

DOCKETED

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SMUD Presentation On RPS Progress

Additional submitted attachment is included below.



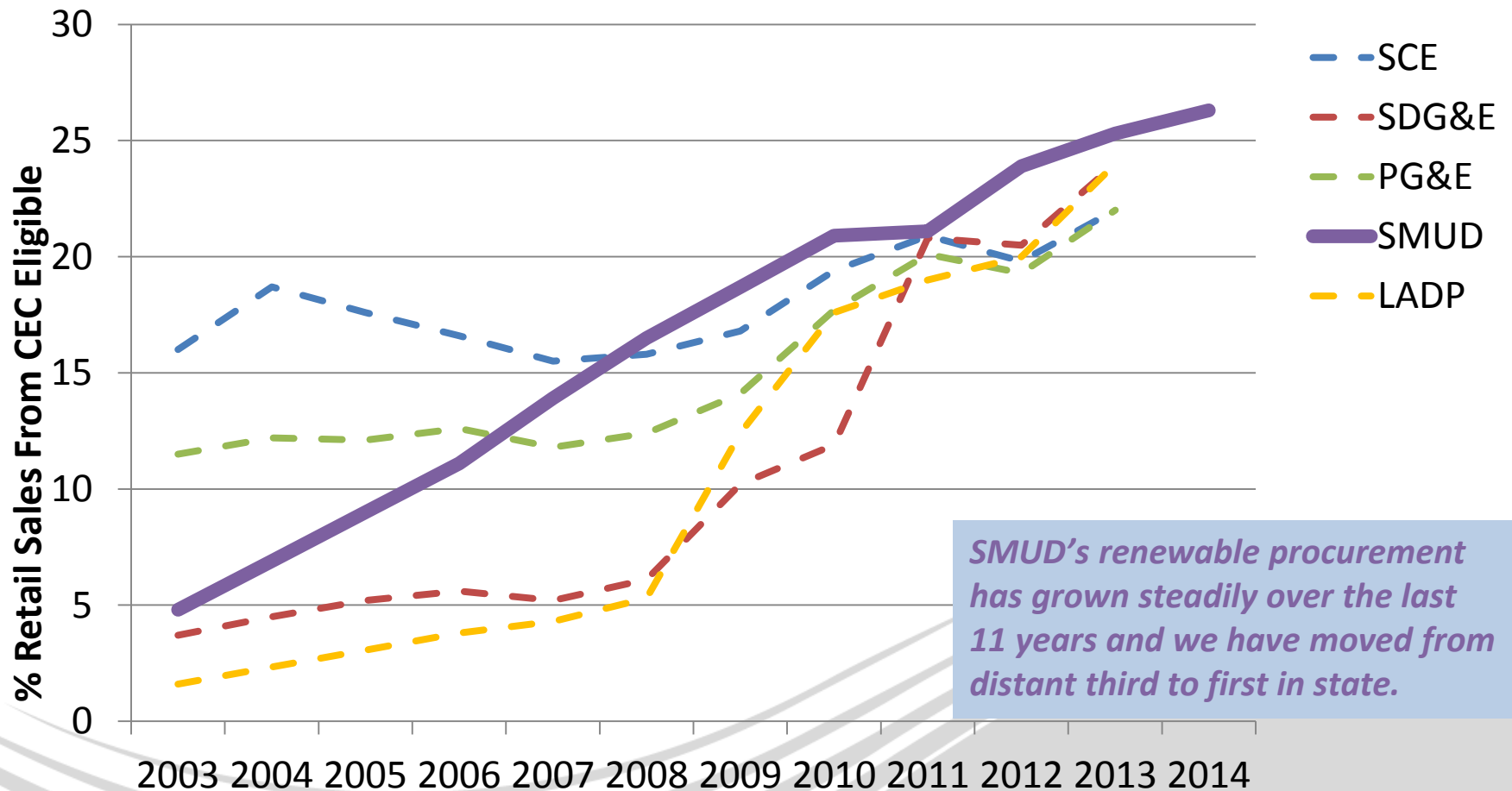
CEC Workshop -- Renewable Progress, Challenges, and Opportunities

Monday, May 11th, 2015
Tim Tutt

Powering forward. Together.

