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Advanced Biofuels Canada
Biocarburants avancés Canada

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Ministry of Environment, Conservation, and Parks
Climate Change Programs and Partnerships Branch

Via Email:
Stephanie.McGill@ontario.ca

Re: *Cleaner Transportation Fuels: Proposed Domestic Renewable Content Requirement for Diesel Fuel as proposed in ERO025-0669*

Advanced Biofuels Canada Association (ABFC) appreciates the opportunity afforded by the province to provide our comments on the subject.

Ontario's Cleaner Transportation Fuel Regulation ('Regulation' or CTFR) enables the use of biomass-based diesel (BBD) fuels to meet diesel-pool blending requirements. Current pathways include renewable diesel (RD) and biodiesel (FAME), and the Director can approve other pathways such as co-processed renewable diesel (CoPro RD).

Advanced Biofuels Canada Association (ABFC) is the national industry voice for producers, distributors, and technology providers for non-fossil, low carbon, and sustainable fuel replacements to gasoline, diesel, and jet fuels. ABFC members produce a portfolio of liquid clean fuels (including ethanol, biodiesel, renewable diesel, Sustainable Aviation Fuel (SAF), sustainable feedstocks, intermediary products, and produce/consume low carbon gaseous products, such as renewable natural gas (RNG) and low carbon hydrogen). Members are also engaged with carbon capture, utilization, and storage technologies (CCUS).

Our members operate over 32 billion litres of low carbon fuel production capacity globally and are significant suppliers to renewable and low carbon fuel regulations in British Columbia, Canada, and worldwide.

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Design Objectives

The objectives upon which our recommendations were developed included:

1. Enable financially sustainable made-in-Canada biofuel production, protect jobs
2. Improve consumer fuel affordability and minimize taxpayer costs
3. Strengthen regional energy security in Ontario and central Canada
4. Assure fuel supply reliability, efficiency, and reduced fuel emissions

Summary

Ontario has a principled case for implementing a 'made in Canada' requirement to address non trade compliant foreign subsidies that pose an existential threat to Canada's biofuel sector, to Ontario's biofuel producers, and to Canadian feedstock producers (e.g., farmers, animal renderers, used cooking oil collectors).

A domestic requirement can be successfully implemented. The cost of meeting the requirement will be difficult to assess, but thoughtful design, guardrails, and improvements in other aspects of the CTFR can limit cost impacts.

Of note, using the assumed ability of Ontario-based Biomass-Based Diesel (BBD) to meet the domestic content requirements considered in ERO025-0669, there will be direct benefits to Ontario.

Recommendations

1. **Implement a 4% domestic biobased diesel requirement effective January 1, 2026.** The proposed 3% level in ERO025-0669 could limit participation to solely Ontario-based producers. Expanding the requirement to pull BBD from other provinces would enable price discovery, create a firmer market signal for domestic producers, and can be met with existing fuel production capacity that is able to access the Ontario market competitively.

2. **Expand the overall biobased diesel requirement to be 5%, effective January 1, 2026.** Similar to the approach undertaken in British Columbia's LCFS, implementing a domestic content requirement can be done alongside an overall increase in renewable fuel blending levels. This expanded BBD requirement would be met from the 4% domestic BBD, and beyond that, imported BBD would be eligible. Foreign biofuel suppliers already have established logistics to supply the Ontario market and through this measure, can continue participating in it. This aspect can also limit potential trade frictions that may arise due to domestic content requirements.

3. **Ontario should monitor developments related to the U.S. Renewable Volume Obligations (RVO) and remain flexible and responsive.** Proposed changes to the U.S. RVO (RFS Set 2), under which fuels produced outside the U.S. or within the U.S. from imported feedstocks would generate only 50% of the RIN value of domestic fuels from domestic feedstocks, will disadvantage Canadian producers and feedstock suppliers. Ontario must ensure that the Clean Transportation Fuels Regulation (CTFR) is designed

to allow for timely adjustments if new U.S. policies undermine the ability of Canadian fuels and feedstocks to compete in the market. It is essential that the benefits of domestic biofuels policy reflect and support the entire Canadian supply chain. ABFC would be pleased to provide additional recommendations as necessary relative to US developments.

