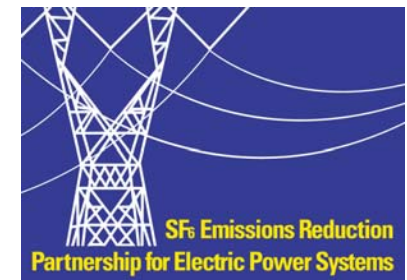


# **U.S. EPA's Proposed Greenhouse Gas Mandatory Reporting Rule**

## **The Reporting of SF<sub>6</sub> Emissions from Electric Power Systems**

### **EPA Climate Change Division**

### **June 2, 2009**



# Overview

- **Background on the Proposed GHGMRR**
- **Proposal for SF<sub>6</sub> Emissions from Electric Power Systems**
  - Who would report?
  - Calculating emissions
  - Monitoring and QA/QC requirements
  - Data reporting requirements
- **Public Comment Period and Stakeholder Engagement**
- **Online Resources**

# Presentation not a substitute for reading the Proposed Rule

- This presentation is intended to assist reporting facilities/owners in understanding key provisions of the proposed rule. However, it is not intended to be a substitution for the rule.
- If there are any inconsistencies between the presentation and the rule, defer to what's in the rule.
- Asking a question during this presentation is not the same as submitting public comment. Please see Web page or preamble for information on how to submit comments.
- Visit EPA's Web site ([www.epa.gov/climatechange/emissions/ghgrulemaking.html](http://www.epa.gov/climatechange/emissions/ghgrulemaking.html)) for more information, including the proposed preamble and rule and additional information sheets on specific industries, or go to [www.regulations.gov](http://www.regulations.gov) to access the rulemaking docket (EPA-HQ OAR-2008-0508). For questions that cannot be answered through the Web site or docket, call 1-877-GHG-1188.

# **Proposed Mandatory GHG Reporting Rule: Overview**



# Outline



- Congressional Request
- Rulemaking Approach
- Summary of Key Elements of Proposal
- Appendices

# Appropriations Language



## **FY08 Omnibus Appropriations, signed Dec 26, 2007:**

- “... not less than \$3,500,000 shall be provided for activities to develop and publish a draft rule not later than 9 months after the date of enactment of this Act, and a final rule not later than 18 months after the date of enactment of this Act, to require mandatory reporting of greenhouse gas emissions above appropriate thresholds in all sectors of the economy...”

## Accompanying Explanatory Statement

- The Agency shall "use its existing authority under the Clean Air Act" to develop a mandatory GHG reporting rule. "The Agency is further directed to include in its rule reporting of emissions resulting from upstream production and downstream sources, to the extent that the Administrator deems it appropriate. The Administrator shall determine appropriate thresholds of emissions above which reporting is required, and how frequently reports shall be submitted to EPA. The Administrator shall have discretion to use existing reporting requirements for electric generating units under Section 821 of the Clean Air Act...."

# Rulemaking Approach



1. Start with anthropogenic emission sources in the U.S. GHG Inventory and IPCC Guidelines
2. Review existing methodologies and reporting programs (e.g., CARB, Acid Rain Program/RGGI, The Climate Registry, 1605b, Climate Leaders, fuel quality and vehicle programs, etc.)
3. Apply screening criteria to identify source categories to be included in the rule:
  - Could be covered under the Clean Air Act
  - Ability to measure
  - Administrative burden
    - Number of reporters vs. coverage of emissions
4. Develop reporting methodologies for selected emission source categories
5. Established cross-Agency workgroup to develop rule
  - 8 technical groups (by source category)
  - Over 100 workgroup members
  - Nearly every office within EPA represented (OAR, OGC, OECA, OPEI, OW, OSWER, OPPTS, etc.)

# Source Categories Coverage



**After applying the screening criteria, EPA developed reporting methodologies for emissions source categories found at the following facilities:**

Sector	Reporters
<b>Electricity Generation</b>	Power plants
<b>Transportation</b>	Vehicle and Engine Manufacturers
<b>Industrial</b>	All large industrial emitters, including those in the following industries:
<i>Metals</i>	Iron and Steel, Aluminum, Magnesium, Ferroalloy, Zinc, and Lead
<i>Minerals</i>	Cement, Lime, Glass, Silicon Carbide, Pulp and Paper
<i>Chemicals</i>	HCFC-22, Ammonia, Nitric Acid, Adipic Acid, SF6 from Electrical Equipment, Hydrogen, Petrochemicals, Titanium Dioxide, Soda Ash, Phosphoric Acid, Electronics, Titanium Dioxide
<i>Oil and Gas</i>	Components of oil and gas systems (e.g., Refineries), Underground coal mining
<b>Other</b>	Landfills, Wastewater Treatment, Ethanol, Food Processing
<b>Agriculture</b>	Manure Management
<b>Upstream Suppliers*</b>	Petroleum Refineries, Gas Processors, Natural Gas Distribution Companies, Coal Mines, Importers, Industrial Gases (e.g., HFCs, N2O, PFCs, CO2)

\*Some upstream suppliers will also be reporting their direct emissions (e.g., refineries)



# Proposal Summary



- **Reporter:** Hybrid approach
  - 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)
- **Threshold:** Hybrid approach
  - A facility that meets the emissions threshold of 25,000 tons CO<sub>2</sub>e reports all source categories for which there are methods in the rule
  - May develop capacity thresholds where feasible (e.g., ARP)
- **Methodology:** Hybrid approach
  - Direct measurement of stationary combustion source categories where data currently collected (e.g., CO<sub>2</sub> emissions from EGUs in ARP)
  - Facility-specific calculation methods for other source categories at the facility
- **Frequency:** Annual
  - Annual for new reporters
  - Facilities already reporting similar data more frequently to other mandatory programs (e.g., Acid Rain Program) continue current practice
- **Verification:** EPA as the verifier
  - Reporter self-certifies emissions data and other specified activity data and submits to EPA who performs QA/QC of reports

