SOUTHERN CALIFORNIA EDISON (SCE)
EE HISTORY SUBMISSIONS FOR DISCUSSION AT CEC MAY 25, 2011 WORKSHOP

Stakeholder Pieces

1. Introduction – EE History: Why is the issue important? – All

Energy Efficiency is a fundamental cornerstone of California's energy and climate policy. California has a unique and exemplary history of the successful implementation of energy efficiency programs by IOUs on a large scale. However, past California Energy Demand (CED) forecasts have incorrectly shown a greatly decreased level of IOU EE program savings compared to the overall level of IOU reported savings. Within the CEC's Demand Analysis Working Group (DAWG) meetings, a significant amount of time and resources have been expended debating, documenting and explaining the CEC's past treatment of energy efficiency.

In the past, the CEC has incorrectly portrayed IOU EE program savings by increasing the attribution to decay, building codes, appliance standards and naturally occurring conservation by decrementing IOU program savings. This false portrayal infers that IOU EE programs are having a negligible effect on energy reductions in California. Quite the contrary; IOU EE programs historically have and continue to play a vital role in reducing California's energy usage and have made California the leader in progressive energy policy throughout the world.

SCE supports an approach that accurately reflects the contribution of IOU EE programs to California's energy use reduction efforts. Specifically, SCE advocates a transparent process to document the treatment of IOU EE programs to ensure that unvetted or unknown attribution methodologies are not inappropriately attributing program savings to decay, building/appliance codes and standards, or naturally occurring buckets.

2. Which version of the "program history" information should be used for IOU programs (*ex ante* reported, *ex post* evaluated, an estimate of *ex post* evaluated prepared by CEC, other?) – All

SCE continues to propose that the best available and most reliable EE savings data be used to quantify EE program impacts. SCE suggests the following:

i. **Prior to 2006, where reliable and publically-vetted EM&V information is available to reasonably augment IOU reported EE program savings, SCE supports using *ex post* energy savings for use in the load forecasting process. In the cases where professional judgment was used, and not EM&V principles that conform to CPUC-adopted measurement protocols, SCE suggests the vetting of these decisions.**

ii. **Many parties have questioned the validity of the 2006-2008 EM&V study results. The CPUC, in D.10-12-049 refused to utilize the study results for measuring the financial performance of the 2006-2008 program cycle. Similarly, SCE is adverse to using the controversial EM&V studies to augment EE program savings as the studies do not produce a reliable or meaningful representation of SCE's 2006-2008 EE program results. SCE strongly believes that the IOU *ex ante* estimates for the 2006-2010 program years represent the best available EE savings data to use for this time period.**

iii. **Until better information is available, SCE supports using the program forecasts for 2011 and 2012 approved by the Commission in 2010. Similarly, until the EE goals are updated later this year, SCE supports using the CPUC-adopted 2013-2020 TMG goals to estimate EE savings in the uncommitted period.**

2a. Should there be additional effort to compile a more refined EE program history beyond that contemplated by CEC staff and described to the DAWG?

Please see the response to Question 1.

2b. If yes to 2a how should the information be compiled if it does not already exist? Please be very specific about who should do this work, how will policy decisions about what "counts" or does not "count" be made, estimate how much time it will take (or how much time is appropriate to spend), what sources will be used, how this information would be used in the IEPR and <u>*what the value of additional work beyond that currently contemplated by CEC would be*</u>. *Please describe for each of the following program eras – All*

- Pre-1990
- 1990-1993
- 1994-1998
- 1998-2001

- 2002-2005
- 2006-2008+9

Please see Question 1

3. The traditional EE categories for the historic period are: building codes, appliance standards, program effects, and naturally occurring conservation. How specific should the write-up be about attribution between these categories and why? – All

   a. Please see the response to Question 1.

3a. Which savings categories should be included and why?
3b. Should a new category, "market effects" be included, if so why, and if so, how should these effects be estimated?
3c. How should the impacts of programs vs. standards be portrayed – in tabular form and visually?

4. The CEC's proposal is to characterize the effects of the 2006-2008 programs using the CPUC/ED's *ex post* evaluated results. Should the CEC use the *ex post* evaluated results or some other characterization of 2006-2008 programs? If some other characterization is proposed, please describe the characterization and the rationale for using it. – All

