

Staff Workshop on Publicly Owned Utilities' Energy Efficiency Program Achievements

June 9, 2009

Kae C. Lewis
Demand Analysis Office
Electricity Supply Analysis Division
Klewis@energy.state.ca.us / 916-654-4176



Agenda for Today

- **Background and Context**
- **Staff Report – Progress of POU Energy Efficiency**
- **POU Commitment to Efficiency (Scott Tomashefsky, NCPA)**
- **Measurement and Verification for the POUs
(Gary Cullen, Summit Blue Consulting)**
- **Case Studies**
 - **Rob Lechner, Lodi Electric**
 - **Steven Poncelet, Truckee-Donner PUD**
 - **Thomas Gackstetter, LADWP**
- **Public Comments**
- **Adjourn**

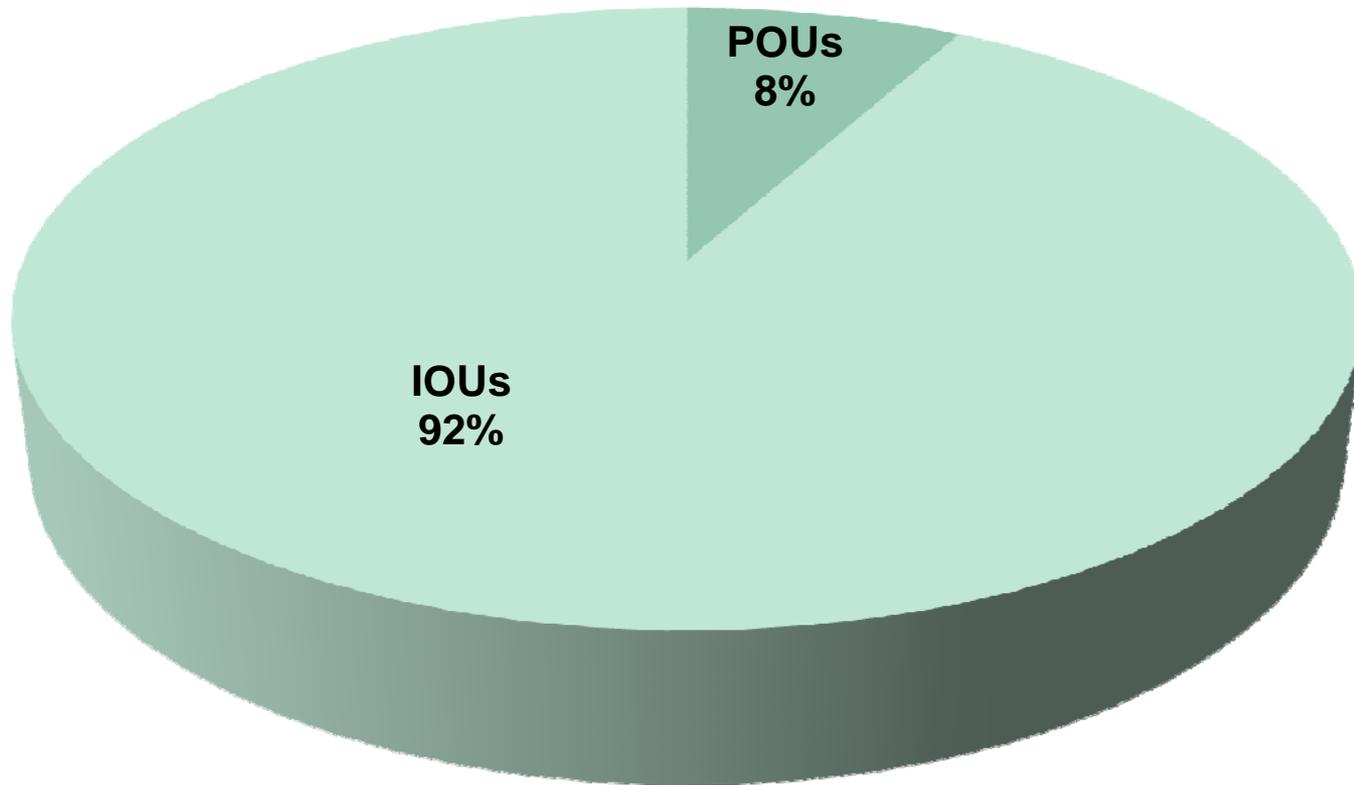


Not Today!

