



Implementing AB 32: California's Approach to Reducing Greenhouse Gas Emissions

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California's Leadership

- California's leadership helps set direction for national program
- California's Pavley Clean Car standards: first vehicle GHG emission standard in the country
 - Paved the way for the new national vehicle standards
- AB 32 continues California's leadership in addressing climate change

What is AB 32?

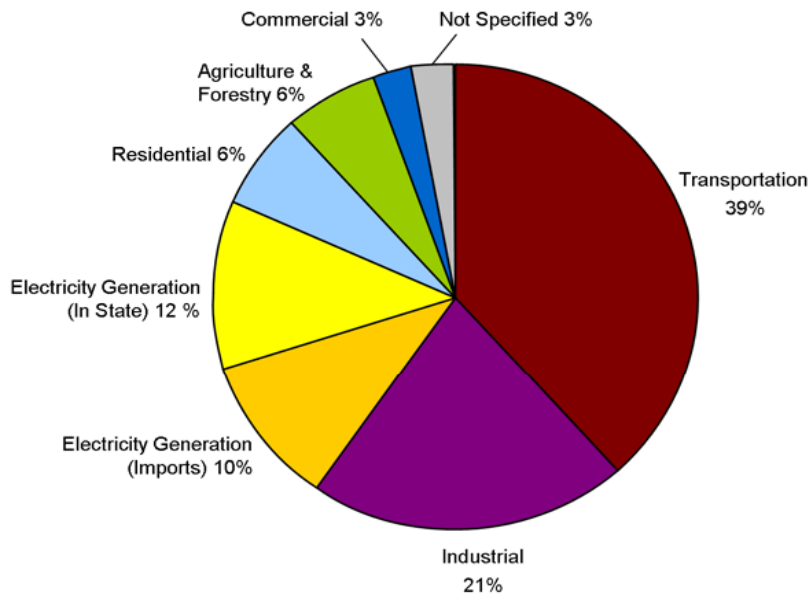
The Global Warming Solutions Act of 2006

AB 32 established the first U.S. economy wide climate change regulatory program

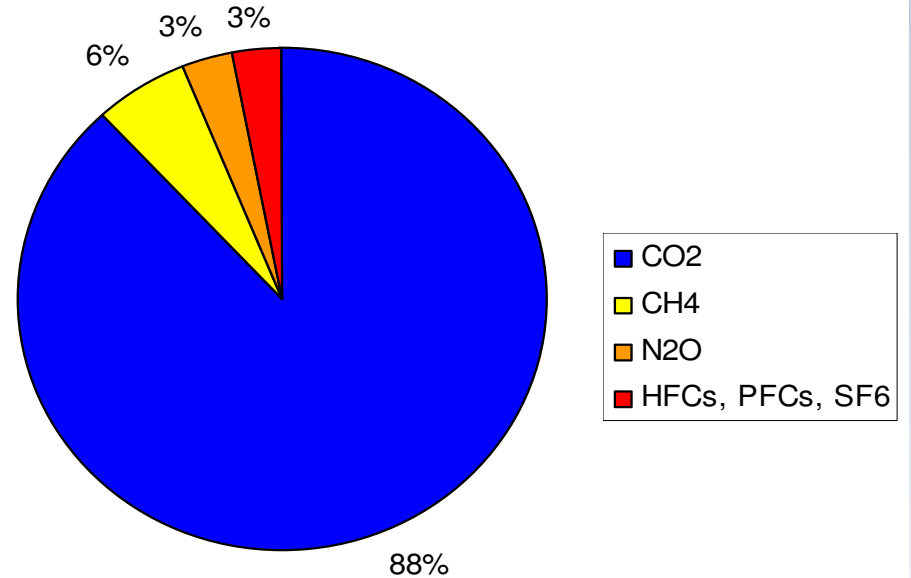
- Sets GHG emissions cap for 2020 at 1990 level, an 11% reduction from 2006 levels
- Points way toward 80% reduction by 2050
- Scoping Plan provides framework to meet GHG emissions reduction target
 - 14 of 30 ARB measures approved to date, reducing GHG emissions by 78 MMTCO₂e in 2020

