



Carbon Pollution: EPA Policies and Programs

April 18, 2012



Focus Areas

- **Ensure compliance with Clean Air Act**
 - As directed by Supreme Court in 2007
 - Finalize mobile source rules
 - Emission reductions from large stationary sources
- **Build on Success of Voluntary Emission Reduction Initiatives**
 - Energy STAR
 - Global Methane Initiative
 - Fluorinated GHG Industry Partnerships
- **Support the President and Congress in enacting clean energy and climate legislation**
 - Greenhouse Gas Reporting Program



- October 20, 1999 - Petition for regulation of GHGs filed by NGOs, renewable energy and others
- April 2, 2007– In *Massachusetts v. EPA*, the Supreme Court found that greenhouse gases meet definition of air pollutants covered by the Clean Air Act
 - “Actual” and “imminent” harm
 - EPA has a duty to take steps in order to “slow or reduce” global warming.
- EPA was required by the Supreme Court to determine whether:
 - GHG emissions from new motor vehicles cause or contribute to air pollution;
 - This air pollution may reasonably be anticipated to endanger public health or welfare; or
 - The science is too uncertain to make a reasoned decision

Supreme Court told EPA: “You have to because Congress told you to.”



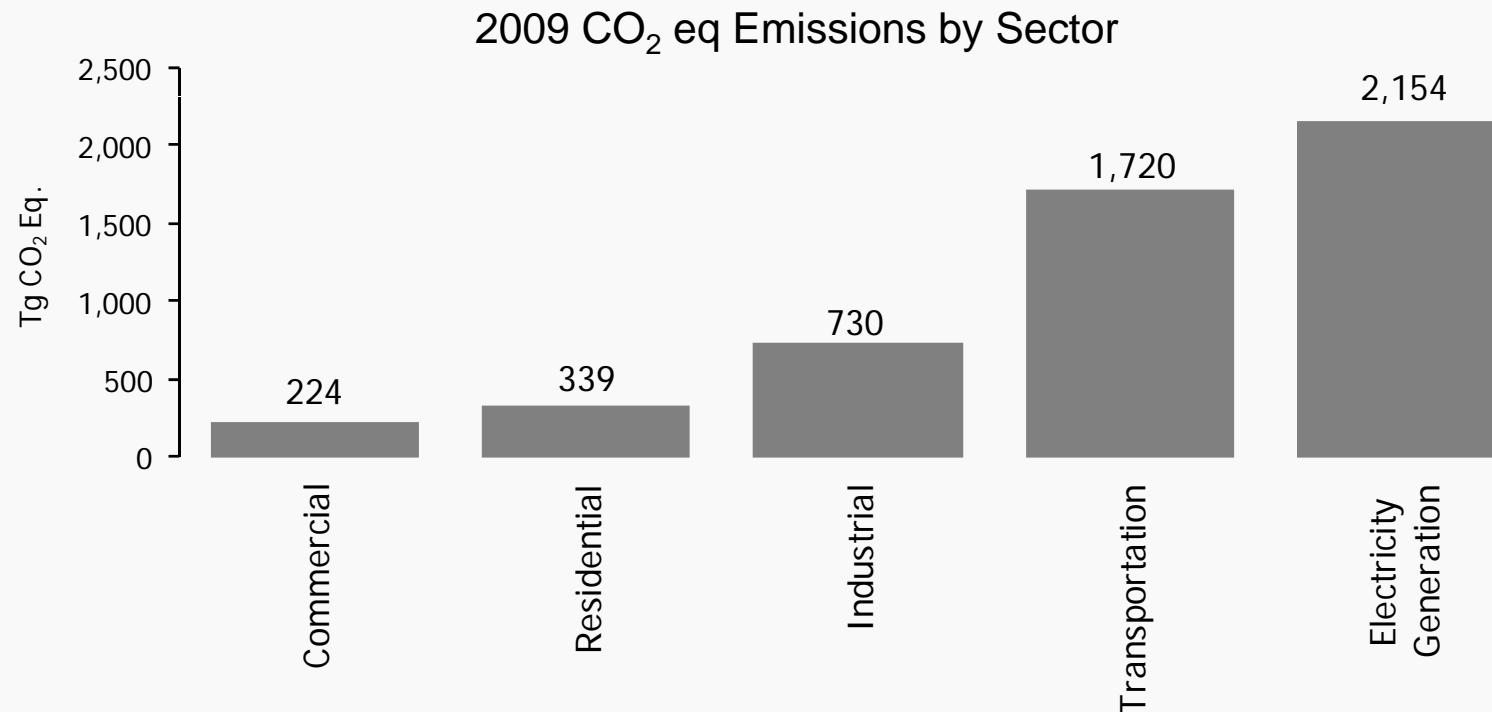
- Dec. 7, 2009 – Administrator Jackson signed a final rule with two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act
 - **Endangerment Finding:** Current and projected concentrations of the mix of six key greenhouse in the atmosphere threaten the public health and welfare of current and future generations
 - **Cause or Contribute Finding:** Combined emissions of CO₂, CH₄, N₂O, and HFCs from new motor vehicles and new motor vehicle engines contribute to the atmospheric concentrations of these key greenhouse gases and hence to the threat of climate change



