



Overview of the Air Resources Board's Climate Change Regulations

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Air Resources Board



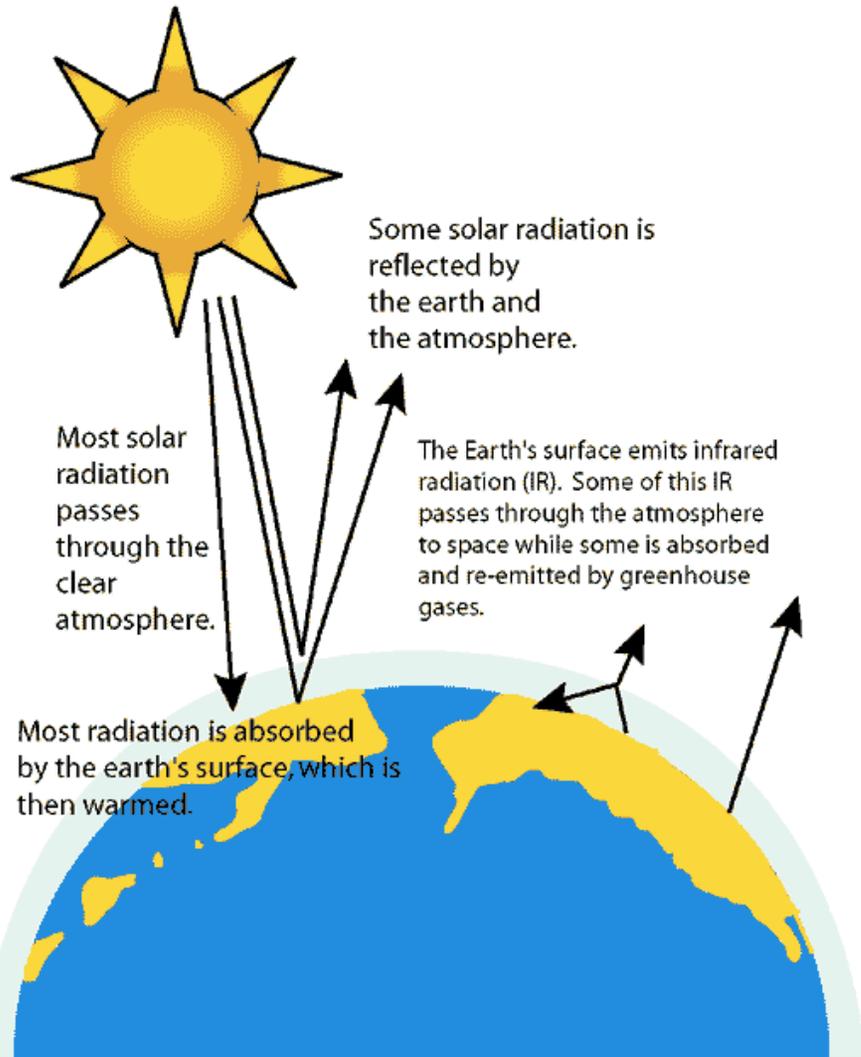
- State agency under Cal/EPA
 - Goal of the ARB is to ensure all Californians, especially children and the elderly, can live, work and play in a healthful environment free from harmful exposure to air pollution
 - Authority to regulate motor vehicle pollution and consumer products



Presentation Overview

- Background on greenhouse gas emissions and climate change
- Background on ARB's climate change regulations for new cars and trucks
- Community impacts
- Next steps

