

RENEWABLE ENERGY PROCUREMENT

United States Energy Association
Presentation

October 16, 2008

Renewable Portfolio Standards (RPS)

- California Law requires investor owned utilities to comply with a Renewable Portfolio Standard of 20% renewables by 2010.
- SMUD's Board of Directors has adopted a 20% RPS to be achieved by 2011. In addition, SMUD will need 3% for its green energy customer program.

RPS Eligibility

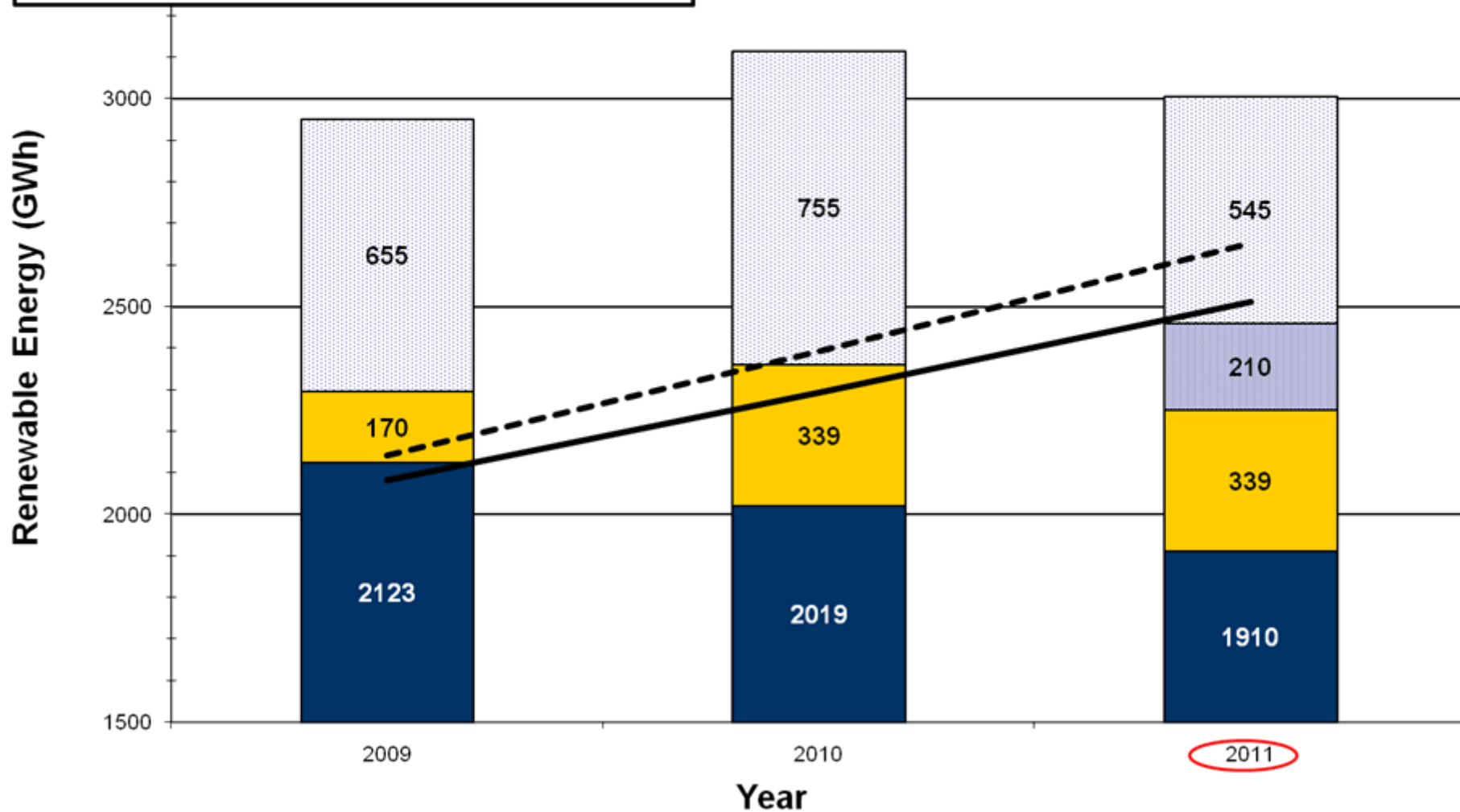
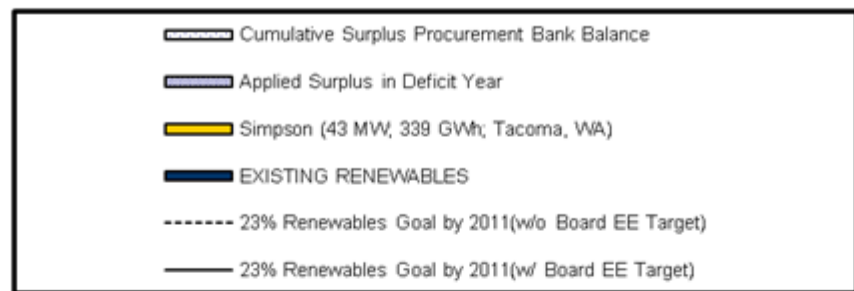
- California Energy Commission (CEC) sets eligibility criteria.
- CEC certifies projects as eligible
- SMUD has its own eligibility criteria

