

Subpart P, Greenhouse Gas Reporting Program

Under the Greenhouse Gas Reporting Program (GHGRP), owners or operators of facilities that produce hydrogen (as defined below) must report emissions from hydrogen production processes and all other source categories located at the facility for which methods are defined in the rule. Owners and operators are required to collect emission data, calculate GHG emissions, and follow the specified procedures for quality assurance, missing data, recordkeeping, and reporting per the requirements of 40 CFR Part 98 Subpart P – Hydrogen Production.

How Is This Source Category Defined?

The hydrogen production source category consists of process units that produce hydrogen by reforming, gasification, oxidation, reaction, or other transformation of feedstock, and that sell the hydrogen as a product. Hydrogen production units that are located at a petroleum refinery are included in this source category if they are not owned by or under the direct control of the refinery owner. GHG emissions from hydrogen production units other than catalytic reforming units that are owned by a petroleum refinery subject to Subpart Y (Petroleum Refineries) must be reported according to the provisions of Subpart P.

What Greenhouse Gases Must Be Reported?

Hydrogen production facilities must report the following emissions:

- Carbon dioxide (CO₂) process emissions from each hydrogen production process unit.
- CO₂, CH₄, and N₂O emissions from each stationary combustion unit other than hydrogen production process units. Calculate and report these emissions under 40 CFR Part 98 Subpart C by following the requirements of Subpart C.
- CO₂ collected and transferred off site by following the requirements of 40 CFR Part 98 Subpart PP (Suppliers of Carbon Dioxide).

In addition, each facility must report GHG emissions for other source categories for which calculation methods are provided in the rule. Please refer to the relevant information sheet for a summary of the rule requirements for calculating and reporting emissions from other source categories at the facility.

How Must Greenhouse Gas Emissions Be Calculated?

Report CO₂ emissions from hydrogen production using one of the following two methods:

- Install and operate a continuous emission monitoring system (CEMS) to measure combined process and combustion CO₂ emissions according to the Tier 4 calculation methodology specified in 40 CFR Part 98 Subpart C.
- Calculate process CO₂ emissions by measuring the following:
 - Feedstocks and fuel consumed each month.
 - Average carbon content of the fuel and feedstock for each month.
 - Molecular weight of the fuel and feedstock.

However, if CO₂ emissions from hydrogen production process units are vented through the same stack as a combustion unit or process equipment that uses a CEMS to follow Tier 4 methodology to report CO₂ emissions, then the CEMS must be used to measure and report combined CO₂ emissions from that stack instead of the calculation procedure described in approach 2 above.

A checklist for data that must be monitored is available at:

<https://www.epa.gov/ghgreporting/Monitoring-Checklist-Subpart-P-Hydrogen-Production>

What Information Must Be Reported?

In addition to the information required by the General Provisions at 40 CFR 98.3(c), each hydrogen production facility must report the following information:

- Quarterly quantity of CO₂ collected and transferred off site in either gas, liquid, or solid forms (kg), following the requirements of Subpart PP of this part and reported at the facility level.
- Annual quantity of carbon other than CO₂ collected and transferred off site in either gas, liquid, or solid forms (kg carbon), reported at the facility level.

If a CEMS is used to measure CO₂ emissions, also report under this subpart the relevant information required under 40 CFR Part 98 Subpart C and the following information listed below:

- Unit identification number and annual CO₂ process emissions (metric tons) for each process unit.
- Annual quantity of hydrogen produced (metric tons) for each process unit.
- Annual quantity of ammonia intentionally produced (metric tons), if applicable, for each process unit.
- Annual quantity of methanol intentionally produced (metric tons), if applicable for each process unit.

If a CEMS is not used to measure CO₂ emissions, also report the following information for each hydrogen production process unit:

- Unit identification number and annual CO₂ process emissions (metric tons).
- Annual quantity of hydrogen produced (metric tons).
- Annual quantity of ammonia intentionally produced, if applicable (metric tons).
- Annual quantity of methanol intentionally produced (metric tons), if applicable for each process unit.

Facilities must enter required data into the electronic Greenhouse Gas Reporting Tool (e-GGRT) to be reported in the annual report, and must also enter into e-GGRT's *Inputs Verifier Tool* (IVT) the inputs to emission equations for which reporting is not required. IVT uses these entered data to calculate the equation results.

What Records Must Be Kept?

In addition to the information required by §98.3(g), you must retain the following for each hydrogen production facility:

If a CEMS is used to measure CO₂ emissions, the records required for the Tier 4 Calculation Methodology in §98.37.

If a CEMS is not used to measure CO₂ emissions, then you must retain records of all analyses and calculations conducted and the information listed below:

- Monthly consumption of each fuel and feedstock used for hydrogen production and its type (standard square feet of gaseous fuels and feedstocks, gallons of liquid fuels and feedstocks, kilograms of solid fuels and feedstocks).
- Monthly analyses of carbon content for each fuel and feedstock used in hydrogen production.
- Monthly analyses of the molecular weight of gaseous fuels and feedstocks (kg/kg-mole) used.

When and How Must Reports Be Submitted?

Annual reports must be submitted by March 31 of each year, unless the 31st is a Saturday, Sunday, or federal holiday, in which case the reports are due on the next business day. Annual reports must be submitted electronically using [e-GGRT](#), the GHGRP's online reporting system. Additional information on setting up user accounts, registering a facility and submitting annual reports is available at <https://ccdsupport.com/confluence/>.

When Can a Facility Stop Reporting?

There are several scenarios under which a facility may discontinue reporting. These scenarios are summarized in the [Subpart A Information Sheet](#) as well as in an [FAQ](#).

For More Information

For additional information on Subpart P, visit the [Subpart P Resources](#) webpage. For additional information on the Greenhouse Gas Reporting Program, visit the [Greenhouse Gas Reporting Program Website](#), which includes information sheets on other rule subparts, [data](#) previously reported to the Greenhouse Gas Reporting Program, [training materials](#), and links to [frequently asked questions](#).

This document 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. The series of information sheets is intended to assist reporting facilities/owners in understanding key provisions of the Greenhouse Gas Reporting Program.