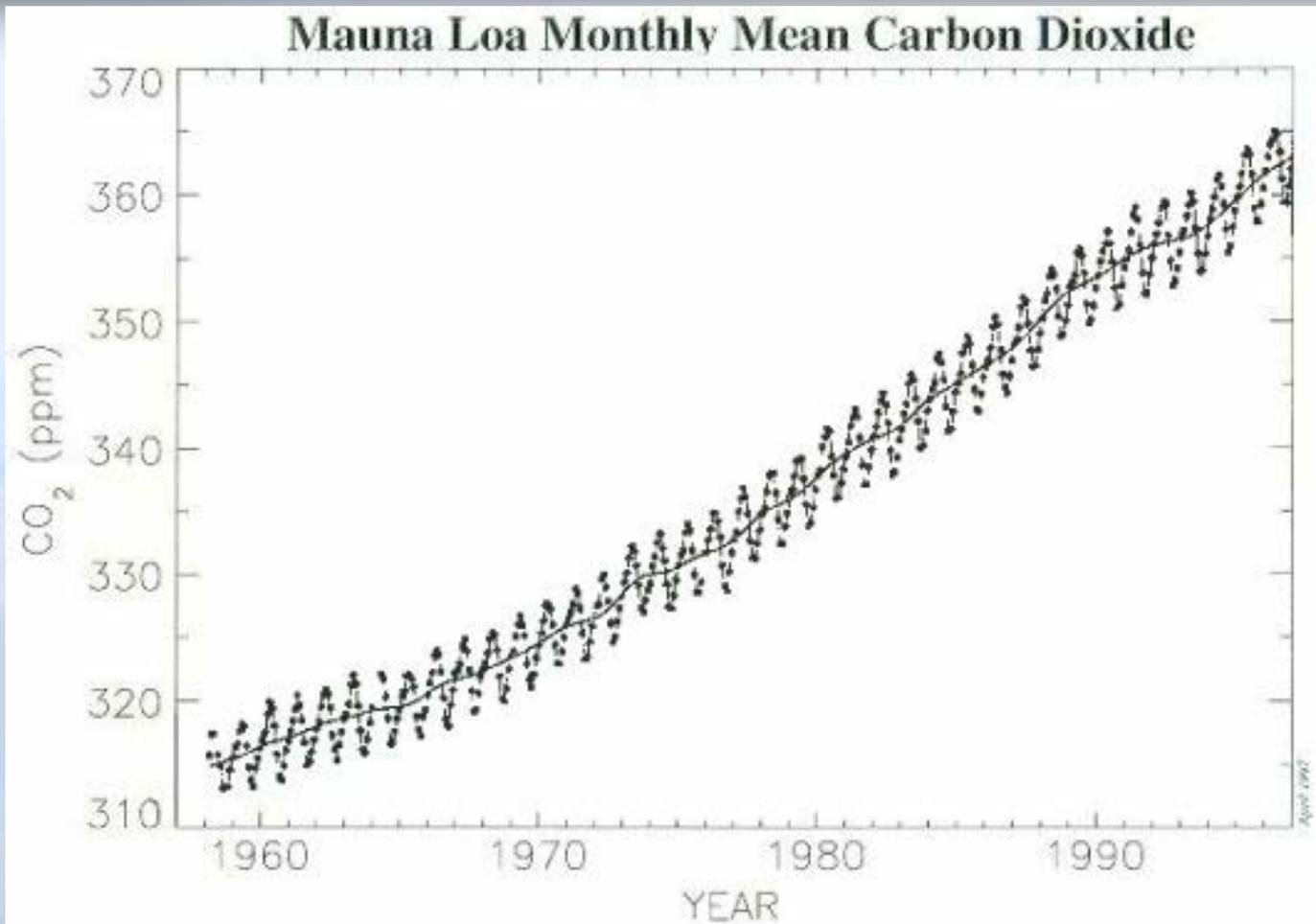
The Greenhouse Effect



- Greenhouse gases
 - CO₂, CH₄, N₂O, HFC (refrigerants)
 - Serve as a blanket to trap heat and keep the earth warm
- Climate change caused by increasing GHG concentrations

