



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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# Presentation Organization

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



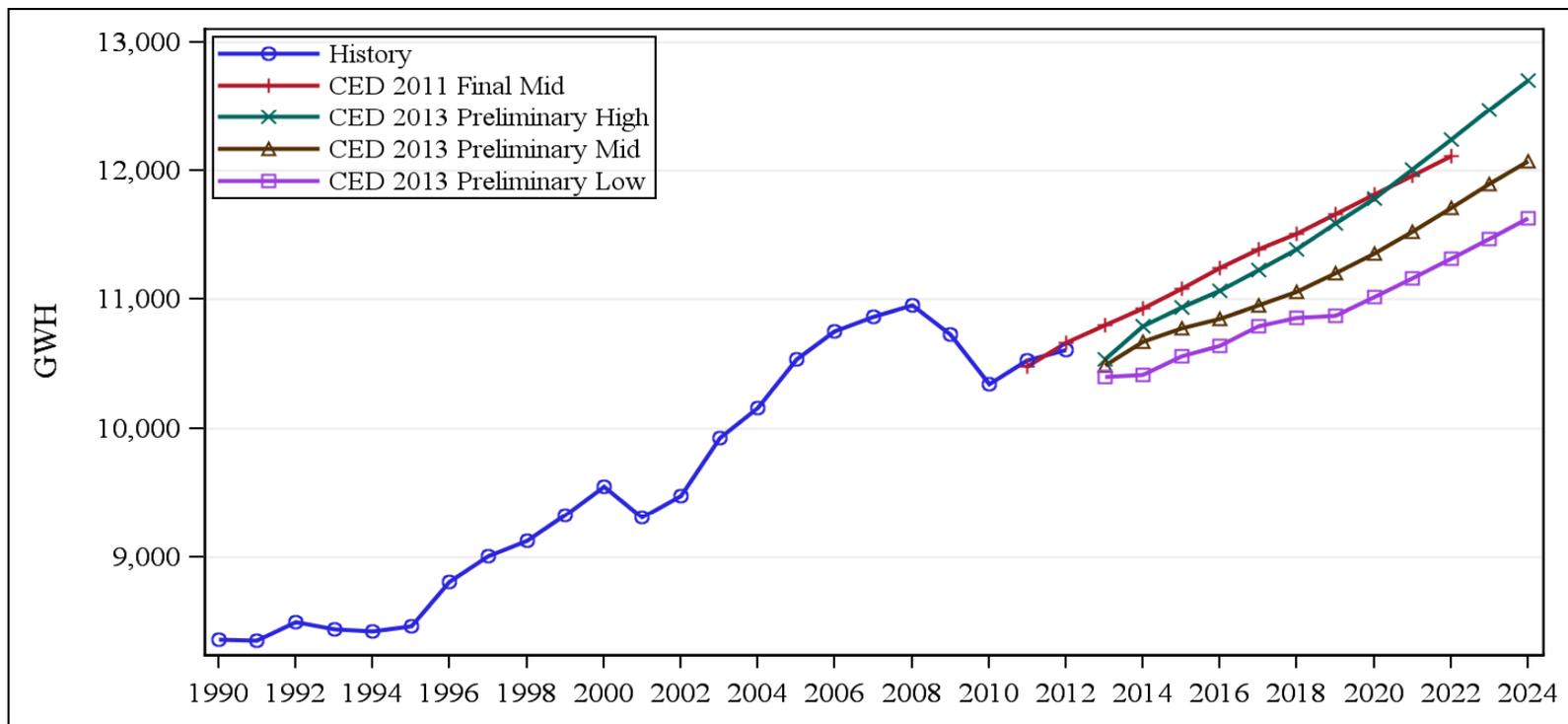
