

CLIMATE CHANGE

EPA'S ROLE IN PRESIDENT OBAMA'S ACTION PLAN

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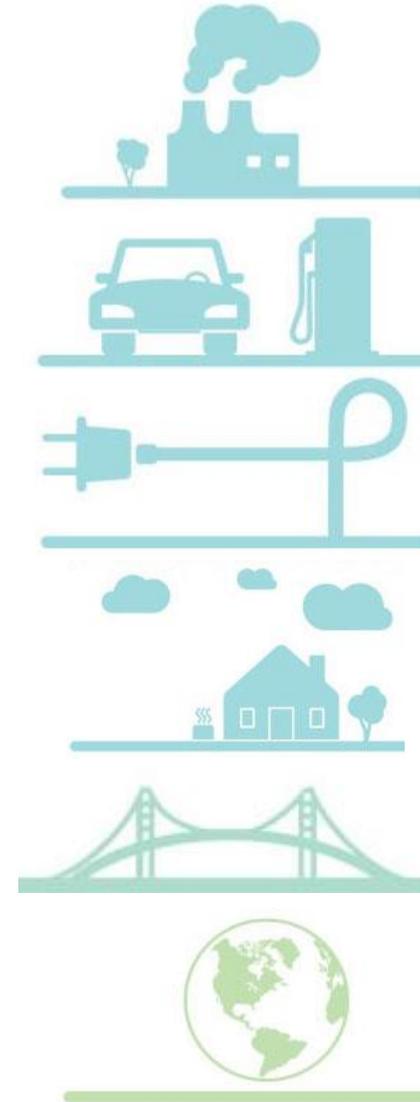
PRESIDENT OBAMA'S PLAN

- Calls on the federal government to work together with states, cities, industries, consumers and the international community to address one of the greatest challenges of our time
- Reinforces the federal commitment to:
 - Cutting harmful pollution
 - Protecting our country from the impacts of climate change
 - Leading an international effort to address a changing climate



EPA ACTION UNDER PRESIDENT OBAMA'S PLAN

- Reducing carbon pollution from power plants
- Building a 21st century transportation sector
- Cutting energy waste in homes, businesses, and factories
- Reducing methane and HFCs
- Preparing the U.S. for the impacts of climate change
- Leading international efforts to address global climate change



CARBON POLLUTION IS THE BIGGEST DRIVER OF CLIMATE CHANGE

U.S. GREENHOUSE GAS POLLUTION INCLUDES:



CARBON DIOXIDE (CO₂)

Enters the atmosphere through burning fossil fuels (coal, natural gas, and oil), solid waste, trees and wood products, and also as a result of certain chemical reactions (e.g., manufacture of cement).

84%



FLUORINATED GASES

Hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride are synthetic, powerful greenhouse gases that are emitted from a variety of industrial processes.

2%



NITROUS OXIDE (N₂O)

Emitted during agricultural and industrial activities, as well as during combustion of fossil fuels and solid waste.

