California Energy Commission

2009 IEPR
Background and Perspective
Demand Forecast and EE Quantification

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Scope

- Background
- Activities since August 12, 2008 workshop
  - Improvements in EE treatment and transparency in documenting EE for the base demand forecast
  - Planning to create a capability to determine the incremental impacts of existing uncommitted EE scenarios relative to the base demand forecast
- Schedule going forward

Background

- 2006 LTPP (CPUC) surfaced questions about what uncommitted EE required by the CPUC might actually be embedded in CEC demand forecast
- 2007 IEPR revised demand forecast surfaced too late to allow full discussion of EE impacts embedded in this forecast
- Two 2008 IEPR workshops (March 11 and August 12) framed the issues and staff's proposed approach

Working Group

- Stakeholder suggested a working group to improve transparency about EE in the forecast
- Chris Ann Dickerson hired to facilitate such an effort
- Initial working group meeting conducted Dec. 1, 2008
- Roughly every 4 – 6 weeks since then

Acquire EE Program Data

- Examining potential double counting requires data at the end-use or measure level for EE programs to compare with the forecast model
- Acquiring such data proved to be much more difficult than expected
- Itron provided the core data for 2003-2007 program data, which allowed staff to develop its specific approach
- WG participants helped identify options

Modify Forecasting Models

- EE program focus on lighting requires further disaggregation of staff forecasting models
- For 2009 IEPR cycle:
  - Limited modification of computer codes allowed residential lighting to be separated from a broader miscellaneous end-use
  - Commercial building lighting is a high priority, but necessary changes have not been possible given other data issues
- Further progress in the future

Coordinate EE Treatment

- Impacts of standards handled well within end-use forecasting models
- Price response and other market effects handled within models and/or input assumptions
- Utility programs:
  - Some measures handled in forecasting models
  - Other measures subtracted as “savings” from raw forecast model results to prepare actual forecast

Incremental EE Impacts

- CPUC/ED wants to use a managed forecast for 2010 LTPP analyses
- CEC prefers to continue to use the traditional separation between committed and uncommitted EE
- Quantifying uncommitted EE requires a separate effort
- Lesson learned is that incremental impacts of uncommitted EE highly dependent upon the base forecast and its treatment of EE

CPUC-Defined Scenarios

- 2008 EE Goals Study evaluated three future scenarios
- CPUC/Ed proposes to use the High and Mid scenarios for the 2010 LTPP rulemaking
- These will be adapted to remove the elements associated with 2009-2011 EE program filings submitted to the CPUC on March 2, 2009, since these are in the CEC staff demand forecast

Proposed Methodology

- 2008 Goal Study scenarios developed by Itron using the SESAT model
- Adapt the SESAT analyses to reconcile base assumptions to the CEC staff revised demand forecast
- Run SESAT for each of the two scenarios
- Incremental impact of each scenario is the difference between reconciled base and scenario result

Communication

- DFEEQP Working Group has been a forum to improve communication in both directions
- EE program impacts have been the focus for this 2009 IEPR cycle
- CEC staff, CPUC/ED, utilities (EE program staff and forecasters) and other interested parties are learning from each other
- Historic EE EM&V processes have not fully captured forecasting needs for EE data
- EE EM&V processes are being adapted to improve communication and data needed for forecasting

Broad Schedule

- 2008 IEPR Update
  - March 11 – initial scoping workshop
  - August 12 – progress report workshop
  - September – chapter for 2008 IEPR Update
- 2009 IEPR
  - Dec 2008 – Working Group kickoff meeting
  - June 2009 – preliminary demand forecast
  - Aug 2009 – revised demand forecast
  - Sept 2009 – incremental impacts of existing CPUC EE scenarios taken from 2008 Goal Study and D.08-07-047
- 2010 and later
  - Projected impacts of new high EE scenarios

Appendix
Slides from August 12, 2008 Workshop

The Original Questions for March 11

- Given the 2007 IEPR adopted load forecast, how can near-term incremental impacts from the next tranche of EE programs (e.g., 2009-2011) be determined?
  - This question came up in the context of comments on the revised staff demand forecast issued in November 2007.
- Given CEC load forecasts, how can long-term incremental impacts and costs of high penetrations of EE potential be determined (e.g., 2012 and beyond)?
  - This question came up in the comments on the Draft 2007 IEPR concerning its reliance upon the Staff Scenario Analyses Project.

Next Steps Proposed on March 11

- Developing a game plan to achieve the objectives
  - Identifying EE embedded in load forecasts
  - Learning more about proposed EE programs
  - Acquiring characteristics data (measures, costs) for these programs to estimate gross program impacts
  - Learning how to compare the EE impacts in forecasts versus incremental EE impacts using different methods/models
  - Developing protocols for adjusting from gross to net impacts
  - Institutionalizing methods for assessing net impacts of programs when the reference is a particular vintage of CEC demand forecast
- Adopting interim approaches while “the holy grail” is being pursued

Actual Next Steps

- Staff developed multiple iterations of a conceptual project plan
- Sought and obtained CPUC/ED comments
- Obtained CPUC/ED commitment to fund Itron for a selected set of tasks
- Worked with Itron and CPUC/ED to develop task description for amendment to existing CPUC – Itron contract

Workshop Objectives

- Achieve recognition that issues associated with quantifying EE in demand forecasts and developing improved methods for quantifying EE incremental to the baseline demand forecast are shared problems
- Surface staff's conceptual plans for a multi-year project
- Obtain support from utilities and others to contribute to this project
- Provide an opportunity for interested parties to learn of staff's plans and to provide informed comments