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California Energy Commission
Docket Office, MS-4
Docket No. 09-IEP-1C
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Re: California Energy Commission (Energy Commission)
Docket No. 09-IEP-1C: Written Workshop Comments of
Southern California Edison Company (SCE) on Energy
Efficiency Measurement and Attribution

To Whom It May Concern:

Southern California Edison (SCE) appreciates the opportunity to provide comments on the May 21st workshop on Energy Efficiency Measurement and Attribution and Preliminary Peak Forecast. As requested in the workshop notice, our comments cover the Energy Commission staff's proposed 2010 peak demand forecast and methods, along with the energy efficiency accounting and attribution.

I. Peak Demand Forecast

A. Short-Run Peak Demand (2010 for Resource Adequacy)

The Energy Commission's staff updated 2010 peak demand forecast provided by Lynn Marshall on 6/4/09 is much closer to SCE's current demand outlook than the one presented at the May 21st workshop. The Energy Commission's staff weather adjusted peak demand for 2008, the starting point for the latest forecast, is very consistent with SCE's forecast. However, the Energy Commission staff's forecast shows a 2.2% drop in SCE TAC[1]/Planning area peak demand from 2008 weather-adjusted demand to 2009 weather-adjusted demand. SCE anticipates that the peak demand will not decline as much as the Energy Commission staff's forecast indicates. SCE expects a decline of less than 1%. Moreover, the present recession may not affect peak air conditioning use as much as is reflected in the 2010 peak demand forecast. Peak demand is composed of two components, base demand[2] and weather sensitive demand[3]. In 2008, base demand declined 300 MW, but weather sensitivity increased, even in the face of the recession. The net decline, associated

[1] Transmission Access Charge
[2] MW at 75°F
[3] MW/°F multiplied by the number of customers

with the recession, is taken into account in the base demand, which is most impacted by declining industrial and commercial loads.

Overall, SCE anticipates that 2010 peak demand (based on expected normal weather conditions) to be about 300 MW higher than the new 2010 peak demand forecast. SCE therefore, assumes that the Energy Commission staff has either inappropriately decreased base demand too much or decreased both components in 2009 and has arrived at an overall decrease that is too large. SCE would like to work with the Energy Commission staff to better understand the driving components of their peak demand, including

- The weather adjusted energy sales for 2008 (MWh)
- The declining forecast for 2009 (base demand and weather sensitive components)
- The staff's energy forecast 2009 - 2011
- Forecast of residential household additions in 2008 - 2011

B. Long-range (2010-2020)

The Energy Commission staff's long range growth rate in peak demand (1.1%) is much lower than SCE's long-range growth rate. It would be even lower if it included the effects of incremental uncommitted energy efficiency (EE). SCE expects, post recession, to return to the approximately 2.0% per year growth rate (peak after deducting uncommitted EE). The Economy.com (usually used by the Energy Commission) forecast of California employment returns to pre-recession growth rates after 2012. Yet the staff forecast of peak demand does not reflect this.

For clarification, it appears that the Energy Commission staff has forecast a shift in the energy/economy relationships (absent the effects of uncommitted EE). SCE does not understand the basis for this shift and would like to work with the staff to better understand its economic assumptions going forward. Post recession, Economy.com forecasts the California economy (e.g. building permits and commercial employment) returning to pre-recession growth rates (but at lower absolute levels of employment, so there is some long-term effect of the recession), but the Energy Commission staff's long-range peak forecast shows a dramatic shift downward in the long-term peak growth post recession that is unexplained.

II. EE Attribution

After reviewing the information presented during the May 21st workshop, SCE feels that parties to this proceeding would benefit from additional, detailed description of the methods used by the Energy Commission's Staff to estimate the impacts of embedded utility EE programs including lighting levels and the category identified as "deferred treatment." In the 2007 IEPR, the plan set forth by the Energy Commission to resolve the issue of accounting for EE in the demand forecast determined that Energy Commission staff resources should be devoted to these three topics over the course of the 2008 IEPR Update and 2009 IEPR time period:

- Improving estimated impacts of EE within the demand forecast and attribution to motivating forces, such as price response, market effects, program participation, requirements of standards;

- Creating a new capability to project near-term program impacts incremental to the CEC demand forecast; and

- Creating new capability to project long-term impacts from portions of EE potential that are identified as achievable under various program designs.

