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EE History Discussion

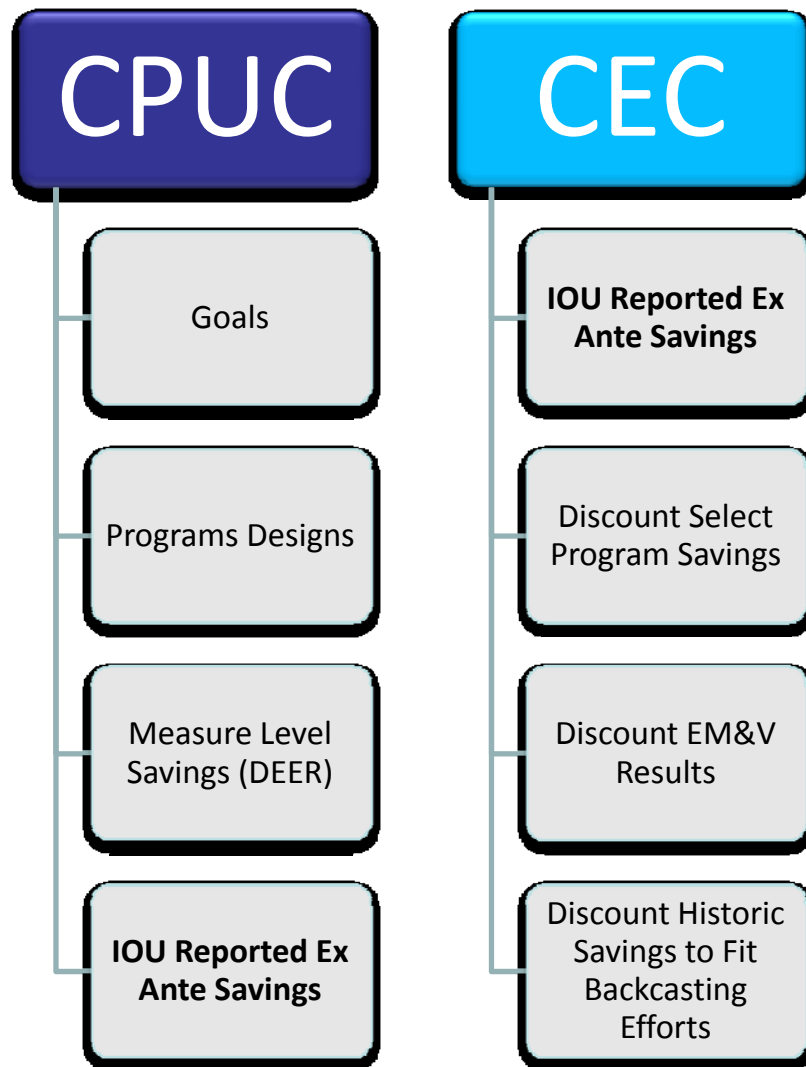
CEC IEPR Workshop – May 25, 2011

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Why is EE Important?

- **Energy Efficiency is intertwined with many aspects of California energy policy**
 - **California's Energy Action Plan** makes Energy Efficiency and Demand Response the first resources in California's "loading order"
 - **California Global Warming Solutions Act**, requiring GHG emissions reduction to 1990 levels by 2020, utilizes EE as a primary resource solution
 - **California Long-Term Energy Efficiency Strategic Plan** establishes far-reaching goals for energy efficiency in California
 - **Public Utilities Code** states that utilities must first meet their "unmet resource needs through all available energy efficiency and demand reduction resources that are cost effective, reliable, and feasible."