## SMUD Overview

- 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

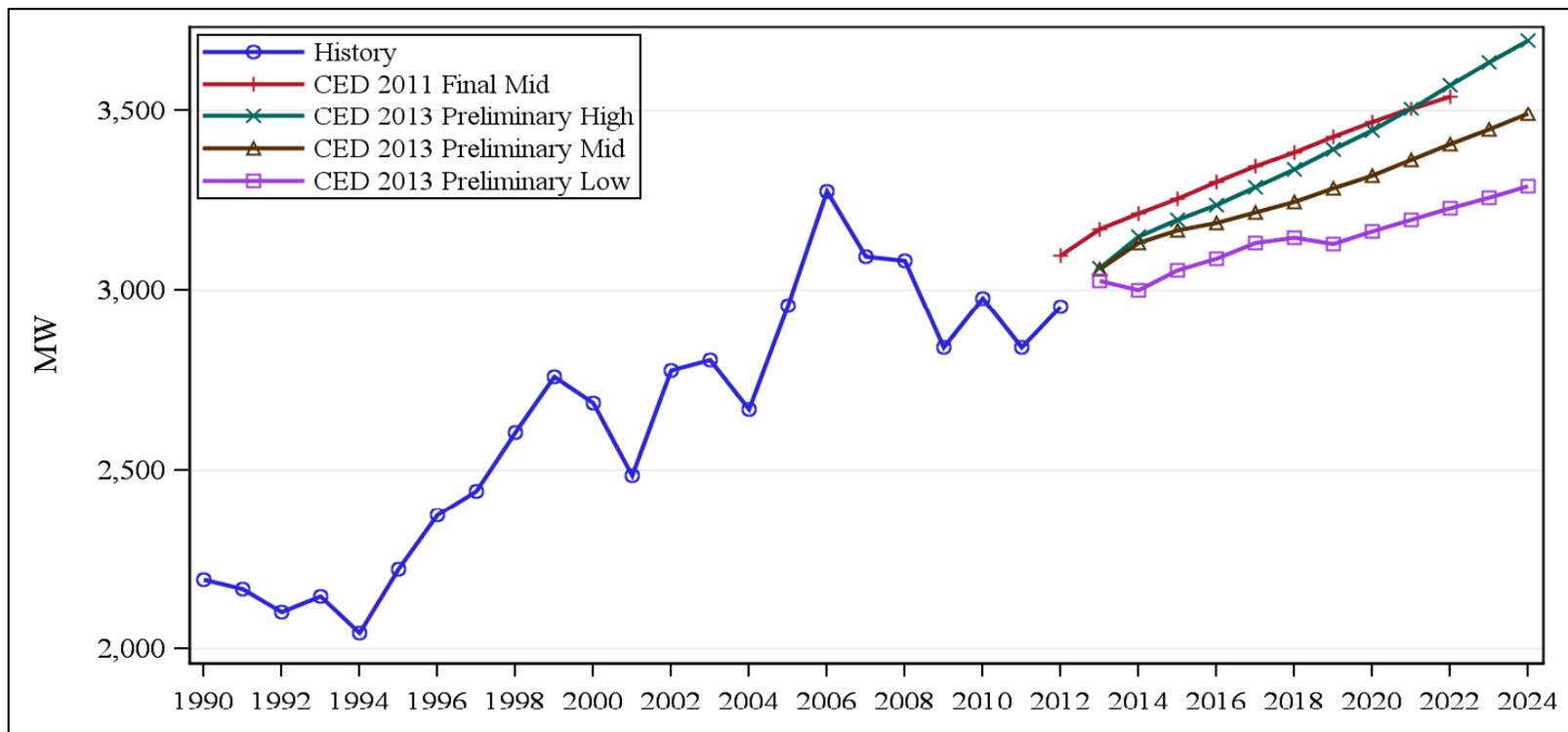
Average annual growth: 0.77, 1.08, and 1.51 percent for the low, mid, and high cases, respectively.