5%

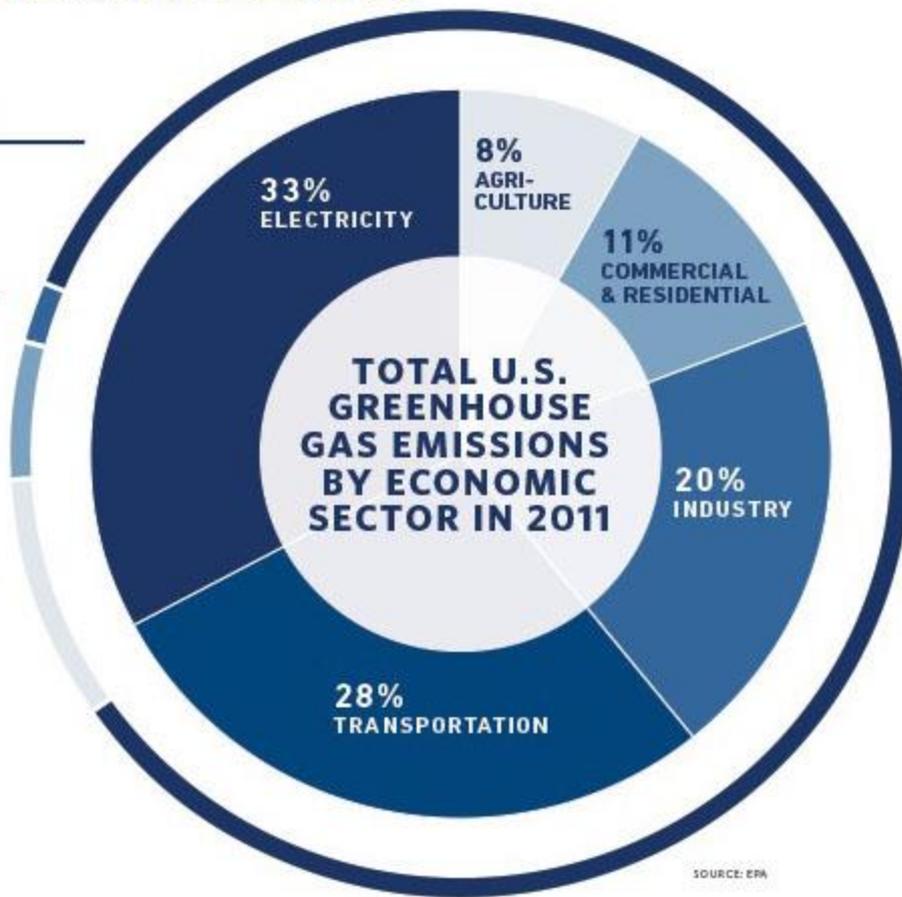


METHANE (CH₄)

Emitted during the production and transport of coal, natural gas, and oil as well as from landfills.

9%

SOURCE: EPA



SOURCE: EPA



REDUCING CARBON POLLUTION FROM POWER PLANTS

- **Progress**

- Renewable energy accounts for about half of all new generation capacity installed in 2012
- 35 states have renewable energy targets in place, and more than 20 have set GHG reduction targets

- **Continuing the momentum for the future**

- EPA will work closely with states, industry, and other stakeholders to establish carbon pollution standards for both new and existing power plants





CARBON POLLUTION STANDARDS— NEW POWER PLANTS

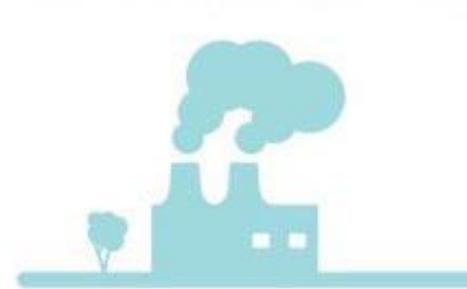
- Carbon pollution standards for new power plants
 - New proposal by September 20, 2013—currently under interagency review
 - Informed by the more than 2.5 million comments received on the April 2012 proposal
 - Will reflect recent developments and trends in the power sector
 - Will follow the agency’s open and transparent review process, including public comment and hearings





CARBON POLLUTION STANDARDS— EXISTING POWER PLANTS

- Carbon pollution standards for existing power plants
 - Will engage in a collaborative dialogue with stakeholders and leverage state leadership to develop a path forward
 - Will build on the series of listening sessions the agency held in 2011
 - Will follow its normal, open and transparent regulatory process to develop standards for existing power plants
 - Proposal: June 2014
 - Final: June 2015
 - State 111(d) Plans: June 2016





CARBON POLLUTION STANDARDS— STAKEHOLDER OUTREACH

- In the coming weeks, EPA will engage in a collaborative dialogue with stakeholders to discuss the path forward
- This process will:
 - leverage state’s leadership and experience
 - engage a wide range of stakeholders including
 - leaders in the power sector,
 - labor leaders,
 - non-governmental organizations,
 - tribal officials,
 - other stakeholders, and
 - members of the public





