August 8, 2022

Liane M. Randolph
Chair California Air Resources Board
1001 I Street Sacramento, CA 95814

RE: Comments on the Draft 2022 Climate Change Scoping Plan Update

Dear Chair Randolph and Members of the California Air Resources Board (CARB):

Global Clean Energy is a California-based renewable fuels innovator producing ultra-low carbon renewable fuels from patented nonfood camelina varieties. Thank you for the opportunity to comment on the 2022 Draft Climate Change Scooping Plan Update.

Global Clean Energy is committed to advancing climate reduction targets to improve air quality throughout the Golden State. We support CARB's proposal to accelerate carbon reduction targets 30 percent by 2030. Given the push to fully decarbonize California by 2045 (EO B5518) we see heightened reduction as beneficial to achieving these goals, while recognizing that renewable fuels can play a pivotal role in meeting these targets. We appreciate CARB taking biofuels' unique attributes into account when crafting this updated scoping plan.

One of the fuels we create, renewable diesel, is especially helpful in achieving the state's decarbonization goals. Renewable diesel significantly reduces criteria pollution, including NOx and PM, as well as reducing GHG emissions by up to 85% (depending on feedstock). In fact, according to CARB's Renewable Diesel Workshop[1], using renewable diesel on all tier 0-4i equipment in the San Joaquin Valley (2025) would reduce NOx emissions by 0.55 tpd and PM2.5 emissions by 0.073 tpd. Renewable Diesel has fewer GHG and local emissions than both traditional diesel and biodiesel fuels, acts as a drop-in replacement for modern traditional diesel engines with no blending required, and unlike ZEVs, does not require largescale infrastructure replacement. In addition, renewable diesel is readily available across the majority of California and is at cost parity with CARB ULSD.

In addition to producing renewable diesel, we also produce renewable propane, naphtha, and butane. These renewable byproducts can then be used to support further reduction of GHG and other emissions in California. For example, renewable propane from camelina for school buses, forklifts, and other equipment would have the same low CI as renewable diesel and would produce lower NOx and PM than traditional diesel or gasoline. Renewable naphtha and butane also help lower the GHGs and production costs associated with gasoline as they are used as a gasoline blendstock.

We understand from public workshops that CARB is seeking input on reducing lipid-based feedstocks for renewable fuels so as to not advance food vs. fuel concerns or cause indirect land use change. We would urge CARB to consider an exemption for certain lipid-based feedstocks certified as low ILUC-risk, similar to the European Union's RED II directive.

Global Clean Energy's primary renewable fuel feedstock, our patented camelina, is a lipid-based feedstock that is nonfood, grows between traditional crop cycles on dryland farms, and does not contribute to land use change. Further, camelina has the potential to be the lowest carbon renewable fuel feedstock on the market.

Camelina-based renewable fuels produced by Global Clean Energy have an ultra-low carbon intensity (CI) score that has the potential to go below zero. We were issued a first-of-its-kind LCFS pathway by CARB in 2015. For reference, camelina is an oilseed crop, member of the mustard seed family and a distant relative of the canola plant.

Global Clean Energy's camelina is grown domestically and contributes to rural economic development by providing farmers additive income on land otherwise left idle. Further, our company's vertically integrated structure allows us to drive down our lifecycle carbon emissions. Through streamlined operations and identifying efficiencies, we expect to reduce our carbon emissions to single digits or below in coming years.

Our Bakersfield Renewable Fuels Refinery, which is anticipated to begin production later this year, is actively contributing to the "Just Transition" from fossil fuels to clean energy careers and has a nameplate capacity of 15,000 barrels per day or over 200 million gallons per year. Our fuels will be readily available to the California market through existing distribution agreements, and we expect the Jan Juaquin Valley's agricultural and trucking sectors to consume much of what we produce.

Given camelina-based fuels' positive traits, we encourage CARB to exempt it from any lipid-based feedstock restrictions. Enacting these changes will ensure our company and others can continue to produce renewable fuels in California that further the domestic clean energy supply, lower carbon emissions, and strengthen our state's clean energy economy.

Further, as CARB seeks to implement the goals of EO N7920, we encourage you to prioritize the use of renewable diesel in medium and heavy-duty vehicles. There are no technical, supply, or financial reasons why medium and heavy-duty vehicles cannot switch to renewable diesel use rather than ZEVs to support CARB's carbon reduction objectives. By encouraging renewable fuels' heightened use in these applications, CARB can help to ensure limited economic impacts on businesses that would otherwise have to replace their existing vehicle fleets while achieving environmental objectives.

Renewable diesel can also be used as a fuel source for rail, agricultural equipment, commercial harbor craft, and airport ground support equipment as well as aviation fuel – other stated

carbon reduction targets of your agency – all of which are fuel options our company is exploring at our Bakersfield site.

We appreciate CARB taking the benefits of renewable fuels produced using camelina into account in its rule making process and encourage you to consider enacting the above-mentioned low ILUC lipid-based feedstock exemptions to further advance California's emissions reduction targets.

Sincerely,

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1. https://ww2.arb.ca.gov/sites/default/files/2021-09/ORD_Amendment_Workgroup-Renewable_Diesel.pdf