# For more information



- Preamble and proposed regulatory text available at: [www.regulations.gov](http://www.regulations.gov) after publication in the Federal Register
- Written comments should be submitted to [www.regulations.gov](http://www.regulations.gov)
- Additional information:  
[www.epa.gov/climatechange/emissions/ghgrulemaking.html](http://www.epa.gov/climatechange/emissions/ghgrulemaking.html)  
Hotline: 1-877-GHG-1188  
Email: GHGMRR@epa.gov

# Appendix A: CAA Section 114



- **Recordkeeping, inspections, monitoring and entry:** For the purpose of “...(iii) carrying out any provision of this chapter...(1) The Administrator may require any person who owns or operates any emission source, who manufactures emission control equipment or process equipment, who the Administrator believes may have information necessary for the purposes set forth in this subsection, or who is subject to any requirement of this chapter (other than a manufacturer subject to the provisions of section 7525(c) or 7542 of this title with respect to a provision of subchapter II of this chapter) a one-time, periodic or continuous basis to-(A) establish and maintain such records; (B) make such reports; (C) install, use and maintain such monitoring equipment and use such audit procedures, or methods; (D) sample such emissions (in accordance with such procedures or methods, at such locations, at such intervals, during such periods and in such manner as the Administrator shall prescribe); (E) keep records on control equipment parameters, production variables or other indirect data when direct monitoring of emissions is impractical; (F) submit compliance certifications in accordance with subsection (a)(3) of this section; and (G) provide such other information as the Administrator may reasonably require.”

# Appendix B: CAA Section 208



- **Information Collection:** “ Every manufacturer of new motor vehicles or new motor vehicle engines, and every manufacturer of new motor vehicle or engine parts or components, and other persons subject to the requirements of this part or part C of this subchapter, shall establish and maintain records, perform tests where such testing is not otherwise reasonably available under this part and part C of this subchapter, make reports and provide information the Administrator may reasonably require to determine whether the person has acted or is acting in compliance with this part and part C of this subchapter and regulations thereunder, or to otherwise carry out the provision of this part and part C of this subchapter, and shall, upon request of an officer or employee duly designated by the Administrator, permit such officer or employee at reasonable times to have access to and copy such records.”



# **Reporting SF<sub>6</sub> Emissions from Electric Power Systems**

**~Subpart DD~**

# Who Would Report?



- Proposed threshold for reporting is 17,820 lbs. of utility-wide SF<sub>6</sub> nameplate capacity
- Proposed EPS source category includes the following SF<sub>6</sub> or PFC containing equipment (transmission and distribution):
  - gas-insulated substations
  - circuit breakers and other switchgear
  - gas-insulated lines
  - power transformers
- Includes owners or operators



# Proposal for Calculating Emissions

- Emissions would be calculated for the entire utility using the following mass balance formula:
  - $\text{Emissions} = (\text{decrease in SF}_6 \text{ inventory}) + (\text{acquisitions of SF}_6) - (\text{disbursements of SF}_6) - (\text{Net Increase in Total Nameplate Capacity of Equipment Operated})$
- Same methodology as Partnership
- PFC emissions calculation would also be required using same equation

# Monitoring and QA/QC Requirements



- **Proposed QA/QC:**
  - Review inputs to emission calculation to ensure all inputs/outputs included
  - Ensure all additions including SF<sub>6</sub> purchased from OEMs and SF<sub>6</sub> returned from off-site recycling are accounted for among the additions to inventory.
  - Do not enter negative inputs, confirm no negative emissions
  - Ensure beginning-of-year inventory matches end-of-year inventory from previous year





# Monitoring and QA/QC Requirements Continued

- Proposed QA/QC methods throughout the year:
  - Weigh all cylinders sent off-site
    - using scales certified to be accurate and precise to within 1% of the true weight and recalibrated per manufacturer specs.
  - Track and weigh all cylinders as they leave and enter storage
    - using scales within 1% of the true weight and recalibrated at least annually or minimum frequency per manufacturer specs.
  - Ensure all substations have provided information to manager compiling the emissions report (if not already handled through an electronic inventory system)

# Proposed Data Reporting Requirements



- Nameplate capacity of all equipment at beginning of year, new equipment purchased and equipment retired during the year
- Transmission miles (>34.5 kV)
- SF<sub>6</sub> and PFCs sales and purchases
- SF<sub>6</sub> and PFCs sent off-site (destruction, recycling, or return to suppliers)
- SF<sub>6</sub> and PFCs returned from off-site after recycling
- SF<sub>6</sub> and PFCs stored in containers at the beginning and end of year
- SF<sub>6</sub> and PFCs with or inside new equipment purchased in the year or sold equipment
- If required, missing data could be replaced by data from similar equipment with similar nameplate capacity

# Public Comment Period and Stakeholder Engagement



- Public comment period ends June 9
- Two public hearings
  - April 6 and 7 in Arlington, VA
  - April 16 in Sacramento

# Online Resources



- The pre-publication text of the proposed rule, details on the public hearings, instructions on how to submit comments, and other information may be found at:

[www.epa.gov/climatechange/emissions/ghgrulemaking.html](http://www.epa.gov/climatechange/emissions/ghgrulemaking.html)

- Frequently asked questions may be found at:

[http://epa.gov/climatechange/emissions/ghg\\_faq.html#rulepurpose](http://epa.gov/climatechange/emissions/ghg_faq.html#rulepurpose)

- An information sheet on SF<sub>6</sub> from EPS may be found at:

<http://www.epa.gov/climatechange/emissions/downloads/SulfurHexafluoride.pdf>