



Low Carbon Fuel Standard Tier 2 Pathway Application

Application No. B0940

Updated: 03/26/2026 (See Underlined Text)

Staff Summary

**Central Valley Renewable Fuels, LLC (1723)
Central Valley Renewable Fuels, LLC, Bakersfield, California
Renewable Diesel from Soybean Oil, Canola Oil, Distillers' Corn Oil,
Used Cooking Oil, and Animal Fats (Poultry and Tallow)**

Deemed Complete Date: 12/22/2025

Posted for Comment Date: 3/11/2026

Carbon Intensity (CI) Certified Date: 3/26/2026

CI Start Date: 10/1/2025

Pathway Summary

The Central Valley Renewable Fuels, LLC (Central Valley Renewables) seeks certification of five (5) Tier 2 pathways for Renewable Diesel derived from U.S. sourced Soybean Oil, North American-sourced Canola Oil, Distillers Corn Oil (DCO), Used Cooking Oil (UCO), and Animal Fat (poultry fat and tallow) at the renewable diesel production facility in Bakersfield, California. The Central Valley Renewables facility (formerly known as Bakersfield Renewable Fuels) was a crude oil/petroleum refinery that was converted into a renewable diesel facility which commenced renewable diesel production in 2024.

The Central Valley Renewables renewable diesel plant is a stand-alone plant with an internal steam methane reformation (SMR) reactor that produces hydrogen using natural gas and renewable off-gasses from production as feed and process fuels.

Soybean and Canola Oil feedstocks are directly supplied to Central Valley Renewables by rail. Since this application was submitted prior to July 1, 2025, the biomass feedstocks used in the initial application are not subject to sustainability requirements under section 95488.9 (g)(5)(B) of the 2025 LCFS Regulation. However, beginning with the 2026 Annual Fuel Pathway Report, to be submitted in 2027, the biomass feedstocks will be subject to the sustainability requirements pursuant to section 95488.9(g)(5)(A).

DCO, UCO, and Animal Fats feedstocks are transported to the bio-refinery by truck only. Energy inputs for the renewable diesel production process include natural gas, electricity, and renewable off gases (from the production process).

Co-products in the form of renewable naphtha (RN), renewable propane, and renewable butane are also produced. These co-products qualify for the co-product credit in California. The gaseous co-products are re-directed to the refinery to be used as a process fuel or as a feedstock for production of hydrogen and displace the use of natural gas. The produced renewable diesel fuel produced at Central Valley Renewables is transported and distributed in California by truck.

Carbon Intensity of Fuel Type Pathway

The carbon Intensity (CI) for the proposed fuel pathway is determined from life cycle analysis conducted using a modified version of the Board-approved Tier 1 Simplified CI Calculator for Biodiesel and Renewable Diesel.¹

The modified calculator has been determined to be equivalent to CA-GREET3.0 pursuant to section 95488.7(a)(1) of the LCFS regulation. The applicant has provided operational data and supporting documentation for a period of 3 months; from April 2025 to June 2025. The following table lists the proposed CIs for this application.

Proposed Pathway CIs

Pathway Number	Fuel & Feedstock	Pathway FPC	Pathway Description	Carbon Intensity (gCO₂e/MJ)
B094001	Renewable Diesel from Soybean Oil	<u>RND005B</u> <u>09400100</u>	North American Soybean Oil transported to renewable diesel plant in Bakersfield California by rail; NG, Electricity; finished Renewable Diesel fuel distributed in California by truck.	62.89

¹ The Tier 1 Simplified CI Calculator for Biodiesel and Renewable Diesel (August 13, 2018), incorporated by reference in the LCFS Regulation, section 95488.3(b).

