



CPUC Climate Policies: Overview and Perspective

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World's Largest GHG Emitters

	2000 Emissions (Mt CO2)	Per Capita Emissions
1. USA.....	5,661.....	19
2. China.....	2,795.....	02
3. Russia.....	1,437.....	10
4. Japan.....	1,186.....	09
5. India.....	1,073.....	01
6. Germany.....	787.....	10
7. UK.....	569.....	09
8. Canada.....	437.....	13
9. California.....	430.....	12
10. Italy.....	429.....	07
11. South Korea.....	428.....	09
12. Mexico.....	425.....	04



Sources: Courtesy of CalEPA
 Research conducted by Oak Ridge National Lab & The Tellus Institute



Governor's GHG Targets



Per June 2005 Executive Order

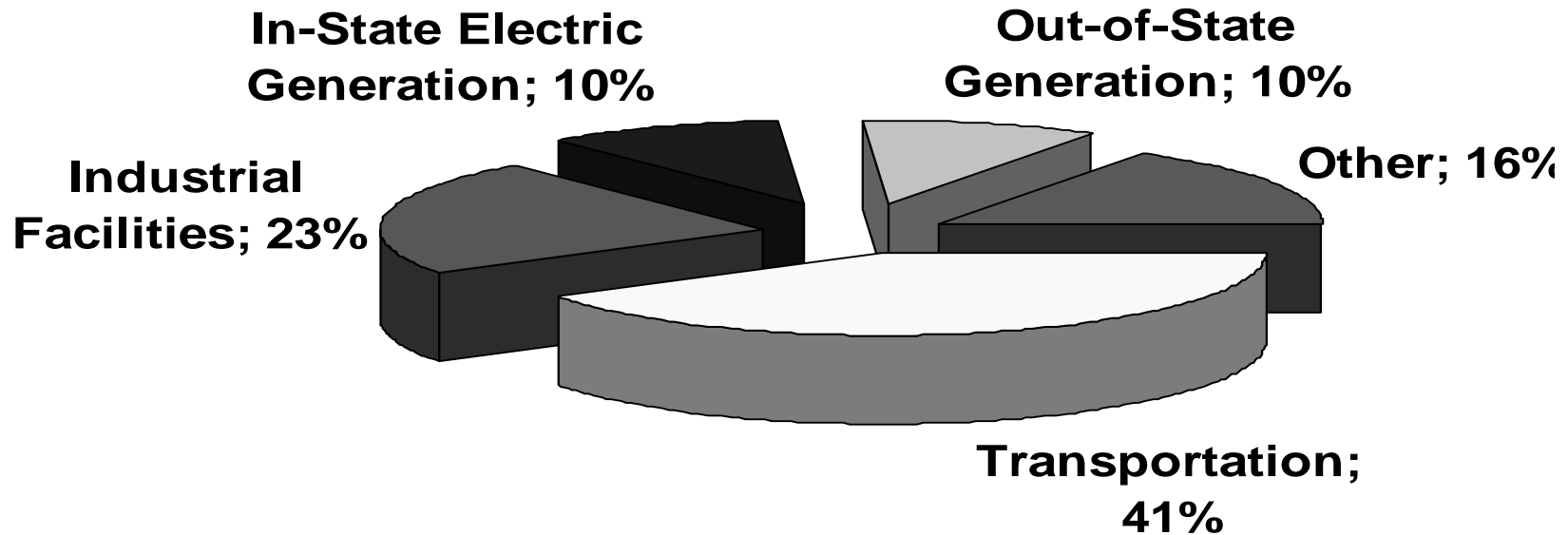
- **2010:** cut to 2000 levels (↓11%)
- **2020:** cut to 1990 levels (↓ 25%)
- **2050:** 80% below 1990 levels

New Legislation Signed September 2006

- Puts 2020 goal in statute
- Makes Air Resources Board lead agency
- Calls for a portfolio of policies
- Permits trading, with goal of linking to other systems



