CLEAN AIR REGULATIONS: WHAT’S NEW & WHAT’S NEXT

Janet McCabe
Office of Air and Radiation (OAR)
U.S. Environmental Protection Agency

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Today’s Presentation

- Recent and Upcoming EPA Programs
- EPA’s Commitment to Strong Partnerships with States

Gross Domestic Product: 212%
Vehicle Miles Traveled: 167%
Population: 45%
Energy Consumption: 52%
CO₂ Emissions: 32%
Aggregate Emissions (Six Common Pollutants): -68%
National Ambient Air Quality Standards
Particulate Matter NAAQS

- On June 14, 2012, EPA proposed to:
  - Strengthen the annual health standard for PM$_{2.5}$ by setting the standard within the range of 12-13 micrograms per cubic meter ($\mu$g/m$^3$);
  - Retain the existing 24-hour PM$_{2.5}$ standard at 35 $\mu$g/m$^3$;
  - Set a separate PM$_{2.5}$ standard to improve visibility
    - Two options proposed: 30 or 28 deciviews;
  - Retain existing secondary standards for PM$_{2.5}$ and PM$_{10}$ identical to primary standards; and
  - Retain existing 24-hour standard for PM$_{10}$ at 150 $\mu$g/m$^3$.

- EPA anticipates attainment/nonattainment designations by December 2014, with those designations likely becoming effective early 2015.

- Comments will be accepted until August 31, 2012
  - Two public hearings were held last month: Philadelphia and Sacramento, CA.

- EPA will issue final standards by December 14, 2012.
Counties with Monitors Projected to Violate the 2008 8-Hour Ozone Standard of 0.075 parts per million (ppm) in 2020

1 28 counties are projected to violate the 2008 8-hour ozone standard of 0.075 parts per million (ppm).

2 Future ozone levels were projected only for counties with monitoring data and within the contiguous 48 states.

3 Modeled emissions reflect the expected reductions from federal programs including the Clean Air Interstate Rule, the Clean Air Mercury Rule, the Clean Air Visibility Rule, the Clean Air Nonroad Diesel Rule, the Light-Duty Vehicle Tier 2 Rule, the Heavy Duty Diesel Rule, proposed rules for Locomotive and Marine vessels and for Small Spark-Ignition Engines; as well as illustrative state and local level mobile and stationary source controls identified for the purpose of attaining the 1997 ozone and 2006 PM2.5 standards. States may choose to apply different control strategies for implementation.
2008 Ozone Standards: Final Nonattainment Areas

Notes:
EPA has not designated as nonattainment any areas outside the Continental US.
Reducing Emissions from Stationary Sources
Reducing Emissions Transported Across Statelines: Cross State Air Pollution Rule (CSAPR)
Mercury and Air Toxics Standards (MATS): Benefits

- The first national standards to reduce emissions of mercury and other toxic air pollutants from new and existing coal- and oil-fired power plants.
  - Prevents 90% of mercury in coal burned at a power plant from being emitted
  - Reduces 88% of acid gas emissions
  - Reduces 41% of $SO_2$ emissions (beyond reductions expected from CSAPR)

- Every dollar we spend to reduce pollution will return $3-$9 in health benefits

- Emissions reductions will be made through a range of strategies, including the use of existing emission controls, upgrades to existing emission controls, installation of new pollution controls, and fuel switching.
Breakdown of Reported GHG Emissions (MMT CO2e) from Stationary Sources by Industry Type - 2010*

- Power Plants, 2,324 (72.3%)
- Government & Commercial, 15 (0.5%)
- Pulp & Paper, 46 (1.4%)
- Minerals, 96 (3.0%)
- Metals, 99 (3.1%)
- Landfills, 117 (3.6%)
- Other Industrial, 159 (4.9%)
- Chemicals, 175 (5.4%)
- Refineries, 183 (5.7%)

All data is as reported by facilities on 12/16/11.

This figure shows total reported GHG emissions by industry type reported to the Greenhouse Gas Reporting Program (GHGRP) in 2010. Note this figure does not represent total U.S. emissions, and percentages only imply the percent of total emissions reported by facilities in the GHGRP. The GHGRP covers the vast majority of U.S. emissions from the electric power and industrial sectors.

*Emissions from the transportation, residential, commercial and agricultural sectors are not reflected in these totals.
On June 26th, the U.S. Court of Appeals for the DC Circuit upheld EPA’s endangerment finding, its greenhouse gas emission standards for light duty vehicles and its Tailoring Rule.

- The Court confirmed that EPA followed both the science and the law in these actions.

