November 7, 2022

Chair Randolph and Board Members
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: CABA and Clean Fuels Comment Letter – In-Use Off-Road Diesel Fueled Fleets Regulation

The California Advanced Biofuels Alliance (CABA) and the Clean Fuels Alliance America (Clean Fuels) appreciate the opportunity to comment on the In-Use Off-Road Diesel Fueled Fleets Regulation (Off-Road). While we applaud amending the regulation to require the use of renewable diesel, we believe other drop-in fuel replacements, such as blends of renewable diesel and biodiesel, should be an available alternative in the regulation, especially when the regulation is worded to default to allow the use of 100 percent petroleum diesel in the event renewable diesel is unavailable.

CABA is a not-for-profit trade association promoting the increased use and production of advanced biofuels in California. CABA has represented biomass-based diesel (BMBD) feedstock suppliers, producers, distributors, retailers, and fleets on state and federal legislative and regulatory issues since 2006. Clean Fuels is the U.S. trade association representing the entire biodiesel and renewable diesel value chain, including producers, feedstock suppliers and fuel distributors. As a drop-in fuel replacement for petroleum diesel, biodiesel and renewable diesel can help California achieve its carbon neutrality goals.

While both fuels provide significant benefits on their own, blending the fuels together maximizes both the environmental and economic profiles of biodiesel and renewable diesel.

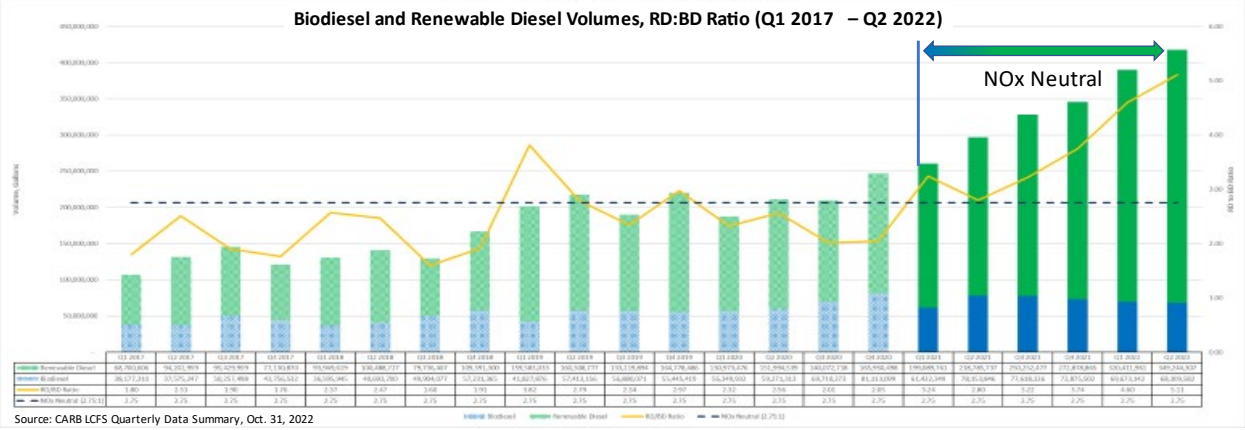
A California Air Resources Board (CARB) approved fuel[1], renewable diesel and biodiesel blends comprised of up to 20% biodiesel and 80% renewable diesel (R80/B20) will reduce emissions, perform higher and provide supply and cost benefits to California communities.

Compared to petroleum diesel, R80/B20 can not only reduce nitrogen oxides (NOx) by 10%, but also reduces total hydrocarbons (THC) by more than 20%, particulate matter (PM) by more than 40% and carbon monoxide (CO) by more than 25%. One-hundred percent renewable diesel (R100) compared to petroleum diesel, can reduce NOx by about 15%, THC by 12%, PM by 37% and CO by 24%.[2] The full suite of benefits provided by R80/B20 blends only enhances the emissions reductions renewable diesel and biodiesel can provide alone. As CARB is aware, PM has significant adverse impacts on human health, disproportionately so in disadvantaged/ environmental communities (DACs). Because biodiesel reduces

[1] https://ww2.arb.ca.gov/sites/default/files/2021-07/ADF_Regulation_5-3-21.pdf
[2] https://www.regi.com/docs/default-source/products/reg-18043_ultra_clean_diesel_fact_sheet_updated_2.pdf?sfvrsn=bcba8d1a_2

PM more than renewable diesel[3], an important goal for the Off-Road Regulation should be to maximize the amount of biodiesel used by off-road fleets while balancing the need for reducing other pollutants, such as NOx. This is especially critical for maximizing the regulation's health benefits to local DACs, many of which are sited near California ports and throughout the San Joaquin Valley. An R80/B20 blend achieves this optimal balance of GHG, PM and NOx reductions while reducing costs for fleet operators.

Furthermore, over the past six consecutive quarters (Q1 2021 – Q2 2022), biodiesel and renewable diesel blends have exceeded the 2.75 to 1 ratio determined by CARB as being NOx neutral[4] for biodiesel/renewable diesel blends used in older legacy vehicles, as established by the recent amendments to the Alternative Diesel Fuel (ADF) regulation[5] This, coupled with the high turnover to new technology diesel engines (NTDE), means that any remaining NOx concerns involving biodiesel used in California vehicles have been effectively addressed by the market.



