

Fuel Pathway Staff Summary
Louis Dreyfus Commodities Grand Junction, LLC at Grand Junction, Iowa

Deemed Complete Date: June 4, 2013
Certified and Posted Date: August 1, 2013

Plant Summary

Louis Dreyfus Commodities Grand Junction, LLC (LDCGJ) produces ethanol from corn in a dry mill plant in Grand Junction, Iowa. The company has applied for two Method 2A pathways for the fuel produced in this plant. The plant was designed by Fagen using ICM technology and has, according to its air pollution control permit, the capacity to produce 125 million gallons of denatured ethanol annually. The plant is a natural-gas-fired facility producing Dry Distiller's Grains with Solubles (DGS) and Modified (or partially dried) DGS. Corn oil is also produced at this plant.

LDCGJ applied for a Method 2A fuel pathway under the California Low Carbon Fuel Standard (LCFS) in February 2011. In March of 2011, staff assigned LDCGJ's pathway an LCFS identification code of ETHC042, and recommended it for approval at a carbon intensity (CI) of 91.24 gCO₂e/MJ. Upon certification of the two pathways described herein, pathway ETHC042 will be discontinued.

Carbon Intensity of Ethanol Produced

As shown in Table 1, LDGJC is applying for two LCFS Method 2A pathways with carbon intensities (CI) of 89.56gCO₂e/MJ, and 83.21 gCO₂e/MJ. Proposed Method 2A pathways must be evaluated against reference pathways from the LCFS lookup table. Although a Method 2A pathway must be very similar to its reference pathway, it must achieve at least a 5 gCO₂e/MJ improvement in CI over that pathway.¹ The reference pathway for both of LDGJC's proposed pathways is the Midwest dry mill, natural gas, dry DGS pathway, having a CI of 98.35 gCO₂e/MJ. In the absence of reference pathways involving modified DGS, proposed pathways involving modified DGS use the most similar dry DGS pathway as their reference. The LDGJC pathways both improve upon the reference pathway CI by more than the requisite 5 gCO₂e/MJ.

¹ In the LCFS regulation, this 5 gCO₂e/MJ improvement threshold is referred to as a "substantiality requirement."

Table 1. 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
Ethanol from Corn	ETHC085	2A Application*: Midwest; Dry Mill; Dry DGS; NG	59.56	30	89.56
Ethanol from Corn	ETHC086	2A Application*: Midwest; Dry Mill; Modified DGS; NG	53.21	30	83.21

*Specific conditions apply.

Operating Conditions – Louis Dreyfus Grand Junction Commodities, LLC

Staff recommends approval of the LDGJC application subject to the following operating conditions:

- The total pathway-specific thermal energy consumption and electrical process energy consumption shall not exceed the values reported in the LDGJC Method 2A application.² These values are classified by the applicant as confidential business information. Pathway-specific energy use values may be calculated using any accounting period up to and including one year.
- The total ethanol yield shall not be less than the value reported in the LDGJC Method 2A application. These values are classified by the applicant as confidential business information. Pathway specific ethanol yield values may be calculated using any accounting period up to and including one year.
- Louis Dreyfus Grand Junction Commodities, LLC shall only sell ethanol to California buyers under this pathway if that ethanol is associated with either 100 percent dry DGS, 100 percent modified DGS.

In order for LDGJC to sell ethanol in California under the CI values appearing in Table 1, these three conditions must be met for every gallon sold.

Staff Analysis and Recommendation

Staff has reviewed the Louis Dreyfus Grand Junction Commodities, LLC application and has replicated, using the CA-GREET model, the CI values calculated by LDGJC. LDGJC has provided documentation verifying the plant’s use of thermal and electrical process energy, and its ethanol yield. Staff is satisfied that the values presented in the application accurately represent the plant’s actual use of thermal and electrical energy, and its ethanol yield values. Staff believes that LDGJC will be capable of maintaining

² Compliance with values not to be exceeded or not to be less than will be based on monthly, quarterly, or annual average values as determined by operational conditions. Calculation of the average values can exclude periods of abnormal operations, such as planned maintenance or force majeure events.

the CI values appearing in Table 1. Consequently, staff believes that the CI values of 89.56 gCO₂e/MJ, and 83.21 gCO₂e/MJ accurately represent the CI values of ethanol volumes associated with dry DGS and modified DGS, respectively, produced at the Grand Junction plant. Therefore staff recommends that the LDGJC's application for a Method 2A corn ethanol pathway be certified.