

June 30, 2022

Joshua Grice  
Washington Department of Ecology  
300 Desmond Drive SE  
Lacey, WA 98503



## **Comments on Chapter 173-446 WAC – Draft Climate Commitment Act Program Rule**

Dear Mr. Grice,

The Coalition for Renewable Natural Gas (RNG Coalition)<sup>1</sup> offers the following comments on the Department of Ecology’s (Ecology) Cap-and-Invest Program (Program) draft rule (Draft)<sup>2</sup> pursuant to Chapter 173-446 of the Climate Commitment Act.<sup>3</sup> We appreciate the ongoing work by Ecology to incorporate feedback obtained during the informal phase of this conversation, and reiterate the importance of this Program as a pathway toward developing biogas, renewable natural gas (RNG), and renewable hydrogen (collectively, renewable gas) as a means of displacing fossil fuels and improving organic waste management in the state. Our comments herewithin are primarily focused on the need for consistency in RNG procurement rules across jurisdictions, the inclusion of RNG under the definition of “biofuels”, and carbon accounting methodologies.

### **About Renewable Gases**

Many experts agree that renewable gases can be a strong climate change mitigation tool and that such gases are needed in certain applications across all sectors of the economy in perpetuity.<sup>4</sup> Strategies that utilize renewable gases will displace the use of fossil fuel; increase capture and utilization of methane emissions from organic waste streams; and improve the circularity of Washington’s economy through recycling, the creation of bioproducts, and carbon removals from the atmosphere.

#### *Overview of Renewable Natural Gas*

RNG is biogas-derived fuel that has been captured from organic waste streams—including agricultural wastes, municipal wastewater, and municipal solid waste in landfills—and upgraded to achieve quality standards necessary to blend with, and substitute for, geologic natural gas. Every community in America produces waste. As that waste breaks down, it often emits methane, which is a potent and harmful

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<sup>1</sup> <http://www.rngcoalition.com/>

<sup>2</sup> <https://ecology.wa.gov/DOE/files/4f/4ffb375b-2bec-4b66-afb3-9b613645896e.pdf>

<sup>3</sup> <https://ecology.wa.gov/Air-Climate/Climate-change/Reducing-greenhouse-gases/Climate-Commitment-Act>

<sup>4</sup> For example, the Intergovernmental Panel on Climate Change’s most recent report on GHG mitigation states that “Because some applications (e.g., aviation) are not currently amenable to electrification, it is anticipated that 100% renewable energy systems will need to include alternative fuels such as hydrogen or biofuels.”

[https://report.ipcc.ch/ar6wg3/pdf/IPCC\\_AR6\\_WGIII\\_FinalDraft\\_FullReport.pdf](https://report.ipcc.ch/ar6wg3/pdf/IPCC_AR6_WGIII_FinalDraft_FullReport.pdf) (See: Page TS-54)

GHG. RNG projects capture this methane from existing sources of food waste, animal manure, wastewater sludge and garbage, and redirect it away from the environment, repurposing it as a clean, green energy source.

The Intergovernmental Panel on Climate Change (IPCC) calls methane capture and recovery from solid waste management “a short-term ‘win-win’ policy that simultaneously improves air quality and limits climate change.”<sup>5</sup> Furthermore, the 2021 IPCC Working Group I report recommends that “strong, rapid, and sustained reductions in CH<sub>4</sub> emissions” should be a first priority for policymakers.<sup>6</sup>

RNG can be used in all the same applications as conventional natural gas, including in transportation, industrial, heating, and electricity applications. The most common method to produce RNG today is through the biological process of Anaerobic Digestion (AD). RNG is key to reducing fossil fuel CO<sub>2</sub> emissions and, as a significant bonus, RNG also reduces the GHG impacts of organic wastes by capturing methane from these waste streams. Solid waste is expected to grow nearly 70 percent by 2050 due to natural human activity.<sup>7</sup> RNG provides a near-term solution for effectively managing this colossal waste issue and gets us on the path to implementing a source of clean, reliable, renewable fuel. Washington regulators and companies have recognized these benefits, making RNG a key component of many prior climate change strategy discussions.<sup>8</sup> RNG has been a proven clean source of energy for decades at low volumes but is growing in importance, scale, and popularity today because of the urgent need to combat climate change and deal with the emissions of society’s growing waste streams as quickly as possible.