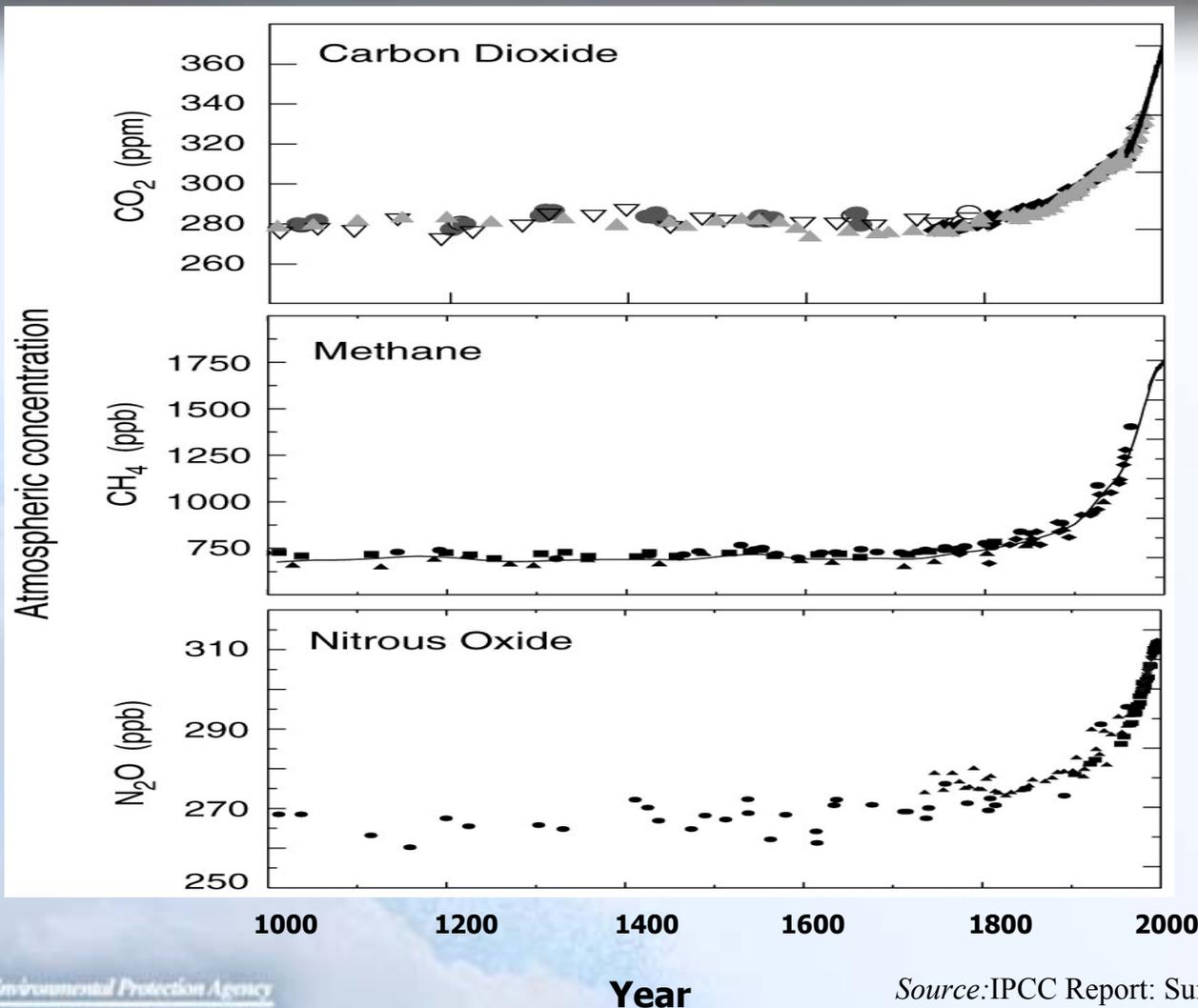


CO₂ Concentrations are Increasing





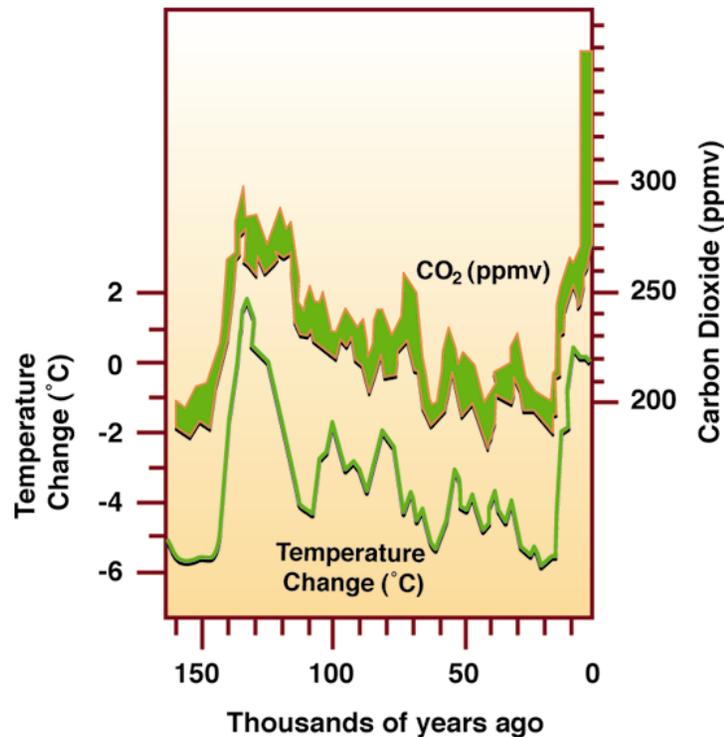
Evidence that the Industrial Era has Changed the Atmosphere



Source: IPCC Report: Summary for Policy Makers, Climate Change 2001: The Scientific Basis



Temperature and Carbon Dioxide Are Related



- Ice core records show the current rate of increase and levels are unprecedented
