

Staff Summary
Method 2B Pathway Application
ADM Agri-Industries Company, Lloydminster, Alberta, Canada
For Canola Biodiesel (BIOD013, BIOD015)

Deemed Complete Date: November 19, 2013

Posted for Comment: January 28, 2014

Certified and Posted: February 7, 2014

Pathway Summary

ADM Agri-Industries Company (ADM) produces biodiesel from Canola oil in a biodiesel plant in Lloydminster, Alberta, 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 70 million gallons per year.

Rather than develop a biodiesel pathway specific to its plant, ADM chose to use the existing LCFS pathway for biodiesel produced in the U.S. from North American Canola.¹ ADM 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 of both finished fuel and feedstock. No company-specific confidential information was used in the development of this pathway.

This pathway would be available to ADM, and, through the Method 1 process, to any other producers located in Alberta Canada.

Carbon Intensity of Biodiesel Produced

The LCFS lookup table currently contains no pathway for biodiesel produced in Canada. Therefore, the ADM pathway falls under the Method 2B provisions of the LCFS. Because the ADM 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 Conversion of North American Canola to Biodiesel (Fatty Acid Methyl Esters-FAME) at <http://www.arb.ca.gov/fuels/lcfs/2a2b/internal/121410lcfs-canola-bd-rpt.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	BIOD013	2B Application (specific conditions do not apply): North American Canola; oil extracted in Canada; Biodiesel produced in Canada (rail transport)	31.75	31	62.75
Biodiesel	BIOD015	2B Application (specific conditions do not apply): North American Canola; oil extracted in Canada.; Biodiesel produced in Canada (rail and ship transport)	31.10	31	62.10

Operating Condition

Operations at the ADM 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 ADM 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 ADM in its pathway report.

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