California Energy Commission

SMUD Planning Area Demand Forecast

IEPR Workshop on Preliminary Electricity and Natural Gas Demand Forecasts 2014-2024

California Energy Commission

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Malachi Weng-Gutierrez
Demand Analysis Office
Electricity Supply Analysis Division
Malachi.Weng-Gutierrez@energy.state.ca.us / 916-654-4588

Presentation Organization

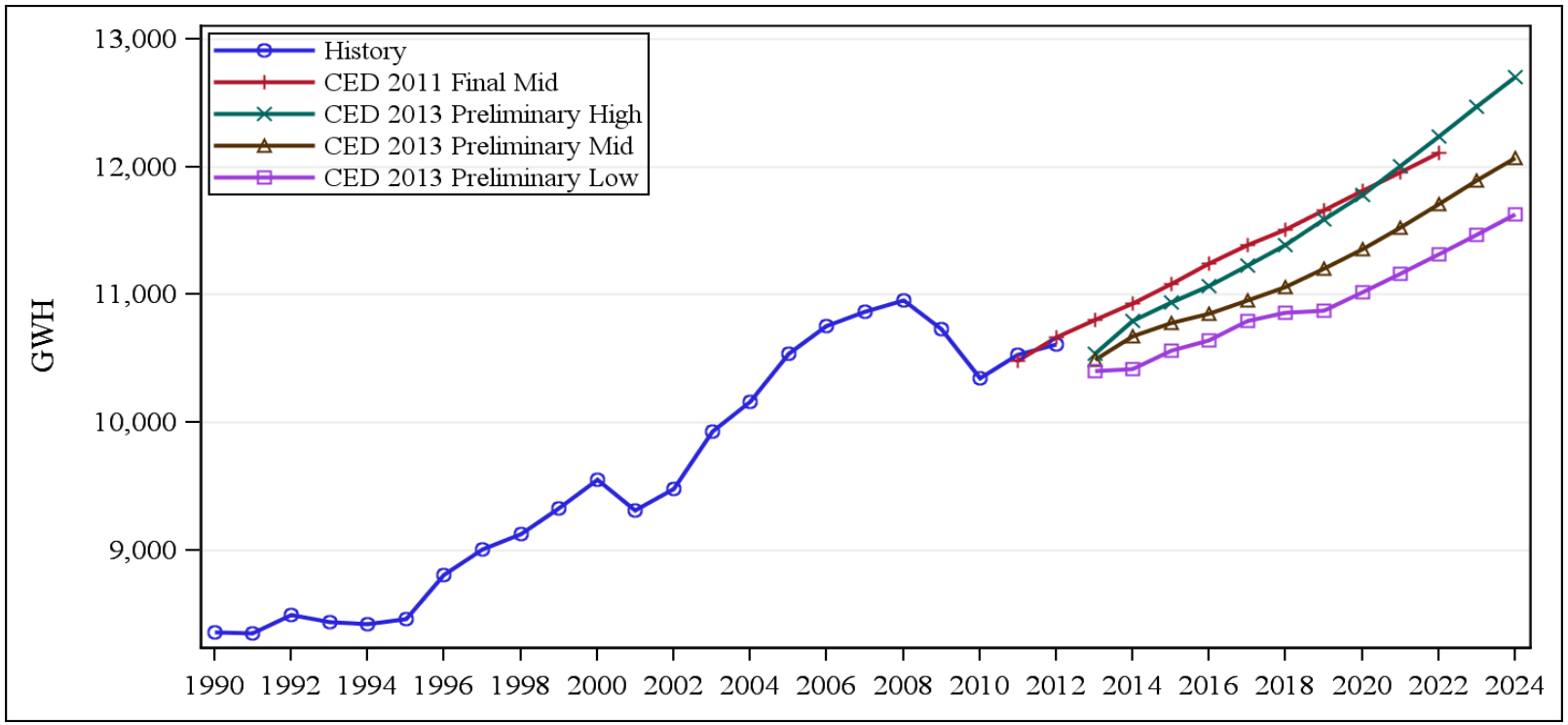
1. Planning area results
2. Efficiency and self-generation
3. SMUD forecast comparison

