

# CLIMATE CHANGE MITIGATION

EPA'S ROLE IN PRESIDENT OBAMA'S ACTION PLAN

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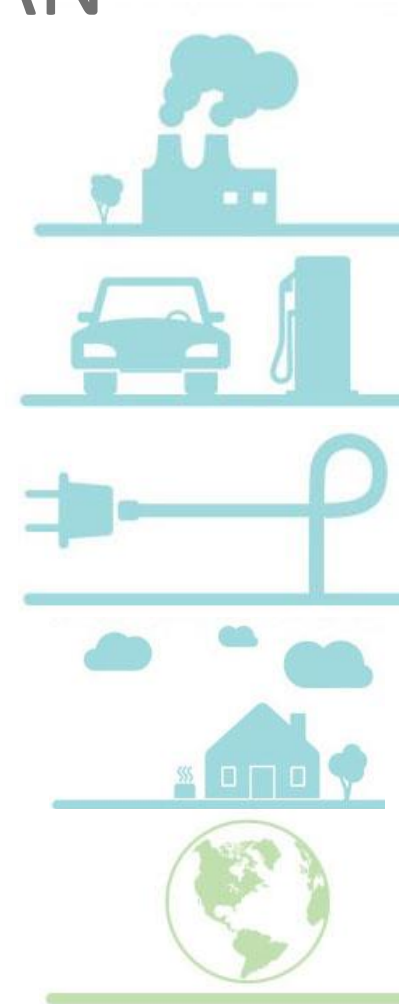
# PRESIDENT OBAMA'S CLIMATE ACTION PLAN

- Calls on the federal government to work together with states, tribes, 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, and
  - Leading an international effort to address a changing climate.



# EPA MITIGATION ACTIONS UNDER PRESIDENT OBAMA'S PLAN

- Reducing carbon pollution from power plants
- Building a 21<sup>st</sup> century transportation sector
- Cutting energy waste in homes, businesses, and factories
- Reducing methane and HFCs
- Advance public-private partnerships
- 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 (CO<sub>2</sub>)