4. **Consider requiring fuel suppliers to provide confidential reporting to MECP on a quarterly or monthly basis.** This issue is explained in further detail below in the section 'Guardrails: Cost containment'. Essentially, the proposed regulatory amendment has the potential to create market advantage for domestic producers and blended fuel suppliers, and may raise prices for consumers. To monitor and mitigate against this outcome, reasonable reporting requirements for BBD producers are proposed.

5. **Establish MECP capability to model inferred wholesale prices.** This suggestion encourages the department to calculate an indicative wholesale cost impact of the measure (on an ongoing basis) to ensure that wholesale blended fuel costs are not raised by fuel suppliers beyond any potential added cost related to the domestic BBD content.

6. **Establish credit market visibility.** Compliance credit market transparency enables price discovery and a more efficient fuel marketplace. We suggest that monthly credit market information be published that includes some or all of the following: number of transfers, credit volume, average price, minimum and maximum price, etc. British Columbia's monthly reporting serves as a practical example; comparable reporting can be readily implemented by Ontario.

7. **Confirm technology and feedstock neutrality (e.g., do not limit eligibility to 'waste' feedstocks') to enable all BBD products to access the market.** The inclusion of 'waste' as any type of eligibility requirement poses material risks to the effectiveness of this proposed CTFR update. The term 'waste' lacks a consistent accepted definition across jurisdictions and regulations - especially in the renewable fuels sector - which invites potentially fraudulent behavior and mislabeling which introduces unnecessary risk into a regulated market system like the CTFR. We note that the CTFR already encourages the use of local 'waste' streams for fuel production by virtue of including the greenhouse gas intensity of the BBD fuel as calculated under GHGenius; wastes have lower CI's due to the exclusion of upstream emissions.

ABFC looks forward to further discussing the proposed recommendations with your team. The below sections provide additional information in support of our recommendations and for Ontario taking decisive action.

Yours truly,

Advanced Biofuels Canada Association

Additional Content in Support of Submission

Ontario Biomass-Based Diesel Demand

The Biofuels in Canada 2024 databook estimates 2023 Ontario consumption of renewable diesel (RD) and biodiesel (FAME) to be 290ML. Those data show this volume to have been ~3.82% of the total diesel pool. Based on that, a 3% domestic requirement would be ~228ML.

Diesel consumption growth in Ontario per Canada Energy Futures is projected (current climate scenarios) to grow 5.1% and 8.4% from 2023 to 2026 and 2030 respectively. BBD at 3% on that basis would be approximately 240ML and 247ML per annum in 2026 and 2030 respectively.

Domestic BBD Production Capacity Relevant to Ontario

Biomass-based diesel fuels compliant with the CTFR include biodiesel, renewable diesel, and co-processed renewable diesel. Co-processed fuels would require a pathway approval under a Director's Direction, but no substantial barriers are anticipated.

Ontario's biobased diesel needs could be met by existing Canadian facilities.

Co-processed Renewable Diesel

New BBD supply could be established at existing petroleum refineries currently serving the Ontario market, if those refineries were to add co-processing capacity.

As co-processed RD is comingled with conventional diesel, it is feasible to consider any refinery already serving the Ontario market as a candidate for supplying domestic BBD.

The lowest CAPEX investments for biomass co-processing incorporate lipids (fats and oils) into the fluid catalytic cracker (FCC) units; this produces higher volumes of renewable gasoline. When lipids are co-processed in hydrotreater units, co-processed renewable diesel is the primary product.

Canada Energy Regulator data show the following refineries to have hydrodesulphurization refining capability. Hydrodesulphurization is a subset of hydrotreating; it serves as an indicative proxy of the upper-end yield of finished BBD.

Company	*Location*	*Input volume (m^3/d)*	*Estimated 5% annual BBD output (ML/y) **
Imperial Oil	Sarnia, ON	14,150	232.4
Imperial Oil	Nanticoke, ON	15,740	258.5
Shell Canada	Sarnia, ON	6,455	106.0
Suncor	Sarnia, ON	13,053	214.4
Suncor	Montreal, QC	19,317	317.3
Valero	Levis, QC	40,065	658.1
		Total	1,786.7

* *Conversion yield of 90% assumed from renewable feedstocks input to output BBD*

Hydrodesulphurization unit size is an indicative proxy for potential co-processed renewable diesel production capacity. Other factors that would limit the volume of BBD available to the Ontario market are shared jet fuel/diesel pipelines, export markets, and other impact on other refinery units (e.g., isomerization capability to meet lower cloud point requirements). While 5% co-processing is not a technical upper limit, it is appropriate to use it based on ASTM/CGSB standards and the established feasibility of this feed rate for various refining platforms.

