



California Energy Commission

IEPR Committee Workshop

CALIFORNIA ENERGY DEMAND 2011-2022 PRELIMINARY STAFF FORECAST

August 30, 2011 — 10:00 am

Efficiency/Conservation, Self-Generation

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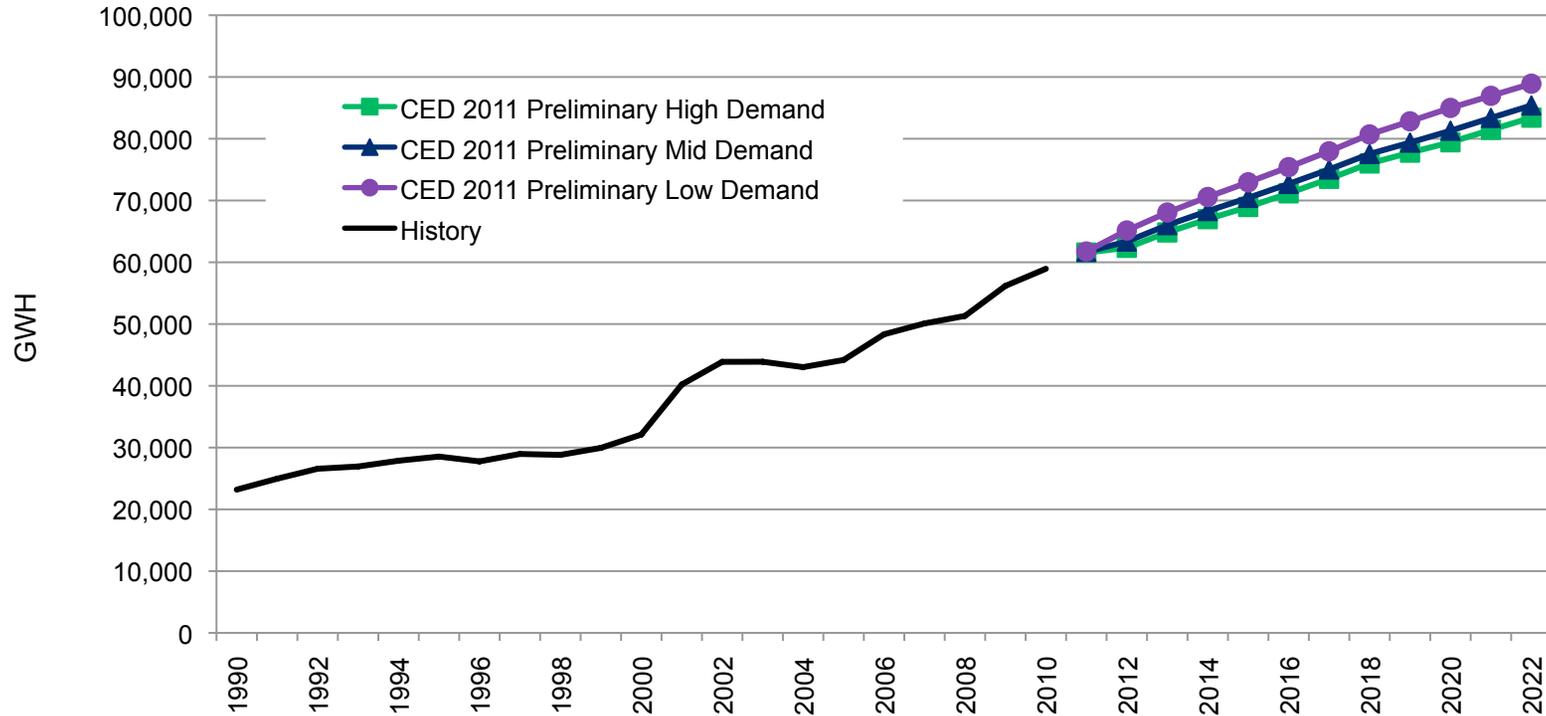
Energy Efficiency

- Committed Savings
 - Implemented programs and initiatives
 - Not yet implemented but finalized, approved, and funded
- Uncommitted Savings
 - Likely to occur but not yet finalized, approved, or funded