Short Term

- SMUD has almost procured everything needed for 2011 RPS goals.

SMUD's Renewable Energy Supply and Potential New Contracts

(October 14, 2008)



REC Trading

- Purchase RECs don't meet RPS eligibility criteria.
- We have traded RECs in the past, but are not doing so now.

Long Term Renewables

- The California Legislature is considering enacting a requirement on all utilities to meet a 33% RPS standard by 2020.
- AB-32 - CO₂ reductions to 1990 levels by 2020
- Executive Order calling for 80% CO₂ reduction by 2050
- Western Governors' Initiatives
- Future Federal legislation

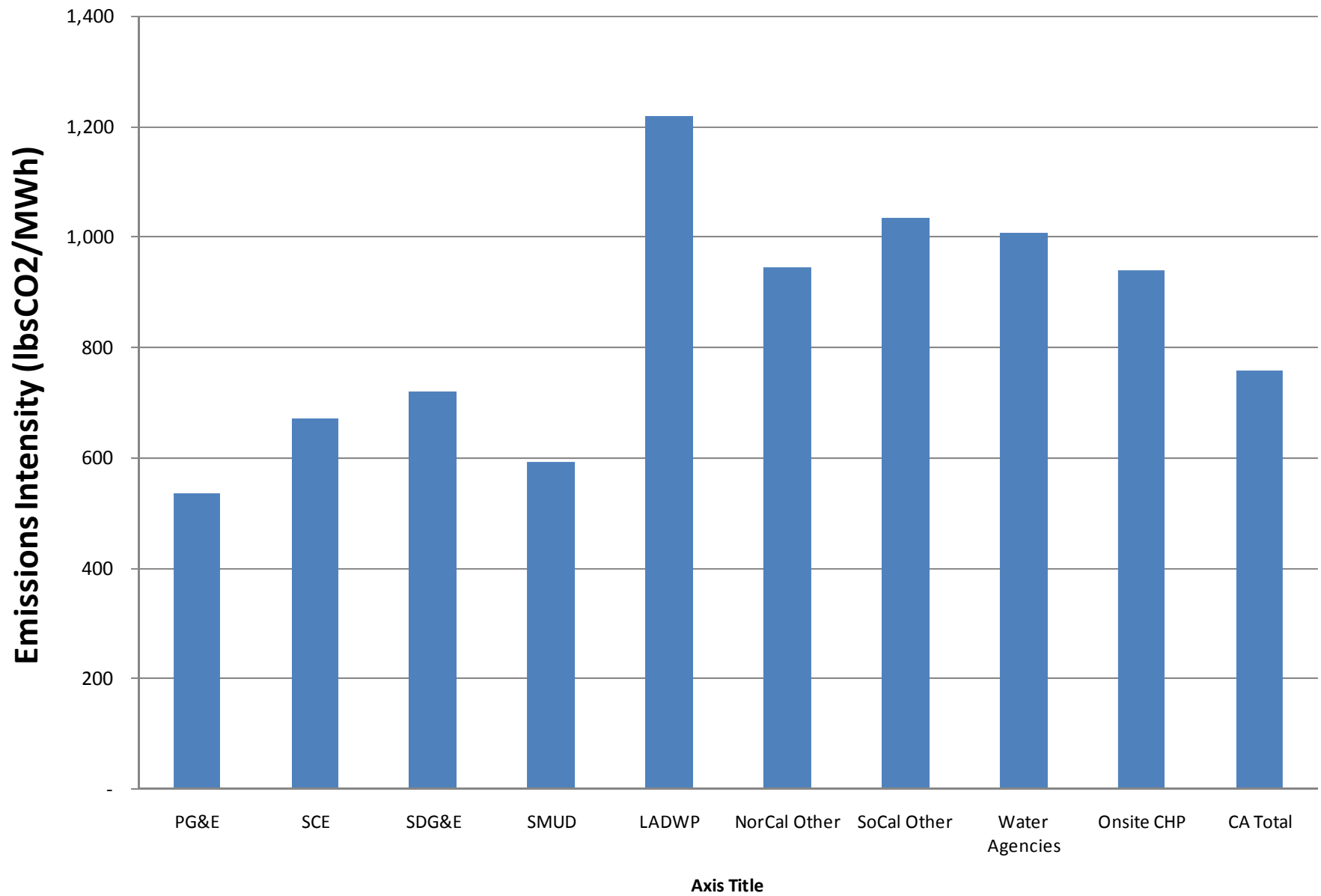
CARBON CONSTRAINTS

- AB-32 - CO₂ reductions to 1990 levels by 2020
- Executive Order calling for 80% CO₂ reduction by 2050
- Western Governors' Initiatives
- Future Federal legislation
- Board Vision and Strategic Directives

