



Caterpillar Inc.
P.O. Box 610
Mossville, Illinois 61552-0610

George Lin
Email: lin_george@cat.com
Global Regulatory Affairs Technical Manager
Caterpillar Inc.
P.O. Box 610
Mossville, IL 61552

November 7th, 2022

Clerk's Office
Email: ordamendments@arb.ca.gov
California Air Resources Board
1001 I Street
Sacramento, CA 95814

RE: Notice of Public Hearing to Consider Proposed Amendments to the In-Use Off-Road Diesel-Fueled Fleets Regulation

To whom it may concern:

Caterpillar submits the following comments regarding the proposed amendments to 13 CCR §2449:

§2449 (c)(74) "Zero-emission vehicle"

We recommend that "zero-emissions" be defined in a way which includes technologies that provide net zero tailpipe emissions. For example, a hydrogen combustion system with catalysts to reduce tailpipe NOx emissions to ambient NOx levels should qualify as "zero-emissions".

§2449 (d)(6)(I) requires that new engines or vehicles added to a fleet in 2028 and later must be California certified.

This change is not appropriate to implement for multiple reasons.

On the surface, this is a fundamental change to ARB's current policy that allows U.S. EPA certified products to be used within the state. This proposed change would unnecessarily ban already very low emitting Tier 4 Final U.S. EPA products from being added to fleets, effectively making them illegal to use in California. We question whether CARB has the authority to discriminate against in-use U.S. EPA certified products in this way. Furthermore, if NOx reduction is the practical difference between CARB "Tier 5" and the current Tier 4 Final standard, there is evidence that NOx levels are already too low such that it may be hindering ozone reduction in California¹.

¹ "Food for Thought: Overly Aggressive NOx Reduction Has Delayed California's Ozone Attainment by 15 Years" – Stillwater Associates
<https://stillwaterassociates.com/food-for-thought-overly-aggressive-nox-reduction-has-delayed-californias-ozone-attainment-by-15-years/>

A more important issue is that CARB lacks sufficient justification to implement such a change. In fact, it is not currently possible for anyone to substantively comment on the impact of such a change because the requirements that will eventually apply to model year 2028 off-road products are not yet known. A future “Tier 5” off-road regulation is in the early stages of conceptualization. A draft is likely 2 or more years away from being made available. Any previous costs studies and impacts to fleets conducted by CARB would not be applicable to an undefined future regulation.

Finally, considering the unprecedented situation where CARB’s off-road “Tier 5” regulations may not be aligned with U.S. EPA nonroad emission standards, it would be reasonable to expect that some engine/machine models will no longer be financially viable to produce for California due to the already low sales volumes of some offroad engines/machines in the U.S. further aggravated with even lower sales volumes in California. Fleets simply may not be able to buy California certified products within some machine categories because manufacturers do not produce a California unique product. The decrease in product availability may impact the market in ways that are difficult to predict. For example, while it may be expected that reduced product offerings could result in higher machine prices for the remaining available products, reduced product availability might also increase GHGs as reduced engine models force some machines to incorporate engines that are not as well suited for that machine’s operating profile.

Sincerely,
George Lin
Global Regulatory Affairs Technical Manager
Caterpillar Inc.