



Fact Sheet

Biogas, Biomethane, and Hydrogen Reporting Greenhouse Gas Emissions

Oregon's Greenhouse Gas Reporting Program [rules](#) are found in OAR 340-215 and referred to as GHG RP rules throughout this document. Regulated entities subject to Oregon's GHG RP [rules](#) must separately report the greenhouse gas emissions resulting from the complete combustion or oxidation of all biomass-derived fuel from the combustion or oxidation of the non-biomass derived portion of the fuel. The GHG RP [rules](#) also allow for book and claim accounting for hydrogen and biomethane under certain circumstances. This document describes the requirements for reporting biogas, biomethane and hydrogen under the Greenhouse Gas Reporting Program rules.

Overview

Biomass fuels or biofuels are fuels that are derived from organic materials originating from plants, animals, and micro-organisms. Carbon dioxide emissions from biomass-derived fuels, such as biogas and biomethane, are considered biogenic and must be separately documented and reported from the non-biogenic emissions of that fuel. The reporting regulation requires entities to report information on directly delivered biomass-derived fuels, including biogas, and contractually delivered biomethane and hydrogen.

Under the GHG RP [rules](#), biogas is defined as gas that is produced from the breakdown of biomass in the absence of oxygen, including anaerobic digestion, anaerobic decomposition, and thermochemical decomposition. Biogas has not been refined and is not able to be transferred via pipeline without refinement. Biomethane is defined as refined biogas, or another synthetic stream of methane produced from biomass feedstock, that has been upgraded to meet pipeline quality standards or transportation fuel grade requirements. It may be injected into existing natural gas infrastructure and be delivered through pipelines or distribution systems.

Biomethane is physically identical to fossil natural gas, and indistinguishable from fossil natural gas molecules when mixed. Regulated entities are not required to physically track biomethane molecules injected into a natural gas pipeline from the point of injection through to physical delivery at an end user location in Oregon. Since there is no requirement to provide evidence that the purchased biomethane was physically delivered to a specific end user, the chain of custody contracts and documentation represent the ownership and transfer of the biomethane through the supply chain.

Translation or other formats

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Hydrogen may also be directly delivered or blended with natural gas and delivered through pipeline systems. Oregon Greenhouse Gas Reporting rules allow regulated entities to report hydrogen that is directly delivered to Oregon or hydrogen injected into a pipeline that is part of the connected natural gas transmission and distribution network using book and claim accounting, if the pipeline system allows for the transport of hydrogen.

Regulated entities reporting these fuel types must ensure that no other person can make claims on the environmental attributes of the gas reported to DEQ, except for a program where DEQ has confirmed that the claim on the environmental attributes was made for the same use and volume as is being claimed for greenhouse gas reporting.

Under the GHG RP [rules](#) environmental attributes include all environmental claims, credits, benefits, emissions reductions, offsets, and allowances attributable to the production or use of the fuel. The environmental attributes also include the avoided greenhouse gas emissions associated with the production, transport, and combustion of a quantity of fuel compared with the same quantity of fossil gas.

Book and claim of biomethane and hydrogen

Unless the fuel is being directly delivered to a source, accounting for biomethane and hydrogen is done using “book and claim” accounting. Under the book and claim accounting model, the environmental attributes of the gas are detached from the physical molecules when they are commingled into a common transportation and distribution system for that form of energy.

The detached attributes are then assigned by the owner to the same form and amount of gas when it is delivered for use. For the purposes of this division, the common transportation and distribution system must be connected to Oregon and the gas must be injected into that system within the same data year as it is reported.

If using an electronic tracking system approved by DEQ for book and claim accounting, the entity must submit records showing the retirement of all environmental attributes of the gas that are being reported under this division.

