

Ontario's modern Renewable Fuel Standard

Pembina Institute's submission to the discussion paper on Ontario's proposed modern Renewable Fuel Standard

EBR Registry Number: 012-7923

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Summary

Finding more efficient ways to move people and goods — on a cost, carbon and quality of life basis — has been, and will continue to be, a major focus area for the Pembina Institute. We are happy for the opportunity to submit this brief in response to the Ontario Ministry of the Environment and Climate Change (MOECC) discussion paper, *Developing a Modern Renewable Fuel Standard for Gasoline in Ontario*.

We are pleased to see the MOECC announce its plan to introduce a new policy to support low-carbon fuels.¹ Greenhouse gas (GHG) emissions from the transportation sector is Ontario's largest source of carbon emissions by economic sector and accounts for 33% of the province's total emissions.² Changing how people and goods move — including by what mode, with what fuel and how far — is necessary to reduce transportation emissions and achieve Ontario's climate change goals. These changes can and should be driven by a combination of policies and regulations, incentives, smart urban planning and private and public investments in clean technologies. Solutions to our mobility challenges will also be bottom-up: reducing fuel use in the transportation sector could come through mode shifting to transit, walking and cycling, as well as disruptive innovations like autonomous vehicles and ride sharing.

¹ Ministry of Environment and Climate Change, Climate Change Action Plan (2016)
<https://www.ontario.ca/page/climate-change-action-plan#section-4>

² Environment and Climate Change Canada (2016), National Inventory Report 1990-2014, Economic Sector Categorization

Use of a modern renewable fuel standard

The Pembina Institute is supportive of the establishment of fuel standards to achieve Ontario's objective of reducing GHGs and other air emissions, including nitrogen oxides and particulate matter, from the transportation sector. In the last decade, a number of provinces and the federal government have introduced regulations to support low-carbon and/or renewable fuels. These include British Columbia's Renewable and Low Carbon Fuels regulations (which came into effect in 2010), Ontario's ethanol in gasoline regulation (2007) and greener diesel regulation (2014) as well as renewable fuel standards (RFS) in Ontario, Manitoba, Saskatchewan, Alberta and British Columbia. Further, a federally legislated RFS that applies to gasoline and diesel fuel is also in effect under the *Canadian Environmental Protection Act*. Combined, these standards have resulted in a reduction of GHG emissions. For example, a recent report estimated that in 2014 avoided lifecycle GHG emissions from provincial and federal fuel policies rose to 4.3 Mt CO₂eq in 2014, accounting for a 2% reduction in lifecycle transportation emissions.³

We believe that a technology-neutral policy like the modern RFS will not only bring about GHG reductions, but other co-benefits such as improving air quality, stimulating innovation for alternative transportation technologies and creating economic benefits.

Overarching design principles

In the sections below, we offer the MOECC overarching design principles for the development of its modern RFS. In our view, the MOECC should begin by clearly articulating objectives, seek opportunities for alignments with other jurisdictions, and ensure that targets are clear enough to stimulate innovation. We would recommend that the standard be designed to reduce GHG emissions and diversify fuel sources over the 2018-2030 time period, as a complementary tool designed to support decarbonization of Ontario's transportation sector. In this way, the province is assisting the clean growth and innovation agenda by providing secure markets for lower carbon fuels and transformational technological developments in Ontario. The MOECC should review this standard by 2025 to determine if design principles need to be refined to ensure they are responsive to market conditions and performance metrics as well as establish a path forward to meet the 2050 provincial GHG targets.