Hydrotreated co-processed fuels are a well-established technology deployed in a number of refineries of different configurations, including several in Europe, and two in British Columbia.

The current 50/50 market shares of FAME and RD suggest that 120ML of domestic RD will be needed for a feasible 3% requirement. A 4% or 5% market may see higher RD or CoPro RD.

BBD Fungibility in Ontario Diesel Pool

Highlights

- Neat renewable diesel (R100) is compatible with all diesel engines. While its cloud point can be adjusted to suit seasonal temperatures, lower-cloud formulations are in shorter supply and come at a higher cost.
- Co-processed renewable diesel is fully fungible in diesel fuel.
- B20 is widely available at US truck stops and light duty retail stations in the U.S. mid-west. Seasonal use in the Windsor-Cornwall corridor would provide a significant opportunity for biodiesel usage for CTFR obligated parties.

Biodiesel

On-road:

Biodiesel has practical limits for incorporating into the on-road diesel pool.

- Higher cloud point.
    - Requires heated tankage and lines in (generally) segregated storage.
    - Limits blending according to blend percentage and seasonal temperatures.
    - Blending with kerosene to maintain blend cloud point is generally not economically viable (and rarely practiced in Canada)

- Vehicle compatibility
    - All medium- and heavy- duty diesel engines produced in model year 1993 and later have elastomers and engine components compatible with up to 20% biodiesel (B20).
    - Diesel original engine manufacturers (OEM) do not retroactively test engine models already in the market when a new fuel is commercially available. Most OEMs have formally approved B5; lack of approval of higher-level blends does not imply non-compatibility, as years of US experience have shown
    - B20 has widely available at retail and cardlock stations in the United States for years.
        - The US DoE reports 1,400 retail stations with B20 or above.

- Love's, Travel Centers of America, and Pilot Flying J operate high-throughput US interstate truck-stops, where diesel is commonly labeled 'may contain up to 20% biodiesel.'
    - Love's operates (July 2025) 240 public cardlock stations with B20, 20 cardlocks with B12-B15, and seven cardlocks with B5-B7.
    - Pilot Flying J operates 124 public interstate cardlocks with B20.

Marine:
Neat biodiesel (B100) is in commercial use in Great Lakes fleets such as Canada Steamship Lines (CSL) and Algoma Central. In 2023, CSL alone used 18.75 ML of biodiesel.

Viable Domestic Supply: Logistics and Economics

Refined petroleum products and biofuels are currently supplied to the Ontario market through refinery terminals, as well as terminals served by rail, marine, and truck transport.

BBD Supply Distance and Mode
Rail transload facilities are already in place, are of relatively low capex. Alberta BBD producers could ship directly to Ontario transload facilities.

Marine transport is a very low-carbon and relatively low-cost transportation mode for liquid fuels.

- A BBD shipper will need a position in an Ontario marine terminal (e.g., Hamilton, Port Colbourne), leased from the facility operator.
- Marine supply requires Ontario marine terminals. Marine terminals are high-capex with limited capacity for new infrastructure.
- The Federal *Coasting Trade Act* (CTA) requiring the use of Canadian-flagged vessels between two or more Canadian points. This requirement raises costs and adds to logistical complexity. The St. Lawrence Seaway and Great Lakes provide highly cost-effective transport of biofuels, but the CTA offsets that advantage.

Durability of Domestic Requirement
MECP proposes that the domestic requirement is to be, 'a temporary, time-limited measure which would be expected to be in place for the duration of U.S. subsidies.'

- The *One Big Beautiful Bill Act* provides a producer tax credit to December 31, 2029.
- Domestic BBD producers or traders/brokers who would not otherwise be supplying domestic content are unlikely to invest in infrastructure needed to serve the Ontario market unless the demand is assured for a duration sufficient to recoup their investment.

Market Impacts

Costs

Higher BBD prices — A primary objective of the proposed amendments is to minimize cost impacts to end users.