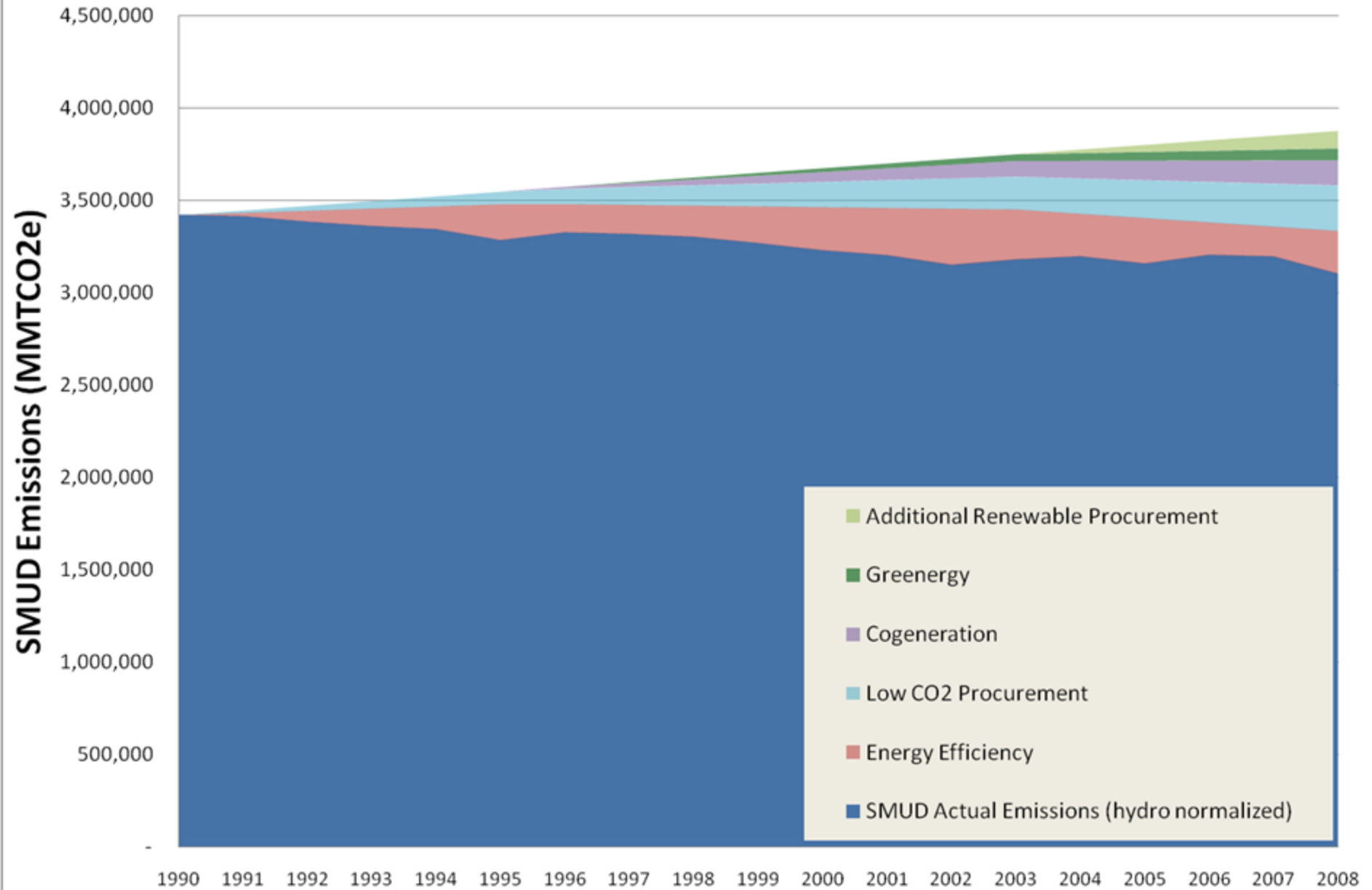
SMUD RESOURCE PORTFOLIO - 2008

- Thermal/Carbon Based - ~60%
 - Local natural gas plants (~45%)
 - Purchases (15%)
- Non-carbon Based - ~40%
 - Large Hydro (25%)
 - UARP
 - WAPA
 - RPS (15%)

