

# Greenhouse Gas Reporting Program

## Subpart DD: Electrical Transmission and Distribution Equipment Use



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For a copy of the presentation slides, visit:

<http://www.epa.gov/ghgreporting/reporters/training/index.html>

# Subpart DD: Overview



- **Definition of Source Category**

- All electric transmission and distribution equipment and servicing inventory insulated with or containing SF<sub>6</sub> or PFCs used within an electric power system.
- Includes
  - Gas-insulated substations
  - Circuit breakers and other switchgear, including both closed-pressure and sealed-pressure
  - Gas containers, such as pressurized cylinders
  - Gas carts
  - Electric power transformers

# Subpart DD: Overview



- **GHGs That Must Be Reported**
  - SF<sub>6</sub> and PFCs emissions from:
    - Fugitive equipment leaks, installation, servicing, equipment decommissioning and disposal
    - Storage cylinders and other containers
  - Emissions from equipment installation and recently purchased equipment must be reported under subpart DD once equipment user has the title to equipment
- **Reporting Threshold**
  - Total nameplate capacity of SF<sub>6</sub> and PFC insulated equipment located within the facility, when added to total nameplate capacity not located within the facility but under common ownership or control, exceeds 17,820 pounds **(excluding sealed-pressure)**
    - Capacity-based equivalent to emissions-based threshold of 25,000 MTCO<sub>2</sub>e
  - Electricity generation units (EGUs)
    - Only report subpart DD emissions from SF<sub>6</sub> or PFC insulated equipment if the nameplate capacity of equipment located *at the EGU facility* exceeds 17,820 lbs

# Subpart DD: Facility Definition



## How is “Facility” defined?

- Due to the unique physical characteristics of electric power systems, subpart DD provides the following facility definition exclusively for the subpart:
  - **Facility (electric power system facility):** *all electric transmission and distribution equipment insulated with or containing SF<sub>6</sub> or PFCs that is linked through electric power transmission or distribution lines and functions as an integrated unit, that is owned, serviced, or maintained by a single electric power transmission or distribution entity (or multiple entities with a common owner), and that is located between: (1) the point(s) at which electric energy is obtained from an electricity generating unit or a different electric power transmission or distribution entity that does not have a common owner, and (2) the point(s) at which any customer or another electric power transmission or distribution entity that does not have a common owner receives the electric energy. The facility also includes servicing inventory for such equipment that contains SF<sub>6</sub> or PFCs.*
- Not Corporate-based, although may align with corporate boundaries
- Each distinct facility submits emissions report to EPA

# Subpart DD: Monitoring Method



- Emissions are measured at the electric power system facility level using a mass-balance approach as follows:

$$\textit{Emissions} = \textit{Decrease in SF}_6 \textit{ Inventory} + \textit{Acquisitions of SF}_6 - \textit{Disbursements of SF}_6 - \textit{Net Increase in Total Nameplate Capacity of Equipment Operated}$$

- Inventory refers to gas inside containers or non-energized equipment
- Gas or nameplate associated with hermetically sealed-pressure equipment *should be included* in all of the inputs of the mass-balance formula.
- PFC emissions must be calculated in the same way, substituting the PFC for SF<sub>6</sub> in the equation above.

# Subpart DD: Monitoring Method (cont.)



## How much SF<sub>6</sub> has arrived inside equipment from electrical equipment manufacturer?

- The recordkeeping requirements in subpart SS require that each electrical equipment manufacturer must retain
  - *“certifications of the quantity of gas, in pounds, charged into equipment at the electrical equipment manufacturer or refurbishment facility as well as the actual quantity of gas, in pounds, charged into equipment at installation.”*
- Subpart SS Preamble: OEMs *“should provide copies of the certifications to electric power system facilities upon request.”*

# Subpart DD and Subpart SS: Equipment Installation & Reporting Boundary



- Emissions that occur during installation while filling the equipment off-site from the electrical equipment manufacturing facility must be calculated and reported by the electrical equipment manufacturer under Subpart SS *until the title of the equipment has transferred to the electric power T&D entity.*
- Once the title has transferred to the equipment user, the subpart DD facility is responsible for reporting emissions even if third-party conducts installation.
  - Emissions are captured in subpart DD mass-balance monitoring methods
- For subpart SS facilities, emissions associated with equipment installation off-site from the manufacturing facility are estimated using a specified mass-balance formula provided in subpart SS.