California Greenhouse Gas Emissions

2006 GHG Emissions by Sector
(484 MMT CO₂e)



2006 Emissions by GHG Type



CO₂, N₂O



CO₂, CH₄, N₂O



CO₂



CO₂



HFCs, PFCs, SF₆

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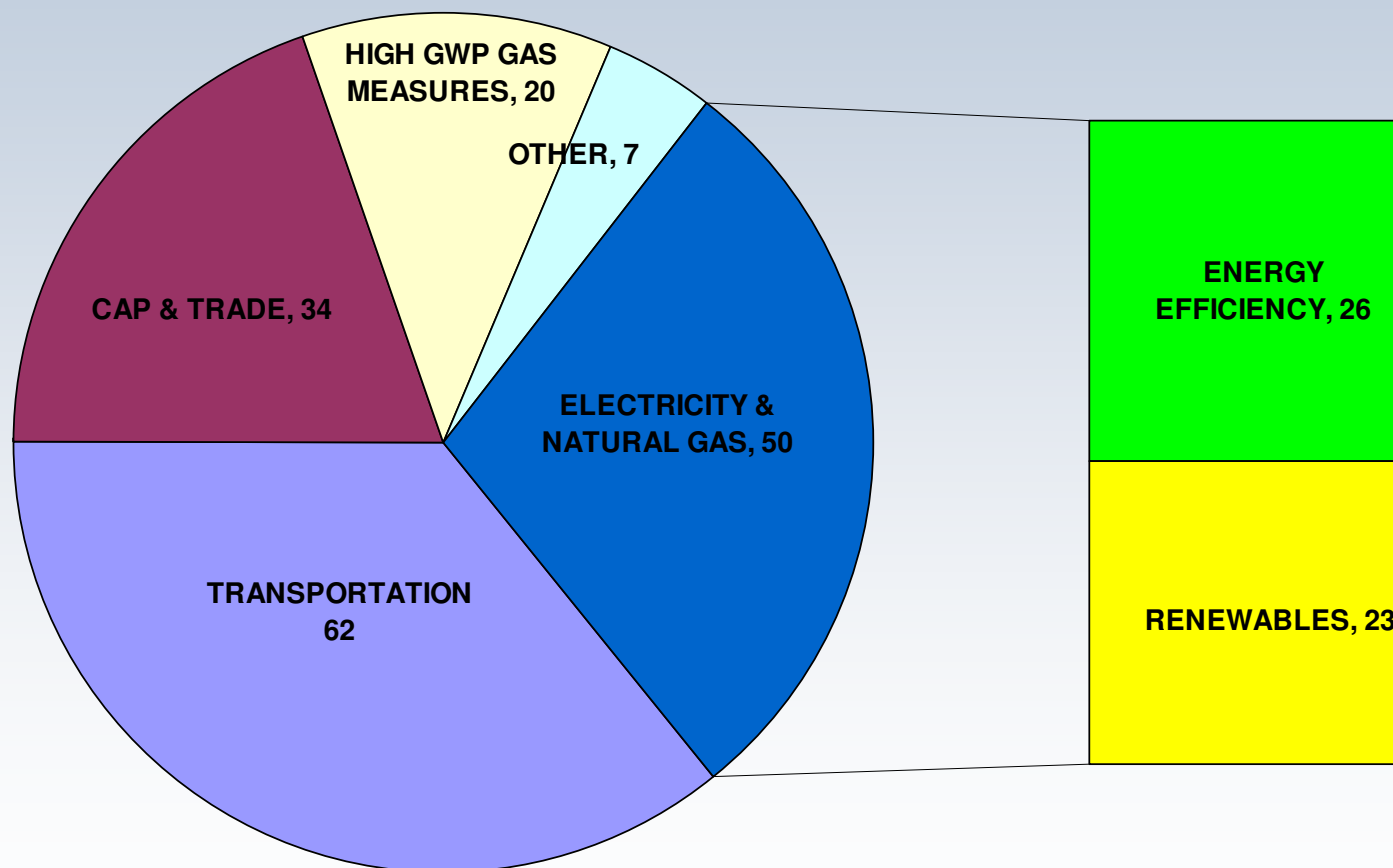
Scoping Plan Recommendations