SMUD Overview

- Mid case is 3.3 percent lower than *CED 2011* in 2022
- Near-term consumption is influenced by slow economic growth and higher rates
- Lower growth rate over forecast caused by higher electricity rates and addition of standards

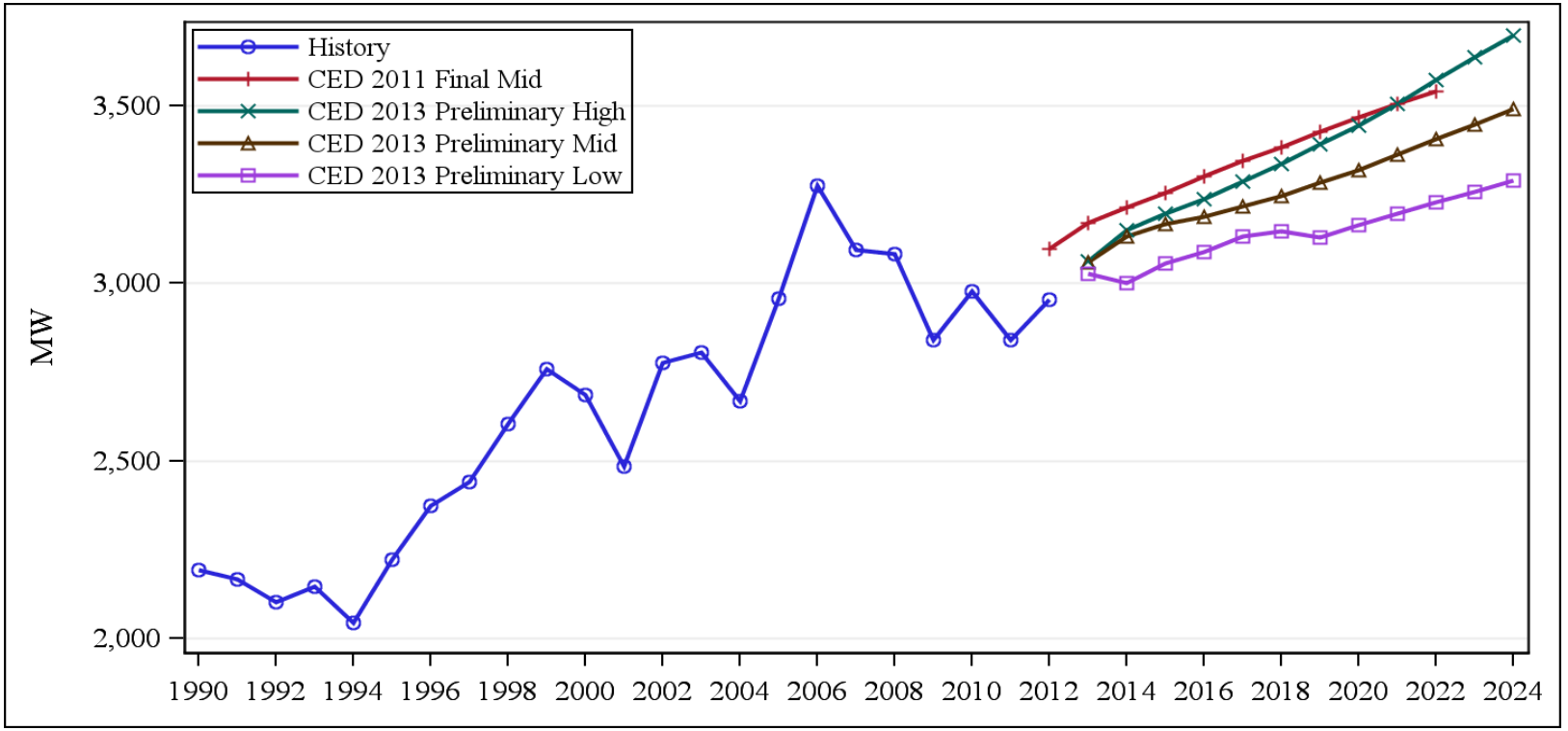
SMUD Electricity Consumption

Average annual growth: 0.77, 1.08, and 1.51 percent for the low, mid, and high cases, respectively.