- For the first two quarters of 2022, Biodiesel and Renewable Diesel comprised over 46% of the carbon reductions in the LCFS, more than electricity (23.6%), RNG (15.2%), and hydrogen (0.2%) **combined**.
- BD and RD now comprise **44.5% each gallon of diesel fuel** on average in CA in the first two quarters of 2022.
  - 138M gal biodiesel, 670M gal renewable diesel **Total BMBD = 808M gal**
  - BD = 8.7% of LCFS carbon reductions/credits, RD = 37.7% of credits, **Total BMBD = 46.4% of the credits**
  - BD = 7.5% of diesel pool, RD = 37% of diesel pool, **Total BMBD = 44.5% of the diesel fuel pool**
- For **six quarters in a row** (Q1 2021 – Q2 2022), RD:BD ratio has **exceeded ADF threshold** for NOx neutrality (2.75:1) (yellow line).

Further, because renewable diesel offers increased cetane and biodiesel offers increased lubricity, blends of renewable diesel and biodiesel can increase engine life with better self-ignition and smoother-running engines.

[3] See Executive Summary, CARB Final Report, "Biodiesel Characterization and NOx Mitigation Study," Oct. 2011, https://www.arb.ca.gov/fuels/diesel/altdiesel/20111013_carb%20final%20biodiesel%20report.pdf.
[4] https://ww2.arb.ca.gov/resources/documents/low-carbon-fuel-standard-reporting-tool-quarterly-summaries
[5] Alternative Diesel Fuel (ADF) regulation, adopted May 3, 2021, see https://ww3.arb.ca.gov/regact/2020/adf2020/fro2.pdf.

While emissions benefits and engine performance are significant on their own, supply and price are at the forefront of consumer concerns. As the supply of renewable diesel is growing, biodiesel is currently available to help ease supply concerns. Blending biodiesel into renewable diesel will also decrease the cost of renewable diesel alone, easing consumer concerns of availability and cost.[6]

At the very least, biodiesel and renewable diesel blends should be required for use in regulated fleets when R99/R100 is not available. To permit the use of petroleum diesel – when blends of renewable diesel and biodiesel are available in the absence of R99 or R100 – makes little sense, but that is how the current proposed regulatory text is worded. To address this, we provided staff with the following suggested amendments (underlined below) that would replace the petroleum diesel default fuel with a renewable diesel and biodiesel blend (consistent with the recently amended Alternative Diesel Fuel regulation).

> *"(e) Renewable Diesel Requirements*
>
> *(1) Starting on January 1, 2024, all fleets subject to this regulation are required to use R99 renewable diesel fuel in all vehicles subject to this regulation, subject to the exemptions provided in section 2449.1(e)(2) below.*
>
> *(2) The following fleets are exempt from the renewable diesel requirements in section 2449.1(e)(1):*
>
> > *a. Any fleet that is designated as a captive attainment area fleet, as described in section 2449(c)(6); and*
> >
> > *b. Any fleet that is comprised <u>of at least 90%</u> vehicles with Tier 4 final engines or model year 2007 or newer on-road engines.*
> >
> > *<u>c. Any fleet for which at least 90% of the total hours of operation of the fleet is performed with Tier 4 final engines or model year 2007 or newer on-road engines.</u>*
>
> *(3) If <u>R99</u> renewable diesel is unavailable to a portion of a fleet through its normal refueling methods, those vehicles for which <u>R99</u> renewable diesel is unavailable are not required to comply with Section 2449.1e(1) but are instead required to use a diesel fuel that meets the requirements specified in the order below:*
>
> > *<u>a. If R99 is unavailable, the vehicles must use an R75/B20 blend (up to 20% biodiesel blended with at least 75% renewable diesel);</u>*
> >
> > *<u>b. If R75/B20 is unavailable, the vehicles must use an R55/B20 blend (up to 20% biodiesel blended with at least 55% renewable diesel);</u>*
> >
> > *<u>c. If R55/B20 is unavailable, the vehicles may use CARB diesel.</u>*

[6] https://afdc.energy.gov/fuels/prices.html

Documentation for demonstrating the unavailability of the fuels set forth in section 2449.1(e)(1) or (e)(3)a. or b. above must comply with section 2449.1(e)(4).

(4) If at any point a fleet asserts its inability to comply with section 2449.1(e)(1) due to the unavailability of R99 or any fuel specified in section 2449(e)(3)a. or b., the fleet must have documentation showing the unavailability of that fuel and the fleet operator's attempts to obtain the fuel. This documentation may include communications from fuel providers, contract bids, or maps of fueling stations near a job site. A fleet's normal fueling methods shall include such factors as job site, storage site or retail station refueling. Refueling methods shall not refer to a specific distributor or brand of fuel. Fleets must make reasonable attempts to obtain R99 renewable diesel, at a minimum, on a quarterly basis or when vehicles move to a new job site.

(4) Fleets that solely rent vehicles to other entities must include language in their rental contract that the recipient of the rented vehicle must comply with the R99 renewable diesel requirements in section 2449.1(e) and, if R99 is unavailable, the requirements in section 2449.1(e)(3). Such fleets that include such language in their rental contracts will not be held liable if a rented vehicle under their ownership is not compliant with section 2449.1(e) as a result of the renter's actions, but the fleet must report to CARB the entity that rented the vehicle and did not comply with section 2449.1(e)."

There is no single solution to help California achieve its ambitious goals. Allowing blend alternatives (e.g. R80/B20), as well as R99 in the Off-Road Regulation, will help California achieve emission benefits immediately while the state pursues its decarbonization efforts, enhance local air quality in disadvantaged and EJ communities, and ease any potential cost and supply concerns. We ask that such blends be incorporated into the proposed amendments.

We thank CARB staff for their work on this important matter and look forward to collaborating with you. Please feel free to contact us if any questions should arise.

Sincerely,

Rebecca Baskins
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California Advanced Biofuels Alliance

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