Energy Commission
Workshop on Energy Forecasting
March 11, 2008**

**Richard Aslin
Pacific Gas and Electric Company**

Presentation Themes

- This needs to be sorted out before the 2009 IEPR/2010 Long Term Integrated Resource Plans are developed.
- The current modeling conventions with respect to treatment of EE may be outdated and causing needless confusion.
- PG&E believes that 100% or more of current target levels of EE are already embedded in the California Energy Demand (CED) projections.
- Ideally the CED would explicitly identify EE and Self-Generation by customer type and by region for each year in the forecast horizon.
- Ideally the CED would include more than just the “expected” value forecast. Planning to the “expected” value may not be the right standard.

Question 1

- How are the demand forecasts used in other venues? Are there issues associated with the forecasts and those uses? How can forecast use in these other venues be coordinated to reflect collaborative understanding of how to use the forecasts?
- **The current modeling convention with respect to committed vs. uncommitted EE programs is outdated and causes confusion**
 - The modeling convention is a hold-over from a previous era. It is outdated given the current planning environment.
 - The modeling convention is not needed given the EAP loading order, the CPUC EE targets decision, and other directives which require incorporating the adopted targets in all long-term planning exercises.
 - The modeling convention causes confusion for forecast users in transmission planning, in distribution planning, in financial and rate planning exercises.

Question 1 – Continued – What Flavor of Forecast is Needed

Uses for Long-Term Electric Demand Forecasts	Forecast Need		
	Hybrid (No)	Mitigated (Yes)	Unmitigated (?)
Generation Planning	Hybrid (No)	Mitigated (Yes)	Unmitigated (?)
Transmission Planning	Hybrid (No)	Mitigated (Yes)	Unmitigated (No)
Distribution Planning	Hybrid (No)	Mitigated (Yes)	Unmitigated (No)
Financial/Rate Planning	Hybrid (No)	Mitigated (Yes)	Unmitigated (No)
GHG Planning	Hybrid (No)	Mitigated (Yes)	Unmitigated (?)

Hybrid has different treatment of CEE savings during the forecast horizon. The current modeling convention.

Mitigated is with target levels of CEE savings incorporated throughout the forecast horizon.

Unmitigated is before target levels of CEE savings are incorporated.

Question 2

- What additional information or analysis would parties like to see? What data are needed to conduct this analysis? Can these questions be effectively answered with the demand forecast or are new tools needed?
- The CEC should estimate the amount of EE projected forward for classes other than residential and commercial. There is potentially a large amount of EE being projected forward via the industrial and Ag equations.
- The CEC should do an analysis similar to the EE analysis for self-generation. It is possible that the current forecasting methods are also projecting forward large amounts of self-generation that are not being shown explicitly in the forecast tables. Double counting self-gen has the potential to be a material issue for the next round of IRP. Ideally, the CEC should do both the above analyses at a regional level.
- Ideally the CEC should include in its forecast either scenarios, sensitivities, or a confidence interval. A point forecast is useful for many applications but planning requires a sense of the dispersion of possible outcomes as well as the “expected” value. Planning to the “expected” value is planning to be short 50% of the time. The “value proposition” may not support “expected value” planning.

Question 2 – Continued -- 100% of Current EE Targets May Already Be Captured

2009-2013 Time Period	Embedded in CEC Forecast	CPUC Adopted Targets for PG&E
Residential (per CEC analysis)	265 MW	
Commercial (per CEC analysis)	485 MW	
Industrial + AG (estimated based on historic data)	500 MW	
Total	1,250 MW	1,220 MW

