March 24, 2022

California Air Resources Board
1001 I Street
Sacramento, CA 95814

By Electronic Submittal

The Clean Fuels Alliance America (Clean Fuels)[1] and California Advanced Biofuels Alliance (CABA)[2] appreciate the opportunity to provide comments on the proposed Commercial Harborcraft rulemaking. Our comments reinforce the ones we submitted at the Board's November 2021 hearing (incorporated herein by reference)[3]. Clean Fuels and CABA have been longtime supporters of the state's overall climate and air quality improvement goals and have collaborated frequently with CARB staff toward achieving those goals.

We appreciate the staff's proposal to require a 99% renewable diesel fuel (R99) for all commercial harborcraft, which recognizes the many benefits of renewable diesel. However, we are strongly disappointed in the proposal's exclusion of biodiesel, another important drop-in replacement for petroleum diesel, and request the Board to direct staff to provide 15-day changes that would allow an 80% renewable diesel and 20% biodiesel blend (R80/B20) in addition to the current proposal that requires R99 exclusively.

The rationale for allowing the use of R80/B20 blends is described in detail in the November 2021 joint comment letter we submitted (attached for your convenience). To summarize, allowing the use of R80/B20 provides numerous benefits that are substantially similar or superior to requiring R99 fuel exclusively, including:

- Both R99 and R80/B20 reduce GHGs by up to 79% or more
- Both fuels reduce NOx: R99 reduces NOx by about 11%, R80/B20 by about 10%
- Both fuels reduce particulates: R99 reduces PM by about 27%, R80/B20 by 29%.

[1] Clean Fuels is the U.S. trade association representing the entire supply chain for biodiesel, renewable diesel, and to a growing extent, sustainable aviation fuel.
[2] California Advanced Biofuels Alliance is a not-for-profit trade association promoting the increased use and production of advanced biofuels in California. CABA represents biomass-based diesel (BMBD) feedstock suppliers, producers, distributors, retailers, and fleets on state and federal legislative and regulatory issues.
[3] See CABA and NBB joint comment letter, dated Nov. 15, 2021, at https://www.arb.ca.gov/lists/com-attach/3620-chc2021-VjUHYANgAjBReVA+.pdf.

As we noted previously, both fuel blends achieve similar reductions in GHGs and NOx, but R80/B20 reduces diesel PM more than R99. This fact should be of strong interest to CARB and its efforts to improve the health of residents living in environmental justice (EJ) and disadvantaged communities, many of which are located in close proximity to ports that are served by large numbers of commercial harborcraft. As the Board is well aware, diesel PM is particularly harmful to human health, being the state's leading toxic air contaminant. Diesel PM exposure results in significant numbers of premature death, asthma attacks, work loss days, and cancer cases,[4] among other health impacts.

For the remainder of this letter, we want to address a number of misconceptions and misunderstandings on which the R99 proposal appears to have been based (as indicated in Staff Response to Comments 3196-1 and 3196-2).[5]

The Use of R80/B20 Does Not Increase NOx Emissions

The staff's first response to our recommendation to allow the use of R80/B20 was, "[t]he use of an 80 percent renewable diesel and 20 percent biodiesel (R80/B20) blend instead of the proposed blend of renewable diesel at 99 percent purity or higher (R99) ***would increase NOx emissions.***" [emphasis added.] This is patently untrue, as evidenced by the next sentence in the response, which notes that "there wouldn't be as much of a NOx benefit [with R80/B20] as with R99." Not having as much of a benefit is vastly different than having an actual disbenefit (i.e., NOx increase), which the response initially states erroneously. Moreover, the added benefit of R80/B20 relative to R99 is the increased reduction in PM emissions, which was not addressed at all by the staff response and, as noted previously, is a benefit that should be particularly important for addressing EJ concerns.

