

Subpart QQ: Imports and Exports of Pre-Charged Equipment and Closed-Cell Foams containing Fluorinated GHGs



**Greenhouse Gas Reporting Program
January 17, 2012**



Agenda



- Background on the GHG Reporting Program
- Applicability under Subpart QQ
- Reporting, Monitoring, and Recordkeeping under Subpart QQ
- Q&A

Disclaimer



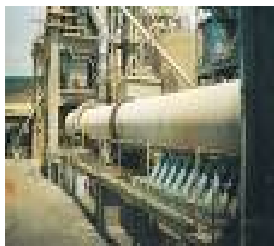
This training is provided solely for informational purposes. It does not provide legal advice, have legally binding effect, or expressly or implicitly create, expand, or limit any legal rights, obligations, responsibilities, expectations, or benefits in regard to any person.

Overview: U.S. EPA GHG Reporting Program (GHGRP)



Goal of GHGRP is to collect accurate and timely data on GHG information to inform future policy decisions.

- Monitoring began in 2010 for most source categories with first reports due by late summer 2011.
- An additional 12 source categories began collecting data in 2011 and report by late summer 2012.
- Rule covers 41 source categories for reporting, accounting for 85-90% of U.S. GHG emissions.
- Reporting only, no control or use requirements.



Source Categories for 2010



- **Adipic Acid Production (Subpart E)**
- **Aluminum Production (Subpart F)**
- **Ammonia Manufacturing (Subpart G)**
- **Cement Production (Subpart H)**
- **Electricity Generation (Subpart D)**
- **Ferroalloy Production (Subpart K)**
- **General Stationary Fuel Combustion Sources (Subpart C)**
- **Glass Production (Subpart N)**
- **HCFC-22 Production HFC-23 Destruction (Subpart O)**
- **Hydrogen Production (Subpart P)**
- **Iron and Steel Production (Subpart Q)**
- **Lead Production (Subpart R)**
- **Lime Manufacturing (Subpart S)**
- **Manure Management Systems (Subpart JJ)** [*EPA will not be implementing subpart JJ due to a Congressional restriction prohibiting the expenditure of funds for this purpose.*]
- **Municipal Solid Waste Landfills (Subpart HH)**
- **Miscellaneous Uses of Carbonates (Subpart U)**
- **Nitric Acid Production (Subpart V)**
- **Petrochemical Production (Subpart X)**
- **Petroleum Refineries (Subpart Y)**
- **Phosphoric Acid Production (Subpart Z)**
- **Pulp and Paper Manufacturing (Subpart AA)**
- **Silicon Carbide Production (Subpart BB)**
- **Soda Ash Production (Subpart CC)**
- **Suppliers of Coal-based Liquid Fuels (Subpart LL)**
- **Suppliers of Petroleum Products (Subpart MM)**
- **Suppliers of Natural Gas and Natural Gas Liquids (Subpart NN)**
- **Suppliers of Industrial Greenhouse Gases (Subpart OO)**
- **Suppliers of Carbon Dioxide (Subpart PP)**
- **Titanium Dioxide Production (Subpart EE)**
- **Zinc Production (Subpart GG)**

Source Categories for 2011



The twelve new source categories for reporting year 2011 and beyond include:

- Electronics Manufacturing (Subpart I)
- Fluorinated Gas Production (Subpart L)
- Magnesium Production (Subpart T)
- Petroleum and Natural Gas Systems (Subpart W)
- Use of Electric Transmission and Distribution Equipment (Subpart DD)
- Underground Coal Mines (Subpart FF)
- Industrial Wastewater Treatment (Subpart II)
- **Imports and Exports of Equipment Pre-charged with Fluorinated GHGs or Containing Fluorinated GHGs in Closed-cell Foams (Subpart QQ)**
- Carbon dioxide injection and geologic sequestration (Subpart RR)
- Manufacture of electric transmission and distribution (Subpart SS)
- Industrial waste landfills (Subpart TT)
- Injection of carbon dioxide (Subpart UU)

Key Elements of the Rule



- Annual reporting of GHG by:
 - 41 source categories, which includes:
 - 33 types of direct emitters
 - 6 types of suppliers of fuel and industrial GHG
 - Facilities that inject CO₂ underground for geologic sequestration, enhanced oil recovery, or any other purpose.
- Direct reporting to EPA electronically
- EPA verification of emissions data

What GHGs Are Reported?



- CO₂
- CH₄ (methane)
- N₂O (nitrous oxide)
- Fluorinated GHGs
 - HFCs (hydrofluorocarbons)
 - PFCs (perfluorocarbons)
 - SF₆ (sulfur hexafluoride)
 - Other fluorinated gases (except CFC and HCFC and gases <1 mm Hg @25° C)

What Is CO₂e?



