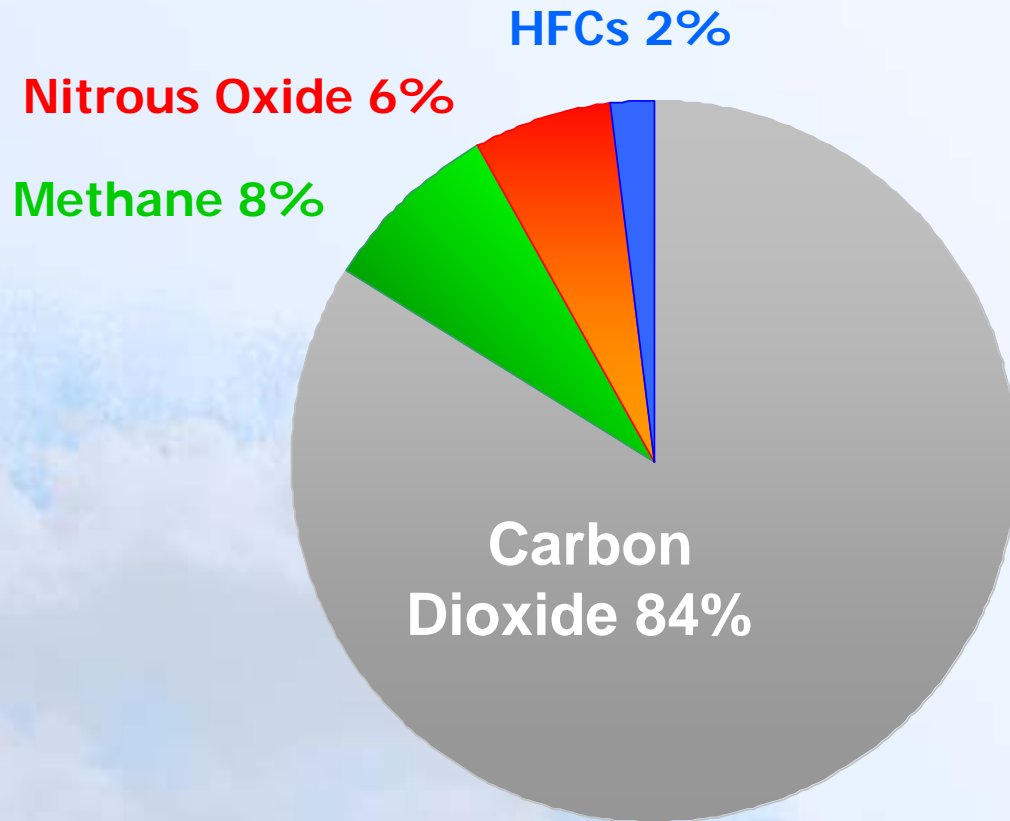




# California's Climate Action Plan

STAPPA / ALAPCO Meeting  
May 2, 2006

# CA GHG Emissions (1999)



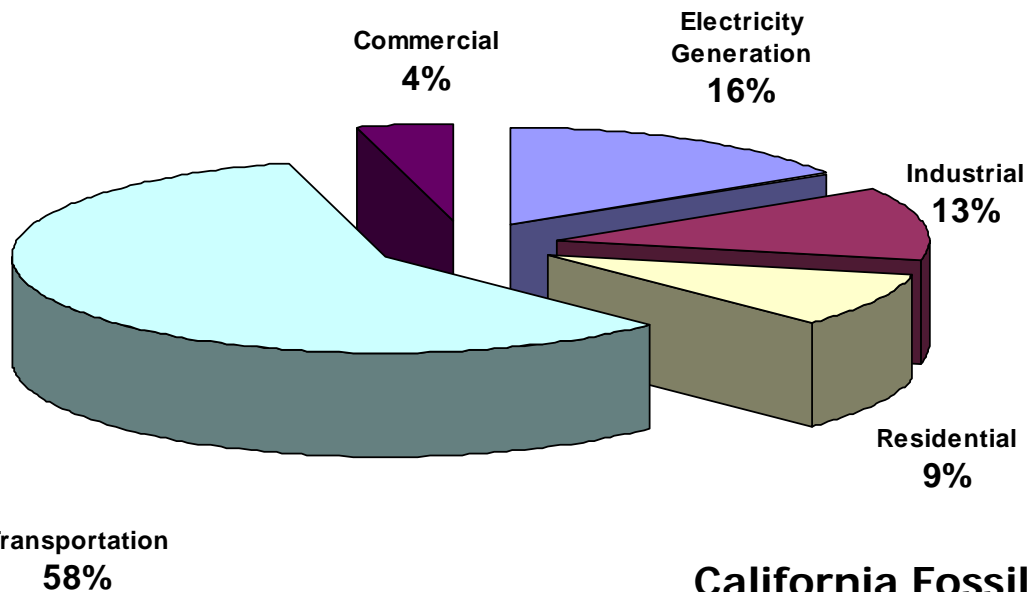
## Sources:

