Developments in U.S. National Climate Change Policy

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Outline

- Clean Air Act, Climate Legislation, and EPA
- 2007 Supreme Court Decision
- Endangerment Findings and Petitions
- Tailoring Rule
- GHG Reporting Program
- International Work

CAA, Climate Legislation, and EPA

- EPA strongly supports comprehensive energy and climate legislation, which will be needed to achieve the President's goal of an 80% reduction in greenhouse gas (GHG) emissions by 2050.

- Supporting legislation and carrying out current law are not mutually exclusive. It makes sense to do both. The agency is obligated to make decisions on GHGs under the current Clean Air Act (CAA), consistent with the 2007 Supreme Court decision in *Massachusetts v. EPA*.

- EPA continues to see existing law as a complement to, rather than a substitute for, new legislation on GHGs.
  - The GHG vehicle rule, for example, is giving us a head start by requiring emissions reductions from cars and light trucks that will contribute to climate protection and to meeting targets in future legislation.

- Administrator Jackson has been clear that EPA will address GHGs in a deliberate and sensible manner. EPA will achieve reductions in ways that are reasonable and effective, focus on large emitters, and strengthen our economy -- by promoting new cleaner technology and reducing dependence on imported oil.

Supreme Court Decision & Aftermath

- *Massachusetts v. EPA* (April 2007)
  - The Supreme Court found that GHGs, including carbon dioxide (CO_2), are "air pollutants" under the CAA
  - Required EPA 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
  - EPA was required to respond to petitions for rulemaking requesting that EPA regulate CO_2 and other GHGs from motor vehicles
  - http://www.supremecourtsus.gov/opinions/06pdf/05-1120.pdf

Endangerment Findings

- In April 2009 EPA proposed two findings under Section 202 of the CAA:
  (1) Current and projected concentrations of six key GHGs endanger the public health and welfare of current and future generations; and
  (2) The combined emissions of CO2 and other GHGs emitted from cars contribute to the pollution that causes the endangerment

- This was the first step in responding to the petition for rulemaking at issue in the *Massachusetts vs. EPA* decision.

- Major reports synthesizing the climate science literature from the U.S. Global Climate Research Program (USGCRP), the Intergovernmental Panel on Climate Change (IPCC), and the National Research Council (NRC) serve as the primary scientific basis supporting the Administrator's Endangerment Findings.

- After consideration of public comments, the Endangerment Findings were finalized in December 2009.

- http://epa.gov/climatechange/endangerment.html

The Public Health and Public Welfare Elements of the Endangerment Findings

- Public Health

  "The Administrator has considered how elevated concentrations of the well-mixed greenhouse gases and associated climate change affect public health by evaluating the risks associated with changes in air quality, increases in temperatures, changes in extreme weather events, increases in food- and water-borne pathogens, and changes in aeroallergens."

  "Finally, the Administrator places weight on the fact that certain groups, including children, the elderly, and the poor, are most vulnerable to these climate-related health effects."

- Public Welfare

  "The Administrator has considered how elevated concentrations of the well-mixed greenhouse gases and associated climate change affect public welfare by evaluating numerous and far-ranging risks to food production and agriculture, forestry, water resources, sea level rise and coastal areas, energy, infrastructure, and settlements, and ecosystems and wildlife."

Endangerment Petitions

- EPA received 10 administrative petitions for reconsideration of the Endangerment Findings.
- After considering issues raised in the petitions, EPA found no evidence to support these claims.
- With this decision, EPA decided there was no scientific or other basis to change its 2009 finding that climate change caused by emissions of greenhouse gases threatens public health and the environment.
- Petitions were denied July 29, 2010.
- "The Endangerment Finding is based on years of science from the U.S. and around the world. These petitions -- based as they are on selectively edited, out-of-context data and a manufactured controversy -- provide no evidence to undermine our determination. Excess greenhouse gases are a threat to our health and welfare." -- EPA Administrator Lisa P. Jackson

GHG Light-Duty Vehicle Rule

- Second step in responding to *Massachusetts vs. EPA* decision
- May 2009 announcement
  - President Obama announced a national policy to dramatically reduce greenhouse gas emissions and improve fuel economy for new cars and light trucks sold in the U.S.
- Proposed rule in September 2009; final rule signed April 2010
  - EPA and NHTSA issued joint rules which require vehicles to meet an average GHG standard of 250 grams CO_2 per mile, equivalent to an average fuel economy standard of 35.5 mpg
  - Standards will cut GHG emissions by an estimated 960 million metric tons and save 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).
  - Automakers can build a single light-duty national fleet that satisfies all requirements under both the National Program and the standards of California and other states, while ensuring that consumers still have a full range of vehicle choices.
  - http://epa.gov/otaq/climate/regulations.htm