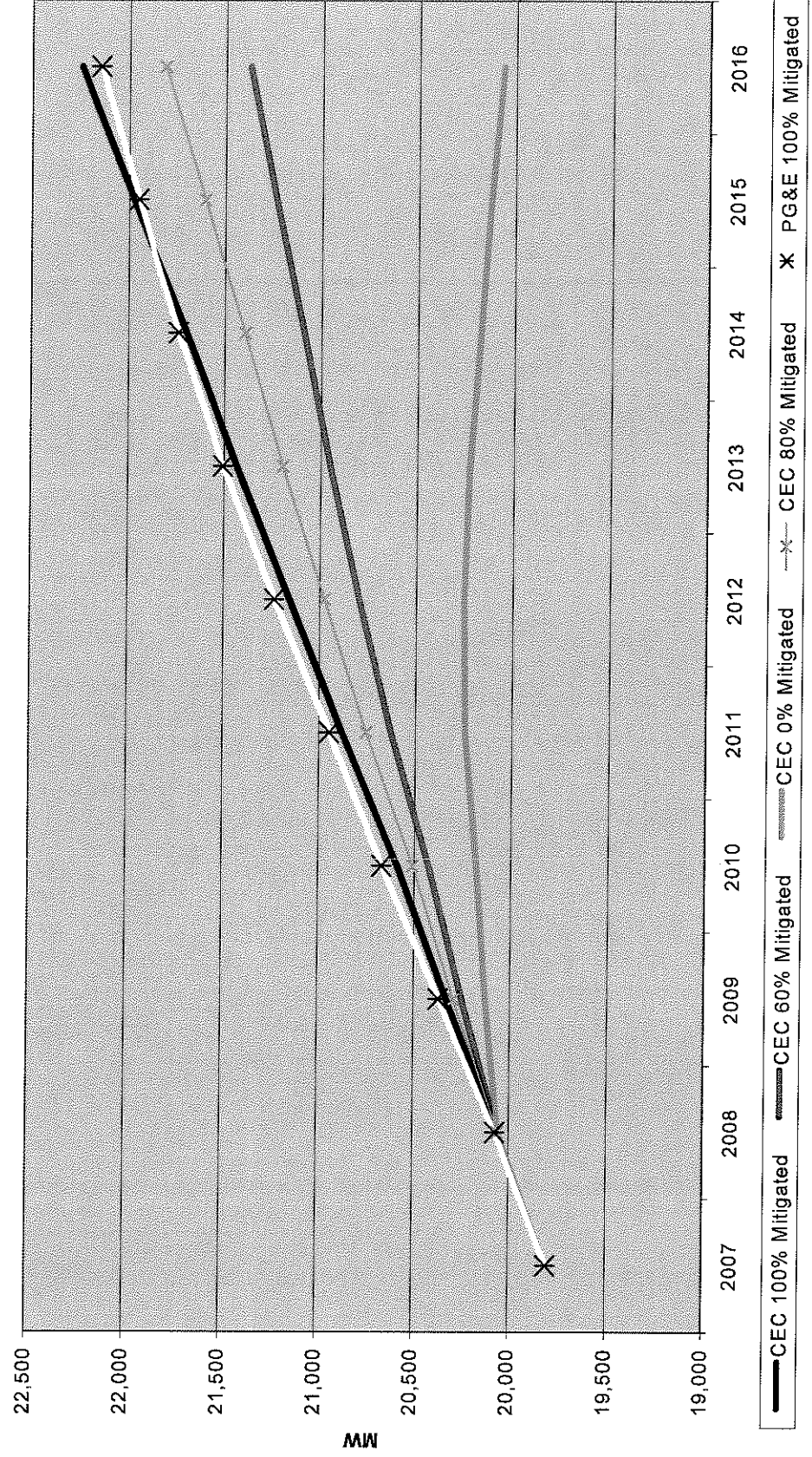
Residential and commercial savings are based on the analysis as shown in the 2008-2018 CED report Table 14.

Question 3

- How would that additional information or analysis be used? What entity would use the results, and when is it needed?
- **Additional information would be useful in better understanding the forecast and how to use it.**
 - 80% of targets (the final LTPP guess) seems more reasonable than 60% (the intermediate LTPP guess) or 0% (the starting LTPP guess) but 20% of the targets still amounts to 500 MW of capacity over a 10-year period.
 - Based on the forecast results PG&E get from the regression model, after fully mitigating for the target EE savings throughout the forecast horizon, it appears that the CED projection is 100% mitigated.
 - It is currently not possible to determine the reasonableness of the CEC's forecasts because it is not clear what is included or not included. This is true for both EE and self-generation.
 - Scenario or confidence interval information will help us better understand the risks and trade-off inherent in the current planning criteria.

