Mandatory Greenhouse Gases Reporting Rule

Briefing for States February 25, 2010





# Agenda



 MRR overview and information resources available to the states

> Kitty Sibold, EPA Marnie Stein, Iowa DNR

II. Update on recent MRR activities

Sean Hogan, EPA

III. Building the MRR data flow between EPA and the states Kong Chiu, EPA

Andy Putnam, Colorado DPHE



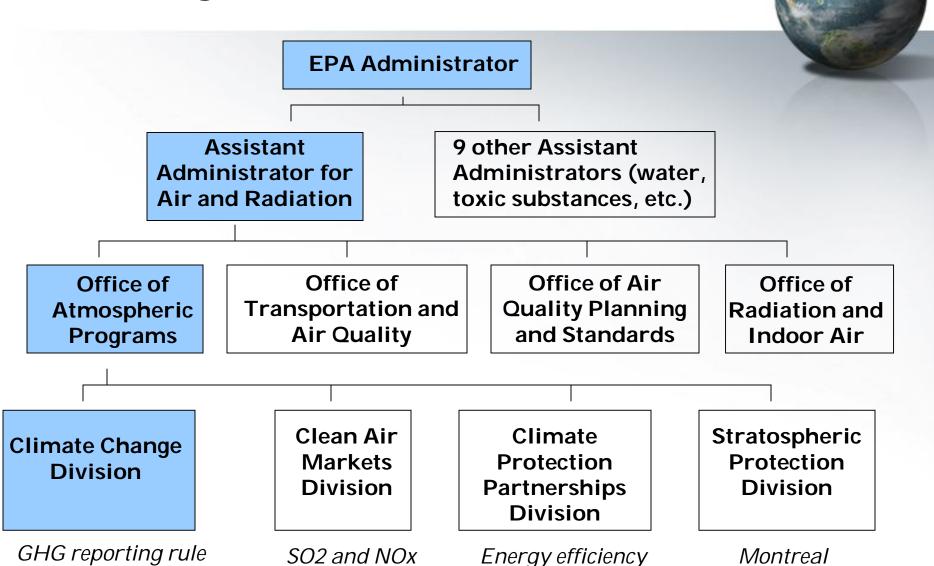
# I. MRR overview and information resources available to the states

# **EPA Organizational Chart**

trading programs

Climate science & econ.

Internat. negotiations



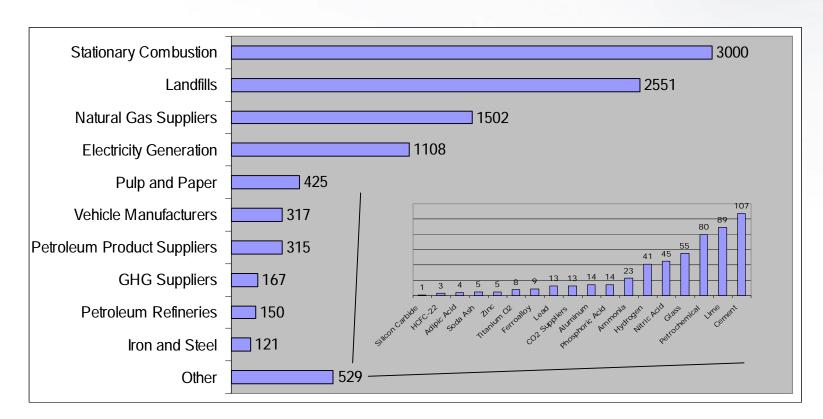
Clean energy

Protocol

implementation

# Purpose of the Rule

- Provide accurate and timely data to inform future climate change policies and programs
- Does not require control of GHGs
- About 10,000 U.S. Facilities Covered



# 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 metric tons or more CO<sub>2</sub>e per year reporting threshold for most sources; capacity-based thresholds where feasible
- Monitoring begins January 1, 2010; first reports due March 31, 2011
- Direct reporting to EPA electronically
- EPA verification of emissions data
- Reported gases include CO2, CH4, N2O, HFCs, PFCs, SF6, other fluorinated gases (except CFC and HCFC and gases <1 mm Hg @25o C)</li>

# Source Categories in the Final Rule

Upstream Sources (Suppliers)	<ul> <li>Suppliers of Coal-based Liquid Fuels</li> <li>Suppliers of Petroleum Products</li> <li>Suppliers of Natural Gas and Natural Gas Liquids</li> <li>Suppliers of Industrial GHGs</li> <li>Suppliers of Carbon Dioxide (CO2)</li> </ul>	
Downstream Sources (Emitters)	<ul> <li>General Stationary Fuel Combustion Sources</li> <li>Electricity Generation</li> <li>Adipic Acid Production</li> <li>Aluminum Production</li> <li>Ammonia Manufacturing</li> <li>Cement Production</li> <li>Ferroalloy Production</li> <li>Glass Production</li> <li>HCFC-22 Production</li> <li>HCFC-23 Destruction</li> <li>Hydrogen Production</li> <li>Iron and Steel Production</li> <li>Lead Production</li> </ul>	<ul> <li>Lime Manufacturing</li> <li>Miscellaneous Uses of Carbonates</li> <li>Nitric Acid Production</li> <li>Petrochemical Production</li> <li>Petroleum Refineries</li> <li>Phosphoric Acid Production</li> <li>Pulp and Paper Manufacturing</li> <li>Silicon Carbide Production</li> <li>Soda Ash Manufacturing</li> <li>Titanium Dioxide Production</li> <li>Zinc Production</li> <li>Municipal Solid Waste Landfills</li> <li>Manure Management (will not be implemented in 2010)</li> </ul>
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)	