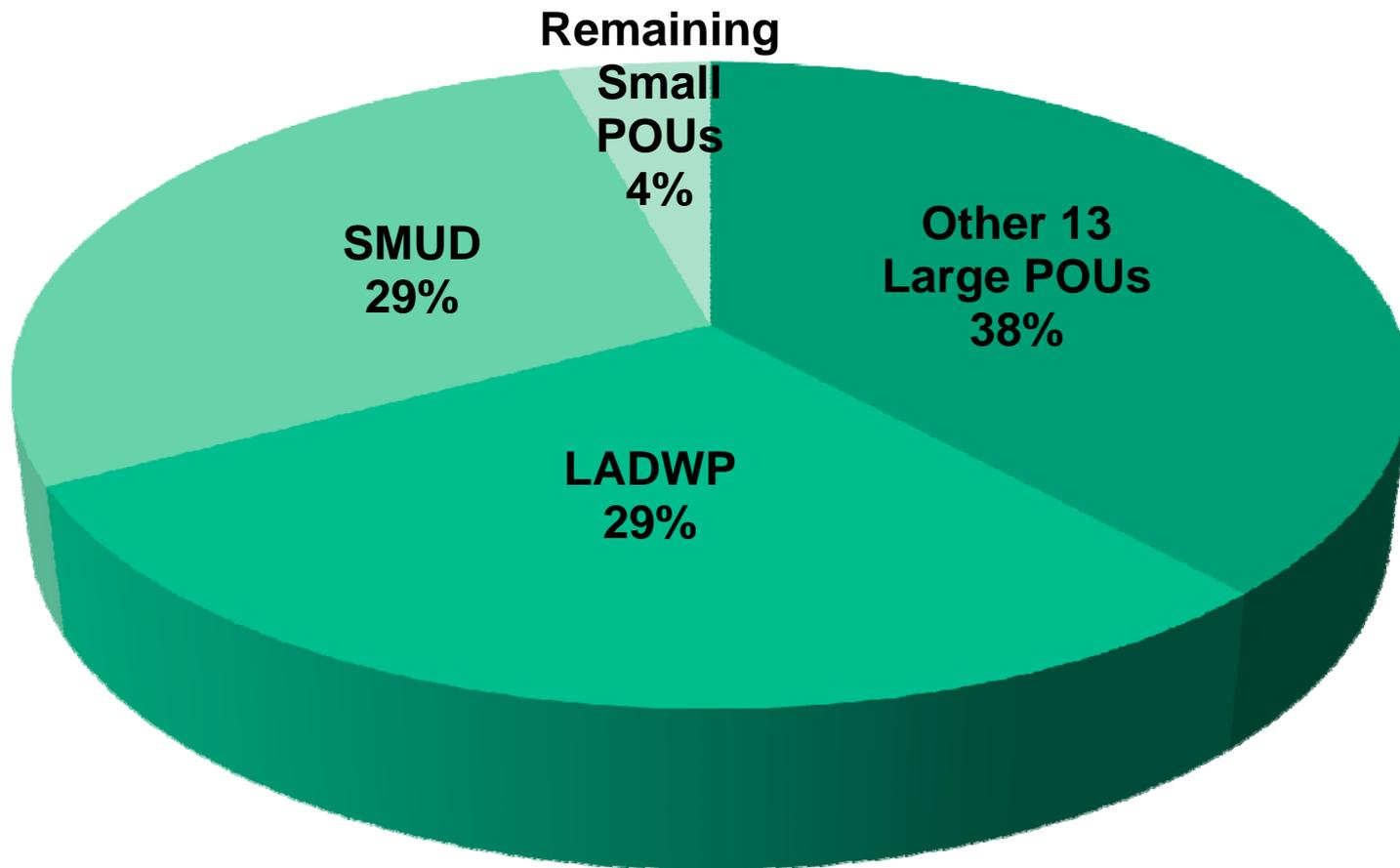
- **IOU Energy Efficiency**
 - **AB 2021 involves IOUs but monitoring their progress in efficiency is the jurisdiction of the CPUC**
- **POU Impacts in the Demand Forecast**
 - **The inclusion of energy efficiency impacts in the Energy Commission will be discussed in a later workshop.**



2008 Statewide Annual Energy Savings (MWh)



2008 Annual Energy Savings (MWh)



Legislative Background

- **SB 1037 (2005)**
 - All publicly owned utilities are obligated to report investments in energy efficiency programs annually to their customers and to the Energy Commission.
- **AB 2021 (2006)**
 - Requires Energy Commission, together with POU and CPUC, to develop a statewide estimate of energy efficiency potential and establish savings targets for the next 10 years. Energy Commission monitors and reports yearly POU progress towards targets set in 2007.
- **AB 32 (2006)**
 - POU energy efficiency programs contribute to the carbon emissions reduction goals in CARB Climate Change Scoping Plan (2008) – reported in Climate Action Team Report Card



Where Are We?

- 2006 -- POU's submit first annual energy efficiency report to Energy Commission with program savings, expenditures and cost-effectiveness results (Dec 06)**
- 2007 -- POU's, CPUC (IOUs) and Energy Commission develop first statewide energy efficiency potential estimate and targets for 2007-2016**
- 2008 -- POU's submit second annual energy efficiency report (March 2008)**
- 2009 -- POU's submit third annual energy efficiency report (March 2009)**
- 2010 -- POU's, CPUC (IOUs) and Energy Commission develop second statewide energy efficiency potential estimate and targets for 2007-2016**



Intent of AB 2021

- Each POU should first **acquire all energy efficiency resources that are cost-effective, achievable and reliable.**
- Energy efficiency should be procured so that the state can meet the goal of **reducing electricity consumption** by 10 percent over ten years (annual average 1%).
- Energy savings achieved through this legislation is part of the state's plan to **reduce carbon emissions.**

These intentions are the basis of criteria by which efficiency progress can be evaluated: magnitudes of savings, cost-effectiveness, feasibility and reliability



Metrics of Commitment and Progress

- **Increase in Efficiency Expenditures**
- **Efficiency Expenditures as Percent of Revenue**
- **Energy and Peak Savings Relative to Targets**
- **Savings as Percent of Total Sales**
- **Cost-effectiveness of Energy Efficiency Portfolio**
- **Adequate Tracking and Reporting Systems**
- **Measurement and Verification of Savings**



15 Largest POU's by 2008 Efficiency Savings

Anaheim Public Utilities

Burbank Water & Power (W&P)

Glendale W&P

Imperial Irrigation District (ID)