# SMUD Planning Area Peak

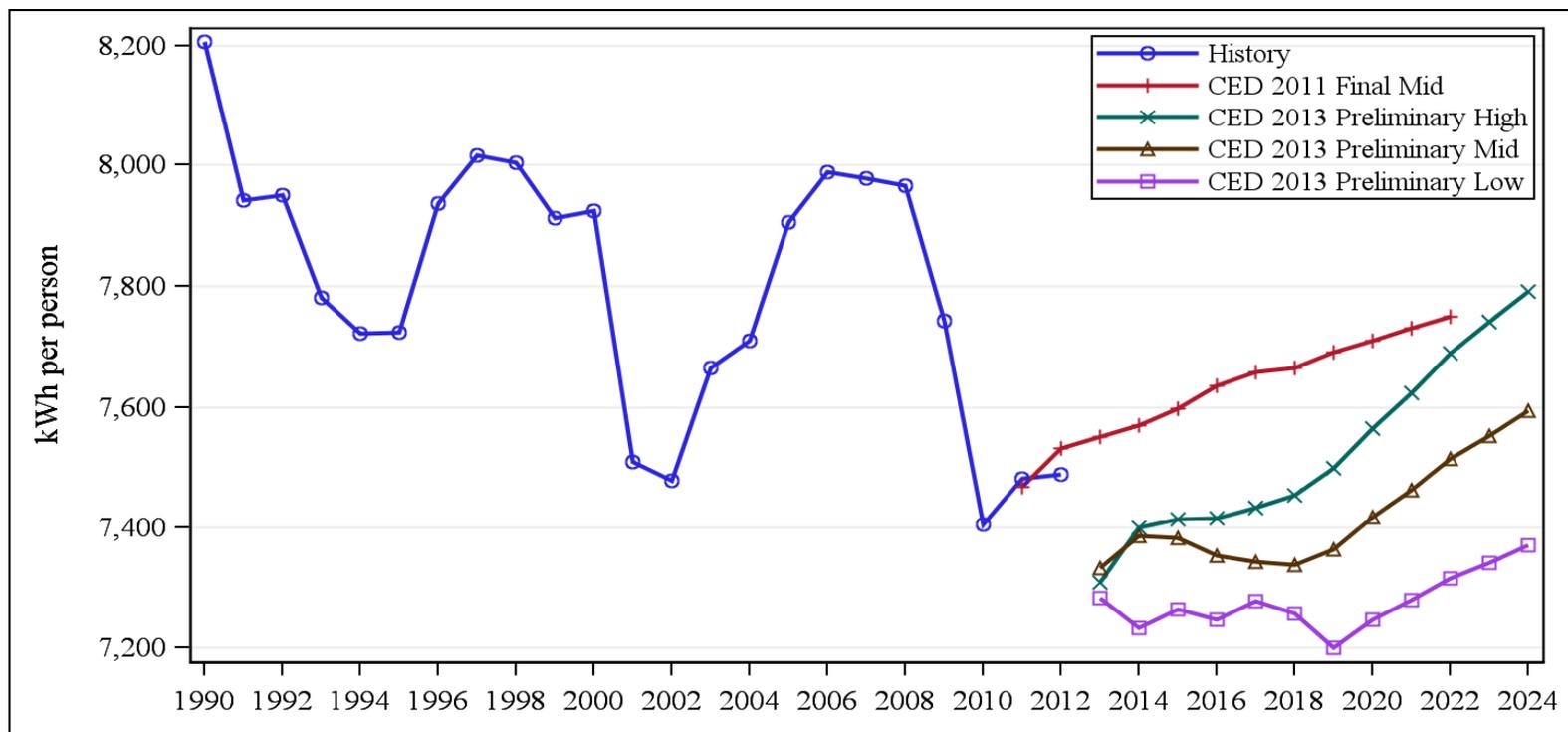
Average annual growth: 0.63, 1.12, and 1.61 percent for the low, mid, and high cases, respectively.





