ONEIA
Ontario Environment Industry Association

March 12, 2017

Rebecca Tan, Policy Advisor
Ministry of the Environment and Climate Change
Climate Change and Environmental Policy Division
Air Policy Instruments and Programs Design Branch
77 Wellesley Street West, Floor 10, Ferguson Block
Toronto, Ontario
M7A2T5

Re: Developing a Modern Renewable Fuel Standard For Gasoline in Ontario (EBR Registry Number: 012-7923)

Dear Ms. Tan,

On behalf of Ontario's more than 3,000 environment and cleantech firms, the Ontario Environment Industry Association (ONEIA) is pleased to provide our comments on the Ministry of Environment and Climate Change's (MOECC) discussion paper on *Developing a modern renewable fuel standard for gasoline in Ontario* (RFS).

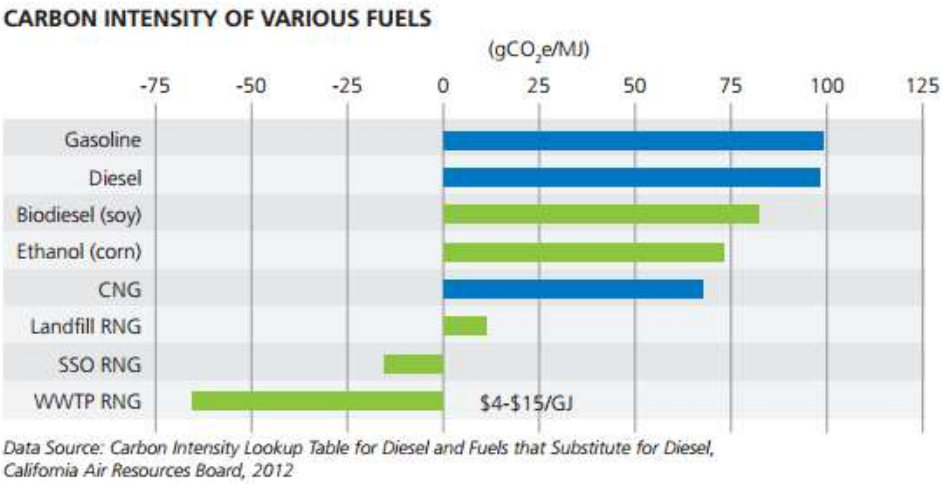
Ontario is home to Canada's largest group of environment and cleantech companies. The most recent statistics from the federal government show that Ontario's environment sector employs more than 65,000 people across a range of sub-sectors. This includes firms working in such diverse areas as materials collection and transfer, resource recovery, composting and recycling solutions, alternative energy systems, environmental consulting, brownfield remediation and water treatment – to name just a few. These companies contribute more than $8-billion to the provincial economy, with approximately $1-billion of this amount coming from export earnings.

Members of ONEIA are committed to engaging with the Province as it develops policies and regulations that are consistent with our principles of sound science, sound environment and a sound economy. To that end, we convened a working group of members drawn from across the resource recovery services sector to review the Province's discussion paper on a RFS.

In its review, ONEIA was pleased to see the steps that the MOECC is looking to undertake in this area and would request that the MOECC look to broaden the RFS to include all forms of transportation fuels, in particular the use of renewable natural gas (RNG).

Renewable Natural Gas

The conversion of methane from landfills, biogas and wastewater treatment facilities to electricity or natural gas is a decades old technology. Compared to other transportation fuels, the carbon intensity of these energy sources is considerably less.



Data Source: Carbon Intensity Lookup Table for Diesel and Fuels that Substitute for Diesel, California Air Resources Board, 2012

This biogenic source of energy is used extensively in the United States. In Ontario, only a handful of companies and municipalities are converting methane to electricity but the potential is great to expand the use of this technology for the development of alternative low carbon fuels.

In the last decade, landfill companies, primarily in the United States, have been increasingly switching from generating electricity to developing pipeline quality gas, specifically as a direct substitute or offsetting the use of natural gas or electricity at industrial facilities (e.g. automotive, pulp and paper and cement manufacturers). Today, landfill operators are moving towards supplying pipelines with RNG as pipeline companies are seeking to receive as much RNG as possible. ONEIA supports the development of an RNG system that is market driven and allows private entities generating RNG to sell the associated attributes for the highest return available in the marketplace.

As an example, Progressive Waste Solutions (PWS) built and operates a large-scale biogas facility at its Lachenaie Landfill in Quebec which converts landfill gas to pipeline quality gas which is in addition to its landfill gas to electricity facility. The company recently closed its landfill gas to electricity operation and redirected all the landfill gas generation to its RNG facility. PWS intends to develop a similar facility at its Ridge Landfill near Chatham, ON. Walker Industries is taking a similar approach at its Niagara Landfill.

Renewable Natural Gas as a Transportation Fuel

In 2014, Ontario used approximately 5 billion litres of diesel for road motor vehicles. Based on organics, biosolids and landfill gas production, Ontario could transition 33% of its entire diesel fuel use to compressed RNG and provide the lowest carbon fuel source and support the mitigation of short-lived climate pollutants. The proposed timelines, especially organics, do not match up to the climate change goals. To achieve the 2% RNG by 2020 and 10% by 2030 objectives by the Ontario government, approvals and the development of infrastructure will need to be hastened significantly. Sources and generation potential are detailed in the table below based on Canadian Biogas Study from 2013:

Source	Generation Potential of Millions m3	Generation Potential of Millions of Litres of Diesel Fuel Equiv.

