October 24, 2019

Kendra White, Energy Policy Advisor to the Commission
Washington Utilities and Transportation Commission
621 Woodland Square Loop S.E.
Lacey, Washington 98503

RE: Investigation into Renewable Natural Gas Programmatic Design and Pipeline Safety Standards, Docket U-190818

Dear Ms. White,

The Coalition for Renewable Natural Gas (RNG Coalition)[1] offers this letter in response to the initial questions posed by the Washington Utilities and Transportation Commission (Commission) in Docket U-190818. Below we briefly describe our organization and the benefits of RNG before addressing the specific questions raised by the Commission.

About the RNG Coalition and the RNG Industry

The 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 waste collection, 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.

Currently our organization focuses on RNG derived from biologic wastes (sometimes called biomethane or biogas that has been upgraded to meet pipeline or transportation specifications). RNG is a direct substitute for conventional natural gas that can be introduced to the gas system in significant volumes safely and quickly. This type of renewable gas deserves significant near-term attention because the primary method of generating biomethane—anerobic digestion (AD)—is a well-proven cost-effective technology available at commercial scale. RNG offered by Washington utilities would give their customers the ability to reduce their carbon footprint from their gas use immediately.

Utility Procurement of RNG Will Offer Significant Environmental and Economic Benefits

As described in more detail below, recent growth in RNG supply has been motivated by programs targeting RNG use as a transportation fuel, however, vehicular consumption represents less than one percent of total gas demand in the United States.[2] Therefore, expanding the use of RNG to other sectors

[1] http://www.rngcoalition.com/

[2] https://www.eia.gov/dnav/ng/ng_cons_sum_dcu_nus_a.htm

is of significant interest to our members. Developing successful policy drivers to stimulate a market for RNG produced for gas utility customers has the potential to significantly contribute toward achieving the State's climate change goals, provide a cost-effective opportunity to decarbonize existing natural gas infrastructure and drive economic development.

All commercially available methods of producing RNG have excellent greenhouse gas performance. The transportation fuel programs promoting RNG use have proven that production and use of RNG achieves greenhouse gas emissions reductions on the order of 40% or more compared to conventional natural gas derived from geologic sources. Methane is a short-lived climate pollutant that, according to the Intergovernmental Panel on Climate Change, is up to 84 times as potent as a greenhouse gas as carbon dioxide.[3] The best RNG projects prevent the release of methane and achieve dramatic greenhouse gas reductions.

Lifecycle greenhouse gas evaluations conducted by the California Air Resources Board and Argonne National Labs have found that some RNG projects capture and destroy a greater amount of methane and other greenhouse gases (as measured on a tons of carbon dioxide equivalency basis) than are emitted during the fuel's combustion, making this RNG one of the few fuels with a "carbon-negative" impact (i.e., better than "carbon-neutral").[4] We recommend the use of similar lifecycle accounting mechanisms be applied by Washington utilities procuring RNG. We believe that differentiating RNG supply by such metrics is appropriate and should be encouraged.

In addition to the environmental benefits of RNG, there are substantial economic benefits realized with increased development, deployment and utilization of RNG—including millions of dollars in capital investment ($10-$100 million per project) and creation of thousands of clean energy sector jobs (up to 173 direct and indirect jobs per project).[5] We would be happy to provide additional detail about this topic if it is of interest to the Commission.

Response to Specific Questions Posed by the Commission

1. What level of guidance is needed from the Commission related to the following elements of E3SHB 1257, Sections 13 and 14:

- *General program structure of each section (13 and 14)*

We support definitive guidance from the Commission to implement both Section 13 and 14 of E3SHB 1257.

- *Eligibility of particular environmental attributes*

  Robust tracking and third-party verification of RNG supply chains (and the associated environmental attributes)—developed initially as part of the systems for evaluating compliance

[3] https://www.ipcc.ch/site/assets/uploads/2018/02/WG1AR5_Chapter08_FINAL.pdf

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

[5] https://static1.squarespace.com/static/53a09c47e4b050b5ad5bf4f5/t/59077544ebbd1ad192d13ff6/1493660998766/ICF_RNG+Jobs+Study_FINAL+with+infographic.pdf

with the mandatory transportation fuel programs—are currently being expanded to serve voluntary sustainability markets.[6,7] Utilities adopting RNG procurement programs will help facilitate further buildout of such systems and we encourage direct engagement by the Commission in the design of such systems.

- *Procedures to approve, bank, or transfer environmental attributes*

  In general, we support programmatic flexibility to bank and transfer environmental attributes associated with RNG, providing that such flexibility does not significantly diminish the incentive to increase the use of RNG over time.

How should that guidance be provided? For example, Policy Statement? Rule? Other?

We have no comments currently as to the best structure for providing guidance to utilities (policy statement, rule, etc.) but would be happy to discuss this issue with other stakeholders at the October 29th workshop and provide a recommendation in future filings.

2. For Section 14 programs, should subscribers be required to pay all costs of RNG, or should any under-collection of section 14 costs be credited toward the RNG program charge authorized by Section 13?

