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August 27, 2024

Clerks' Office

California Air Resources Board

1001 I Street

Sacramento, CA 95814

(Submitted electronically via <https://ww2.arb.ca.gov/applications/public-comments>)

RE: Low Carbon Fuel Standard: 2024 Proposed Amendments

General Motors LLC (GM) appreciates the opportunity to offer comments on CARB's Proposed 15-Day Notice on Low Carbon Fuel Standard (LCFS) Proposed Amendments published on August 12, 2024.

If you have any questions, please contact me at +1-202-775-5071.

Sincerely,



Hon. David Strickland

Vice President

Global Regulatory Affairs and

Transportation Technology Policy

General Motors LLC

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EXECUTIVE SUMMARY

General Motors LLC (“GM”), headquartered in Detroit, MI, is a global automotive manufacturer committed to positively impacting the communities where its customers live and work. As of January 2024, GM employs roughly 163,000 employees, operates 155 facilities, delivers over 2 million vehicles annually, and works with more than 10,000 suppliers.¹

GM is focused on advancing toward a zero emissions future that is inclusive and accessible to all.² Battery Electric Vehicles (“BEVs”) are key enablers of our vision for a world with Zero Crashes, Zero Emissions, and Zero Congestion.³ GM regularly reports on sustainability metrics,⁴ and endeavors to track and report emissions inventory.⁵ GM has set science-based targets consistent with the goals of the Paris Agreement to support this vision.⁶

GM appreciates the opportunity to provide its insight as a BEV manufacturer to CARB’s 15-Day Proposed Regulation Order⁷ released on August 12, 2024 with proposed updates to the Low Carbon Fuel Standard, particularly on aspects of the proposal related to electric vehicle charging. This proposal clearly signals CARB’s intention to pursue further reductions in carbon-based fuel impacts to the environment by incentivizing BEV deployment using decarbonized electricity. GM supports CARB’s proposed updates to the LCFS framework, with recommendations on specific aspects of the revised program.

GM supports CARB’s framework proposal to tighten carbon intensity stringency, adopt an acceleration mechanism and introduce a step down in stringency for 2025.

CARB’s LCFS program is among the most successful regulatory programs, delivering significant reductions in carbon intensity from fossil fuels and promoting adoption of lower carbon intensive transportation modes. As such, the market is oversupplied with credits, thereby reducing their value and potential to reinvest in California’s EV infrastructure development. CARB’s plan to increase stringency from 5% to 9% to achieve a 22.75% carbon intensity reduction will tighten market conditions, bolstering the market and while continuously decreasing carbon intensity in liquid fuels.

The proposed amendment to require a 30% reduction in carbon intensity by 2030 continues to be an appropriate benchmark for market conditions. Adding additional flexibility to the regulation with the adoption of a near-term step-down and an automatic acceleration mechanism will strengthen the LCFS program long-term. Using two credit market ratio signals as the triggers for the acceleration mechanism is appropriate to address the specific problem that the proposal is intended to address.

¹ <https://www.gm.com/company/usa-operations>

² <https://news.gm.com/company/about-us>

³ *Id.*

⁴ <https://www.gmsustainability.com/esg-resources-and-downloads.html>

⁵ <https://www.gmsustainability.com/data-center.html>

⁶ https://www.gmsustainability.com/_pdf/resources-and-downloads/GM_2021_SR.pdf (pages 11, 16-17)

⁷ <https://ww2.arb.ca.gov/rulemaking/2024/lcfs2024>

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GM commends CARB's proposal to allocate up to 45% of base credits to OEMs.

Allocating a greater share of credit generation to BEV-producing OEMs expands opportunities for incentives and infrastructure growth for electric vehicles and other projects which support transportation electrification in California. CARB allocates “up to 45% of base credits” without establishing criteria or a framework for determining the applicable percentage. GM recommends that CARB establish criteria for credit allocation which will bring increased regulatory certainty to the LCFS program.

Credits generated from light-duty electric vehicles should be reinvested into the still developing light-duty electric vehicle market.

While California leads the US in EV sales having reached 25% market share, the EV transition is far from complete. Substantial progress is needed to meet CARB's complementary regulatory programs, which will require 51% ZEV sales in 2028 leading to 100% by 2035 under Advanced Clean Cars II. The transitioning EV market is entering difficult terrain as the market transitions from early adopters to mainstream buyers. Mainstream buyer characteristics indicate that incentives and infrastructure access are more important than ever. Infrastructure access for light-duty vehicles must be addressed to achieve EV market growth to meet regulatory and climate expectations. Funding generated from residential EV credit generation should be directed to the light-duty EV market by investing in infrastructure deployment, vehicle incentives and public education.