- The 10 hottest years in the 143-year-old global temperature record have all occurred since 1990 (Meteorological Organization)

Source: Adapted from Office of Science and Technology Policy, Climate Change State of Knowledge, October 1997



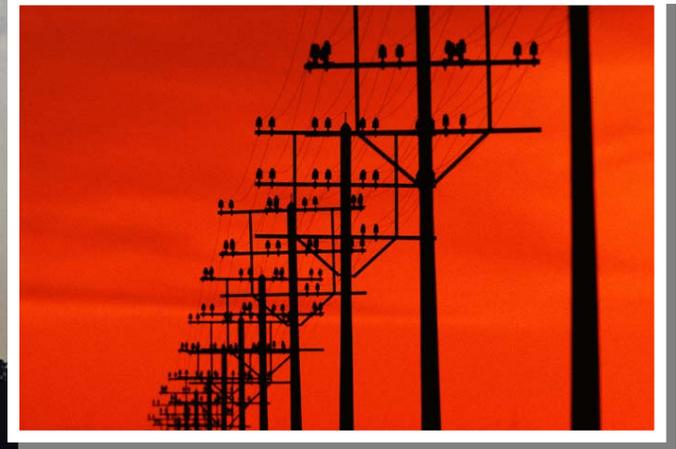
Burning Fuel Increases Greenhouse Gas Emissions



