



December 9, 2019

Clerk of the Board  
California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

**Re: Support for a Strengthened Advanced Clean Truck Rule**

Dear Chair Nichols and Members of the Board,

Tesla commends the California Air Resources Board (CARB) for taking the important step of developing the first-of-its-kind Advanced Clean Truck rule to accelerate the deployment of zero-emission medium- and heavy-duty (MD and HD) vehicles. Such requirements have long been necessary and the technological advancements of the last several years have shown that the proposed requirements can be even more stringent and in line with the public health and climate crises that we face as Californians. California's Fourth Climate Change Assessment estimates that Californians will face tens of billions of dollars in direct climate change related costs by 2050, which are dominated by the costs of human mortality, damages to coastal properties, and the potential for droughts and mega-floods.<sup>1</sup> And that's not even to speak of the ongoing incidence of disease and premature deaths attributable to local criteria air pollutants emitted from vehicles.<sup>2</sup>

Thus, Tesla recommends that CARB strengthen the proposed Advanced Clean Truck rules by (1) starting the manufacturer sales requirements for Class 2b-3 pick-ups in 2024 rather than 2027, and (2) altering the proposed manufacturer sales requirement percentages such that approximately 20% of the MD and HD vehicles on the road by 2030 are zero-emission, rather than the roughly 4-5% likely with the percentages as currently proposed.

While there are dozens of examples of zero-emission MD and HD vehicle models developed by different manufacturers, Tesla is best suited to convey its own plans for deploying such vehicles. Tesla is, of course, developing its Class 8 fully-electric Semi truck,<sup>3</sup> which should start showing up on California roads in real numbers over the next two years. Tesla's Semi customers already include many of the largest trucking companies in the country in nearly every major industry.

Further, Tesla just recently announced the development of its first pick-up truck, the Cybertruck.<sup>4</sup> As of November 26, less than one week from the launch of the Cybertruck, Tesla already received more than 250,000 orders for the Cybertruck. While we have not yet begun production of the Cybertruck, we expect it to have a towing capacity of 7,500-14,000+ lbs., and it should very likely qualify as a "Class 2B-3" medium-duty vehicle.

As usual, CARB Staff did an admirable job at trying to balance many competing interests in the development of the Advanced Clean Truck rule. However, the sales requirements put forth in the draft regulation should be strengthened given what is technically and economically feasible. Additionally, stronger requirements are undoubtedly necessary to meet California's state and federal clean air requirements.<sup>5</sup>

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<sup>1</sup> California's Fourth Climate Change Assessment Statewide Summary Report, August 27, 2018, p. 8, available at <https://www.energy.ca.gov/sites/default/files/2019-07/Statewide%20Reports-%20SUM-CCCA4-2018-013%20Statewide%20Summary%20Report.pdf>.

<sup>2</sup> See, e.g., American Lung Association, "State of the Air," Feb 1, 2019, available at <https://www.lung.org/assets/documents/healthy-air/state-of-the-air/sota-2019-full.pdf>.

<sup>3</sup> See <https://www.tesla.com/semi>.

<sup>4</sup> See <https://www.tesla.com/cybertruck>.

<sup>5</sup> State and federal clean air requirements include federal ambient air quality standards (2023 and 2031) and state-level 40% reduction in greenhouse gases by 2030 and 80% by 2050.

More specifically, the Advanced Clean Truck rules should not exclude pick-up trucks until 2027, as currently proposed in the rules. Pick-up trucks, which comprise over 60% of the Class 2b-3 segment,<sup>6</sup> should be included as soon as the broader MD/HD zero-emission truck requirements begin in 2024. It is very much possible to electrify Class 2b-3 pick-ups, and excluding them until 2027 would delay the transition of this very large segment of vehicles to zero-emissions technology. Many major auto manufacturers, new and incumbent, have announced electric pick-up trucks that will be ready over the next several years, and others will likely be close behind.<sup>7</sup>

Further, the proposed annual manufacturer sales percentages should be strengthened across the board. Given the low cost of driving on electricity and thus the strong business case for adopting all-electric tractors like the Tesla Semi, we expect that California can relatively easily achieve the proposed Class 7-8 tractor group targets culminating in a zero-emission vehicle requirement of 15% of new vehicle sales by 2030. Commercial buyers in the MD/HD vehicle segment are very economically rational and will quickly adopt electric vehicles as soon as the superior total cost of ownership of electric trucks like the Tesla Semi is apparent. While there are numerous ways for CARB to strengthen the targets, Tesla generally supports setting the targets to achieve 20% zero-emission penetration of MD/HD vehicles on the road by 2030, rather than the roughly 4-5% penetration that is likely given the manufacturer sales percentages as currently proposed.

Again, Tesla appreciates CARB's continued leadership in developing innovative clean air policies like the Advanced Clean Truck rule. However, we urge CARB to set more ambitious zero-emission vehicle sales percentages right from the start of the regulation given the urgency of California's emissions reductions requirements and the fact that the truck industry can move more quickly.

Thank you for your consideration.

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<sup>6</sup> CARB, "Advanced Clean Local Trucks Second Workgroup Meeting," August 30, 2017, page 29.

<sup>7</sup> See, e.g., <https://www.caranddriver.com/news/a29890843/full-electric-pickup-trucks/>.