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February 11, 2010

Electronic Delivery

California Energy Commission
Dockets Office
1516 Ninth Street, MS-4
Sacramento, CA 95814

DOCKET
09-IEP-1C
DATE FEB 11 2010
RECD. FEB 16 2010

Re: Docket No. 09-IEP-1C

Docket Office:

Please find attached PG&E's comments on 2009 IEPR Electricity Demand Forecast workshop, held February 3, 2010. Please contact me should you have any questions.

Sincerely,

Dan Patry

Attachment

PG&E COMMENTS IN RESPONSE TO THE CEC'S STAFF WORKSHOP ON INCREMENTAL IMPACTS OF ENERGY POLICY INITIATIVES RELATIVE TO THE ADOPTED DEMAND FORECAST DOCKET NO. 09-IEP-1C

PG&E wishes to thank the California Energy Commission (CEC) staff, ITRON and participants in the Demand Forecast Energy Efficiency Quantification Project (DFEEQP) for their hard work, dedication, and thoughtful discourse on a challenging issue facing the State. While PG&E lauds staff and stakeholders for the progress made thus far in improving the CEC's demand forecasting, PG&E remains concerned that the ITRON findings with respect to the Incremental Uncommitted Energy Efficiency savings as presented at the February 3rd workshop and included in the CEC staff's draft report remain flawed in several significant ways which preclude them from being submitted to the CEC commissioners for adoption prior to further revision..

The February 3rd workshop identified a number of significant modeling issues that need to be addressed prior to adoption of the analysis:

I. Peak/Energy Ratio Assumptions Must be Consistent with the CPUC's Adopted Goals and Decisions

The ITRON analysis estimates peak savings in all three scenarios (low, mid and high) that are far beyond those which were adopted in the CPUC goal and decision. CPUC Decision 08-07-047 adopted peak savings goals for the three IOUs of 4,029 MW during the period 2013-2020[1]. By comparison, just the "incremental uncommitted" portion of peak energy efficiency savings based on the ITRON modeling as presented at the workshop is 4,034 MW, 5,352 MW and 6,484 MW in the low, mid and high savings scenarios, respectively.

Previously the CEC staff reported that the "embedded uncommitted" savings in the adopted California Energy Demand base case forecast during that same period was 3,135 MW. This leads to the conclusion that the total amount of energy efficiency savings that would be included in a fully mitigated forecast based on the current ITRON/CEC staff analysis, would be 7,169 MW, 8,487 MW and 9,619 MW in the low, mid and high scenarios which is 80%, 110% and 140% above the levels adopted by the CPUC in D 08-07-047.[2]

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[1] Table A-2 Total Market Gross Goals IOU Total (annual).

[2] Embedded incremental refers to the amount of incremental energy efficiency savings that are included in the CEC's adopted demand forecast in the period 2013-2020 based on Table A-8: Electricity Efficiency/Conservation Savings by Planning Area and Sector for the California Energy Demand 2009-2020 report from the CEC for the three IOUs. To be fair the CEC staff at the workshop noted that there is an inconsistency between the "incremental embedded" shown in these tables and what would be thought of as "incremental uncommitted" based on the ITRON analysis, however, currently these are the only incremental uncommitted estimates relative to the adopted forecast that are publically available to the best of our knowledge.

PG&E recommends that, before presentation to the CEC Commissioners for adoption, the ITRON analysis be adjusted such that the peak/energy ratios in the scenarios are consistent with those as adopted in D 08-07-047. Further, PG&E recommends that the sum of embedded energy efficiency savings (as shown in the adopted California Energy Demand base case forecast report) and the incremental energy efficiency savings as estimated by ITRON after adjusting the peak/energy ratio be no greater than the total incremental energy efficiency savings as adopted in D 08-07-047. This will insure that, at a minimum, the fully mitigated peak demand forecast is consistent with adopted D 08-07-047 savings goals.

II. The Use of "Scenarios" as Reflected in the ITRON/CEC Analysis is Misguided as it Understates the Real Range of Uncertainly with Respect to the Fully Mitigated Demand Forecasts

The energy efficiency savings scenarios as currently constructed reflect only a very narrow range of possible outcomes with respect to adoption of energy efficiency measures by consumers over the next ten years. The CEC staff's report makes a point that there is a great deal of uncertainty in this regard, especially concerning savings which require voluntary adoption on the part of consumers and for the savings attributed to the Big Bold Energy Efficiency Strategies (BBEES)which are currently untested and for which we have very little if any real world experience. In the current scenarios, even after adjusting for consistently with D 08-07-047 as suggested in earlier comments, the "low" energy efficiency scenario is still beyond what many stakeholders believe is "reasonably expected to occur" during the next decade.