BUILDING A 21ST CENTURY TRANSPORTATION SECTOR

- **Progress**

- Issued vehicle GHG and fuel economy standards for model years 2012-2025, requiring an average performance equivalent of 54.5 mpg in 2025
 - Combined savings for consumers of more than \$1.7 trillion in fuel costs
 - Cuts 6 billion metric tons of CO₂ over lifetimes of vehicles sold
- In 2011, issued GHG standards for heavy- and medium-duty trucks for model years 2014-2018
 - Reduces about 250 million metric tons of GHGs
 - Provides \$41 billion in net benefits over the lifetimes of model year 2014-2018 trucks





BUILDING A 21ST CENTURY TRANSPORTATION SECTOR

- **Continuing the momentum for the future**
 - In partnership with industry leaders and other stakeholders, EPA and DOT will issue GHG and fuel efficiency standards for post-2018 trucks
 - Continued support for renewable fuels standard
 - Continued support for public/private partnerships such as SmartWay

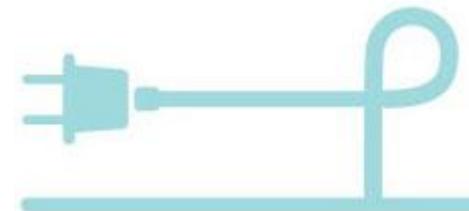




CUTTING ENERGY WASTE IN HOMES, BUSINESSES, AND FACTORIES

- **Progress**

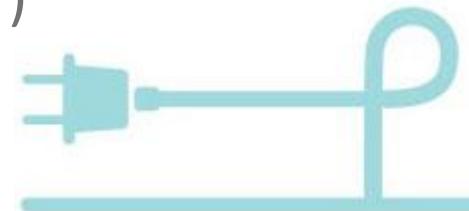
- More than 25 states have set energy efficiency targets
- 18,000 partners and individuals across the country have tapped the value of ENERGY STAR over 20 years
 - Preventing more than 1.8 billion metric tons of GHGs
 - Saving more than \$230 billion on utility bills
 - In 2012 alone, consumers and businesses reduced their utility bills by \$24 billion, due to investments in energy-efficient technologies and practices





CUTTING ENERGY WASTE IN HOMES, BUSINESSES, AND FACTORIES

- **Continuing the momentum for the future**
 - ENERGY STAR will:
 - Continue to boost ENERGY STAR performance levels for appliances and products
 - Provide information to homeowners to improve energy efficiency
 - Support interagency efforts to increase efficiency of multifamily housing
 - Promote EPA's Portfolio Manager Tool and develop and deliver other tools and support
 - Encourage combined heat and power (CHP)





REDUCING METHANE AND HFCs

- **Progress**

- **Methane:** Since 1990, the US has decreased methane emissions by 8 percent due in part to partnerships with industry both at home and abroad
- **HFCs:** EPA has created a powerful incentive in the fuel economy standards to encourage automakers to reduce HFC leaks and adopt safer alternatives in motor vehicle air-conditioning





REDUCING METHANE AND GHGs

- **Methane**

- Global warming potential more than 20 times greater than CO₂
- Short-lived climate pollutant
- Represents 9 percent of the nation's GHG emissions
 - Major sources include: oil and gas, enteric fermentation, landfills, coal mining, agriculture, etc.

- **Hydrofluorocarbons (HFCs)**

- HFCs are potent greenhouse gases
- By 2030, U.S. emissions of HFCs are expected to triple compared to 2005
- Increasing rapidly due to phaseout of ozone depleting substances and increased use of air-conditioning especially in developing economies





REDUCING METHANE AND HFCs

- **Continuing the momentum for the future**
 - **Methane**
 - Interagency methane strategy
 - Look for opportunities to reduce methane from key sectors to reduce emissions, enhance economic productivity, and improve public health
 - **HFCs**
 - Address HFCs through domestic action
 - Continue international diplomacy





PREPARING THE U.S. FOR THE IMPACTS OF CLIMATE CHANGE

- **Progress**

- In 2013, federal agencies released Climate Change Adaptation plans for the first time