# Source Categories Not Finalized in 2009

## EPA is reviewing public comments and other information before deciding on these subparts:

- Electronics manufacturing
- Ethanol production
- Fluorinated GHG production
- Food processing
- Magnesium production
- Oil and natural gas systems
- Sulfur hexafluoride (SF<sub>6</sub>) from electrical equipment
- Underground coal mines
- Industrial landfills
- Wastewater treatment
- Suppliers of coal

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

# Applicability for Direct Emitters is Facility-Based



## A facility\* is defined as...

- Physical property, plant, building, structure, source, or stationary equipment;
- on contiguous or adjacent properties;
- in actual physical contact or separated solely by public roadway or other public right of way; and
- under common ownership or common control

\* **Note:** this definition is different than the definition for Title V and PSD applicability.

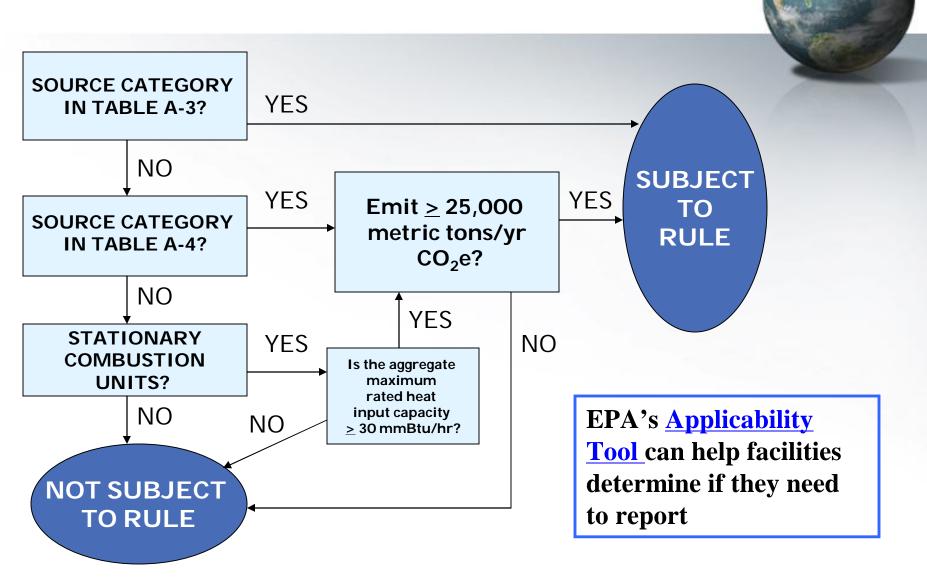
Military installations may be classified as more than one facility.

## Reporting is Facility-Based



- A facility can have multiple source categories.
- A facility must evaluate each source category separately to assess applicability to the rule.
  - "All-in" source categories (Table A-3)
  - Threshold categories (Table A-4)
  - Stationary fuel combustion
- If rule applies, report emissions for all source categories for which methods are provided in the rule.

## Does the Rule Apply to My Facility?





## Table A-3: All-in Source Categories\*

Electricity Generation if report CO<sub>2</sub> year-round through Part 75

Adipic Acid Production

**Aluminum Production** 

Ammonia Manufacturing

Cement Production

**HCFC-22 Production** 

HFC-23 Destruction Processes that are not collocated with a HCFC-22 production facility and that destroy more than 2.14 metric tons of HFC-23 per year

Lime Manufacturing

Nitric Acid Production

Petrochemical Production
Petroleum Refineries
Phosphoric Acid Production
Silicon Carbide Production
Soda Ash Production
Titanium Dioxide Production
Municipal Solid Waste Landfills
that generate CH<sub>4</sub> equivalent to 25,000
metric tons CO<sub>3</sub>e or more per year

Manure Management Systems (Will not be implemented in 2010)

<sup>\*</sup>Source categories are defined in each subpart.

## Table A-4: Threshold Source Categories\*

Ferroalloy Production

Glass Production

Hydrogen Production

Iron and Steel

Production

**Lead Production** 

Pulp and Paper

Manufacturing

Zinc Production

<sup>\*</sup>  $\geq$ 25,000 metric tons CO<sub>2</sub>e per year from all source categories, combustion units, and miscellaneous use of carbonates.