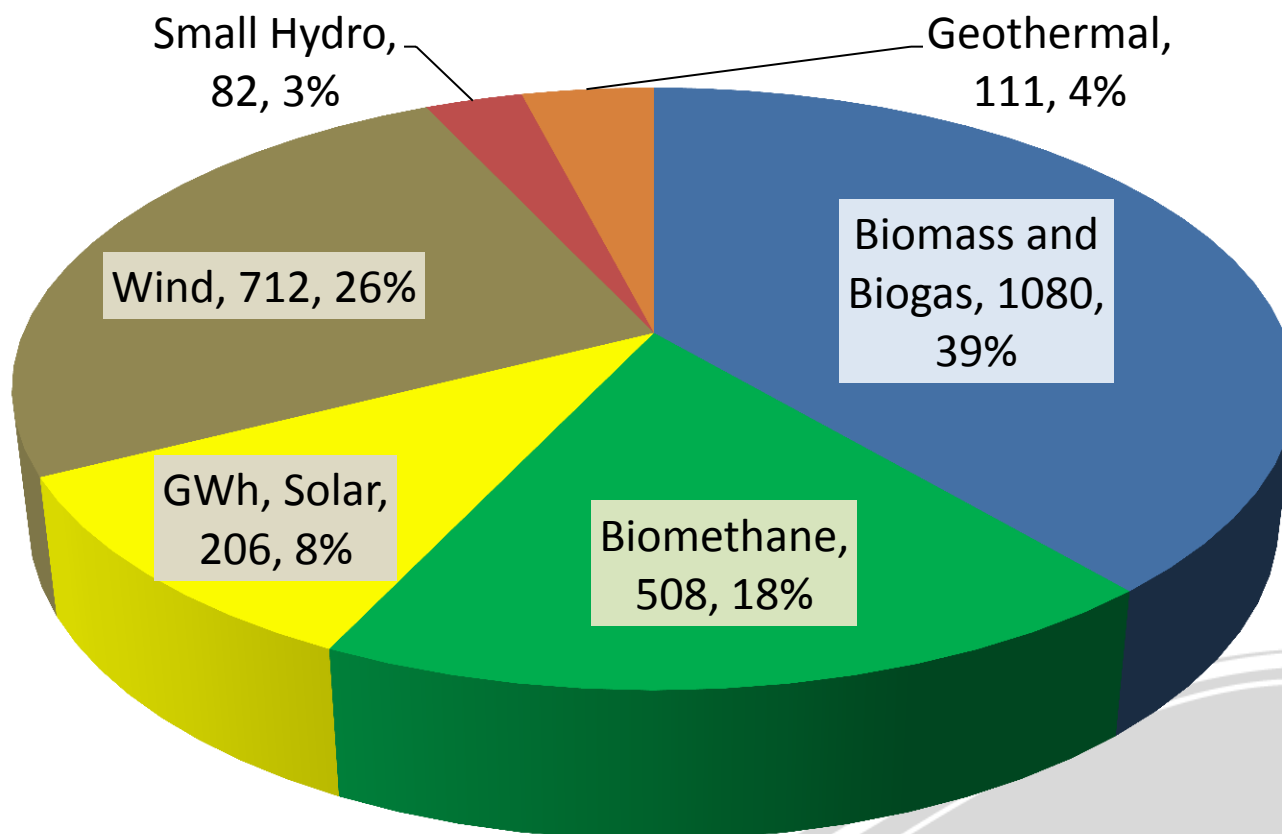


Renewable Procurement As % Retail Sales For the Five Largest Utilities In California