## SMUD Per Capita Consumption

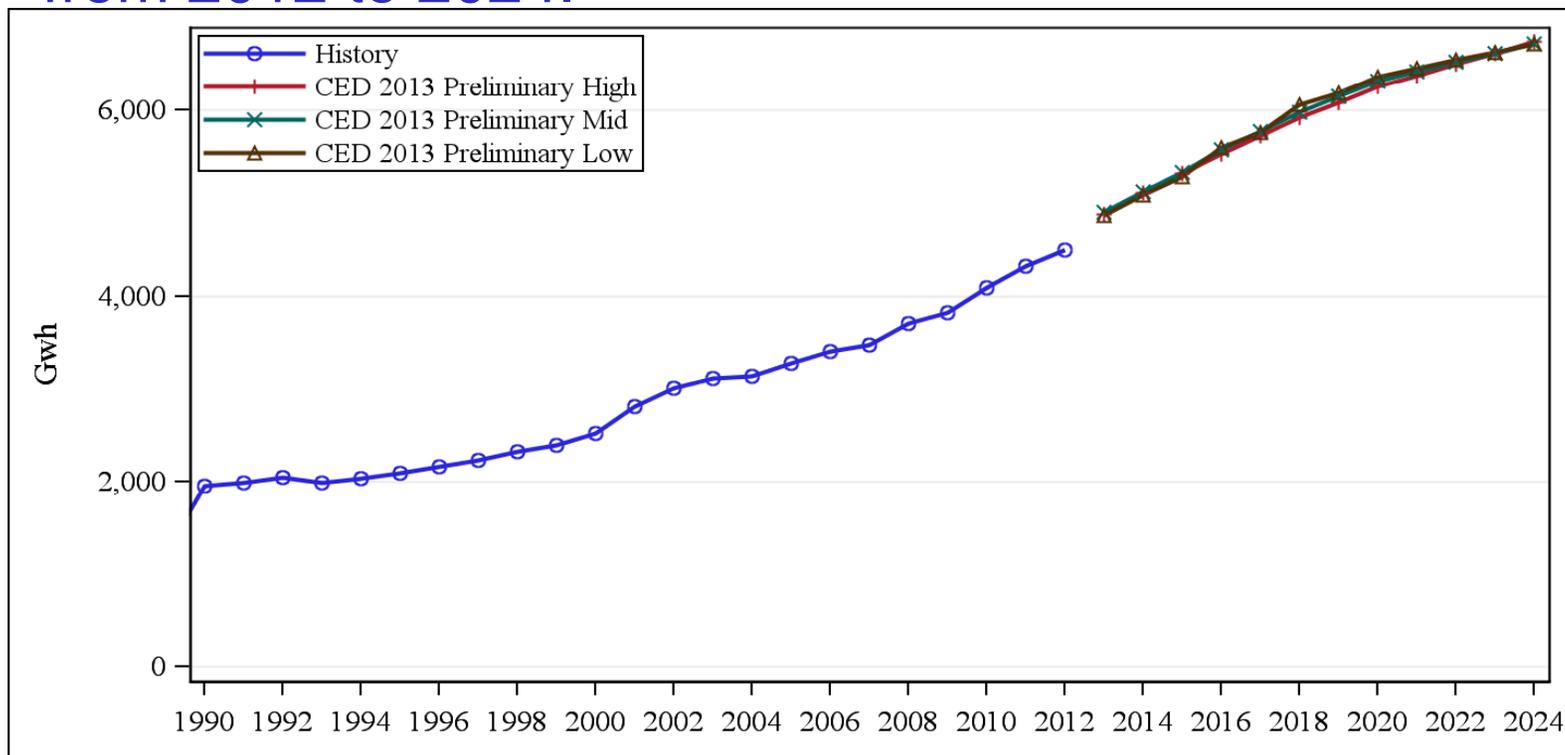
Increased EV adoption lead to increasing per capita electricity consumption toward end of the forecast.