³ Clean Energy Canada and Navius Research (2016) "Biofuels in Canada: Tracking progress in tackling greenhouse gas emissions from transportation fuels" <http://cleanenergycanada.org/wp-content/uploads/2016/03/FINAL-Report-Biofuel-Policy-Review-March-2016.pdf>

Alignment and harmonization with similar standards in other jurisdictions

The MOECC's definition of a modern RFS closely aligns with a low-carbon fuel standard (LCFS). The MOECC can, therefore, establish a modern RFS that aligns with other comparable LCFS programs currently in place in B.C., California and Oregon. The Government of Canada has also issued a discussion paper and has begun its consultation on the proposed regulatory approach and design of a national clean fuel standard.⁴ It will be critical that the modern RFS be aligned and harmonized with these standards, including around issues such as baselines, carbon intensity targets, fuel blending requirements, methodology and reporting. Consideration should also be made about the transferability of credits between comparable jurisdictions with standards already in place.

Since cars and trucks cross provincial and international borders, putting a national and/or international emissions performance standard on transportation fuels provides certainty to those that are both subject to the standard (i.e. fuel suppliers) and those who make or purchase lower carbon vehicles (i.e. electric or natural gas based vehicles). For fuel suppliers, a harmonized standard would provide administrative and compliance ease across boundaries, and, if designed appropriately, could provide firms with cost-effective trading mechanisms to achieve the policy's required emissions reductions. A harmonized and stringent standard would also provide the market conditions necessary to allow market-ready and emerging clean fuel technologies greater access to markets and financial investment.

Ensuring integrity, ownership and additionality of the proposed standard

Tracking compliance within a renewable fuel standard can be difficult when projects or actions taken can potentially be used to comply with a myriad of other provincial regulations. Clear mechanisms need to be put in place to ensure that actions taken are additional to other regulations, are not double counted and that ownership of the reduction is clear. In our view the MOECC should clearly state that the modern RFS is part of a portfolio of provincial policies aimed at reducing GHG emissions from the transportation sector. The term "complementary,"

⁴ Government of Canada (February, 2017), Clean Fuel Standards: Discussion Paper, https://www.ec.gc.ca/lcpe-cepa/D7C913BB-13D0-42AF-9BC7-FBC1580C2F4B/CFS_discussion_paper_2017-02-24-eng.pdf

as used in the discussion paper, should be further defined to explicitly state that the RFS is an “additional” policy aimed at meeting Ontario’s climate targets. It will be required to have its own separate compliance obligations beyond what is in place for other policies, including the cap-and-trade market. For example, fuel suppliers are now subject to the Western Climate Initiative (WCI) cap-and-trade program, and as a result have an emissions reductions obligation and access to tradable emission credits. In designing and implementing programs to reduce Ontario’s carbon pollution, the provincial government should be clear that these systems are designed to unlock additional tonnes of emissions reductions domestically — beyond those already likely to occur under WCI.

Maximize GHG emissions benefits by increasing the coverage of the proposed fuel standard

In order to unlock greater emissions reductions, Ontario’s RFS should apply to a greater pool of transportation fuels. In particular, the modern RFS should have broader coverage beyond gasoline to include diesel. In other words, the standard should apply to more than cars and light-duty vehicles, and should include buses and medium- and heavy-duty vehicles. Trucking is the fastest growing subsector of transportation emissions, and without broader coverage Ontario’s RFS will do little to curb these emissions.

Significant population growth is anticipated in the Greater Golden Horseshoe in the next two decades. The [Growth Plan for the Greater Golden Horseshoe](#) predicts a population of 13.5 million people in the region by 2041. This 50% increase in population means there are more people and goods being moved around, driving longer distances and producing more emissions. With its modern RFS, Ontario has an opportunity to plan for a low-carbon future — and ensuring its RFS covers a broader suite of fuels would send a proactive signal to companies to reduce their emissions, despite growth and development trends placing upwards pressure in the opposite direction.

