

STATE OF CALIFORNIA
AIR RESOURCES BOARD

Proposed California Greenhouse Gas)
Emissions Standards for Medium- and)
Heavy-Duty Engines and Vehicles (Phase 2))
and Proposed Amendments to the)
Tractor-Trailer GHG Regulation)

Hearing Date:
February 8, 2018

COMMENTS OF THE
TRUCK AND ENGINE MANUFACTURERS ASSOCIATION

Introduction

The Truck and Engine Manufacturers Association (EMA) hereby submits its comments regarding the proposed California “Phase 2” Greenhouse Gas Emission Standards for Medium and Heavy-Duty Engines and Vehicles (hereafter, the “GHG Phase 2 Proposal”). EMA’s members design and manufacture the engines and vehicles that are subject to CARB’s GHG Phase 2 Proposal, and, as a result, EMA has a clear and significant interest in this matter.

EMA has worked cooperatively and diligently with CARB and with U.S. EPA for many years to develop and implement stringent standards and other requirements to reduce the emissions of greenhouse gases from medium and heavy-duty vehicles and engines. A key governing principle of that multi-year collaborative process has been a commitment by all parties — EPA, CARB, and manufacturers — to work toward a single uniform set of nationwide GHG emissions standards for medium and heavy-duty engines and vehicles, in recognition of the facts that GHG emissions implicate national (indeed, international) concerns, that the motor vehicles at issue are instruments of interstate commerce, and that EMA’s members cannot afford to design and manufacture multiple types of engines and vehicles to meet multiple differing GHG emissions standards. To that end, EMA’s work on and support of EPA’s Phase 2 GHG standards was expressly premised on the parties’ understanding that CARB would adopt Phase 2 standards that fully aligned with EPA’s, without any separate or unique certification or compliance burdens.

CARB’s GHG Phase 2 Proposal is not fully aligned with EPA’s Phase 2 program, and, to that same extent, is inconsistent with the parties’ underlying commitment to a uniform nationwide program. As detailed below, CARB should eliminate those significant inconsistencies before finalizing the GHG Phase 2 Proposal.

CARB Certification

Unlike CARB's GHG Phase 1 Rule, under which EPA-certified engines and vehicles are "deemed to comply" with the Phase 1 California regulations, CARB has proposed that for the Phase 2 standards it must independently verify all certification information. See, § 1037.205(A)(2). Under CARB's Phase 2 Proposal, engine and vehicle manufacturers would be required to submit to CARB certification staff all the certification documentation that they submit to EPA to achieve federal certification. CARB staff would then independently review all the documentation before issuing an Executive Order (EO). However, the proposed independent certification requirement is completely unnecessary under the otherwise aligned EPA and CARB GHG rules. Moreover, the separate and duplicative certification-review requirement would be particularly problematic due to the greatly increased amount of documentation involved in certifying engines and vehicles to the new, much more complex, Phase 2 requirements.

As an initial matter, CARB's proposed change to the Phase 1 certification approach is unnecessary since even under a "deemed to comply" certification scheme, CARB certification staff can and does routinely ask for additional certification documentation from manufacturers. Since under a "deemed to comply" approach CARB already has the opportunity to review whatever specific certification documentation it deems necessary, it is completely unnecessary for CARB's GHG Phase 2 Proposal to mandate that a manufacturer provide all of that certification documentation up-front.

In addition to being unnecessary, independent CARB review of all Phase 2 certification documentation is an undue burden on government and industry resources. Under the complex GHG Phase 2 regulations, a manufacturer would need to submit to CARB approximately thirty different categories of certification documents, and within those categories each manufacturer would likely need to submit more than one thousand unique data files. In turn, each file would include a great deal of data on the performance of different vehicle and engine components. For example, we estimate that, in order to cover their entire engine offering, one manufacturer would need to submit over one hundred engine fuel maps to describe the specific engine fueling strategy for each engine displacement and rating. Similarly, a manufacturer would be required to submit over one hundred transmission data files, covering all available transmissions, with the efficiency of each transmission gear included. Similar unique data files would be required for each system variant under each of the different vehicle component categories. In short, each manufacturer would need to submit to CARB the same mountain of information that it submits to EPA. Such independent CARB certification review procedures will consume thousands of person-hours by the manufacturer to prepare and submit the data to CARB, and untold hours to respond to questions that might arise from CARB certification staff.

Worse, much of the time spent by CARB certification staff to review the data, and efforts by manufacturers to submit it and respond to CARB's questions, may be an inefficient use of already limited resources. For instance, a manufacturer must include in its up-front certification submission all available product variants, without knowing which of those variants customers will choose during the upcoming year. Accordingly, it is foreseeable that CARB will interrogate a specific component in a manufacturer's certification application, potentially delaying the

issuance of an EO to do so, and in the end the manufacturer may never end up selling that particular component.