Combination of market mechanisms, other regulations, and voluntary measures

- Cap-and-trade program covers 85 percent of emissions
- Complementary measures such as:
 - Energy efficiency
 - Renewable energy
 - Regional targets for transportation-related emissions
 - Existing laws and policies (e.g. Pavley, LCFS)

Scoping Plan Emissions Reductions

MMTCO₂e by sector



Low Carbon Fuel Standard

- Reduces carbon intensity of CA's passenger vehicle fuels by 10 percent (16 MMT) by 2020
- World's first requirement that fuel providers reduce carbon intensity of transportation fuels
- Land use changes are included in the carbon intensity calculations
- LCFS encourages technology innovation and energy diversification

Advanced Clean Car Standards

- Will link standards for reducing toxic tailpipe emissions with standards reducing GHG emissions
- Reduce fuel costs, dependence on petroleum
- Include improvements in:
 - Hybrid and plug-in hybrid vehicles
 - Full battery-electric vehicles
 - Use of hydrogen-powered fuel cells
 - Vehicles that run on biofuels and other low-carbon fuels
 - Vehicle weight reduction--stronger, lighter materials
 - Keeping interior of cars cooler

High GWP Measures

- Important due to expected growth in emissions from these gases
- Measures include:
 - HFC emission reduction measures for mobile air conditioning
 - Limit high GWP use in consumer products
 - Limits on use of SF₆
 - Reduction of perfluorocarbons in semiconductor manufacturing
 - High GWP refrigerant management program for stationary sources

Cap-and-Trade Regulation

- November 2009: Preliminary draft regulation
- Developing next draft of regulation
- Included elements
 - Program design defined through regulatory language
 - Revisions to mandatory reporting requirements
 - Offset protocols development
 - Technical analyses to identify potential environmental, health, and economic impacts
- Working with Western Climate Initiative partners to create a regional market
- Final draft regulation to Air Board later this year

Other Upcoming ARB Activities

- Renewable Electricity Standard—July
 - Requires electricity deliverers to meet a 33 percent renewable energy target by 2020.
- SB 375 Regional Transportation-Related GHG Targets—September
- Mandatory Commercial Recycling—October
 - Commercial sector generates more than half of CA's solid wastes
 - Partnership between CalRecycle and ARB

State Agency Partners

- Many California agencies working on climate change programs

Electricity

Forest

Water

Agriculture

Waste

Public Health

- Adaptation
 - **California's Climate Adaptation Strategy**
 - **Integration of mitigation and adaptation**

California Environmental Protection Agency

 **Air Resources Board**

Good News

- California is on track to a low carbon economy
 - Venture capital investment in clean technology
 - Growth in green business
 - Increase in green jobs
 - Increase in renewable energy generation capacity

(Source: Next10)



Activities to Support AB 32 Implementation

- ARRA funding for energy efficiency and climate planning actions
- Green economy, job creation and workforce development
- Small business success and outreach
- Local government tools/guidance

Conclusion

- Almost half of reductions to meet 2020 goal approved
- Board to consider major regulations in upcoming months
- Helping California transition to low carbon economy
- California's program a model for the region, the nation, and the world

More Information and Contacts

ARB's Climate Change Website:

<http://www.arb.ca.gov/climatechange>

California's Climate Change Website:

<http://climatechange.ca.gov/>

ARB's Cap-and-Trade Rulemaking Website:

<http://www.arb.ca.gov/cc/capandtrade/capandtrade.htm>

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