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%



### METHANE (CH<sub>4</sub>)

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

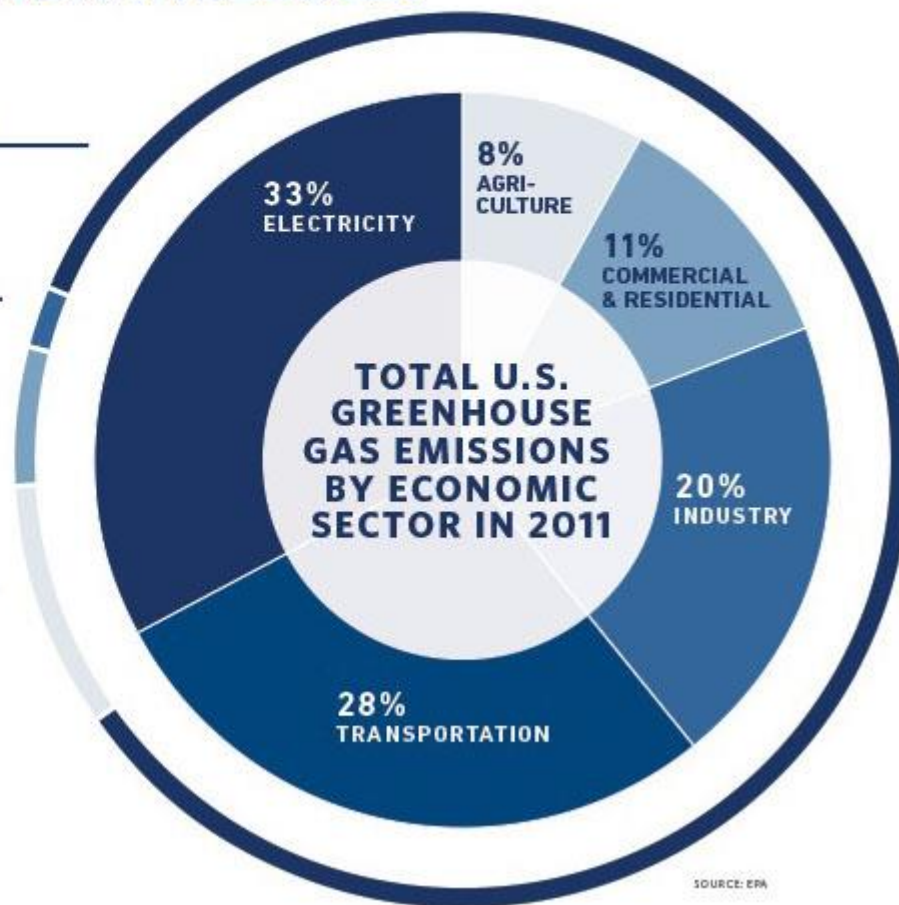
9%

### NITROUS OXIDE (N<sub>2</sub>O)

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

5%

SOURCE: EPA



SOURCE: EPA



# CARBON STANDARDS FOR NEW POWER PLANTS

- Standards for new power plants under 111(b)
  - Proposal issued on September 20, 2013, published January 8, 2014
    - Follows usual approach to setting New Source Performance Standards
    - Reflects more than 2.5 million public comments on a 2012 proposal and recent trends in the electric power sector
    - Sets separate standards for different types of new power plants
      - Defines Best System of Emission Reduction that is based on adequately demonstrated technologies
  - Public comment period closes on May 9, 2014





# CARBON GUIDELINES FOR EXISTING POWER PLANTS

- Guidelines for existing power plants under 111(d)
  - Will follow EPA’s normal, open and transparent regulatory process
    - Proposal: June 2014—Currently at OMB for interagency review
    - Final: June 2015
    - State 111(d) Plans: June 2016
  - Existing power plants are different than new power plants
    - Guidelines are expected to be different from, and less stringent than, the proposed standards for new plants.
  - Clean Air Act calls for EPA to work in partnership with states to address emissions from the existing fleet
    - The Clean Air Act offers proven, flexible mechanisms that provide a path forward to address carbon emissions.
    - States will develop plans to meet standards for existing sources.





# CARBON GUIDELINES FOR EXISTING POWER PLANTS

- Unprecedented outreach to stakeholders will inform guidelines
  - More than 200 meetings with states, industry and other stakeholders
  - 11 public listening sessions
- Common themes heard from industry and states
  - Maximize flexibility in state plans
  - Consider multi-state options
  - Provide adequate time to submit state plans and to reduce emissions
  - Understand and address the impacts, including costs to utilities and ratepayers
  - Ensure reliability
  - Give credit for early action
  - Avoid stranding assets





# BUILDING A 21ST CENTURY TRANSPORTATION SECTOR

- On February 18, 2014, President Obama directed EPA and DOT to develop and issue the next round of GHG and fuel efficiency standards for post-2018 trucks
  - Proposed standards issued by March 31, 2015
  - Final standards issued by March 31, 2016
- Builds on first round of medium- and heavy-duty standards (2014-2018)
- Benefits from first round:
  - Oil: 530 million barrels of oil saved over the lifetime of model year 2014-2018 vehicles
  - GHG: 270 million metric tons CO<sub>2</sub> emissions reductions
  - Fuel Savings: \$50 billion in total fuel savings over the lifetimes of these vehicles







# BUILDING A 21ST CENTURY TRANSPORTATION SECTOR

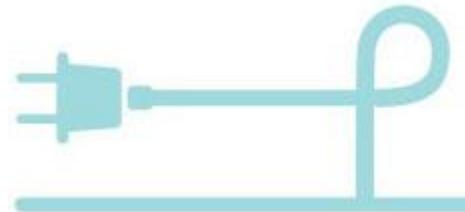
- 2007 Energy Independence and Security Act
  - Congressional mandate to reduce dependency on oil imports and reduce GHGs
- Renewable fuels standard
  - Annual volume rules establish required renewable fuel volumes
  - Ongoing evaluation of potential new renewable fuel pathways
- Continued support for public/private partnerships such as SmartWay





# CUTTING ENERGY WASTE IN HOMES, BUSINESSES, AND FACTORIES

- Climate Action Plan calls for buildings to cut waste and become at least 20 percent more energy efficient by 2020.
- Partnership programs, like Energy STAR, will help achieve this goal.
  - Over ENERGY STAR’s 20-year history, our partners and individuals have prevented more than 1.8 billion metric tons of GHGs. And these energy users are saving more than \$230 billion on their utility bills.





# PRODUCTS



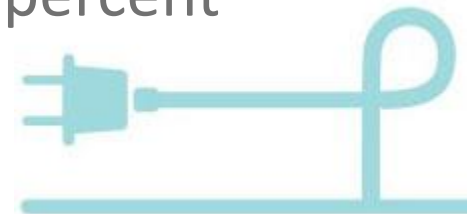
- EPA continues to boost ENERGY STAR performance levels for appliances and products.
  - In 2013, EPA finalized 15 new or revised product specifications including, refrigeration, computers, data center servers and pool pumps.
  - More than 1,500 models from nearly 140 manufacturers were recognized as ENERGY STAR Most Efficient 2013, including televisions, computer monitors, clothes washers, refrigerators, heating and cooling equipment, ventilation and ceiling fans, and windows.