The "Tailoring Rule"

- Addresses GHG permitting under the Prevention of Significant Deterioration (PSD) Program and Title V
- What Does PSD Require?
  - Best Available Control Technology (BACT)
  - Air quality analysis
  - Additional impacts analysis
  - Public involvement
- What is BACT?
  - An emissions limitation which is based on the maximum degree of control that can be achieved
  - A case-by-case decision that considers energy, environmental, and economic impact
  - BACT can be add-on control equipment or modification of the production processes or methods
    - Including: fuel cleaning or treatment and innovative fuel combustion techniques
  - BACT may be a design, equipment, work practice, or operational standard if imposition of an emissions standard is infeasible

Tailoring Rule- Timing

- Finalized in May 2010, focuses GHG permitting on the largest emitting facilities -- such as power plants, refineries and cement production. This will keep the workload manageable for permitting authorities.
- Small farms, restaurants, and commercial facilities are shielded by this rule
- Step 1, starting January 2011: Only sources undertaking permitting actions anyway for other pollutants must address GHGs in their permits.
  - These "anyway" sources will be subject to the PSD requirements only if they increase net GHG emissions by 75,000 tpy CO_2e or more.
- Step 2, July 1, 2011-June 30, 2013: Construction of new sources with potential to emit 100,000 tpy CO_2e, and modifications that increase net GHG emissions by 75,000 tpy CO_2e, are subject to PSD.
  - Title V operating permits are required for facilities with potential to emit at least 100,000 tpy CO_2e.
- Further Action
  - The rule establishes an enforceable commitment to complete another rulemaking no later than July 1, 2012, proposing or soliciting comment on a possible Step 3 of the phase-in plan.
  - EPA will not require permits for smaller sources until April 30, 2016 or later, after completing a study of the burden on small sources.

Additional GHG regulatory decisions

- EPA must decide how to respond to petitions, public comments, and lawsuits seeking to have the agency use Clean Air Act authorities to regulate stationary and mobile source categories.
  - Should CAA Section 111 (NSPS) emissions standards be issued for certain categories of large industrial sources of GHGs?
  - Should Title II (mobile sources) of CAA be used for additional categories of mobile sources of GHGs?
  - Should CAA Title VI be used to further control HFCs? (HFCs already covered to some extent under existing regulations)

