October 27, 2020

Mr. Richard Corey
California Air Resources Board
1001 I ST
Sacramento, CA 95814

Subject: CARB's Proposed ADF Modifications Require an Updated Environmental Review per the California Environmental Quality Act

Dear Mr. Corey:

Thank you for the opportunity to publicly comment on CARB's "Proposed Amendments to the Regulation on the Commercialization of Alternative Diesel Fuels". The intent of this letter is to address CARB's position that an updated Environmental Analysis ("EA") is not required. **In summary, CARB's 15-day notice statement that "there is no new information of substantial importance related to the emissions analysis that shows new significant effects or previously identified significant effects that would be more severe" does not consider the LED program and Karavalakis[1] studies which render staff's statement patently false. As a result, CARB must conduct an updated Environmental Analysis to include corrections made for past erroneous assumptions as well as demonstrably false forecasted emissions reductions.**

CARB's January 7, 2020 Initial Statement of Reasons ("ISOR")[2], Section VI entitled "Environmental Analysis" was written prior to CARB conducting its Low Emission Diesel ("LED") program study. The ISOR states that

> "… CARB, as the lead agency, previously prepared the 2018 EA under its certified regulatory program (Cal. Code Regs., tit. 17, §§ 60000 through 60008) to comply with the requirements of CEQA. The 2018 EA provided an environmental analysis which focused on reasonably foreseeable potentially significant adverse and beneficial impacts on the physical environment resulting from reasonably foreseeable compliance responses taken in response to implementation of the amendments proposed in the rulemaking that went into effect in January 2019 (2018 Amendments)."

[1] Karavalakis, G., Jiang, Y., Yang, J., Durbin, T. et al., "Emissions and Fuel Economy Evaluation from Two Current Technology Heavy Duty Trucks Operated on HVO and FAME Blends," SAE Int. J. Fuels Lubr. 9(1):2016, https://doi.org/10.4271/2016-01-0876.

[2] https://ww3.arb.ca.gov/regact/2020/adf2020/isor.pdf

(Emphasis added.) As detailed below, the LED program data demands that CARB re-state its January 2020 ISOR findings and, as a result, issue an updated EA.

CARB asserts in the 15-day notice that

> "Past CARB-commissioned studies[3] have demonstrated the ability for some ADF Formulations to reduce NOx emissions, compared to conventional diesel. A study commissioned by CARB in 2009 found that a blend of 55 percent renewable diesel, 20 percent biodiesel, and 25 percent conventional diesel (R55 B20, which equates to a ratio of 2.75 gallons renewable diesel to one gallon biodiesel) resulted in a small NOx reduction (0.8%) compared to conventional diesel. . . .Staff analyzed the overall NOx emissions of the proposed modifications related to the approved ADF formulation blend content using publicly available data and studies."

The 15-day Notice fails to reference the LED program data, and it is readily apparent that CARB has, in fact, failed to consider this directly relevant and, more importantly, more current emissions testing data in the drafting of the 15-day notice. CARB's failure to use the more current LED program data, in favor of the outdated 2009 data, is a violation of CEQA.

As stated in our October 19, 2020 public comment submission, CARB's claim that "[s]taff's Supplemental Disclosure Discussion Analysis **assumed a NOx decrease of 10 percent for R100**", based on the staff report for the 2015 ADF regulation, is a demonstrably false assumption based on the LED program's findings. Based on the LED study's legacy vehicle emissions data, renewable diesel provides **only a 5% NOx reduction** versus CARB ULSD. CARB's 10% renewable diesel NOx reduction claim, based on the 2009 program emission data, is inaccurate by a twofold factor. As a result, the "Staff Analysis of ADF Public Formulation Blend Level"[4] spreadsheet is inaccurate given staff's assumption that renewable diesel reduces NOx by 10%. More egregiously, CARB has continued to base conclusions on renewable diesel reducing NOx by 10% knowing that the LED program data indicates only a 5% NOx reduction is achievable. CARB cannot continue to promote benefits that are verifiably false based on their own more recent LED program test results. CARB is cherry picking data, choosing to ignore its own comprehensive testing conducted this year, in favor of eleven (11) year-old test results.

Further, CARB must correct their Appendix B[5] viewpoint, which states:

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[3] "CARB Assessment of the Emissions from the Use of Biodiesel as a Motor Vehicle Fuel in California, "Biodiesel Characterization and NOx Mitigation Study," Final Report." Durbin et al. 2011. October. Available at: https://www.arb.ca.gov/fuels/diesel/altdiesel/20111013_CARB%20Final%20Biodiesel%20Report.pdf.

[4] "Staff Analysis of ADF Public Formulation Blend Level." CARB 2020. June 4. Available at: https://ww2.arb.ca.gov/sites/default/files/2020-06/Staff_Analysis_ADF_Public_Formulation_Blend_Level.xlsx

[5] "Proposed Amendments to the Regulation on the Commercialization of Alternative Diesel Fuels 15-Day Changes", Appendix B Staff Analysis of Renewable Diesel/Biodiesel Formulations and NOx Emissions, page 7.

