



January 5, 2018

Michael Rensing
PO Box 9314, Stn Prov Govt
British Columbia V8W 9N1
By email: lcfr@gov.bc.ca

Subject: Enerkem comments on the British Columbia Low Carbon Fuels Compliance Pathway Assessment

Dear Mr. Rensing,

Enerkem appreciates the opportunity to submit comments on the British Columbia Low Carbon Fuels Compliance Pathway Assessment.

Enerkem is a Canadian cleantech company that uses its proprietary clean technology to convert non-recyclable municipal solid waste (MSW) into low carbon transportation fuels and green chemicals such as cellulosic ethanol and methanol. Enerkem's advanced biorefineries significantly reduce greenhouse gas (GHG) emissions through displacement of gasoline use in transportation and through avoidance of methane emissions from landfill. Enerkem's ethanol produced at its commercial facility in Edmonton has obtained the lowest carbon intensity ever from the British Columbia government for the province's Low Carbon Fuel Standard. In addition, this facility is the first ISCC (International Sustainability and Carbon Certification) certified plant in the world to convert municipal solid waste into biomethanol.

Enerkem congratulates the British Columbia government for the vision and leadership demonstrated by its continued commitment to reducing the carbon intensity of transportation fuels in the province. We believe that the consultations that the Ministry of Energy and Mines has begun regarding the British Columbia Greenhouse Gas Reduction (Renewable and Low Carbon Fuel Requirements) Act and the Renewable and Low Carbon Fuel Requirements Regulation will help strengthen B.C.'s transition to a lower-carbon transportation sector and increase choices for consumers at the pump.

With respect to the Pathway Assessment, Enerkem commends the Ministry for its thorough assessment on ethanol and its recognition of the potential for mid and high level blends to increase the use of ethanol in the province and reduce emissions from the gasoline fuel pool. We also agree with the Ministry's assessment that lower carbon ethanol will become increasingly available over the coming few years, notably as production ramps up at Enerkem's Edmonton facility.

We also encourage the Ministry to continue its efforts to incentivize the installation of blender pumps and the supply of higher-level blends of ethanol, as indicated in the Pathway Assessment.

Enerkem's clean technology can also produce low carbon methanol for use in a variety of applications, both as a transportation fuel and as a chemical. Methanol can be blended with gasoline at levels of up to 3% in Europe and we recommend that British Columbia and other North American jurisdictions continue to consider the potential of renewably produced methanol as a lower carbon fuel for the future.

At the present time, methanol is a promising lower carbon fuel for marine applications. The conversion of marine transport vessels to methanol has been successfully demonstrated. One example is Stena Line's conversion of a large 1 500 passenger ferry, the Stena Germanica, to run on methanol. Another example is Vancouver-based Waterfront Shipping Company's launch in 2016 of seven vessels with methanol dual-fuel engines. Adopting methanol drastically reduces sulfur and particle emissions compared to traditional marine diesel and lowers nitrogen oxide emissions. When methanol is produced from renewable sources—such as Enerkem's waste-based biomethanol— it also can significantly lower CO2 emissions over the entire fuel lifecycle.

Thank you for your consideration of these comments,



Marie-Helene Labrie
Senior Vice-President, Government Affairs and Communications