

Greenhouse Gas Rules and Climate Change Legislation

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2009 EPA Rules

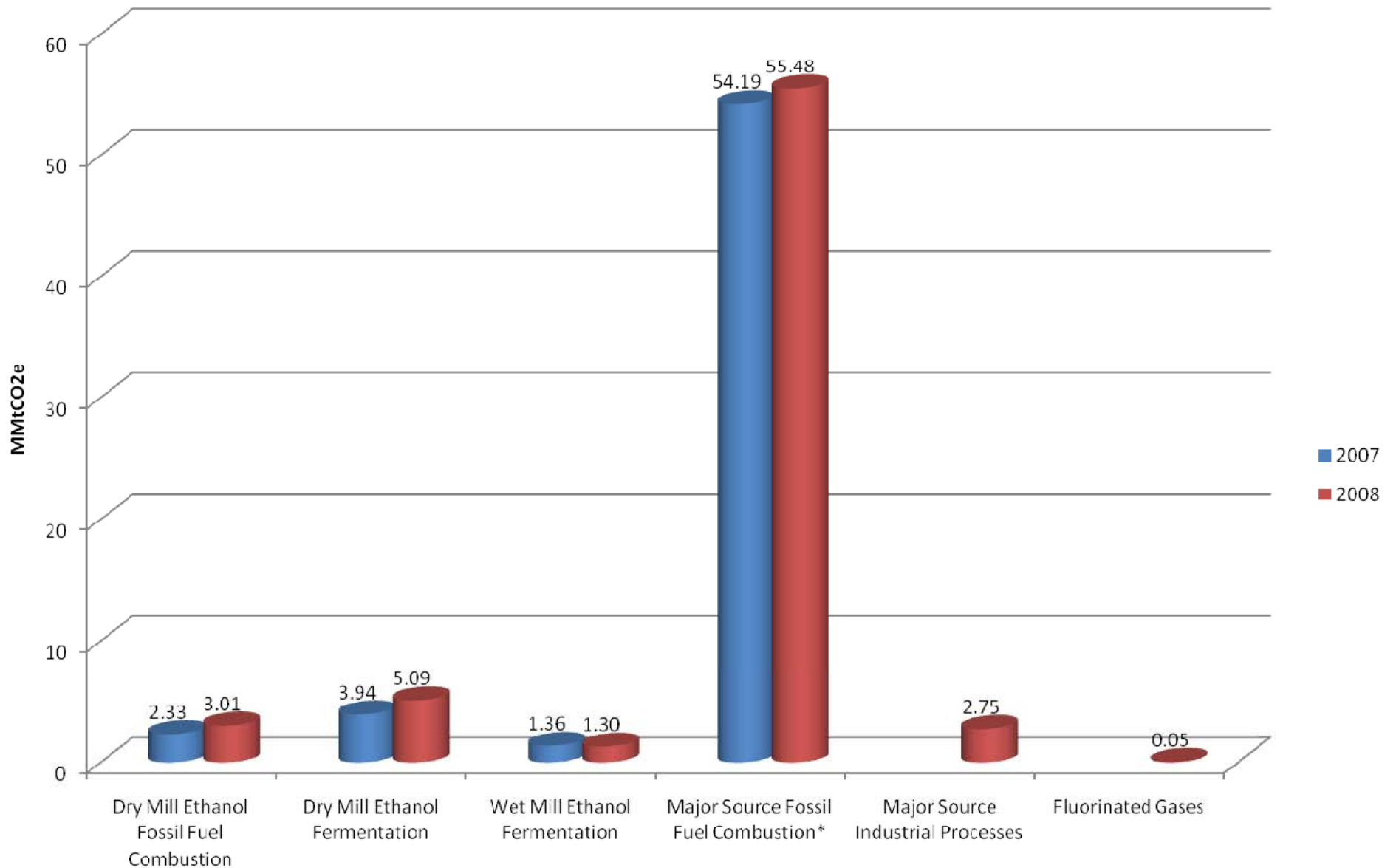
- Endangerment Finding (proposed April)
- Renewable Fuel Standard (proposed May)
- Vehicle and CAFE Standards (proposed Sept)
- Mandatory Reporting (proposed March & final Sept)
- PSD and Title V GHG Tailoring (proposed Sept)