Biomass-based diesel prices in Canada – and the US – will increase in 2025 regardless of Ontario's amendments. The US$1/gallon blenders tax credit for BBD was replaced on January 1, 2025, with a producer's tax credit, which is not available to Canadian producers. While the new credit varies based on carbon intensity and other factors, it will be amount to roughly half the pre-2025 tax credit for soybean oil-based BBD products (i.e., the primary U.S. feedstock). Prices to end users will need to increase accordingly.

A compounding factor is a significantly higher BBD blending mandate for 2026-2027 under the U.S. EPA's proposed 'Set 2' proposal. Yet to be finalized, this Renewable Volume Obligation (RVO) will, if maintained in a final decision due in October 2025, tighten BBD availability and pressure feedstock prices higher- especially when combined with restrictions on imported foreign feedstocks under IRA 45Z.

Guardrails: Cost containment

A domestic BBD requirement may limit competition and has the potential for BBD producers/suppliers to exercise market power to realize higher wholesale prices than those available in an unrestricted market.

Increase Domestic Requirement

Market participants have noted to ABFC that, while a 3% domestic requirement within an overall 4% CTFR diesel pool mandate may appear to provide access to potentially less expensive imported BBD, overall costs may be lower under a 4% domestic requirement while an expanded 5% CTFR provides opportunity for overall market growth.

i. A 4% requirement adds 60ML of domestic demand.
ii. A larger market would make the Ontario market more viable for BBD producers outside of Ontario and Quebec, who may be able to achieve threshold shipping and terminalling volumes.
    a. Standard parcels of RD would be 5,000 tonnes (~61ML) or higher. Renewable diesel inclusion rates can be well above 20%, allowing a shorter window to place product into the market, reducing distribution costs. Larger shipping volumes reduce per-litre costs.
    b. Capital or leasing costs for terminals will be lower on a per-litre basis with larger volumes.
iii. Current maximum biodiesel production capacity in Ontario is 170ML. Were the former BIOX plant in Hamilton (60ML) to resume operations, it would be approximately 230ML.
    a. Pairing the 3% required volume to potential Ontario biodiesel capacity may disincentivize non-Ontario BBD producers from investing to service the market.

b. Were only Ontario plants to service the domestic requirement, costs are likely to be higher.

Required Sales Reporting

A quid-pro-quo for an assured domestic market could be a requirement that BBD suppliers – not necessarily producers – would submit confidentially to MECP monthly or quarterly information showing volumes and wholesale prices of BBD placed into the market.

This requirement would serve as a check on exercise of market power; it could be utilized in tandem with other approaches.

MECP Indicative Market Cost Capacity

It is challenging yet necessary for MECP to be able to assess whether blended fuel prices are reasonable. BBD costs are a composite of multiple factors. Firms such as OPIS and Argus provide indicative pricing services in most low carbon fuel markets. While some firms model *Clean Fuel Regulations* (CFR) credit values, Canadian markets— except for British Columbia—are generally too small and lack frequent credit market reporting. As a result, the California market is often used as a proxy, with adjustments made for differences in carbon intensity (CI) values.

ABFC maintains a compliance cost calculator to estimate premiums (or discounts) of ethanol (RUL reference), and biodiesel and RD (neat/unblended ULSD) that helps assess the cost/savings impacts of clean fuel policies in Canada. ABFC welcomes the opportunity to review this information with MECP.

Compliance cost calculators in a CI-regulated market (LCFS, CFR) combine values for the physical product and those associated with meeting CI targets. The relative component values in this bar-chart-type 'stack' will change with market conditions. Each low-carbon biofuel type will have its own 'stack' of values based on its CI value and markets it is utilized in.

Note that BBD markets in the US have been volatile since Q3/Q4 2024 as the BTC expiry approached. Markets are expected to normalize in the next few quarters with the U.S. *One Big Beautiful Bill Act*. MECP may need to undertake more work to understand the implications for the proposed domestic-content requirement in the context of the underlying North American BBD market.

Enabler: Credit Market Reporting

The CTFR allows transfers of credits between participants. No data are reported publicly on the outcomes.

ABFC has previously presented to MECP the case for reporting on the basis that there is near-universal agreement in the low carbon fuels sector that credit market reporting:

- Brings new entrants into the market.
- Increases competition.
- Lowers overall costs to the consumer.
- Enables the market to more closely match supply and demand.