With Appropriate and Routine Maintenance, the Use of R80/B20 Would Not Result in Engine Performance Issues

To our knowledge, there is no empirical evidence that supports the performance claims noted in the staff report and staff response to comments in any of the reports and technical analyses in the rulemaking record. Instead, the staff's response to our recommendation recycles outdated and debunked misconceptions about biodiesel that are decades old. To illustrate, the response supports the performance issues claim by simply stating that "biodiesel also acts as a surfactant and in initial use in engines that have not used biodiesel (BD) previously, a lot of detritus can be released which can foul

[4] Trinity Consultants, which found in a 2021 study that reducing PM by switching to biodiesel in legacy vehicles and equipment at the Port of Los Angeles/Long Beach, West Oakland, San Bernardino, and South Fresno could reduce premature deaths by up to 230 per year, asthma cases by 149,000 per year, 31,000 fewer sick days each year, and achieve other health benefits, all totaling over $2 billion per year in avoided health costs. See https://www.biodiesel.org/news-resources/health-benefits-study.

[5] Response to Comments on the Draft Environmental Analysis, https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2021/chc2021/chcrtc.pdf, at 334-335, accessed March 23, 2022.

filters and negatively affect engine performance." The response further states that "biodiesel in 20 percent concentrations or higher could result in engine performance issues due to the age of the existing CHC fleet and fueling systems, including fuel tanks, fuel links, and other ancillary components."

First, our recommendation was for R80/B20, not blends of biodiesel higher than 20 percent. Further, the use of biodiesel, along with renewable diesel and conventional petroleum diesel, requires the operator to follow the manufacturer's recommended practices, which generally call for regular maintenance and cleaning of fuel-related systems, including tanks. Moreover, the staff's response was based in large part on the 2006 National Renewable Energy Laboratory's (NREL) Biodiesel Handling and Use Guide (Third Edition), which was cited in the staff report as a key basis in support of these claims. This is notable since that version of the NREL Biodiesel Handling and Use Guide was 15 years old at the time the proposed rulemaking was released for comment, and it has been long superseded by at least two subsequent editions. The current Fifth Edition (2016) identifies no particular performance concerns unique to B20 storage in tanks, noting that for microbial contamination (a main driver for the concerns noted in the response), "[t]he best way to deal with this issue (***for both petroleum diesel and biodiesel***) is adequate fuel storage tank housekeeping and monitoring, especially minimizing water in contact with the fuel." [emphasis added.]

It is important to note that biodiesel has been in use in California and the U.S. for a number of decades now. Under the state's Low Carbon Fuel Standard, the use of biodiesel has grown 19-fold, from a mere 14 million gallons in 2011 to about 270 million gallons in 2020 (and over 2 billion gallons in the U.S.). It is highly unlikely this sort of growth in biodiesel volumes would have occurred if fleet operators were experiencing broadly the types of issues cited in the response to comments (as CARB's own data shows, the use of B20 has been steadily growing in the state, outpacing the use of lower biodiesel blends).[6]

Biodiesel Generally Has Greater GHG Benefits than Renewable Diesel

Staff's response to comments supports the rejection of the R80/B20 recommendation, in part, by noting that "biodiesel does not necessarily have lower lifecycle GHG emissions than renewable diesel." While this statement is true on its face, it leaves out some important context. All things being equal, biodiesel production generally requires less energy than production of renewable diesel from the same feedstock, reflecting the simpler production process for biodiesel and the higher energy requirements for hydrotreating feedstocks to produce renewable hydrocarbon diesel. This difference typically confers biodiesel with a similar but lower carbon intensity (CI) score because of that reduced energy use.

[6] See Alternative Diesel Fuels Reporting Summaries, https://ww2.arb.ca.gov/resources/documents/alternative-diesel-fuels-reporting-summaries, showing that the percentage of B100 volumes blended into B20 has steadily grown from 18.9% in 2016 to 37.8% in 2020, while the share of lower biodiesel blends have decreased.

