

Staff Summary
Method 2B Application
Diamond Green Diesel
Mixed Feedstock for Renewable Diesel
(RNWD024 and RNWD025)

Deemed Complete Date: March 20, 2014
 Posted for Comment Date: April 14, 2014
 Certified Date: April 24, 2014

Pathway Summary

Diamond Green Diesel (DGD) has submitted a Method 2B application for two pathways for the production of renewable diesel (RD) from used cooking oil (UCO) at its St. Charles, Louisiana plant. DGD began producing RD at its St. Charles plant in June 2013. The plant has the capacity to produce 420,000 gallons of RD per day. In September 2012—prior to the startup of the plant—DGD applied for 12 prospective RD pathways. These pathways differed by feedstock (soy oil, corn oil, used cooking oil, and animal fat), rendering energy, and transport modes and distances. All 12 pathways were modified versions of existing LCFS RD or biodiesel pathways. DGD’s pathways were certified on December 3, 2012.

DGD is now applying for two new UCO pathways based the availability of operational data cover covering the last six months of 2013. These data indicate that energy consumption at the DGD plant has been lower than the estimates on which the carbon intensities (CIs) in the original 12 pathway were based (see Table 1, below). Used cooking oil transport emissions, however, have moved in the opposite direction: rather than the 50-mile transport distance on which the original CI estimates were based, DGD’s operational data show that this feedstock is actually transported 488 miles by heavy-duty diesel truck.

As with the original 12 pathways, DGD’s two new pathways are modeled as UOP Econofining processes and utilize the default RD process energy consumption values found in CA-GREET 1.8b. Those process energy defaults are summarized in Table 1 below.

Table 1: Energy for Renewable Diesel Process from CA-GREET model

Feedstock	Process Energy Input (Btu/lb)	Electricity Energy	Thermal Energy
Soy Oil	1,851	61.4%	38.6%
Corn Oil			
Used Cooking Oil (UCO)	2,175		
Tallow			

Operating Conditions

In using the two UCO RD pathways described in this Staff Summary, DGD must meet the following operating conditions for every gallon of renewable diesel sold in California:

1. DGD has provided staff with operational data covering the last six months of 2013. Records covering a total of two years are required for LCFS Method 2 pathway applications. Staff is able to prospectively certify applications, however, on the condition that the applicant submit a full two-year data record. DGD will, therefore, submit energy consumption and transportation records no less frequently than every six months, until staff is in receipt of records covering a full two years of operations at its St. Charles plant. If these records indicate that the certified pathway CI is lower than the actual CI, staff may adjust the certified CI to reflect actual operations at the St. Charles plant.
2. Every volume of RD that DGD sells into the California market must be labeled to identify the feedstock used to produce that volume. In labeling its volumes, DGD shall follow the procedures described in the “Mixed-Feedstock Bio- and Renewable Diesel Guidance” available on the Low Carbon Fuel Standard web site (<http://www.arb.ca.gov/fuels/lcfs/2a2b/internal/mixed-feedstock-bdrd-120112.pdf>).
3. DGD agrees to make all certified pathway CIs available via the LCFS Method 1 Lookup Tables to other RD producers whose production pathways are accurately described by the approved pathways developed in the DGD application.

Carbon Intensity of the Fuel Produced

The proposed DGD pathway CIs are summarized in Table 2.

Table 2: Proposed Lookup Table Entry

Fuel	Pathway Identifier	Pathway Description	Carbon Intensity in gCO ₂ e/MJ (Including Indirect Effects)		
			Direct Emission	Land Use or Other Indirect Effect	Total
Renewable Diesel	RNWD 024	2B Application*: Conversion of waste oils (Used Cooking Oil) from U.S to renewable diesel where “cooking” is required (rail transport)	21.10	0	21.10
	RNWD 025	2B Application*: Conversion of waste oils (Used Cooking Oil) from U.S to renewable diesel where “cooking” is required (ship transport)	20.89	0	20.89

*Specific Conditions apply

Staff Analysis and Recommendation

Staff has reviewed DGD’s application and finds the following:

- Staff has replicated, using the CA-GREET spreadsheet, the carbon intensity values calculated by DGD; and
- Staff has confirmed that the energy consumption values used in the DGD application are the CA-GREET 1.8b defaults.

On the basis of these findings, staff recommends that two DGD’s Method 2B pathways for truck transported UCO to RD be approved for use in DGD’s mixed-feedstock RD plant.