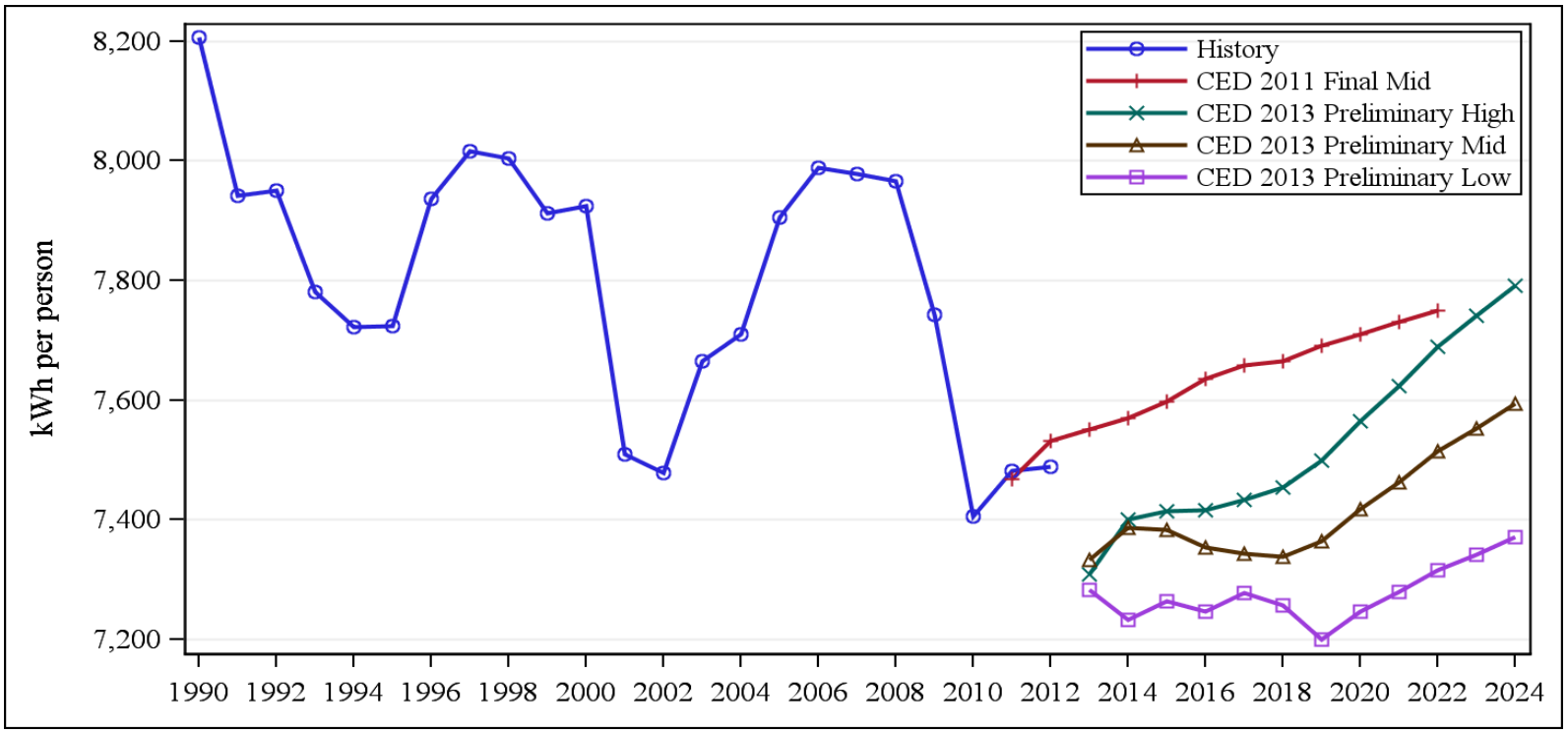
SMUD Planning Area Peak

Average annual growth: 0.63, 1.12, and 1.61 percent for the low, mid, and high cases, respectively.