# Subpart DD: Scale Accuracy



- **Accuracy:** EPA eased the proposed accuracy requirement for scales (of  $\pm 1$  percent of the true mass or weight) as follows:
  - Scales used to weigh cylinders must be accurate to within  $\pm 2$  pounds
  - For determining the amount of gas returned to the supplier in cylinders, a detailed monthly accounting may be obtained from the gas supplier as long as the gas supplier measured the cylinders using scales that were accurate to within  $\pm 2$  pounds

# Subpart DD: Recalibration Requirements



- **Recalibration:** EPA eased the proposed recalibration requirement (of at least annually or as specified by the manufacturer, whichever more frequent) as follows:
  - Recalibration must be performed per manufacturer specifications

# Subpart DD: Cylinder Weighing for Storage Inventory



- EPA eased the requirement for the frequency of storage inventory cylinder weighing
  - Initial proposal: cylinders must be weighed when entering and leaving storage inventory
  - Final subpart DD: cylinders must be weighed for beginning and end of year inventory measurements only
- Beginning and end of year inventory measurements must be developed by physically weighing the cylinders
  - Beginning and end of year measurements should match
  - Data from software inventory tracking system not sufficient

# Subpart DD: Data Reporting Requirements



- Each component of mass-balance inputs must be reported
  - SF<sub>6</sub> and PFCs
    - stored in containers at the beginning and end of the year (decrease in inventory)
    - purchased in bulk (acquisition)
    - purchased from equipment manufacturers or distributors inside equipment (acquisition)
    - returned from off-site after recycling (acquisition)
    - contained in equipment sold to other entities (disbursement)
    - returned to suppliers (disbursement)
    - sent off site to be recycled (disbursement)
    - sent off site for destruction (disbursement)
    - new nameplate capacity commissioned during the year (change in nameplate capacity)
    - nameplate capacity retired during the year (change in nameplate capacity)
- Other data must be reported to confirm accuracy of emission estimates:
  - System-wide nameplate capacity at beginning of year (excluding sealed pressure)
  - Transmission line miles (above 35 kV)
  - Distribution line miles (at or below 35 kV)

# Best Available Monitoring Methods



- Best available monitoring methods may be used during January 1, 2011 through June 30, 2011
  - Use emission estimation equations provided in the rule
  - Obtain equation inputs using best available monitoring method (e.g., current monitoring methods, engineering calculations, company data)
- Must begin following all applicable monitoring and QA/QC requirements on July 1, 2011
- If extension is needed (equipment purchase, process unit shutdown etc.), facility must request an extension
  - Extension request must have been submitted to EPA no later than February 28, 2011
  - No extension will be granted beyond December 31, 2011

# Relationship to State and Regional Programs



- Rule does not preempt states from regulating or requiring reporting of GHGs.
  - EPA rule is a limited action developed in response to a specific request from Congress and is narrower in focus than many existing State programs that are coupled with reduction programs
- No state delegation of program implementation
- Reporting entities must report directly to EPA
  - To reduce reporting burden, EPA is working on a data exchange standard
  - EPA is committed to 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

# Relationship to EPA Voluntary Partnership for Electric Power Systems



- Purpose of Partnership is to identify and support efforts to reduce emissions
- Voluntary Partnership will continue
- Facilities required to report under GHGRP report only once through e-GGRT system
- Facilities not covered under the GHGRP expected to continue reporting per voluntary agreement

# Technical Assistance



- On-line applicability tool: Assists potential reporters in assessing whether they are required to report (on Web site for sources subject to 2010 data reporting)
- Technical assistance materials (e.g., Information Sheets, Monitoring Checklists) (on Web site)
- Trainings and webinars (on-going)
- Other materials 1 – FAQs (as needed)
- RSS available to announce new outreach materials

For complete list of materials and training schedule, see:

<http://www.epa.gov/ghgreporting/reporters/index.html>



# Additional Information



- <http://www.epa.gov/ghgreporting/reporters/index.html>
  - Preamble and rule
  - Technical background documents on source categories
  - Comment response documents
  - Link to rulemaking docket
  - Technical assistance materials
- Email: [GHGMRR@epa.gov](mailto:GHGMRR@epa.gov)