

January 26, 2022

Luke Martland
Climate Commitment Act Implementation Manager
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. Martland,

The Coalition for Renewable Natural Gas (RNG Coalition)¹ offers the following comments on the Department of Ecology’s (Ecology) draft rule (Draft)² pursuant to Chapter 173-446 of the Climate Commitment Act,³ otherwise known as Washington’s Cap-and-Invest Program (Program). 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. To that end, we applaud the pending implementation of this Program as another step toward transforming Washington’s organic waste and energy sectors through the development and use of biogas, renewable natural gas (RNG), and renewable hydrogen.

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 RNG and Biologically-Derived Renewable Hydrogen

Organic waste is a serious and growing issue, and 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 people

¹ <http://www.rngcoalition.com/>

² <https://ecology.wa.gov/DOE/files/ad/add4891c-0c4e-4253-a784-d02051c77633.pdf>

³ <https://ecology.wa.gov/Regulations-Permits/Laws-rules-rulemaking/Rulemaking/WAC-173-446>

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

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

Growth in RNG and Progress of Utility Programs in Other Jurisdictions

Over the last decade, policies focused on reducing GHG emissions have driven extraordinary growth within the RNG industry. There are now 200 operational RNG production facilities in North America with 258 under construction or in substantial development⁸ 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 forthcoming Washington Clean Fuel Standard.⁹

RNG is also increasingly being used to decarbonize natural gas end-use applications in non-transportation sectors, marked by the emergence of new gas utility procurement programs for RNG—many of which are largely aligned with the vision of Washington's policy statement related to voluntary RNG procurement.¹⁰ For example, the California Public Utilities Commission (CPUC) is currently

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

⁹ Washington Department of Ecology, *Washington Clean Fuel Standard*. <https://ecology.wa.gov/Air-Climate/Climate-change/Reducing-greenhouse-gases/Clean-Fuel-Standard>

¹⁰ [http://lawfilesexternal.wa.gov/biennium/2019-20/Pdf/Bills/Session Laws/House/1257-S3.SL.pdf](http://lawfilesexternal.wa.gov/biennium/2019-20/Pdf/Bills/Session%20Laws/House/1257-S3.SL.pdf)

considering requiring all gas utilities to procure RNG at levels up to ~15% of current core consumption by 2030, per the authority granted in California Senate Bill 1440;¹¹ Oregon has adopted rules for voluntary RNG procurement targeting 15% for the 2030-2034 timeframe;¹² Nevada has authorized RNG procurement and rate recovery;¹³ British Columbia recently upped its ambition on RNG and is now targeting 15% renewable gas content in the natural gas system by 2030;¹⁴ and voluntary corporate buyers now have a framework for certification of RNG fuel production, sales, and consumption under the recently-finalized Green-e Renewable Fuels Standard.¹⁵

Washington's Cap-and-Invest Will Drive Emission Reductions Through RNG Production and Use

In working toward the state's established 2050 net-zero emissions target,¹⁶ 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. British Columbia¹⁷ has likewise established a 2050 carbon neutrality target, and California currently has a target to achieve net-zero GHG emissions by 2045¹⁸ while considering pathways to achieve net-zero emissions by as early as 2035.¹⁹ All of these states' pathways are dependent, in part, on the increased production and use of waste-derived renewable gases to help achieve their goals.

Indeed, 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.²⁰ World renowned organizations such as the International Energy Agency²¹ have pointed out that bioenergy—including bioenergy with carbon capture and storage—is an important pathway to achieving net-zero GHG goals. Furthermore, the importance of

¹¹ See the CPUC's recent Proposed Decision in CPUC Docket R.13-02-008: <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M436/K682/436682810.PDF>

¹² <https://apps.puc.state.or.us/orders/2020ords/20-227.pdf>

¹³ <https://www.leg.state.nv.us/App/NELIS/REL/80th2019/Bill/6199/Text>

¹⁴ <https://news.gov.bc.ca/releases/2021EMLI0046-001286>

¹⁵ <https://www.green-e.org/docs/rf/Green-e%20Renewable%20Fuels%20Standard.pdf>

¹⁶ 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>

¹⁷ While British Columbia has an 80% GHG emissions reduction target by 2050, Canada has a net-zero target by 2050 according to its *Canadian Net-Zero Emissions Accountability Act*, which received royal ascent in June 2021: <https://www.parl.ca/LegisInfo/en/bill/43-2/C-12>.

