# Developments in U.S. National Climate Change Policy

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# Overview

- Many Players on Climate Change
- Current EPA Policy Developments Impacting the Future
  - GHG Reporting Rule
  - GHG Endangerment Findings
  - Other EPA Actions/CAA Issues
- Congressional Developments
- International Developments
- Conclusions

# Many Actors Involved

- Much broader and more complex institutionally than any other environmental issue
- Diverse interests and perspectives, e.g.:
  - Energy use, security, and markets: DOE, FERC, DOD
  - Sectoral agencies: USDA, DOT, DOI
  - Revenue use: Treasury
  - Research agencies: DOE, NASA, NOAA, USGS
  - Impacts: DOI, NOAA
  - International activities: DOS, USAID, DOC, USTR
  - Interagency coordination: CEQ, OMB, OSTP, NSC, CEA
- States and regions
  - Trading programs (RGGI, WCI, Midwest)
  - Reporting programs (TCR, CCAR, WCI, etc.)

# Strong Engagement in EPA

- Priority for Administrator Lisa Jackson
- Many EPA offices, programs, and regions focusing on climate
  - Mitigation
  - Impacts (water, air quality)
  - Linkages to other environmental goals (air quality, waste management, etc.)
  - Land use
  - Research and development
  - Data management
  - Regulatory review

# Mandatory GHG Reporting Rule

- Required by the FY 2008 Consolidated Appropriations Act
- First Federal rule requiring mandatory reporting of greenhouse gas (GHG) emissions from large sources
- Intended to collect accurate and timely emissions data to inform future policy decisions
- Final rule signed September 22, 2009
- Collecting this information under the CAA:
  - Does not require an endangerment finding
  - Does not make greenhouse gases a regulated pollutant under the Prevention of Significant Deterioration (PSD) program

# Source Categories in the Final Rule*

| | |
|---|---|
| **Upstream Sources** | • Suppliers of Coal-based Liquid Fuels<br>• **Suppliers of Petroleum Products**<br>• **Suppliers of Natural Gas and Natural Gas Liquids**<br>• Suppliers of Industrial GHGs<br>• Suppliers of Carbon Dioxide (CO2) |
| **Downstream Sources** | • **General Stationary Fuel Combustion Sources**<br>• Electricity Generation<br>• Adipic Acid Production<br>• Aluminum Production<br>• Ammonia Manufacturing<br>• Cement Production<br>• Ferroalloy Production<br>• Glass Production<br>• HCFC-22 Production and HFC-23 Destruction<br>• Hydrogen Production<br>• Iron and Steel Production<br>• Lead Production<br>• Lime Manufacturing<br>• Miscellaneous Uses of Carbonates<br>• Nitric Acid Production<br>• Petrochemical Production<br>• Petroleum Refineries<br>• Phosphoric Acid Production<br>• Pulp and Paper Manufacturing<br>• Silicon Carbide Production<br>• Soda Ash Manufacturing<br>• Titanium Dioxide Production<br>• Zinc Production<br>• Municipal Solid Waste Landfills<br>• Manure Management |
| **Mobile Sources** | •Vehicles and engines outside of the light-duty sector (light-duty in NPRM to *Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Fuel Economy Standards)* |

* We delayed inclusion of the following source categories as we consider the comments and options: Electronics Manufacturing, Ethanol Production, Fluorinated GHG Production, Food Processing, Magnesium Production, **Oil and Natural Gas Systems**, Sulfur Hexafluoride ($SF_6$) from Electrical Equipment, Underground Coal Mines, Industrial Landfills, Wastewater Treatment, Suppliers of Coal

# Rule Summary

## Reporter:

- Facility based reporting for all source categories for which there are methods
- Limited exceptions for a few reporters (e.g. fuel importers, vehicle and engine manufacturers outside of the light-duty sector)
- *No major changes from proposed rule*

## Threshold:

- A facility that meets the general emissions threshold of 25,000 metric tons or more of $CO_2e$/year reports all source categories for which there are methods in the rule
- Capacity thresholds where feasible
- *No major changes from proposed rule*