Transportation



Industry

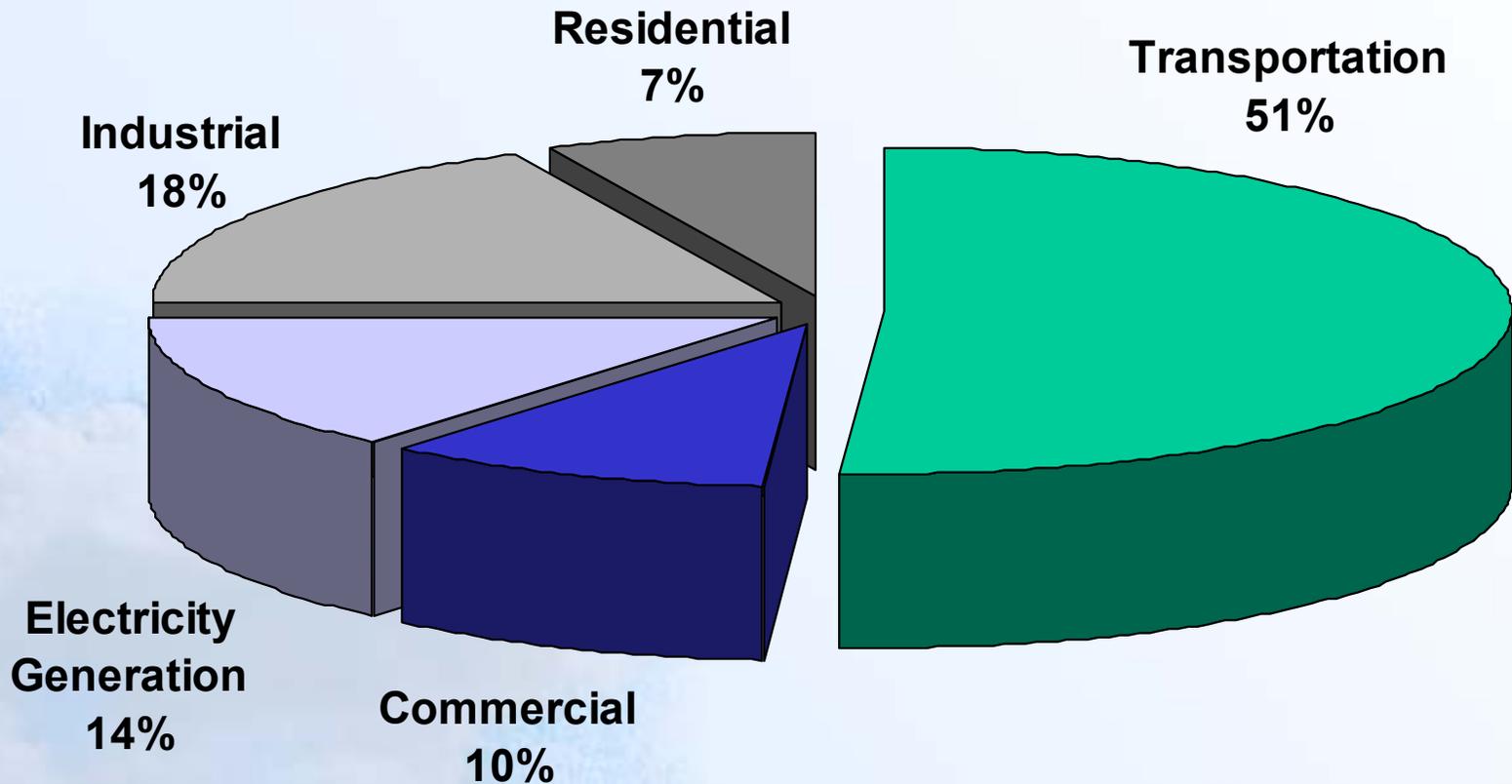


Utilities

Source: U.S. EPA State and Local Climate Change Outreach Kit, March 2000



Transportation is California's Largest Source of Greenhouse Gas Emissions

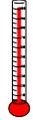


Source: California Energy Commission

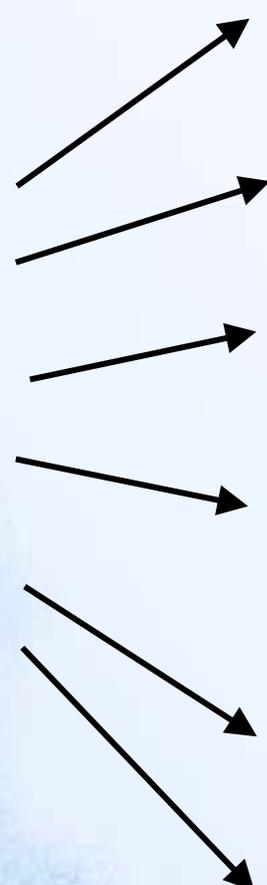


Potential Climate Change Impacts

Climate Changes

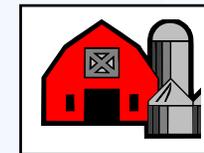
-  Temperature Increase
-  Precipitation Patterns and Extremes
-  Sea Level Rise

Source: Anne Grambsch, 1998



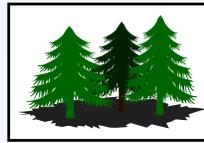
Health

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



Agriculture

Crop Yields
Irrigation Demands



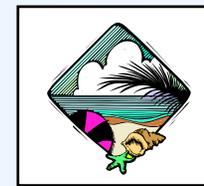
Forests

Forest Composition
Geographic Range of Forests
Forest Health and Productivity



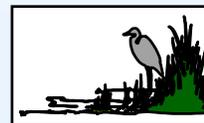
Water Resources

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



Summary

- Global climate change is a concern
- More progress is needed to reduce greenhouse gas emissions