- GHGs have varying heat-trapping ability and atmospheric lifetimes.
- Global warming potential (GWP) is a metric used to compare emissions among GHGs.
- The GWP of CO₂ is 1.0, and the GWP of other GHGs are expressed relative to CO₂
 - For example, CH₄ has a GWP of 21. Each metric ton of CH₄ emissions would have 21 times as much impact on global warming (over a 100-year time horizon) as a metric ton of CO₂ emissions.
- Mass emissions x GWP = CO₂e (metric tons)

Table A-1 of Subpart A lists GWPs

Subpart QQ Calculator



Available through EPA's applicability tool

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

Applicability Tool

► Is the Mandatory Greenhouse Gas Reporting Rule applicable to your FACILITY?

This tool is designed to help you assess whether your facility would be required to report greenhouse gas (GHG) emissions as required by EPA's Mandatory GHG Reporting Rule. Applicability depends on the source categories located at the facility and, for some source categories, the emission level or production capacity.

This tool is **not** intended for **Suppliers** of fossil fuels or industrial GHGs and **Engine Manufacturers**. However, guidance for Suppliers and Engine Manufacturers is available at the following links:

- [Mobile Sources Information Sheet \(PDF\)](#) (2 pp., 53 K)
- [Suppliers of Carbon Dioxide Information Sheet \(PDF\)](#) (2 pp., 53 K)
- [Suppliers of Coal-based Liquid Fuels Information Sheet \(PDF\)](#) (3 pp., 46 K)
- [Suppliers of Industrial Greenhouse Gases Information Sheet \(Including Bulk Importers and Bulk Exporters of Fluorinated GHGs and N₂O\)\(PDF\)](#) (4 pp., 68 K)
- [Download calculation utility \(XLS\)](#) (50 K, [About XLS](#))
- [Importers and Exporters of Fluorinated Greenhouse Gases Contained in Pre-charged Equipment or Closed-cell Foams \(PDF\)](#) (2 pp., 37 K)
- [Suppliers of Natural Gas Information Sheet \(PDF\)](#) (3 pp., 61 K)
- [Suppliers of Petroleum Products Information Sheet \(PDF\)](#) (4 pp., 62 K)



Applicability under Subpart QQ

Who needs to report under Subpart QQ?



- **Importers** with total annual imports of fluorinated GHGs in equipment and foams $\geq 25,000$ metric tons CO₂e
- **Exporters** with total annual exports of fluorinated GHGs in equipment and foams $\geq 25,000$ metric tons CO₂e

What type of equipment is covered under QQ?



Pre-charged equipment is any appliance, appliance component, electrical equipment, or electrical equipment component that is charged with a fluorinated GHG prior to sale or distribution or offer for sale or distribution.

- Appliances means any device that contains and uses a fluorinated GHG refrigerant and is used for household or commercial purposes, such as:
 - air conditioners
 - motor vehicle air conditioners
 - refrigerators
 - chillers
 - freezers
- Electrical equipment includes (but is not limited to):
 - gas-insulated substations
 - circuit breakers
 - other switchgear
 - gas-insulated lines
 - power transformers

Am I an importer?



- *Importer* means any person, company, or organization of record that for any reason brings a product into the United States from a foreign country, excluding introduction into U.S. jurisdiction exclusively for United States military purposes. An importer is the person, company, or organization primarily liable for the payment of any duties on the merchandise or an authorized agent acting on their behalf. The term includes, as appropriate:
 - (1) The consignee.
 - (2) The importer of record.
 - (3) The actual owner.
 - (4) The transferee, if the right to draw merchandise in a bonded warehouse has been transferred.

See 40 CFR 98.6

Am I an exporter?



- *Exporter* means any person, company or organization of record that transfers for sale or for other benefit, domestic products from the United States to another country or to an affiliate in another country, excluding any such transfers on behalf of the United States military or military purposes including foreign military sales under the Arms Export Control Act. An exporter is not the entity merely transporting the domestic products, rather an exporter is the entity deriving the principal benefit from the transaction.

See 40 CFR 98.6

Threshold Determination



To determine whether your imports or exports exceed the annual 25,000 metric ton CO₂e threshold, calculate:

Fluorinated GHGs inside:

- *Pre-charged equipment*
- *Closed-cell foam inside equipment*
- *Closed-cell foam*

Example Threshold Calculation



Total Imports (metric tons CO₂e)

$$= \text{Charge (kg)} \times \text{GWP} \times \text{Number of Units} \\ \times 0.001 \text{ metric tons/kg}$$

Example for equipment containing HFC-134a:

$$\text{Total imports (metric tons CO}_2\text{e)} = 0.5 \text{ kg} \times 1300 \\ \times 100,000 \text{ units} \times 0.001 \text{ metric tons/kg} \\ = 65,000 \text{ metric tons CO}_2\text{e}$$

Pre-Charged Equipment



- For each type of equipment containing a fluorinated GHG used as a refrigerant or electrical insulator, multiply the fluorinated GHG charge per unit of equipment (in CO₂e) by the number of units of equipment imported or exported annually.
- Example
(10 window AC units) x (500 kg CO₂e refrigerant/AC unit)
= 5,000 kg CO₂e (or 5 metric tons CO₂e)