DNR Reporting Requirements

- Facility-level reporting
- Title V facilities
 - Fossil fuel GHGs, F-gases
- Ethanol plants
 - Fossil fuel GHGs, fermentation GHGs
- Industrial GHGs
 - Manufacturers of cement and lime
 - Producers of iron & steel, ammonia, nitric acid
 - Soda ash use

Iowa Point Source Greenhouse Gas Emissions by Sector



* Includes 1.06 MMtCO₂e from 7 dry mill ethanol plants that are also classified as major sources.

Mandatory Reporting of GHGs

Timeline:

- Proposed March 10, 2009
 - Signed September 22, 2009
 - Published October 30, 2009
 - Effective December 29, 2009
- More comprehensive and stringent than DNR reporting requirements.

Key Elements of the Rule

- Annual reporting of GHGs by:
 - 25 source categories
 - 5 types of suppliers of fuel and industrial GHGs
 - Motor vehicle and engine suppliers (except light duty sector)
- 25,000 mtCO₂e per year *actuals* threshold for most sources
- Requires certification by designated representative
- Does not require 3rd party verification
- Does not preempt State reporting programs

Reporting Deadlines

- Data reported directly to EPA electronically
- First reports due to EPA March 31, 2011 for CY 2010
- CY 2009 report still due to DNR March 31, 2010
- DNR will then transition to statewide GHG inventory

Applicability



IowaDNR

The Iowa Department of Natural Resources



Leading Iowans
in caring for
our natural resources

All-in Source Categories

Electricity Generation if report CO ₂ year round through Part 75	Petrochemical Production
Adipic Acid Production	Petroleum Refineries
Aluminum Production	Phosphoric Acid Production
Ammonia Manufacturing	Silicon Carbide Production
Cement Production	Soda Ash Production
HCFC-22 Production	Titanium Dioxide Production
HFC-23 Destruction Processes (see rule for caveats)	MSW Landfills that generate CH ₄ ≥ 25,000 mtCO ₂ e
Lime Manufacturing	Manure Management Systems with combined CH ₄ & N ₂ O ≥ 25,000 mtCO ₂ e*
Nitric Acid Production	<i>*barred by FY 2010 Appropriations Bill</i>

Threshold Categories

Stationary Combustion Units	Lead Production
Ferroalloy Production	Pulp and Paper Manufacturing
Glass Production	Zinc Production
Iron and Steel Production	

- $\geq 25,000$ metric tons CO₂e per year *actuals* from all source categories, combustion units, and miscellaneous use of carbonates.
- Unit-level reporting for stationary combustion units.
- Allows aggregation of up to 250 MMBtu/hr or units if they use the same Tier calculation.
- No exemption for space heaters or insignificant combustion units except emergency equipment.

Sources Not Included in Final Rule

Electronics manufacturing	SF ₆ from electrical equipment
Ethanol production	Underground coal mines
Fluorinated GHG production	Industrial landfills
Food processing	Wastewater treatment
Magnesium production	Suppliers of coal
Oil and natural gas systems	Geologic sequestration

Facilities with these source categories could be covered by the rule based on GHG emissions from stationary fuel combustion sources.

Expect revisions to the rule for these categories in 2010.

What Suppliers Are Covered?

- All producers of petroleum products, coal-based liquids, industrial GHGs, and CO₂
- Exporters of 25,000 mtCO₂e/year
- Importers of 25,000 mtCO₂e/year
- All fractionators and local gas distribution companies of natural gas and natural gas liquids.

