

# **EPA Climate Initiatives: Update and Next Steps**

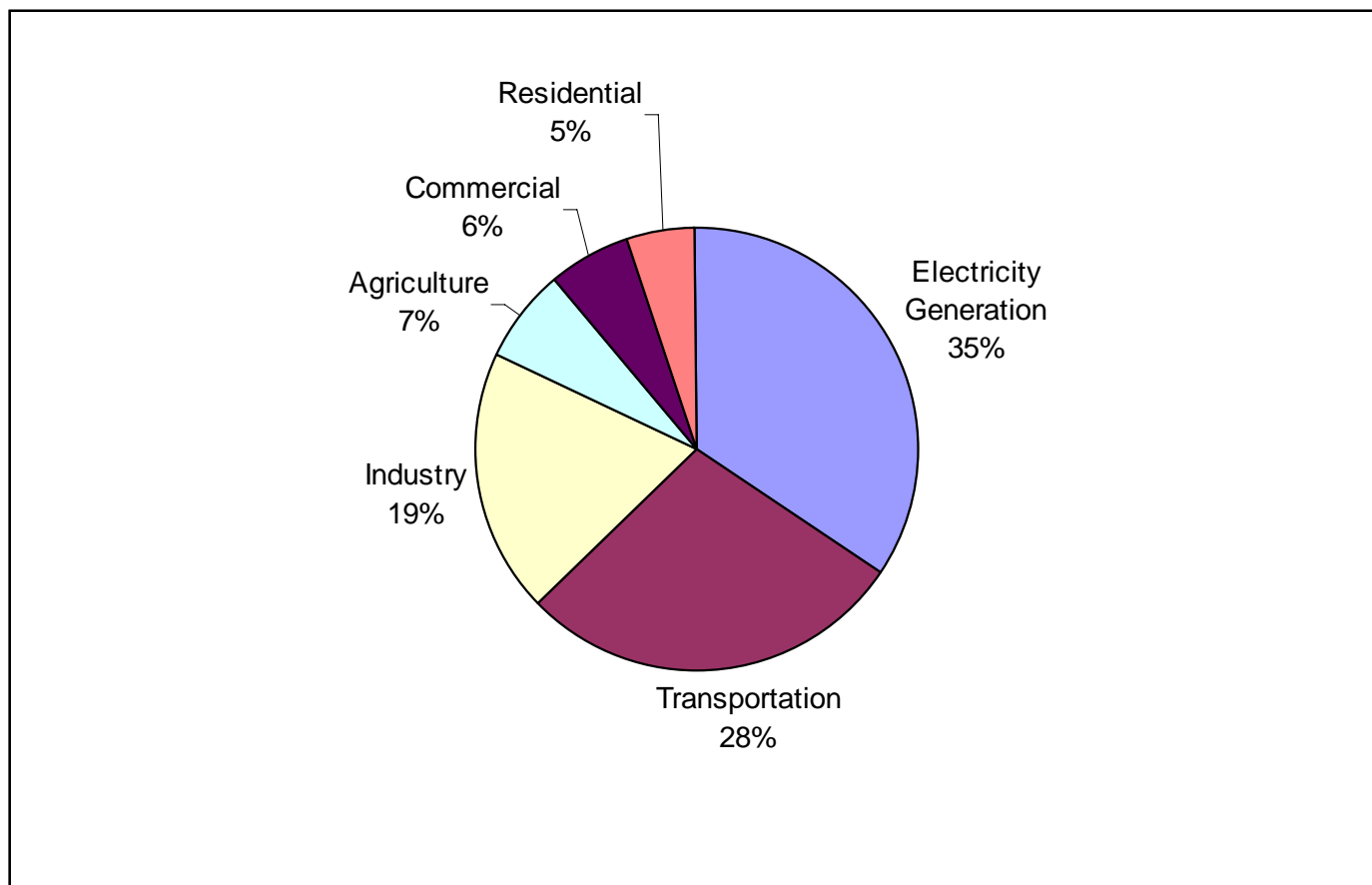
**Gina McCarthy**

**Assistant Administrator**

**U.S. EPA, Office of Air and Radiation**

**February 5, 2010**

# U.S. GHG Emissions Allocated to Economic Sectors (2007)



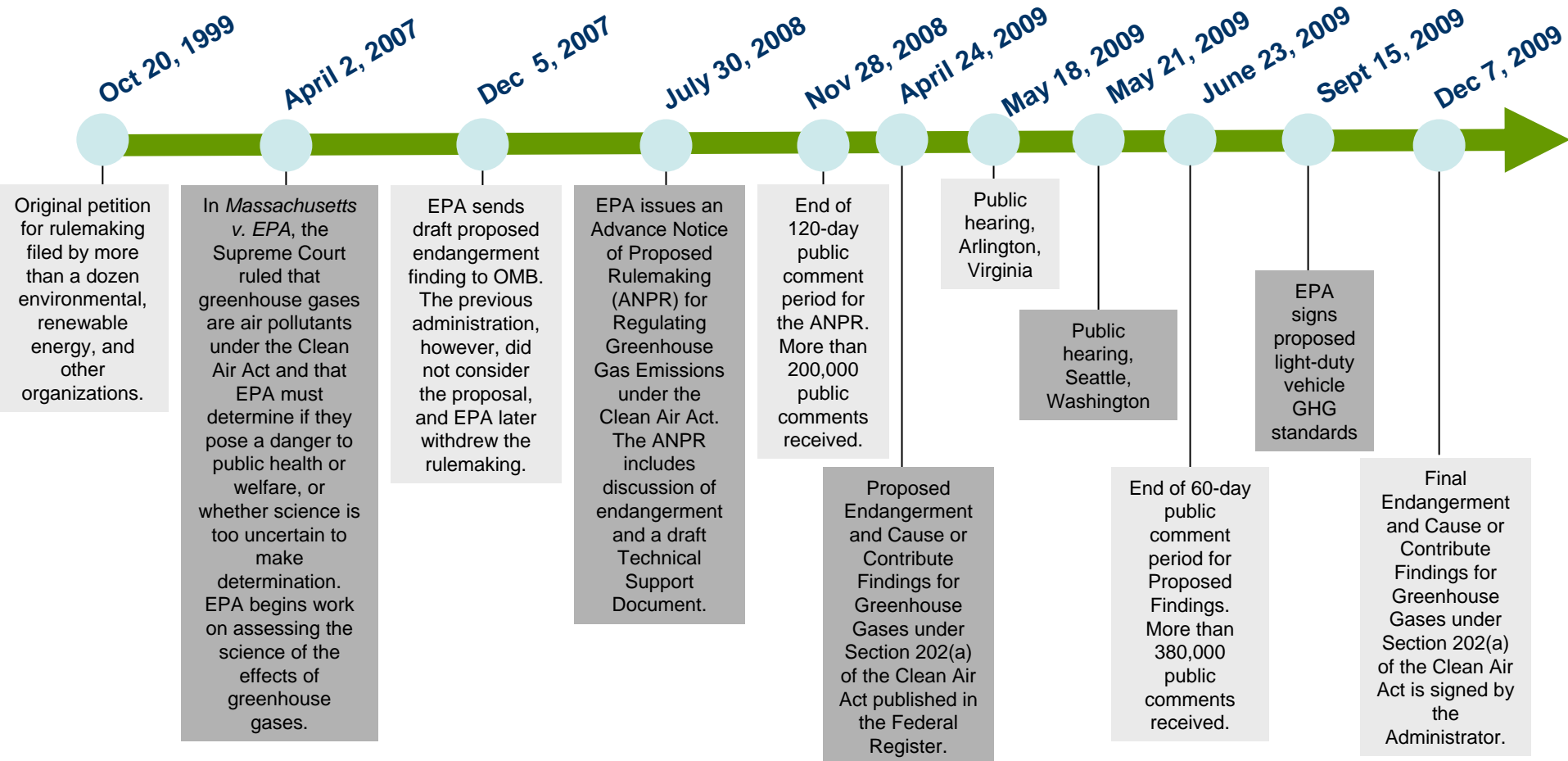
# New Administration Priorities

- One of the Administrator's top priorities for 2010: Taking action on climate change
- Comprehensive approach to climate, energy, transportation and the economy based on sound science

# EPA Climate Regulatory Actions

- **Endangerment Finding**
  - GHG emissions endanger public health and welfare
  - Provides the legal basis for the Light-Duty Vehicle Rule
  - Issued December 7, 2009

## Timeline of EPA's Endangerment Finding



# Section 202(a) of the Clean Air Act

4 “Cause or contribute” test for emissions analyzed in context of prior determinations and unique attributes of GHGs

3 Scope and definition of “air pollutant” that causes or contributes to air pollution

The Administrator shall by regulation prescribe... standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines, which in her judgment cause, or contribute to, air pollution which may reasonably be anticipated to endanger public health or welfare.

