

April 9, 2018

Mr. Sam Wade
California Environmental Protection Agency
Air Resources Board
1001 I Street
Sacramento, CA 95814

Subject: 2018 LCFS Rulemaking

Thank you for the opportunity to submit comments to the subject document. California Fueling prides itself in being a California based owned/operated business. We were the first company to obtain CARB approval of a NOX Mitigant, VESTA™ 1000, under the ADF. Our technology has advanced since this initial approval and we remain focused on developing more cost-effective market solutions to CARB's NOX Mitigation challenges.

Following are comments relating to two sections of the proposed rulemaking, both of which are particular to the ADF. Our comments are intended to bridge practical experience with rulemaking efforts so that the LCFS's proposed improvements can translate into viable market solutions. In addition, we seek to clarify certain viewpoints which may have been true in the past but require updating.

1. Supplemental NOx Disclosure

Section 3. b., page G-7

"During the rulemaking process, staff will continue to evaluate whether the sunset provision can be bifurcated for on-road vehicles versus off-road vehicles and equipment, which would result in an earlier anticipated sunset date for on-road vehicles while preventing any NOx increases above baseline."

Following are California Fueling's comments regarding "bifurcation":

The bifurcation concept has significant practical challenges. In today's marketplace, BXX blends are splash blended (as opposed to in-line blending). If the on-road ADF were to expire NOX Mitigant would not be required. Meanwhile, the off-road ADF would remain intact requiring NOX Mitigant. As a result, infrastructure challenges would surface. For example, when >B5 blends are splash blended "under the rack", NOX Mitigant is added to biodiesel in bulk storage tanks or in railcars (making it "additized"). Should under the rack blenders be required to "additize" biodiesel railcars or bulk storage tanks for off-road and not for on-road, they would be required to double the number of tanks, railcars, etc. This likely would not occur because of increased costs, limited asset availability, etc. and, as a result, off-road B20 volumes could be

negatively impacted. The same would hold true for terminal blending given they too splash blend BXX in tankage, however, at present, terminals are only blending seasonal allowances which do not require NOX Mitigant.

Terminals represent the single largest opportunity to promote B20 blends, yet few are doing so. Terminal clients, or obligated parties, dictate BXX blend levels. In order for terminals to invest in BXX blending equipment and infrastructure, their clients would have to be willing to assume those costs. In a moving target scenario, (e.g. different on and off-road sunset dates), terminal clients will be less likely to invest the capital required to rack blend B20 because of the timing payback uncertainty.

Biodiesel represents one of the key opportunities for fossil fuel replacement. Given the amount of off-road diesel in California (~30-35% of the total diesel fuel consumed in California), a significant portion of the diesel market may be precluded from using biodiesel from a practicality perspective if a bifurcation concept was adopted. Off road diesel vehicles emit >250 tons per day of NOX emissions as well as additional particulate matter. The off-road diesel market could become one of the highest criteria pollutant emitting fuels if access to renewable fuel options is made difficult. Citizens of California in areas of high off-road vehicle populations face potential increased exposure of criteria pollutants should off-road B20 ADF volumes be negatively impacted because of bifurcation.

In summary, the current ADF applies to on and off-road BXX blends above seasonal allowances. However, if the on-road ADF sunsets, but the off-road ADF remained intact, the off-road B20 market would likely be negatively impacted because of the increased infrastructure requirements of supplying two fuel types.

2. Supplemental NOx Disclosure

F. ALTERNATIVES ANALYSIS

3. Description of Alternatives

c. Alternative 3: Require Mitigation for all Biodiesel Blends

“Staff analyzed a very similar alternative as part of the alternatives analysis for the LCFS regulations adopted in 2015.¹⁹⁶”

In 2015, there was only one (1) CARB approved NOX Mitigant, di-tertiarybutyl peroxide (DTBP). In the last nine months, three (3) different NOX Mitigants have been approved by CARB. All recently approved options are far more practical and cost effective than DTBP. Any conclusions drawn from '15 premises should be updated to reflect the current state of the market especially given the opportunity to update the LCFS.