LADWP

Lodi Electric Utility

Modesto ID

City of Palo Alto

Pasadena W&P

Redding Electric Utility

Riverside Public Utilities

Roseville Electric

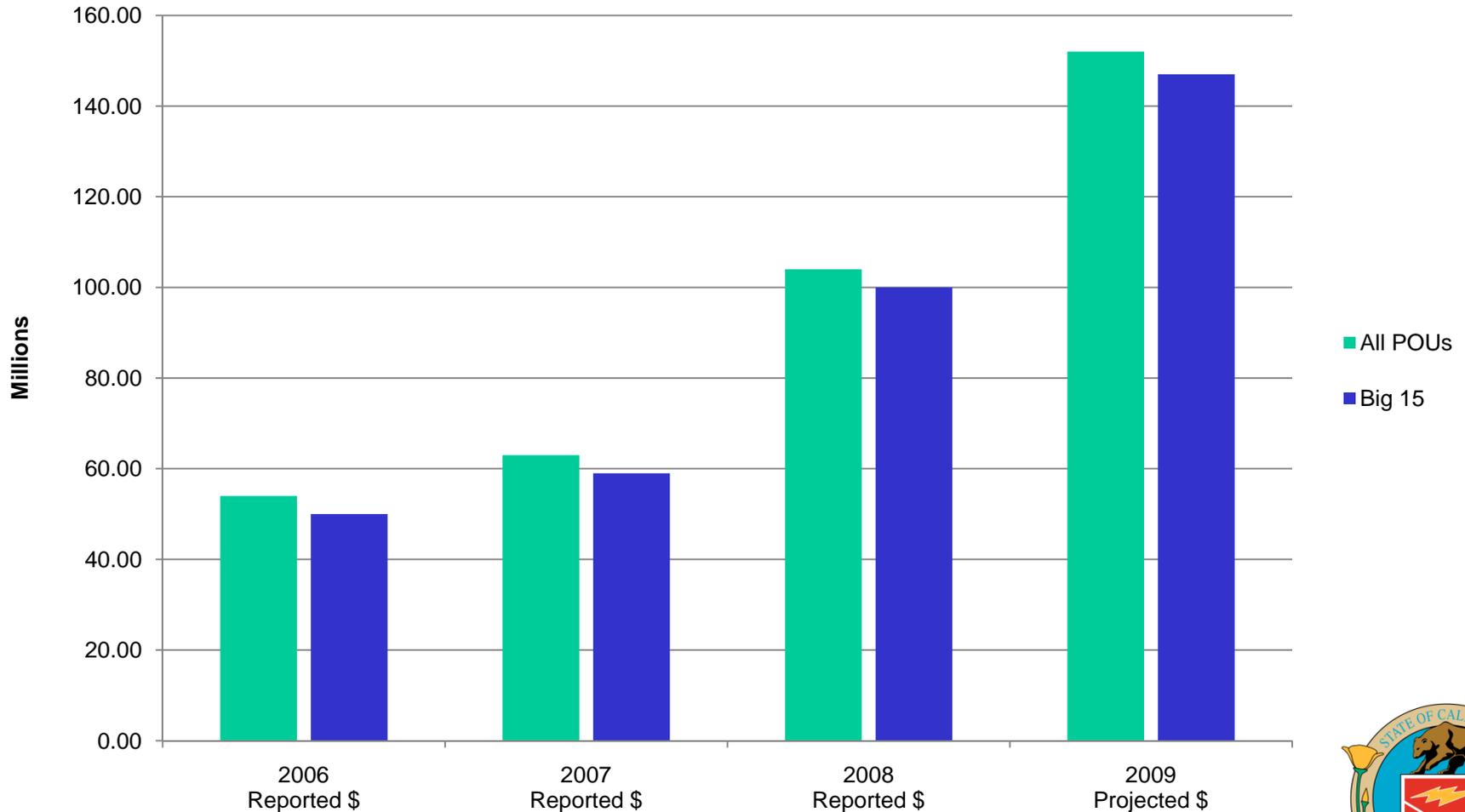
