



Oregon Department of Environmental Quality

Climate 2023 Rulemaking Brief

Proposed rule clarifications for reporting biomethane

May 10, 2023

Overview

DEQ is requesting input on proposed changes to the rules governing reporting of biomethane under Oregon's Greenhouse Gas Reporting Program, OAR 340-215. The Greenhouse Gas Reporting Program (GHGRP) requires reporting of greenhouse gas emissions data and related information from major sources including large stationary sources and liquid fuel, natural gas, propane, and electricity suppliers. This information is used in several ways including to develop the statewide greenhouse gas inventory and support emission reduction programs such as HB 2021.

Data reported to the Greenhouse Gas Reporting Program is also used to implement the Climate Protection Program, OAR 340-271. GHGRP data is used to determine covered emissions and compliance obligations for companies regulated by the Climate Protection Program.

DEQ is proposing changes to the Greenhouse Gas Reporting Program rules to:

- Clarify current reporting requirements for biomethane
- Incorporate additional reporting requirements for biomethane to improve data quality and verification.

The Climate Protection Program sets a declining limit, or cap, on greenhouse gas emissions from fossil fuels used throughout Oregon, including diesel, gasoline, natural gas, and propane.

The Climate Protection Program:

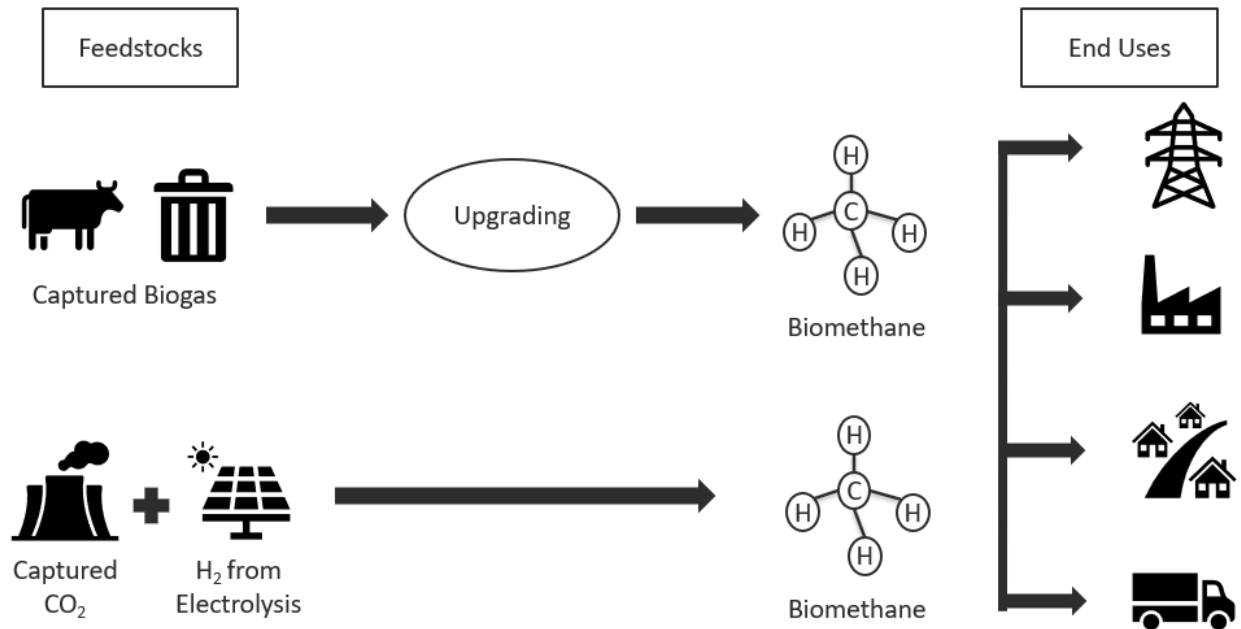
- Requires that covered entities reduce greenhouse gas emissions
- Supports reduction of emissions of other air contaminants that are not greenhouse gases
- Prioritizes reduction of greenhouse gases and other air contaminants in environmental justice communities
- Provides covered entities with compliance options to minimize business and consumer economic impacts.

Biomass derived fuels, such as biomethane, are not covered emissions in the Climate Protection Program. So, one way in which companies regulated by the Climate Protection Program can comply and reduce greenhouses gas emissions, is by increasing the supply/use of biomass derived fuels, like biomethane, relative to fossil fuels. For example, natural gas utilities (local distribution companies) could increase the supply of biomethane relative to natural gas to reduce greenhouse gas emissions and comply.

What is biomethane?

Biomethane, also known as renewable natural gas (RNG), is biogas that has been upgraded to a pipeline quality gas and is interchangeable with natural gas on gas interstate and local distribution systems. This biogas can be produced from the breakdown of organic matter from

various sources, such as landfills, wastewater treatment plants, or livestock operations. Biomethane can also be produced by combining hydrogen and captured carbon dioxide from the combustion of biomass. Since biomethane can be substituted for natural gas, it can be transported in natural gas pipelines and used in place of natural gas for industrial processes, power generation, transportation, and residential and commercial use. Biomethane is a biomass derived fuel since it is produced from non-fossilized and biodegradable organic material. Since biomethane is derived from organic matter the carbon contained within the biomethane is already part of the natural carbon cycle.



