PRELIMINARY DRAFT SUBMITTED FOR PUBLIC COMMENT
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Louis Dreyfus Corp. Corn Ethanol Sub-pathway 2A Application

Plant Summary

LouisDreyfus Commodities Corporation (LouisDreyfus) operates a gas-fired, dry mill corn ethanol plant in Norfolk, Nebraska. LouisDreyfus has submitted an LCFS Method 2A application for the Norfolk plant. The ethanol production capacity of the plant is 53 million gallons per year. About 85 percent of the distillers' grains with solubles produced at the Norfolk are partially-dried modified distillers' grains with solubles (MDGS) with a typical moisture content of about 55 percent, by weight. The remaining distillers' grains with solubles co-product is dried to a nominal 10 percent moisture and sold as dried distillers grains with solubles (DDGS). The Norfolk plant uses grid electricity and natural gas for its process fuel.

Carbon Intensity of Ethanol Produced

Although the LouisDreyfus plant produces DGS at two distinct moisture levels, it is applying for a single carbon intensity. The DDGS and MDGS are produced simultaneously; there is no practical way to collect data on the emissions associated with 100 percent MDGS and 100 percent DDGS operation. In addition, the proportion of DDGS produced is small compared to the proportion of MDGS. The single carbon intensity of the Norfolk plant, as calculated by LouisDreyfus, is 87.16 gCO_2e/MJ of ethanol produced. The reference carbon intensity from the LCFS Lookup Table is 98.4 gCO_2e/MJ. Because the proposed CI is five or more gCO_2e/MJ below the reference pathway CI, the proposed pathway meets the LCFS substantiality requirement.

The LouisDreyfus Norfolk plant achieves a lower carbon intensity value relative to the reference pathway through two principal means: First, the plant incorporates modern plant design developed by ICM, which results in less energy use in the plant. Energy use at the Norfolk plant is below the 36,000 BTU per gallon energy use value that forms the basis of the carbon intensity for the reference dry DGS pathway. Second, electricity use at the Norfolk plant is below the 1.08 kw-hr per gallon that is assumed for the reference pathway.[1]

Staff Analysis and Recommendation

The staff has reviewed the LouisDreyfus application for the Norfolk plant and has replicated, using the CA-GREET spreadsheet, the carbon intensity value calculated by LouisDreyfus. LouisDreyfus has provided documentation for the plant's energy use and ethanol production. The staff is satisfied that the energy value in the application accurately represents the plant's energy value. The staff is satisfied that the electricity use value in the application accurately represents the plant's electricity use value. The staff believes that the carbon intensity value

[1] Actual plant energy use values are classified as confidential business information and not reported herein.

calculated by LouisDreyfus is sustainable. Consequently, the staff believes that the carbon intensity value of 87.16 gCO_2e/MJ accurately represents the carbon intensity value of the Norfolk plant. Therefore, the staff recommends that LouisDreyfus Commodities' application for a Method 2A corn ethanol sub-pathway be approved.