Statewide Committed Consumption Savings

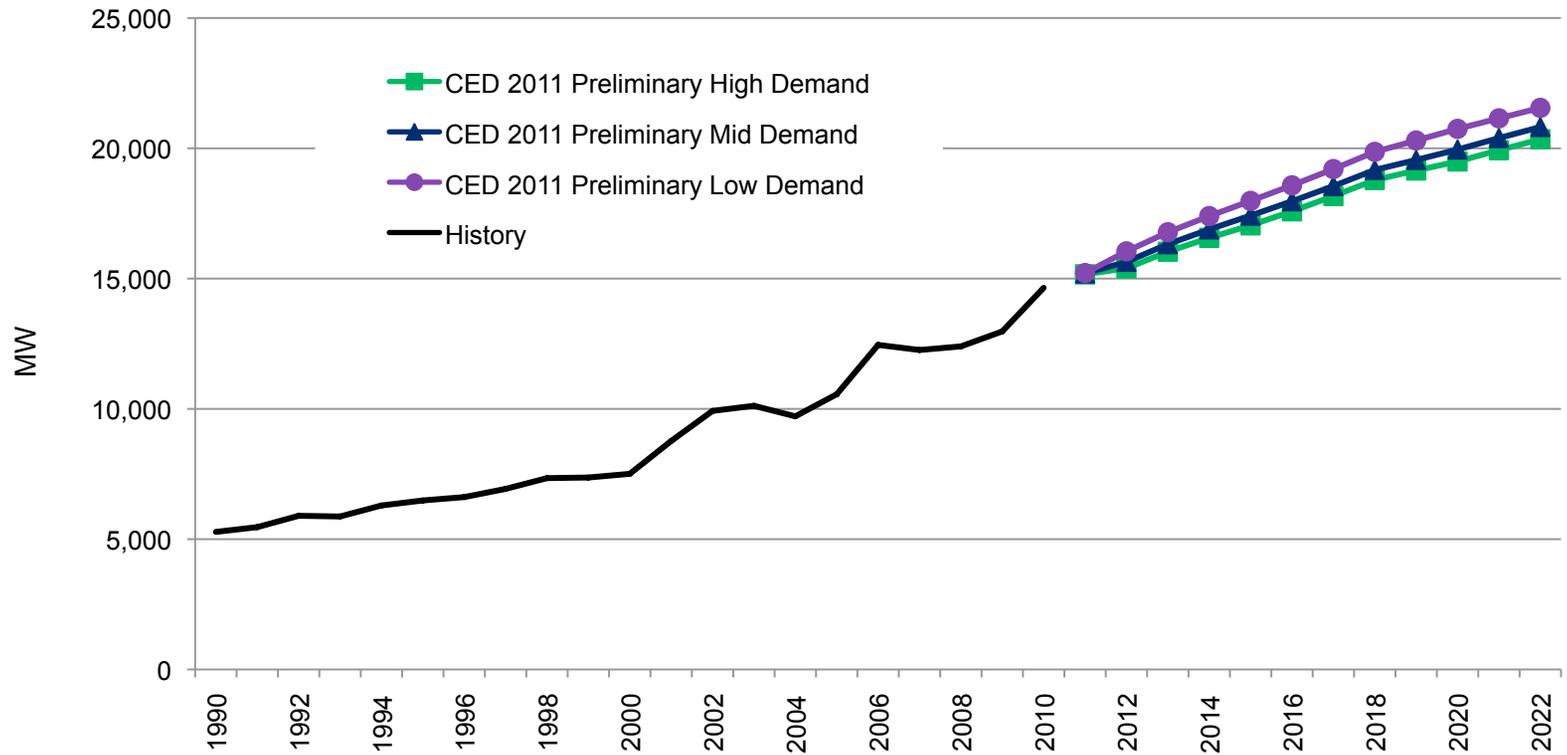
• Almost 90,000 GWH in low case by 2022





Statewide Committed Peak Savings

• All three cases above 20,000 MW by 2022





Committed Utility and Public Agency Efficiency Programs

- Three scenarios: high savings for low case, low savings for high case
- For IOUs (2011 and 2012 first-year savings):
 - High savings equals total net reported
 - Low savings applies realization rates by end use based on 2006-2009 CPUC EM&V results,
- Logistic decay function applied to first-year savings given expected useful life
- Assumes 50% of IOU decay from 2006 on is made up through additional committed savings



Committed Utility and Public Agency Efficiency Programs

- Similar procedure for publicly owned utilities
- Committed period extends to 2011 only
- Realization rates for historical program savings informed by CPUC EM&V efforts