## Methodology:

- Direct measurement of stationary combustion source categories where data currently collected (e.g., $CO_2$ emissions from EGUs in Acid Rain Program)
- Facility-specific calculation methods for other source categories at the facility
- *Major changes from proposed rule:*
  - *Best available monitoring methods may be used from 1/1/2010-3/31/2010*
  - *Streamlined and reduced reporting burden regarding required methodologies*

# Rule Summary *(cont.)*

## Frequency: Annual

- Data collection will begin January 1, 2010, with first reports submitted to EPA March 31, 2011
- Exception: Facilities already reporting quarterly for existing mandatory programs (e.g., Acid Rain Program) will continue to report quarterly
- *Major changes from proposed rule: Added mechanisms to allow facilities and suppliers to cease submitting annual reporting in special cases*
  - *1) Facilities or suppliers report less than 25,000 metric tons of $CO_2e$ for 5 consecutive years, or less than 15,000 metric tons $CO_2e$ for 3 consecutive years*
  - *2)Facilities or suppliers shut down GHG-emitting processes or operations covered by the rule.*

## Verification: EPA verifies reports

- Reporter self-certifies emissions data and other specified activity data and submits to EPA who performs verification of reports
- *No major changes from proposed rule*

# Relationship to State & Regional Programs

- Rule does not preempt States from regulating or requiring reporting of GHGs
  - EPA rule is a limited action developed in response to a specific request form Congress and is narrower in focus than many existing State programs that are coupled with reduction programs.
- No state delegation
- Reporting entities will report directly to EPA
  - To reduce reporting burden, EPA staff is working with States, The Climate Registry and the Exchange Network on a data exchange standard
  - EPA is committed to working with State and Regional programs to provide timely access to verified emissions data, establish mechanisms to share data efficiently, and harmonize data systems to the extent possible

# Subpart W

- Focus on oil and natural gas systems
- Included in Proposed Rule in April 2009
- EPA received extensive comments on the proposal
- Not included in the Final Rule – EPA is carefully considering and responding to comments
- Next Steps
  - EPA will issue a proposed rule for public comment
  - Goal is to have a proposed rule finalized such that data collection can begin on January 1, 2011

# For More Information about the Mandatory GHG Reporting Rule

- Preamble and final regulatory text available at our website
  - After publication in the FR, it will also be available at **www.regulations.gov**
- Additional information including a training schedule: www.epa.gov/climatechange/emissions/ghgrulemaking.html
- Hotline:
  - Telephone: 1-877-GHG-1188
  - Email: GHGMRR@epa.gov

# Endangerment: Background

- April 2, 2007– In *Massachusetts v. EPA*, the Supreme Court found that greenhouse gases are air pollutants covered by the Clean Air Act
- EPA was required 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
- Endangerment finding is a prerequisite for using section 202 of the Clean Air Act to regulate GHGs

# Endangerment Findings

- April 17, 2009 –Administrator signed a proposal with two distinct findings regarding greenhouse gases under section 202(a) of the Clean Air Act
  - **Proposed Endangerment Finding:** Current and projected concentrations of the mix of six key GHGs in the atmosphere threaten the public health and welfare
  - **Cause or Contribute Finding:** Combined emissions of $CO_2$, $CH_4$, $N_2O$, and HFCs from new motor vehicles and motor vehicle engines contribute to the atmospheric concentrations of these key greenhouse gases and hence to the threat of climate change

# Endangerment: Next Steps

- 60 day public comment period from date of publication in FR (April 24-June 23)
- Approximately 400,000 public comments received
- Work ongoing to respond to public comments
- General Information and FAQs available on website at: http://epa.gov/climatechange/endangerment.html

# Other EPA Actions

- Granted California's request for a waiver for its GHG vehicle standard (74 FR 32744, July 8, 2009)
- NPRM to Establish Light-Duty Vehicle Greenhouse Gas Emission Standards and Corporate Fuel Economy Standards (signed September 15, 2009)
- NPRM: "Prevention of Significant Deterioration and Title V GHG Tailoring Rule" (Signed September 30, 2009)
- Proposal to Reconsider Former Administrator Johnson's Interpretive Memo on Definition of Pollutants Under the Clean Air Act (signed September 30, 2009)