Silicon Valley Power

SMUD

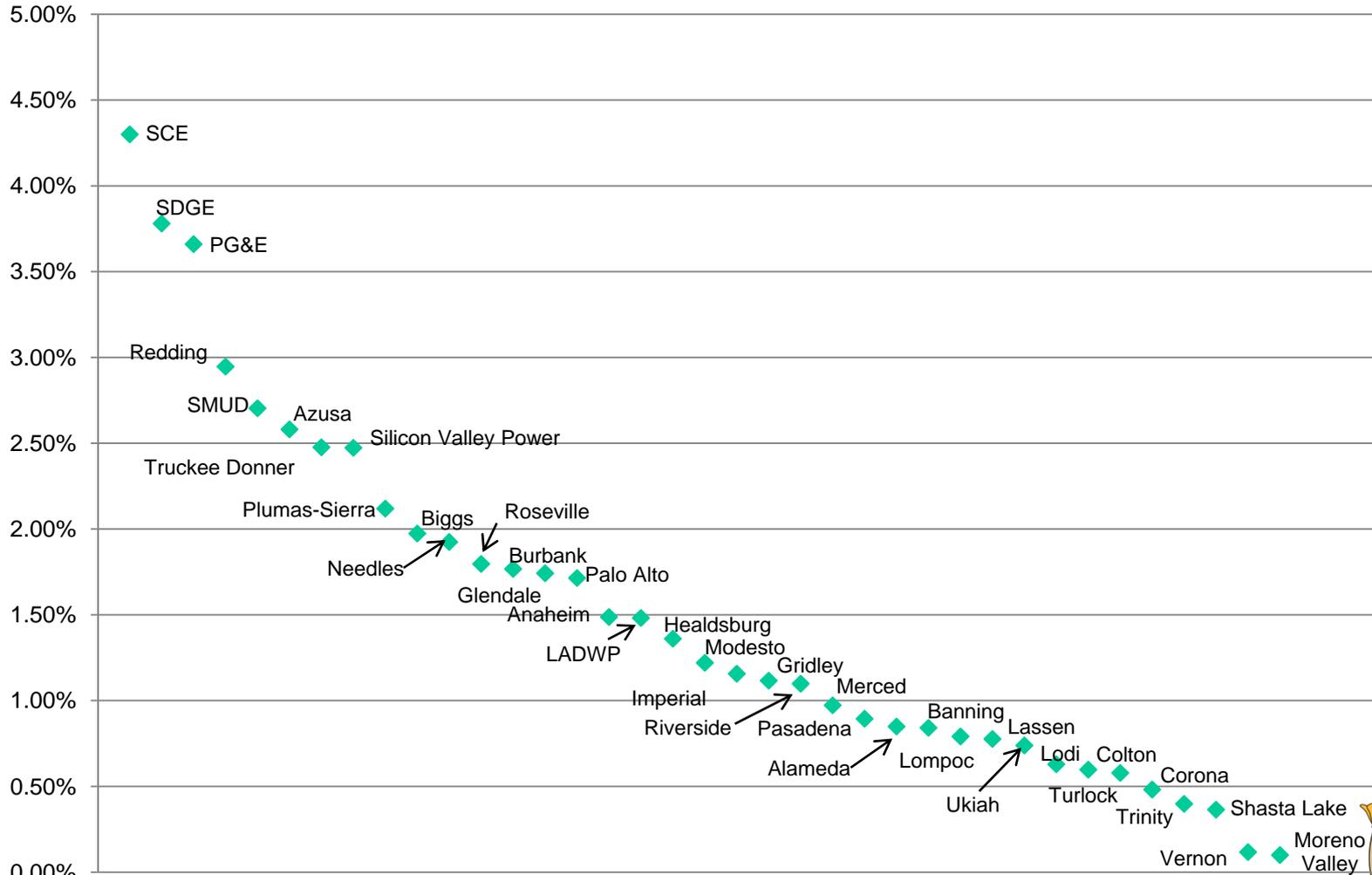
Turlock ID



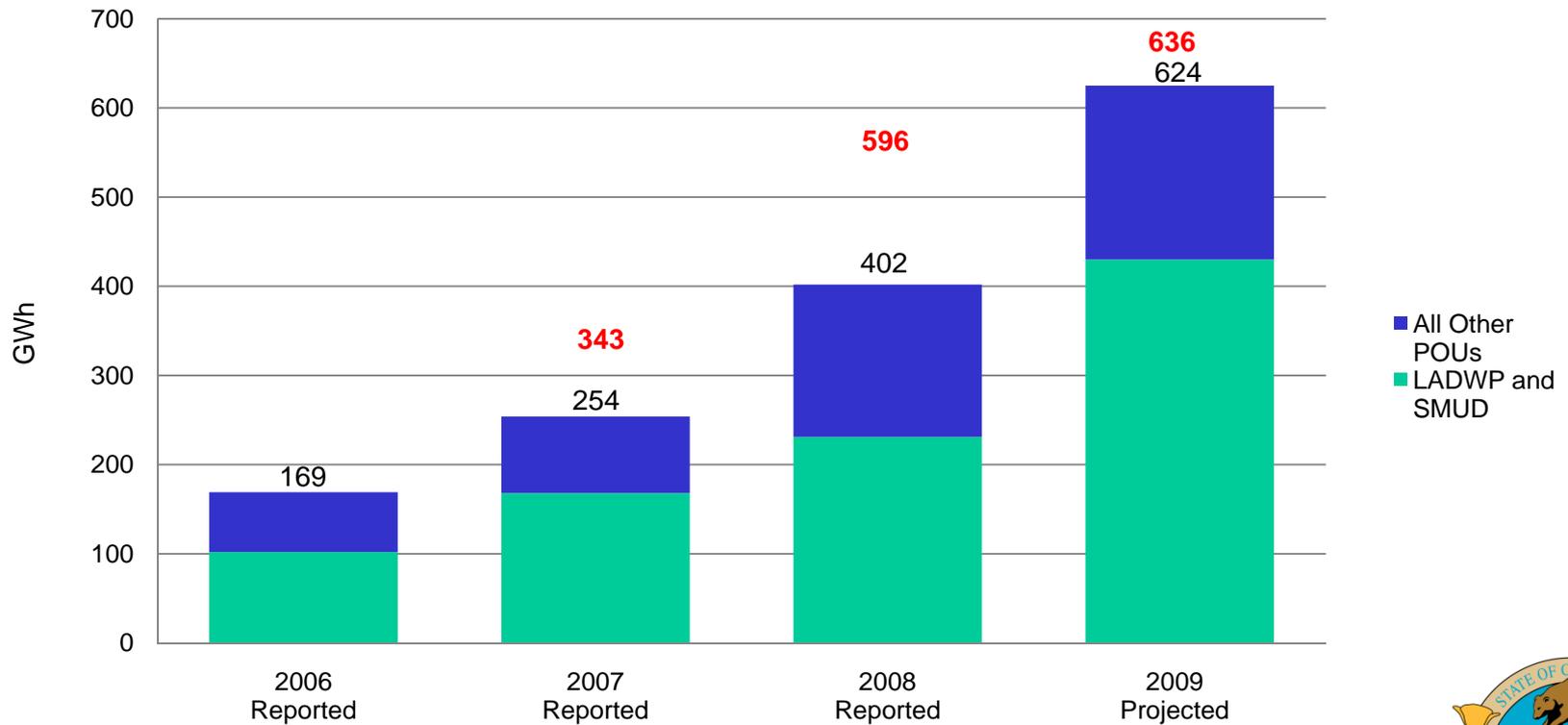
POUs' Reported and Projected Energy Efficiency Expenditures for 2006-2009