Moreover, the response leaves out the fact that low CI biodiesel pathways far outnumber low CI renewable diesel pathways. For example, according to CARB's own LCFS data,[7] there are 59 certified fuel pathways for biodiesel and renewable diesel with carbon intensity scores of 25 or less (25 CI reflecting about a 75% reduction in GHGs relative to petroleum diesel). Of those 59, 54 are for biodiesel pathways (most made from used cooking oil), while 5 are for renewable diesel pathways. Notably, many of those 54 biodiesel pathways were certified by eight California-based producers, including New Leaf Biofuel in San Diego, Crimson Renewable Energy in Bakersfield, Biodico Westside in Five Points, and Imperial Western Products in Coachella. By excluding even the possibility of an R80/B20 blend being used in commercial harborcraft, the proposal would harm the ability of in-state biodiesel producers, along with the jobs and economic activity they support in California, to compete in this sector and benefit California residents with their lowest polluting diesel replacements.

Conclusion

We applaud and support the state's efforts to aggressively address climate change, air quality, and environmental justice in a holistic manner. The staff's proposal to require R99 fuel exclusively is directionally correct but unnecessarily restrictive. To address this, we strongly encourage the Board to recognize the complementary properties of biodiesel and renewable diesel and allow the use of either an R99 fuel or an R80/B20 blend in commercial harborcraft through a 15-day change. This would allow an optimal blend of GHG, environmental, public health, and EJ benefits, along with better economic impacts for fleet operators and California biodiesel producers.

Thank you for your consideration of these comments. We look forward to continuing our strong collaboration with California.

Sincerely,

Floyd Vergara, Esq., P.E.
Director of State Governmental Affairs
Clean Fuels Alliance America

Rebecca Baskins
Executive Director
California Advanced Biofuels Alliance

[7] See Current Fuel Pathways, https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/fuelpathways/current-pathways_all.xlsx, accessed March 23, 2022.

November 15, 2021

California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: CABA and NBB Comment Letter – Harbor Craft Regulation

The California Advanced Biofuels Alliance (CABA) and the National Biodiesel Board (NBB) appreciate the opportunity to comment on the Harbor Craft Regulation. While we applaud amending the regulation to include renewable fuels, we believe other drop-in fuel replacements, such as renewable diesel and biodiesel blends, should be an available alternative in the regulation.

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. The NBB 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%.[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 PM substantially more than renewable diesel[3], an important goal for the CHC regulation should be to maximize the amount of biodiesel used by commercial harbor craft 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

[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
[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.

near California ports or are otherwise subjected to emissions from coastal operations of harbor craft. A R80/B20 blend achieves this optimal balance of GHG, PM and NOx reductions while reducing costs for fleet operators.

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.

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 any supply concerns. Blending biodiesel into renewable diesel will also decrease the cost of renewable diesel alone, easing consumer concerns of availability and cost.[4]

There is no single solution to help California achieve its ambitious goals. Allowing blend alternatives (e.g. R80/B20), as well as R100 in the Harbor Craft Regulation, will help California achieve emission benefits immediately while the state pursues its decarbonization efforts, enhance local air quality in disadvantaged and EJ communities near ports and waterways, and ease any potential cost and supply concerns. We ask that such blends be incorporated into the amendments through a 15-day rulemaking public process. This will also provide an opportunity to clarify and correct the technical basis for this rulemaking; it appears that the proposed amendments excluding the use of biodiesel are premised on inaccurate information regarding biodiesel, and we would be happy to work with CARB staff to correct the rulemaking record.[5]

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,

Trent Trawick
Chair
California Advanced Biofuels Alliance

Floyd Vergara
Director of State Governmental Affairs
National Biodiesel Board

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

[5] See e.g., Appendix E of the Staff Report (at E-53), citing the 15-year old National Renewable Energy Laboratory's "Biodiesel Handling and Use Guide (Third Edition, 2006)," as a key basis for contamination, usage, storage and other issues raised in the Staff Report. The Third Edition has long been superseded by the Fifth Edition (2016) of that guide. Indeed, CARB's own 2015 Biodiesel Multimedia Evaluation found significant GHG, air quality, and environmental benefits and no significant adverse impacts from the use of biodiesel, including impacts to air and water quality. See https://ww3.arb.ca.gov/fuels/multimedia/meetings/revisedbiodieselstaffreport.pdf at 16.