Data reporting requirements

Regulated entities reporting biogas, biomethane or hydrogen to the Greenhouse Gas Reporting Program must report the following information:

- Direct emissions of greenhouse gases including biogenic carbon dioxide resulting from the combustion or oxidation of the biomass-derived fuels
- The type, quantity, and quality of the gas, including the high heating value
- Method of delivery to Oregon
- Name and address of all intermediary and direct vendor(s) from which the fuel is purchased
- Name, address, and facility type from which the fuel was produced
- Feedstock(s) used to produce the gas
- Method(s) used to produce the gas
- Month and year in which the gas was produced

- If applicable, the name and air permit source identification number for the end-user of the gas in Oregon
- Records demonstrating that:
 - No other party can make a claim on environmental attributes that are being reported, except for a program where DEQ has confirmed that the claim on the environmental attributes was made for the same use and volume of biomethane as is being claimed for greenhouse gas reporting
 - The quantity of energy covered by the environmental attributes meets or exceeds the volume of fuel reported

For biomethane or hydrogen only:

- The lifecycle carbon intensity of the gas
- For booked and claimed gas:
 - Emissions based on contractual delivery of the booked and claimed gas
 - The point of injection into a pipeline
 - The equivalent amount of natural gas use in Oregon in million British thermal units

Additional requirements for reporting hydrogen by stationary sources

Air permitted stationary sources subject to [OAR 340-215-0105](#) reporting hydrogen using book and claim accounting must also report the energy, volume, and the total emissions that would have resulted from the full combustion or oxidation of the gaseous fuel displaced in Oregon using the following procedures:

- **Reporting hydrogen that displaces a gaseous fuel that is combusted:** Report the emissions that would have resulted from the full combustion of the displaced fuel using applicable methodology in 40 C.F.R. part 98.
- **Reporting hydrogen that displaces a gas used in a non-combustion process:** A source must first receive written approval from DEQ for the calculation methods used to determine the amount fuel or feedstock displaced. Requests should be emailed to GHGReport@deq.oregon.gov.
 - After approval, a source must report the emissions that would have resulted from the non-combustion use of the fuel that was displaced using applicable methodology in 40 C.F.R. part 98.

Biogas, biomethane, and hydrogen reporting worksheet

To collect the data required for this reporting, DEQ has developed a worksheet required for reporting these fuel types to the GHG RP. This worksheet must be completed and submitted with the entity's annual reporting in Your DEQ Online. [The worksheet is available on our website](#). Instructions to fill out the form are located on the first tab in the worksheet.

Supporting documentation and record retention requirements

Regulated entities reporting biomass-derived fuels or hydrogen, as required under [OAR 340-215-0044](#)(5), must retain supporting documentation required under that division and that authenticates the purchase quantity and quality of the hydrogen or gaseous or liquid biomass-derived fuel between parties. The documentation must be kept for seven years if subject to [Third Party Verification requirements](#). If not subject to those rules, the documentation must be kept for a period of five years.

Reporting claims of biomethane or hydrogen under multiple programs

Booked and claimed gas reported within an annual greenhouse gas emissions report cannot also be claimed at any other delivery location or for any other end uses. However, the GHG RP [rules](#) explicitly allow for regulated entities to make claims under division 215 and the Federal Renewable Fuel Standard Program, Oregon's Clean Fuels Program and Oregon's Climate Protection Program. With DEQ written approval, other programs or jurisdiction may be allowed where DEQ has confirmed that the claim on the environmental attributes can be made for the same use and volume as is being claimed under greenhouse gas reporting program.

Where a specific volume of gas delivered for a specific end use is also eligible for compliance with other overlapping regulatory programs, the gas may be eligible to be claimed under more than one program without being double counted. For example, a volume of biomethane delivered by a local distribution company to a natural gas vehicle fueling station could be claimed under the Greenhouse Gas Reporting Program, and under both the federal Renewable Fuel Standard and Oregon Clean Fuels Program. In this case, the three regulatory programs all consider the same volume of biomethane, used at the same point and time, and for the same end use.

Please ensure that you notify the GHG RP in your report submittal or through email if the volumes you are reporting are also being reported in another of these programs (i.e., Clean Fuels Program or Federal RFS).

Reporting deadline

This supplemental information must be submitted with the natural gas supplier annual report to the GHG RP. The reporting deadline for that sector is March 31 for reporting emissions from the previous calendar year (January 1 to December 31). If the reporting deadline falls on a Saturday, Sunday, or an Oregon state observed holiday, the reporting is due the following business day.

Greenhouse gas reporting program contacts

For assistance with reporting please email the program at GHGReport@deq.oregon.gov. Sector specific program contact information and phone numbers are available on our program contacts [website](#).

Non-discrimination statement

DEQ does not discriminate on the basis of race, color, national origin, disability, age, sex, religion, sexual orientation, gender identity, or marital status in the administration of its programs and activities. Visit DEQ's [Civil Rights and Environmental Justice page](#).