

East Energy Adams, Adams, Nebraska Corn Ethanol LCFS Pathway Method 2A Application

Plant Summary

E Energy Adams, LLC (EE Adams) operates a corn ethanol plant near Adams, Nebraska. EE Adams has applied for a Method 2A fuel pathway for its Adams plant under the California Low Carbon Fuel Standard (LCFS). The Adams plant began operations in 2007. It is an ICM-designed facility with a nameplate capacity of 65 million gallons per year (MGY) of denatured ethanol. The plant is a dry mill, natural gas-fired facility producing both wet and dry distiller's grains with solubles (DGS). Approximately 65 percent of the DGS produced is dry DGS and the remaining 35 percent is wet DGS.

Carbon Intensity of Ethanol Produced

As shown in Table 1, the applicant is applying for a single pathway carbon intensity (CI) of 88.43 gCO₂e/MJ. The single CI for which EE Adams is applying reflects the energy consumed for the production of 65 percent dry and 35 percent wet DGS co-products, as specified in its Method 2A application. The proposed method 2A pathways must be evaluated against a reference pathway from the LCFS Lookup table. The reference carbon intensity from the LCFS Lookup Table is the Midwestern gas-fired dry DGS pathway having a CI of 98.40 gCO₂e/MJ. The production process for the proposed fuel must not differ significantly from the production process specified for the reference pathway. The proposed Method 2A pathway CI must also improve upon the reference pathway CI by five or more gCO₂e/MJ.¹ As Table 1 indicates, EE Adams' Method 2A pathway meets this requirement.

The EE Adams pathway achieves a lower carbon intensity value relative to the reference pathway through improved energy efficiency. Thermal energy use at the Adams plant is below the 32,330 BTU per gallon energy use value that forms the basis of the carbon intensity for the reference dry DGS pathway. Electricity use at the Adams plant is also below the level assumed for the reference pathway (1.08 kW-hr per gallon).²

The total thermal energy and electricity use values for the Adams plant will become operating conditions upon approval by the Air Resources Board's (ARB's) Executive Officer of the proposed pathway carbon intensity value: thermal energy and electricity use shall not exceed the current values that are classified by the applicant as confidential business information. These conditions

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

² Actual plant energy use values are classified as confidential business information and not reported herein.

effectively limit EE Adams to the production of no more than 65 percent dry DGS for the ethanol sold into the California market: drying a higher proportion of its DGS co-product will increase energy consumption and carbon intensity beyond the values specified in the company's Method 2A application.

Table 1: Proposed Lookup Table Entry for the EE Adams in Nebraska Plant

Fuel/Feedstock	Proposed Lookup Table Pathway Description	Carbon Intensity in gCO₂e/MJ (Including Indirect Effects)	Do Special Conditions Apply? (Y/N)¹
Ethanol/Corn	Midwest Dry Mill, dry DGS; Natural Gas	88.43	Y

¹ The special condition to which this column refers is discussed in the "Carbon Intensity of the Fuel Produced" section of this summary.

Staff Analysis and Recommendation

Staff has reviewed the EE Adams application and has replicated, using the CA-GREET spreadsheet, the carbon intensity value calculated by EE Adams. EE Adams has provided documentation of the plant's thermal and electrical energy use. Staff is satisfied that the energy values presented in the application accurately represent the plant's actual thermal and electrical energy consumption. Staff believes that the carbon intensity value calculated by EE Adams is sustainable. Consequently, Staff believes that the carbon intensity value of 88.43 gCO₂e/MJ for the dry DGS pathway accurately represent the carbon intensity value of the Adams plant. Therefore, staff recommends that the EE Adams application for a Method 2A corn ethanol pathway be approved.