# SMUD Planning Area Electricity Consumption Savings Estimates

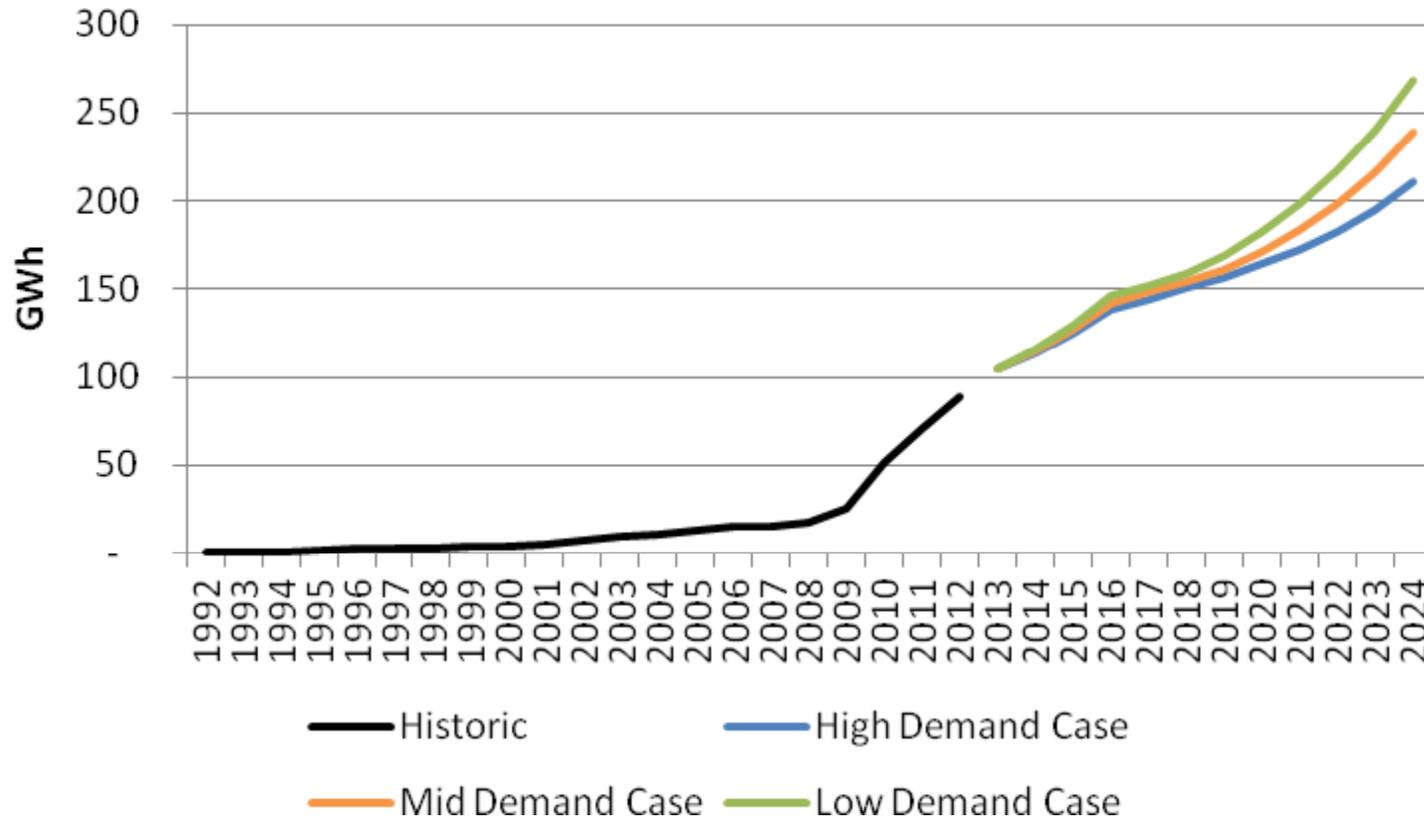
Just over 2,200 GWh of additional savings projected from 2012 to 2024.