## **Monitoring Requirements**



- Continuous emission monitoring systems (CEMS) required if already used (e.g., NSPS, Acid Rain Program) and meet specified criteria
  - Optional for other sources
- Sources without CEMS must use category-specific GHG calculation methods
  - Monitor process parameters, fuel use
  - Calculate GHG using equations in applicable subparts
  - Example approaches (varies by source category)
    - Mass balance calculation
    - Site-specific emission factors
    - · Default emission factors

## **Special Provisions for 2010**



### Best Available Monitoring Methods (BAMM)

- BAMM may be used from January 1 March 31, 2010
- Source must begin following all applicable monitoring and QA/QC requirements on April 1, 2010 unless an extension is approved by EPA

### Abbreviated Emissions Report

- Available to facilities with only stationary combustion sources, and no other listed source categories
- Can report total facility emissions only (not unit level)
- Can use any calculation methodology in Subpart C

# Schedule for Monitoring and Reporting

1/1/10	Start collecting data using required methods in each subpart or best available monitoring methods (BAMM)
1/28/10	Deadline for submitting application to extend use of BAMM
3/31/10	Monitors installed and calibrated Begin using required monitoring methods (if extension for BAMM not obtained)
12/31/10	Complete 2010 data collection
1/30/11	Submit electronically the certificate of representation
3/31/11	Submit GHG report for 2010
Ongoing	Submit corrected report 45 days after each discovery
Ongoing	Submit annual reports on 3/31 each year

## How Will Emissions Be Verified?



## 2 Step process:

- Self certification
  - Designated representative certifies and submits report
  - Rule allows one designated representative for each facility and supplier
- EPA verification
  - Reports submitted through an electronic system
  - Built-in calculation and completeness checks for reporters
  - Electronic QA and consistency checks
  - On-site audits

# **Electronic Data Reporting System**

- Web-based system (TRI-ME web)
  - Will guide reporters through data entry and submission
  - Interview approach with built-in calculations (TurboTax®)
- Will include option to submit file directly using standard format (e.g., XML)
- XML schema will be available by March 2010
- Complete system design, development, testing and implementation in 2010
- Begin user and facility registration (Summer 2010)
- Outreach, training, and hotline to assist reporters using the system (Summer 2010)

## Confidential Business Information (CBI)

- EPA will protect any information claimed as CBI in accordance with regulations in 40 CFR Part 2, subpart B
- In general, emissions data collected under CAA sections 114 and 208 cannot be considered CBI
- EPA will undertake a separate notice and comment process this year on CBI status of data collected

# Relationship to State and Regional Programs

- Rule does not preempt states from regulating or requiring reporting of GHGs
- Reporting entities are required to report directly to EPA
- EPA is 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

### Resources Available on the Web

Resources by Subpart

### Resources and Tools

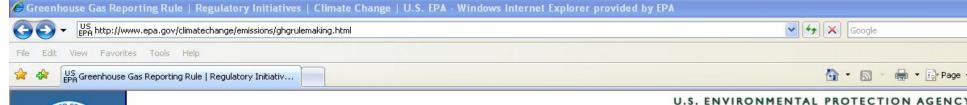
- FAQs
- Information sheets
- Applicability Tool

### **Training Opportunities**

- Webinars
- Regional training sessions

### Rule Help Center

All materials are available at <a href="https://www.epa.gov/climatechange/emissions/ghgrulemaking.html">www.epa.gov/climatechange/emissions/ghgrulemaking.html</a>



#### **Climate Change - Regulatory Initiatives**

O All EPA This Area Search: You are here: EPA Home » Climate Change » Regulatory Initiatives » Final Mandatory Reporting of Greenhouse Gases Rule

Climate Change Home

Regulatory Initiatives Home

Endangerment Findings

Proposed GHG Permitting Requirements on Large Industrial **Facilities** 

**Final Mandatory** Reporting of GHGs Rule

**EPA and NHTSA Propose National** Program to Cut GHG and ImproveFuel **Economy for Cars and** Trucks

Waste Energy Recovery Registry

California GHG Waiver Request

Renewable Fuel Standard 2 (RFS)

**Geologic Sequestration** of Carbon Dioxide

Advance Notice of Proposed Rulemaking

#### Final Mandatory Reporting of Greenhouse Gases Rule

Final Mandatory Reporting of Greenhouse Gases Rule Rulemaking Notices Resources by Subpart Resources and Tools

**Training Opportunities** 

Background

Rule Help Center

In response to the FY2008 Consolidated Appropriations Act (H.R. 2764; Public Law 110-161), EPA has issued the Final Mandatory Reporting of Greenhouse Gases Rule. The rule requires reporting of greenhouse gas (GHG) emissions from large sources and suppliers in the United States, and is intended to collect accurate and timely emissions data to inform future policy decisions.

Under the rule, suppliers of fossil fuels or industrial greenhouse gases, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to EPA. The gases covered by the proposed rule are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), sulfur hexafluoride (SF<sub>c</sub>), and other fluorinated gases including nitrogen trifluoride (NF<sub>c</sub>) and hydrofluorinated ethers (HFE).

The final rule was signed by the Administrator on September 22, 2009. On October 30, 2009, the final rule was published in the Federal Register (www.regulations.gov) under Docket ID No. EPA-HO-OAR-2008-0508-2278. The rule will be effective December 29, 2009. This action includes final reporting requirements for 31 of the 42 emission sources listed in the proposal. At this time, EPA is not finalizing the remaining source categories as we further consider comments and options.

EPA's new reporting system will provide a better understanding of where GHGs are coming from and will guide development of the best possible policies and programs to reduce emissions.

This comprehensive, nationwide emissions data will help in the fight against climate change.

