

April 25, 2022

Rachel Assink
Air Quality Planner
Washington Department of Ecology
300 Desmond Drive SE
Lacey, WA 98503



Re: Washington Clean Fuel Standard Draft Rule

Dear Ms. Assink,

The Coalition for Renewable Natural Gas (RNG Coalition)¹ offers the following comments in response to the Department of Ecology’s (Ecology) draft Clean Fuel Standard (CFS) rule (Draft)² and related program documents.³ In recent years Washington has begun to emerge as a leader in exploring the role of Renewable Natural Gas (RNG) as a greenhouse gas (GHG) reduction strategy. The implementation of a CFS in Washington is a significant step toward transforming the state’s organic waste, energy, and transportation sectors through the development and use of biogas to create renewable natural gas (RNG), renewable hydrogen, and renewable electricity for use in various transportation applications. RNG Coalition applauds this Draft as a significant step toward Washington’s decarbonization goals.

About the RNG Coalition and the RNG Industry

RNG Coalition is the trade association for the RNG industry in the United States and Canada. Our diverse membership is comprised of leading companies across the RNG supply chain, including recycling and waste management companies, renewable energy project developers, engineers, financiers, investors, organized labor, manufacturers, technology and service providers, gas and power marketers, gas and power transporters, transportation fleets, fueling stations, law firms, environmental advocates, research organizations, municipalities, universities, and utilities. Together we advocate for the sustainable development, deployment, and utilization of RNG, so that present and future generations have access to domestic, renewable, clean fuel and energy in Washington and across North America.

GHG Reduction Potential of Biogas-Derived Resources

Organic waste is a serious and growing issue, and the climate and other environmental impacts from these wastes require an immediate and ongoing solution. Globally, municipal solid waste is expected to grow 69% from 2.01 billion metric tons (BT) in 2018 to 3.4 BT in 2050 (around 50% of which is organic waste).⁴ Moreover, these trends are underpinned by an expected 25% population increase of 2 billion

¹ <http://www.rngcoalition.com/>

² <https://ecology.wa.gov/DOE/files/e4/e4b11436-8669-485d-8939-05f5524bf0ff.pdf>

³ <https://ecology.wa.gov/Regulations-Permits/Laws-rules-rulemaking/Rulemaking/WAC-173-424-455>

⁴ https://datatopics.worldbank.org/what-a-waste/trends_in_solid_waste_management.html

people between now and 2050.⁵ Capturing waste biogas for use as renewable energy is a proven technology for addressing GHG emissions and other challenges in the waste sector, which are slated to worsen over the timeframe required to address climate change.

When derived from such waste feedstocks, all commercially available methods of producing RNG have excellent lifecycle greenhouse gas performance, exemplified by CI modeling employed by Oregon and California's⁶ clean fuel programs. Moreover, some RNG projects capture and destroy a greater amount of GHG (as measured on a tons of carbon dioxide equivalency basis) than are emitted during the fuel's production and use, making it one of the few fuels available commercially today that can achieve a carbon-negative impact (i.e., better than carbon-neutral).

Furthermore, carbon-negative emissions technologies, and in particular those which operate based on the sequestration of biogenic carbon (e.g. bioenergy with geologic carbon capture and sequestration, biochar with soil carbon sequestration), present an opportunity to accelerate GHG reductions in the energy sector or provide useful, non-fossil CO₂ chemical feedstocks. Employing such technologies will ultimately allow our economy to not only reach, but potentially move beyond carbon neutrality to a point where atmospheric carbon levels can be drawn down to stabilize Earth's climate, if needed. To this end, our industry is working toward the implementation of carbon capture and sequestration at RNG and biogas production facilities, and to create carbon-negative renewable hydrogen or bioliquids as outlined in work conducted by Lawrence Livermore National Laboratory for California.⁷

The scientific community—including the most recent report from the United Nations' Intergovernmental Panel on Climate Change—continues to emphasize that global GHG emissions must reach net-zero in the first half of this century.⁸ World renowned organizations such as the International Energy Agency⁹ have pointed out that bioenergy—including bioenergy with carbon capture and storage—is an important pathway to achieving net-zero GHG goals. The importance of maintaining pressure on reducing methane emissions through RNG deployment is underscored by the recent IPCC report, which identifies “methane capture and recovery from solid waste management” as one of the best “short-term ‘win-win’ policies,”¹⁰ and the joint U.S.-EU Methane Pledge, targeting a 30% reduction by 2030.¹¹ Policies that cover a large section of the economy, such as Washington's CFS Program, will play an essential role in enabling these technologies.