GM recommends that CARB reinstate Clean Fuel Rewards for light-duty EV adopters. Light-duty EV adopters represent the best opportunity for reducing carbon intensive transportation applications, including the harder to transition used vehicle market. Residential light-duty EV charging funds the Clean Fuel Reward program and this program is highly incentivizing to light-duty EV purchasers as it is available at the time of purchase as an “on the hood” incentive. It is paramount that the Clean Fuel Reward program is reliably mechanized for light-duty vehicle purchasers. We urge CARB to reconsider its proposal to allocate the Clean Fuel Reward to medium and heavy-duty electric vehicles and instead reserve these light-duty credits for reinvestment in light-duty EV purchasers.

CARB should continue to promote adoption of hydrogen without precluding specific feedstocks for eligibility under the LCFS program.

CARB proposed adoption of subsection 95482(h), which removes credit generation eligibility for hydrogen produced using fossil gas as a feedstock, effective January 1, 2031. The 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan Update) identified a need for low-carbon, renewable hydrogen for the transportation sector (among other sectors) to displace fossil fuels in support of achieving California's greenhouse gas emission reduction goals. The 2022 Scoping Plan Update scenario did not include hydrogen produced from fossil fuels, with or without carbon capture as low-carbon, renewable hydrogen. Instead, it identified as low carbon and renewable hydrogen produced through steam methane reformation of biomethane, electrolysis, and biomass gasification. Staff is proposing to remove LCFS crediting eligibility for hydrogen produced from fossil fuels at the end of 2030 to align with the current operational

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timeline for projects funded under the hydrogen hubs grants, which will expand the supply of renewable hydrogen in California.

To further continued growth of the nascent hydrogen fuel market, it is premature for CARB to eliminate feedstock pathways for hydrogen. LCFS credit generation should be determined by the carbon intensity of the fuel. LCFS is a mechanism to promote a more robust hydrogen supply for energy intensive transportation electrification.

CARB should allow medium-duty vehicles flexibility to fuel at light-duty or heavy-duty hydrogen refueling stations.

As described in the USCAR white paper⁸ on medium duty fuel cell vehicle refueling requirements, Class 3-6 trucks have unique refueling requirements that will benefit from refueling at either upgraded light-duty refueling stations or heavy-duty refueling stations. GM recommends that all future hydrogen stations should allow for the fueling of Class 4-6 vehicles which can be accommodated if the proper provisions are accounted for in the early planning stages of the stations. As currently defined in these proposed rules, Class 4-6 trucks would be combined with the heavy-duty (HD-HRI) category and thus precluded from refueling at upgraded light-duty stations which could reduce the availability of hydrogen fuel and slow the adoption for this important class of vehicles.

The definition of medium-duty in these proposed rules is a GVWR between 8,501 and 14,000 lbs, whereas the commercial vehicle industry generally refers to medium-duty as Class 4 – 6 vehicles with a GVWR between 14,000 and 26,000 lbs. While it's clear that a light duty vehicle would typically not refuel at a Class 8 tractor trailer truck stop, and a class 8 truck would not refuel at a light duty station, Class 4-6 vehicles will benefit from refueling at both of these types of stations.

Therefore, the definition of medium-duty should be amended to also include Class 4-6 vehicles resulting in a medium duty vehicle definition with a range of GVWR from 8,501 lbs – 26,000 lbs. Additionally, since medium duty vehicles as defined in this manner will be refueling in practice at both upgraded light-duty and heavy-duty stations, medium-duty vehicles using this new definition should be included in both categories, thus creating “LMD-HRI” and “MHD-HRI” categories.

“MHD-HRI” stations should be categorized into public and private stations with a capacity credit provision available for the private stations, similar to the provision available for private “LMD-HRI” stations.

GM looks forward to reviewing details on CARB’s proposal to add third-party verification provisions to electricity transaction types.

GM recognizes and supports provisions designed to enhance integrity of regulatory programs, while streamlining regulatory compliance and costs. Based on CARB’s proposed regulatory text,

⁸ <https://uscar.org/download/53/hydrogen-fuel-cell/13748/2023-uscar-medium-duty-h2-infrastructure-white-paper.pdf>

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CARB's expectation for how third-party verification should be managed for metered residential EV charging are unclear.

In §95500(c)(1) Applicability, entities submitting Quarterly Fuel Transaction Reports are expected to obtain the services of an accredited verification body, including required site visits. It would be ideal to understand CARB's expectations for a "site" under this verification requirement, as this definition could be widely interpreted as it pertains to residential EV credit generation and may require considerations to address consumer privacy protections. Finally, third-party verifiers for regulatory programs tend to slow market conditions due to limited accreditors, at least in the near term. We look forward to working with CARB to come to a practical solution for both parties to demonstrate validity of EV residential charging events for the final amendment update.

CONCLUSION

GM supports CARB's proposed framework for the 2024 Low Carbon Fuel Standard updates. As one of the key stakeholders in low carbon electricity usage within the LCFS program and its administration, GM would be glad to provide further support for any of the above topics and looks forward to continued collaboration on the development of the LCFS program.