- **Endangerment Finding** does not impose emissions reduction requirements on industry or other entities
 - Not accompanied by a proposed standard
 - Does not impose any timetable for issuing regulations
 - Does not indicate that EPA has made any final decisions about regulating GHGs under the Clean Air Act
- General Information and FAQs available on website at: <http://epa.gov/climate/endangerment.html>



Electricity Generation Is the Largest Source of CO₂ eq Emissions





March 27th NSPS Action

- EPA proposed a carbon pollution standard for new fossil-fuel fired power plants
- Currently there are no national limits on the amount of carbon pollution new power plants can emit.
- The proposed standard would ensure that new power plants use modern technology to limit this harmful pollution.
- EPA's proposed standard is flexible, achievable and can be met by a variety of facilities using different fossil fuels, such as natural gas and coal.
- The comment period will be open for 60 days after publication of the rule in the Federal Register, and EPA will hold public hearings.



Proposed Carbon Pollution Standard for New Sources

- Proposes output-based emission standard of 1,000 pounds of CO₂ per megawatt-hour (lb CO₂ /MWh gross)
- Applies to new
 - Fossil fuel-fired boilers,
 - Integrated Gasification Combined Cycle (IGCC) units, and
 - Natural Gas Combined Cycle (NGCC) units
- New combined cycle natural gas power plants could meet the standard without add-on controls.
- New coal or petroleum coke power plants would need to incorporate carbon capture and storage technology (CCS).
 - The proposal includes an alternative 30-year compliance period to allow these new plants to incorporate CCS at a later date to reach compliance



Flexibilities for New Coal-fired Power Plants

- New power plants that use Carbon Capture and Storage (CCS) would have the option to use a 30-year average of CO₂ emissions to meet the proposed standard, rather than meeting the annual standard each year.
- Provides flexibility for new power plants to phase in CCS technology
 - Plants that install and operate CCS right away would have the flexibility to emit more CO₂ in the early years as they learn how to best optimize the controls
 - Plants could wait to install or operate CCS for up to 10 years to take advantage of lessons learned from other early installations.
- For example, a new power plant could emit more CO₂ for the first 10 years and then emit less for the next 20 years, as long as the average of those emissions met the standard.
 - Because CO₂ is long-lived in the atmosphere, the 30-year averaging period is not expected to have a different impact on climate compared to a continuous emission rate limit or an annual emissions limit.
- This would also allow for CCS to become even more widely available, which should lead to lower costs and improved performance over time.