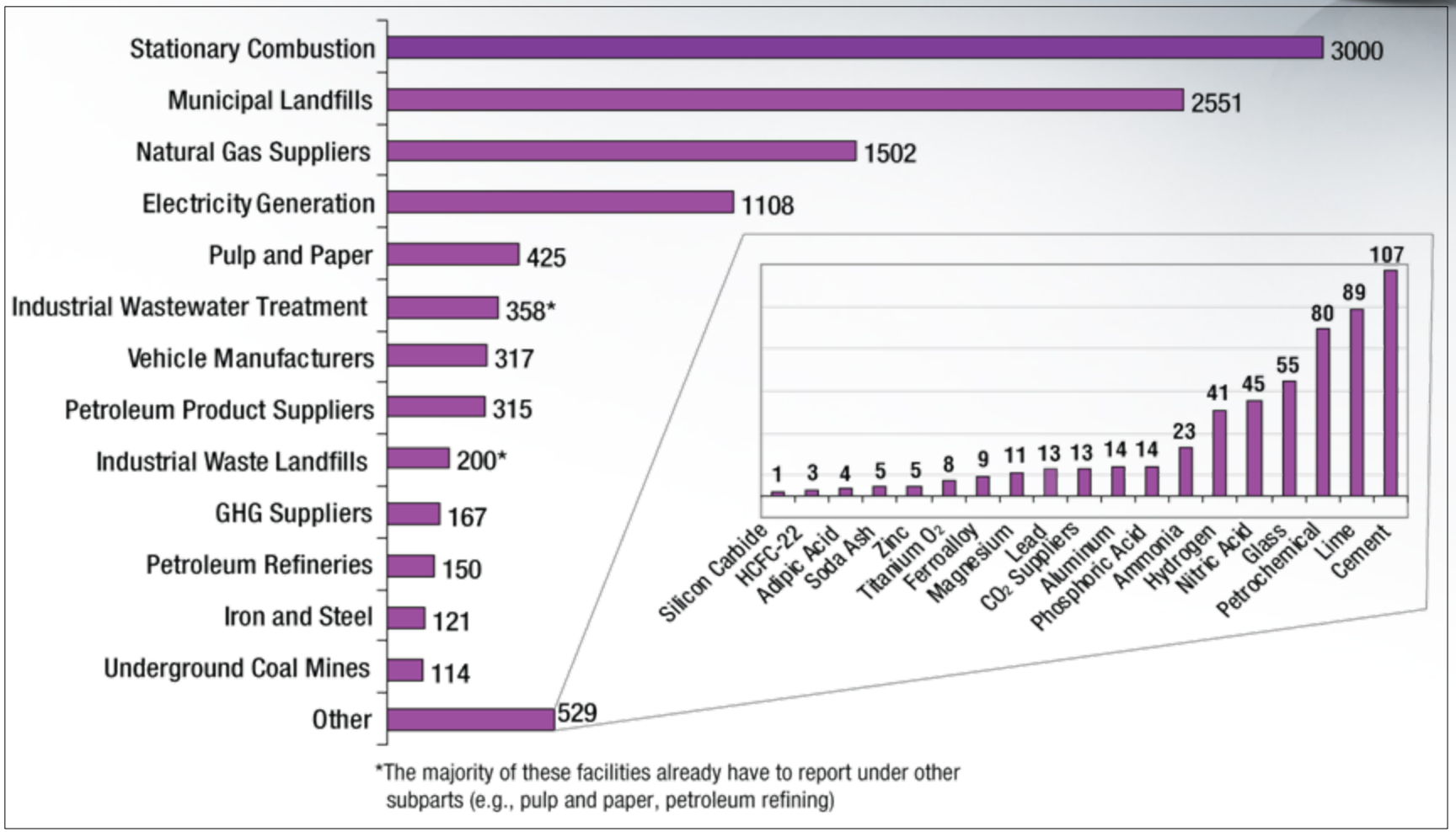
GHG Reporting Program (GHGRP)

- Required by FY08 Appropriations Act – December 26, 2007
- Final rule published in Federal Register in October 2009
  - ~10,000 facilities should be monitoring emissions starting Jan 1, 2010
  - First reports due March 31, 2011
- GHGRP will provide accurate and timely emissions data to inform future climate policy decisions
  - Does not require control of GHG

Key Elements of the Program

- Program applies to:
  - Direct emitters of greenhouse gases with emissions generally equal or greater than 25,000 metric tons CO_2e/year (equivalent to 131 rail cars' worth of coal, or average annual energy use of 2,200 homes)
  - 25 source categories
  - 5 types of suppliers of fuel and industrial GHGs
  - Motor vehicle and engine suppliers (except light duty sector)
- Covers 85% of total U.S. GHG emissions

About 10,000 U.S. Facilities Covered



Data Publication and Use

- EPA will publish all data that is not Confidential Business Information (CBI)
- EPA took comment on what data is CBI and is finalizing its determination now
  - Intend to issue this before March 31 reporting date
- Substantial interest in data publication by NGOs, states, other agencies, and within EPA
- Initiating process to solicit input and ideas for most useful reports and looking for good examples of data dissemination models

Petroleum and Natural Gas Systems Reporting Rule (Subpart W), as proposed

- Petroleum and natural gas reporting rule (Subpart W) amends 40 CFR Part 98 to include reporting of GHG emissions from petroleum and natural gas systems

- Proposed petroleum and natural gas reporting rule:
  - Published in the Federal Register on April 12, 2010
  - 60 day comment period closed on June 11

- Final petroleum and natural gas reporting rule to be issued soon

Key Elements of the Petroleum and Natural Gas Reporting Rule, as proposed

- Requires reporting by facilities in specific segments of the petroleum and natural gas industry that emit GHGs ⩾ 25,000 metric tons carbon dioxide equivalent (CO_2e) per year:
  - Onshore petroleum and gas production facilities (including EOR CO_2 surface emissions), basin level reporting
  - Offshore petroleum and gas production platforms
  - Natural gas processing plants
  - Natural gas transmission compression
  - Underground natural gas storage
  - Liquefied natural gas (LNG) storage
  - LNG import and export
  - Natural gas distribution facilities, owned or operated by Local Distribution Companies (LDCs)
- Annual reporting of:
  - Equipment leaks and vented carbon dioxide (CO_2) and methane (CH_4) emissions;
  - CO_2, CH_4 and nitrous oxide (N_2O) emissions from flares; and
  - CO_2, CH_4, and N_2O combustion emissions from portable and stationary equipment in onshore petroleum and natural gas production