Committed Building and Appliance Standards

- Energy Commission forecasting models incorporate building and appliance standards through changes in inputs
- End-use consumption per household in the residential sector and end-use consumption per square foot in the commercial sector
- To measure the impact of each individual set of standards, staff removed the input effects from standards one set at a time



Price and Market Effects

- Meant to capture load impacts of changes in energy use not directly associated with standards or efficiency programs
- In practice, mainly includes impacts of rate changes (price effects)



Committed Savings Issues

- Attribution among savings sources is not provided in *CED 2011 Preliminary*
- Television standards not yet incorporated
- 2013 bridge year



Incremental Uncommitted Efficiency Savings

- Includes three scenarios for incremental impacts during 2013-2022 for IOUs and 2012-2022 for publicly owned utilities
 - Uncommitted utility programs
 - Updates to Title 20, Title 24, and federal appliance standards
 - Big Bold Energy Efficiency Initiatives (BBEES)



Incremental Uncommitted Efficiency Savings

- Based on incremental uncommitted efficiency analysis by Energy Commission and Itron for *2009 IEPR*
 - Subtracts AB 1109 and 2010 Title 24 revision impacts, which are included in committed savings
 - Extrapolates for 2021 and 2022
 - Reduces impact of BBEES, consistent with CPUC 2010 LTPP assumptions (mid case=low BBEES)
 - Reduced peak impacts vs. 2009 analysis due to adjustment of residential HVAC peak/energy



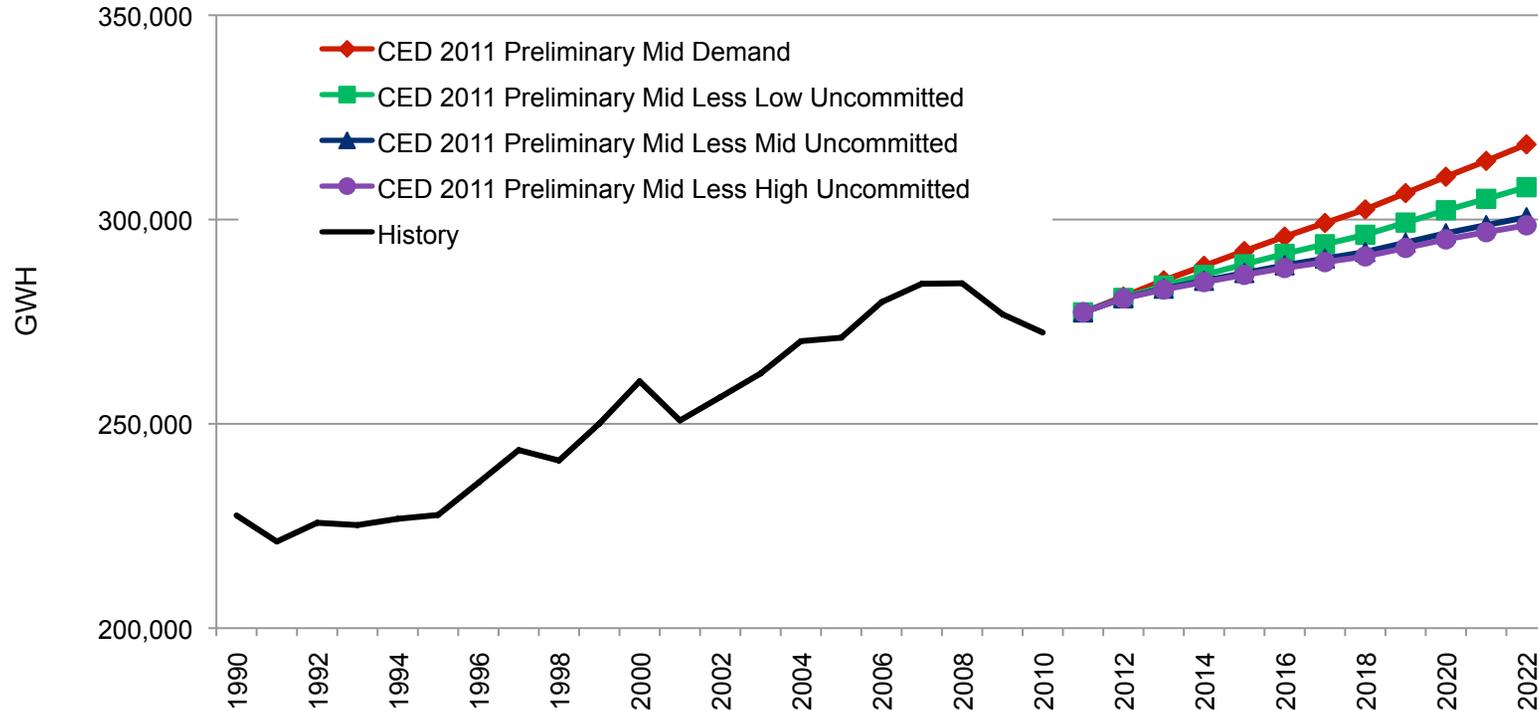
Incremental Uncommitted Efficiency Savings