Global Methane Initiative

- Purpose: promotes methane recovery and use opportunities worldwide.
 - Coal Mining, Agriculture, Landfills, Oil and Gas Systems
- Participants: thirty-eight governments, the European Commission, the Asian Development Bank and the Inter-American Development Bank
- Process: works with private-sector entities, financial institutions, and other non-governmental organizations



Created by EPA in 1992 to encourage purchase of energy efficient products

Energy STAR products use 20-30% less energy than required by federal standards

Australia, Canada, Japan, NZ, Taiwan and European Union have adopted the program

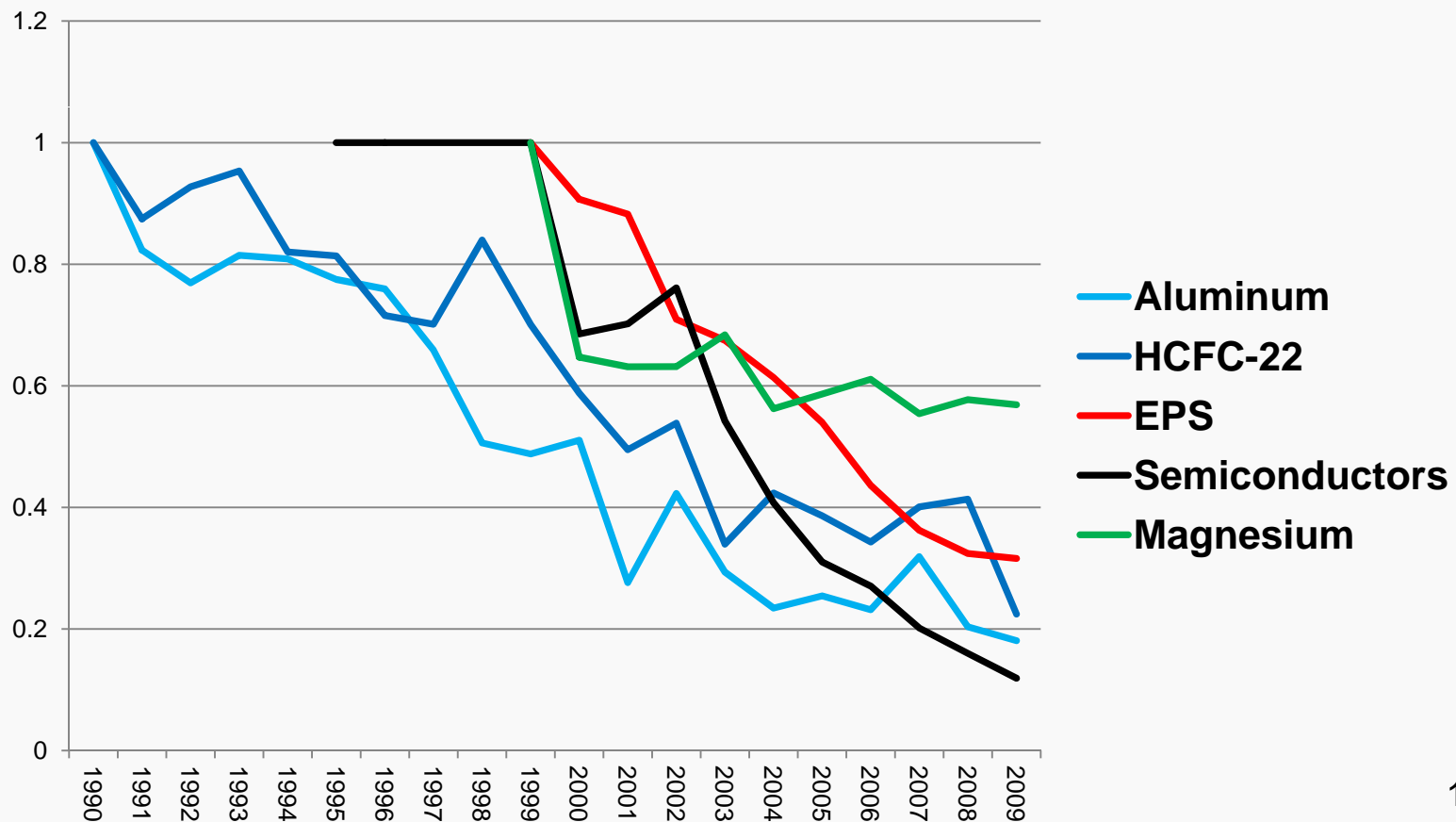
>40,000 Energy Star products: major appliances, office equipment, lighting, home electronics, and more

