October 26, 2023

VIA ELECTRONIC FILING

Mark Sippola, Branch Chief
California Air Resources Board
1001 I Street
Sacramento, California 95814

Re: RNG Coalition Comments on October 5, 2023 Cap-and-Trade Workshop

Dear Mr. Sippola,

The Coalition for Renewable Natural Gas (RNG Coalition)[1] offers the following comments in response to the California Air Resources Board's (CARB) October 5 Workshop (Workshop) regarding updates to the state's Cap-and-Trade (C&T) program.

RNG Coalition previously submitted comments in response to the June 14 and July 27 Workshops which addressed a variety of topics fundamental to the use of renewable gas, including the role of renewable gas in decarbonization, the use of M-RETS tracking system for RNG and hydrogen, and our support for increasing the programs greenhouse gas (GHG) reduction target, among others. We note that the GHG accounting treatment of biogenic CO_2 emissions compared to fossil CO_2 emissions was a primary focus of our response to the June 14 Workshop. Our comments herewithin primarily pertain to the Biogenic Emissions Topics discussed by CARB beginning on slide 52 of the October 5th presentation.[2]

General Feedback on Renewable Gases in Cap-and-Trade

We appreciate CARB's attention to renewable gas topics, including the intent to use the best available science and provide consistent treatment across end uses and across multiple feedstock and fuel combinations. Debate around RNG issues remain complex, and we recommend C&T staff review for stakeholders the fundamental underlying justifications[3] for use of RNG as a methane abatement and fossil fuel displacement strategy in future Workshops. Much of this knowledge base has not been emphasized in the C&T Workshops thus far and it does provide important differention for RNG/biogas from other GHG abatement strategies.

RNG Coalition supports the increased use of biomethane (RNG), clean hydrogen, and renewable CO_2 in all relevant applications. We advocate for policies to accomplish this both within California, across different states, at the Federal level, and in voluntary markets. We expect that increased renewable gas use in California will be achieved through a suite of policies, including but not limited to California's

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

[2] https://ww2.arb.ca.gov/sites/default/files/2023-10/nc-CapTradeWorkshop_Oct052023_afternoon_0.pdf

[3] For example, see: World Resources Institute *Renewable Natural Gas as a Climate Strategy: Guidance for State Policymakers* https://www.wri.org/research/renewable-natural-gas-climate-strategy-guidance-state-policymakers or https://www.epa.gov/lmop/renewable-natural-gas or https://www.epa.gov/agstar/benefits-anaerobic-digestion

Renewable Gas Standard, Low Carbon Fuel Standard, Renewable Portfolio Standard, new corporate GHG reporting requirements under Senate Bill 253 (Wiener, 2023), and C&T requirements.

CARB Should Prioritize Alignment of RNG Claims Between the Low Carbon Fuel Standard, Utility Procurement Programs, Voluntary Corporate Procurement, and the Cap-and-Trade Program

CARB should focus on harmonization of reporting rules across the major programs mentioned above to allow for consistent claims where volumes of renewable gases (and the associated environmental benefits) are assigned. We continue to recommend one centralized electronic registry to address any possibility of double claims or double payments by compliance entities.

For example, we believe that much of the RNG used in natural gas vehicles today is not recognized by the C&T/Mandatory Reporting Regulation's (MRR) current framework. In the Low Carbon Fuel Standard, gas deployed into natural gas vehicles is reported downstream of the utility, usually through collaborative reporting between the RNG project and the company running the dispensing stations.

Utilities reporting for the same volumes of gas under the C&T program do not have good visibility into LCFS claims and do not know what is renewable and what is not at each station. This can, and should, be corrected in this rulemaking, either through improved internal coordination between groups at CARB (who have access to both datasets and can map stations using RNG to utility service territories) or through a holistic fix that could be used across both programs (e.g., use of a centralized registry that could be accessed by both programs).

Similar issues are likely to arise as entities begin to procure more RNG under corporate GHG accounting frameworks for facilities not directly covered in C&T/MRR. As CARB begins to gather data for such corporate reporting under SB 253 requirements, there should be a way for utility C&T obligations to be reduced to recognize these purchases. In the absence of such accounting alignment, renewable fuel use will be counted as conventional gas and thus create unnecessary duplicative C&T burden for California utility ratepayers—even those directly paying to procure RNG.

Existing C&T Resource Shuffling/Start Date Additionality Requirements Have Proven to be Administratively Burdensome and Largely Unnecessary

Section § 95852.1.1 of the current C&T rules contain eligibility requirements for biogas and biomethane that are not consistently applied to any other source of greenhouse gas abatement—including other biofuels that may be less GHG beneficial than RNG when evaluated on a lifecycle basis. CARB should revisit the underlying logic of these historical provisions.