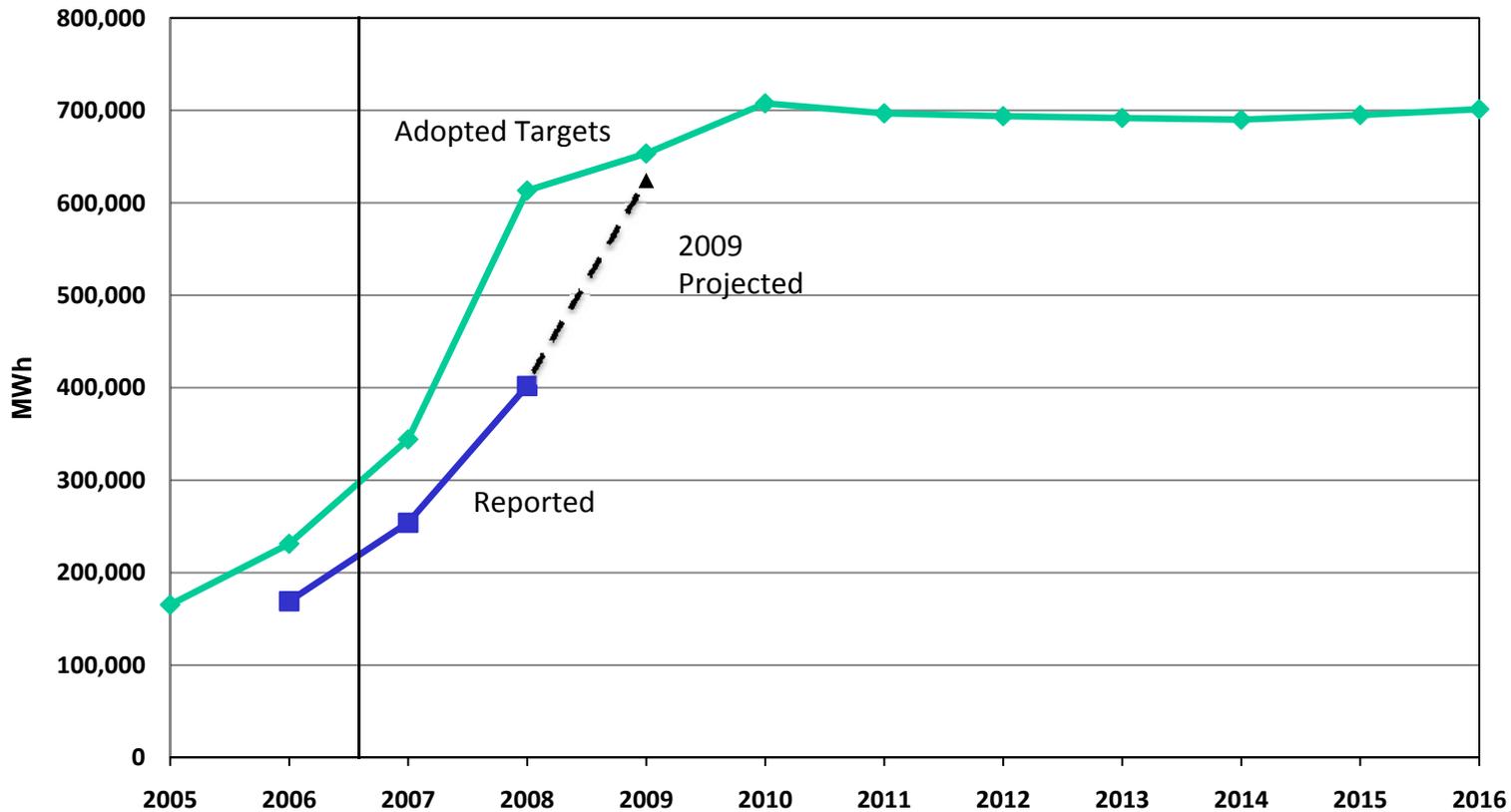
Efficiency Expenditures as Percent of Revenue