We support the program costs associated with the voluntary tariffs described by Section 14 being fully born by program subscribers. We also believe that for voluntary tariffs available to residential (and possibly small commercial customers) it is wise to offer price-certainty rather than volume-certainty. Volume certainty has been preferred in voluntary renewable electricity programs, wherein customers specify a certain percentage of their use with no cost cap, but we believe that a fixed dollar amount model will provide a sufficient level of ratepayer protection for smaller customers while also providing much-needed market certainty that RNG project developers need in order to access investment capital, build RNG production facilities and deliver RNG supply.

3. What methods should the Commission consider to calculate the 5 percent limit on customer charges for RNG programs authorized in Section 13?

In conceptual terms, we believe calculating this limit will involve a comparison of the costs of any RNG program applicable to all retail customers (authorized per Section 13) to the total revenue requirement for all retail gas customers for the utility in question (likely over an extended time period) and ensuring that these costs do not exceed 5 percent.

[6] The systems set up for tracking RNG in transportation programs are being extended to support non-transport (deemed "thermal") uses by the Midwest Renewable Energy Tracking System.

[7] The traditional sources of certification for voluntary renewable energy purchases, such as Green-e, have also responded to this need from corporate sustainability RNG buyers and are working to building a framework to help facilitate such voluntary purchases. See: https://www.green-e.org/news/031219

We'd be happy to discuss this issue with other stakeholders at the October 29th workshop and will comment further on these issues after the general program scope is resolved per question 1 above.

4. How should renewable hydrogen be treated in RNG programs?

Although the RNG Coalition is currently focused on promoting RNG (biomethane derived from biogas), we recognize that other technologies will likely also be helpful to fully decarbonize the energy services currently served by conventional natural gas. Technologies that require time to scale and achieve production cost reductions (e.g., renewable hydrogen, sometimes called power-to-gas) or that involve the turnover of long-lived capital stock (e.g., electrification, efficiency) will also likely be needed. We support utilities exploring these technologies in conjunction with biomethane.

Renewable hydrogen is a promising but longer-term method to create significant volumes of renewable gas. Technologies to deploy renewable hydrogen at commercial scale are under development in Europe and elsewhere. We support continued exploration of the opportunities to use renewable hydrogen but believe the technology development path for such gas will be slower than that for biogas-derived renewable natural gas. Also, these categories may not be clear cut in the future as power-to-gas involving electrolytic hydrogen that is combined with biogenic carbon dioxide has the potential to boost the yields of current sources of RNG supply.[8]

5. What barriers are there, if any, to accessing and investing in the RNG market, and how can the Commission or regulated utilities address such barriers?

We believe the study entitled *Biogas and Renewable Natural Gas Inventory*,[9] completed by the Oregon Department of Energy, correctly summarized the primary barriers faced by RNG projects. This list was also included in the *Promoting Renewable Natural Gas in Washington State*[10] study conducted by the Washington Department of Commerce and Washington State University (Department of Commerce Study). Barriers listed in these studies include:

- Access to project financing
- Higher capital cost of gas upgrading equipment to remove impurities and increase heat content of RNG to meet utility pipeline standards
- High cost of pipeline interconnection and testing
- High production and capital costs with no valuing of environmental benefits
- Perception of risk due to unfamiliarity with the technology, fuel sources, and fuel supply chain
- Inability to use most food waste streams in the state
- Lack of financial incentives for natural gas fueling infrastructure and vehicles
- Limited number of RNG production sites close to natural gas pipelines

[8] https://www.nrel.gov/esif/partnerships-southern-california-gas.html#targetText=NREL%20and%20Southern%20California%20Gas,U.S.%20Power%2Dto%2DGas%20Project&targetText=The%20technology%20takes%20excess%20electricity,to%20produce%20renewable%20natural%20gas.

[9] https://www.oregon.gov/energy/Data-and-Reports/Documents/2018-RNG-Inventory-Report.pdf

[10] http://www.commerce.wa.gov/wp-content/uploads/2019/01/Energy-Promoting-RNG-in-Washington-State.pdf

The barrier that utilities have the most direct control over is the acceptance of RNG into pipelines. Historically, this has been a significant hindrance to project development across the US and Canada. The issues have included overly stringent gas quality requirements and prohibitively costly pipeline interconnection standards in certain states. There are a small but growing number of gas utilities—many of whom have joined our coalition—that have publicly recognized the role RNG can play in cost-effectively decarbonizing the natural gas grid and have begun to move to reduce these interconnection barriers.[11]

6. Is there an adequate supply of RNG in the current market? Please describe the current market for RNG supply both in and outside Washington state.

The RNG industry is nascent relative to other renewables industries but has shown extraordinary growth that has been driven by policies designed to promote environmental and economic goals—including but not limited to clean air, improved waste management, increased job development, energy independence, and resource diversity.

The first RNG production facility in North America was developed in 1982 at the Fresh Kills Landfill on Staten Island, New York. That project continues to produce RNG that has been successfully transported to customers for nearly 40 years. Between 1982 and 2011, 30 RNG projects were developed—most of which were incentivized by various state's Renewable Portfolio Standard Programs (RPS) and underwritten by the monetization of Renewable Energy Credits (RECs) that RNG-sourced electricity generated under such programs.

