

Staff Summary
Method 2B Pathway Application
Methes Energies Canada Inc., Ontario, Canada
Used Cooking Oil and Corn Oil Biodiesel (BIOD016, BIOD017)

Deemed Complete Date: February 5, 2014
Posted for Comment: February 20, 2014
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Pathway Summary

Methes Energies Canada Inc. produces biodiesel from Used Cooking Oil and Corn Oil in a biodiesel plant in Sombra, Ontario, Canada. The company has applied for a Low Carbon Fuel Standard (LCFS) Method 2B pathway for the fuel produced in this plant. The plant uses a standard FAME transesterification process to produce biodiesel and has a production capacity of 13.5 million gallons per year.

Rather than developing a biodiesel pathway specific to its plant, Methes chose to use the existing LCFS pathways for biodiesel produced in the California from Used Cooking Oil¹ and corn oil.² The corn oil that Methes obtains is from a dry mill ethanol plant that dries all of its DGS. The extraction process occurs after fermentation and distillation, and precedes DGS drying. Methes left most of the default input parameters unchanged in its CA-GREET analysis. Only the electrical generation energy mix and transportation distance parameters were changed to reflect Canadian production. No company-specific confidential information was used in the development of this pathway.

This pathway is available to Methes, as well as any other producer in Ontario, Canada with production processes matching those described in Methes' life cycle analysis report.

Carbon Intensity of Biodiesel Produced

The LCFS lookup table currently contains no pathway for biodiesel produced from Used Cooking Oil and Corn Oil in Canada. Therefore, the Methes pathway falls under the Method 2B provisions of the LCFS. Because the Methes application was submitted under the Method 2B process, it is not subject to the substantiality requirements with which Method 2A applications must comply (a minimum improvement of five gCO₂e/MJ, and a minimum production volume of ten million gallons per year). The proposed fuel pathway carbon intensities are shown in the following table.

¹ Detailed California-Modified GREET Pathway for Biodiesel Produced in California from Used Cooking Oil http://www.arb.ca.gov/fuels/lcfs/092309lcfs_ucobd.pdf

² California-Modified GREET Pathway for the Production of Biodiesel from Corn Oil at Dry Mill Ethanol Plants <http://www.arb.ca.gov/fuels/lcfs/2a2b/internal/15day-cornoil-bd-rpt-022112.pdf>

Proposed Lookup Table Entries

Fuel	Pathway Identifier	Pathway Description	Carbon Intensity in gCO ₂ e/MJ		
			Direct Emissions	Land Use or other Indirect Effects	Total
Biodiesel	BIOD016	2B Application*: Canadian Used Cooking Oil; Biodiesel produced in Canada	19.75	0	19.75
Biodiesel	BIOD017	2B Application*: Midwest Corn Oil.; Biodiesel produced in Canada	9.78	0	9.78

*Specific Conditions Apply

Operating Condition

Operations at the Methes plant will be subject to the following condition. This condition must be met for every gallon sold in California: All gallons produced under all certified LCFS Method 2 pathways shall inherit the same CI increment from the consumption of process energy at the plant. The applicants may not allocate process energy CIs so as to reduce the total life cycle CI of some subset of the gallons produced (e.g., those being shipped to California) and increase the CI of the remaining gallons. An example of such a reallocation would be associating California-bound gallons with the consumption of biogas and non-California-bound gallons with the consumption of natural gas.

Staff Analysis and Recommendation

Staff has reviewed the Methes application, and finds the following:

- Staff replicated, using the CA-GREET spreadsheet, the carbon intensity values calculated by the applicant; and
- Staff has confirmed the transport distance and marginal electricity mix values used by Methes in its pathway report.

On the basis of these findings, staff recommends that Methes application for a method 2B pathway be certified.