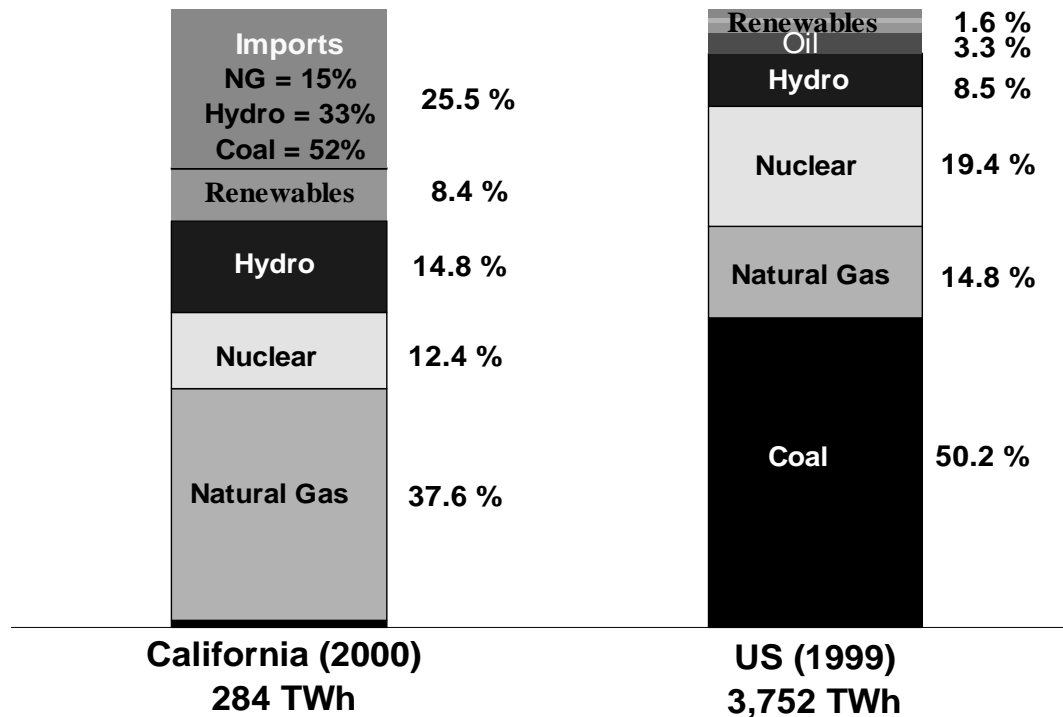
Sources of California's Greenhouse Gas Emissions