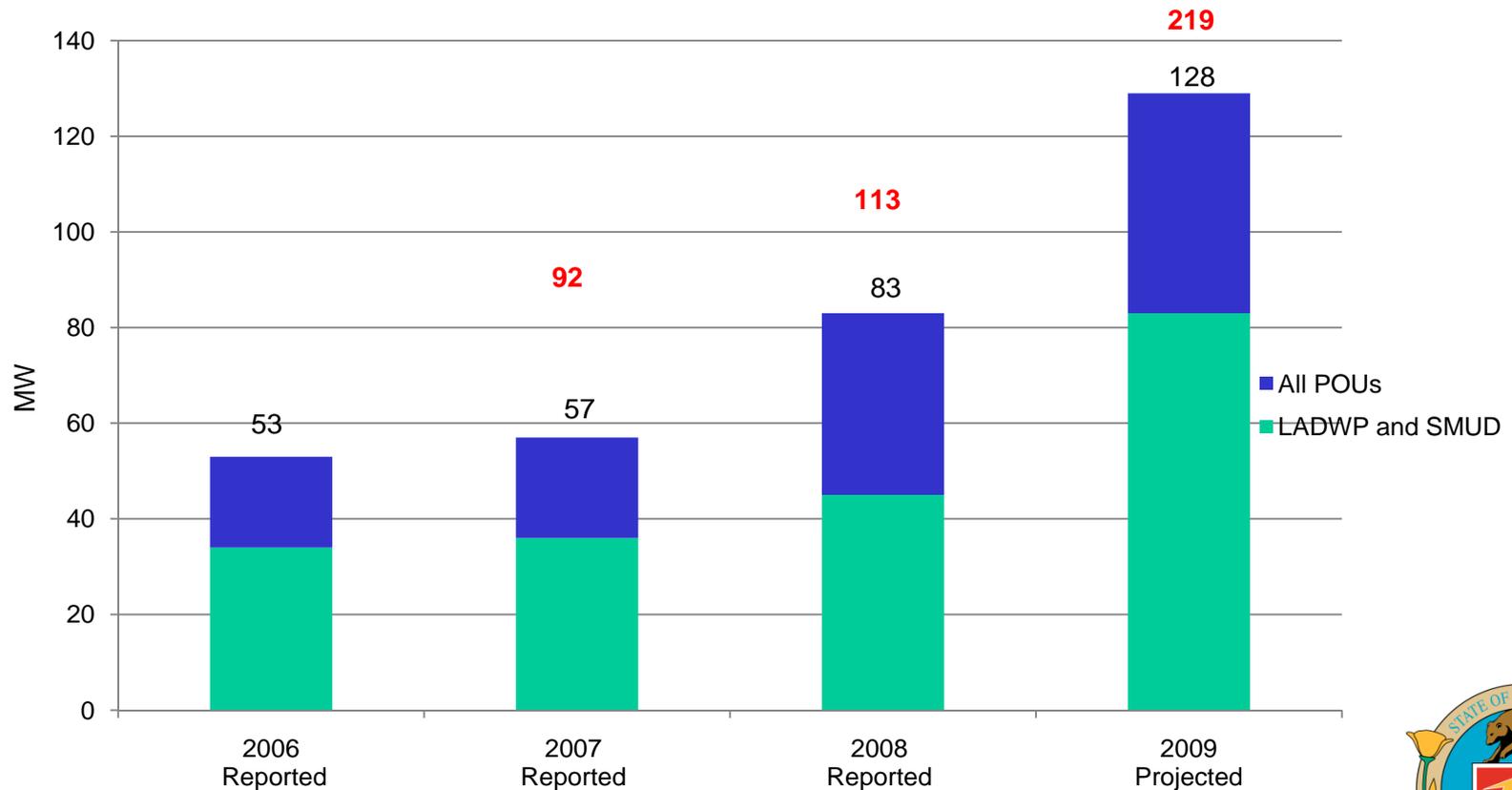
POU's Reported and Projected Electric Energy Savings for 2006-2009



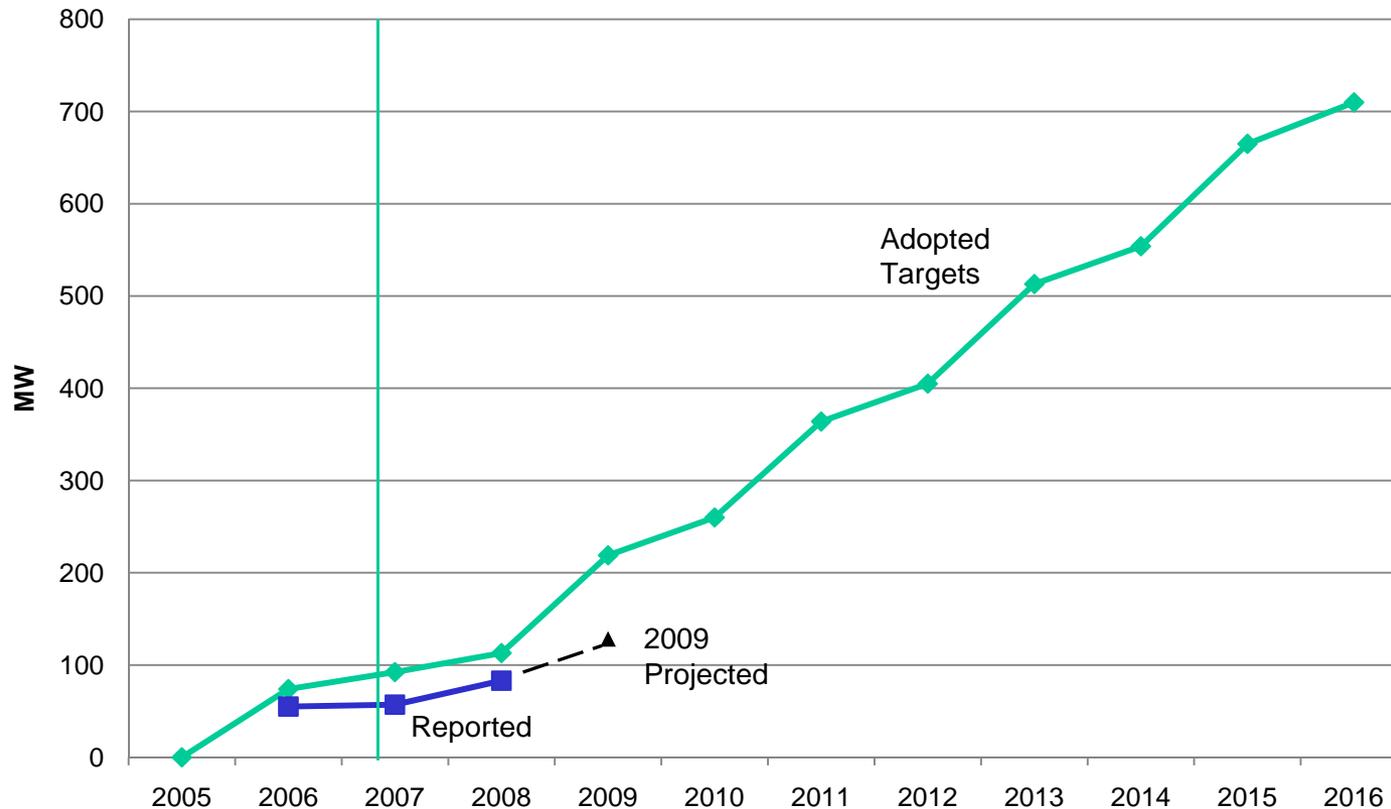
POUs' Adopted Targets Compared to Reported and Projected Annual Energy Savings



