Electric Transmission and Distribution Equipment Use

Subpart DD, Greenhouse Gas Reporting Program

OVERVIEW

Subpart DD of the Greenhouse Gas Reporting Program (GHGRP) (40 CFR 98.300 – 98.308) applies to electrical transmission and distribution equipment that meets the Subpart DD source category definition. Some subparts have thresholds that determine applicability for reporting, and some do not. To decide whether your facility must report under this subpart, please refer to 40 CFR 98.301 and the GHGRP Applicability Tool.

This Information Sheet is intended to help facilities reporting under Subpart DD understand how the source category is defined, what greenhouse gases (GHGs) must be reported, how GHG emissions must be calculated and shared with EPA, and where to find more information.

How Is This Source Category Defined?

The electrical transmission and distribution equipment use source category consists of all electric transmission and distribution equipment and servicing inventory insulated with or containing fluorinated greenhouse gases (GHGs), including but not limited to sulfur hexafluoride (SF_6) and perfluorocarbons (PFCs), used within an electric power system. This equipment and servicing inventory includes but is not limited to:

- Gas-insulated substations
- Circuit breakers
- Switchgear, including closed-pressure and hermetically sealed-pressure switchgear
- Gas-insulated lines containing fluorinated GHGs, including but not limited to SF_6 or PFCs
- Gas containers such as pressurized cylinders
- Gas carts
- Electric power transformers
- Other containers of fluorinated GHGs, including but not limited to SF_6 and PFCs

What GHGs Must Be Reported?

Each facility must report emissions of each fluorinated GHG, including but not limited to SF_6 and PFCs, that is a component of a reportable insulating gas. A reportable insulating gas means an insulating gas whose weighted average global warming potential (GWP), as calculated in Equation DD-3 to 40 CFR 98.302, is greater than one. Emissions to be reported include emissions resulting from the equipment and servicing inventory listed above under "How is This Source Category Defined," including emissions from equipment leaks, installation, servicing, decommissioning and disposal, and from storage containers.

If multiple Greenhouse Gas Reporting Program (GHGRP) source categories are co-located at a facility, the facility may need to report GHG emissions under a different subpart. Please refer to the relevant Information Sheet for a summary of the rule requirements for any other source categories located at the facility.

How Must GHG Emissions Be Calculated?

In addition to the information required by the General Provisions in Subpart A, found at 40 CFR 98.3(c), electric power system facilities must calculate the annual emissions of each fluorinated GHG that is a component of any reportable insulating gas using the mass-balance approach in Equation DD-4:

$$\text{User Emissions}_i = \Sigma_j \text{GHG}_{i,w} * [(\text{Decrease in Inventory of Reportable Insulating Gas j}) + (\text{Acquisitions of Reportable Insulating Gas j}) - (\text{Disbursements of Reportable Insulating Gas j}) - (\text{Net Increase in Total Nameplate Capacity of Equipment Operated Containing Reportable Insulating Gas j})]$$

User Emissions_i Emissions of fluorinated GHG i from the facility (pounds (lbs)).

$\text{GHG}_{i,w}$ The weight fraction of fluorinated GHG i in reportable insulating gas j if reportable insulating gas j is a gas mixture, expressed as a decimal fraction. If fluorinated GHG i is not part of a gas mixture, use a value of 1.0.

Decrease in Inventory of Reportable Insulating Gas j. The difference between the following:

- Reportable insulating gas stored in containers (but not in energized equipment) at the beginning of the year (lbs); and
- Reportable insulating gas stored in containers (but not in energized equipment) at the end of the year (lbs).

These quantities must be measured using a scale that is accurate to within +/- 2 lbs of true weight, and the scale must be recalibrated periodically per manufacturer specifications.