The Role of Biogas in a Clean Fuel Standard

⁵ <https://www.un.org/development/desa/en/news/population/world-population-prospects-2019.html>

⁶ For example, see the lifecycle analyses conducted by California's Air Resources Board: <https://ww3.arb.ca.gov/fuels/lcfs/fuelpathways/pathwaytable.htm>

⁷ LLNL, *Getting to Neutral: Options for Negative Carbon Emissions in California*, Baker et al., January, 2020, Lawrence Livermore National Laboratory (LLNL) https://www-gs.llnl.gov/content/assets/docs/energy/Getting_to_Neutral.pdf

⁸ Intergovernmental Panel on Climate Change, *Sixth Assessment Report – Climate Change 2021: The Physical Science Basis*. <https://www.ipcc.ch/report/sixth-assessment-report-working-group-i/>

⁹ International Energy Agency, *Net Zero by 2050: A Roadmap for the Global Energy Sector*, May, 2021. <https://www.iea.org/reports/net-zero-by-2050>

¹⁰ IPCC, 2021. *Climate Change 2021: The Physical Science Basis. Chapter 6. Short-Lived Climate Forcers*. https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Chapter_06.pdf

¹¹ <https://www.state.gov/joint-u-s-eu-statement-on-the-global-methane-pledge/>

RNG Coalition has long supported the use of CFS-style policies to realize GHG reduction goals across the transportation, energy, and waste sectors. In working toward the state’s established 2050 net-zero emissions target,¹² Washington has emerged as a national leader on climate action, moving toward these ambitious long-term GHG emissions reduction targets using practical, far-reaching policies such as a Clean Fuel Standard.

Over the last decade, policies focused on reducing GHG emissions have driven extraordinary growth within the RNG industry. There are now 250 operational RNG production facilities in North America with 237 under construction or in substantial development¹³ compared to only 30 developed between 1982 and 2011. This recent development has been incentivized largely by transportation decarbonization programs, including the United States Environmental Protection Agency’s Renewable Fuel Standard and state-level clean fuel standards such as the existing CFS programs in California, Oregon, and British Columbia.

The biogas and other organic waste resources targeted by our industry can be used to create pipeline-quality RNG, to produce renewable hydrogen, or to generate electricity. All three of these energy carriers will serve an important role in Washington’s transportation sector. Moving forward, it will be crucial for Ecology to be mindful of how to incentivize the use of organic waste feedstocks across all applications, including those where RNG is converted to electricity, hydrogen, or even sustainable aviation fuel.

Feedback on Draft Rule

Washington’s current Clean Fuel Standard draft deserves significant recognition for its incorporation of both Washington-specific provisions and standardized processes from the other jurisdictions which have experience administering analogous clean fuel standard programs. Overall, we are highly supportive of the Draft. The following recommendations would further enhance the Draft to produce a best-in-class CFS for Washington which will achieve the maximum possible reductions in GHG emissions.

Set the Strongest Carbon Intensity Targets Permitted by Statute

A wide portfolio of renewable energy and GHG reduction technologies are available to begin decarbonizing Washington’s transportation sector today. All these technologies need to be implemented as quickly as possible given Washington’s ambitious economy-wide goal of a 45% reduction in emissions from 1990 levels by 2030.

To create the greatest likelihood of achieving the economy-wide goals and maximizing contributions from the transportation sector, Ecology should set the most stringent CFS targets allowable by statute. RNG Coalition supports requiring a 20% carbon intensity (CI) reduction requirement by 2034, beginning compliance requirements in 2023 and making 2023 a full compliance year.

¹² Washington State Legislature, *RCW 70A.45.020 Greenhouse gas emissions reductions—Reporting requirements*. <https://apps.leg.wa.gov/rcw/default.aspx?cite=70A.45.020>

¹³ Based on RNG Coalition’s production facility data as of January 24, 2022: <https://www.rngcoalition.com/rng-production-facilities>

Regional Alignment and Reciprocity of CI Scores Should be a Key Goal

We strongly appreciate the language found in the Draft's section WAC 173-424-OIC that allows for applicants to seek approval to use a carbon intensity that is currently approved by California or Oregon. Such regional alignment will maximize the ability for RNG producers to swiftly respond to the joint signal sent by the clean fuel programs in these states.