# SMUD Self-Generation Energy Impacts

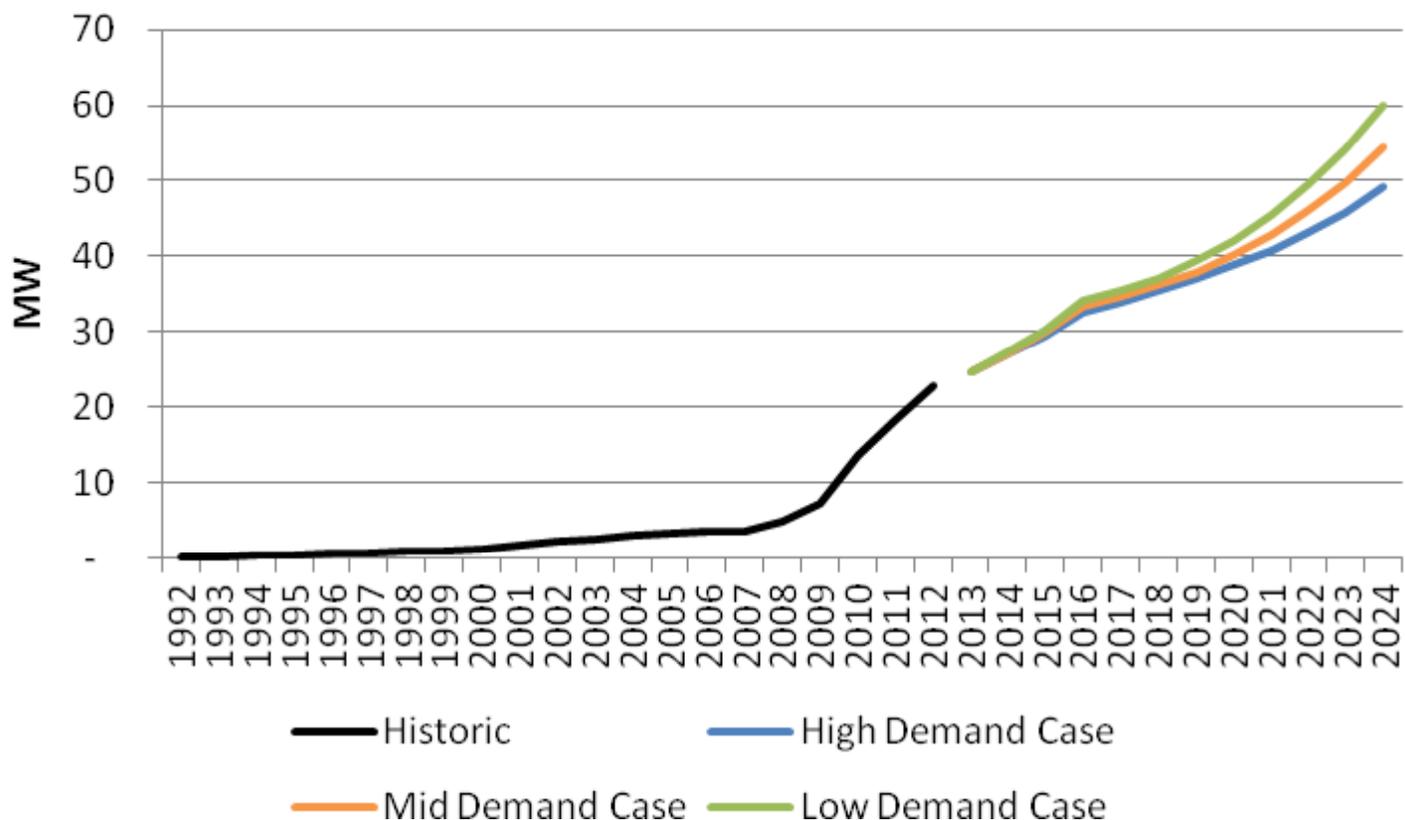
PV Energy impacts increase by 143 GWh in mid case