Acquisitions of Reportable Insulating Gas j. The sum of the following:

- Reportable insulating gas purchased or otherwise acquired from chemical producers, chemical distributors, or other entities in bulk (lbs);
- Reportable insulating gas purchased or otherwise acquired from equipment manufacturers, equipment distributors, or other entities with or inside equipment, including hermetically sealed-pressure switchgear, while the equipment was not in use (lbs);
- Reportable insulating gas acquired inside equipment, except hermetically sealed-pressure switchgear, that was transferred while the equipment was in use (e.g., through acquisition of all or part of another electric power system) (lbs); and
- Reportable insulating gas returned to the facility after off-site recycling (lbs).

Disbursements of Reportable Insulating Gas j. The sum of the following:

- Reportable insulating gas returned to suppliers (lbs);
- Reportable insulating gas sent off-site for recycling (lbs);
- Reportable insulating gas sent off-site for destruction (lbs);
- Reportable insulating gas that was sold or transferred to other entities in bulk (lbs);
- Reportable insulating gas containing in equipment, including hermetically sealed-pressured switchgear, that was sold or transferred to other entities while the equipment was not in use (lbs); and
- Reportable insulating gas inside equipment, except hermetically sealed-pressure switchgear, that was transferred while the equipment was in use (e.g., through sale of all or part of the electric power system to another electric power system) (lbs).

The scale used to weigh quantities returned in containers (regardless of whether weighing is performed by the electric power system facility or the supplier) must be accurate to within +/- 2 lbs of true weight, and the scale must be recalibrated periodically per manufacturer specifications.

Net Increase in Total Nameplate Capacity of Equipment Operated Containing Reportable Insulating Gas j. Nameplate capacity refers to the full and proper charge of gas within equipment as specified by the equipment manufacturer rather than the actual charge, which may reflect leakage. The net increase is the difference between the following:

- Nameplate capacity of new equipment (including hermetically sealed-pressure switchgear).
- Nameplate capacity of retiring equipment (including hermetically sealed-pressure switchgear).

Users of closed-pressure electrical equipment with a voltage capacity greater than 38 kilovolt (kV) may measure and adjust the nameplate capacity value specified by the equipment manufacturer by following the requirements of 40 CFR 98.303(b).[1]

A checklist for data that must be monitored is available here: Subpart DD Monitoring Checklist.

What Information Must Be Reported?

In addition to the information required by the General Provisions in Subpart A, found at 40 CFR 98.3(c), the following must be reported:

- Nameplate capacity of equipment (lbs) containing each containing each reportable insulating gas:
  - Exisiting at the beginning of the new year (excluding hermetically sealed-pressure switchgear.
  - New hermetically sealed-pressure switchgear during the year.
  - New equipment other than hermetically sealed-pressure switchgear during the year.
  - Retired hermetically sealed-pressure switchgear during the year.
  - Retired equipment other than hermetically sealed-pressure switchgear during the year.
- The number of reportable insulating gas containing pieces of equipment in each of the following equipment categories:
  - New hermetically sealed-pressure switchgear during the year.
  - New equipment other than hermetically sealed-pressure switchgear during the year.
  - Retired hermetically sealed-pressure switchgear during the year.
  - Retired equipment other than hermetically sealed-pressure switchgear during the year.
- Transmission miles (length of lines carrying voltages above 35 kV).
- Distribution miles (length of lines carrying voltages at or below 35 kV).
- States and territories in which the facility lies.
- Pounds of each reportable insulating gas stored in containers, but not in energized equipment, at the beginning of the year.
- Pounds of each reportable insulating gas stored in containers, but not in energized equipment, at the end of the year.
- Pounds of each reportable insulating gas purchased or otherwise acquired in bulk from chemical producers, chemical distributors, or other entities.
- Pounds of each reportable insulating gas purchased or otherwise acquired from equipment manufacturers, equipment distributors, or other entities with or inside equipment, including hermetically sealed-pressure switchgear, while the equipment was not in use.

[1] See EPA's 2024 Review of Revisions To The GHGRP For Electrical Equipment (Subparts DD & SS) for the requirement for measuring nameplate capacity.

