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November 5, 2020

Arpit Soni  
Alternative Fuels Section  
California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

Re: Low Carbon Fuel Standard Public Workshop to Discuss Potential Regulation Revisions

Dear Mr. Soni:

Tesla respectfully submits the following comments regarding the California Air Resources Board's (CARB) staff presentation at the October 14, 2020, Low Carbon Fuel Standard (LCSF) Potential Regulation Amendments Workshop.

Tesla's mission is to accelerate the world's transition to sustainable energy. Since the company's founding in 2003, our goal has been to accelerate the advent of sustainable transport by bringing compelling mass-market electric cars to market as soon as possible. Moreover, Tesla believes the world will not be able to solve the climate change crisis without directly reducing air pollutant emissions – including carbon dioxide and other greenhouse gases - from the transportation and power sectors.

To accomplish its mission, Tesla designs, develops, manufactures, and sells high-performance fully electric vehicles (EVs), and energy generation and storage systems, and also installs and maintains such systems. Tesla proudly manufactures and assembles vehicles at its California facilities in Fremont and Lathrop. Tesla shares the State of California's air quality, clean transportation, and climate goals, and applauds the direction of the Governor's recent Executive Order (EO, N-79-20).

Tesla is one of the largest manufacturing employers in California and the only automaker building passenger vehicles in California. Tesla employs more than 20,000 workers in California and has delivered over 320,000 vehicles through September 2020. As the recent report<sup>1</sup> "The Economic Contribution of Tesla in California" finds, Tesla also supports over 31,000 additional jobs in the state, and the company's economic impact in California goes far beyond that of its immediate employees and includes infusing over \$4 billion into the California economy in 2017 alone.

As an automaker providing leading transportation fuel-switching technology, Tesla strongly supports CARB's efforts to improve and strengthen the Low Carbon Fuel Standard regulations. With that in mind, currently, Tesla looks forward to engaging with staff in the upcoming rulemaking process on the

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<sup>1</sup> IHS Markit, The Economic Contribution of Tesla in California (May 2018).



following points:

- Tesla supports post-2030 targets that reflect the significant zero emission vehicle uptake in the light, medium, and heavy-duty vehicle classes given rapid improvements in availability of compelling products and accessibility to customers across California. Recent rulemakings such as the Advanced Clean Truck and the Advanced Clean Car 2 are also taking into account updated zero emission vehicle adoption trends in their target setting. It is critical that post-2030 targets send a clear and consistent message to the industry and that the LCFS regulation complements these other regulations that help reduce emissions and accelerate clean transportation adoption across all vehicle classes.
- Regarding whether staff should do one or two rulemakings, Tesla supports whichever option optimizes regulations for the fastest implementation of some critical updates related to the use of electricity as a renewable transportation fuel. In order to place California on a pathway to meeting the goals outlined in EO N-79-20<sup>2</sup>, Tesla would request staff move expeditiously with the rulemaking and aim to have the updated rule become effective in 2023.
- The next several years are critical to achieving California's medium and long-term climate and clean transportation goals, and there are elements of the LCFS regulation today that should be updated to remain relevant in the coming years from a technological perspective. For example, the fast charging infrastructure program, which was developed more than two years ago, helped paved the way for more fast charging stations across the state. However, as fast charging technology has continued (and will continue) to evolve based, in part, on consumer needs and site economics, there is a clear need to refine the existing program to take into account some of these changes. Otherwise, the program may incent the deployment of less advanced technology, which provide a subpar consumer experience, at the expense of more capable, efficient, and effective solutions.
- Tesla looks forward to staff making updates to implementation details previously discussed in guidance documents. For example, staff originally required automakers generating incremental electric vehicle credits to apply a geofence of 220 meters around non-residential charging stations and exclude any charging that takes place within that geofence. Staff indicated 220 meters was "a conservative estimate" to reflect inaccurate locations of public charging stations, which were not required to provide GPS coordinates, and lack of experience with GPS location accuracy on the vehicle side.<sup>3</sup> Now that public charging station owners have updated their station locations with accurate GPS coordinates, and staff has had more experience with vehicle telemetry, Tesla believes the 220 meter geofence radius should be reduced to 20 meters. According to [gps.gov](https://www.gps.gov), GPS signal actual performance accuracy exceeds specifications, providing location at a global average within ~0.715 meters, 95% of the time.<sup>4</sup> Furthermore, new vehicles are equipped with highly accurate GPS chips since location accuracy is critical for navigation services. Given GPS precision and limited risk of double counting, over twenty times the global average (20 meters) is a conservative standard.

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<sup>2</sup> <https://www.gov.ca.gov/wp-content/uploads/2020/09/9.23.20-EO-N-79-20-text.pdf>

<sup>3</sup> [https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/guidance/lcfsguidance\\_19-03.pdf](https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/guidance/lcfsguidance_19-03.pdf)

<sup>4</sup> <https://www.gps.gov/systems/gps/performance/accuracy/>



- Finally, Tesla strongly supports the LCFS throughput credit provisions as they help support more public charging infrastructure development and deployment for all vehicle classes in California. As mentioned above, there are continuous innovations in charging infrastructure technologies supporting different vehicles and use-cases. For example, there are charging stations where the power cabinet is combined with the charger and powers only one charger and there are charging stations where the power cabinet is separate and powers multiple chargers; there are also differences in how these chargers are able to capture the amount of energy dispensed for transportation. In all cases, the charging provider is paying for electricity used for the charger to enable transportation (high-utilization non-residential charging sites are often metered by the utility). It is important that reporting requirements and credit generation are not applied in a way that penalize technologies that are actually more advanced and efficient because they are able to capture more specific and accurate charging information. We look forward to working with staff and other stakeholders on how to best reflect the true amount of transportation fuel used given these different technologies.

Thank you for your consideration of these comments. Please do not hesitate to contact me for any questions.

Sincerely,

Thad Kurowski  
National Credit Trading & Intermountain West Policy Lead  
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