- New! BAMM Petition Form (5 pp, 30 KB, About PDF)
- Special Provisions for 2010 Fact Sheet (PDF) (6 pp, 55 KB, About PDF)
- · Press Release
- Mandatory Reporting of Greenhouse Gases-Final Preamble & Rule (10-30-09 FR) (PDF) (261 pp, 2.57 MB, About PDF)
  - Mandatory Reporting of Greenhouse Gases-Final Preamble (10-30-09 FR) (PDF) (115 pp, 1.27 MB, About PDF)
  - Mandatory Reporting of Greenhouse Gases-Final Rule (10-30-09 FR) (PDF) (147 pp, 1.73 MB, About PDF)
- Regulatory Impact Analysis for the Mandatory Reporting of Greenhouse Gas Emissions Final Rule (PDF) (213 pp, 1.4 MB, About PDF)
- · Response to Comments

To access materials related to the proposed rule, including the Proposed Rule Preamble, please visit the Proposed Rule archive.

You will need Adobe Reader to view some of the files on this page. See EPA's PDF page to learn more.

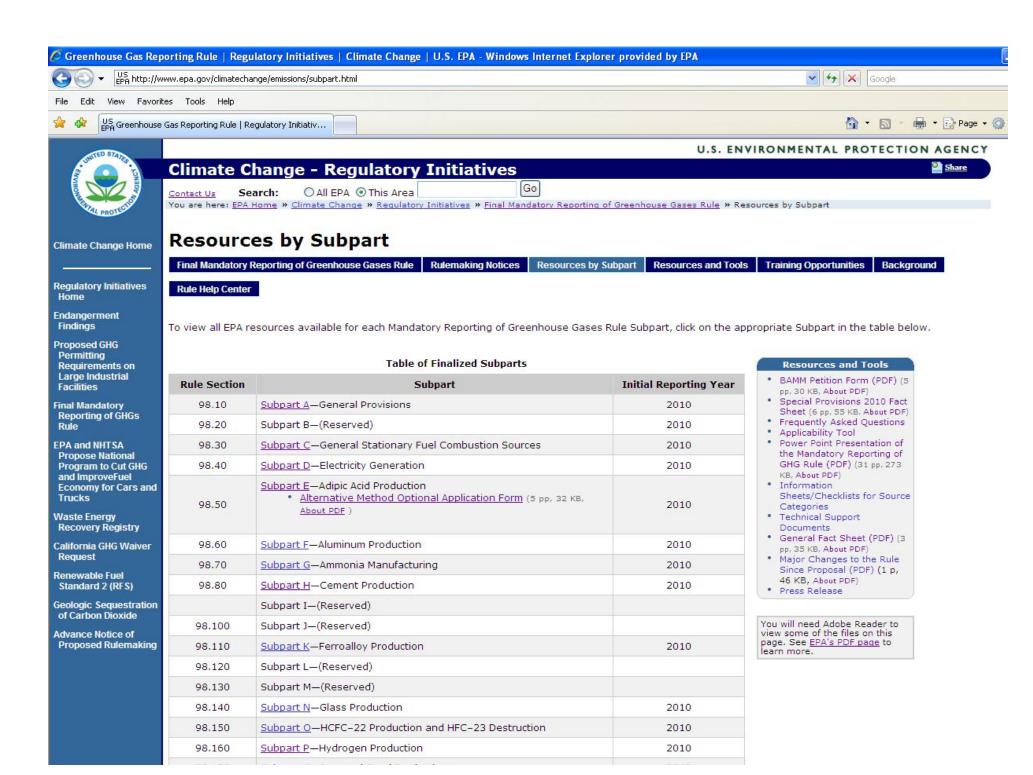
#### What's New

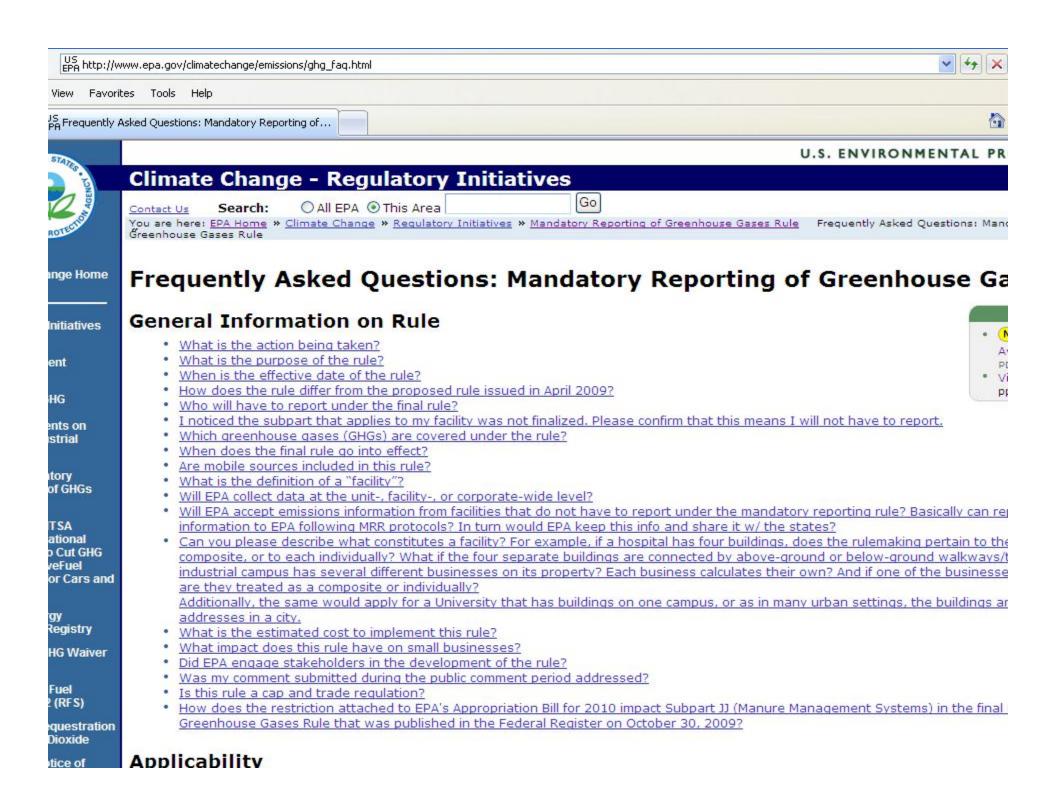


- New! BAMM Petition Form (5 pp. 30 KB, About PDF)
- New! Alternative Method Optional Application Form for Adipic and Nitric Production (5 pp, 32 KB, About PDF)
- New! Additional FAQs Now Available
- . EPA has staff openings for implementation of the MRR