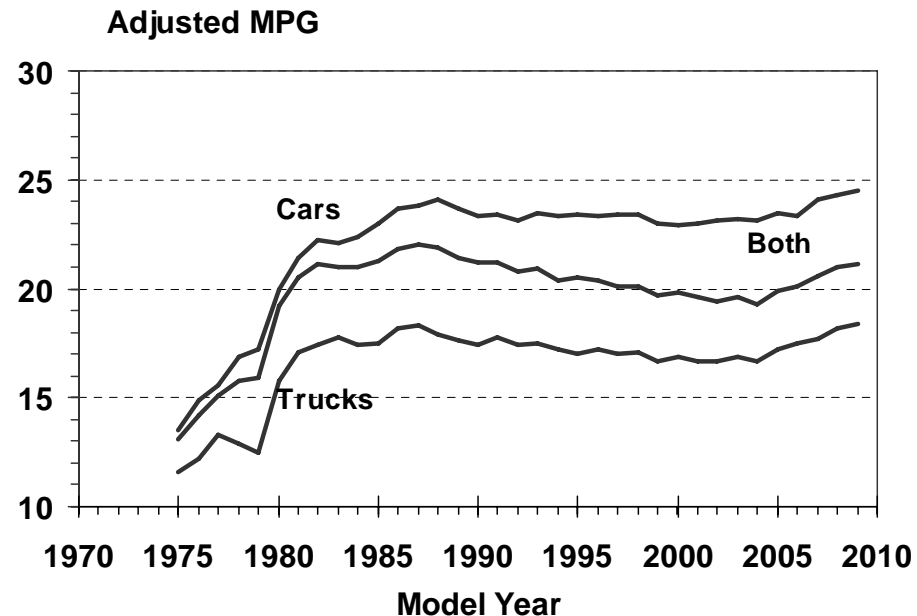
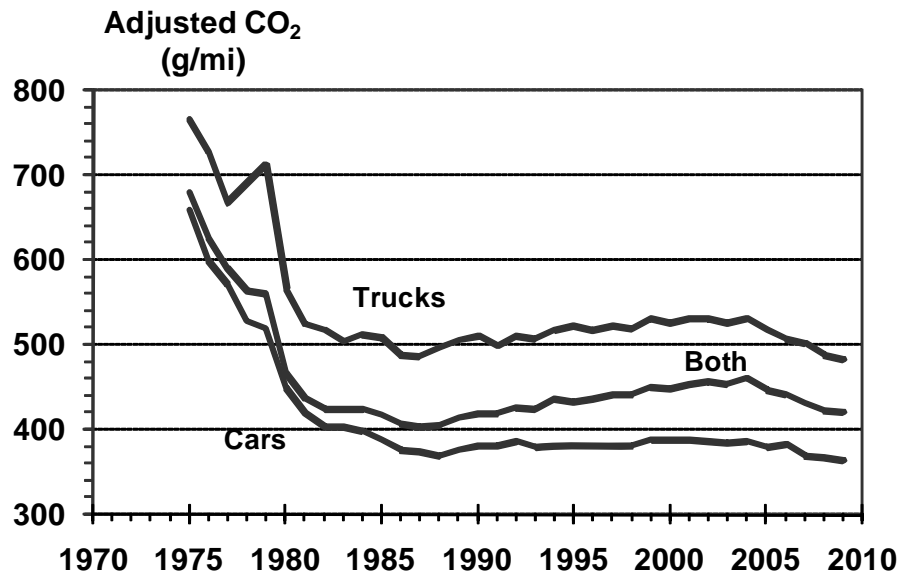
1 Scope and definition of “air pollution”