Biomethane regulation and reporting

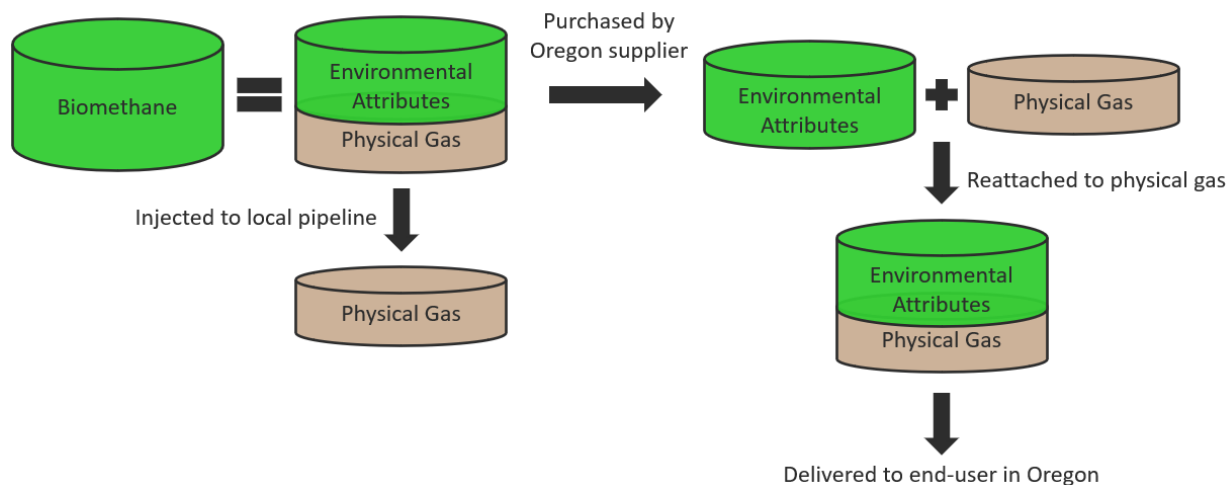
DEQ’s Greenhouse Gas Reporting rules for natural gas suppliers (OAR 340-215-0115) stipulate specific reporting requirements for any biomass-derived fuels, such as biomethane, but do not currently contain explicit provisions or requirements for the use of “book and claim” accounting for the delivery of these biomass-derived fuels. DEQ determined that the current Greenhouse Gas Reporting Program rules allow for the reporting of biomethane based on contractual deliveries of the fuel, separate from the physical gas. DEQ has included requirements for reporting of biomethane using a book and claim model within its Greenhouse Gas Reporting Protocol for Natural Gas Suppliers. These requirements include:

- Demonstrated sole ownership of environmental attributes for an equivalent amount of biomethane as reported under the program,
- Information on the production facility and vendor, and
- Restrictions on claiming these environmental attributes under other regulatory programs

Book and Claim accounting

“Book and Claim” refers to the accounting methodology where the environmental attributes of an energy source 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 energy when it is used.

Since biomethane is molecularly identical to fossil natural gas and can be commingled with existing fossil natural gas supplies within pipeline networks, DEQ's current greenhouse gas reporting rules do not require natural gas suppliers to physically track and deliver actual biomethane volumes from injection into a pipeline through to physical delivery at an end user location. The environmental attributes of any biomethane may be decoupled from the physical gas that is injected into a pipeline that is physically connected to the gas supplier's local distribution system in Oregon and claimed at the point natural gas is withdrawn from the natural gas supplier's system. Under this model, the biomethane nominated to a pipeline is assumed to displace an equivalent amount of fossil natural gas in the system (measured in MMBtu) and there is no requirement for the physical biomethane molecules to be traced further by the natural gas supplier within Oregon.



As DEQ considers potential rule amendments for book and claim reporting, staff is assessing several Greenhouse Gas Reporting Program and Climate Protection Program goals including:

- Accurately and completely accounting for greenhouse gas emissions.
- Providing compliance options and flexibility for regulated entities.
- Providing certainty for regulated entities on use of biomethane for compliance.
- Maximizing greenhouse gas emissions reductions and potential emissions reductions from biomethane.
- Minimizing costs for consumers in Oregon, particularly environmental justice communities.
- Assessing any potential local benefits of biomethane production or use.