	RNG	
Wastewater WWTP	119	123
IC&I Food Waste	122	126
Animal Manure	637	657
Residential SSO	72	74
Landfill Gas	654	675
Subtotal	1,604	1,655

The use of natural gas as a transportation fuel has been growing exponentially. It is predominantly used with return to base fleets such as waste collection and municipal transit. The waste services industry began using liquid natural gas (LNG) predominantly in California over two decades ago and began the switch to compressed natural gas (CNG) in the mid to late 2000s. Today, Waste Management (WM), Republic and Progressive Waste Solutions (PWS) /Waste Connections have the largest CNG powered waste and recycling collection fleets in North America respectively. In Ontario, WM, PWS and Emterra Environmental have CNG powered collection vehicles operating in Ottawa, Waterloo and the Regions of Peel and Simcoe County.

The environmental benefits of converting from diesel to CNG are numerous. For every vehicle that is converted to natural gas, use of diesel fuel is reduced by an average of 8,000 gallons per year. This reduces greenhouse gas emissions by over 22 metric tons per year, per truck. Vehicles powered by CNG emit nearly zero particulate emissions, cut smog-producing nitrogen oxide emissions by 50 percent compared to the cleanest diesel trucks, cut greenhouse gas emissions by over 20 percent, and are far quieter than diesel trucks. (WM)

While the conversion of CNG to compressed C-RNG is not a new phenomenon, its uptake is starting to take root. WM in partnership with Linde, is converting landfill gas into LNG at WM's Livermore Landfill in northern California and transporting the LNG to southern California to fuel its LNG powered fleet. In St. Landry's Parish, LA, PWS is fueling its CNG powered vehicles with landfill gas directly from the St. Landry Landfill. In Surrey, BC, the City is completing the development of a bio-digester which will process the organics collected in the city and converted to pipeline quality gas. The generation of RNG from waste based sources will continue to originate from landfills due to the large and consistent flow volumes, as well as biogas and WWTP facilities which also show significant potential.

Response to Discussion Paper Questions

As requested in the discussion paper, ONEIA is providing response to the various questions that were asked.

Targets and blending requirements

a. **Ontario has existing content requirements for ethanol in gasoline. What minimum level of ethanol blending and GHG performance would help support the objectives of the RFS?**

ONEIA does not have any comments on the adjustment of content requirements for ethanol in gasoline. We believe that any adjustments should be treated similar to other low carbon fuels in terms of their carbon intensity and supporting the province in meeting its goals for lower GHG emissions. We also believe that the minimum requirements should be dictated by available technology.

b. **Given Ontario's GHG reduction targets for 2030 and 2050, what factors should be considered in setting RFS targets post-2020?**

ONEIA recommends harmonizing the various regulations in this area including the ethanol and biodiesel mandates. The RFS should allow for a level playing field that is allows the province to achieve its targets. ONEIA believes that the province should set short, medium and long term targets in regards to transportation fuels and assess the scalability of the various low carbon fuels in supporting these efforts along with technology development to support its efforts. The province should also work with other jurisdictions to complement the policies that are being undertaken. As previously, we believe that MOECC should broaden the focus to include landfill gas, biogas from food waste and other organics and wastewater treatment plant biogas.

Flexibility mechanisms

a. **Should activities to lower the carbon intensity of other conventional transportation fuels be eligible for compliance purposes?**

ONEIA supports a system that lowers the carbon intensities of all transportation fuels regardless of the various subsectors that exist within the transportation sector. The government needs to ensure that its strategy is consistent with the Climate Action Plan including emissions reduction targets and RNG needs. The province needs to ensure that future policy tools do not create unintended consequences with offset protocols.

b. **Should investments in low-carbon transportation projects also be eligible for compliance purposes? If yes, what types of projects?**

ONEIA supports investments in low carbon transportation projects and their eligibility for compliance purposes. We believe that these investments will drive innovation and attract additional investments into the province.

Assessing lifecycle emissions

a. **Should an RFS consider impacts from indirect land-use changes (ILUC), even though science in this area continues to evolve? If so, how?**

ONEIA does not have any comments on the indirect land use changes.

Transparency

a. **What measures can be taken to increase transparency and support business decision-making under an RFS (e.g. an information registry, bulletins, and guidance material)?**

ONEIA agrees that Ontario needs an open, transparent system that provides a pathway to generation and sale of environmental attributes. We believe that the province should work with other jurisdictions on the development of this program.

Others

a. **What other considerations should be included in the discussion?**

ONEIA suggests that the MOECC address the modernization of approvals to support this transition to lower carbon transportation fuels. It should also ensure that it engages with other areas of the MOECC (i.e. organics disposal bans) so unintended consequences do not occur such as eligibility to participate in this program.

SUMMARY
ONEIA is appreciative of the opportunity to provide its comments and suggestions and stands ready to work with the MOECC in the development of an RFS.

Should you have any questions about the information contained herein, please do not hesitate to contact the co-chairs of our working group, Brandon Moffatt and/or Randy Cluff or feel free to contact the ONEIA office directly at 416-531-7884.

Yours truly,

Alex Gill
Executive Director, ONEIA