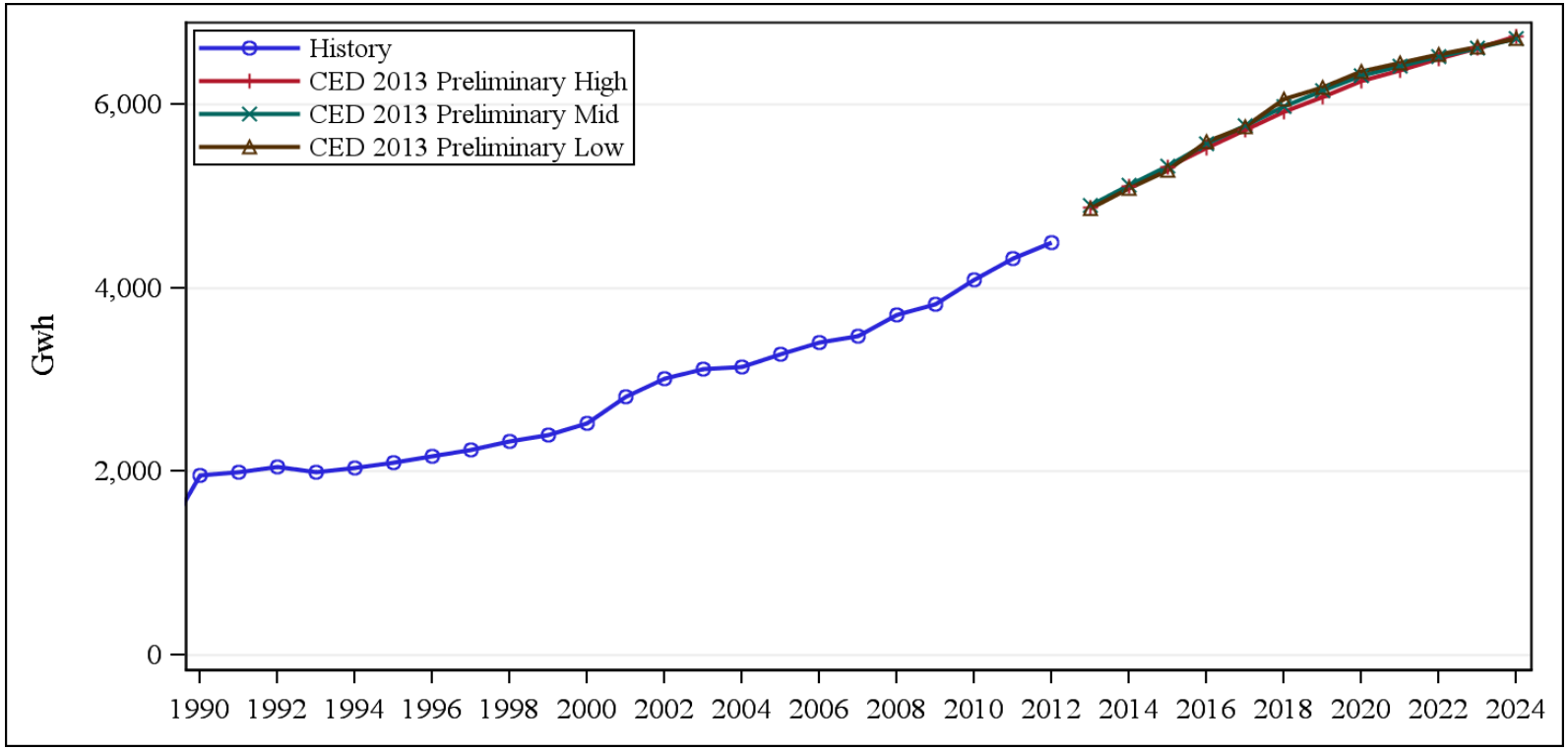
SMUD Per Capita Consumption

Increased EV adoption lead to increasing per capita electricity consumption toward end of the forecast.