# Other EPA Actions (cont.)

- EPA must respond to a number of pending Clean Air Act issues
  - Multiple petitions to set standards for mobile sources related to aircraft, ships, other non-road engines (e.g. construction)
  - Multiple legal actions related to setting new Source Performance Standards for GHGs (e.g., EGUs and industrial boilers, cement, refineries, landfills)

# Ongoing Congressional Activity

- House passed American Clean Energy and Security Act of 2009
- Draft Senate climate bill—Kerry-Boxer Clean Energy Jobs & American Power Act—released September 30, 2009
  - Differences from House bill: slightly more ambitious targets; price collar on carbon permits; fewer international offsets allowed; EPA retains authority to regulate GHGs under CAA
  - Allocations not specified
  - NSPS delayed until 2020 – opportunity for offsets
- Current legislative framework focuses on cap and trade, but also other policy tools, like:
  - Energy efficiency
  - Renewable Energy

# EPA Analysis of Waxman-Markey

- If enacted, the bill would:
  - Advance energy efficiency and reduce reliance on oil
  - Create an economy-wide cap and trade program
  - Stimulate innovation in clean coal technology
  - Accelerate use of renewable energy sources
  - Create strong demand for clean energy technologies and assist economic recovery and job growth
- At request of bill sponsors, EPA's economic analysis Waxman-Markey Discussion Draft of the bill was issued April 20st
  - Analysis focused on cap and trade provisions due to time limitations
  - Projections of emissions and energy demand based on AEO 2009 (December 2008) and do not include the stimulus law

# EPA Analysis & Major Findings

- The Waxman-Markey Discussion Draft transforms the structure of energy production and consumption, moving the U.S. to a clean energy economy.

- Allowance prices are less than previous EPA analyses of Senate cap and trade bills, ranging from $13 to $17 per metric ton $CO_2$ equivalents ($tCO_2e$) in 2015 and from $17 to $22/$tCO_2e$ in 2020 in the core scenario.

- Offsets have a strong impact on cost containment.

  - The capped sector uses all of international offsets allowed in all years of the policy (1.25 billion $tCO_2e$ offsetting 1 billion $tCO_2e$ of capped sector emissions annually).

  - The 1 billion $tCO_2e$ annual limit on domestic offsets is never reached due to limited mitigation potential.

# International Re-engagement

- Negotiations underway on “Post-2012 Framework”, with aim to agree by Copenhagen
- Timetable is very ambitious
- Key elements of Post-2012 Framework still under development
- Lesson from Kyoto: US domestic policy needs to lead and inform international policy development

# Things to Watch

- Progress in the Senate
  - Climate Bill – multiple committees involved
  - Energy Provisions
- Copenhagen Outcome
- Ongoing Actions under Clean Air Act

# Conclusions – Moving Forward

- Change is underway
  - A lot of policy uncertainty, but strong focus on tackling climate change
- Methane reductions are an important part of climate protection and offer significant co-benefits
  - Potent greenhouse gas
  - Address near-term warming
- Opportunity to act now
  - Technically feasible, cost-effective reductions available
  - Minimize impact of any future regulatory regime
- Full spectrum of policies and measures being considered
  - Use Partnership to prepare for the future