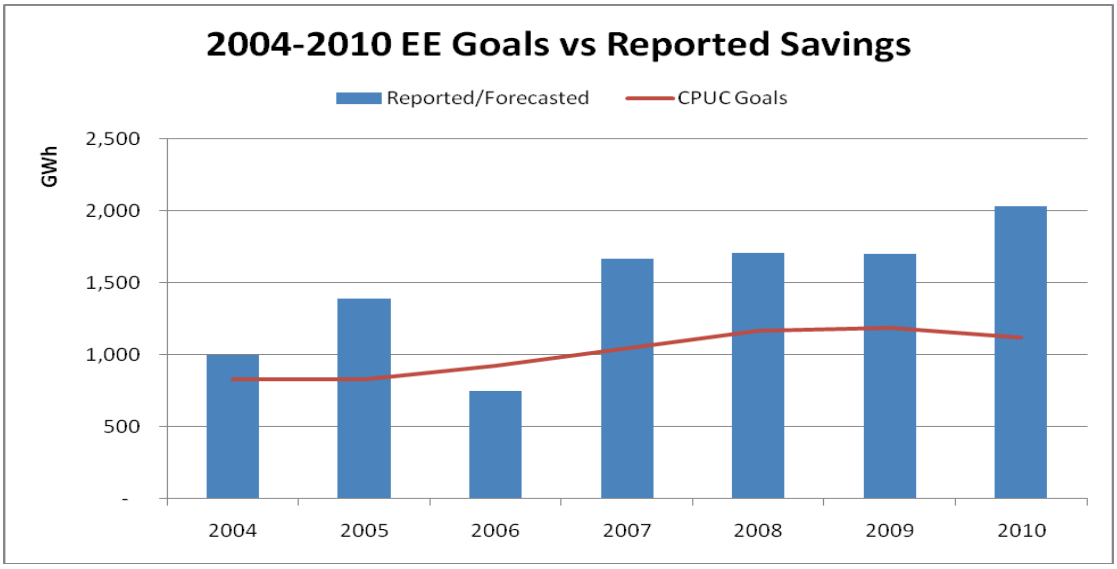
   a. Please see the response to Question 2.

5. CEC is proposing to characterize the current 2010-2012 program cycle in three scenarios to characterize 2010-2012 programs:
   - Low EE impacts: Applying 2006-08 CPUC/ED EM&V "realization rates" to the IOU program plans
   - Mid EE impacts: 2009 IEPR adjustments to 2010-2012 programs
   - High EE impacts: IOU forecast results for 2010-2012

   For 2010-12 and beyond should there be a deterministic estimate or scenarios? If scenarios, should they differ from CEC's proposed scenarios, and if so, how and why – All

The CEC held a Joint Committee Workshop on Economic, Demographic, and Energy Price Inputs for Electricity, Natural Gas and Transportation Fuel Demand Forecasts ("Workshop") on February 24, 2011. The Workshop gave interested stakeholders an opportunity to discuss and provide suggestions on the proposed methods, inputs, and assumptions which will be used for the long-term energy demand assessments and forecasts to develop the recommendations for the 2011 IEPR. SCE supplied written comments. In response to the CEC's proposed scenarios, SCE offered a set of alternate proposals for consideration.

1) **SCE proposes using SCE's current 2010-2012 program plans[1] for all EE savings forecast during the committed period. As shown in the figure below, SCE's EE programs have a long, successful track record of delivering savings to its customers and are the most reliable and reasonable expectation of what has/will occur.**



Source: D.04-09-060, D.09-09-047

Note: 2004-2008 results were reported in net savings, 2009-2010 results were reported in gross.

As required by the CPUC, SCE utilized the most current information available to estimate 2010-2012 program impacts. In the absence of better

[1] SCE's 2010-2012 program cycle compliance filing and the program designs were specifically designed to be cost-effective, reliable and feasible so as to exceed the CPUC adopted EE savings goals promulgated in Decision ("D") 04-09-060 and D.09-09-047. SCE's 2010-2012 program cycle Compliance Filing (2410-E) dated November 23, 2009 was approved by the CPUC on April 8, 2010.

information, this information should be view as the best available information for use in the CEC load forecasting process

2) For the Uncommitted time period, SCE proposes bounding the EE scenarios with Low EE (High Demand) and High EE (Low Demand) cases. The Mid EE (Mid Demand) case can be considered a base case. These scenarios, as shown below, reflect the full range of uncertainties in the potential impact of different EE programs and strategies included in the TMG goals.

Scenario Name	Scenario Description
Low EE (High Demand)	TMG with 2004 P/E ratios with modified Big, Bold Energy Efficiency Strategies ("BBEES") to reflect continued IOU program savings
Mid EE (Mid Demand)	TMG with low BBEES (2010 Long Term Procurement Plan) and 2004 P/E ratios
High EE (Low Demand)	TMG Goals with 2004 P/E ratios

Low Energy Efficiency Case

SCE proposes replacing the BBEES savings with a current estimate of the trajectory of savings from SCE's New Construction, Small HVAC, and Low Income Energy Efficiency programs. SCE believes that these changes will be more reflective of the lower bound of TMG goal uncertainty given the significant challenges facing BBEES.[2]

In addition, assumed Huffman Bill[3] savings are likely overstated given changes in the lighting efficiency market since 2007, such as the introduction of 72 watt incandescent light bulbs. However, lumen output data does not currently exist to adequately model the impact of the savings attributable to the Huffman Bill.[4]

Mid Energy Efficiency Case

[2] *See* Incremental Impacts of Energy Efficiency Policy Initiatives Relative to the 2009 Integrated Energy Policy Report Adopted Demand Forecast, Attachment A: Technical Report, CEC-200-2010-001-ATA, p. 68 ("…regardless of the assumed delivery mechanism, achieving the specific market penetration rates for Zero Net Energy ("ZNE") new construction reflected in the BBEES targets requires, by the CPUC's own characterization, 'an aggressive and creative action plan.' Relative to IOUs programs, Title 24, the AB 1009 lighting standards, and federal appliance standards, therefore, it is reasonable to describe the outcomes associated with the BBEES initiatives for ZNE homes and building as highly uncertain.")