AB 1493 Requirements

- Adopt regulations by January 1, 2005
 - Maximum feasible reduction of greenhouse gases from new motor vehicles
 - Economical to owner/operator
- Regulations apply to new 2009 and later model year vehicles
 - Vehicle manufacturers must build new lower greenhouse gas emission cars and trucks

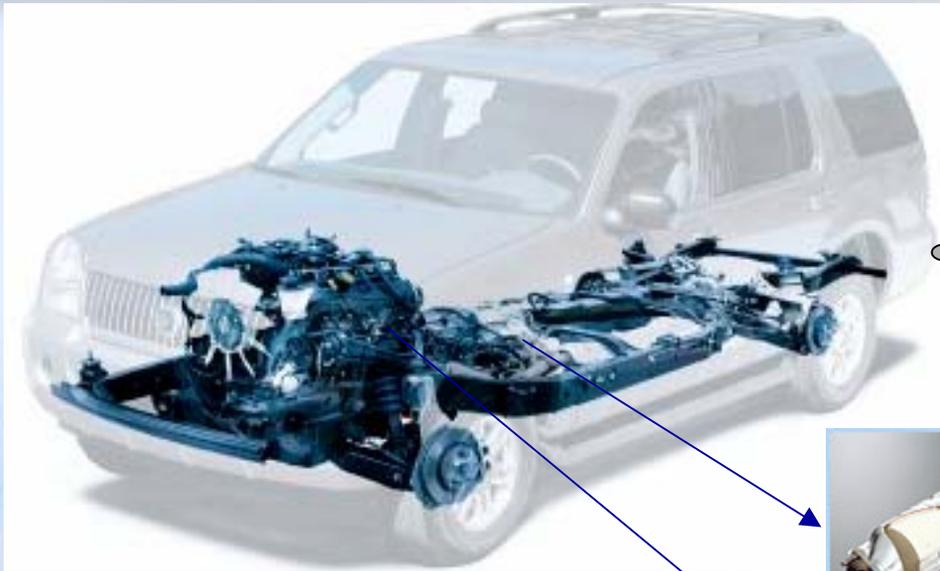


Regulations Shall Not Require ...

- Fees or taxes on vehicle, fuel or miles traveled
- Ban on the sale of any vehicle category
- Reduction in vehicle weight
- Limitation or reduction of speed limit
- Limitation or reduction of miles traveled