Pathway Number	Fuel & Feedstock	Pathway FPC	Pathway Description	Carbon Intensity (gCO₂e/MJ)
B094002	Renewable Diesel from Canola Oil	<u>RND006B</u> <u>09400200</u>	North American Canola Oil transported to renewable diesel plant in Bakersfield California by rail; NG, Electricity; finished Renewable Diesel fuel distributed in California by truck.	57.39
B094003	Renewable Diesel from Distillers Corn Oil	<u>RND003B</u> <u>09400300</u>	U.S. sourced Distillers Corn Oil transported by truck to renewable diesel plant in Bakersfield, California; NG, Electricity; finished Renewable Diesel fuel distributed in California by truck.	36.74
B094004	Renewable Diesel from Used Cooking Oil	<u>RND001B</u> <u>09400400</u>	North American sourced Used Cooking Oil transported to the renewable diesel plant in Bakersfield, California; NG, Electricity; finished Renewable Diesel fuel distributed in California by truck	25.07

Pathway Number	Fuel & Feedstock	Pathway FPC	Pathway Description	Carbon Intensity (gCO ₂ e/MJ)
B094005	Renewable Diesel from Animal Fats (poultry fat and tallow)	<u>RND002B</u> <u>09400500</u>	North American sourced Animal Fats transported to the renewable diesel plant in Bakersfield, California; NG, Electricity; finished Renewable Diesel fuel distributed in California by truck	39.97

Operating Conditions

The certified CI value in the above table may be used to report and generate credits for fuel quantities that are produced at the facility in the manner described in the applicant's Life Cycle Analysis (LCA) report, and dispensed for transportation use in California, subject to the following requirements and conditions:

1. Fuel pathway holders are subject to the requirements of the California Air Resources Board's (CARB) Low Carbon Fuel Standard (LCFS) regulation, which appears at sections 95480 to 95503 of title 17, California Code of Regulations. Requirements include ongoing monitoring, reporting, recordkeeping, and third-party verification of operational CI and a controlled process for providing product transfer documents or other similar records to counterparties or CARB. All specified source feedstocks reported in the fuel production process must meet chain-of-custody requirements specified in section 95488.8(g)(1)(B).
2. The following Operating Condition (OC) is applicable to user-defined input values for co-products in Field 2.17.a: "Energy Density of Other Co-Products (LHV, Btu/gal)" (Cell K53 of the RD-Production Tab in the Tier 1 Simplified CI Calculator applicable to Renewable Naphtha, Cell L53 of the of the RD-Production Tab in the Tier 1 Simplified CI Calculator applicable to Renewable Propane, and Cell M53 of the of the RD-Production Tab in the Tier 1 Simplified CI Calculator applicable to Renewable Butane). The input values shall be determined by Gas Chromatography (GC) analyses or other CARB approved method (e.g., correlation between LHV and specific gravity of renewable naphtha, propane, and butane), and shall be reported as a Representative Value, or a Conservative Value with the following constraints, respectively:

The Representative Value of Energy Density shall be based upon CARB's approved sampling and analysis plan used to determine the user-defined input value for the Energy Density of Co-Products renewable naphtha,

renewable propane, and renewable butane co-produced and exported for sale under this fuel pathway. The applicant's proposed sampling and analysis plan shall consider the variability of the facility-specific material attribute in selecting the sampling method, frequency of analysis or measurements, and the calculation method used to determine the composite, representative, user-defined input value. Results derived on a higher heating value (HHV) basis shall be converted to a lower heating value (LHV) basis using a factor approved by CARB. Inputs must be site-specific; results from one facility's co-product analysis may not be reported in applications or Annual Fuel Pathway Reports for any other facility's pathways.

The Conservative Value for Energy Density is the lowest result of GC analyses or other CARB approved method reduced by a conservative margin of 5 percent. Lower values for co-product energy density reduce co-product credit and correspond to higher, more conservative, CI values. The value may be determined from analysis of an initial subset of facility-specific results provided to CARB at the time of application. The applicant must demonstrate that the selected value is conservative, relative to analyses of the facility's specific material and peer reviewed literature values for the material. The fuel pathway will be certified with an operating condition requiring a minimum sampling and analysis frequency, to be determined during the certification process on the basis of the initial subset of results provided with the application package. If any analysis results in a lower value than the approved conservative value, the user-defined input value must be updated in the subsequent Annual Fuel Pathway Report. A fuel pathway holder may transition from a conservative value to a representative value for the subsequent Annual Fuel Pathway Report if approved by CARB prior to the report due date.