# Contacts and Resources

*Thank you!*

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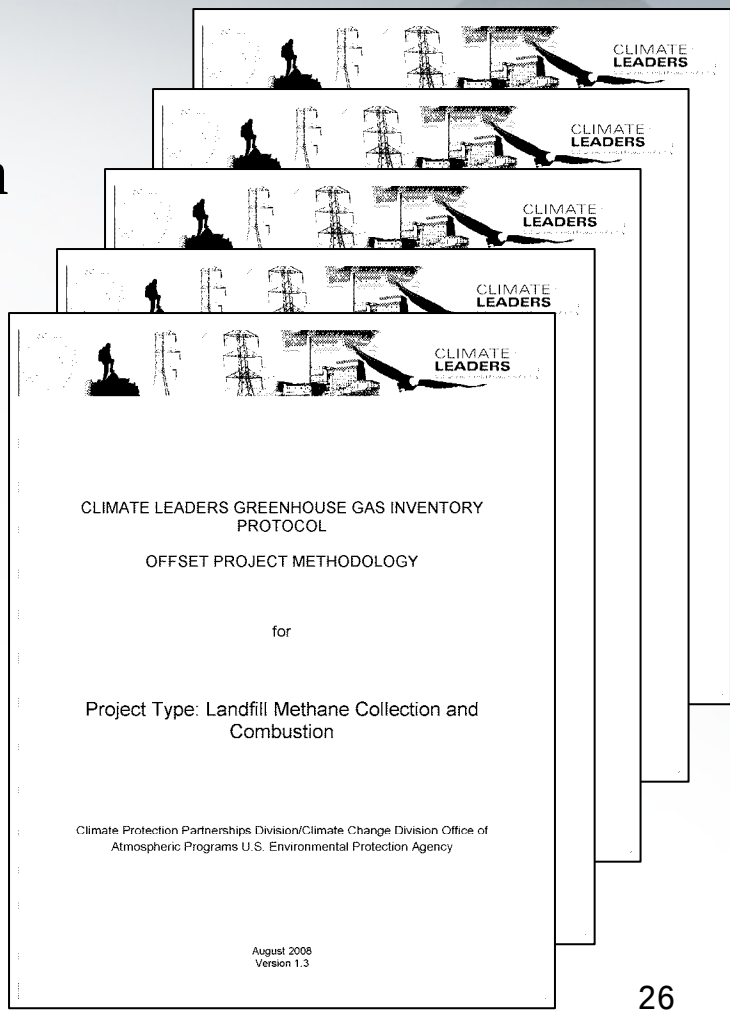
# APPENDIX

# EPA Offsets Experience and Activities

- On the ground, program experience
  - Voluntary programs for energy efficiency, non-CO2 gases. Domestic and international
- Policy and technical experience in cap and trade and GHG accounting
  - Implementing cap and trade programs for SO2/NOx
  - National inventory work
  - Mandatory reporting of GHGs
  - Capacity building in developing countries
- Experience specific to offsets
  - EPA Climate Leaders
  - Climate Action Reserve and other external programs
  - UNFCCC
- Economic Analysis
  - S. 2191
  - H.R. 2454

# Offsets and EPA Climate Leaders

- Industry/government partnership
  - Partners inventory GHG emissions
  - Set reduction goals
- Offsets may be used to meet reduction goals
- EPA develops methodologies for Partner use
  - (including landfill methane, anaerobic digesters, afforestation/reforestation)
- EPA also provides guidance for submitting a project with a new methodology or data set
- EPA reviews and approves projects



# Offsets in Waxman-Markey

- General Provisions
  - Offsets Integrity Advisory Board (OIAB)
    - 9 members, provides recommendations (e.g. on project types, methodologies)
  - EPA/USDA select project types, develop methods, including conservative activity baselines, crediting period, provisions for reversals and leakage
  - Third party verification is required
    - EPA can accept ANSI or develop its own accreditation program
  - Early offsets from programs starting after January 2001
    - CCAR, RGGI, others as determined by EPA
    - Projects initiated after January 1, 2009.
- International offsets
  - Eligibility: developing countries party to an agreement with U.S.
  - Types of international offsets
    - Project-based, with options for implementation
      - Using methods developed by EPA, through a UN mechanism (e.g., CDM), or a hybrid approach
    - Sector-based
      - Sectors and countries meeting certain criteria eligible for only sector-based offsets
    - Reduced deforestation
      - At national, state/provincial, or project/program level, depending on country

# Waxman-Markey Economic Analysis: Offsets Findings

- Offsets have a strong impact on cost containment.
- Domestic offsets
  - The annual limit on domestic offsets is never reached.
- International offsets
  - While the limits on the usage of international offsets (accounting for the extra international offsets allowed when the domestic limit is not met) are not reached, the usage of international offsets averages over 1 billion tCO2 e each year.
  - Without international offsets, the allowance price would increase 89 percent relative to the core policy scenario.
  - If international offsets were not available for only the first 10 years, the allowance price would increase by just 3%.
  - If extra international offsets could not be used when the domestic offset usage was below one billion tCO2 e, then the allowance price would increase 11%.