- January and February Reporting Rule Webinars Scheduled
- Special Provisions for 2010 Fact Sheet Now Available (PDF) (6 pp, 55 KB, About PDF)

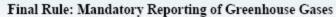
#### Resources and Tools

- . BAMM Petition Form (PDF) (5 pp. 30 KB, About PDF)
- Special Provisions 2010 Fact Sheet (6 pp, 55 KB, About PDF)
- Frequently Asked Questions
- · Applicability Tool
- · Power Point Presentation of the Mandatory Reporting of GHG Rule (PDF) (31 pp. 273 KB, About PDF)
- Information Sheets/Checklists for Source Categories
- Technical Support Documents
- General Fact Sheet (PDF) (3)





#### **Special Provisions for 2010**





EPA has received numerous questions from owners and operators about greenhouse gas (GHG) reporting requirements in 2010. Generally, facilities and suppliers must begin collecting data and complying with all requirements of the rule starting on January 1, 2010. However, the rule contains some provisions for flexibility for the 2010 reporting year. These provisions mean that certain facilities or suppliers will not have to meet some of the requirements during part or all of 2010.

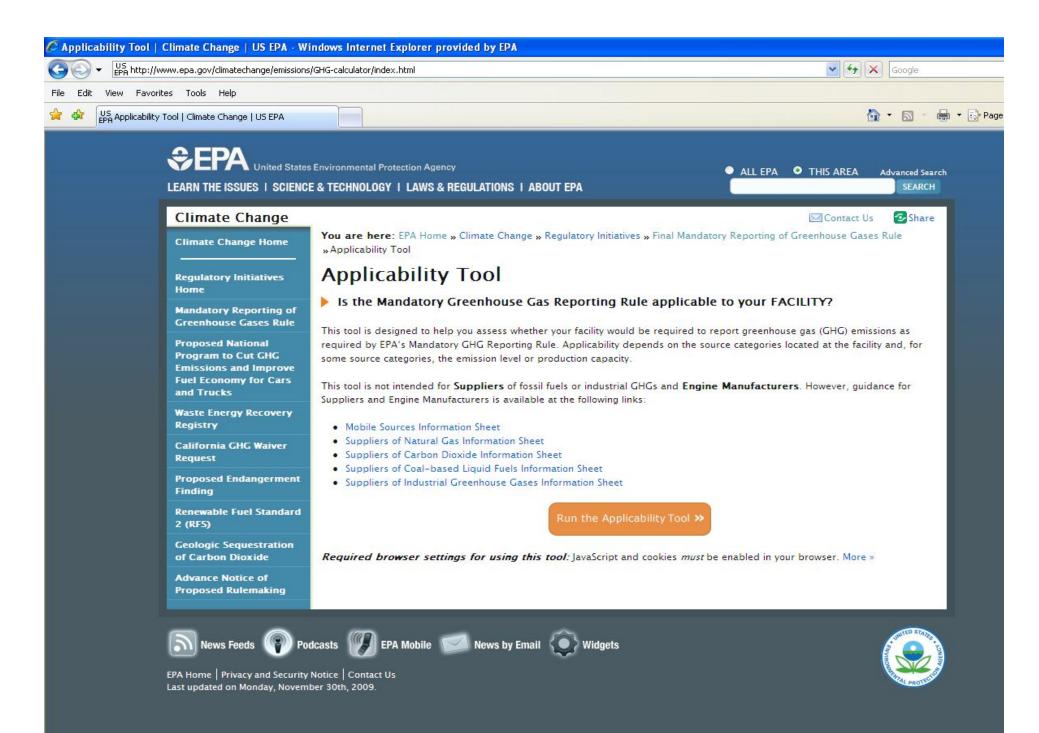
The special provisions for the 2010 reporting year are summarized in the table below.