CPUC and CEC EE Attribution Methods Are in Conflict



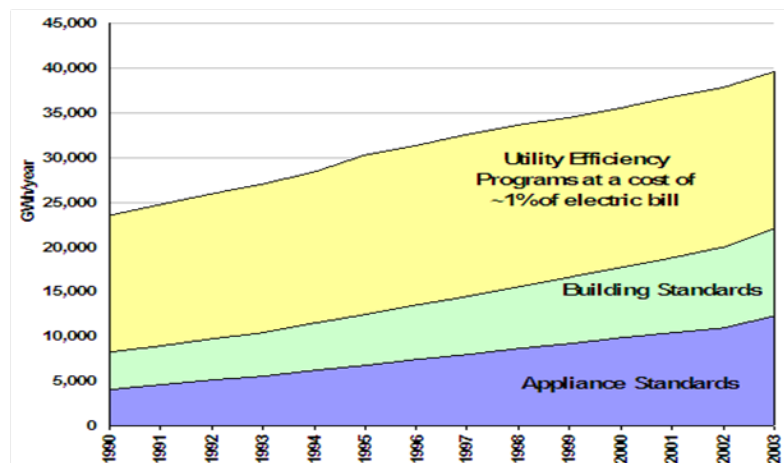
- CEC load forecasting data requirements differ from savings captured through CPUC/IOU EE programs
- Differences in objectives between the CPUC and CEC account for differences between EE savings estimates
- CEC adjustments to EE program savings were made for modeling purposes
 - Not based on vetted data or assumptions

Difficulty Using EE

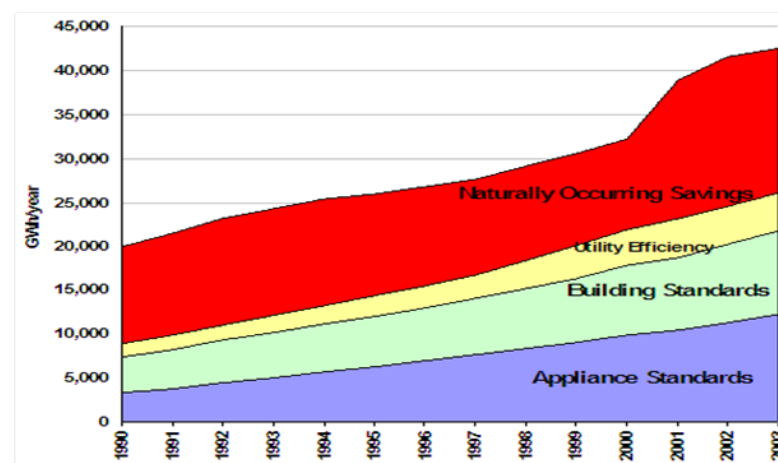
- Difficulty arises in correctly distinguishing EE impacts from market effects, standards effect, and savings from public or utility programs that are captured in forecast models
 - Building and appliance standards are modeled within the residential and commercial forecast models. The models account for building decay, equipment replacement, and market-induced impacts.
 - Some DSM programs sponsored by utilities, state government, local government, and other organizations are also modeled within the sector models
- As models are calibrated to actual historical data (backcasting), they implicitly account for the effects of many years of energy efficiency programs

Representation of IOU EE Savings Impacts are Misleading

EE Savings (2005 Energy Action Plan)



EE Savings (2009 CED Forecast)



- The IEPR analyses is extremely misleading when it purports to allocate EE savings among mutually exclusive categories of utility and public agency programs, naturally occurring savings, and state and federal building codes and appliance standards
- A major function of EE programs is market transformation for EE technologies so the technologies become widely enough adopted to 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
- Retract the inaccurate 2009 IEPR graph of historical EE
- If a graphic must be used to depict EE savings, SCE suggests depicting savings in total without savings attribution

Next Steps

- Where should limited time and resources be spent?
 - It was clear in 2009 that quantifying the overlap between EE imbedded in the CEC forecast and Uncommitted EE was a good use of time and resources.
 - Expending time and resources to further define historic EE savings impacts should be reexamined as the actual impacts on the load forecast are minimal.
 - Any depiction of EE load impacts on the forecast should be limited to the time period that impacts the forecast.
- Adjustment made for modeling purposes should not be portrayed as actual EE program impacts
 - Data augmented for load forecasting purposes can be taken out of context and wrong conclusions can be drawn about EE program effectiveness
- Revision to data for load forecasting purposes should be clear and transparent

SCE Response to CEC Questions

Introduction – EE History: Why is the issue important?