Greenhouse Gas Emissions



Engine



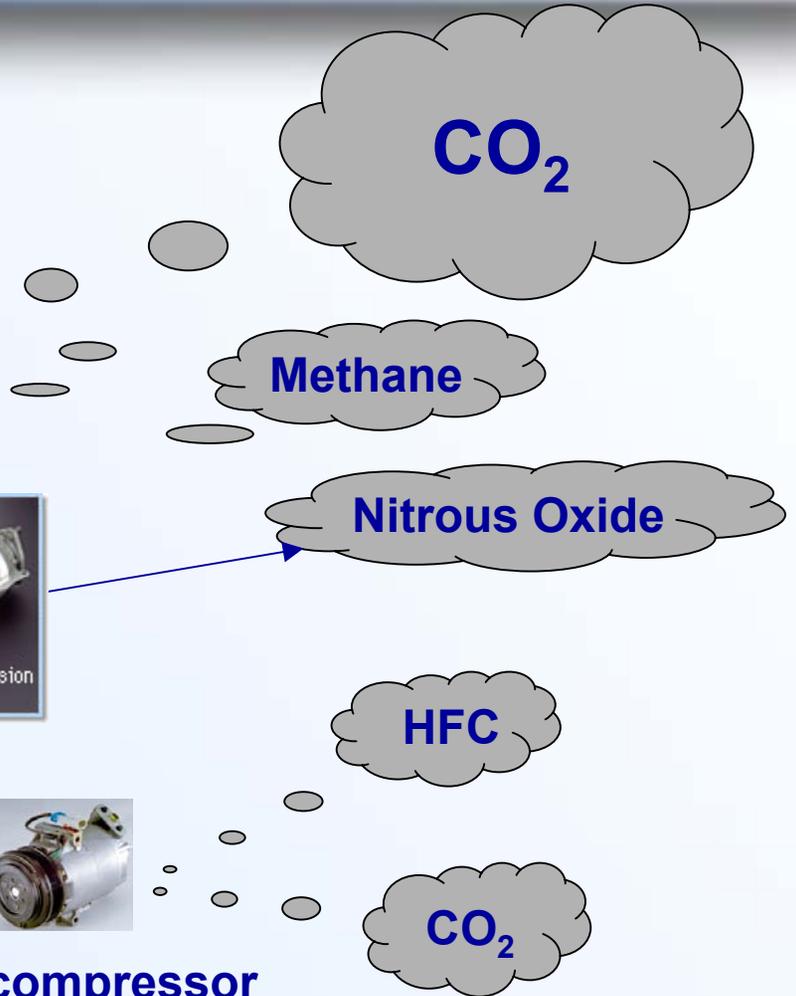
Transmission



Auto exhaust emission control catalyst



A/C compressor





Draft Staff Proposal

- Released for public comment on June 14
- Provides early overview of complete methodology
- Details subject to change
 - Work still underway
 - Public comment



Greenhouse Gas Standard

- Added to current motor vehicle control program for smog-forming pollutants
- Two tier approach
 - One standard for passenger cars and small trucks, another for larger trucks
- Two steps - each phased in over three years
 - Near term (2009 - 2011)
 - Mid term (2012 - 2014)



New Cars 2009-2011

- 22-24% reduction in greenhouse gas emissions
- Average increase in price for a new car
 - \$241 for passenger cars and small trucks
 - \$326 for larger trucks
- Consumers will see pay back in an average of 2.6 years