The electric sector accounts for 35% of US CO₂ emissions

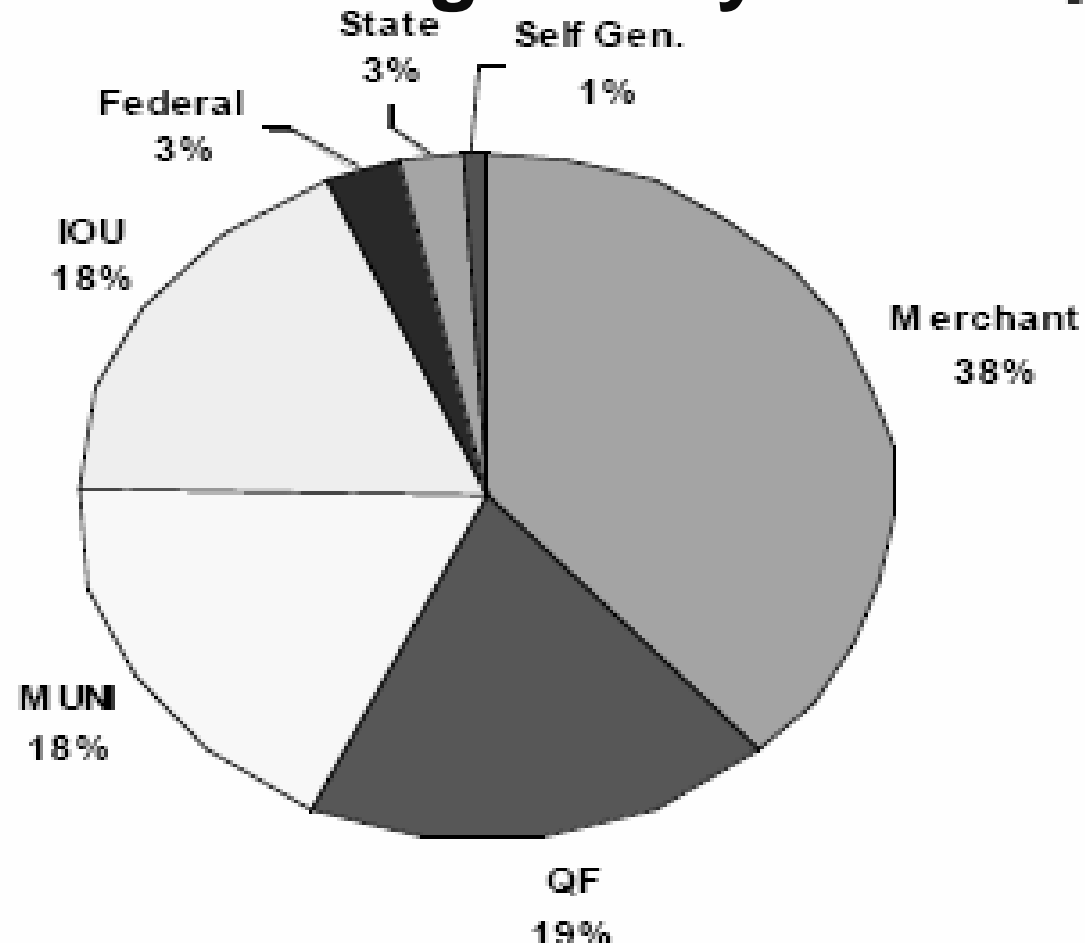


California versus U.S. Electricity Supply





A hybrid market structure: Balkanized regulatory authority





Extensive regional interconnection: Limiting leakage is a challenge





The “Loading Order” sets priorities for utilities’ acquisition of new resources



Efficiency and Demand Response



Renewable Energy

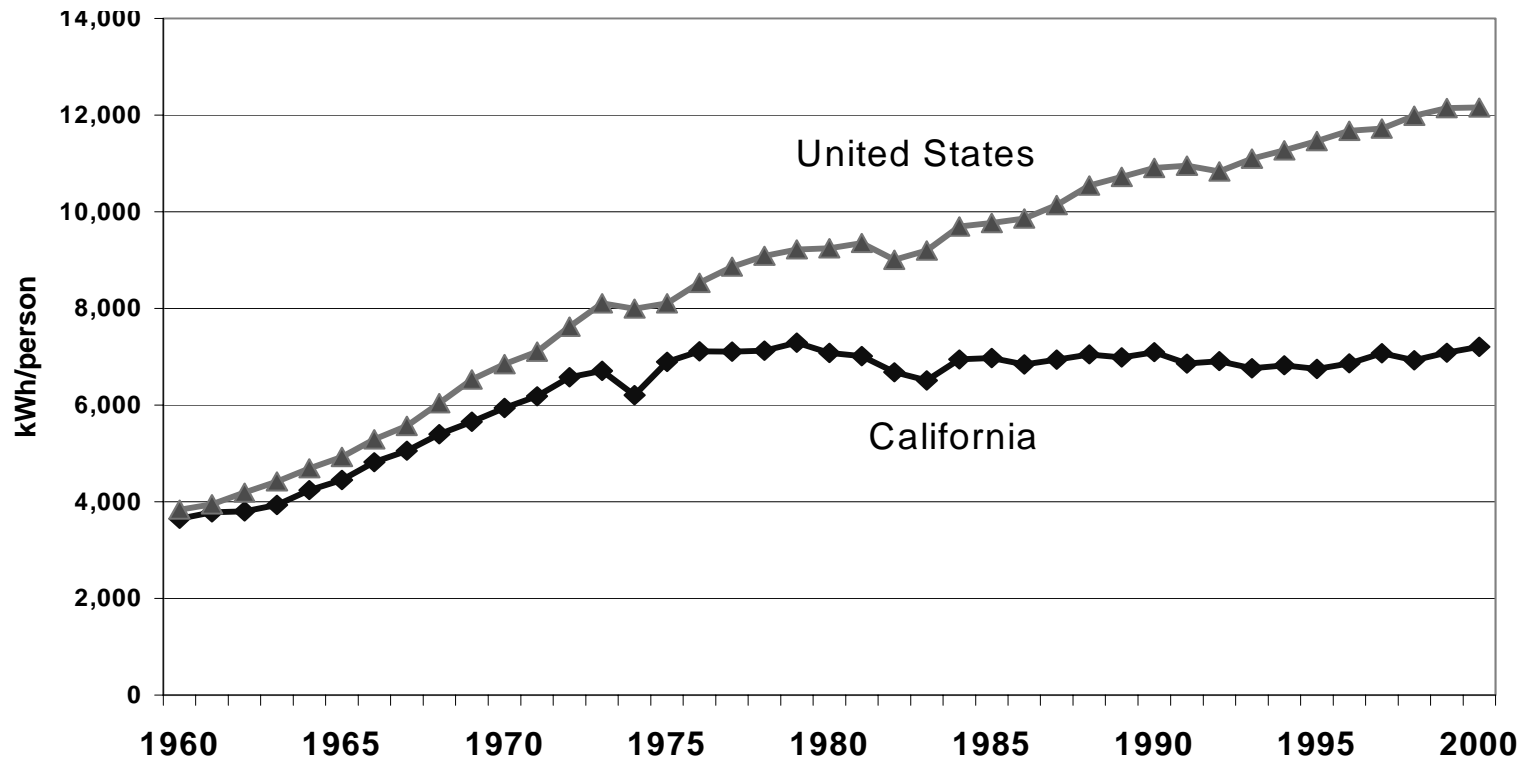


Clean and Efficient Fossil-fired Energy

Mostly command and control mandates



California versus U.S. Electricity Consumption





Climate Action Team projections of GHG Reductions from CPUC Policies

	MMt CO ₂ e	
	2010	2020
• IOU EE programs	4.0	15.1
• Renewable Portfolio Std.	5.0	11.0
• California Solar Initiative	0.4	3.0
• IOU CHP Initiative	1.1	4.4
• <i>IOU Electricity Sector carbon policy*</i>	1.6	2.7

*Preliminary Estimate



Additional Electric Sector Policies

Electricity Sector Strategies Climate Action Team Report March 2006	GHG Savings (MMT CO ₂)	
	2010	2020
State Appliance Energy Efficiency Standards	3	5
State Building Energy Efficiency Standards	1	2
Green Buildings Initiative	0.5	1.8
Publicly-Owned Utility (POU) Energy Efficiency Programs	1	5.9
POU Renewable Portfolio Standard	< 1	3.2
POU Combined Heat and Power Program	0	< 1
POU Emissions Performance Standard	3	9
Total Potential Emission Reductions	24.6	63.1



CPUC Carbon Policy: Initial Steps

- **2004: Environmental Risk Adder**
 - Utilities must add in \$8/ton CO₂ for carbon based resources when evaluating new supplies.
- **2005-06: GHG Performance Standard**
 - New long term base-load supplies must meet or beat GHG emissions levels of CCGT.
 - Effectively requires new coal-fired generation to include capacity to capture and store CO₂ safely.
 - 2006 law places in statute, applies to all LSEs



Load-Based Cap for Electric Sector Will be Part of AB32 Framework

- Load-based cap will be applied to all retail electric providers in CA.
- Includes emissions from imported electricity
- Initially CO₂, eventually other Kyoto gases
- Seeking compatibility with
 - Statewide, multi-sector cap and trade program
 - RGGI initiative
 - EU Emissions Trading System



An additional objective: Accelerating advanced coal technology



*Other western states
want to sell energy
to California*

*California's energy
purchasing power
is a powerful lever*