Since 2011, more than 72 RNG projects have been developed—and an additional 90 new RNG projects are under construction or have completed significant development. Most of the newer projects developed post-2011 were incentivized by transportation decarbonization programs, including the federal Renewable Fuel Standard Program (RFS) and California's Low Carbon Fuel Standard (LCFS). These projects are largely underwritten by the monetization of tradeable credits, such as Renewable Identification Numbers (RINs), that RNG-sourced transportation fuel generates under these programs.

Despite the success of programs promoting RNG in transportation, to date no analogous federal or state programs exist to promote RNG use in the sectors where most natural gas demand occurs (i.e., non-transport applications), which is why the questions considered in this proceeding are so critical. There remain thousands of landfills, wastewater treatment facilities and livestock operations across North America—including many in Washington—where raw biogas (methane) is being flared, or worse, is uncollected and escaping fugitively into the atmosphere.

We believe the Department of Commerce Study did a strong job of characterizing the potential supply from Washington.[12] For potential supply outside of Washington, we recommend the study conducted

[11] We note that recently other states have passed legislation that allows other utilities to own this portion of the projects to address the "access to project financing" barrier. For example, see Nevada SB 154 (Cancela, 2019). We prefer utility rate-based investment stop at the interconnection and that competition between non-regulated project developers be allowed to continue to drive down the cost of RNG production technology on the producer side of the project (i.e., upstream of the interconnection).

[12] See Section 3. Inventory of Opportunities.

by ICF International entitled *Design Principles for a Renewable Gas Standard*, which contains a helpful literature review of recent studies evaluating potential nation-wide supply.[13]

7. What is the range of price premiums for RNG and how it compares to prices for conventional natural gas in the current market?

As a non-profit trade association, the RNG Coalition represents competing companies and organizations who buy and sell products including biomethane and regulatory credits like RINs and LCFS credits.[14] Our members cannot share real time price or production information among themselves.

Our status as a third party, non-market participant, puts us in a unique position to lawfully collect industry information and deliver it to government entities as part of our advocacy efforts. We'd be happy to conduct such a blinded survey for the Commission if such information can be kept confidential once submitted. We cannot, however, act as an intermediary to share market information among our members, including through providing pricing details in any publicly available comments.

Further, since the current transportation program pricing is relatively volatile, rather than only focusing on current market prices, it may also be productive to review long-run expectations for production cost of RNG.[15] Again, we would point to the Department of Commerce Study and, specifically, the "Economics of RNG" discussion found in Section 4. Other similar studies exist evaluating potential RNG supply costs outside of Washington. For example, the ICF study mentioned above found significant supply available at production costs well below the current prices for RNG in transport fuel markets.

8. What gas quality standards do companies currently require for interconnection of RNG to their distribution system?

Unfortunately, gas quality standards do vary significantly from utility to utility (and across various pipeline companies) throughout North America. We have created an online database of gas quality information taken directly from major transmissions gas pipeline tariffs in an attempt to compare and contrast the requirements across the country.[16]

---

[13] https://www.icf.com/resources/white-papers/2017/design-principles-for-renewable-gas

[14] The value of environmental credits are made public by the government agencies that run these programs.

For RINs see: https://www.epa.gov/fuels-registration-reporting-and-compliance-help/rin-trades-and-price-information

For LCFS see: http://ww3.arb.ca.gov/fuels/lcfs/dashboard/creditpriceserieswithoutargusopis.xlsx

[15] Another reason not to look to short-run market prices in transportation-focused programs is that the price of other competing fuels, such as diesel, are also higher on a per-unit-energy basis.

[16] http://www.rngcoalition.com/pipeline-database

We have extensively commented on these issues under various utility tariffs in other forums, however, we prefer to see the initial conversation surrounding HB 1257 implementation focus on the potential design of the utility RNG programs.[17]

9. Should the Commission consider adopting uniform standards or provide general guidance for RNG quality? If so, what standards or guidance should the Commission adopt?

We support all efforts to coordinate across utilities on these issues to lower barriers to RNG injection. For example, we collaborated with the Northeast Gas Association on the publication of the *Interconnect Guide for Renewable Natural Gas In New York State*. We look forward to coordination across the Washington utilities and would be happy to provide additional information on this issue in future filings, if necessary, after the Washington gas utilities articulate the standards applicable in their service territories. **However, such standards discussions should not delay implementation of utility RNG procurement programs authorized by HB 1257.**

Conclusion

The RNG Coalition appreciates the opportunity to participate and comment in this proceeding. Our members look forward to investing in and constructing new RNG production facilities, and creating clean energy sector jobs to serve RNG demand in Washington, learning from the results of this policy model, and sharing those lessons with interested utilities and policymakers across North America.

Sincerely,

Sam Wade
Director of State Regulatory Affairs
Coalition for Renewable Natural Gas
1017 L Street #513
Sacramento, CA 95814
530.219.3887
sam@rngcoalition.com

[17] For an example of our comments on these issues in other forums, including opposition to the stringency of siloxane limits imposed in California, see: https://apps.cpuc.ca.gov/apex/f?p=401:57:0::NO