# 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.



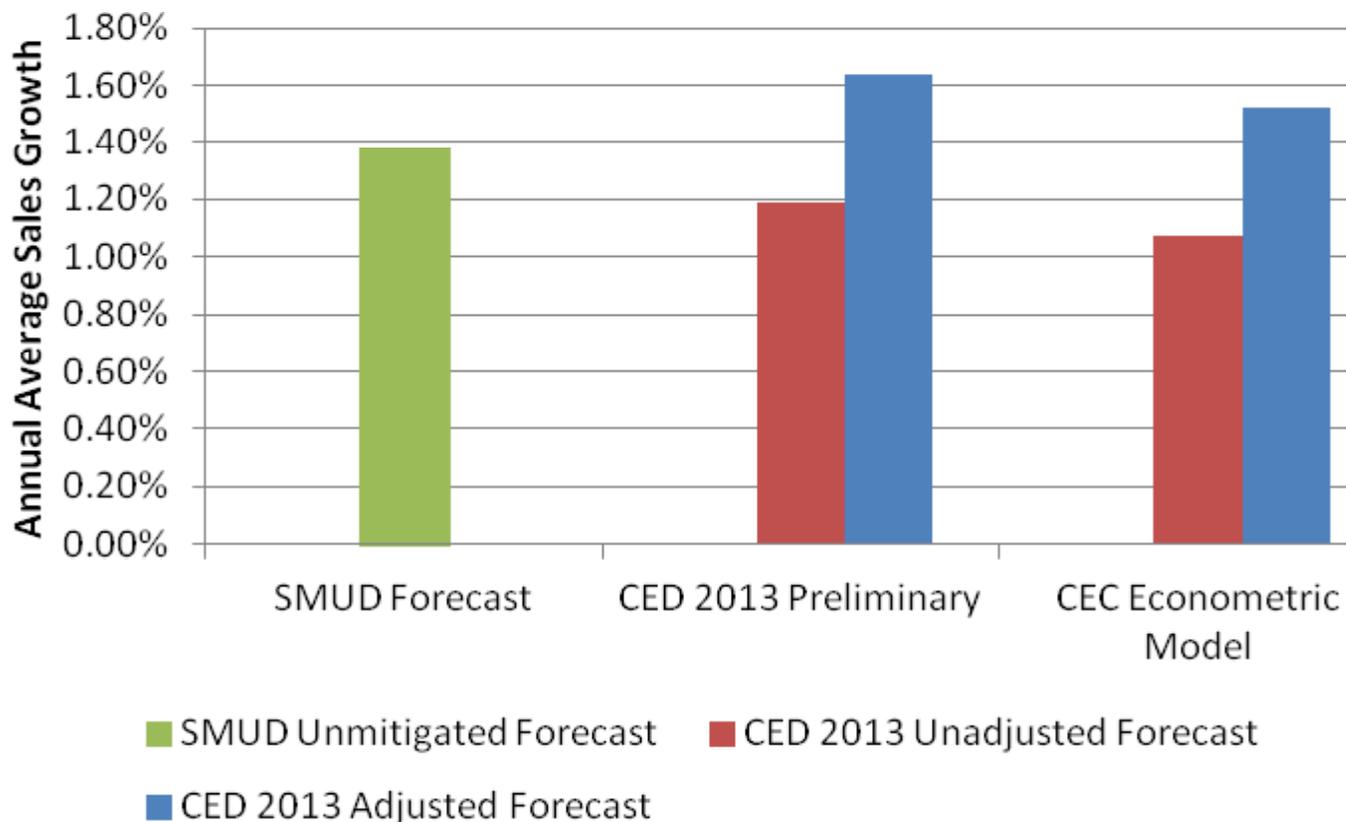
## SMUD Forecast Comparison

- 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 is higher than SMUD unmitigated peak even after adjusting for input differences.