Comments and questions

There are many factors that DEQ is evaluating related to the implementation of book and claim reporting of biomethane. For the Climate 2023 rulemaking, DEQ is interested in receiving feedback from the advisory committee and public on these factors and particularly on the following 3 questions related to reporting requirements:

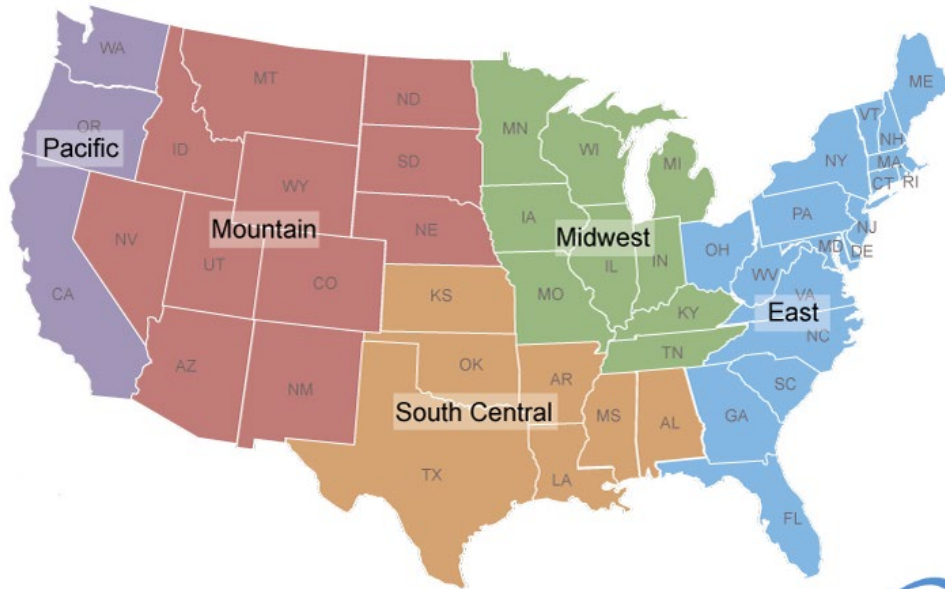
1. **Should DEQ apply any additional geographic constraints for book and claim reporting of biomethane?**

Background: Biomethane production typically occurs at or near sources of organic waste to produce biogas, such as landfills or agricultural facilities. DEQ currently allows biomethane injected into any natural gas pipeline connected to Oregon to be contractually delivered to an end-user in Oregon. Book and claim is an indirect accounting method used because it is impossible to track and deliver specific individual gas molecules in a commingled pipeline. Biomethane injected into the pipeline network cannot be directly tracked and delivered to a specific end-user, in the same way that a specific portion of injected fossil natural gas cannot be tracked and delivered to a specific end-user. As a result, a book and claim method is necessary to account for any biomethane shipped via commingled pipeline, whether over a short distance within Oregon or from across the continent.

DEQ could geographically limit the use of book and claim to only biomethane injected within a specific boundary, such as within Oregon or within adjacent states.

Possible Options:

- a. Only biomethane injected into a pipeline within Oregon is eligible for book and claim.
- b. Only biomethane injected into a pipeline within Oregon or adjacent states (WA, ID, NV, and CA) is eligible for book and claim.
- c. Only biomethane injected into a pipeline within the western natural gas network (Pacific and Mountain storage regions) is eligible for book and claim.



- d. Allow biomethane injected in any pipeline connected to Oregon to be eligible for book and claim.

2. Should DEQ require biomethane to be injected into a natural gas pipeline, or should DEQ allow book and claim accounting for biomethane delivered directly to an end-user outside of Oregon?

Background: Book and claim accounting is based on the principle of displacement, whereby an amount of biomethane added to a connected pipeline system reduces the overall amount of fossil natural gas that must be added to that same system to meet demand. This is often phrased as a requirement for injection of biomethane into a “North American common carrier pipeline”. While this would cover most instances of biomethane use, there may be biomethane producers that supply directly to an end-user without injecting into the pipeline network. In this instance, if the biomethane is used in place of fossil natural gas use from the connected pipeline network, natural gas use is still displaced, and emissions are reduced.

Possible Options:

- a. Require biomethane to be injected into a natural gas pipeline connected to Oregon.
- b. Allow biomethane to be claimed if delivered directly to an end-user outside of Oregon for use where it displaces natural gas use from a natural gas pipeline connected to Oregon.

3. Should DEQ restrict the vintage of biomethane eligible for use in greenhouse gas reporting?

“Vintage” means the date or time period that biomethane was injected into a pipeline.

Background: Book and claim eligibility may be limited to certain vintages for claimed environmental attributes to align the actual use of the biomethane (and emission reduction) with the claimed reduction during reporting. This goal could be balanced with flexibility to allow for adequate time for regulated entities to procure the environmental attributes for biomethane, account for possible storage and delays in actual delivery of biomethane to an end-user, and account for the annual reporting cycle of the Greenhouse Gas Reporting Program.

Possible Options:

- a. Require biomethane to be claimed within the same calendar year it was injected into a pipeline.
- b. Require biomethane to be claimed within the same or subsequent calendar year it was injected into a pipeline.
- c. Require biomethane to be claimed within the same calendar year it was injected into a pipeline, or the previous calendar year for biomethane injected within the first quarter of the year.
- d. Require biomethane to be claimed within X calendar years after being injected into a pipeline.

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