Fluorinated Greenhouse Gas Production

Proposed Rule: Mandatory Reporting of Greenhouse Gases

Under the proposed Mandatory Reporting of Greenhouse Gases (GHGs) rule, owners or operators of facilities that contain fluorinated GHG production processes (as defined below) and that emit 25,000 metric tons of GHGs per year or more (expressed as carbon dioxide equivalents) from stationary combustion, miscellaneous use of carbonates, and other source categories (see information sheet on General Provisions) would report emissions from all source categories located at the facility for which emission calculation methods are defined in the rule. Owners or operators would collect emission data, calculate GHG emissions, and follow the specified procedures for quality assurance, missing data, recordkeeping, and reporting.

Producers of fluorinated GHGs should also review the requirements of 40 CFR part 98, subpart OO (Suppliers of Industrial Greenhouse Gases) to determine if they would also report emissions under 40 CFR part 98, subpart OO.

How Is This Source Category Defined?

Under the proposal, the fluorinated GHG production source category consists of facilities that produce fluorinated GHGs (F-GHGs). The reuse or recycling of F-GHGs and the generation of HFC-23 from the production of HCFC-22 are excluded from this source category. Also see 40 CFR part 98, subpart O (HCFC-22 Production and HFC-23 Destruction).

What GHGs Would Be Reported?

The proposal calls for F-GHG production facilities to report F-GHG emissions from each F-GHG production process.

In addition, each facility would report GHG emissions for other source categories for which calculation methods are provided in the rule. For example, facilities would report carbon dioxide (CO_2), nitrous oxide (N_2O), and methane (CH_4) emissions from each stationary combustion unit on site by following the requirements of 40 CFR part 98, subpart C (General Stationary Fuel Combustion Sources). Please refer to the relevant information sheet for a summary of the proposal for calculating and reporting emissions from any other source categories at the facility.

How Would GHG Emissions Be Calculated?

Under the proposal, in addition to the information required by 40 CFR 98.3(c), for each F-GHG production process, the emissions of each F-GHG product and F-GHG byproduct would be calculated using the following mass balance calculations.

- For the F-GHG product, emissions would be calculated using daily measurements of the following:
  - Reactants input to the process
  - F-GHG product produced
  - Reactants removed from the process (such as those sent to a control device)
  - Byproducts produced (if any)
  - Wastes removed from the production process and destroyed (if any)
- For F-GHG byproducts, emissions would be calculated using daily measurements of the following:

- Mass of byproduct produced
- F-GHG byproducts captured (if any)
- F-GHG byproduct in wastes destroyed (if any)

In general, daily measurements used in the mass balances would be made using flow meters, weigh scales, or a combination of volumetric and density measurements. If product and byproduct streams contain more than trace concentrations of other materials, the concentrations would be measured using methods such as gas chromatography.

For the destruction efficiency, the owner or operator would initially use the destruction efficiency determined during a previous performance test or, if no previous performance test has been completed, the destruction efficiency provided by the manufacturer of the destruction device. Each year, the owner or operator would be required to measure the mass flow and fluorinated GHG concentration at the outlet to the destruction device to confirm that emissions from the destruction device were as low as expected based on the initially determined destruction efficiency of the device.

What Information Would Be Reported?

In addition to the information required by the General Provisions at 40 CFR 98.3(c), the proposal calls for the following information to be reported for each F-GHG production process:

- Mass of each F-GHG produced.
- Mass of each reactant input to the process.
- Mass of each reactant permanently removed from the production process.
- Mass of each F-GHG product removed from the production process and destroyed.
- Mass of each F-GHG byproduct generated.
- Mass of each F-GHG byproduct destroyed.
- Mass of each F-GHG byproduct captured and sent off site for destruction.
- Mass of each F-GHG byproduct captured for other purposes.
- Mass of each fluorinated GHG emitted.
- Missing data periods, including reporting the reasons for the missing data and the method used to estimate values for missing data.

F-GHG production facilities that destroy F-GHGs would have to submit:

- An initial report of the destruction efficiency, the methods used to determine the destruction efficiency, the method used to record the amount of F-GHG destroyed, the identity of the F-GHG used during the performance test, and a list of any state and federal regulations that apply to the destruction process. A revised report would have to be submitted if any changes are made the destruction efficiency or the F-GHG measurement methods used.
- The results of the annual fluorinated GHG concentration and flow measurements at the outlet of the destruction device.

For More Information

This series of information sheets is intended to assist reporting facilities/owners in understanding key provisions of the proposed rule. However, these information sheets are not intended to be a substitution for the rule. Visit EPA's Web site (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> 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.