### *Overview of Renewable Hydrogen*

In the mid- to long-term, hydrogen produced from renewable feedstocks, such as clean electricity and waste biomass, should also be viewed as an essential part of Washington’s renewable gas mix. In a similar manner to RNG, waste-biomass-derived hydrogen is poised to contribute to a circular bioeconomy as a pathway for recycling biogenic resources which are not well suited to AD, often by combining thermochemical processes (such as pyrolysis and gasification) with steam methane reforming or similar technologies to make hydrogen from methane. Bio-derived renewable hydrogen is an effective complement to electrolytic hydrogen sourced from renewable electricity, and both pathways have an important role to play.

### **Standardize Principles for RNG Procurement and Use**

Developing a standardized methodology for renewable gas markets across North America is a top priority for our organization. To this end we appreciate the ability to recognize renewable gases as a greenhouse gas (GHG) reduction strategy under Washington’s Greenhouse Gas Reporting Program

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<sup>5</sup> See page 6-91 of: [https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC\\_AR6\\_WGI\\_Chapter\\_06.pdf](https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Chapter_06.pdf)

<sup>6</sup> [https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC\\_AR6\\_WGI\\_SPM.pdf](https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_SPM.pdf), pg. 27

<sup>7</sup> <https://datatopics.worldbank.org/what-a-waste/trends-in-solid-waste-management.html>

<sup>8</sup> For example, see: <http://www.commerce.wa.gov/wp-content/uploads/2018/02/Energy-RNG-Roadmap-for-Washington-Jan-2018.pdf>

(GGRP)<sup>9</sup> and, by extension, the forthcoming Cap-and-Invest Program. In implementing the rules for renewable gas under both programs, Ecology should aim to harmonize with other existing policies which utilize well established accounting methods to achieve their decarbonization goals.

### **Building off Existing Well-functioning RNG Accounting Methods**

RNG injected into the gas system in North America should be able to be moved freely between GHG programs that provide the highest value. As described below, this is an established driving principle within other existing programs in the Pacific Coast Collaborative that have been the biggest drivers of RNG so far. Continuing this approach in the Cap-and-Invest system will optimize the growth of RNG across related markets over time and help facilitate eventual linkages of Cap-and-Invest systems.

Because it is not possible to track direct physical delivery of renewable gas, once it is intermingled with fossil gas in the pipeline system, chain of custody methods<sup>10</sup> have been successfully used for years in other analogous national programs that have been strong drivers for RNG (U.S. Renewable Fuel Standard,<sup>11</sup> European Guarantees of Origin and Certification Schemes for green gas,<sup>12</sup> and the European Union Renewable Energy Directive<sup>13</sup>) as well as for other types of renewable energy (REC tracking<sup>14</sup> and virtual power purchase agreements<sup>15</sup> between renewable electricity facilities and load).

At the state level, clean fuel standard programs in California and Oregon—as well as Washington’s current draft<sup>16</sup>—have developed analogous accounting rules for RNG. The renewable gas standards in place in California and Oregon also build upon these concepts. Finally, California’s Cap-and-Trade program has a long history of accepting RNG imports from across North America under a similar framework.

We stress the importance of creating consistency and fungibility between all North American RNG markets, and especially within the Pacific Coast Collaborative, as such harmonization will decrease costs, increase competitiveness, and lead to the sustainable growth of the clean gaseous fuel industry.

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<sup>9</sup> <https://ecology.wa.gov/Regulations-Permits/Laws-rules-rulemaking/Rulemaking/WAC-173-441>

<sup>10</sup> Sometimes further differentiated as “book and claim” or “mass balance” accounting.

<sup>11</sup> <https://www.biocycle.net/biogas-rng-projects/>

<sup>12</sup> <https://www.entsog.eu/certification-green-gases>

<sup>13</sup> For a summary of European Union chain of custody methods. See: <https://fsr.eui.eu/biomethane-in-the-renewable-energy-directive/>

<sup>14</sup> <https://www.wecc.org/Administrative/How%20WREGIS%20Works.pdf>

<sup>15</sup> <https://rmi.org/insight/virtual-power-purchase-agreement/>

<sup>16</sup> Washington Department of Ecology, *Washington Clean Fuel Standard*. <https://ecology.wa.gov/Air-Climate/Climate-change/Reducing-greenhouse-gases/Clean-Fuel-Standard>

## **Adopt the M-RETS System as a Registry for Tracking RNG Volumes**

The digital infrastructure designed to support RNG transactions already exists and is ready to be paired with Washington's program. Such systems are proven in Europe<sup>17</sup> and are designed to replace the necessity of tracking of "paper" contracts between a wide variety of counterparties involved in a high number of RNG transactions. M-RETS<sup>18</sup> is a renewable energy credit and renewable thermal credit platform which is currently tracking RNG volumes for non-transportation markets, including Oregon's renewable gas standard and for voluntary RNG procurement, and will likely be used in a number of other similar programs, including California's renewable gas standard.