As some parties suggested at the February 3rd workshop, a "reasonably expected to occur" scenario should be added to give decision makers a better sense of the true range of uncertainty with respect to energy efficiency savings over the next decade. Having such "uncertainty analysis" only in the text of the report but not reflected in the scenarios is not enough. As was suggested at the workshop, such a scenario could be constructed by using the ex-post/ex-ante ratios from past energy efficiency studies to adjust the current mid or low case. The ITRON/CEC staff analysis is, in large part, using end-use based approaches to estimate both base case demand growth and incremental energy efficiency savings that they themselves take issue with in other proceedings as being subject to potential bias. Previous studies suggest that these traditional ex-ante modeling approaches may tend to overstate observed customer energy efficiency savings and/or understate customer energy demand when they are empirically tested via ex-post examination. PG&E endorses the creation of this additional scenario.

Additionally, PG&E suggests that using scenarios that allow only one of the many drivers of demand growth to vary may be misleading to decision makers and planners who ultimately rely on these forecasts as an input to their decision making and planning. In the reports and analysis leading to the adoption of the CEC's base case demand forecast, the CEC staff ran alternative scenarios based on economic and demographic projections other than those of Moody's-Economy.com. While the range of these economic/demographic projections between vendors was actually quite narrow and not reflective of the real uncertainty regarding future economic growth, the analysis confirmed that projections of future load growth in California are highly sensitive to underlying projections of economic and demographic growth. Since this analysis will ultimately be used in conjunction with an underlying demand forecast scenario, the final resulting fully mitigated demand forecast will contain a significant downward bias if it also does not contain low, mid and high case economic and demographic growth scenarios that can be matched against the incremental uncommitted energy efficiency scenarios.

III. Dependable Load Impacts of Incremental Energy Efficiency Savings are Critical to Resource Planning

The draft report says at p. 1 that the CPUC staff intends to use these projected load impacts as part of the portfolio assessment analyses used to define the need for electricity resources in the forthcoming 2010 LTPP rulemaking. This is problematic because these impacts are neither firm nor sufficiently dependable enough to be relied on to meet future customer demand. If the incremental EE impacts are not dependable, they should not be used to determine resource need in the LTPP. Relying on optimistic EE estimates without back-up resources will only result in insufficient resources being available, and potential customer outages. This sentiment is reflected in the staff report (p. 52):

> *"In general, decision makers must consider the implications of efficiency-induced projections of very low or even negative energy and peak demand growth through 2020. While the Energy Action Plan loading order emphasizes cost-effective energy efficiency as California's first choice to meet demand growth, relying solely on these resources for long-term resource adequacy is uncharted territory. If decision makers postpone decisions to invest in supply-side resources and energy efficiency fails to deliver as forecasted, then serious reliability (and cost) consequences could result, unless such shortfalls have been anticipated and contingency actions identified."*

Although the draft report recognizes the reliability risk of relying on highly speculative energy efficiency estimates, it fails to remedy this problem. The three scenarios presented in the draft report, with varied levels of incremental EE

impacts do not capture the range of uncertainty needed for determining resource need.

IV. The "End-Use" Modeling Framework Lacks Transparency and Verifiability

PG&E continues to be concerned about the highly technical and subsequently highly opaque nature of this and other analysis flowing from the "end-use" modeling framework that the CEC staff is using. No stakeholder in either the IEPR or the LTPP proceeding, other than CEC staff and its consultant ITRON, has reasonable access to the models that were used either to develop the adopted basecase demand forecast or the incremental uncommitted analysis.

The lack of transparency and verifiability is an ongoing problem and continues to be a barrier to achieving consensus around key issues with respect to future California energy demand. The fact that trying to answer the relatively simple question of "how much energy efficiency is embedded in the adopted demand forecast" has been ongoing now for over two years and required the use of outside consultants begs the additional question of how can stakeholders have faith in the results of such complex models when, apparently, even the model builders themselves do not fully understand why the models are producing these results.

PG&E suggests that a less technical and more transparent modeling approach, while it may lack the "rigor" of the current approach, would yield equal or better forecasts and help all stakeholders to gain more understanding and consensus around the forecasts that are ultimately adopted.

V. Conclusion

Again, PG&E commends CEC staff and stakeholders for their hard work and dedication in contributing to the development of the State's energy demand forecast. We continue to stress the importance of dependable and realistic inputs and assumptions in forecast development, particularly in the case of BBEES as adopted by the CPUC. A transparent and verifiable modeling platform is critical to ensuring progress towards the State's goal of ensuring reliable, environmentally sound and reasonably priced energy for all its citizens. We look forward to continued collaborative efforts on these important topics with staff and stakeholders in the future.