Sampling and Analysis Plan

The applicant shall develop a sampling and analysis plan for each fuel production facility, to demonstrate to CARB the validity of composite values used for all relevant user-defined inputs. At a minimum, the proposed sampling and analysis plan shall include the following:

- a. Description of the material attribute(s) specified for all relevant user defined inputs (e.g., Energy Density LHV (Btu/lb) of the co-product streams.
- b. The properties (e.g., composition, vapor pressure, density etc.) of the co-product streams.
- c. The proposed sampling frequency, given as a number of samples per time period, or per unit of fuel produced (e.g., every 100,000 gallons), to monitor the material attribute and its variability. The applicant must indicate the method of compositing collected samples with due

consideration to changes in production cycles (batch runs, or continuous), changes in type of feedstock, seasonal availability of feedstocks, and disruptions to the production process (startup and shutdown).

- d. Documentation of analytical results must identify the samples by date, type, location, and fuel production batch.
 - e. The test methods employed (standard or industry recognized) shall be described for all analytical measurements to support the use of a composite value for a user defined input.
 - f. Individual GC test results shall be averaged per the stated frequency (i.e., time period) in the Sampling and Analysis plan. Averages and variances shall be provided for each time period reviewed, and individual GC test reports shall be provided as requested by the verification body or CARB.
3. The Field 2.14.b "Conversion Factor from HHV to LHV" for Cell H53 of the RD Production tab of the Simplified CI Calculator instructs the applicant to consult CARB Staff for a value. The initial value may be proposed by the applicant as the weighted average conversion factor of component fuel gases (as determined by the inline GC composition) reported monthly in Field 2.14 Alternate Fuel Credit for Co-Product Use. The HHV to LHV conversion factors of component fuel gases can be found in the "Fuel_Specs" tab of the Simplified CI Calculator. A composite weighted average conversion factor should be reported in Cell H53 based upon the monthly conversion factors calculated above and is subject to verification.

For example, if the composition of the Alternate Fuel hydrocarbons for Month 1 is 60 percent propane, and 40 percent butane, then the calculated monthly HHV to LHV conversion factor is determined as follows:

$$\begin{aligned} &= (60\% \times 0.922 \text{ Conv Factor for Propane}) + (40\% \times 0.922 \\ &\quad \text{Conv Factor for Butane}) \\ &= 0.922 \end{aligned}$$

A weighted average composite of all monthly calculated conversion factors should be reported in Cell H53 of the RD Production tab.

4. For all source-specified feedstocks such as North America DCO, UCO, and Animal Fats reported in the fuel production process the applicant must undergo chain-of-custody verification and ensure that applicable requirements in 95488.8(g)(1) are met. In particular, the applicant must request that the verification body perform chain-of-custody verification with adequate sampling for each region supplying source-specified feedstock to the fuel production facility. This entails, among other things, the VB reviewing the supply chain entities' inventory records and confirming by mass balance and/or segregation that sufficient feedstock from the

relevant regions associated with the fuel pathway is available to supply to the facility listed in this application.

5. Moisture content of feedstocks used for renewable diesel fuel production is subject to monitoring, reporting, and verification. Either the representative method or the conservative method may be used. The representative method calculates monthly values for weighted average moisture content from financial transaction records or internal measurements by the fuel producer. The conservative method assumes feedstock moisture content is zero, based on the lower value of the range for allowable moisture content.
6. If the total yield of Renewable Diesel exceeds 85% as part of the Annual Fuel Pathway Reporting, the applicant must notify CARB and propose a corrective action plan to address any potential errors including inventory accounting errors.

Staff Analysis and Recommendation

Staff has reviewed the application and has replicated, using the Tier 2 modified version of the Simplified CI Calculator, the CI values calculated by the applicant. SCS Global Services (H3-20-017) submitted a positive validation statement. Staff recommend this application for five pathways be certified after all the comments received during the 14-day public comment period are addressed by the applicant and the response deemed satisfactory by the California Air Resources Board. The certification is subject to the operating conditions set forth in this document.

Comments and Certification

These pathways did not receive public comments during the comment period. CARB certified the pathways.