[3] Assembly Bill 1109.

[4] *Id.* at 66.

As directed in the 2010 LTPP[5], SCE proposes using the mid-case results from the Energy Commission's Incremental Impact of Energy Efficiency Policy Initiatives Report[6] for all values, except BBEES, for which the low-case results should be used. This is appropriate given the significant challenges to the BBEES discussed above.

High Energy Efficiency Case

The CPUC 2008 Goals Study characterized the TMG goals as stretch goals. SCE proposes the use of the TMG goals as promulgated in the TMG Goals Decisions[7] or as depicted in the Energy Commission's Incremental Impacts of Energy Efficiency Policy Initiatives Report adjusted to reflect the 2004 P/E ratios.

6. Forecast results for energy efficiency are sensitive to assumptions about "decay" – how energy efficient measures are replaced at the end of their useful life. What percent are replaced with non-efficient technologies? With equally efficient technologies? With more efficient technologies? CECs current proposal is to use the assumption, per CPUC, that 50% of measures are replaced with equally efficient measures during the forecast period.

Is this value appropriate or should a different value be used? Which value(s) and why? How shall additional information about what actually happens be developed? -- All

SCE believes that decay does not happen. Most IOU EE savings come from long-lived appliances, lighting fixtures, refrigerators, and air-conditioners. When long-lived appliances wear out, the consumers will replace them with appliances of greater efficiency because of technological changes and improved appliance standards. Even for short-lived measures, such as CFLs, it is expected that a customer will replace a burned-out CFL with a CFL and not an incandescent.

SCE continues to propose that the best available and most reliable EE savings data be used. SCE's encourages the use of results of the EE potential modeling efforts where measure replacement is estimated based on customer choice modeling. These models estimate measure

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[5] Administrative Law Judge's Ruling Modifying System Track I Schedule and Setting Prehearing Conference, R.10-05-006, February 10, 2011, p. 10.

[6] Incremental Impacts of Energy Efficiency Policy Initiatives Relative to the 2009 Integrated Energy Policy Report Adopted Demand Forecast, May 2010, CEC-200-2010-001-CTF.

[7] *See* D.08-07-047 (August 1, 2008).

replacement for Retrofit, Conversion and Replace on Burnout customer decisions. The CPUC currently has three consulting firms under contract capable of estimating decay and the subsequent measure replacement – KEMA, Itron and Navigant. SCE strongly suggests that these firms be consulted or the results of existing studies utilized to estimate measure replacement.

7. Add any additional information desired – All

The IEPR analyses become extremely misleading when they purport to allocate energy efficiency savings among mutually exclusive categories of utility and public agency programs, naturally occurring savings, and state and federal building codes and appliance standards. In many cases, the categories overlap. A major function of energy efficiency programs is to develop enough of a market for specific energy-efficient technologies that they become widely enough adopted that they can either (1) gradually become the choice of many customers without the need for a utility program ("naturally occurring savings") or (2) gain enough market share to be feasibly adopted into codes or standards. Compact fluorescent lamps and energy-efficient refrigerators are two prime examples of technologies that got sufficient footholds in the market through energy efficiency programs that multiple manufacturers began to offer them, costs came down, larger fractions of the population began purchasing them (some without the need for a rebate), and it became feasible to begin adopting standards that required greater levels of efficiency for these end uses. This critical function of energy efficiency programs is widely recognized throughout the literature on energy efficiency programs and indeed, in the codes and standards section of the CEC.

SCE continues to support the use of EE savings in the CEC's load forecasting efforts. With the aforementioned caveats notwithstanding, SCE supports the CEC's efforts to identify the magnitude of EE load impacts as they pertain to the CEC load forecasting efforts. However, SCE does not agree that the IEPR is the proper venue to assess the overall or "official" EE load impact estimates. The data developed by the CEC for use in it load forecasting models differs significantly from the savings captured through the utility energy efficiency programs approved by the CPUC and municipal utility boards. Additionally, the attribution of energy efficiency among EE programs, naturally occurring, and codes & standards is well-beyond the capabilities of the CEC's load forecasting efforts. This difference in objectives is at the heart of the question of which EE impact assessments are correct. SCE strongly encourages the use of the CEC efforts to assess EE load impacts be confined to the CEC load forecasting efforts. It is wildly inaccurate to take them out of context and apply them

to the load impacts of the utility EE portfolios as a whole. As a result, SCE recommends the report add language to explain this situation and consider removing the tables and figures that inaccurately portray the supposed attribution of the estimated EE savings and the arbitrary reductions from CPUC and utility-reported EE program savings.