Emissions Intensities of California Utilities

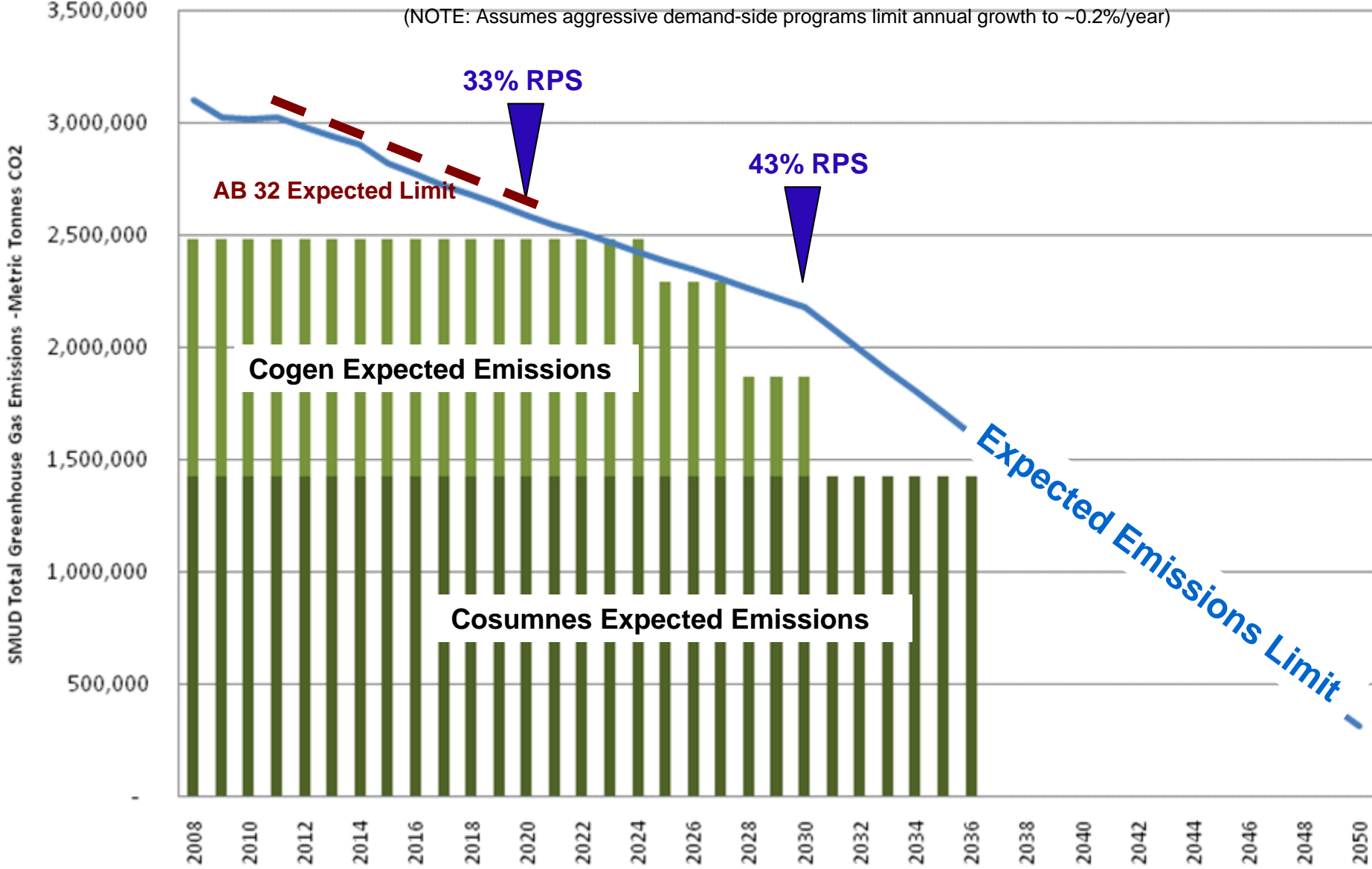


SMUD Emissions Reductions Initiatives Since 1990

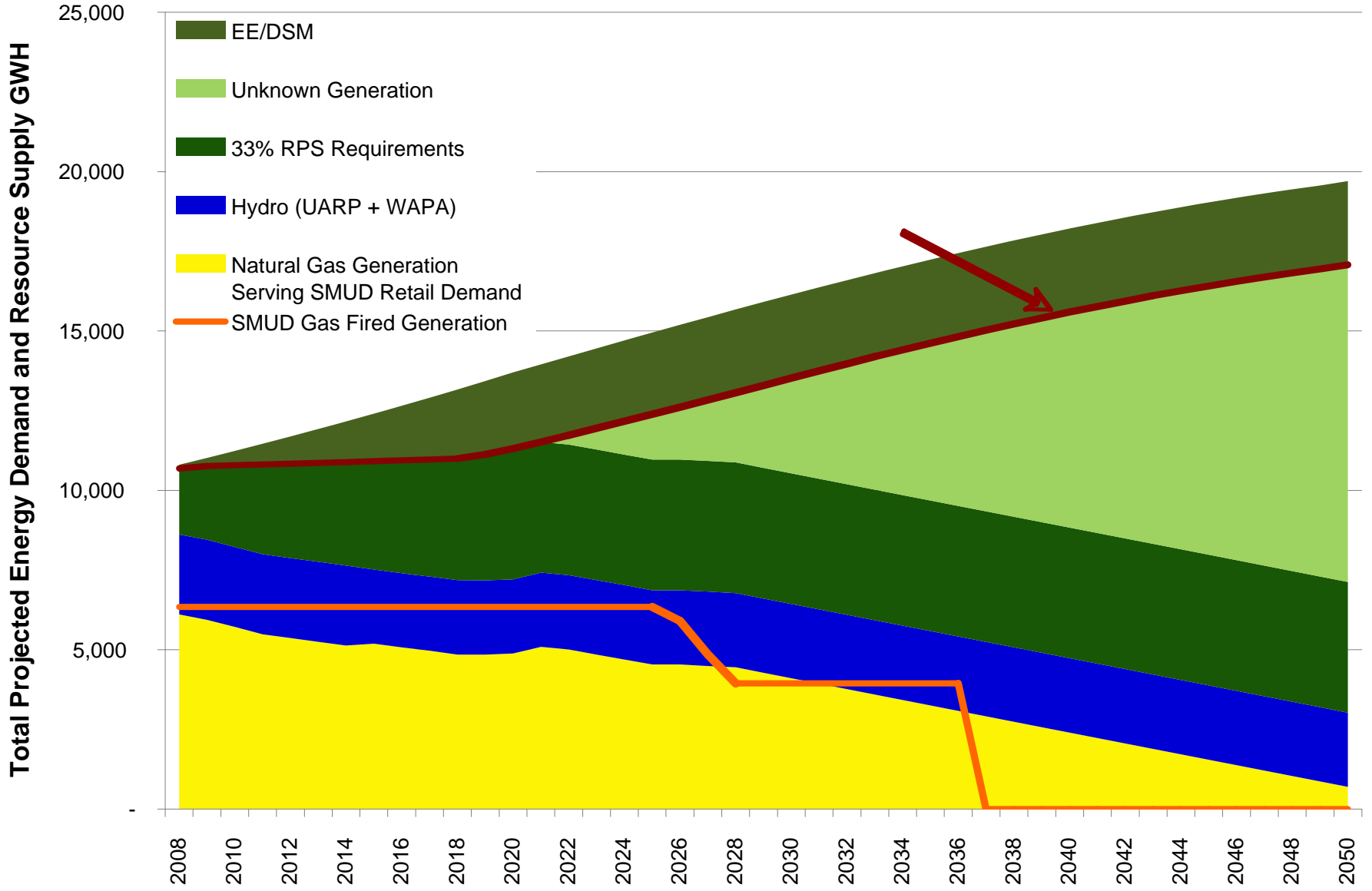


Projected Greenhouse Gas Emissions Targets for SMUD through 2050

(NOTE: Assumes aggressive demand-side programs limit annual growth to ~0.2%/year)



SMUD Projected Resource Mix Through 2050



SOME CHALLENGES

- Transmission availability.
- Long term availability of tax credits for renewables.
- Impacts of world banking crisis.