As the plan described, a "meta-analysis" of program Efficiency Measurement & Valuation studies was supposed to be conducted to obtain measure penetration data to create a saturation database which would consolidate EE measure penetration across vintages and types of programs. This information would allow for the appropriate attribution of historical savings and provide information for how future savings would be attributed. This was the most important task in resolving the EE accounting question. We understand that the task of collecting and calibrating the data is not an easy one. The presentation on Measurement of Energy Efficiency Program Impacts for the 2009 Preliminary Forecast (page 3) demonstrates that the "Standards and Price/Market Effect" are the estimates from the 2007 IEPR. This information was stale and unconfirmed at the time it was initially included in the demand forecast.

Various Energy Commission Staff Reports describe a multi-step approach to estimate the energy savings impacts that result from different conservation strategies.[4] The approach presented on May 21st estimates attribution from standards first, guided by the principle that program savings are determined in the reverse order of introduction. When all building and appliance standards are removed, only market or price effects remain. Price impacts are then estimated by using a constant price forecast. The savings from utility EE programs appear to be calculated as the residual impacts after standards and price effects have been removed.

If SCE's understanding of the staff's methodology is correct, the estimated impacts of utility EE programs could be greatly understated because of the potentially significant error inherent in the estimation of standards and price effects. For example, the forecasted impacts of each generation of standards have a compliance rate that has not been subject to rigorous empirical study. To the extent that these compliance rates are overstated, the impacts of utility EE programs would be understated. In addition staff has adopted a "realization rate" which is applied to EE program savings that seemingly has no empirical basis.

Since the impacts of utility EE programs are subject to rigorous and ongoing measurement and evaluation, arguably their quantification is far more accurate than modeling-based estimates of standards and price effects, and the associated compliance and realization rates. Consequently, it would be more reasonable to subtract the impacts of the utility programs first, rather than last, in the process of estimating the effects of different conservation strategies.

[4] For example California Energy Demand 2008-2018 Staff Revised Forecast, November 2007, p. 25-26

A report documenting estimates of savings for a common set of utility programs and building and appliance standards is still needed. This analysis was to help reveal to what extent there is some potential for overlap in independent estimates of program savings based on reports versus estimates of program savings that occur within the context of a model that is simultaneously estimating savings from efficiency standards, price, and technological changes. The presentation "Summary of EE Quantification and Recommendations for the 2009 CEC Electricity Forecast"[5] recommended adjustments to the CEC end use models for the savings incorporated in the forecast. It is not clear whether this has already taken place in the current forecast. These recommendations should have been reviewed in the working group before their application to the forecast. SCE believes the adjustments recommended are based on erroneous data, and should not have been used without review by the working group. For example, page 10 references a CPUC EE 2006-2007 Verification Report conducted by the Energy Division. SCE has pointed out numerous flaws in this report in R.06-04-010:

> "It is SCE's conclusion that the Draft Report has such serious shortcomings that it should not be considered by the Commission, as any meaningful or reliable indication of SCE's 2006-2007 energy efficiency earnings results. In fact, the Draft Report is so fundamentally flawed that it jeopardizes the tremendous progress California has made in the past few years in establishing energy efficiency as the first energy resource in the State's loading order."[6]

SCE supports the use of the best available information aimed at enhancing the 2009 IEPR load forecast and meeting the goals of the Demand Forecast Energy Efficiency Quantification Project working group objectives. However, data should be reviewed by the working group before they are used. After review a detailed report of the final outcome should be issued to all parties.

As always SCE appreciates the opportunity to participate in the Energy Commission's IEPR process in support of the implementation of the state's energy goals. If you have any questions or need additional information about these comments, please contact me at 916-849-2964.

Very truly yours,

/s/ Manuel Alvarez

Manuel Alvarez

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[5] presented by Mike Messenger of Itron

[6] Southern California Edison Company's (U 338-E) Comments on the Review Draft of the Energy Efficiency 2006-2007 Verification Report, December 15, 2008, p.2