Emissions Monitoring

– CEMS

- Required if already used for NSPS, Acid Rain, etc. and meet specified criteria
- May need to upgrade to certify for CO₂
- Optional for other sources

– Source category-specific GHG calculation methods

- Monitor process parameters, fuel use (fuel sampling)
- Calculate GHG using equations in subpart
- Monitoring plan in place by April 1, 2010
- QA/QC requirements to 5% accuracy for monitors and flow meters
- Tiers calculations apply by fuel

Special Provisions for 2010

- Best available monitoring method may be used during 1st Quarter of 2010
- Must begin following all applicable monitoring & QA/QC requirements on April 1, 2010
- Extension requests must be received within 30 days of effective date.
- Abbreviated 2010 report for sources with only fossil fuel combustion units (can report facility total instead of unit GHG)

Mobile Source Requirements

- Emissions from mobile sources will be captured by reports from fuel suppliers and manufacturers of vehicles and engines (outside of the light-duty sector).
- No requirements for fleet operators or state and local governments.
- Manufacturers of vehicles and engines—including heavy-duty trucks, motorcycles, and nonroad engines—will report CO₂ starting with model year 2011 and other GHGs in subsequent model years.

When Can You Stop Reporting?

- If annual reports demonstrate CO₂e <25,000 metric tons/year for 5 consecutive years.
- If annual reports demonstrate CO₂e <15,000 metric tons/year for 3 consecutive years.
- If you shut down all processes/units/supply operations covered by the rule.
- Must notify EPA.
- If threshold is subsequently triggered, must start reporting again.

Technical Assistance

<http://www.epa.gov/climatechange/emissions/ghgrulemaking.html>

- On-line applicability tool
- Technical assistance materials
- Trainings and webinars
- RSS available to announce new outreach materials

Questions on Mandatory Reporting

PSD and Title V Tailoring Rule

- Amends PSD Part 51 and 52 to add
 - Major source level of $\geq 25,000$ tons CO₂e
 - Significance level of $\geq 10,000 - 25,000$ tons CO₂e
- Modifies Title V Part 70 and 71 to add
 - Major source level of $\geq 25,000$ tons CO₂e
- EPA will re-evaluate thresholds after 5 years.
- New Title V sources will have one year to submit application.
- Sources with issued Title V permits will be required to include GHG emissions on their renewal application.

PSD and Title V Tailoring Rule

Total maximum design rate needed for permitting threshold.

Fuel	10,000 tons CO ₂ e PTE	25,000 tons CO ₂ e PTE
Natural gas	~19 MMBtu/hr	~48 MMBtu/hr
Diesel	~13 MMBtu/hr	~34 MMBtu/hr
Bituminous coal	~10 MMBtu/hr	~27 MMBtu/hr

Note: Mandatory reporting rule is in *metric tons actuals*.
Tailoring rule is in *English tons potentials*.
1 English ton = 0.9072 metric tons.

PSD and Title V Tailoring

Which minor sources are likely to have at PTE > 25,000 tons?

- Hospitals
- Schools
- Municipalities
- Portable aggregate plants
- MSW Landfills
- Food processors and meat packers
- Large commercial and residential buildings

PSD and Title V Tailoring

- Comments are due to EPA by December 28, 2009.
- Internal DNR workgroup is reviewing proposed rule.
 - Number of new sources
 - Cost of implementation
 - SIP approval and Iowa rules

Federal Legislation

House

- Waxman-Markey: American Climate and Energy Security Act of 2009 (ACES)

Senate

- Kerry-Boxer: Clean Energy Jobs and American Power Act (CEJAP)

Federal Legislation - ACES

– Cap-and-trade GHG reductions from 2005 levels

3% by 2012

17% by 2020

42% by 2030

83% by 2050

– Capped at 25,000 mtCO₂e

– Removes EPA's authority to further regulate GHGs

– Energy and Job Provisions

- Renewable electricity standard 20% by 2020
- Carbon capture and sequestration
- Building codes, lighting & appliances, etc.
- Green workers, consumer assistance, adaptation programs, public health

Federal Legislation – Kerry-Boxer

- Passed out of Senate Environmental and Public Works Committee to full Senate on 11/05/2009
- 20% reduction by 2020
- Different allowance allocation & offset provisions than ACES
- No renewable energy standard
- Maintains EPA's authority to regulate GHGs

Questions

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<http://www.iowadnr.gov/air/prof/ghg/ghg.html>

<http://www.epa.gov/climatechange/index.html>