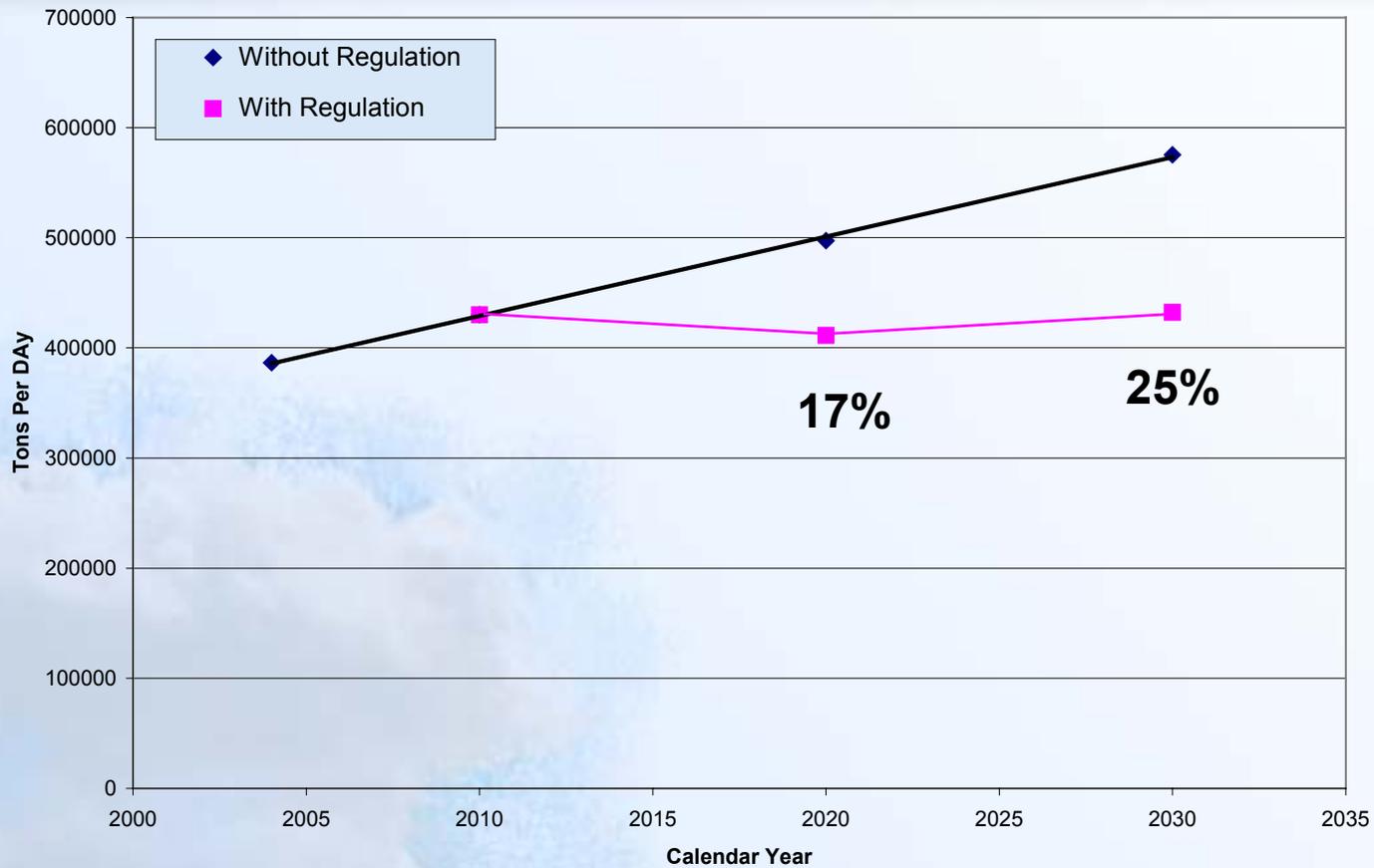


New Cars 2012-2014

- 30-32% reduction in greenhouse gas emissions
- Average increase in price for a new car
 - \$561 for passenger cars and small trucks
 - \$871 for larger trucks
- Consumers will see pay back in an average of 5.3 years



Fleetwide Emissions Reductions





ARB Priorities

- Protect public health
- Improve and complement ongoing efforts to reduce smog and toxic emissions
 - No switching of smog and/or toxic emissions for climate change emissions
 - No relaxation of standards for criteria and toxic pollutants.



Community Impacts

- Low-income and minority communities may be particularly vulnerable to climate change
 - ARB is working with outside sources to study the impacts of climate change on communities
- ARB is looking at the economic/environmental impacts of the climate change regulations on communities



Economic Impacts

- Low-Income Households that Purchase Used Cars
 - You may see a slightly higher purchase price for used vehicles - from \$13 to \$33 per year
 - But you will see lower operating costs - from ~\$100-150 per year
- Local Businesses
 - Impacts are small
 - Net positive effect



Smog Emission Impacts

- Looked at impacts of regulation on smog emissions
 - Are there going to be more older vehicles on the roads?
 - Will people drive more miles?
- Impacts were insignificant



Community Input

- ARB has been working with stakeholders to get input from communities throughout the process
- Input at the community level is essential to a successful partnership and regulation
- We welcome your input as we refine our draft staff report



Next Steps

- July
 - Workshops on draft staff report
 - * July 6 Oakland (EJ Focused)
 - * July 7 Sacramento
 - * July 8 Fresno (EJ Focused)
 - * July 13 Pacoima (EJ Focused)
- August 6 Release final staff report
- Sept. 23 Board hearing



AB 1493 List Serve

- Provides subscribers with automatic email notification
 - Notice of workshops and meetings
 - Posting of documents on ARB website
- To subscribe: go to ARB climate change website - www.arb.ca.gov/climatechange and follow prompts



Information Resources

- Air Resources Board
 - 1-800-END-SMOG
 - www.arb.ca.gov/climatechange
- California Energy Commission
 - www.energy.ca.gov/global_climate_change/index.html
- California Climate Change Registry
 - www.climateregistry.org
- United States Environmental Protection Agency
 - www.epa.gov/globalwarming/index.html
- Intergovernmental Panel on Climate Change
 - www.ipcc-nggip.iges.or.jp



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