- Pounds of each reportable insulating gas returned to the facility after off-site recycling.
- Pounds of each reportable insulating gas acquired inside equipment, except hermetically sealed-pressure switchgear, that was transferred while the equipment was in use (e.g., through acquisition of all or part of another electric power system).
- Pounds of each reportable insulating gas that was sold or transferred to other entities in bulk.
- Pounds of each reportable insulating gas returned to suppliers.
- Pounds of each reportable insulating gas sent off-site for recycling.
- Pounds of each reportable insulating gas sent off-site for destruction.
- Pounds of each reportable insulating gas contained in equipment, including hermetically sealed-pressure switchgear, that was sold or transferred to other entities while the equipment was not in use.
- Pounds of each reportable insulating gas disbursed inside equipment, except hermetically sealed-pressure switchgear, that was transferred while the equipment was in use (e.g., through sale of all or part of the electric power system to another electric power system).
- The total of the nameplate capacity values most recently assigned by the electrical equipment manufacturer(s) to each of the following groups of equipment:
    - All new equipment whose nameplate capacity values were measured by the user under this subpart and for which the user adopted the user-measured nameplate capacity value during the year.
    - All retiring equipment whose nameplate capacity values were measured by the user under this subpart and for which the user adopted the user-measured nameplate capacity value during the year.
- The total of the nameplate capacity values measured by the electrical equipment user for each of the following groups of equipment:
    - All new equipment whose nameplate capacity values were measured by the user under this subpart and for which the user adopted the user-measured nameplate capacity value during the year.
    - All retiring equipment whose nameplate capacity values were measured by the user under this subpart and for which the user adopted the user-measured nameplate capacity value during the year.
- For each reportable insulating gas reported in 40 CFR 98.306(a), (d) through (o), and (q), an ID number or other appropriate descriptor that is unique to that reportable insulating gas.
- For each ID number or descriptor reported in 40 CFR 98.306(t) for each unique insulating gas, the name (as required in 40 CFR 98.3(c)(4)(iii)(G)(*1*)) and weight percent of each fluorinated gas in the insulating gas.

What Records Must Be Maintained?

Reporters are required to retain records that pertain to their annual GHGRP report for at least three years after the date the report is submitted. Please see the Subpart A Information Sheet and 40 CFR 98.3(g) for general recordkeeping requirements. Specific recordkeeping requirements for Subpart DD are listed at 40 CFR 98.307.

When and How Must Reports Be Submitted?

Reporters must submit their annual GHGRP reports for the previous calendar year to the EPA by March 31st, unless the 31st falls on a Saturday, Sunday, or federal holiday, in which case reports are due on the next business day. Annual reports must be submitted electronically using the electronic Greenhouse Gas Reporting Tool (e-GGRT), the GHGRP's online reporting system.

Additional information on setting up user accounts, registering a facility, and submitting annual reports is available on the GHGRP Help webpage.

When Can a Facility Stop Reporting?

A facility may discontinue reporting under several scenarios, which are summarized in Subpart A (found at 40 CFR 98.2(i)) and the Subpart A Information Sheet.

For More Information

For additional information on Subpart DD, please visit the Subpart DD webpage. For additional information on the GHGRP, please visit the GHGRP website, which includes additional information sheets, data previously reported to the GHGRP, training materials, and links to Frequently Asked Questions (FAQs). For questions that cannot be answered through the GHGRP website, please contact us at: GHGreporting@epa.gov.

This Information Sheet is provided solely for informational purposes. It does not replace the need to read and comply with the regulatory text contained in the rule. Rather, it is intended to help reporting facilities and suppliers understand key provisions of the GHGRP. It does not provide legal advice; have a legally binding effect; or expressly or implicitly create, expand, or limit any legal rights, obligations, responsibilities, expectations, or benefits with regard to any person or entity.