- CO<sub>2</sub>
  - ▶ Fossil fuel combustion
- Methane
  - ▶ Fossil fuels
  - ▶ Landfills, agriculture
- Nitrous Oxide
  - ▶ Agriculture, cars
- HFCs
  - ▶ Refrigerants, solvents

Source: 1997 Global Climate Change, CEC



# Transportation Big Source



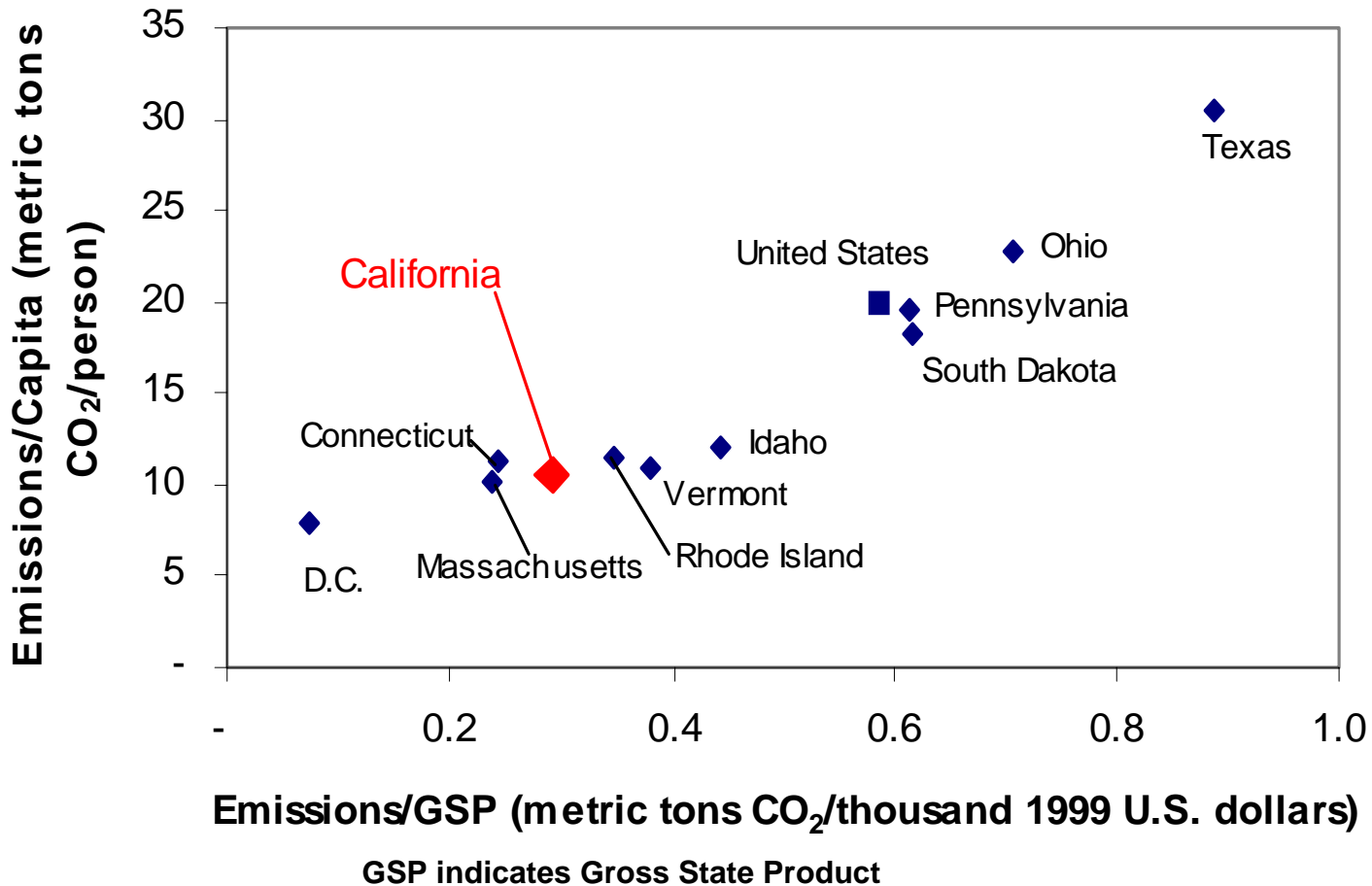
**California Fossil Fuel CO<sub>2</sub> Emission Sources, 1999**

Source: Draft Greenhouse Gas Inventory Update, California Energy Commission, 2001



# Carbon Intensity

(CA vs. Selected States, 1995)





# California GHG Targets

**By 2010, Reduce to 2000 Levels\***

**By 2020, Reduce to 1990 Levels\*\***

**By 2050, Reduce 80% below 1990 Levels**

\* ~60M ton reduction, 11% Below BAU

\*\* ~170M ton reduction, 30% Below BAU





# 2006 Action Plan

- Recommended 44 Strategies
  - 11 underway
  - 33 to be implemented
- Called for Mandatory Reporting
- Called for Cap & Trade System



# Policy Debate

- When will caps be imposed?
- To whom must reports be submitted?
- What will it cost to pull this off?
- Who determines program design?



