RAVEN

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California Air Resources Board
1001 I Street; Sacramento, CA 95814
Rajinder Sahota
Deputy Executive Officer, Climate Change and Research
Reference: August 18, 2022 LCFS Workshop, Tier1 Hydrogen Calculator

CARB has maintained a leadership position in managing GHG emissions over the decades and the 2022 scoping plan provide a critical opportunity to act on managing greenhouse gases in an environment of unprecedented awareness and urgency over global warming. We would like to offer our support for the LCFS program and encourage its ongoing development. The growth of credits shown by CARB illustrates the success of the program. As more credit generators enter the program, the excess of credits will continue to affect credit prices and a more stringent compliance curve would lead to stable credit prices and support more innovation and support of zero emission transportation.

The opportunity to comment on the proposed Tier 1 calculator for hydrogen pathways provides an important alignment among feedstock and fuel pathways within the LCFS. Organic wastes have a role in anaerobic digestion for CNG production, but no pathway has been established for other fuel production routes.

CARB should consider the following for organic wastes:

- Include organic waste as a feedstock or add hydrogen to Tier1 OW calculator
- Update calculations in Tier1 OW calculator that limit avoided methane credit based on digester gas methane concentrations
- Allow for book and claim of renewable power for California-based projects

The hydrogen Tier 1 calculator should also include provisions for organic waste such as those included in the Tier 1 OW calculator. Alternatively, a hydrogen option could be added to the Tier 1 OW calculator. In either event the feature of the Tier 1 OW calculator that limits avoided methane due to methane concentrations should be replaced with a limit based on Btus of hydrogen production.

Numerous technologies exist for the conversion of organic wastes to hydrogen including anaerobic digestion, thermal chemical gasification and pyrolysis, and other routes. The calculator should recognize that inactive carbon associated with the term (1 – DOCf) is not part of the anaerobic digestion calculation due to its ultimate fate of decomposition. This approach should carry through for hydrogen pathways.

CARB should also provide greater clarity on the use of DOCf factors. Given the challenges in compliance with AB1383, guidance in selecting DOCf factors would be helpful.

A step in the direction of addressing the use of biomass would be to hold a workshop on organic waste pathways which would include assessment of alternative fate categorization and the implications of AB1383.

Thank you for your consideration.

Best Regards,

Matt W. Murdock, CEO