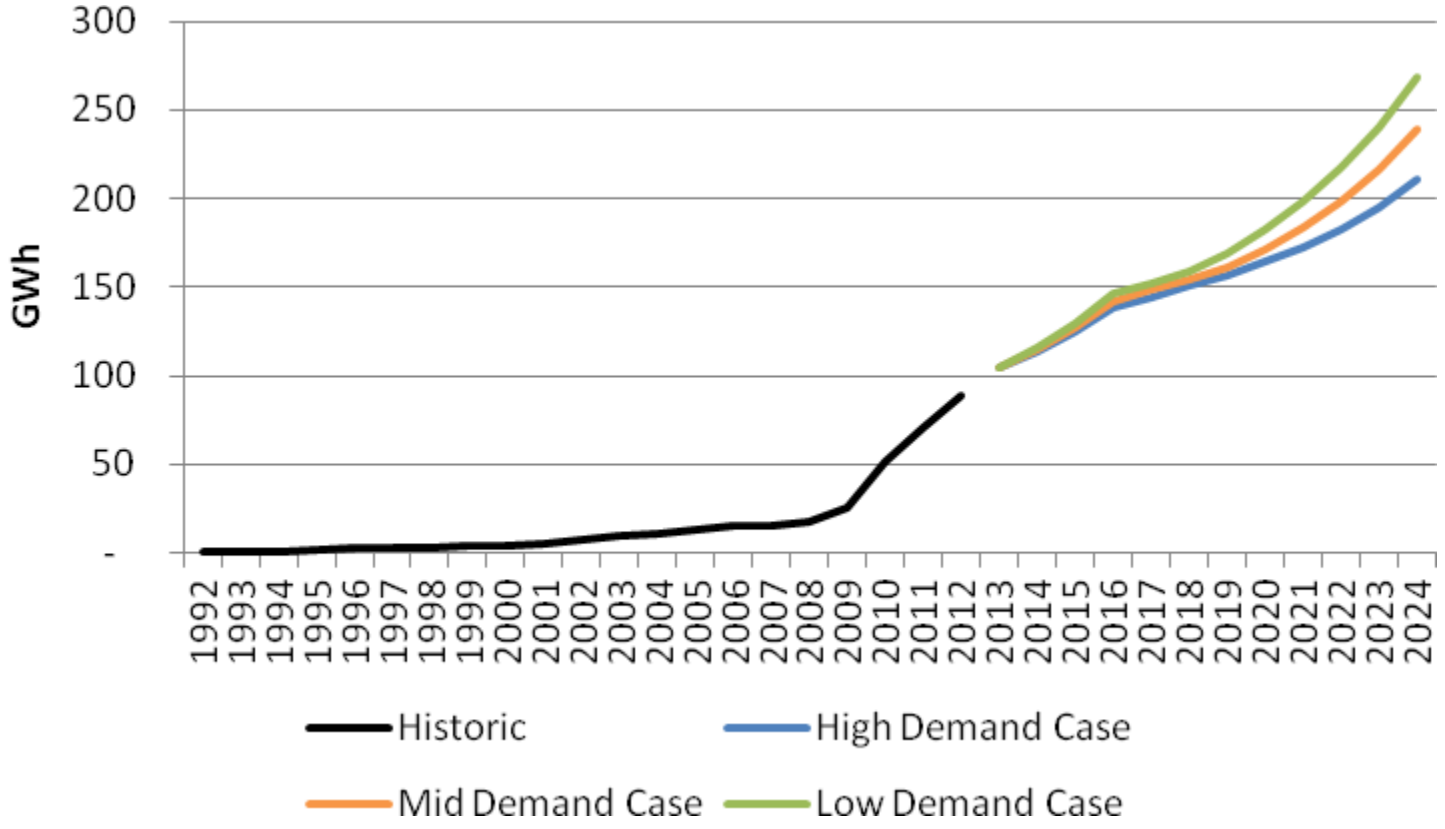
SMUD Planning Area Electricity Consumption Savings Estimates

Just over 2,200 GWh of additional savings projected from 2012 to 2024.