We strongly suggest that Ecology take steps to incorporate the M-RETS system for RNG volumes procured for compliance under the Cap-and-Invest program as a way to standardize RNG tracking while eliminating concerns related to double-counting, ensuring transparency in volume origination, and allowing integration with other programs and markets.

## **Defining RNG and Assessing Carbon Intensity**

RNG Coalition reads the Draft's current definition for "biomass" and, by association, the definition for "biomass-derived fuels", "biomass fuels", and "biofuels" to likely be inclusive of RNG.<sup>19</sup> RNG can be derived from a variety of organic waste feedstocks, commonly categorized as either (1) anaerobic digestion (AD) feedstocks such as animal waste, food waste, wastewater, and the organic fraction of MSW (including landfill gas) or (2) gasification feedstocks such as crop residues or other woody wastes. RNG produced via methanation of renewable hydrogen—particularly from waste CO<sub>2</sub> streams that are generated during the biogas upgrading process—is another emerging technology. We request clarification as to if all RNG resources and end uses are included under the definition of "biofuels" as considered under the Program.

If Ecology believes RNG is a biofuel in all end uses, we request clarity with respect to implementation of the requirement for biofuels to be lower than 40% in carbon intensity (CI) compared to their closest fossil fuel counterpart with respect to RNG. Here it will be important for Washington to employ a standardized lifecycle CI scoring methodology to ensure accuracy and sustainability, if not all RNG resources are to be considered equal.

We appreciate the work that Washington undertook to develop a version of the Greenhouse Gases, Regulated Emissions, and Energy Use in Technologies (GREET) model in the Clean Fuel Program. We believe this model could be easily adapted when RNG is used in non-transportation applications, if necessary to demonstrate the 40% CI benefit. A thermal sector GREET model has already been

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<sup>17</sup> <https://www.ergar.org/about-us/>

<sup>18</sup> <https://www.mrets.org/>

<sup>19</sup> Draft pg. 2

developed by EcoEngineers<sup>20</sup> for use in Minnesota,<sup>21</sup> and could easily be adapted for use in Washington, if necessary.

If Ecology chooses to pursue this path, we recommend that efforts be made to ensure that the Cap-and-Invest Program's requirements align well with Washington's CFS—allowing for parity across programs and minimizing reporting burden on RNG producers. It is also important to note that using lifecycle CI scoring to assess the eligibility of biofuels under the Cap-and-Invest program should not be confused with the treatment of RNG emissions at the point of combustion, where all eligible biogenic CO<sub>2</sub> emissions are treated as carbon neutral for the purposes of compliance with Cap-and-Invest.

#### *Proposed Allowance Schedule and Investment Prioritization*

Ecology should continue to pursue an aggressive decarbonization schedule for this program which aims to create an allowance price in the system that is well aligned with the social cost of greenhouse gas emissions, ensuring environmentally optimal and economically efficient outcomes. If socially efficient pricing does not occur—as has been the primary outcome in other U.S. cap-and-invest systems—it will be particularly important to reinvest the dollars raised by the State in technologies which hold the greatest GHG abatement potential in the near term.

RNG's ability to reduce methane emissions in hard-to-abate organic waste sectors while providing a biogenic substitute for fossil-derived natural gas should be considered a top priority in that category. If allowance prices are initially low, Washington should follow California's proven example of using a portion of cap-and-invest allowance value to provide grants (or other forms of direct value) for anaerobic digesters as well as grants which cover certain pipeline interconnection costs for renewable gas facilities.

#### *Cost-Recovery for RNG Purchases by Utilities*

Washington Utilities and Transport Commission, in coordination with Ecology, should explicitly clarify how RNG purchases by utilities for compliance within the Program will be allowed to receive rate recovery.

#### **Conclusion**

RNG Coalition appreciates the continued opportunity to provide feedback as Ecology works to finalize Washington's Cap-and-Invest Program. Indeed, this is an important opportunity for the suite of technologies needed to decarbonize Washington's economy, and our members look forward to investing in new systems which improve organic waste management, capture methane emissions, and produce clean fuel under the forthcoming Program.

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<sup>20</sup> <https://www.ecoengineers.us/>

<sup>21</sup> See Minnesota Public Utilities Commission Docket 21-324, searchable here: [https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showeDocketsSearch&showE\\_docket=true](https://efiling.web.commerce.state.mn.us/edockets/searchDocuments.do?method=showeDocketsSearch&showE_docket=true)

Sincerely,

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