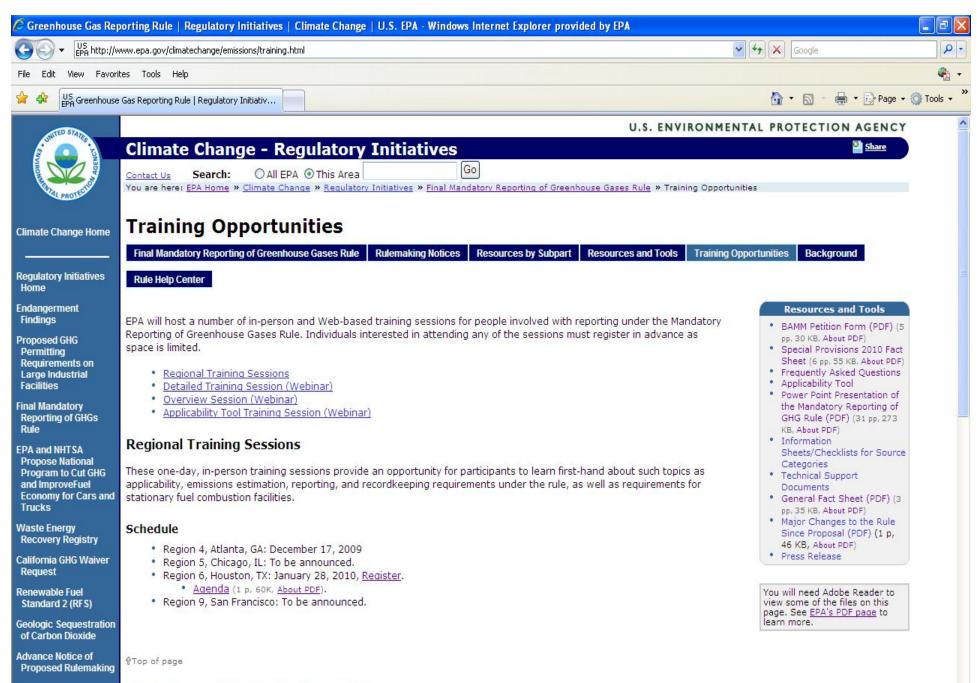
Special Provision	Eligibility	Reference
Abbreviated reporting for the 2010 reporting year	Facilities containing only general stationary fuel combustion sources	§98.3(d)(3)
Use of best available monitoring methods through March 31, 2010 (with possible extension through December 31, 2010)	Any parameter for which it is not reasonably feasible to acquire, install, and operate a required piece of equipment	§98.3(d)(1)
Postponement of equipment calibrations beyond April 1, 2010	Monitoring devices with active calibrations and processes that cannot be calibrated without removing the device from service	§98.3(i)(5) and §98.3(i)(6)
Monitoring plan completed by April 1, 2010	All facilities	§98.3(g)(5)(i)

#### Abbreviated Reporting

#### Who can submit an abbreviated report?

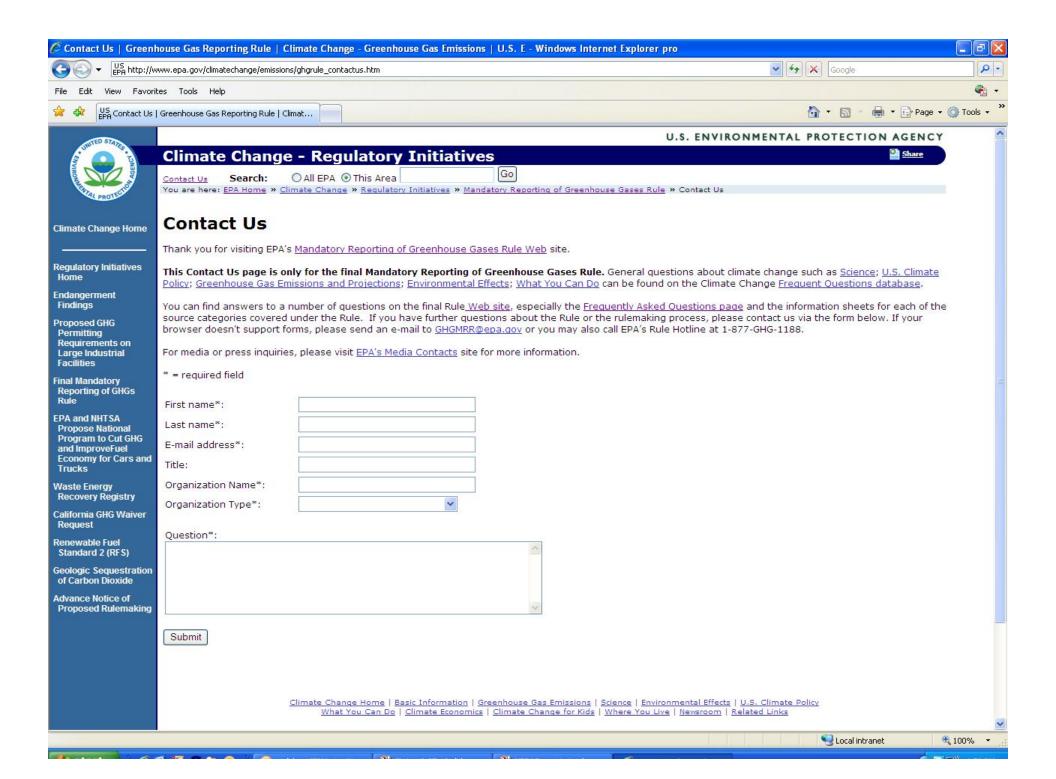
If your facility is required to report emissions from stationary fuel combustion sources only (covered by subpart C of the rule) and none of the "all-in" or threshold sources listed in subparts D-JJ, you may submit an abbreviated emission report for the calendar year 2010 report only (to be submitted March 31, 2011).





