

Submitted via email to Evan Kersnar

August 25, 2020

Mary D. Nichols, Chair
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: Comments to the Proposed Heavy-Duty Omnibus Regulation

Dear Chair Nichols and Members of the Air Resources Board:

On behalf of BAE Systems, I hereby submit comments in response to the Proposed Heavy-Duty Omnibus Regulation, released on June 23, 2020.

BAE Systems is committed to electrifying transportation in California and around the world. We provide full electric systems for battery and hydrogen powered buses in California and worldwide as well as low emission electric hybrids. Since 2000, our technologies have powered over 12,000 heavy duty electrified buses and are providing over 2 billion miles of clean, reliable service.

The technologies BAE Systems developed for our zero emission transit powertrains are already being transferred for use in California's medium and heavy duty trucks and marine vessels. Additionally, our low emission technology serves as a bridge to full electric transit buses pursuant to the Innovative Clean Transit Regulation (ICT) and to medium and heavy duty trucks under the Advanced Clean Truck Regulation (ACT).

BAE Systems supports the goal of further improving air quality and reducing greenhouse gas emissions for all Californians. However, as constructed, this proposed regulation will negatively impact the costs of bringing full zero emission technology to the California marketplace and achieve the targets set forth in the ICT rule that results in 100 percent zero emission bus purchases starting in 2029.

In our review of the Proposed Heavy-Duty Omnibus Regulation, BAE Systems found a number of areas of ambiguity in identifying the requirements applicable to the hybrid components versus the engine, such as the following:

1. *It is unclear* what warranty language applies to the hybrid components on vehicles with engines certified for use in hybrid vehicles exclusively, not optionally certified under the hybrid powertrain.
2. *It is unclear* if the defined time associated with the extended warranty under any recall as it applies to the hybrid components that may cause the Malfunction Indicator Lamp (MIL) to illuminate.

3. *It is unclear* that the “useful life” requirements are applied to the hybrid components outside of the optional hybrid powertrain certification.
4. *It is unclear* the extent to which these changes are applicable to the hybrid components that light the MIL.
5. *It is unclear* if sections 2167 and 2168 are applicable over the periods of use defined by “useful life” in Section 2112 (l)(21) or whether there is another defined period of use for the hybrid components.
6. *It is unclear* that there was consideration for the practical and physical limitations on electro-chemical components (e.g. batteries) in the definition of useful life.
7. *It is unclear* whether Medium Heavy Duty engine warranty is applicable for optionally certified hybrid powertrains when used in Heavy Duty Vehicles.

There is no difference between BAE Systems’ zero emission powertrains and low emission hybrid powertrains in that they share common components. If the aforementioned concerns do in fact apply to the heavy duty electric hybrid components, the impact will be to drive up cost. For BAE Systems, the additional cost burden will carry across both low and zero emission powertrains.

BAE Systems has invested in low and zero emission technologies to help California achieve its clean air goals. The proposed Rule combined with the ICT and ACT regulations unfairly disadvantages leading manufacturers like us, and favors later market entrants who solely service the zero emission markets and who do not have to comply with current and proposed low emission regulations.

Therefore, we strongly recommend re-evaluation of the proposed changes that impact low emission electric hybrids to clarify ambiguities and ensure a level playing field. If the California Air Resources Board intends to move forward with these changes unmodified, BAE Systems recommends that transit bus heavy duty hybrids be exempted.

Sincerely,



Stephen J. Trichka
Vice President and General Manager, Power & Propulsion Solutions
BAE Systems

cc: R. Corey, ARB
S. Cliff, ARB
J. Kitowski, ARB
K. Heroy-Rogalski, ARB
S. Lemieux, ARB
D. Hawelti, ARB
P. Adnani, ARB
N. Richards, ARB