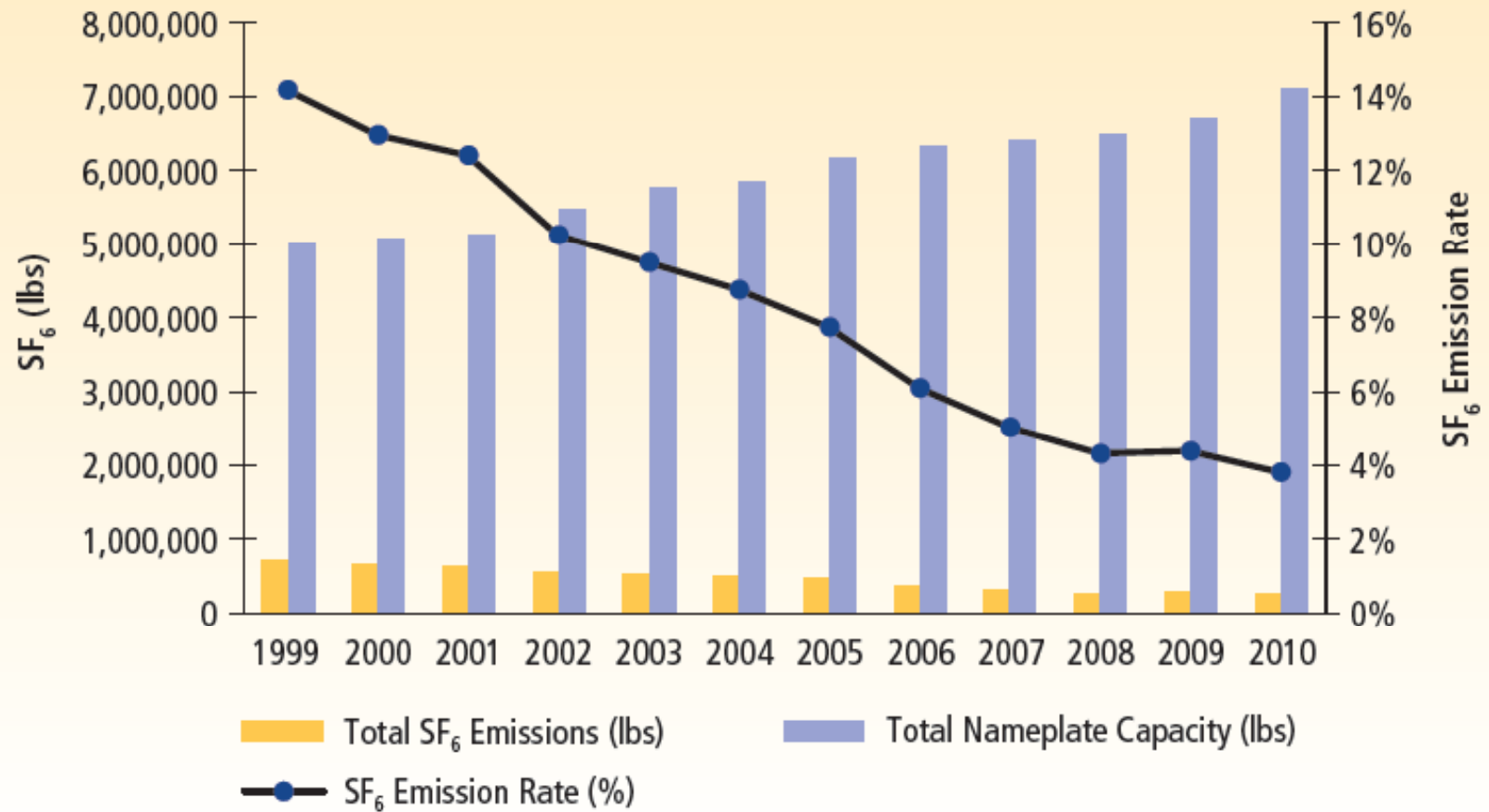
>\$14 bil savings/year

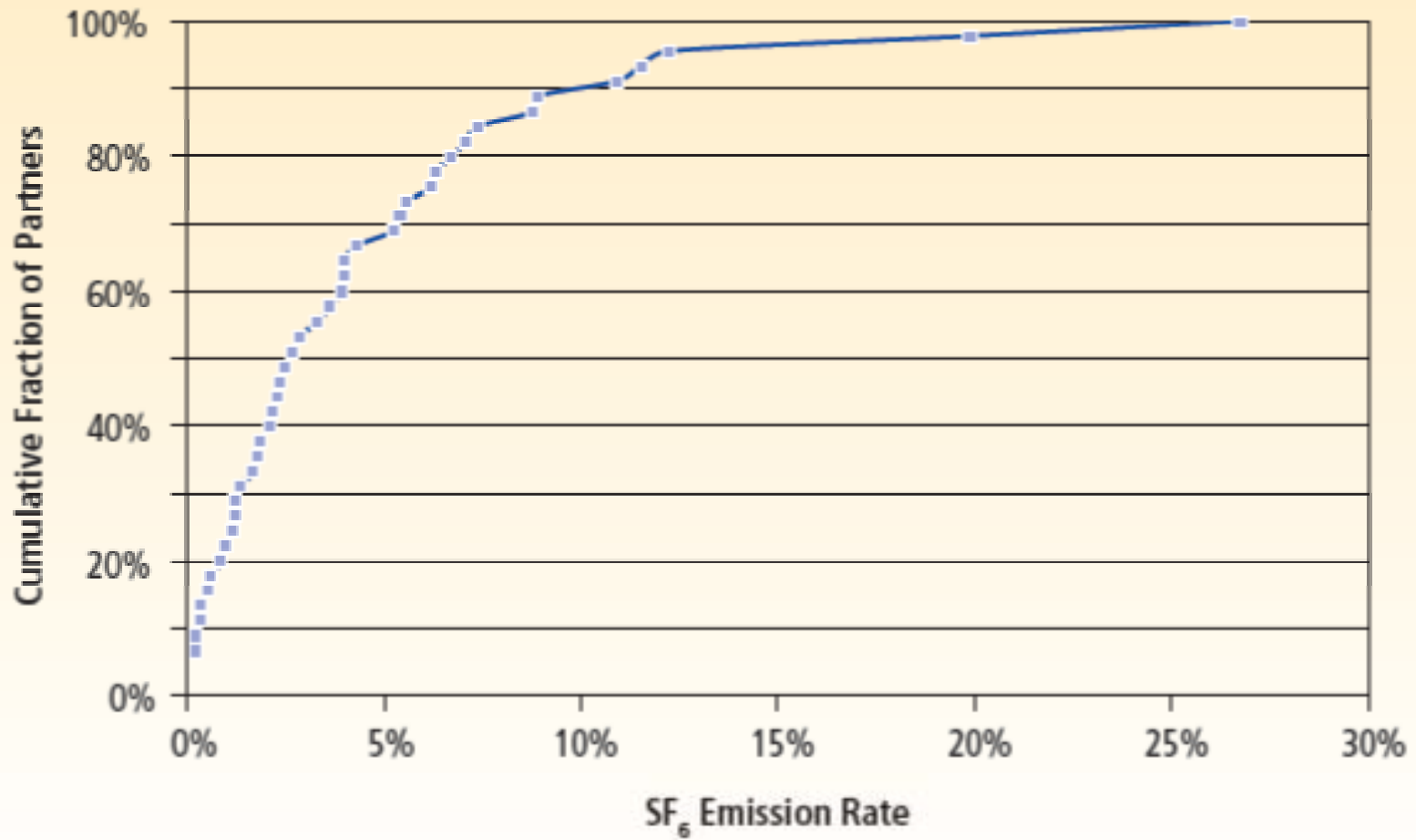




FGHG Emission Rates Since Program Launch









EPA Path Forward

- EPA will continue to move [slowly] forward with flexible common sense regulation
- Continue to use voluntary programs and initiatives
- Hope for new comprehensive climate legislation