#### Detailed Training Session (Webinar)

This Webinar training session provides detailed information on such topics as applicability, estimating emissions, reporting, and recordkeeping requirements under the rule, as well as guidance for stationary fuel combustion facilities.



## **EPA Outreach Activities**



- Webinars- ~22
- Industry meetings- ~ 70
- Regional meetings- 2 done; more planned
- Trade Association contact- newsletters, RSS feeds
- Web site materials- 27k visitors in 45 days
- Hotline- 1300 questions

Estimated contact through meetings/webinars alone: 6500+ people

## **Iowa GHG Activities**



- SF 485, passed in April 2007, required:
  - –All air pollution construction permit applications are required to quantify potential GHG emissions beginning July 1, 2007.
  - –DNR to develop GHG mandatory reporting program by January 1, 2008.
  - –DNR to submit annual GHG emissions report to the Governor & Legislature.
  - -First report due September 1, 2008 for 2007 GHG emissions.
  - –Created Iowa Climate Change Advisory Council.

## **Iowa Outreach on MRR**

- MRR is more comprehensive than Iowa's GHG reporting requirements.
- DNR will cease its mandatory program after the 2009 inventory and transition to top-down inventory.
- Requirement to report to Governor still in effect. DNR will use data collected by EPA.
- Not many resources, but outreach needed to communicate differences between the two rules and transition to top-down inventory.

## **Iowa Outreach Tools**

- Iowa Air List Serve
- Website
  - –FAQ specific to Iowa
  - –Power Point presentation
- Presentations to Industry Groups (by invitation)
- Answer questions and direct them to EPA website
  - Questions on Subpart C monitoring requirements
  - Questions on ethanol plant applicability

# IowaDNR Air Quality The Iowa Department of Natural Resources



#### Compliance

Construction Permits
Greenhouse Gas Emissions
Emissions Inventory
Modeling
Operating Permits
PM2.5 Nonattainment
Rules and Planning
Small Business Assistance
SPARS

#### Citizen Site

Bus Emissions Education Climate Change Education Tools In Your Neighborhood Open Burning Report a Violation Weathercasters

#### **Forms**

Select a Form Type...

#### **Permits**

Select a Permit Type...

#### **Iowa Greenhouse Gas Inventories**

- 2008 Greenhouse Gas Emissions from Selected Iowa Source Categories
  - Greenhouse Gas Inventory Report (PDF File)
  - Cover Letter (PDF File)
- 2007 Greenhouse Gas Emissions from Selected Source Categories
  - Report (PDF File)
     MMtCO2e values in Table 4 on p. 14 corrected on 2/10/09
  - Cover Letter (PDF File)
- <u>Iowa Greenhouse Gas Inventory & Reference Case Projections 1990-2025, October 2008 (PDF File)</u>
- WRI Report Charting the Midwest 2003 Emissions (PDF File)
- Year 2000 Iowa Greenhouse Gas Emissions Inventory (PDF File)
- 1990 Iowa Greenhouse Gas Action Plan (PDF File)

#### **EPA Mandatory Greenhouse Gas Reporting Rule**

- EPA GHG Mandatory Reporting Rule FAQ (PDF File)
- Presentation on the Mandatory Reporting Rule (PDF File)

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

- Fact Sheet Proposed Rule: Prevention of Significant Deterioration and Title V
  Greenhouse Gas Tailoring Rule (PDF File)
- Presentation on the Tailoring Rule (PDF File)

#### DNR Greenhouse Gas Inventory Reporting Forms and Instructions

- Ethanol Production All Facilities
  - Instructions (PDF File) Revised 1/13/2010
  - O Reporting Spreadhseet (XLS File) Revised 1/13/2010

## **Iowa DNR FAQ**

reports to EPA.

This FAQ is intended to be a resource for Iowa facilities that have questions on how the EPA rule will impact DNR's mandatory GHG reporting program and does not address all requirements of the EPA rule. EPA's final rule is available at - <a href="http://www.epa.gov/climatechange/emissions/downloads09/GHG-MRR-FinalRule.pdf">http://www.epa.gov/climatechange/emissions/downloads09/GHG-MRR-FinalRule.pdf</a>.

#### When are facilities required to submit their first GHG emissions report to EPA?

The rule requires covered entities to report their greenhouse gas emissions directly to EPA using a new electronic reporting system. The first report will be for calendar year (CY) 2010 emissions, and will be due March 31, 2011.

#### What GHG's will need to be reported?

The gases covered by the rule are carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), sulfur hexafluoride (SF<sub>6</sub>), and other fluorinated gases including nitrogen trifluoride (NF<sub>3</sub>) and hydrofluorinated ethers (HFE).