¹⁸ Governor Brown – State of California's Executive Department, *Executive Order B-55-18 to Achieve Carbon Neutrality*. <https://www.ca.gov/archive/gov39/wp-content/uploads/2018/09/9.10.18-Executive-Order.pdf>

¹⁹ Office of Governor Gavin Newsom, "Governor Newsom Holds Virtual Discussion with Leading Climate Scientists on State's Progress Toward Carbon Neutrality," press release, July 9, 2021. <https://www.gov.ca.gov/2021/07/09/governor-newsom-holds-virtual-discussion-with-leading-climate-scientists-on-states-progress-toward-carbon-neutrality/>

²⁰ 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/>

²¹ 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>

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,”²² and the joint U.S.-EU Methane Pledge, targeting a 30% reduction by 2030.²³ Policies that cover a large section of the economy, such as Washington’s Cap-and-Invest Program, will play an essential role in enabling these technologies.

Feedback on Draft Rules

Treatment of Organic Waste Feedstocks

Ecology’s treatment of the organic waste feedstocks for which RNG is used as a GHG abatement strategy will serve as an important component of the Program as it pertains to methane emissions. RNG Coalition supports language in the Draft which would defer coverage of landfills until the Program’s third compliance period, while allowing increased biogas capture (to at least 75%) and/or implementation of a biogas-to-electricity or RNG facility to result in exemption from Program coverage. Maintaining these parameters in the final rule while simultaneously developing other policies that promote RNG procurement will send a strong signal that RNG is an important climate mitigation tool for both the waste and energy sectors, leading to increased production and utilization. Ecology should also consider how legislation such as HB 1663²⁴—which targets increased biogas capture rates—can support these emission reduction efforts in the landfill sector. Given the existing and forthcoming programs in Washington designed to abate methane emissions, including the Clean Fuel Standard, we also support the exclusion of agricultural emissions from compliance under the Program at this time.

Proposed Allowance Schedule and Investment Prioritization

Ecology should continue to pursue an aggressive decarbonization schedule for this important program which is slated to cover 75% of Washington’s economy. This should lead to an allowance price in the system that is well aligned with the social cost of greenhouse gas emissions and therefore ensure environmentally optimal and economically efficient outcomes. This has long been the theoretical promise of carbon pricing and in a system that meets this objective RNG projects will be well incentivized. Unfortunately, other cap and invest programs have not always achieved allowance prices high enough to drive significant investment in RNG. We hope that the system in Washington will avoid this outcome and that RNG investments in the system will be driven primarily by the market price.

If socially efficient pricing does not occur—as has been the primary outcome in other US 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 presents a unique decarbonization opportunity to that end. As a result, states leading in the race to abate short-lived climate pollutants, such as California, are using dollars raised through cap-and-

²² 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

²³ <https://www.state.gov/joint-u-s-eu-statement-on-the-global-methane-pledge/>

²⁴ <https://lawfilesexternal.wa.gov/biennium/2021-22/Pdf/Bills/House%20Bills/1663.pdf?q=20220110113537>

trade programs to promote RNG production as an important part of their near-term strategies aimed at avoiding the worst effects of climate change.

Recent work from CalRecycle,²⁵ the California Public Utilities Commission’s SB 1440 white paper,²⁶ and CARB’s recent analysis²⁷ of livestock methane reductions—largely based on RNG—all serve to outline this strategy. If allowance prices are initially low Washington should follow California’s proven pathway of using a portion of cap-and-invest funds to provide grants for anaerobic digesters as well as grants which cover certain pipeline interconnection costs for renewable gas facilities.

Cost-Recovery and Use of Book-and-Claim Accounting

In order to facilitate expedient decarbonization in both the gas and organic waste sectors, Ecology should support utilities’ ability to procure renewable energy as a compliance mechanism in a flexible fashion. First, Ecology should explicitly clarify that all renewable energy resources purchased via book-and-claim accounting shall qualify for compliance within the Program. This method of RNG procurement aligns with other state, federal, and voluntary programs across all segments of the RNG industry, including preliminary conversations in Washington’s forthcoming Clean Fuel Standard. Furthermore, Ecology should also allow utilities to recover RNG procurement costs related to program compliance if Washington wishes to fully enable the consumption of RNG by utility customers.

Conclusion

Washington’s Cap-and-Invest 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. Allowing for RNG cost recovery, aligning procurement practices with other jurisdictions, maintaining the current language around organic waste compliance eligibility, establishing aggressive targets that lead to socially optimal allowance prices, and/or providing funds for projects with large near-term GHG impacts will allow Ecology to realize that future.

Our 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. This Program 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/

Sam Wade

Director of Public Policy
Coalition for Renewable Natural Gas

²⁵ <https://www2.calrecycle.ca.gov/Publications/Details/1693>

²⁶ https://www.cpuc.ca.gov/uploadedFiles/CPUC_Website/Content/Utilities_and_Industries/Energy/Energy_Programs/Gas/SB1440_Staff_Proposal_FINAL.pdf

²⁷ <https://www2.arb.ca.gov/sites/default/files/2021-06/draft-2030-dairy-livestock-ch4-analysis.pdf>

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