Key Areas of Public Comment

- Over 3,500 submissions received
- About 3,000 from a mass mailer
  - Ensure robust methodologies and data transparency
  - Begin data collection as soon as possible
- Objections to the inclusion of gathering lines and booster stations
  - Additional cost
  - Complexities and variations of ownership
- Measurement methods
  - Commenters stated that meters and regulators were not clearly defined
  - Commenters believe the methodologies to be too burdensome
- Industry segment reporting
  - Many facilities requested guidance about which segment to report under, if they fell under more than one
- Cost estimates

When the Final Rule is Signed:

- EPA will offer GHG Reporting Program training sessions on Subpart W

- More information will be available at: www.epa.gov/climatechange/emissions/subpart/w.html
  - Fact sheet
  - Tip sheet (very detailed)
  - Monitoring checklist (detailed by sector)
  - FAQs

If You Have Additional Questions…

- Step 1: Check the searchable Frequently Asked Questions ("FAQ") database: http://epa.gov/climatechange/emissions/ghg_faq.html

- Step 2: Submit your question using the Hotline Email: GHGMRR@epa.gov
  - EPA will respond in writing
  - Answers will be posted to the FAQ database

Growing International Focus on Methane

- Increased attention on methane reductions due to:
  - Rapid pace of Arctic warming
  - Growing recognition of co-benefits, especially linkage between methane emissions and background concentrations of ground-level ozone
- Last month the Global Methane Initiative was launched at a meeting in Mexico City
  - Builds on the existing structure and success of the international Methane to Markets Partnership (M2M)
  - Includes 38 country partners (up from 14 that initially joined M2M)
  - More than 1,000 public and private sector member organizations, including large multilateral development banks, technology vendors, project developers
  - The United States is pledging $50 million over 5 years, and other developed countries are considering pledges to support implementing methane emissions reduction projects and technologies
  - For more information: http://www.methanetomarkets.org/gmi
- EPA continues to lead US efforts in this area, with support of our private sector partners
- There will be a meeting tomorrow of the Oil and Gas Subcommittee to the Global Methane Initiative

International Accomplishments in Oil and Gas Sector

- Twelve partners in Natural Gas STAR International have reported emissions reductions of 13.1 Bcf in 2009 and 78.7 Bcf since 2004*
- Issued multi-year grant to work with Gazprom to conduct compressor station measurement studies, a methane mitigation evaluation of part of their natural gas transmission system, and a greenhouse gas inventory refinement, among other projects
- Worked with corporate partners in Brazil, Argentina, Mexico, Russia, and the U.S. to publish papers on quantifying natural gas losses from cast iron distribution mains, designing offshore platforms to minimize methane emissions, and the role of methane emission reduction projects in sustainable development
  - Received "Best Paper" award at the World Gas Congress, October 2009
- Conducted on-site measurement studies to quantify methane emissions and propose mitigation projects at oil and natural gas facilities in Chile, China, and Mexico
- Collaborated with PEMEX to develop a program to systematically reduce methane emissions, with project highlights that include a $22 million effort to install dry seals on compressors which will reduce emissions by 70,000 MTCO2E.

*Year that Methane to Markets was launched

Final Thoughts

- Congressional action appears unlikely in the near term
- EPA is moving with careful consideration within the Clean Air Act
- Actions to reduce GHGs remain important
  - Science is strong
  - Rate of change in key indicators is cause for concern
  - One of Administrator Jackson's top priorities for EPA
- Your continued domestic and international efforts to recover and use methane are essential
  - Natural Gas STAR has been extremely successful in reducing methane emissions from oil and natural gas systems in the US
  - We are working collaboratively with partners in other countries to reduce methane emissions through Natural Gas STAR International and the Global Methane Initiative
- Natural gas is part of the climate change solution
  - Strong environmental stewardship in the oil and natural gas industry will continue to be important in addressing climate issues, especially as this industry continues to grow
- Having data available that can inform and guide the development of climate policy is critical for future success

Contacts and Resources

Thank you!

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