

Memorandum of Understanding

We, the stakeholders indicated below, agree to the terms outlined in this Memorandum of Understanding (MOU) regarding the establishment of a British Columbia – Sustainable Marine, Aviation, Rail and Trucking (BC-SMART) Fuels Consortium that will be tasked with further developing and implementing the goals outlined in the BC-SMART Roadmap and summarized within this MOU.

As a stakeholder, _____ (organization/company) agrees to be an active participant in the BC-SMART Fuels Consortium. This coalition will work together to implement the goals and objectives of the BC-SMART Roadmap with the primary goal of developing sustainable, low-carbon intensity drop-in biofuels for the use of the long-distance transportation sectors, including the Marine, Aviation, Rail and long-distance Trucking (sSMART sectors).

Background

The BC Ministry of Energy, Mines and Petroleum Resources (BC-MEMPR) encouraged the development of the BC-SMART Roadmap with the strategic objective of decarbonizing liquid transportation fuels, in particular for the long-distance transportation sectors. The goal is to facilitate the development of drop-in biofuels, specifically focusing on the difficult-to-decarbonize sSMART sectors that are not readily suited to electrification. When enabled, the Roadmap will help deliver those aspects of the CleanBC Plan, announced in December 2018, which targets greenhouse gas emission reductions in the transportation sector. While the Province has, to date, primarily focused on decarbonizing passenger vehicles via electrification, the BC-SMART Roadmap is focused on decarbonizing the long-distance transport sector.

The CleanBC Plan specifically refers to:

- *“increasing the Low Carbon Fuel Standard to 20% by 2030 and increasing the production of renewable transportation fuels” with “over 40% of diesel and 10% of gasoline” from biofuels*
- Recognition of the practical reality that internal combustion engines will continue to be a *“back-up to ensure we can get where we’re going in remote areas”*
- Recognition of forest and municipal organic waste as sources for biofuels and the role of the two BC refineries to develop the ability to refine both fossil crude and green crude made from a variety of waste and renewable sources
- Meeting the increased demand for cleaner fuels by ramping up new production in B.C. of 650 million litres of renewable fuels by 2030.”

When enabled, the BC-SMART Roadmap will become an integral component of the CleanBC Plan.

The BC-SMART Roadmap recommends action in three, related areas:

- 1) Establishing a multi-stakeholder consortium that brings together a “coalition-of-the-willing” that will develop long-lived, commercially viable processes to establish the supply chain to enable the decarbonization of British Columbia’s and the region’s long-distance transport sectors. (Includes *signing of this Memorandum of Understanding, to confirm commitment to promoting drop-in biofuel production and use while identifying specific, goals, objectives and the time lines needed to establish commercial production and use of drop-in biofuels*)
- 2) **“Software” recommendations:** Build upon, and further develop, the policies and regulatory measures that will help establish the production and use of low carbon drop-in biofuels by the long-distance transport sector. (Government lead)
- 3) **“Hardware” recommendations:** Invest in the supply chain and infrastructure, the foundation of which already exists, to help produce and distribute low carbon intensity biofuels while facilitating a co-processing strategy at local refineries. (Industry lead)

The BC-SMART Fuels Consortium will be co-chaired by a senior representative from industry and a senior representative from the BC Government. The consortium will be supported by the BC-SMART Fuels secretariat based at UBC.

The Purpose of the BC-SMART Fuels Consortium

The BC-SMART Fuels Consortium signatories to this MOU commit to evolve and deliver the strategic plan outlined in the BC-SMART Roadmap by:

- Establishing an action plan with clear goals and timelines that supports the goals of the CleanBC Plan;
- Identifying opportunities and challenges that will be tackled to meet the BC-SMART Fuels Consortium objectives;
- Identifying the funding required to develop a co-processing strategy at BC's refineries while encouraging the supply of biobased feedstocks/intermediates ("conventional" and "advanced");
- Recruiting other stakeholders that can contribute to the establishment of the BC-SMART Fuels Consortium; and
- Establishing a robust drop-in biofuels supply chain that can provide low carbon fuels for the marine, aviation, rail and trucking sectors.

Timeline

By 15 March 2019, the BC-SMART Fuels Consortium members (as co-signers of this MOU), will have committed, with the help of the BC-SMART Fuels secretariat, to work together to develop the goals, timelines and funding required to develop the BC-SMART Fuels concept outlined in the BC-SMART Roadmap.

Structure and Reporting function

Although originally conceptualized by the BC-MEMPR, and supported by their strategic funds, the BC-SMART Fuels Consortium will function as true "coalition-of-the-willing", co-chaired by senior government and industry representatives, and initially supported by a jointly funded secretariat. By the first half of 2019, the consortium members will have developed a strategic plan and a supporting three-year work plan. These plans will better define the goals and timelines in the "software" and "hardware" recommendations summarized above and discussed at the inaugural BC-SMART workshop held on the 20 February, 2019.

The signatories to this MOU commit to providing appropriate representatives from their organizations who will contribute to development and delivery of the BC-SMART goals summarized above.

Duration

This MOU shall come into effect upon the date of signing and remain in effect for three years. After this time (or annually), the MOU will be revisited to update goals and timelines. As a voluntary participant, any member on the BC-SMART Fuels Consortium can withdraw participation after giving notice to the other consortium members via the secretariat. Additional members can join the BC-SMART Fuels Consortium after review and approval by the current consortium members.

List of initial stakeholders

- BC Ministry of Energy, Mines and Petroleum Resources (BC-MEMPR)
- Parkland Refinery (Parkland)
- BC Bioenergy Network (BCBN)
- University of British Columbia (UBC)
- Boeing
- Westjet
- Air Canada
- Port of Vancouver
- Metro Vancouver

- Seaspan
- Vancouver Airport Authority
- West Coast Reduction Ltd.
- Pacific Institute for Climate Solutions
- NORAM Engineering
- AgWestBio
- Harbour Air

➤ Signed: _____ (organization/company)

➤ _____ (Signatory)

➤ _____ (Designation/ title)

➤ _____ (Date)