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EPA Regulations for Greenhouse Gas Emissions

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Overview

- Two primary regulations, mainly for stationary sources.
 - Mandatory Reporting Rule
 - Tailoring Rule
- Mobile sources addressed separately.

Final Rule: Mandatory Reporting of Greenhouse Gases (GHG)

- EPA issued final rule on September 22, 2009.
 - Response to direction from Congress in FY08 and FY09 appropriations bills to develop GHG reporting rule.
- Mandatory reporting of GHGs from sources that emit 25,000 metric tons or more of CO₂ per year.

Affected Source Categories

Upstream Sources	Suppliers of Fossil Fuels – Liquid & Gaseous Suppliers of Industrial GHGs Suppliers of Carbon Dioxide (CO₂)
Downstream Sources	General Stationary Fuel Combustion Sources Electricity Generation Municipal Solid Waste Landfills Manure Management (CAFO's) Industrial Processes
Mobile Sources	Vehicles and engines outside of light-duty sector
Delayed Inclusion	Underground Coal Mines, Ethanol Prod., Wastewater Treatment, Electronics Mfg, Fluorinated GHG Prod., Food Processing, Magnesium Prod., Oil and Natural Gas Systems, Sulfur Hexafluoride (SF₆), Industrial Landfills

Reporting Thresholds

- Actual emissions of 25,000 MT CO₂e per year.
- ~ 85% of total U.S. GHG emissions covered by rule (about 10,000 facilities).
- Applicability tool available on EPA website.

How Much is 25,000 MT CO₂e?

- Equivalent to:
 - Annual GHG emissions from energy use of ~ 2,300 homes.
 - Annual GHG emissions from ~ 4,600 passenger vehicles.
 - Just over 58,000 barrels of oil consumed.
 - 131 railcars' worth of coal.

Reporting

- Annual Reporting to EPA
 - First reports due to EPA on March 31, 2011.
 - Facilities reporting to Acid Rain Program will continue current practices and submit annual GHG emissions reports.
- Exiting the Program
 - Mechanism for facilities and suppliers to cease reporting by reducing their GHG emissions:
 - 5 consecutive years of emissions below 25,000 MT CO₂e/year.
 - 3 consecutive years of emissions below 15,000 MT CO₂e/year.
 - The GHG-emitting processes or operations are shut down.

Emissions Verification

- EPA Verification
 - Facilities will self-certify the data they submit.
 - No third party verification required.
- EPA may take enforcement action for non-compliance.
- Approach consistent with most EPA programs.

Mobile Sources

- Emissions captured by reports from fuel suppliers and manufacturers of vehicles and engines (outside of light-duty sector).
 - No requirements for fleet operators or state and local governments.
- Manufacturers of vehicles and engines report CO₂ for model year 2011; CO₂ and other GHGs for subsequent model years.

Relationship to State and Regional Programs

- Rule does not preempt States from regulating or requiring reporting of GHGs.
- No state delegation.
- Reporting entities will report directly to EPA.

GHG Mandatory Reporting in Kansas

- Based on 2007 data, 80 Industrial facilities will be subject.
- Manure Management requires 84 facilities to perform calculations to determine if they are subject.
- Potentially, as many as 164 Kansas facilities affected by the GHG Mandatory Reporting Rule.

Animal Population Thresholds (How Much is 25,000 Tons, Part 2)

Mandatory GHG Reporting Rule, Subpart JJ

Animal Group	Average Annual Animal Population (Head)
Beef	29,300
Dairy	3,200
Swine	34,100
Poultry – Layers	723,600
Poultry – Broilers	38,160,000
Poultry – Turkeys	7,710,000

Proposed Rule: Prevention of Significant Deterioration and Title V Greenhouse Gas Tailoring Rule

- EPA proposed rule on September 30, 2009.
- Facilities emitting over 25,000 tons/year GHG.
- Proposes new thresholds for construction permits under New Source Review (NSR) and Title V operating permits programs.
- Existing thresholds under PSD considered not appropriate for GHGs.
 - 100 and 250 tons per year currently.
- Permitting only; not cap and trade.

Background for “Tailoring Rule”

- April 2007: Supreme Court found that GHGs are air pollutants covered by the Clean Air Act (CAA).
- April 2009: EPA proposed endangerment finding that GHGs contribute to air pollution. (Final action pending.)
- September 2009: EPA proposed regulations under the CAA for GHG emissions from light-duty vehicles.
 - Action will trigger CAA permitting requirements under PSD and Title V permitting programs for GHG emissions.
- June-September 2009: Waxman-Markey and Kerry-Boxer bills would regulate GHGs and include cap and trade.



Greenhouse Gases in “Tailoring Rule”

- Proposed rule addresses emissions of six GHGs:
 - Carbon dioxide (CO₂)
 - Methane (CH₄)
 - Nitrous oxide (N₂O)
 - Hydrofluorocarbons (HFCs)
 - Perfluorocarbons (PFCs)
 - Sulfur hexafluoride (SF₆)
- Short Tons vs. Metric Tons
 - MRR uses metric tons; Tailoring Rule uses short tons.
 - Use of short tons consistent within permitting programs.

Prevention of Significant Deterioration (PSD) Construction Permits

- Major stationary source threshold of 25,000 tpy CO₂e.
 - Determines if a new facility or a major modification at an existing facility triggers PSD permitting requirements.
- Significance level 10,000 - 25,000 tpy CO₂e.
 - Emissions above significance level would require PSD permit.
 - EPA requesting comments on significance level.
- Sources triggering PSD requirements would need to incorporate Best Available Control Technologies (BACT) and energy efficiency measures.

Title V Operating Permits

- Major source emissions applicability threshold of 25,000 tpy CO₂e.
- New and existing facilities with GHG emissions below this threshold not required to obtain operating permit for GHGs.
- Existing facilities above the threshold would be required to include estimates of their GHG emissions in their permits at renewal.

Kansas Sources Affected

- Estimated 5 to 15 new or modified PSD sources per year over the 25,000 tons threshold.
 - 2008: 14 construction permits to sources over threshold.
 - 2009: 5 construction permits to sources over threshold, so far.
- Title V Sources
 - ~ 160 Title V permits to be required for GHG emissions.
- Several potential new sources in Kansas.
 - Confined Animal Feeding Operations (CAFOs).
 - Additional Municipal Solid Waste (MSW) Landfills.

Path Forward for “Tailoring Rule”

- 60-day comment period.
- Threshold takes effect immediately upon promulgation of final rule.
- EPA will re-evaluate final GHG thresholds after five years.
 - Will determine if lower GHG thresholds are feasible.
 - Phase 2, potentially with lower thresholds, starts six years after promulgation.

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