2 Endangerment to public health, welfare or both

# Light Duty Vehicle GHG Rule

- Close cooperation with DOT and NHTSA
- Applies to MY 2012-2016 cars, SUVs, minivans, pickups
- Increases fuel economy by approximately five percent every year
- Reduces greenhouse gas emissions by nearly 950 million metric tons
- Conserves 1.8 billion barrels of oil
- Compliance costs for industry of less than \$60 billion
- Total benefits of \$250 billion and net benefits of \$190 billion (using \$20/ton CO<sub>2</sub> valuation and 3% discount rate)
- Status:
  - Proposed September 15, 2009
  - Goal is to complete by March of 2010

# Adjusted CO<sub>2</sub> and Fuel Economy, MY1975-2009



# Further GHG Regulations

- **Greenhouse Gas Monitoring and Reporting Rule**
  - Applies to direct emitters of GHGs generally equal or greater to 25,000 metric tons/year
  - Covers an estimated 85 percent of total U.S. GHG emissions
  - Issued September 22, 2009
  - Facilities begin collecting data January 2010
- **PSD Tailoring Rule**
  - Would require the largest industrial facilities to adopt the most efficient technologies available when they are constructed or upgraded
  - Proposed September 30, 2009

# New Energy Initiatives

- Three measures announced earlier this week will boost biofuels production and reduce our dependence on foreign oil.
  - EPA completed a rule to implement the long-term renewable fuels standard of 36 billion gallons by 2022 established by Congress.
  - The U.S. Department of Agriculture proposed a rule that would provide financing to increase the conversion of biomass to bioenergy.
  - The President’s Biofuels Interagency Working Group released its first report – *Growing America’s Fuel*. The report, authored by group co-chairs, Secretaries Vilsack and Chu, and Administrator Jackson, lays out a strategy to advance the development and commercialization of a sustainable biofuels industry to meet or exceed the nation’s biofuels targets.