# Strategies Underway

- Motor Vehicle Regulations
- Energy Efficiency Measures
- Renewable Portfolio Standard
- California Solar Initiative
- Hydrogen Highway
- Green Building Initiative
- Recycling and Waste Reduction





# New Strategies

- Efficient Water Use
- HFC Reductions
- Forest Management
- Enhanced Appliance, Bldg Efficiency
- Municipal Utility Participation
- Smart Land Use
- Conservation Tillage



# ARB Role

- Motor vehicle regulation
- 10 additional strategies
- Economic analysis
- Scientific research
- Mandatory GHG reporting?



# Motor Vehicle Regulations

- Took effect January 1, 2006
- Litigation underway
- USEPA waiver requested
- Climate action plan recommends more stringent standards for 2017 and beyond



# Strategy Development (ARB Strategies)

	2010 (MMT)	2020 (MMT)
Vehicle climate change standards	1	30 <input checked="" type="checkbox"/>
Other new light duty vehicle technology improvements	0	4
Diesel anti-idling	1	1.2 <input checked="" type="checkbox"/>
HFC reduction	2.7	8.5
Transport refrigeration, off-road electrification, port electrification	<1	<1
Manure management	0	1



# Strategy Development (ARB Strategies)

	2010 (MMT)	2020 (MMT)
Semiconductor industry targets (PFC)	2	2
Alternative fuels: Biodiesel blends	<1	<1
Alternative fuels: Ethanol	<1	3.2
Heavy duty vehicle emission reduction	0	3
Reduced venting and leaks in oil and gas systems	1	1
Hydrogen highway	Included	Included



# What Else is Going On

- Coal debate – western states “Frontier” transmission line and “Clean Coal” policy (IGCC + sequestration)
- Western Governors Partnership
- Border states energy alliance
- Biofuels debate



# What Else, continued

- Legislative debate ... how much of this needs to be in statute and how prescriptive should it be?
- Budgetary debate ... Governor proposed \$8.5 million to get started. Is that enough? Should taxes or fees also be on the table?

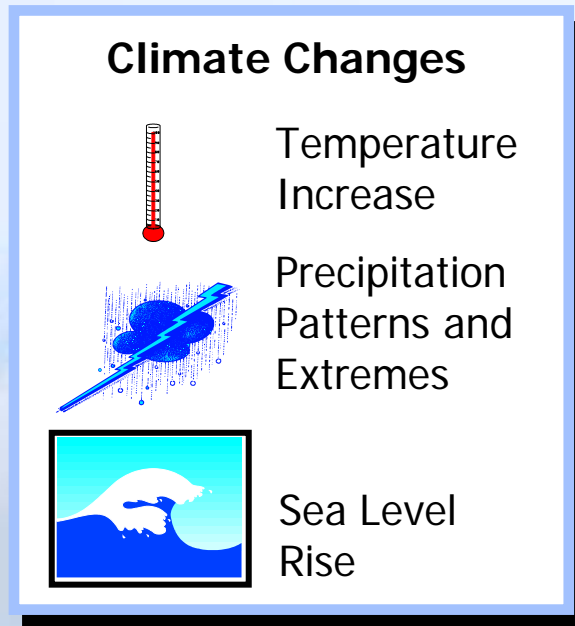


# Analytical Work

- Scenario assessments – how bad will it get in California?
- Economic assessments – is the Administration or the Chamber of Commerce right about the costs and benefits?



# Potential Impacts in CA

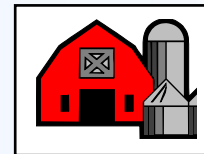


Source: Anne Grambsch, 1998



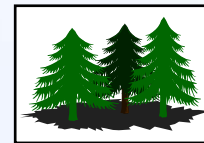
## Health

Air Quality - Respiratory Illness  
Weather-related Mortality  
Infectious and Tropical Diseases



## Agriculture

Crop Yields  
Irrigation Demands



## Forests

Forest Composition  
Geographic Range of Forests  
Forest Health and Productivity



## Water Resources

Water Supply  
Water Quality  
Competition for Water



## Coastal Areas

Erosion of Beaches  
Inundation of Coastal Wetlands  
Additional Costs to Protect Coastal Communities



## Species and Natural Areas

Loss of Habitat and Species



# Next Steps

- Individual rulemakings
- Energy policy actions
- Five mini-summits around the State
- Final budget for 2006/07
- Approved bills for 2006 session