These provisions arise from hotly debated concepts of resource shuffling in prior cap-and-trade rulemakings—largely raised by opponents of RNG/biogas deployment. In our view, attention to these issues have distracted from what should be the primary goal—promotion of greenhouse gas reduction (and especially methane capture) through continued rapid RNG/biogas project development. The complexity and administrative burden of these existing requirements should be viewed as a cautionary tale for the current rulemaking.

RNG/biogas historically has primarily been used in the transportation and power generation sectors. RNG currently remains under 1% of total US natural gas supply, despite recent rapid growth driven by

transportation decarbonization programs. Further, as the Scoping Plan recognizes,[4] there is much untapped potential that could be utilized to help the state meet its GHG reduction goals.

The resource shuffling requirements and arbitrary eligibility cutoff date[5] included in the current C&T regulation is an inappropriate intellectual framework for RNG projects because RNG projects have significant operating costs and will not operate in the absence of continued sufficient policy support.

Practical experience has also shown such requirements to be unnecessary to promote new supply. The other low-carbon and renewable fuel programs promoting rapid growth in RNG use do not require that RNG be produced only from new facilities built for the purpose of generating credits under the program. However, there is strong evidence that these programs have led to RNG resource additions.[6]

Early concerns about biogas/RNG resource shuffling were focused on comparisons to other resources in the power sector. Specifically, concerns about landfill biogas/RNG projects displacing solar or wind were a key driver. Thus, these resource shuffling provisions were not designed with promotion of RNG growth in mind.

In fact, instead of imposed restrictions on resource shuffling leading to additional RNG/biogas project growth, low REC prices and lack of recognition of the unique benefits of RNG (e.g., methane reduction, renewable fertilizer production, circularity of waste streams) in the California RPS, and similar programs across the US, has created an environment where existing projects are at risk of ceasing operations.

As projects roll off the initial power purchase agreements that got them built many are encountering strong financial difficulties. In response to this problem, the US EPA's Landfill Methane Outreach Program (LMOP) program created toolkit specifically for landfill gas projects with expiring electricity power purchase agreements, which says the following:[7]

> "LMOP's mission is to reduce methane emissions from landfills by encouraging the recovery and beneficial use of biogas generated from municipal solid waste. In many cases, continuing to operate an LFG energy project is feasible and is the best way to destroy methane while also generating renewable energy. However, based on landfill conditions or economic factors, it may not be possible to continue an energy project. For these situations, we present responsible ways to shut down your energy project while employing best practices to mitigate methane emissions."

Further, CARB is now *explicitly stating* that it would like to shift the use of biomethane resources from certain current uses (e.g., natural gas vehicles) to other uses over time. We agree that RNG is a flexible resource that can serve many applications that may prove difficult to electrify (and where RNG will therefore remain an important long-run solution). However, the incentives to use RNG in non-

[4] See Scoping Plan Figure H-4. Biomethane Use in California by Sector. https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp-appendix-h-ab-32-ghg-inventory-sector-modeling.pdf

[5] The provisions in § 95852.1.1 focus on January 1, 2012 as a key start date for procurement contracts.

[6] Reed et al. *Environmental Attribute Credits: Analysis of Program Design Features and Impacts* 2023 https://cleanenergy.uci.edu/PDF_White_Papers/Environmental_Attribute_Credits_Analysis_of_Program_Design_Features_and_Impacts_091523.pdf

[7] https://www.epa.gov/lmop/toolkit-expiring-landfill-gas-electricity-power-purchase-agreements

transportation applications are currently much less than provided by transportation sector decarbonization programs—both within and outside of California. CARB should reconsider unproductive resource shuffling language to both incent new projects while smoothly reallocating the existing biogas/RNG resources toward the sectors that may need it most over time.

Deliverability and Time-Matching Must Recognize the Realities of the Interconnected North American Gas System, Including Gas Storage

The concepts of deliverability and time-matching are another set of heavily debated considerations in designing market-based procurement frameworks for different low carbon energy carriers. For appropriate time-matching, it is important to consider that renewable gases are fundamentally different from power resources in the physics of the energy carrier's creation and dispatchability. The fact that RNG and other renewable gases can be stored for long time periods is a key advantage of these energy carriers and this fact makes very short-period (e.g., hourly) matching requirements completely inappropriate for renewable gases. The existing three quarter time matching requirements in C&T has proven workable.