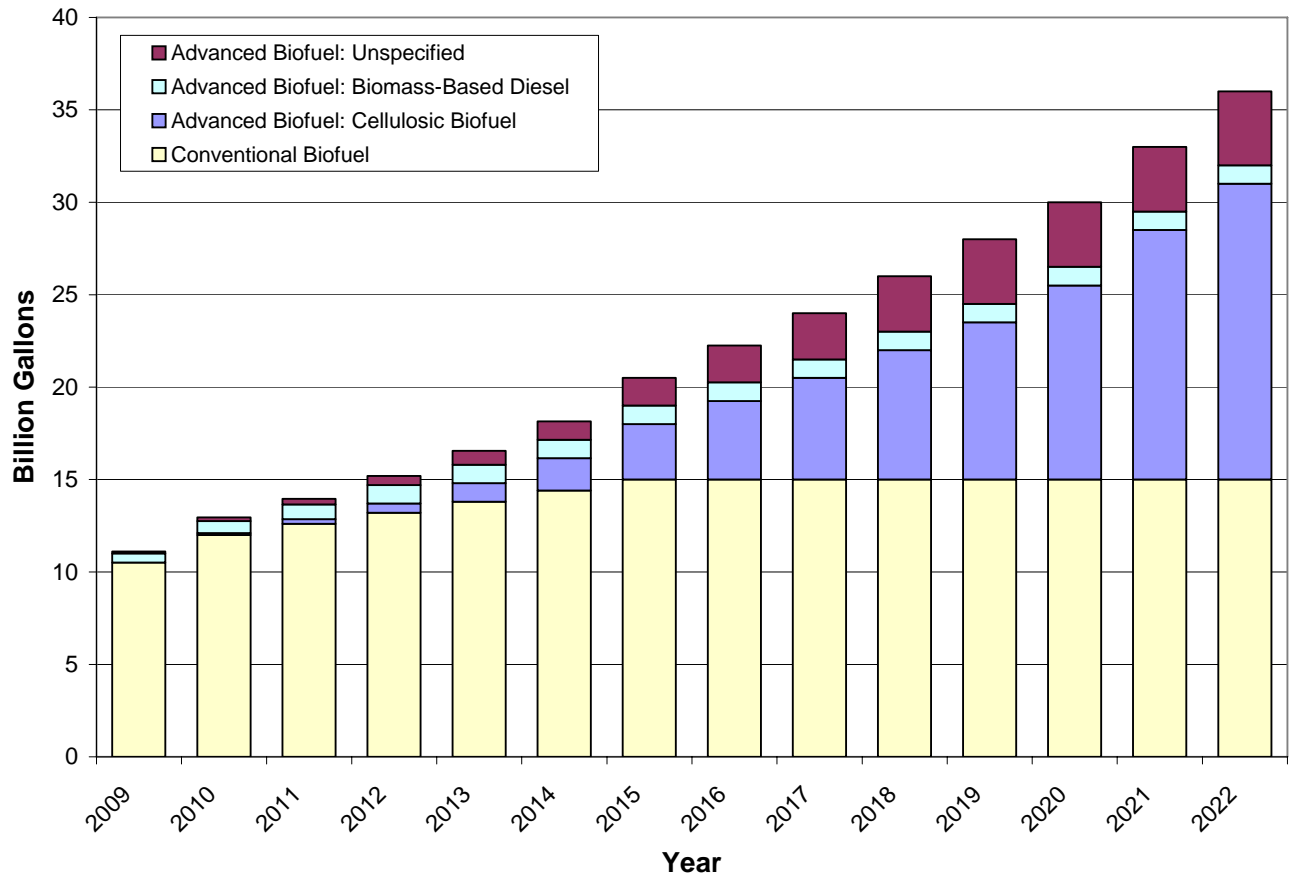
# Renewable Fuels – Overview

- Increased required volumes from 7.5 billion gallons per year in 2012 to 36 billion gallons per year in 2022
- New renewable categories with GHG reduction thresholds from 20-60%

• GHG emissions reduced 138 million metric tons/year when fully phased in

• Market certainty will expand production of advanced biofuels

• Completed February 3, 2010



# Overview of Impacts of the RFS2 Program

- **Petroleum Consumption, Energy Security and Fuel Costs:**
  - Will replace about 7 percent of expected annual gasoline and diesel consumption in 2022
  - Decrease oil imports by \$41.5 billion
  - Result in additional energy security benefits of \$2.6 billion.
- **Greenhouse Gas Emissions:**
  - In 2022, greenhouse gas emissions will be reduced by 138 million metric tons -- equivalent to the annual emissions of 27 million passenger vehicles.
- **Agriculture Sector and Related Impacts:**
  - Expand the market for agricultural products such as corn and soybeans and open new markets for advanced biofuels – increasing net farm income by an estimate of \$13 billion dollars – or more than 36 percent – in 2022.
- **Emissions and Air Quality:**
  - Some emissions such as NO<sub>x</sub>, acetaldehyde, and ethanol are expected to increase and others such as benzene and carbon monoxide are expected to decrease.
  - The impacts of these emissions on criteria air pollutants will vary from area to area.
  - EISA directs the agency to further evaluate these potential impacts and to mitigate, to the extent possible, any adverse impacts.

# Looking Forward

- Enormous opportunity for future transportation GHG reductions through large-scale introduction of advanced technologies
- Also assessing future GHG controls in the mobile sources sector
  - The 2007 *Massachusetts vs EPA* Supreme Court decision included heavy-duty GHG emissions, as well as light-duty vehicles.
  - In February, 2009 the Engine Manufacturers Association sent a letter to Administrator Jackson, to express their support for EPA regulation of GHG emissions from medium- and heavy-duty vehicles.
- Mobile Source GHG Petitions
  - **Marine Shipping vessels** – 3 petitions for rulemaking to set GHG standards under section 213(a)(4) for vessels and 211 for fuels
  - **Aircraft** – 2 petitions for rulemaking to set GHG standards for aircraft under section 231
  - **New nonroad vehicles and engines** – 3 petitions for EPA to set standards under section 213 for nonroad engines other than aircraft, locomotives and vessels.

# Looking Forward

- Integrating air quality and climate protection
- Multi-pollutant strategy for utility sector
  - Coordinating SO<sub>x</sub>, NO<sub>x</sub> and toxics controls
- Climate co-benefits
  - Incentives for Efficiency
  - Reducing Electricity Demand
  - Clean Energy Technologies