- For publicly owned utilities:
 - Program impacts based on goals; three cases use realization rates of 1.0, 0.85, and 0.70
 - Goals assumed extended through 2022
 - Standards and BBEES impacts estimated using IOU savings as a proportion of total consumption applied to publicly owned utility consumption
- Simplified analysis in anticipation of new goals study



Impact on Mid Demand Scenario of Incremental Uncommitted Efficiency

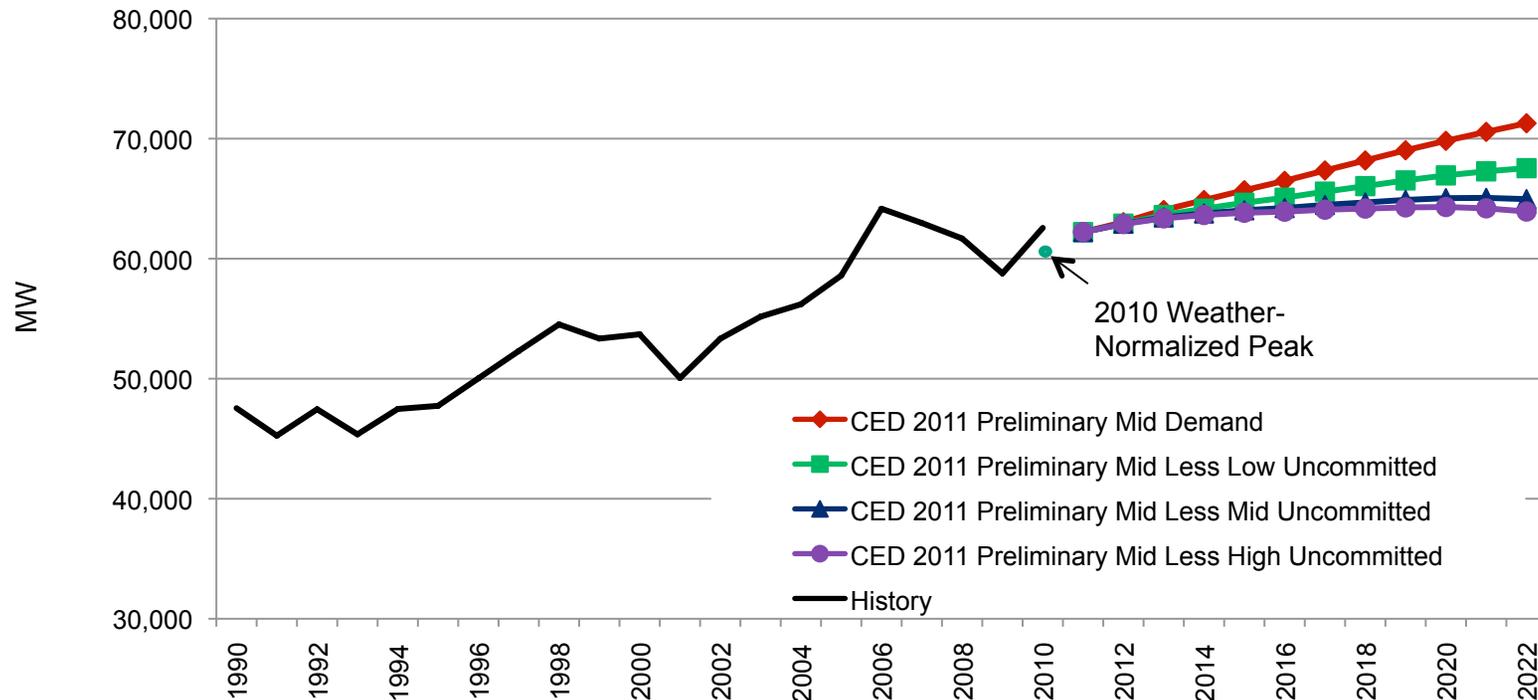
Consumption reduced by 3-6% in 2022





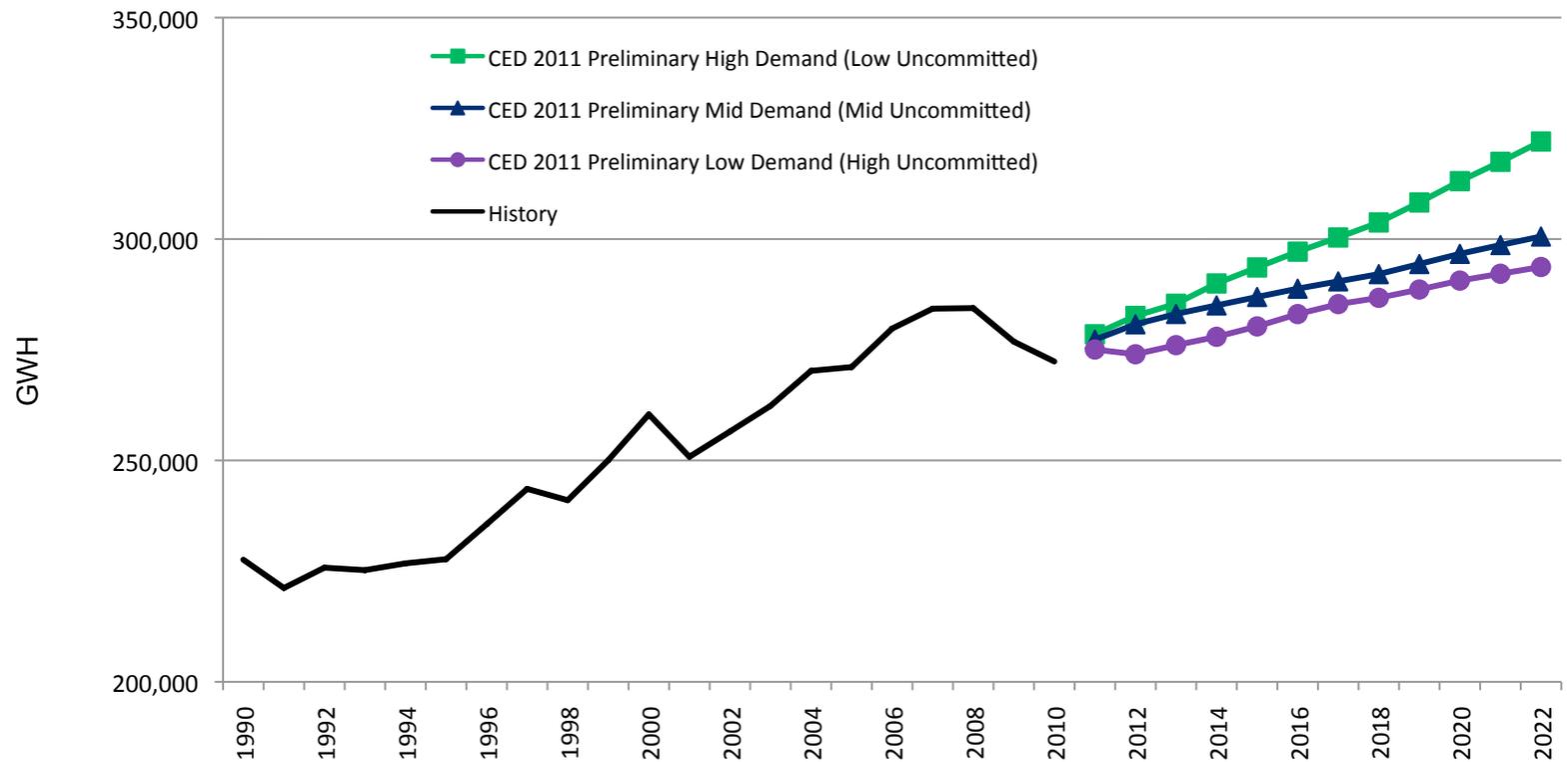
Impact on Mid Demand Scenario of Incremental Uncommitted Efficiency

Peak reduced by 5-10% in 2022





Consumption Scenarios Combining Committed and Uncommitted Savings





Peak Scenarios Combining Committed and Uncommitted Savings