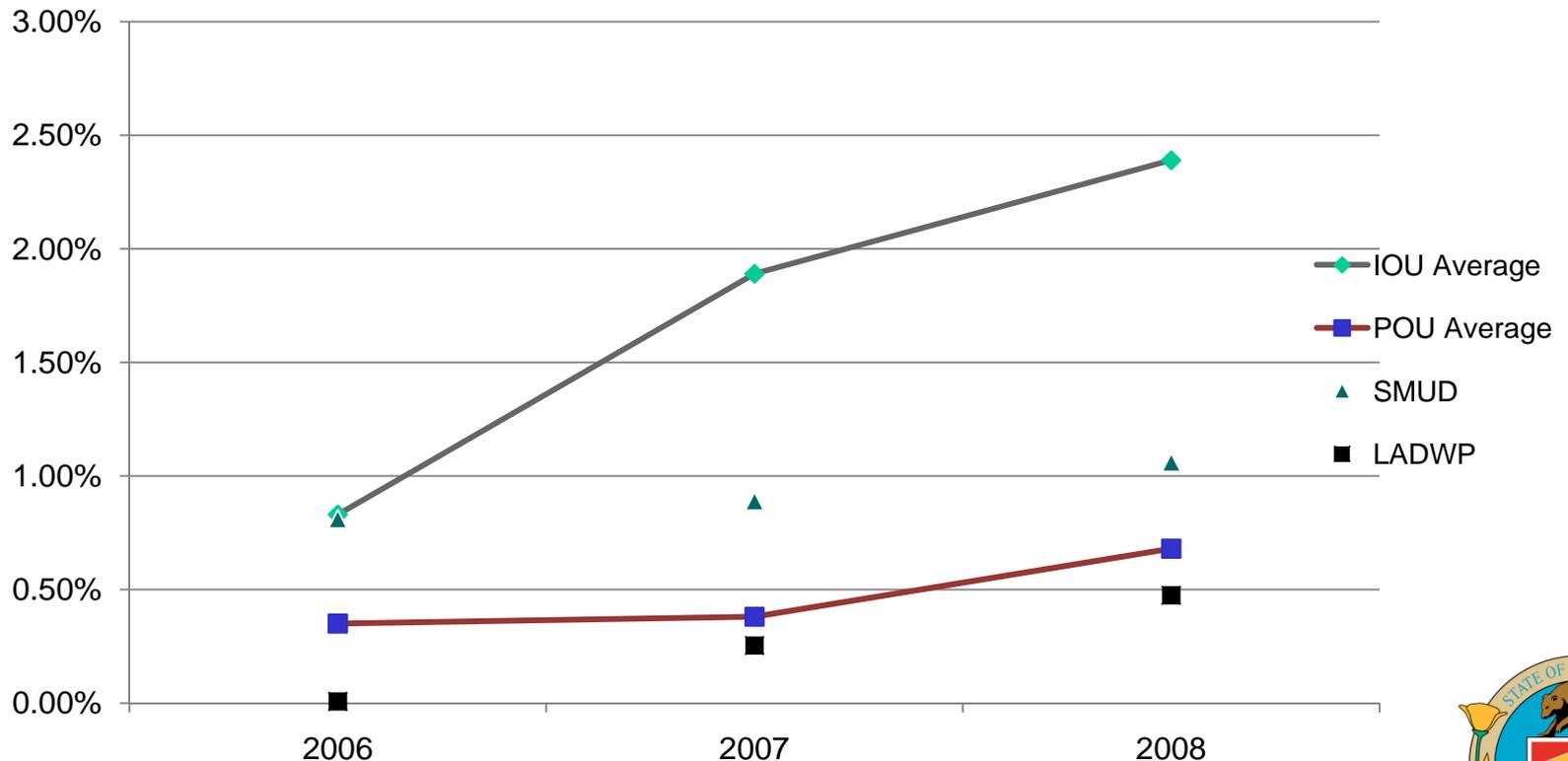
POU's Reported and Projected Annual Peak Savings 2006-2009