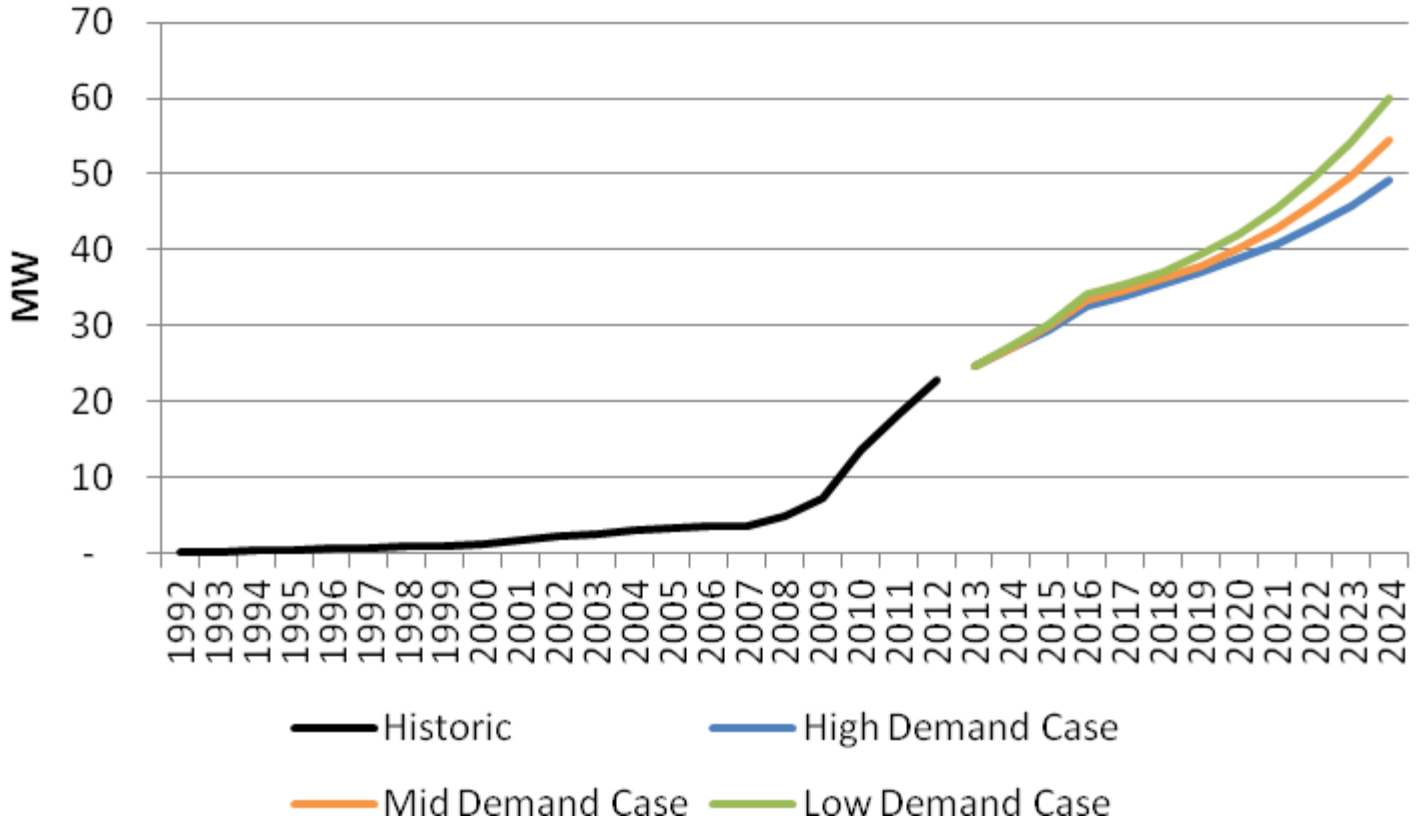
SMUD Self-Generation Energy Impacts

PV Energy impacts increase by 143 GWh in mid case



SMUD Self-Generation Peak Impacts

PV Peak impacts increase by 31 MW in mid case



SMUD Forecast Comparison

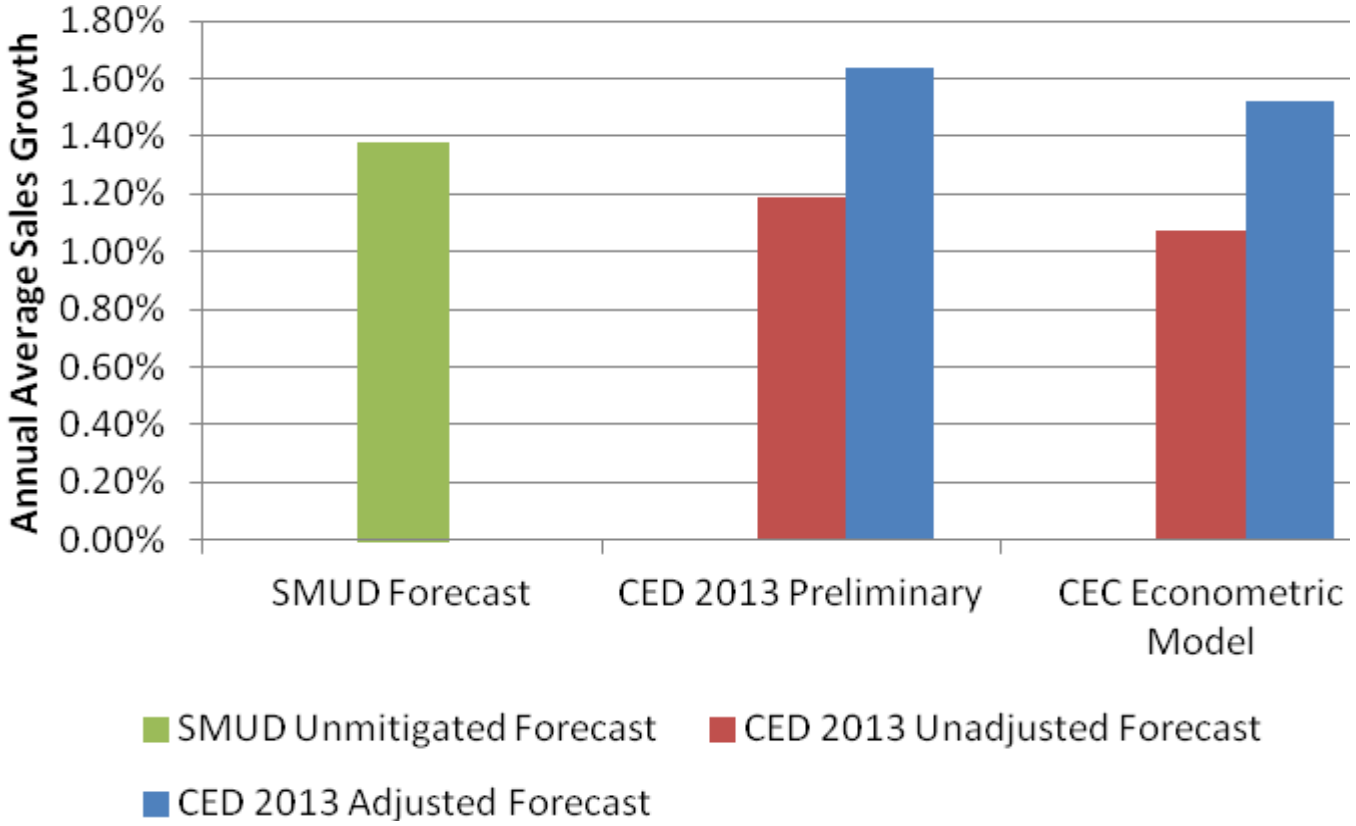
- Three SMUD forecasts: unmitigated, unmanaged, and managed.
- Unmitigated assumes no changes to energy use behavior, appliance stock or efficiencies
- Unmanaged includes changes in end-use appliance saturations and efficiencies and energy use in new home construction and small commercial
- Managed includes SMUD program impacts of EE, PV-SB1, EV and departing load
- The unmitigated forecast is most comparable forecast since no new efficiency impacts are incorporated during the forecast period.

SMUD Forecast Comparison

- SMUD unmitigated sales forecast for 2024 is 12,359 GWh
- *CED 2013 Preliminary* forecast mid case electricity sales for 2024 is 11,832 GWh
- Adjusting for rates, *CED 2013 Preliminary* mid sales for 2024 would be 12,423 GWh
- SMUD does not incorporate rate increases into forecast, while *CED 2013 Preliminary* mid includes the impacts of a roughly 50 percent increase in rates from 2012-2024.

SMUD Forecast Comparison

Annual average growth in unmitigated sales is similar after accounting for key input discrepancies.



SMUD Forecast Comparison

- SMUD unmitigated peak forecast for 2024 is 3,426 MW
- *CED 2013 Preliminary* forecast mid case for 2024 is 3,490 MW
- Adjusting for rates, *CED 2013 Preliminary* for 2024 is 3,612 MW

SMUD Forecast Comparison

CED 2013 peak annual average growth in higher than SMUD unmitigated peak even after adjusting for input differences.