- **Continuing the momentum for the future**

- Assessing climate change impacts in the United States and tracking observed changes
- Climate Data Initiative
 - Leveraging existing climate-related data efforts, including EPA's GHG Reporting Program
- Building stronger and safer communities and infrastructure
 - Support climate-resilient investment
 - Provide tools for climate resilience





LEADING INTERNATIONAL EFFORTS TO ADDRESS GLOBAL CLIMATE CHANGE

- **Progress**
 - Copenhagen Accord
- **Continuing the momentum for the future**
 - Expand bilateral cooperation
 - Combat Short-Lived Climate Pollutants
 - Climate and Clean Air Coalition
 - Arctic Council
 - Global Alliance for Clean Cookstoves
 - Global Methane Initiative (GMI)
 - Partner to implement ENERGY STAR internationally





Other EPA Efforts

- **Tier 3 Standards**

- The proposed Tier 3 program is a comprehensive approach, considering the vehicle and its fuel as an integrated system, aimed at addressing the impacts of motor vehicles on air quality and public health
 - Sets new vehicle emissions standards and lower the sulfur content of gasoline beginning in 2017
 - Reduce both tailpipe and evaporative emissions from passenger cars, light-duty trucks, medium-duty passenger vehicles, and some heavy-duty vehicles
 - Proposed gasoline sulfur standard would enable more stringent vehicle emissions standards and would make emissions control systems more effective

<http://www.epa.gov/otaq/tier3.htm>





Other EPA Efforts

- **Tier 3 Standards – Costs/Benefits**

- Tier 3 is among the most highly cost-effective air quality control measures available.

- The program would cost about a penny per gallon of gasoline, and about \$130 per vehicle.
- The annual cost of the overall program in 2030 would be approximately \$3.4 billion; however, EPA estimates that in 2030, the annual monetized health benefits of the proposed Tier 3 standards would be between \$8 and \$23 billion.

- By 2030, the Tier 3 standards would annually prevent:

- Between 820 and 2,400 premature deaths
- 3,200 hospital admissions and asthma-related emergency room visits
- 22,000 asthma exacerbations
- 23,000 upper and lower respiratory symptoms in children
- 1.8 million lost school days, work days and minor-restricted activities

<http://www.epa.gov/otaq/tier3.htm>





Other EPA Efforts

• Mercury Air Toxic Standard

- On December 16, 2011, EPA announced final standards to limit mercury, acid gases and other toxic pollution from new and existing electric generating units ≥ 25 MW -- approximately 1,400 coal- and oil-fired units at about 600 power plants nationwide
- prevent 90 percent of the mercury in coal burned in power plants from being emitted to the air and reduces acid gases and other air pollutants
- Existing sources generally will have up to 4 years if they need it to comply with MATS
- EPA also providing a pathway for reliability critical units to obtain a schedule with up to an additional year to achieve compliance
- On May 17, 2012, the Federal Energy Regulatory Commission (FERC) approved a policy statement outlining how it will advise EPA on requests for extra time for electric generators to comply with the new mercury and air toxics standards rule

<http://www.epa.gov/otaq/MATS>





Other EPA Efforts

- **Mercury Air Toxic Standard – Estimated Benefits**
 - The annual estimated costs of this final rule are \$9.6 billion. The value of the improvements to health alone total \$37 billion to \$90 billion each year . This means that for every dollar spent to reduce this pollution, we will get \$3-\$9 in health benefits.
 - Each year the rule is fully implemented, the rule will prevent serious health effects, including:
 - 4,200 – 11,000 premature deaths
 - 4,700 heart attacks
 - 130,000 asthma attacks
 - 540,000 missed work or “sick” days
 - Avoiding “sick days” saves companies and families money. It is particularly important for the millions of Americans whose jobs do not provide paid sick leave and who risk losing their jobs if they miss work too often
 - The rule is also projected to annually prevent 5,700 hospital admissions and emergency room visits; 2,800 cases of chronic bronchitis; and 3.2 million days when people must restrict their activities each year

<http://www.epa.gov/otaq/MATS>





Thank You

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