SMUD's Renewable Portfolio: 2014

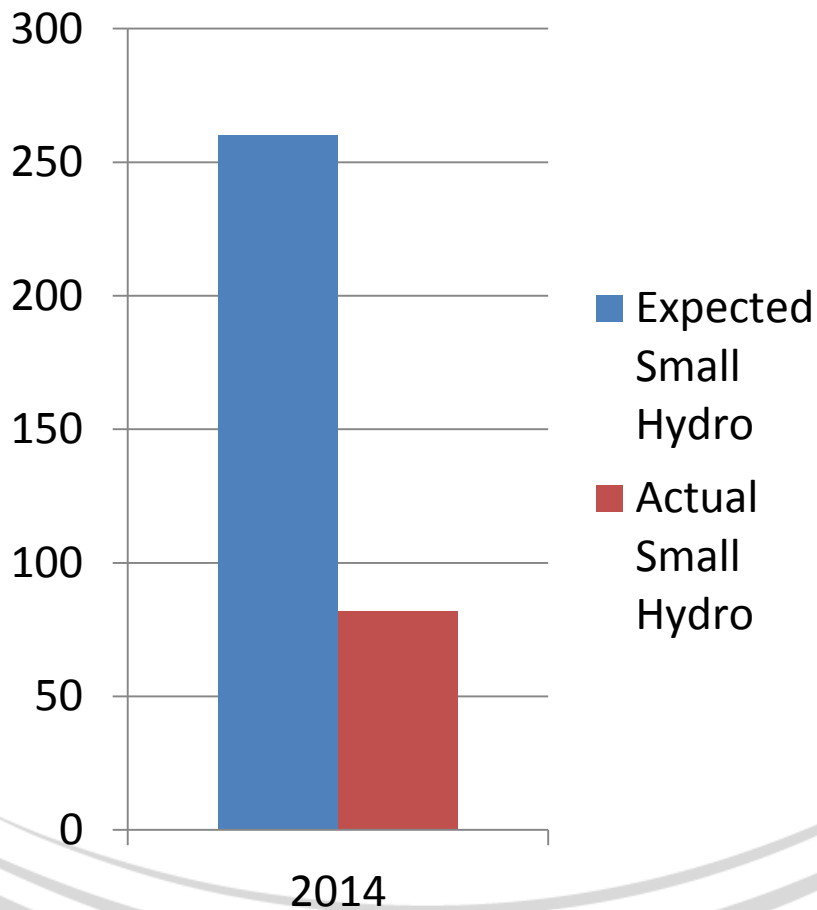
2783 GWH total, 26%



SMUD RPS Status

	2011	2012	2013	1 st Compliance Period
Compliance Period Reqt.				6257 (20%)
SMUD Renewable Procurement	2192 (21%)	2495 (24%)	2639 (25%)	7325 (23%)
RECs Retired	2192 (21%)	2458 (24%)	1630 (16%)	6280 (20%)
RECs Remaining (Potential Surplus)	0	37	1009 (9%)	~1050 (3%)
HCO	NA	NA	NA	~1220 (applied for)