#### Will my company be required to report GHG emissions to both EPA and DNR?

No. The GHG inventory for CY 2009 emissions that is due March 31, 2010 will be submitted to DNR. In order to avoid duplicate reporting, DNR will then transition to conducting a statewide greenhouse gas estimate using statewide activity data.

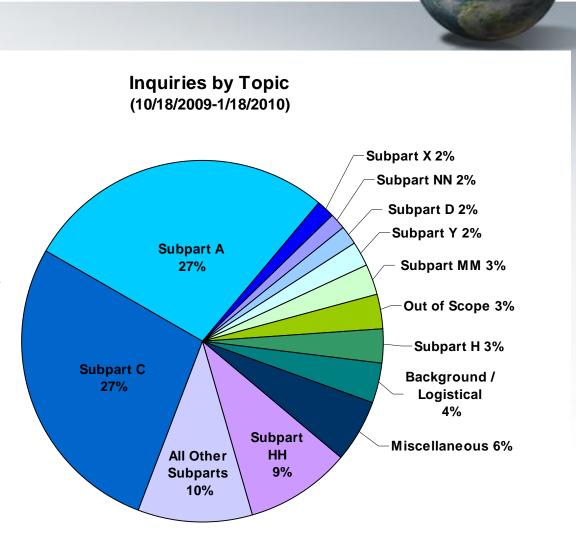
Starting with the CY 2010 GHG emissions report due March 31, 2011, subject facilities will begin reporting **directly** to EPA rather than DNR. DNR estimates that 98% of the GHG emissions reported in previous DNR GHG inventories will be subject to EPA's mandatory reporting rule.



# II. Update on recent MRR activities

## **Update**

- Rule went into effect December 29, 2009; data collection began January 1, 2010.
- Three major efforts right now are responding to industry questions, outreach and communication, and data system development.
- Given the scope of the rule, receiving a lot of questions through the hotline on technical requirements of the rule; if appropriate generating FAQs.



## Update (2)



- Reporters can use Best Available Monitoring Methods (BAMM) through March 31, 2010
  - Petitions to extend use of BAMM had to be submitted by January 28, 2010
  - Are still in the process of evaluating petitions; received several hundred petitions representing a range of industries.
- EPA received 5 petitions for reconsideration on the final rule
  - This is an administrative action.
  - American Petroleum Institute/ National Petrochemical and Refiners Association, Environmental Defense Fund, Utility Air Regulatory Group, American Public Gas Association and the Energy Recovery Council
- 8 petitions for review filed in the DC Circuit Court.
  - The groups listed above, as well as Kinder Morgan, The Fertilizer Institute and the American Chemistry Council

# 2010 Mandatory Reporting Rulemakings



- Proposed GHG reporting rulemakings currently at OMB
  - Petroleum and Natural Gas Systems
  - Geo-sequestration
  - Additional Sources of Fluorinated GHGs
    - Electronics Manufacturing
    - Fluorinated Gas Production
    - SF<sub>6</sub> in Electric Power Systems
    - Manufacturers of Electrical Equipment
    - Importers of Pre-charged Equipment and Closed-Cell Foams
- CBI Notice
- Additional sources not finalized in October 2009 are still being evaluated



# III. Building the MRR data flow between EPA and the states

# State-EPA Integrated Project Team



- The State-EPA Environmental Information Exchange Network "Exchange Network" (background)
- Integrated Project Teams (IPTs) under the Exchange Network
- GHG Data IPT Charge
- GHG Data IPT Membership
  - Andy Putnam, CO, State Co-Chair
  - Kong Chiu, EPA Co-Chair
  - AZ , CA , CO, HI , IA , MA , MI, NC , NJ , NV , NM, OR , WA , WI, State Members
  - ECOS, TCR, Technical Consultants

# State-EPA GHG Data IPT (2)



- Key Work Areas
  - Phase 1: Integrating State Requirements into EPA GHG MRR Electronic Reporting Schema
    - State consultations
    - Additional reporting requirements
  - Phase 2: Plan, design, develop and document the GHG Data Exchange
    - Facility to EPA and EPA to State data flow(s)
    - Must consider:
      - States w/ no GHG data needs or rules
      - States w/ GHG data needs and/or rules <= EPA rule</p>
      - States w/ GHG data needs and/or rules > EPA rule

# State-EPA GHG Data IPT (3)

- Timeline (tentative)
  - Nov, 2009: IPT Charge & Membership
  - Dec, 2009: IPT Kick-Off Meeting
  - Dec 2009-March, 2010: Phase 1
    - Reporting Schema
  - March, 2010- April/May, 2010: Phase 2
    - Exchange Schema
    - Flow configuration document
    - Data exchange template

## State-EPA GHG Data IPT (4)

- State Perspective on IPT
- Phase 1: Summary of Colorado Data Requirements
- Phase 2: Colorado Data Flow Needs

### **Contacts**



### **EPA MRR hotline:**

GHGMRR@epa.gov

#### **Iowa DNR:**

http://www.iowadnr.gov/air/prof/ghg/ghg.html
Marnie Stein, Marnie.Stein@dnr.iowa.gov, 515-281-8468

#### **Colorado DPHE:**

http://www.cdphe.state.co.us/climate/

Andy Putnam, Andrew.Putnam@state.co.us, 303-692-3579