Closed-Cell Foam in Equipment



- For each type of equipment with closed-cell foam that contains a fluorinated GHG, multiply the mass of fluorinated GHG in the closed-cell foam in each unit of equipment by the number of units of equipment imported or exported annually.
- Example
(10 refrigerators) x (100 kg CO₂e closed-cell foam/fridge)
= 1,000 kg CO₂e (or 1 metric ton CO₂e)

Closed-cell Foam



- For each type of closed-cell foam containing a fluorinated GHG that is imported or exported in bulk, multiply the fluorinated GHG charge per cubic foot of foam by the amount of foam in cubic feet imported or exported annually.
- **Example**
(100 cubic feet of foam) x (100 kg CO₂e closed-cell foam/cubic foot)
= 10,000 kg CO₂e (or 10 metric tons CO₂e)



Monitoring, Reporting, and Recordkeeping Requirements under Subpart QQ

Schedule for Monitoring and Reporting – Reporting Year 2011



1/1/11	Start collecting data using required methods in each subpart or best available monitoring methods
12/31/11	Complete 2011 data collection
7/30/12	Submit certificate of representation
9/28/12	Submit GHG report for 2011
Ongoing	Submit corrected report 45 days after each discovery (unless extension is requested)
Ongoing	Submit annual reports on 3/31 each year

Monitoring Plan



- Identifies responsibilities (i.e., job titles) for data collection
- Explains processes and methods used for data collection
- Describes QA/QC procedures
- May rely on references to existing corporate documents (e.g., existing QA plans, standard operating procedures)
- Monitoring Plans must be prepared by April 1, 2011 for subpart QQ reporters

Monitoring under Subpart QQ



- The inputs to the annual submission must be reviewed against the import or export transaction records to ensure accuracy of:
 - ✓ chemicals or blends in the pre-charged equipment or closed-cell foam
 - ✓ quantities (metric tons)
 - ✓ units (kg per piece of equipment or cubic foot of foam).

What Are the Reporting Requirements?



- **Subpart A: General Provisions**
 - Applicability provisions
 - Schedule
 - Reporting and recordkeeping requirements common to all reporters
 - Definitions
 - Report submission procedures
 - Other (e.g., calibration procedures, monitoring plan)
- **Subpart QQ: Source-Specific Requirements**
 - Definition of source category
 - GHG to report
 - Calculation methods
 - Monitoring and QA/QC
 - Missing data procedures
 - Reporting and recordkeeping elements unique to each subpart

Reporting under Subpart QQ



- Identifying information, parent companies, NAICS code(s)
- Certification by the “designated representative”
- Total mass of each fluorinated GHG imported or exported in pre-charged equipment or closed-cell foams.
- For each type of *pre-charged equipment*:
 - Identity of the fluorinated GHG used as a refrigerant or electrical insulator
 - Charge size
 - Number of pieces of equipment imported or exported
- For *closed-cell foams imported or exported inside of appliances*, for each appliance type:
 - Identity of the fluorinated GHG contained in the foam
 - Quantity of fluorinated GHG contained in the foam in each appliance
 - Number of appliances imported or exported

See 40 CFR 98.436

Reporting under Subpart QQ



- For *closed-cell foams* not imported or exported inside appliances, for each foam type:
 - Identity and density of the fluorinated GHG contained in the foam
 - Quantity of foam imported or exported
- If identity and mass of the fluorinated GHG within the closed-cell foam is unknown, for each foam type:
 - Name of the foam manufacturer and certification that the importer or exporter was unable to obtain required information

See 40 CFR 98.436

Retain These Records for 3 Years:



- All data used for GHG calculations for each unit, operation, process, and activity, categorized by fuel or material type
- The annual GHG reports
- Written GHG Monitoring Plan
- Other data required by Subpart QQ:
 - Bill of lading
 - Invoice
 - Points of entry/exit
 - Countries involved
 - Other

When Can I Stop Annual Reporting Under QQ?



- Notify EPA by March 31 of the year after you meet one of the following conditions:
 - If annual reports demonstrate CO₂e <25,000 metric tons/yr for 5 consecutive years.
 - If annual reports demonstrate CO₂e <15,000 metric tons/yr for 3 consecutive years.
 - If you shut down all processes/units/supply operations covered by the rule.
- You must resume reporting in future year if conditions are no longer met

Electronic Reporting System



- All reporting under the GHG Reporting Program is electronic.
- Web-based system for facility/supplier to EPA reporting
 - Web-forms will guide reporters through data entry and submission.
 - Include a mechanism to submit file directly using Extensible Markup Language (XML) format.
 - XML schema is available on the EPA website.
- For updates on the data system, training schedule, and to view the XML schema:

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

GHG Data Publication



- EPA publishes data collected through the GHGRP on the web
- EPA only publishes non-CBI data
 - CBI data will be aggregated to shield sensitive information
- View the publication tool: <http://ghgdata.epa.gov>

Confidential Business Information (CBI)



- EPA has made categorical determinations about whether data reported under the GHGRP is entitled to confidential treatment under the Clean Air Act.
- <http://www.epa.gov/ghgreporting/reporters/cbi/index.html>

Additional Information



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

- questions: GHGReporting@epa.gov



Questions?