



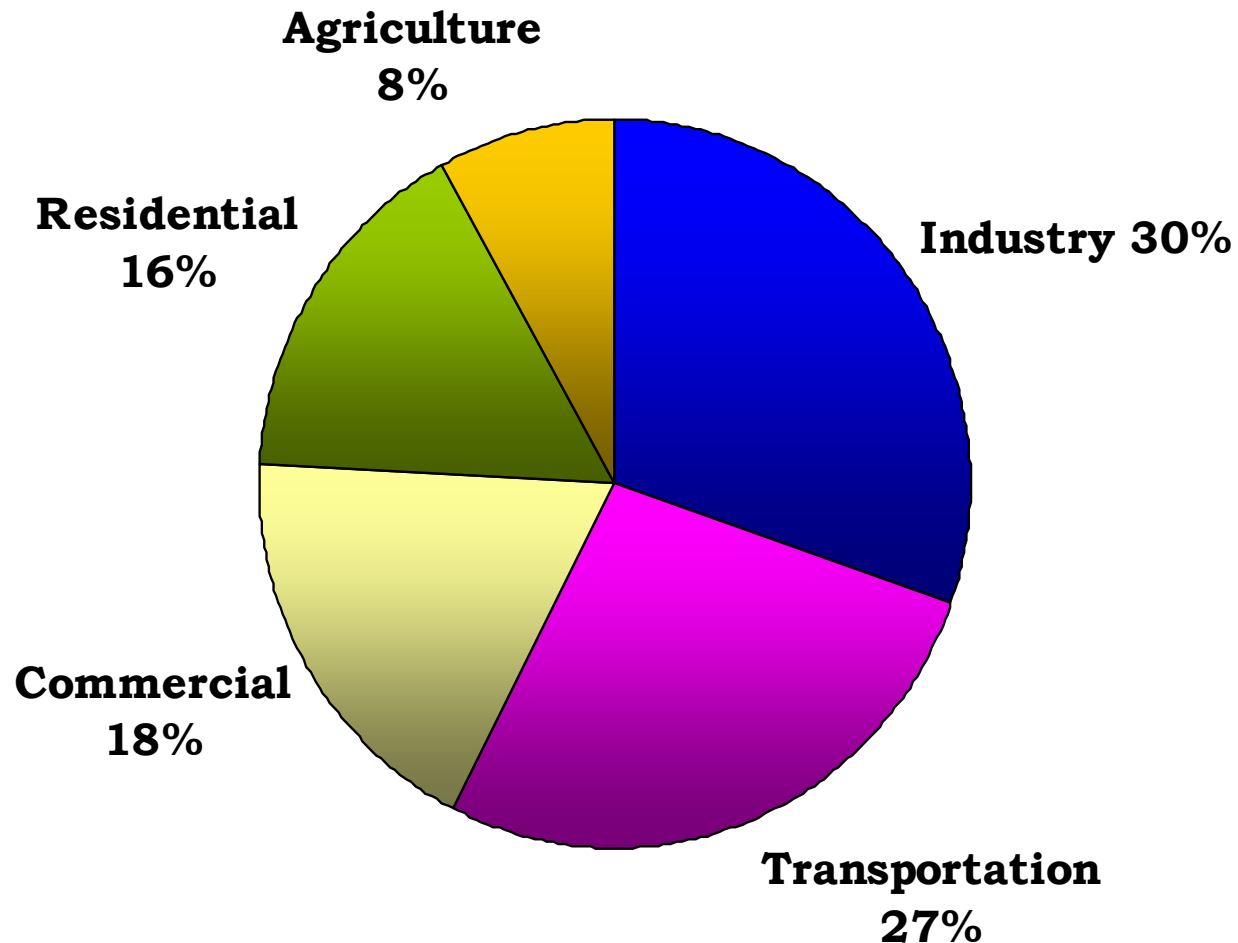
# U.S. Department of Transportation

Responding to  
the Climate  
Challenge



# Transportation and Climate Change

Part of the Problem:





# DOT's Role in Hydrogen

- Promulgate safety and fuel economy standards for hydrogen vehicles
- Set standards for the safe transport of hydrogen
- Conduct hydrogen research, development, and demonstration
- Implement National Fuel Cell Bus Program



# Part of the Solution: Mitigation



## AVIATION

- RVSM - Reduced Vertical Separation Minimums can reduce fuel use by ~500 million gallons/year through improved air traffic management
  - VALE - Voluntary Airport Low Emissions Program supports purchase of clean airport equipment
- Fuel Efficiency Goals:
- Improve per revenue plane mile 1% annually thru 2008
  - Develop new technologies to reduce
    - 25% within 10 years
    - 50% in 25 years
- NGATS - Next Generation Air Transportation System to meet future air transportation system needs while reducing environmental impacts



# Part of the Solution: Mitigation

## AVIATION



- PARTNER - Partnership for Air Transportation Noise & Emissions Reduction researches the impact of non-CO2 aircraft emissions on climate change
- SAGE - System for Assessing Aviation's Global Emissions is a modeling tool to evaluate environmental impacts of aviation and evaluate tradeoffs





# Part of the Solution: Mitigation

## FUEL ECONOMY STANDARDS:

- Raised fuel economy standards for light trucks MY 2005-2007, saving of 3.6 billion gallons of gasoline
- Proposed a new system and stricter standards for light trucks that will save 10 billion gallons of fuel over the lifetime of light trucks MY 2008-2011

# Part of the Solution: Mitigation

Safe, Accountable, Flexible, Efficient Transportation

Equity Act: A Legacy for Users: \$286.4B

- Continues strong commitment to environment
- Funds alternative and biobased fuel & hybrid vehicle R&D that will reduce GHG emissions
- Supports purchase of hydrogen-powered and other clean buses





# Part of the Solution: Mitigation

Safe, Accountable, Flexible, Efficient Transportation Equity Act:  
A Legacy for Users:

- Congestion mitigation and air quality improvement program (CMAQ) funds anti-idling programs like truck stop electrification and diesel retrofits
- Nonmotorized Transportation Pilot Program





# Preparing for the Impact of Climate on Transportation

- Infrastructure is built for a long life
- Transportation planners will have to address potential impacts



Bonner Bridge, Oregon



# Preparing for the Impact of Climate Change on Transportation

## **Department of Transportation Projects:**

- Impacts of Climate Change & Variability on Transportation Systems and Infrastructure: Gulf Coast Study
- Transportation Research Board study on the impacts of climate change on infrastructure and developing tools for transportation planners
- Study on the Effects of Sea Level Rise on National Transportation Infrastructure



# Cooperation: Working with the International Community

Toward cleaner transportation:

- International Maritime Organization
- International Civil Aviation Organization
- International Partnership for Hydrogen Economy



U.S. Department of Transportation



For more information and reports:

[www.dot.gov/climate](http://www.dot.gov/climate)

The cover of the report 'The Potential Impacts of Climate Change on Transportation' features a vertical strip of five images: an airplane, a ship, a truck, a highway, and a person loading a truck. The title is in yellow text on a green background. The DOT Center for Climate Change & Environmental Forecasting logo is also present.

The Potential Impacts of Climate Change on Transportation

The DOT Center for Climate Change & Environmental Forecasting

Workshop  
October 1-2, 2002  
Summary and Discussion Papers

U.S. Department of Transportation