- Energy Efficiency is a fundamental cornerstone of California's energy and climate policy. California has a unique and exemplary history of successful implementation of energy efficiency programs by IOUs on a large scale
- The CEC's Demand Analysis Working Group (DAWG) has spent significant time and resources on debating, documenting and explaining the CEC's past treatment of energy efficiency
- SCE supports an approach that accurately reflects the contribution of IOU EE programs to California's energy use reduction efforts
 - 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 categories

SCE Response to CEC Questions

Which version of the “program history” information should be used for IOU programs?

- 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
 - In cases where professional judgment was used, SCE suggests vetting these decisions
- 2006-2010
 - SCE strongly believes that the IOU ex ante estimates for the 2006-2010 program years represent the best available EE savings data for this time period
 - 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
 - » SCE believes that the controversial EM&V studies do not produce a reliable or meaningful representation of SCE’s 2006-2008 EE program results

SCE Response to CEC Questions

For 2010-12 and beyond, should there be a deterministic estimate or scenarios?

- 2011-2012
 - Until better information is available, SCE supports using EE savings estimates from program plans approved by the Commission in 2010
 - As required by the CPUC, SCE utilized the most current information available to estimate 2010-2012 program impacts
 - In the absence of better information, this should be viewed as the best available information for use in the CEC load forecasting process
 - SCE's 2010-2012 program cycle compliance filing and programs were designed to be cost-effective, reliable and feasible to exceed the CPUC adopted EE savings goals promulgated in D.04-09-060 and D.09-09-047

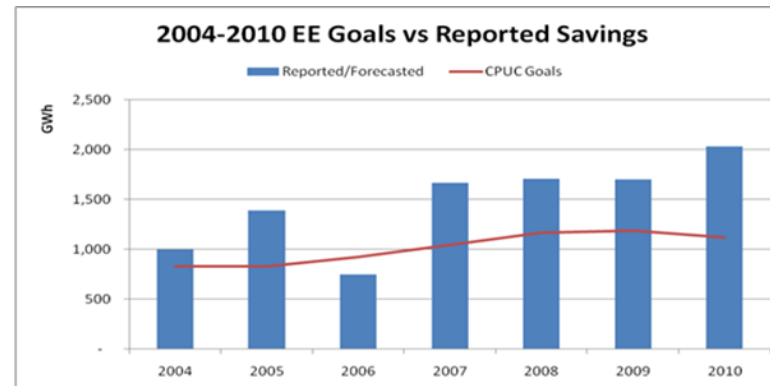
SCE Response to CEC Questions

For 2010-12 and beyond should there be a deterministic estimate or scenarios? Continued

- 2013 and Beyond
 - SCE proposes bounding the EE scenarios with Low EE (High Demand), Mid EE (Mid Demand), and High EE (Low Demand) cases, reflecting the full range of uncertainties in the potential impact of different 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 2004 P/E ratios and low BBEES
High EE (Low Demand)	TMG Goals with 2004 P/E ratios

- SCE is committed to meeting or exceeding the Total Market Gross goals as promulgated in D. 08-07-047
- SCE does not believe that the IOUs' ability to meet or exceed the EE goals is up for question. The question is how much EE can be realistically expected to occur in the context of the TMG goal era



SCE Response to CEC Questions

How are energy efficient measures replaced at the end of their useful lives? What percent are replaced with non-efficient technologies? With equally efficient technologies? With more efficient technologies?

- After taking into account codes and standards, SCE believes that decay becomes a moot issue except for attribution
 - 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 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 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

SCE Response to CEC Questions

Additional Comments?

- The data developed by the CEC for use in its load forecasting models differs significantly from the savings captured through the utility EE programs approved by the CPUC and municipal utility boards
- This difference in objectives is at the heart of the question of which EE impact assessments are correct
- 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