



Ministry of Environment, Conservation and Parks
5th Floor
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December 19, 2023

Re: Generate Upcycle's Comments regarding updates to the Technical Guide for the Cleaner Transportation Fuels Regulation

About Generate Upcycle

Generate Upcycle (Upcycle) is the Generate Capital, PBC (Generate) platform to accelerate growth and expansion in waste-to-value solutions including organic waste, recycling, composting and wastewater treatment. Today, the Upcycle team owns and operates 20 sites in North America and has 300 employees spread across development, operations, maintenance, finance, and administration. Generate is a leading sustainable infrastructure company driving the infrastructure revolution. Generate builds, owns, operates, and finances solutions for clean energy, transportation, water, waste, and digital infrastructure. Founded in 2014, Generate partners with over 50 technology and project developers and owns and operates more than 2,000 assets globally. Generate is the one-stop shop offering pioneers of the infrastructure revolution the money and help they need to get projects built. Our Infrastructure-as-a-Service model delivers affordable, reliable, and sustainable resources to thousands of customers, companies, communities, school districts, and universities.

Upcycle in Ontario

The London, ON Digester, formerly known as StormFisher Environmental, joined the Upcycle Ecosystem of Anaerobic Digesters in 2018 but has been at the forefront of organic waste management since becoming operational in 2012. Located in London, Ontario, the facility is the largest commercial anaerobic digester (AD) in Canada, processing over 140,000 tonnes per year of organic waste into 225,000 GJs per year of renewable natural gas (RNG) and 120,000 tonnes per year of CFIA-grade fertilizer. Our customers are food producers, processors, retailers, restaurants, and municipalities, including Maple Leaf Foods, Nestlé, Dr. Oetker, Unilever, and municipalities like Stratford, Halton and Peel Regions, and Toronto as well as regulated utilities and other corporate off takers of RNG produced at our facilities.

In the near term, Upcycle will bring \$200 million of foreign direct investment to expand AD-to-RNG infrastructure in Ontario. We look forward to working closely with the Government of Ontario on beneficial initiatives that relate to waste diversion and decarbonization.

Introduction

We are proud to be the Canadian division of Generate Upcycle and we continue to appreciate the

visionary thinking from Ontario's leadership with respect to environmental issues. This vision makes it exciting to do business in the jurisdiction.

We appreciate the opportunity to provide comments on the updates to the Technical Guide for the Cleaner Transportation Fuels regulation. It is encouraging that renewable natural gas (RNG) is eligible to contribute towards lowering GHG intensities for bio-based content. However, the requirement that RNG be directly connected, as stated in the Technical Guideline, will limit the potential for RNG to be used in the pathways for other bio-based fuels.

Recommendations

- Update Sections 3.11.2 of the Technical Guideline to replace the term "direct connected" with "delivered".
- Utilize the book-and-claim accounting model for delivering RNG to streamline transactions and ensure the environmental benefits from RNG are retained.

Recommendations Explained

We are requesting this change in language to permit RNG that is delivered to the site to be eligible in the GHGenius calculation to subtract from the natural gas energy use. The requirement for RNG to be directly connected severely limits the potential of RNG to be used to produce bio-based content. Organic wastes are widely distributed and are generally bulky and/or high-water content, and therefore it is highly inefficient from an energy, climate, and economic perspective to transport these waste materials long distances in order to co-locate organic waste processing facilities with large energy users.

Allowing RNG to be delivered to large energy users through existing natural gas infrastructure is far better for the climate and for Canada's businesses. Ensuring that all of the RNG is properly and transparently accounted for can be achieved by utilizing the well-known book-and-claim accounting model that is widely used in many regions in North America. Due to the fungible nature of RNG, we strongly recommend allowing for a book-and-claim system for RNG, as a best accounting practice, to facilitate renewable energy transactions in alignment with models in other jurisdictions.

In most cases, it is not feasible to co-located RNG facilities with end-users to comply with the direct connection requirement, therefore, without a change in the Technical Guide, this requirement will significantly hinder the build out of this climate solution.

The Book and Claim System

The book and claim accounting system has facilitated the development of the organic waste recycling to energy industry in regions of Canada and the USA by connecting RNG suppliers and end-users. In both Quebec and British Columbia (BC), the book and claim system enables the injection of RNG into the natural gas grid at the production site for purposes of applicable GHG reporting and resulting compliance.¹

¹ In Quebec's Regulation respecting a cap-and-trade system for greenhouse gas emission allowances issued under the Environment Quality Act (chapter Q-2, ss. 46.1, 46.5, 46.6, 46.8 to 46.16 and 95.1) – the applicable reference in the definition of "GHG_{non bio k}" is to "excluding CO₂ emissions *attributable to the combustion of biomass or biofuels*, in metric tonnes CO₂ equivalent". In Quebec's regime, similar to Ontario's EPS, the term "biomass" includes RNG. This language has not been interpreted by Quebec's regulator to preclude pipeline delivery of RNG.

² The physical RNG molecules are mixed with conventional natural gas in the pipeline (and are physically indistinguishable inside the pipeline), while the environmental attributes of the measured RNG are tracked separately. The producer delivers the physical RNG into the pipeline, and the buyer is issued a certificate of ownership or a digital entry in a register. This mechanism allows RNG to be "virtually" delivered and used anywhere along the pipeline, significantly increasing the system's flexibility and efficiency.

These types of systems are also used in leading states in the USA. In California, for example, under the Low Carbon Fuel Standard (LCFS), RNG qualifies for credits as long as it is used to replace conventional transportation fuel in California. The RNG does not have to be produced in California or even land there physically.

Advantages of the Book and Claim System

The book and claim system, as implemented in Quebec and BC, offers several benefits:

- It enables industries to reduce their greenhouse gas emissions by utilizing RNG, even if they are not co-located with an RNG production site.
- It reduces costs and logistical challenges associated with RNG storage and transportation.
- It provides a mode of transaction that is highly favourable for environmental sustainability.
- It enhances flexibility in trading and contract settlement.
- It facilitates fulfilment with the GHG compliance regimes through easier tracking and verification of RNG origin and associated emission reductions.

Closing Comments

Generate Upcycle is appreciative of the opportunity to provide its comments and suggestions and stands ready to work with the Ontario Ministry of the Environment, Conservation, and Parks on the Cleaner Transportation Fuels program.

Should you have any questions about the information contained herein, please do not hesitate to contact us.

Yours truly,

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² In BC's current Greenhouse Gas Industrial Reporting and Control Act (GGIRCA) and its Greenhouse Gas Emission Reporting Regulation, the applicable references to "biomass" (which definition includes RNG) simply refer to emissions of carbon dioxide "from biomass" or "from non-biomass" (as applicable). This language has not been interpreted by BC's regulator to preclude use of RNG delivered by pipeline.

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