Significant attention should be placed on retaining cross-jurisdictional alignment of CI tools and scoring. To the extent feasible, Ecology should continue to work closely with its regional partners and attempt to make changes to CI models together.

Prioritizing such alignment may at times delay updating to the best available information. The peer review of the Carbon Intensity Models conducted by the International Council on Clean Transportation (ICCT) recommend many reasonable updates, but some of these changes might create regional misalignment.

As a specific example relevant to RNG, ICCT recommended changing to updated global warming potential (GWP) values based on the IPCC's Fifth Assessment Report (AR5) to reflect an updated understanding of the climate impacts of different non-CO₂ greenhouse gases.¹⁴ Such a change would clearly benefit all RNG projects that reduce methane, and we would support such an update, if it could be done regionally and in a coordinated fashion. However, we recommend against making this change unilaterally in this rulemaking because it would likely create a significant potential burden (on Ecology, CARB, and OR-DEQ staff) due to pathway applicants filing near-identical pathways in multiple jurisdictions.¹⁵

Use of Renewable Electricity Credits and Renewable Thermal Credits

The use of Renewable Electricity Credits (RECs) and Renewable Thermal Credits (RTCs) is an important strategy to align accounting for the use of clean energy across applications including electric vehicle charging, hydrogen production, and clean fuel upgrading.

A significant portion of the greenhouse gas emissions represented in the average RNG fuel's life cycle are from electricity (and sometimes geologic gas) used to upgrade biogas to RNG. In these situations, the use of clean inputs into RNG production can positively impact a resource's CI score, and can be easily tracked using existing systems and assessed using the existing GREET model. Accordingly, Ecology should allow for RECs and RTCs to qualify as an accounting method to reduce the CI score of any resource.

We Oppose Unlimited Carry Forward of Deficits

The ability to carry forward 5% of total deficits described in WAC 173-424-DC(4) should either be modified or eliminated. As currently written, it appears that 5% of deficits can be carried forward in perpetuity, with no penalty. If this language is retained, and a large majority of entities all take advantage of this compliance flexibility, this would unintentionally weaken the collective stringency of the program and reduce demand for credits from low carbon fuels, such as RNG.

¹⁴ See ICCT review pg. 3. <https://ecology.wa.gov/DOE/files/3f/3ff97fb5-9ba4-4507-8741-4be625e4e690.pdf>

¹⁵ To capture the benefits created by different GWP values, many RNG applicants would be willing to file separate pathways in multiple jurisdictions.

We recommend that if any such deficit “carry forward”¹⁶ is to be retained in the rule, that either a limited time window to cover these deficits be imposed and/or that some form of disincentive¹⁷ for using this borrowing flexibility be imposed.

For example, the requirement could be to fully cover all deficits by the end of the following compliance period (i.e., next period required coverage of the 5% borrowed and all deficits incurred in the following period) with no subsequent borrowing allowed in the following period. Alternatively, if borrowing is to be allowed on a rolling basis (across multiple periods), there should be a disincentive imposed in the form of an interest rate increasing the net deficits owed (beyond the initial amount carried over) and some clarity around how this growing balance of deficits will eventually be addressed.

Conclusion

Washington’s CFS Program has the potential to drive climate action across all sectors of the state’s economy, and RNG is poised to play a key role in reducing GHG emissions in line with Washington’s net-zero GHG future. Establishing the most aggressive GHG reduction requirements and strict metrics possible will allow our industry to contribute as efficiently and effectively as possible toward these goals.

The RNG industry is excited about continued growth in Washington and globally as policymakers look to address climate change and increase the resiliency of our energy systems. The CFS will be a critical step for Washington toward those outcomes, and we look forward to continued engagement with Ecology throughout the rulemaking process.

Sincerely,

/S/

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¹⁶ We note that this carryforward is essentially a form of credit borrowing. Borrowing can help avoid short-term price spikes but because it can also shift the period of market tightness to create supply constraints in future years it is not often used. See: <https://www.c2es.org/content/cap-and-trade-basics/>

¹⁷ For example, an “interest payment” that requires a greater number of credits to be surrendered or a financial payment to Ecology for the privilege of borrowing.