# BUSINESSES AND FACTORIES

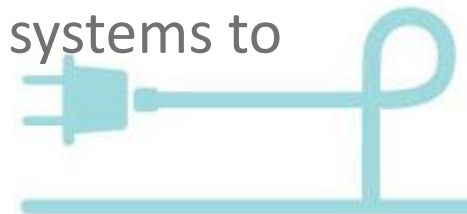
- Promote EPA's Portfolio Manager Tool and develop and deliver other tools and support.
  - We are launching the 2014 National Building Competition: “Battles of the Buildings,” where buildings compete to see which building can save the most energy and water over the course of a year.
  - The Energy STAR Challenge for Industry assists manufacturers of all types in reducing energy use throughout their manufacturing process. Industrial sites that improve their energy efficiency by 10 percent within 5 years are recognized by EPA.





# RESIDENTIAL

- Facilitate home energy improvements through:
  - Enhancing the Energy STAR Home Advisor tool to provide homeowners free, customized energy efficiency recommendations and the ability to track their home improvement activities and progress online.
  - Energy STAR’s verified HVAC installation program improves the energy efficiency and comfort for homeowners purchasing a new HVAC system.
  - Providing homeowners with detailed DO-IT-YOURSELF guidance and information on how to seal and insulate their homes to improve their homes’ efficiency and comfort.
  - Providing information, guidance, and tips to homeowners on maintaining their existing heating and cooling systems to improve efficiency and comfort.





# REDUCING METHANE

- Interagency Strategy to Reduce Methane Emissions
  - Released on March 28, 2014.
  - Sets forth a plan to reduce both domestic and international methane emissions.
  - Identifies ways to improve methane measurement and monitoring.





# REDUCING HFCs

- Address HFCs through domestic action:
  - Use existing Clean Air Act authority of ***Significant New Alternatives Policy (SNAP) Program*** to approve climate-friendly chemicals, prohibit some uses of most harmful chemical alternatives.
  - Provide federal leadership by ***purchasing cleaner alternatives to HFCs*** whenever feasible and by ***transitioning to equipment using safe, more sustainable alternatives***.
- Address HFCs through international action
  - Montreal Protocol





# IDENTIFYING VULNERABILITIES OF KEY SECTORS TO CLIMATE CHANGE

- Interagency Special Report on the Impacts of Climate Change on Human Health in the U.S.
  - Coordinated by U.S. Global Change Research Program (USGCRP) Workgroup on Climate Change and Human Health (CCHHG)
- Product with High Visibility
  - Featured in the President’s Climate Action Plan.
  - Policy and public health decision-makers across the country are in need of more definitive, quantitative assessments of the national burden of health impacts projected under climate change.
- Scientific Assessment of Existing Research
  - State-of-the-science on observed and projected climate change impacts on human health in the U.S.
- Interim Report to complement other Assessment Reports





# Continued support for public/private partnerships

Building on progress to date, EPA will take steps to support further emission reductions from:

- Landfills,
- Coal Mines,
- Agriculture Sources, and
- Oil and Gas Sector
- Aluminum
- Electric Power Systems



# LEADING INTERNATIONAL EFFORTS TO ADDRESS GLOBAL CLIMATE CHANGE

- Expand bilateral cooperation
- Combat Short-Lived Climate Pollutants
  - Climate and Clean Air Coalition
  - Arctic Council
  - Global Alliance for Clean Cookstoves
- Global Methane Initiative (GMI)
- Montreal Protocol
- Partner to implement ENERGY STAR internationally





# LEADING INTERNATIONAL EFFORTS TO ADDRESS GLOBAL CLIMATE CHANGE

- Montreal Protocol
  - The North American Proposal amendment would:
    - Control HFC production and consumption.
    - Phase-*down*, not phase-*out* HFCs.
    - Control by-product emissions of HFC-23 excluding CDM projects.
    - Complements but leaves unchanged UNFCCC obligations.
  - Supports global efforts to reduce GHGs.
  - The Montreal Protocol provides the experience and expertise to effectively implement an HFC phase-down.





# LEADING INTERNATIONAL EFFORTS TO ADDRESS GLOBAL CLIMATE CHANGE

- Work with partner countries to implement ENERGY STAR internationally.
  - Continue engagement with partner countries (EU, Canada, Japan, Taiwan, Australia, New Zealand, Switzerland) through existing agreements to promote specific ENERGY STAR qualified products.
    - Work with non-partner countries (China, India, Mexico) to harmonize efficiency metrics and test methods.
  - EPA coordinated with the Canadian and Mexican governments on efforts to standardize the approaches to measure, track, and assess the energy efficiency of commercial buildings across North America.