The Court stated the following:

- Body of scientific evidence supporting the Endangerment Finding is substantial;
- The Clean Air Act requires EPA to regulate GHG emissions from cars and light trucks;
- The Act “unambiguously” requires application of relevant stationary source permitting programs to GHGs; and
- The litigants in the case are not harmed by the Tailoring Rule and therefore lack standing to challenge it.
GHGs: Permitting Stationary Sources

- EPA determination of health and public welfare risks related to GHG emissions from vehicles lead to air permitting of large stationary sources
  - Began January 2, 2011

- Clean Air Act recognizes there will be continual improvement in environmental control technology, the need for national consistency, and provisions for case-by-case determinations

- Tailoring Rule: Phasing in permitting requirements for the largest sources
  - Step 1 – effective Jan 2, 2011
  - Step 2 – effective July 1, 2011
  - Step 3 – finalized June 29th. Retains Steps 1 and 2 thresholds
On March 27, 2012 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 (1000 lbs CO$_2$/MWhr) is flexible, achievable and can be met by a variety of facilities using different fossil fuels, such as natural gas and coal.

EPA proposes that transitional sources, sources with construction permits and sources seeking to renew permits, will not be required to comply – provided they begin construction within 1-year.

The comment period closed on June 25, 2012.
Reducing Emissions from Mobile Sources
Mobile Sources — Ongoing Rules

Light Duty Vehicle Rule 2017 – 2025

- Building on the success of the 2012-2016 Light Duty GHG standards
  - EPA, NHTSA and CARB working closely to develop a harmonized national program
  - Will allow manufacturers to continue to sell a single fleet of cars in the U.S.
- Will reduce GHGs by approximately 2 billion metric tons and save 4 billion barrels of oil over the lifetime of MY 2017-2025 vehicles.
- Would require average fleet performance equivalent to 163 grams per mile of CO₂ or 54.5 miles per gallon by 2025.
- As a result of our new standards (2012-2025), our country will be using 2.1 million barrels of oil LESS each day in 2025.

Heavy Duty Greenhouse Gas Rule, Phase II

- Renewing the principles which made the 2014-2018 Medium and Heavy Duty GHG program a success, the agency is initiating a regulatory framework for Phase II of the Heavy Duty program

Tier 3 Vehicle and Sulfur Standards

- We remain committed to proposing a new rulemaking to address criteria and toxic pollutants from light-duty vehicles and fuels
Diesel Emission Reduction Program


- Accomplishments to date
  - National
    - EPA has awarded over 500 grants across the U.S. totaling over $500 Million
  - State
    - DERA funds have provided States with $165 Million for clean diesel projects in All 50 States, plus D.C. and the 5 island territories

- 2012 Funding
  - State Allocation Program
    - $9 Million available for new State grants
    - Changes under the reauthorization now allow States to fund local and state mandated projects
  - National Competition-$20 Million (closed June 4)
    - 93 applications were received requesting $7 for every $1 available
Partnerships
Launched on April 4, 2012

Designed to help attainment areas work proactively to stay in attainment of ozone NAAQS now and into the future.
- Does not establish new requirements or defer/avoid any existing requirements

Advantages of participating in Ozone Advance include collaborating with EPA to:
- Ensure continued protection of public health;
- Avoid nonattainment; and
- Use available resources to address ozone efficiently and effectively.

Currently, 23 areas located in 17 states are participating in the program

For more information, please visit: www.epa.gov/ozoneadvance

Roadmap helping air quality planners to incorporate emission reductions from Energy Efficiency & Renewable Energy Policies and Programs in state air quality plans.

www.epa.gov/airquality/eere.html

By reducing emissions and demand, Energy Efficiency & Renewable Energy policies and programs can cost less than other emission reduction programs.
AirNow: Working Together to Protect the Public

- A collaboration between EPA and environmental agencies in all 50 states
  - Provides the public with real time air quality data and forecasts
  - Represents nearly 15 years of cooperation between federal and state agencies

Sign up for email alerts and download the AirNow App for the latest air quality information at www.airnow.gov
Collaborative Document with USDA

- Targeted for state and local agencies, public and agriculture communities
- Designed to highlight the major categories of conservation measures
  - Will be updated to include specific measures to address each of the major categories and identify appropriate USDA-NRCS Practice Standards
  - Only measures approved by USDA-NRCS will be included
- Does not provide any regulatory guidance and is solely for informational purposes

Recognizes that measures should be chosen on a case-by-case basis and not all measures may be appropriate for all conditions

Encourages state and local agencies to work with all stakeholders when developing a plan to mitigate air emissions from agriculture sources
Onboard Refueling Vapor Recovery and Stage II Waiver

- Widespread Use of Onboard Refueling Vapor Recovery and Stage II Waiver
  - On May 9, 2012, EPA finalized the determination that onboard refueling vapor recovery (ORVR) is in widespread use throughout the highway motor vehicle fleet.