3. ii. Discussion

“The future effects of requiring NOx mitigation of all biodiesel blends to the level of conventional diesel would be a likely increase in the use of additives, such as Di-tert-butyl peroxide or renewable diesel, to reduce NOx emissions associated with biodiesel use. This would increase the cost of biodiesel, which is currently one of the cheapest compliance options for the LCFS. The increased cost of biodiesel would likely reduce the incentive for its use, leading to a likely decrease in biodiesel consumption in California relative to projected levels for the project following the adoption of the Proposed Amendments. Because of this, greater quantities of other, more expensive fuels, including renewable diesel, would be necessary to replace credits that could otherwise be generated by biodiesel. Therefore, this alternative would make it more difficult and expensive to generate the average carbon intensity reductions and GHG benefits associated with the project following the adoption of the Proposed Amendments.”

Prior to the implementation of the ADF’s NOX Mitigation requirements on January 1, 2018, Renewable Diesel’s (RD) use significantly increased versus biodiesel as a result of multiple factors including RD’s declining CI versus biodiesels increasing CI, ease of use, etc. To weigh in on the economics of biodiesel versus RHD, one would have to consider a multitude of market factors. NOX Mitigants do increase biodiesel costs, however, those costs continue to decline as more products are approved. Assuming that an additive’s cost would increase the cost of biodiesel such that it would make it uneconomical versus RD is not accurate. The conclusion that the alternative would be counterproductive to CI and GHG benefits is not accurate either.

4. iii. Environmental Impacts

The supposition that requiring NOX Mitigants would adversely impact biodiesel construction and expansion projects is inaccurate. From an in-state perspective, there’s plenty of spare capacity available and production has been stable for some time. The further supposition that NOX Mitigation additive plants would have to be constructed is simply not true; no NOX Mitigant plants are under construction nor are any planned. Consequently, there’s no negative impact to the environment as a result of NOX Mitigant manufacturing in California.

The premise that somehow use of NOX Mitigants, if required in all biodiesel blends, would negatively impact PM emissions as a result of decreased biodiesel use has no evidentiary support. Conversely, registered NOX Mitigants have been shown to improve PM emissions versus BXX blends without NOX Mitigants.

An alternate viewpoint exists. Should CARB require NOX Mitigants in all biodiesel blends, biodiesel use could be favorably impacted. As CARB knows, most BXX blending above seasonal allowances occurs “under the rack”, which is a blending bottleneck. Conversely, B5 is blended

state-wide at terminal racks and 70% of biodiesel use is B5. Implementation of NOX Mitigant at terminals, as a result of the removal of seasonal allowances, could open up more serious consideration of higher BXX blends being made available at terminals across the state.

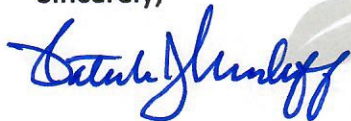
The lack of additive infrastructure is a critical hurdle to increasing the use of biodiesel blends. CARB estimated NOX Mitigant equipment costs would be more than the additive itself (\$0.12/gal for equipment vs an additive cost of \$0.10/gal – Staff Report 10/23/13). Very little capital has been invested in terminal equipment to date. Removal of the seasonal allowances could change this very quickly.

The likelihood of terminals reversing course and moving away from BXX blending as a result of removing the seasonal allowances is not likely given terminal client benefits. A significant number of LCFS credits come as a result of B5 blends and most obligated parties rely on this source to generate credits.

Lastly, the dial down NOX Mitigant treat rates would ensure that when blending B5-B10 such blends would only incur a minimal additive treat cost expense (¼ to ½ that of B20).

We sincerely appreciate all of CARB's efforts to advance and clarify the LCFS. We look forward to working with CARB through the current rulemaking process.

Sincerely,



Patrick J. McDuff
CEO