With this in mind, we would suggest that Ontario’s Ethanol in Gasoline regulation and Green Diesel regulation be folded into a single modern RFS. We would also suggest that the MOECC have an additional compliance period from 2020 to 2030 and that emissions reductions targets increase to align with B.C.’s renewable and low carbon fuel standard, which is 15% below 2010 baseline by 2030. We would suggest that a comparable percentage reduction be established using a baseline that is realistic for Ontario (e.g. 2015 or 2016). Alternatively, these regulations can become part of the baseline for a modern RFS by 2020. In addition and in the short term, existing content requirements for ethanol in gasoline can be maintained until such time as the market becomes more stable with respect to price and accountability mechanisms.

Transparency, governance and accounting

We would recommend that the MOECC establish a registry that has a fair and balanced governance structure and that guidance for new pathways (i.e. guidance documents or protocol development for a new technology) include a stakeholder engagement process. Reporting and compliance information should also be publicly available. The registry should provide training for those companies that are subject to the modern RFS or who wish to opt in to the program. The reporting structure should also make sure there are mechanisms in place to avoid double counting. If MOECC intends to use the GHGenius model, it would need to be reformed to include these recommendations.

Response to discussion paper Q&As

Below are the Pembina Institute's responses to specific questions asked in the MOECC discussion paper:

Flexibility Mechanisms

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

Yes. In order to meet Ontario's aggressive climate targets, we recommend that activities to lower carbon intensity of other conventional transportation fuels be eligible for compliance purposes. We believe this will trigger overall objectives to support an innovative agenda.

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

Yes. The transportation sector will require significant infrastructure investments to support the transformational changes necessary to move to a low carbon economy. For example, deploying wide-scale electric vehicle (EV) charging stations, from both public and private investments, will be necessary to overcome barriers of electric vehicle adoption, such as range anxiety.⁵ As outlined in the Deep Decarbonization Pathway Project (DDPP) report, the electrification of transportation — particularly light-duty passenger vehicles, light and medium freight transport and rail — is essential to achieving a science-based long-term decarbonization trajectory for Canada. According to the DDPP report, EVs will account for nearly 100% of all light-duty

⁵ Plug'n Drive (May 2015), Electric Vehicles: A climate change action plan report, <https://plugndrive.ca/sites/default/files/Electric%20Vehicle%20-%20Reducing%20Ontario's%20Greenhouse%20Gas%20Emissions%20-%20A%20Plug'n%20Drive%20Research%20Report.pdf>

passenger vehicles in 2050 and a 53% improvement in energy productivity in the freight sector due to fuel switching.⁶ Recent climate models⁷ suggest that for Canada to achieve a 30% emissions reduction by 2030, at least 15% of Canadian personal vehicle transportation needs to be electrified through clean power sources. This puts additional demand on grids and creates new demand for widely accessible charging infrastructure. Currently there are only 21,000 electric cars on the road in Canada.⁸ Similarly, other forms of alternative fuels such as hydrogen will also require infrastructure investment.

We would recommend that the MOECC consider investments in low-carbon transportation projects be eligible to meet compliance, but that the credits claimed should either be limited as:

- a percentage of credit eligibility (such as the 25% limit in British Columbia’s renewable and low carbon fuel standard); and/or,
- by installation date (such as installing charging infrastructure from 2018 to 2025). Examples may include, but are not limited to, installing fast chargers for vehicles, hydrogen and compressed natural gas fueling infrastructure, charging pads for buses installed by transit agencies or municipalities. Compliance for these types of projects will require clear protocols to determine who owns the credit (e.g., the developer of the technology, the fuel supplier who installs a fast charger, the municipality, etc.)

⁶ Pathways to Deep Decarbonization in Canada (2015), http://deepdecarbonization.org/wp-content/uploads/2015/09/DDPP_CAN.pdf pages 26 and 29-30.

⁷ Canadian Academy of Engineering et al. (2016), *Canada’s Challenge and Opportunity: Transformations for major reductions in GHG emissions*, <https://www.cae-acg.ca/projects/trottier-energy-futures-project/>

⁸ Plug’n Drive, A Guide to Electric Cars, <https://www.plugndrive.ca/electric-cars>