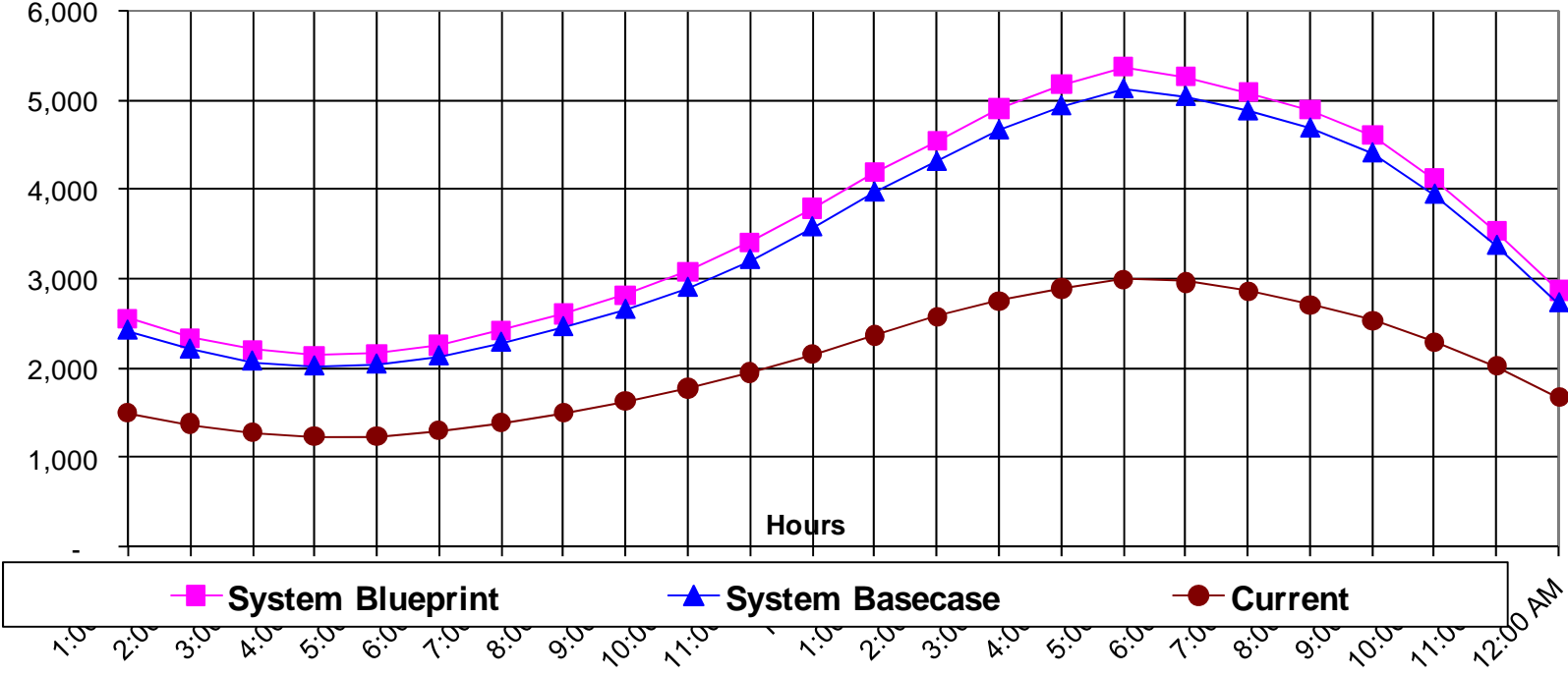
Questions?