- Determination also includes waiver of the requirement for gasoline stations to use Stage II vapor controls in Serious and above ozone nonattainment areas.
  - This allows current and former Serious and above areas (e.g., Baltimore, Dallas, Houston, and Philadelphia) to remove existing Stage II programs from state implementation plans.

- EPA will issue separate guidance this summer with methods to assess the emissions impact of phasing out existing Stage II programs, and satisfying the Northeast Ozone Transport Region "comparable measures" requirement and the 110(l) provisions.
Other Recent and Ongoing Actions

- Portland Cement Rules
- Reducing Emissions from Boilers
- Reducing Emissions from the Oil and Gas Sector
- Strategies for Cleaner Wood burning Appliances
“Portland Cement” is a general term used to describe a variety of cements used today.

On August 6, 2010, EPA issued amendments to two rules that will:
- significantly reduce emissions of air toxics and particle-forming pollutants from new and existing Portland cement kilns; and
- limit emissions of ozone- and particle-forming pollutants from new kilns.

EPA received four petitions for reconsideration; the agency agreed to reconsider several of the issues raised in the petitions and denied others.

On December 9, 2011, U.S. Court of Appeals for the D.C. Circuit upheld most of the rule but remanded the rule without vacatur for EPA to address several issues.
- The Court stayed the standards for clinker piles pending administrative reconsideration, because the Court found the standards could change substantially during reconsideration.

EPA is also considering several emission limits in light of EPA’s definition of solid waste.
Reducing Emissions from Boilers

- On December 2, 2011, EPA proposed reconsidered standards for toxic air pollutants from boilers at major and area sources and certain solid waste incinerators
  - Expect to finalize reconsidered standards soon

- Proposed changes would cut emissions of pollutants such as mercury, particle pollution, sulfur dioxide, dioxin, lead, and nitrogen dioxide
  - These pollutants can cause a range of dangerous health effects - from developmental disabilities in children to cancer, heart attacks and premature death

- Proposed standards would have direct benefits to many communities where people live very close to these units
  - Together, the standards will avoid up to 8,100 premature deaths, 5,100 heart attacks, and 52,000 cases of aggravated asthma
  - EPA estimates that Americans would receive $12 to $30 in health benefits for every dollar spent to meet the proposed standards
On April 17, 2012, EPA issued final regulations to reduce air pollution from the oil and gas industry. Rules include the first national air standards for natural gas wells that are hydraulically fractured, along with requirements for several other sources of pollution in the oil and gas industry that are not currently regulated at the federal level.

Rules require “green completions” which is expected to yield a nearly 95% reduction in VOCs emitted from more than 11,000 new hydraulically fractured gas wells each year. Green completions would capture natural gas that currently escapes into the air, and allow it to be treated and used, or sold. VOC reductions will help reduce ground-level ozone in areas where oil and gas production occurs. Methane emissions reduction is a co-benefit.
PM$_{2.5}$ Wood Smoke Attainment Strategies

EPA encourages the installation of cleaner wood burning appliances across the country in areas with PM$_{2.5}$ wood smoke problems

- Through EPA/NGO/industry partnerships, EPA’s wood smoke attainment strategies helped:
  - Replace nearly 24,000 woodstoves and fireplaces,
  - Reduce approximately 370 tons of PM$_{2.5}$ emissions, and
  - Reduce approximately 60 tons of air toxics

- Through an EPA/state consortium/industry partnership, the Hydronic Heater Program has led to the sale of over 10,000 EPA-qualified units since its inception, avoiding approximately 6,100 tons of PM$_{2.5}$ emissions annually

- After 2010, the wood smoke attainment strategies collectively will:
  - Help avoid/reduce an estimated 6,500 tons of PM$_{2.5}$ annually, and
  - Provide approximately $2.4 to $5.8 billion in estimated health benefits annually

- Revisions to 1988 NSPS are underway
Thank you!

Janet McCabe
Principal Deputy Assistant Administrator
Office of Air and Radiation
US Environmental Protection Agency
1200 Pennsylvania Avenue, NW  6100 A
Washington, DC  20460
202-564-7400
mccabe.janet@epa.gov