Based on the foregoing, we strongly recommend that CARB utilize the established “deemed to comply” certification approach that is working well for GHG Phase 1. Under that approach, CARB certification staff may still ask for additional documentation on any element of the certification application they please. Additionally, should for some reason EPA discontinue providing sufficiently robust certification for Phase 2, CARB could always update its rule to address that potential concern. At this juncture, however, CARB should not add a duplicative, time-consuming and redundant independent certification process to the GHG Phase 2 rule – certainly not without a demonstrated need to do so.

CARB’s GHG Phase 2 Proposal includes additional problematic language on what a manufacturer must include in its certification application. Instead of requiring that a manufacturer unconditionally certify that its engines and vehicles comply with the GHG Phase 2 requirements, as under the federal rule, CARB proposes that manufacturers additionally certify that their products “are built as described” in the certification application. See, §§ 1036.205 and 1037.205. CARB predicts that the additional requirement will “enable CARB to more expeditiously process and issue certification executive orders.” See, *Staff Report: Initial Statement of Reasons for Proposed Rulemaking (ISOR)*, at III-13. We certainly hope that CARB’s prediction turns about to be accurate and that certification staff expeditiously issue EOs. However, we believe inserting a few words in the certification requirement will not solve the problems of wasted efforts and delayed EOs. Instead, we believe the additional language could just as easily cause increased ambiguity as to the sufficiency of the mountain of detailed information in each manufacturer’s certification application.

EMA stands ready to work with CARB to streamline the certification process in a manner that duly reflects the parties’ stated commitment to a nationwide program. It is our hope that a robust and collaborative government/industry effort will minimize the resource demands on both sides and potentially make the Phase 2 rule more workable and implementable.

Advanced Technology Credits

CARB’s GHG Phase 2 Proposal also deviates from full alignment with the Advanced Technology Credit (ATC) provisions in EPA’s Phase 2 rule in two important aspects. See, § 86.1819-14(A)(3)(ii). ATC multipliers provide extra emission credits to a manufacturer to incentivize the implementation of advanced GHG-reducing technologies. CARB is proposing two requirements for plug-in hybrid-electric vehicles (PHEVs) that exceed EPA’s requirements. Additionally, CARB proposes to not allow manufacturers to generate additional emissions credits with an ATC multiplier if they “are required to produce the advanced technology vehicle by another ARB regulation.” CARB should not include such additional requirements in the California GHG Phase 2 rule because they do not fully align with the federal rule and because those additional requirements would reduce the incentives that exist in the federal rule to promote the deployment of advanced technologies.

As noted above, truck and engine manufacturers supported CARB’s GHG Phase 2 rules

in large part because throughout the federal and California Phase 2 rulemaking processes EPA and CARB confirmed that they intended to issue fully aligned rules. To that end, EPA significantly modified its Phase 2 rule based on input from CARB, in the spirit of maintaining the nationwide rule that pertains under Phase 1. Establishing such a nationwide GHG program provides the regulatory consistency that manufacturers require when selling their commercial products to fleets engaged in interstate commerce. Proposing additional requirements for advanced technology vehicles sold in California is inconsistent with the principle of alignment, and such misalignment undermines the foundation of a successful nationwide heavy-duty GHG program.

CARB's proposed GHG Phase 2 Proposal also would mandate that PHEVs cause no increase in NO_x emissions compared to an equivalent conventional vehicle. Additionally, the proposed rule would mandate specific all-electric ranges (AERs) for PHEVs. While we appreciate the constructive dialogue with CARB on the proposed AER requirements, those unique requirements still may create a situation where a PHEV that utilizes an ATC multiplier under the federal rule may not be able to take advantage of the same ATC multiplier in California. Said another way, if a PHEV that does not meet CARB's additional NO_x and AER requirements is sold in California, the additional federal ATCs it generated would (somehow) have to be retired. Under CARB's proposed rule, a manufacturer could utilize an ATC multiplier for each PHEV sold in the other 49 states, but that same vehicle would not earn the additional credit in California. To take advantage of the ATC multiplier in California, manufacturers would need to produce and certify unique California-only PHEVs. Producing unique 49-state and California vehicles would significantly increase manufacturers' costs to develop and deploy PHEVs, and thereby undermines the commercial viability of that advanced technology. To maintain the fundamentally important alignment with EPA and a uniform nationwide GHG Phase 2 program, and to promote the scale required to support a national PHEV market, CARB should eliminate the additional PHEV requirements related to utilizing the ATC multiplier in California.

Additionally, CARB proposes to completely eliminate the use of ATC multipliers for advanced technology vehicles that are mandated by another CARB regulation. That proposal appears to be in anticipation of CARB mandating that manufacturers sell a minimum number of zero-emission vocational vehicles in California. (A mandate that perversely would require a manufacturer to sell a product even though there may be no commercial customer willing to buy it.) What the Phase 2 Proposal is saying, in essence, is that if CARB decides to use a stick to mandate the sales of ZEVs in California, it would at the same time remove the carrot for doing so. Eliminating the ATC multipliers would create another misalignment with the federal GHG Phase 2 rule. Additionally, the proposed elimination of ATC multipliers would serve as yet another burden on top of the already extraordinarily high costs of developing and deploying zero-emission technology.