2050 LOAD CHALLENGES

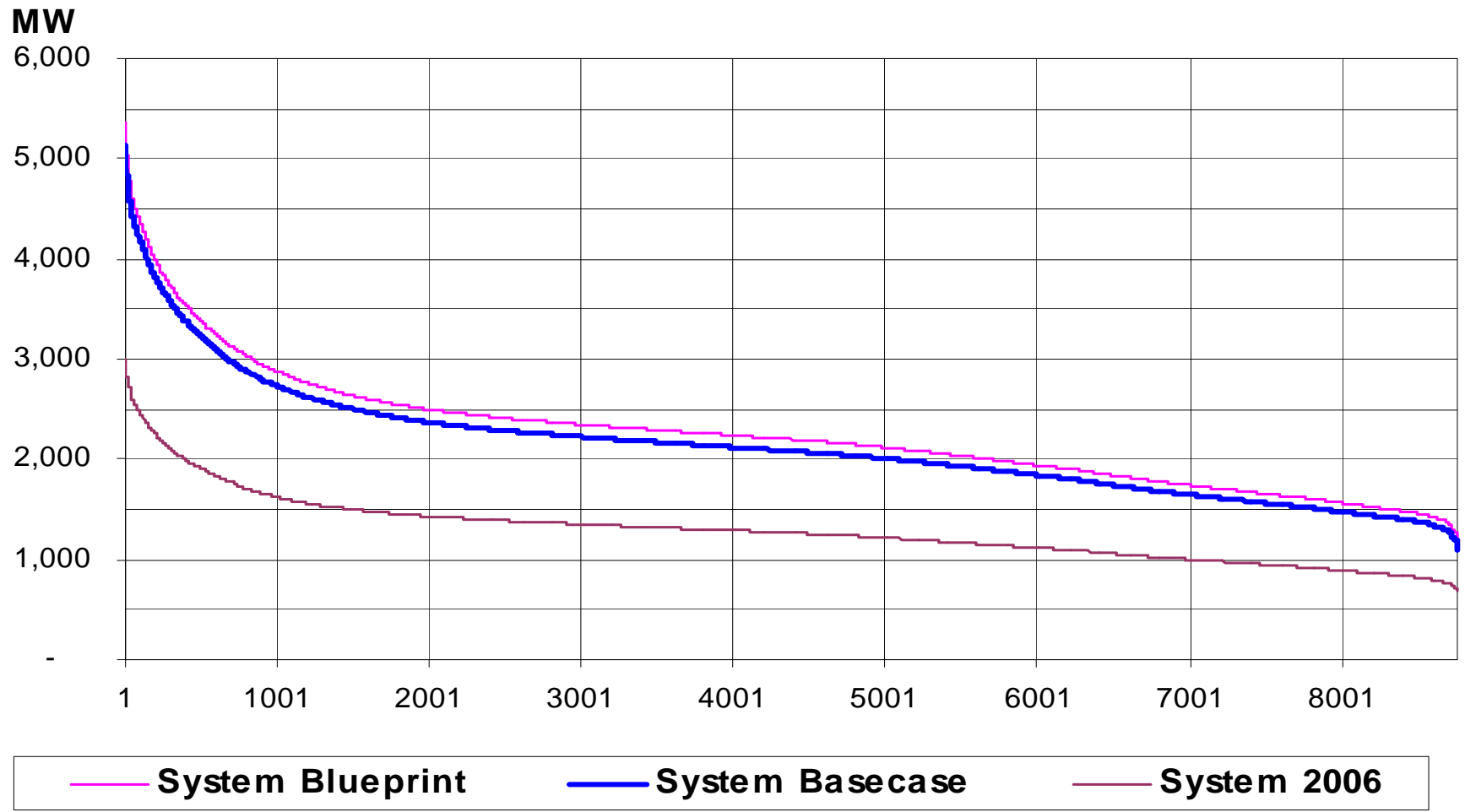
- Thermal - ~10%
- Large Hydro - ~20%
- Other Non-carbon resources - ~70%
 - Renewables
 - New demand-side programs
 - Carbon sequestration
 - Other non-carbon generation
 - Purchasing Carbon Offsets

Comparison of 2050 Peak Load Forecast Scenarios (Base Case vs. Blueprint)

MW



Annual Load Duration Curves (2050)



Additional Requirements for 2050

	<u>Base</u>	<u>Blueprint</u>
Peak Demand (MW)	2142	2375
Annual Energy (GWh)	7438	8450

Preliminary 2008 LSC Update - The Long Term View On Load Serving Capability

Existing System + Known Additions + Supply Options

