

Hydrogen Production

Subpart P, Greenhouse Gas Reporting Program

Measure these parameters for each hydrogen (H₂) production unit monthly unless otherwise noted:



What Must Be Monitored?

If NOT using a continuous emissions monitoring system (CEMS):

- Volume or mass of gaseous fuel or feedstock used (standard cubic feet (scf) or kilograms (kg)).
- Carbon (C) content of gaseous fuel or feedstock (kg C/kg of fuel or feedstock) (annually for standard hydrocarbons (HCs), weekly for other non-standard HCs).
- Molecular weight of gaseous fuel or feedstock (kg/kg-mole) (annually for standard HCs, weekly for other non-standard HCs).
- Volume or mass of liquid fuel or feedstock used (gallons (gal) or kg).
- C content of liquid fuel or feedstock (kg C/gal) (annually for standard HCs, monthly for other non-standard HCs, or upon delivery for liquid fuels and feedstocks delivered by bulk transport).
- Mass of solid fuel or feedstock used (kg).
- C content of solid fuel or feedstock (kg C/kg of feedstock) (annually for standard HCs, monthly for other non-standard HCs, or upon delivery for liquid fuels and feedstocks delivered by bulk transport).
- Quarterly quantity of carbon dioxide (CO₂) collected and transferred off-site in either gas, liquid, or solid forms (kg).
- Annual quantity of C other than CO₂ collected and transferred off-site in either gas, liquid, or solid forms (kg).
- Annual quantity of H₂ produced by method (e.g., reforming, gasification, oxidation, reaction or other transformation of feedstocks) (metric tons).
- Annual quantity of H₂ that is purified (metric tons).
- Annual quantity of ammonia (NH₃) produced, if applicable (metric tons).
- Annual quantity of methanol (CH₃OH) produced, if applicable (metric tons).

If using a CEMS, in addition to the monitoring requirements under 40 CFR Subpart C for the Tier 4 Calculation Methodology:

- Annual quantity of H₂ produced by reforming, gasification, oxidation, reaction or other transformation of feedstocks (metric tons).
- Annual quantity of H₂ that is purified only (metric tons).
- Quarterly quantity of CO₂ collected and transferred off site in either gas, liquid, or solid forms (kg).
- Annual quantity of CH₃OH produced, if applicable (metric tons).
- Annual quantity of NH₃ produced, if applicable (metric tons).
- Annual quantity of C other than CO₂ collected and transferred off-site in either gas, liquid, or solid forms (kg).

Note: If using a CEMS that does not include combustion emissions from the H₂ production unit (i.e., the H₂ production unit has separate stacks for process and combustion emissions), then the non-CEMS approach above must be used considering only fuel inputs to calculate and report CO₂ emissions from fuel combustion related to the H₂ production unit.



For More Information

For additional information and resources on Subpart P, please visit the [Subpart P webpage](#).

This monitoring checklist 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.