The proposed regulatory language that would eliminate ATC multipliers for vehicles mandated by another CARB regulation also could be violative of the requirement in California's Administrative Procedure Act that proposed rulemakings clearly state the express terms of the proposed regulation. See, Cal. Gov't Code § 11346.2(a). Because at this time manufacturers cannot determine which vehicles may be mandated by the potential future CARB regulations

(including the potential ZEV regulation), it is impossible to assess the impacts that such future regulatory provisions may have on manufacturers' ability to comply with the GHG Phase 2 Proposal. Accordingly, CARB should eliminate the ATC multiplier restriction from the GHG Phase 2 rule and instead consider addressing the issue during the anticipated future rulemaking to establish zero-emission vocational vehicle sales mandates.

CARB should adopt EPA's performance requirements for ATC multipliers, and should preserve the availability of ATC multipliers regardless of any future technology mandates in California. Doing so would maintain alignment with the federal rule and help ensure a nationwide GHG program. Doing so also would provide the maximum incentive for manufacturers to deploy advanced technology vehicles in California.

Emission Control Identifiers

CARB is proposing a unique requirement for manufacturers to print emission control identifiers (ECIs) on a vehicle's emission control label. See, §1037.135(2)(i). The ECI requirement is yet another deviation from the federal GHG Phase 2 rule, and we question whether ECIs will actually enhance any CARB enforcement efforts. However, we appreciate CARB taking into account the costs and complexities associated with adding identifiers to emission control labels. There exists very limited space on a commercial vehicle to apply labels where they will not get covered or damaged, and the labels already are nearly filled with other mandated information. Accordingly, we appreciate CARB listening to our concerns and proposing to require only those ECIs that are most likely to assist enforcement.

Air Conditioning System Information

The GHG Phase 2 Proposal includes a long and complicated set of air-conditioning (A/C) system information that must be included in a manufacturer's certification application. See, § 86.1819-14(B). That reporting requirement is in addition to the existing reporting requirements in the federal rule, and therefore represents a significant deviation from alignment and the goal of a nationwide standard. Because the proposed new A/C system schematics that would be required do not otherwise exist, they will require manufacturers to expend a great deal of engineering resources to create them. To justify that misalignment and additional cost, CARB simply states that the additional information is "necessary to allow CARB staff to effectively certify A/C systems to the leakage standard." See, ISOR at ES-8. Missing from CARB's conclusory justification, however, is data on any significant leakage of A/C systems from medium- or heavy-duty vehicles. Nor does CARB even suggest how the newly created schematics might reduce refrigerant leakage.

As CARB correctly points out in the ISOR, most A/C refrigerants have a significantly higher global warming potential than CO₂. However, what the ISOR fails to mention is that any refrigerant leakage would create an unhappy customer and a warranty repair for which the manufacturer would have to pay. Accordingly, manufacturers already are directly and indirectly financially incentivized to minimize A/C refrigerant leakage.

Additionally, CARB's proposed A/C system schematics would create a new set of

required certification documentation, and the proposed rule would establish complicated new requirements for establishing the worst-case A/C configurations. However, the additional certification documentation would not provide any information that would help CARB predict which systems may leak in the field. Instead, they will require A/C engineers, who would otherwise be designing actual improvements to A/C systems, to devise schematics solely for a certification application to CARB. Those new schematics would only add to the mountain of certification data that CARB staff may interrogate, and that predictably will lead to delayed EOs. More importantly, there is no known scenario whereby the proposed A/C system schematics could lead to a reduction in refrigerant leakage in the field, and CARB does not so much as suggest in the proposed rule how the new information might provide such a benefit.

CARB should honor the parties' commitment to alignment (a commitment that CARB itself used as leverage to convince EPA to change the federal Phase 2 rule) and eliminate the make-work A/C system information reporting requirements. If CARB insists on demanding additional A/C system information, it should at least allow manufacturers to use good engineering judgment to determine their worst-case configurations and when a unique schematic is needed. In that case, CARB should drop the criteria that it proposes to utilize to supplant the good engineering judgement of the manufacturer's technical experts.

Engine Family Reporting

CARB also proposes to deviate from the EPA rule by requiring manufacturers to report the engine family associated with each Vehicle Identification Number (VIN). See, § 1037.250. We understand that CARB seeks that information to assist with drive-by emissions measurement systems that may one day be used for enforcement of exhaust emission standards. While it is a burden for manufacturers to add that information to their end-of-year compliance reports, it is one that truck manufacturers are willing to undertake in the spirit of collaboration.

Conclusion

A core commitment that CARB, EPA and EMA members made in the course of developing EPA's Phase 2 GHG standards was that CARB's anticipated Phase 2 standards would be in full alignment with EPA's to ensure the preservation and implementation of a single harmonized nationwide program for the reduction of GHGs from heavy-duty vehicles. As discussed above, CARB's GHG Phase 2 Proposal is violative of that commitment in a number of important respects. CARB should eliminate those instances of mis-alignment before finalizing the Phase 2 Proposal.

Respectfully submitted,

TRUCK AND ENGINE
MANUFACTURERS ASSOCIATION