September 19, 2023

Carey Bylin
California Air Resources Board
1001 I Street
Sacramento, CA 95814
hydrogen@arb.ca.gov

Re: RNG Coalition Comments on SB 1075 Joint Agency Kickoff Workshop

Dear Ms. Bylin,

The Coalition for Renewable Natural Gas (RNG Coalition) is a California-based nonprofit organization representing and providing public policy advocacy and education for the Renewable Natural Gas (RNG) industry.[1] 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 California and across North America.

RNG Coalition offers the following comments in response to the Joint Agency Kickoff Workshop to initiate the development of a comprehensive report on hydrogen as called for in Senate Bill (SB) 1075. The workshop was held on September 5, 2023 by the California Air Resources Board (CARB), in collaboration with California Energy Commission (CEC), California Public Utilities Commission (CPUC), and California Governor's Office of Business and Economic Development (GO-Biz, and together the Joint Agencies).[2]

Renewable Hydrogen Rightfully Includes Hydrogen Derived from Biomass

As suggested in the Workshop by GO-Biz, the Joint Agencies should consider all renewable hydrogen production methods—including biomethane-to-hydrogen, biomass-to-hydrogen, and electrolytic hydrogen—within the scope of hydrogen production and use in the SB 1075 report. We were pleased to see CARB include low-carbon hydrogen from biomass in the scope of the workshop[3] in line with the 2022 Scoping Plan. That includes hydrogen produced from steam methane reformation (SMR) of biomethane, and biomass gasification with carbon capture and storage. In the 2021 Integrated Energy Policy Report (IEPR) from CEC, the hydrogen section of Volume III also acknowledges that renewable organic waste feedstocks can be used to produce renewable hydrogen in a beneficial manner.[4]

[1] For more information see: http://www.rngcoalition.com/

[2] Workshop details can be found here: https://ww2.arb.ca.gov/our-work/programs/sb-1075-hydrogen/meetings

[3] CARB presentation, slides 8-9. https://ww2.arb.ca.gov/sites/default/files/2023-09/sb-1075-workshop-090523-presentation-carb.pdf

[4] California Energy Commission, *2021 Integrated Energy Policy Report, Volume III: Decarbonizing the State's Gas System*

https://efiling.energy.ca.gov/GetDocument.aspx?tn=242233

Deep Thinking on the Intersection Between Biomass and Hydrogen Will Lead to Better Climate Outcomes

Renewable gases are an important near-term decarbonization strategy for all applications which currently utilize fossil-derived fuels and, in the long-term, will be necessary in energy applications which are not well-suited to electrification, and as platform molecules for other fuels and products.

The most proven form of renewable gas today is biomethane derived from anaerobic digestion (AD). California is pursuing important near-term methane reduction strategies facilitated by such biomethane, and the 40% reduction in methane emissions targeted by the Short-Lived Climate Pollutant (SLCP) Reduction Strategy for 2030 should be thought of as a beginning, not an endpoint.[5] As these strategies prove successful by 2030, they can easily be continued (or accelerated) to reduce emissions from these sectors further by 2045.

Therefore, California should aim to continue to productively use feedstocks suitable for AD to be sure the sectors producing organic wastes decline toward carbon neutrality, in line with emissions reductions from other sectors. The renewable gas produced from these feedstocks will likely shift over time from biomethane toward hydrogen as the infrastructure to move hydrogen is developed. Just as there is no conflict between the use of renewable gases and electrification, there is no conflict between biomethane and hydrogen (or between electrolytic and biomass-derived hydrogen).

Both hydrogen and biomethane as an energy carrier can be promoted by California programs, but because they are so critical to reaching carbon neutrality, CARB, CPUC, CEC, and GO-Biz should devote additional attention to the intersection between AD-derived biomethane and renewable hydrogen.

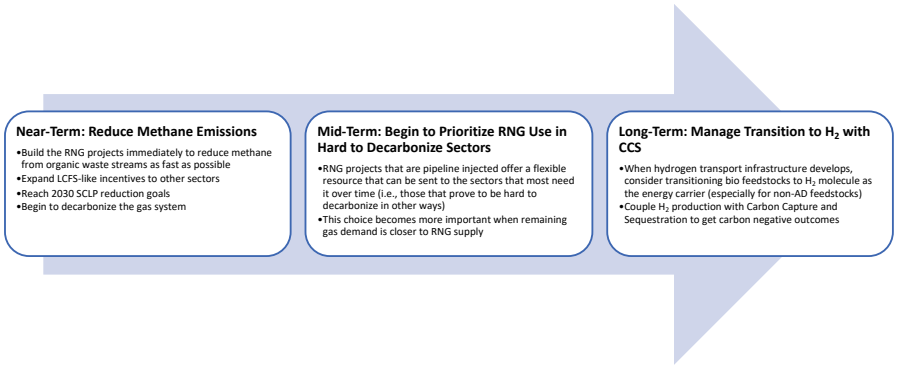

Figure 1. The SB 1075 Report Can Help California Articulate a Multi-Phase Strategy for the Use of the AD Biomethane Resource

Beyond just the feedstock suitable for AD, a wide variety of biomass material can be used to produce hydrogen in ways that produce carbon-negative outcomes when paired with carbon capture and sequestration (CCS).[6] This shift can be especially important for woody feedstocks not well suited to AD, including forest waste that can potentially help mitigate wildfire risks.

[5] https://ww2.arb.ca.gov/our-work/programs/slcp

[6] 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

As CARB noted,[7] the need for an expansion of low-carbon hydrogen supply from organic waste sources should continue to be included in the work done by the Joint Agencies. Methods of creating biomass-derived hydrogen can coexist with other methods of hydrogen production, including pathways that involve electrolysis of hydrogen using renewable power, and are likely to be an important enabling pathway toward achieving carbon neutrality and simultaneously reducing other significant environmental impacts in the forest and agricultural sectors.[8] The Joint Agencies should ensure that all methods of producing hydrogen that can contribute toward carbon neutrality are allowed to be considered through policies that recognize the full lifecycle greenhouse gas benefits and disbenefits of hydrogen supply chains.

Conclusion

RNG Coalition thanks the Joint Agencies for the opportunity to provide feedback on the Kickoff Workshop for the SB 1075 Report. Renewable gases such as biomethane and hydrogen are poised to play a continued and growing role in the state's climate policies, and we look forward to a robust SB 1075 Report which reflects the benefits of their intersection.

Sincerely,

/S/

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[7] CARB presentation, slide 15. https://ww2.arb.ca.gov/sites/default/files/2023-09/sb-1075-workshop-090523-presentation-carb.pdf

[8] Ibid