POUs' Adopted Targets Compared to Reported and Projected Annual Peak Savings

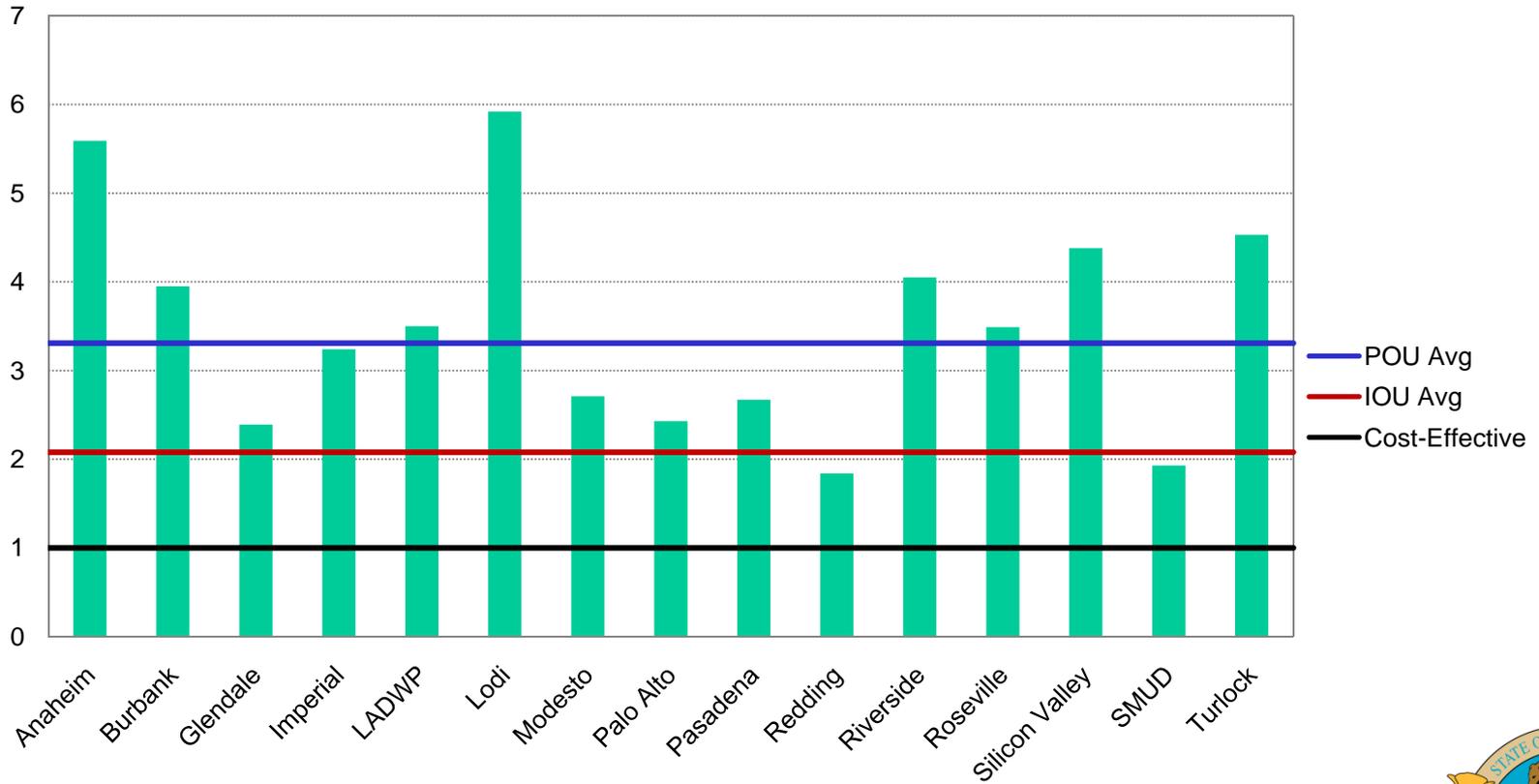


Reported Efficiency Savings as a Percentage of Total Electric Sales



Portfolio Cost-effectiveness

2008 Total Resource Cost



Progress in Measurement and Verification (M&V)

Portfolio Evaluation Plans Completed 2008-2009: **11**

Planned 2009-2010: **10**

M&V Studies Completed 2008-2009: **10 (3-SMUD)**

Planned for 2009-2010: **11-20**

Percent of POUs with plan/study completed or in progress: **>90%**

Conclusions:

- Evaluation Plans are identifying the correct program and measure emphasis for follow on M&V studies
- Process evaluation reports have identified ways to improve program data tracking and reporting & improve measure choice
- Impact evaluation reports indicate high levels of verified savings (realization rates)



Conclusions

- All POUs have increased their energy expenditures by over 90% and their reported savings by 135% since 2006
- POUs are achieving 65-75% of their AB 2021 targets
- POU savings/sales ratios have increased slightly.
- POU efficiency portfolios have been very cost-effective
- Independent measurement and verification of efficiency programs has been initiated and acted upon by many POUs; results show high verified savings
- Current economic recession is beginning to impact program participation rates (as reported by POUs)
- The direction of efficiency savings and evaluation efforts are positive, however, a more extensive review requires additional information.



Staff Recommendations

- POUs work with staff to supply the following information:
 - Rationale for year to year fluctuations in savings accomplishments
 - Impact of economic conditions on efficiency activities and savings
 - Annual expenditures in all PGC categories and breakdown of Total Utility Cost categories
 - Data supplied from POUs to more accurately calculate savings and determine cost-effectiveness
- POUs continue their M&V studies on programs as recommended in plans and with special emphasis on lighting (esp. CFL) programs
- POUs include in subsequent annual reports a description of improvements in programs that result from M&V plans and studies including the upgrades in data collection for M&V
- POUs consider associate membership in California Measurement Advisory Council to facilitate M&V activities