> "Based on emissions studies described in the introduction, renewable diesel reduces NOx by 10 percent and biodiesel increases NOx by 20 percent, meaning two gallons of renewable diesel can fully mitigate NOx emissions from a gallon of biodiesel. Based on these emissions a renewable diesel to biodiesel volume ratio of 2.0 statewide results in overall NOx equivalence with conventional diesel, if no other NOx mitigation is employed. Similarly, renewable diesel to biodiesel volume ratios above 2.0 would result in overall NOx emissions reductions, and renewable diesel to biodiesel volume ratios below 2.0 may result in NOx emissions increases. It is important to note that renewable diesel to biodiesel volume ratios below 2.0 may not result in NOx emissions increases if other mitigation methods are employed."

(Emphasis added.)

Based on the LED program data, renewable diesel reduces NOx 5% versus CARB ULSD. For every 20% renewable diesel added to CARB ULSD, 1% NOx reduction will occur (CARB believes there's a linear relationship between percent renewable diesel and emissions impact). The only ratio at which renewable diesel can neutralize the 4% NOx increase from B20 is an 80% renewable diesel 20% biodiesel blend is a 4:1 ratio as opposed to the 2:1 ratio claimed by CARB. Furthermore, in order to neutralize the 1% NOx increase from B5, 20% renewable diesel is required. Based on CARB's 2019 conventional diesel estimates (2988 million gallons), almost 600 million gallons of renewable diesel is required to neutralize the B5 NOx increase. 618 million gallons of renewable diesel was consumed in 2019 meaning nearly all such volume went to offsetting B5 leaving little to no additional renewable diesel volume for further offsets. Lastly, it's inappropriate for CARB to consider current ADF Formulation data given its (a) intent to revoke such EO's, (b) date-based approval of such and (c) certain data was obtained prior to CARB's reference fuel specification correction (November 2017).

Additionally, CARB states in their 15-day notice that,

> "[r]elying on the NOx emissions analysis in Appendix B, the proposed modifications do not propose substantial changes to the ADF regulation which require major revisions to the 2018 EA because the proposed modifications do not involve new significant environmental effects, or a substantial increase in severity of the previously identified significant effects."

This statement is simply not true based on the LED program data, as confirmed by the 2016 Karavalakis paper (see Fn. 1, above). The LED program and Karavalakis findings clearly demonstrate that:

(a) renewable diesel (R100) reduces NOx by only 5%, not 10% as relied upon by CARB; and

(b) a blend of 80% renewable diesel and 20% biodiesel increases NOx in new technology diesel engines (49.4% NOx increase in the 2014 Cummins ISX15 400ST and a 20% NOx increase in the 2010 Cummins), and does not provide a decrease in NOx emission as relied upon by CARB.

Based on these findings, both of which "involve new significant environmental effects, or a substantial increase in severity of the previously identified significant effects", the January 2020 ISOR, Appendix B included as part of the current 15-day notice and the June 4, 2020 spreadsheet are inaccurate and must be corrected.

The January 7, 2020 ISOR, Section VI, item D1., "Legal Standards" notes that:

"CEQA Guidelines section 15162 states:

(a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

> (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
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> (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative."

In the ISOR, CARB indicates (Section VI, item D2.) that "there are no changes in circumstances or new information that would otherwise warrant any subsequent or supplemental environmental review." For the reasons detailed above, this statement is demonstrably false.

CARB goes on to state,

> "[w]hile CARB staff originally intended to ensure that the proposed amendments achieve the intended NOx-mitigating effect from the additives to address the NOx impacts from biodiesel, the actual net effect of the proposed amendments, coupled with the existing and anticipated greater renewable diesel use in California in 2020 and beyond, will ensure that the ADF regulations have a much higher level of NOx mitigation than recognized in the 2018 EA. Therefore, this new information and the proposed regulation actually results in a greater environmental benefit and, as such, does not result in significant adverse effects not discussed in the 2018 EA."

The basis for CARB's position was the stated assumption that renewable diesel reduces NOx 10% versus CARB Diesel, which CARB knows not to be true. The theory that the "ADF regulations have a much higher level of NOx mitigation than recognized in the 2018 EA" is thus not true also. Table 1 of the ISOR, corrected to consider renewable diesel's lessened benefit, shows that for 2018 and 2019 there is no NOx benefit but rather an adverse impact.

Finally, CARB asserts in this section that,

> "(B) [t]he newly discovered information and the proposed amendments to the ADF regulations result in no significant impacts previously examined that will be substantially more severe than shown in the previous environmental analysis."

Clearly, the reduced benefits of renewable diesel, by a twofold factor (5% vs 10%), is a significant impact which results in substantially more severe results. Accordingly, CARB is obligated under CEQA to issue an updated EA.

Although we have been provided with some of the LED program data, as you are no doubt aware, on October 22, 2020, California Fueling filed a request under the California Public Records Act for additional information. We look forward to CARB providing us with the required production in order that we can conduct a more thorough analysis of, for example, renewables diesel's impact on new technology diesel engines. In the interim, however, we trust that CARB will comply with its CEQA obligations and revisit the EA, ISOR, and the 15-day notice in light of its own contradictory data and the Karavalakis study. CARB's prior failures to comply with CEQA, and cherry picking of data, already landed it in trouble in the *Poet* litigation, it would be unfortunate if improvements to the ADF that, we believe, all stakeholders support were similarly derailed.

Respectfully,

Patrick J McDuff

Patrick J McDuff
CEO
California Fueling, LLC

CALIFORNIA FUELING