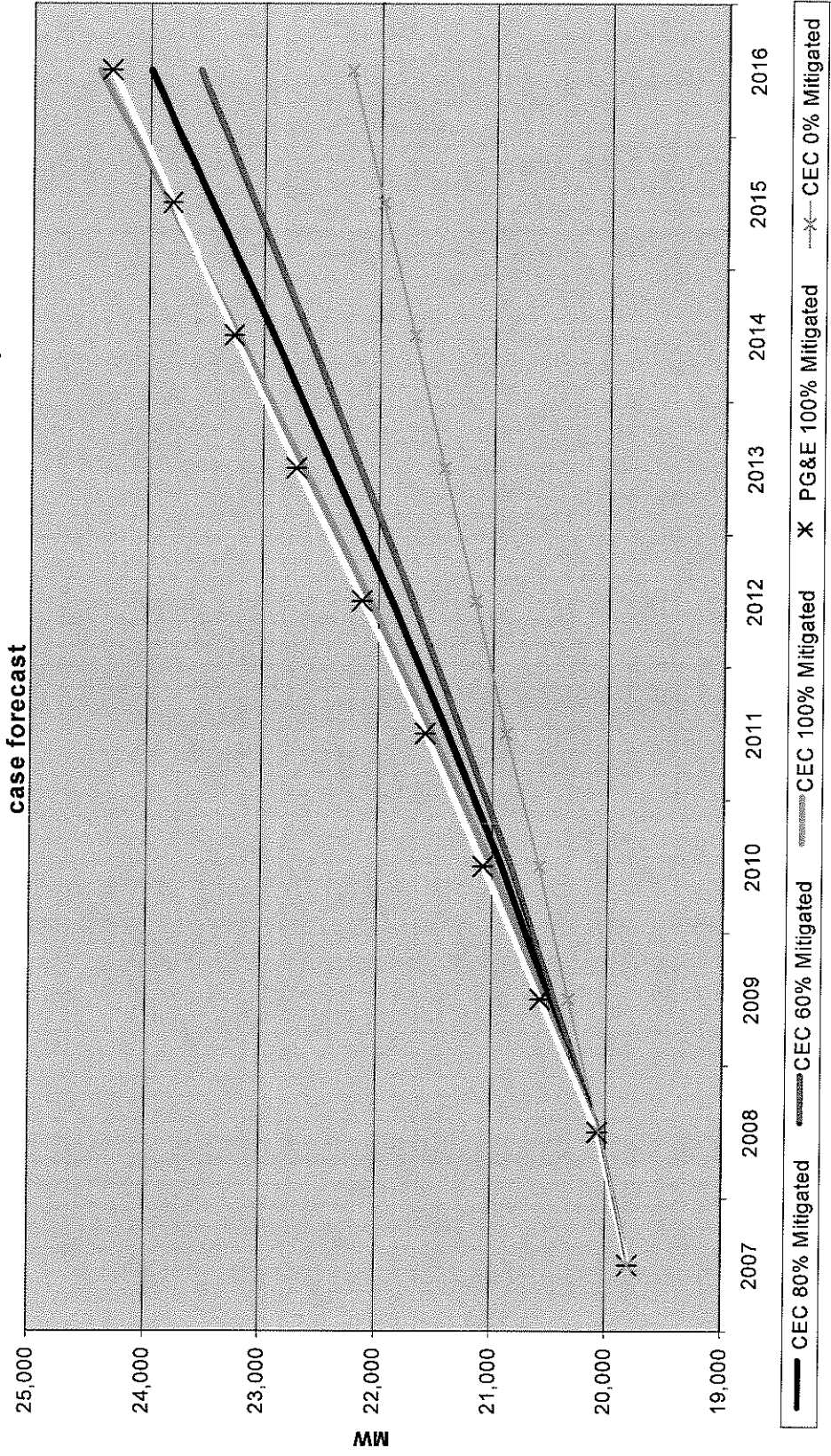
Question 3 – Continued – The Evolution of a “Guesstimate”, 2006 LTPP

Mitigated Peak Load Comparison -- CEC 2007 IEPR Forecast for the PG&E Service Area
 assuming differing levels of embedded mitigation for uncommitted CEE in published base
 case forecast



Question 3 -- Continued -- The Evolution of a "Guesstimate", 2006 LTPP

Unmitigated Peak Load Comparison -- CEC 2007 IEPR Forecast for the PG&E Service Area assuming differing levels of embedded mitigation for uncommitted CEE in published base case forecast



Question 4

- How do utilities model energy efficiency impacts in the utilities' own forecast methods? In particular, please discuss the methods and assumptions used to develop a forecast of unmanaged demand (that is, demand before the effects of energy efficiency programs).
- PG&E uses a regression model estimated using observed historic data. PG&E "calibrates" its model specification such that it fits very closely to the most recent observed data. For this reason PG&E need only adjust its model for changes in future trends in EE savings that are materially different from those captured in the recent historic data. This is no different than the adjustments we make for CSI and for EV load where we believe future trends will be materially different from those captured in the recent historic data over which the model was estimated.
 - For example, recent trend EE program savings have been ~ 200 MW per year while the current targets for 2008-2013 are ~ 250 MW per year so PG&E will make an incremental adjustment of ~ 50 MW per year to the regression model forecast for the period 2008-2013 to develop its fully mitigated demand forecast.