With respect to deliverability issues, to achieve the greatest GHG impact through renewable gas adoption, CARB should continue to employ full book-and-claim for all North American RNG in C&T. This allows project developers to easily match their supply to buyers' demand. The vast majority of the RNG supplied in North America under existing programs is transacted via book-and-claim accounting and this has resulted in overwhelmingly positive greenhouse gas emissions reduction thus far.

Continuing to allow full book-and-claim will incentivize the entire renewable gas supply chain to build the RNG resource in a rational way—starting with the most cost-effective projects. Given that the supply of conventional gas which currently serves California is quite geographically broad, and that there is an existing robust and liquid market for physical gas delivery, which also optimizes moving gas from supply to demand in a least cost (and generally lowest GHG)[8] fashion, no limitations on book-and-claim are needed.

Denmark currently has 40% RNG[9] in their pipeline and the Danish Government is aiming to grow that share to 100% by 2030[10] in line with their Green Gas Strategy, which prioritizes free trade of green gases across borders and states that:

> *When a biogas plant feeds biogas into the gas system, it is mixed with other gas. In the gas system, both biogas and natural gas are mixed to form a uniform gas. In order for the gas supplier to prove the origin of the gas supplied to the final customer, guarantees of origin are used. Energinet issues guarantees of origin, thereby ensuring that it can be documented that a consumed volume of gas is matched by an equivalent production of green gas. This system prevents double counting of renewable energy, allowing companies and other consumers to pay for green gas.*

[8] Moving gas unnecessarily requires additional energy and emissions from compression stations and potential methane leakage.

[9] https://en.energinet.dk/gas/biomethane/

[10] https://en.energinet.dk/gas/biomethane/danish-biomethane-experience/

Deliverability rules in the US EPA's RFS program have long recognized that once RNG and fossil gas is co-mingled there is no way to ensure deliverability of just the subset of renewable molecules. For a recent example of EPA's analysis of this issue, the preamble[11] for the Proposed RFS "Set" rulemaking explicitly stated that:

> *When RNG moves through a pipeline system for distribution, the RNG is mixed with a much larger proportion of fossil natural gas using the same system. The two natural gases—one derived from renewable sources, the other from fossil sources—are fungible at that point. Consequently, by the time the natural gas is used to fuel a vehicle, there is no meaningful way to identify which molecules of methane were originally sourced from biogas and which came from fossil sources. As discussed above, and in light of this dynamic, when EPA introduced RNG as a transportation fuel in the RFS program in the Pathways II rule, we set up a system whereby the demonstration that RNG was used as transportation fuel relied on accounting protocols, recordkeeping requirements, and requirements for contracts and affidavits attesting that a specific volume of RNG was used as transportation fuel, and for no other purpose.*

Oregon's Department of Environmental Quality also recently clearly described the advantages of book and claim accounting in their 2023 climate rulemaking work.[12] These well-proven concepts need to remain unchanged for RNG in the C&T system. Creating consistency and fungibility between Pacific Coast Collaborative partners (and ideally all North American RNG markets) increases competitiveness, improves investment certainty, and leads to the sustainable growth of the renewable gaseous fuel industry. Therefore, CARB should not impose any geographic restrictions on deliverability of renewable gases that are not also imposed on the use of conventional gas. Instead, we should look to align accounting frameworks across California programs and with other North American partners.

Many Sustainable Uses of RNG Exist, the Best Long-Term Use is Hard to Predict

A key benefit of RNG is its ability to be used in a flexible manner wherever current natural gas demand exists, while retaining the option to target certain applications more specifically in the long run. With this in mind, CARB should fully consider all possible RNG end-uses in the near-term, as well as which may be most appropriate in the long-term.

To this end we support "[Updating] biogenic CO_2 exemption to provide equal treatment to process and combustion emissions," as stated on slide 53. Doing so will allow the use of renewable gases and other biologically-derived feedstocks to supplant fossil-derived feedstocks in applications beyond the power and transportation sectors. These are important emerging markets where renewable carbon-based molecules will be necessary to produce a variety of fuels and products, with important circular economy results for waste-derived feedstocks.

Conclusion

[11] Federal Register, Vol. 87, No. 250, Friday, December 30, 2022, Proposed Rules. See page 80637. https://www.govinfo.gov/content/pkg/FR-2022-12-30/pdf/2022-26499.pdf

[12] https://www.oregon.gov/deq/rulemaking/Documents/c2023m2briefBioM.pdf

RNG Coalition appreciates the opportunity to provide feedback toward CARB's update of the Cap-and-Trade program as California moves toward improved program alignment and the increased use of new biogenic fuels and feedstocks across sectors.

Sincerely,

/S/

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