Impact of Drought: 2014 Procurement



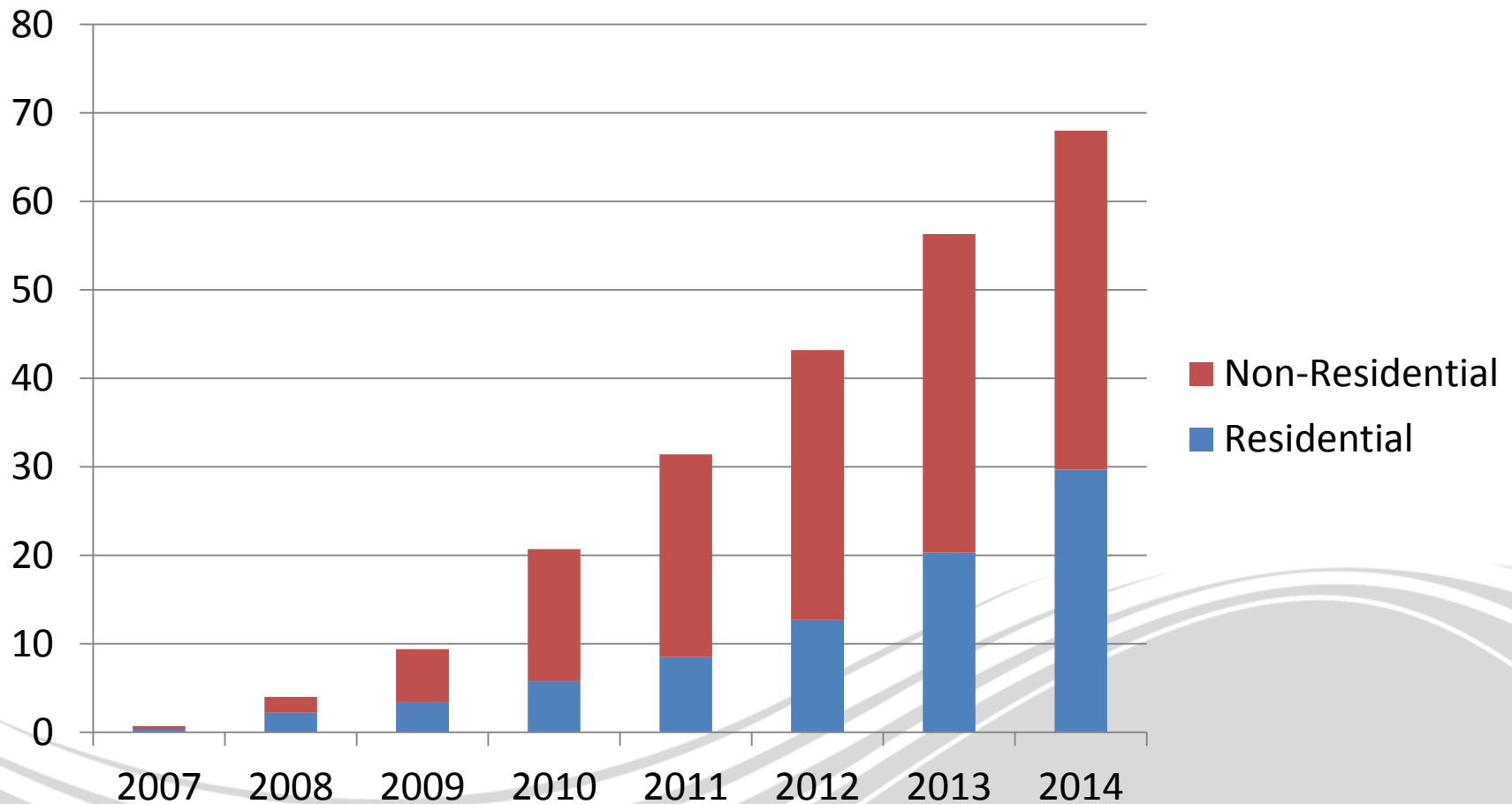
- Drought causes over 75% drop in small hydro procurement in 2014
- With normal hydro, SMUD would be at 28% renewables in 2014, 2% points higher than actual
- Important to recognize variability in procurement plans and violation assessment
- Important to have a portfolio of resources

SMUD Plans For Compliance Periods 2 & 3

	2014-2016	2017-2020
Projected Retail Sales	31749	42475
RPS Requirement	6881 (21.7%)	12743 (30%)
Committed Procurement	8740 (27.5%)	12434 (29.3%)

- Recent Activity
 - Large biomass/small hydro contract ended in 2014
 - Extended contracts with local landfill, wind projects
 - Grandfathered biomethane contracts begin producing
 - New geothermal contracts
 - New local dairy digesters, solar begin producing
 - Considering several new options for wind, solar, geothermal, biogas

SMUD's SB1 Status



SMUD Renewable Research Looking at New Resources, Grid Impacts, Mitigation Alternatives, System Effects and Policies

- Proposed 484kw Solar Canal PV system to offset pumping load and reduce evaporation
- Developing a Pilot Biomass Gasification Project
- Developing better forecasting models; examining the effect of geographic variation
- Examining communications between PV inverters and system to allow monitoring and possibly control
- Research on storage at the house, neighborhood, and system level, and with Electric Vehicles (managed charging, V2H, V2G)
- Demand Response pilots and goals

