



PACT

May 10, 2024

Chair Liane M. Randolph
California Air Resources Board
1001 I Street
Sacramento, CA 95815

Comments of Powering America’s Commercial Transportation (“PACT”) on the Proposed Amendments to the Low Carbon Fuel Standard

Chair Randolph:

Powering America’s Commercial Transportation (“PACT”) appreciates the opportunity to provide comments in response to the April 10, 2024, workshop and, more broadly, on the California Air Resources Board (“CARB”) proposed Low Carbon Fuel Standard (“LCFS”) Amendments.

I. Introduction

PACT is encouraged to see CARB’s focus on medium- and heavy-duty (“M/HD”) charging, and its recognition of the unique nature of power, location, and site design of such charging stations. PACT strongly supports the creation of the MHD-FCI program and proposes modifications to the provision to maximize the benefits of the program according to key industry stakeholders.

II. About PACT

PACT is a coalition dedicated to accelerating the development and deployment of reliable nationwide charging infrastructure for medium- and heavy-duty zero emission vehicles (“M/HD ZEVs”).¹ Our membership comprises stakeholders across the transportation electrification ecosystem, including leading truck manufacturers, charging infrastructure technology providers and developers, commercial fleets, fleet management companies, and utilities. PACT is committed to promoting productive cross-sector collaboration to advance policies and regulations that improve access to and reduce barriers for M/HD charging infrastructure.

¹ PACT membership comprises ABB E-mobility, BC Hydro, Burns & McDonnell, Chateau Energy Solutions, Daimler Truck North America, EV Realty, Geotab, Greenlane, InCharge, InductEV, J.B. Hunt Transport, Inc., Mortensen, Navistar Inc., Penske, Pilot Flying J, PittOhio, Prologis, Voltera, WattEV, Volvo Group North America, and Zeem Solutions.



III. PACT's Regulatory Engagement

PACT is engaged in multiple regulatory settings that have touchpoints on the LCFS rulemaking. PACT's regulatory engagement includes:

- Party status to the California Public Utilities Commission ("CPUC") proceeding on the Rulemaking Regarding Transportation Electrification Policy and Infrastructure² through which PACT submitted reply comments.³ Notably, utilities are responsible for implementing LCFS holdback credit programs which are the dual jurisdiction of CARB and the CPUC. PACT is exploring opportunities to provide LCFS strategy recommendations within this rulemaking, and envisions opportunities to further explore M/HD infrastructure investments.
- Party status to the CPUC proceeding on the Rulemaking to Establish Energization Timelines,⁴ through which PACT submitted opening and reply comments to the rulemaking,^{5,6} and opening comments⁷ on the Scoping Memo.⁸

Moreover, PACT is evaluating further engagement with state agencies, including with the California Energy Commission, on issues such as EV charging reliability and interoperability, as well as data collection (e.g., capacity mapping).

PACT stands ready to work with CARB and its sister agencies to support the industry in achieving the State's Advanced Clean Trucks ("ACT") and Advanced Clean Fleets ("ACF") goals, through the accelerated rollout of M/HD fleets and its attendant infrastructure.

² Order Instituting Rulemaking Regarding Transportation Electrification Policy and Infrastructure (R. 23-12-008) Issued Dec. 20, 2023.

³ Reply Comments of PACT on Order Instituting Rulemaking Regarding Transportation Electrification Policy and Infrastructure (Served and Filed Feb. 5, 2024) <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M524/K929/524929719.PDF>

⁴ Order Instituting Rulemaking to Establish Energization Timelines (R. 24-01-18) Issued Jan. 25, 2024.

⁵ Opening Comments of PACT Order Instituting Rulemaking to Establish Energization Timelines (Served and Filed Feb 20, 2024) <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M525/K574/525574167.PDF>

⁶ Reply comments of Powering Americas Commercial Transportation on Order Instituting Rulemaking to Establish Energization Timelines (Served and Filed Mar. 1, 2024) <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M526/K553/526553989.PDF>

⁷ Opening Comments of PACT on the Assigned Commissioner's Scoping Memo and Ruling in the Order Instituting (Served and Filed May 3, 2024) <https://efile.cpuc.ca.gov/FPSS/0000206073/1.pdf> Rulemaking to Establish Energization Timelines.

⁸ Assigned Commissioner's Scoping Memo and Ruling (R. 24-01-19) Filed Mar. 28, 2024.



IV. Association with Other Comments

PACT agrees with comments provided by multiple stakeholders, including the Joint MHD EV Infrastructure Parties and others as referenced throughout our comments, and offers additional suggestions with respect to public and private infrastructure crediting. Specifically, PACT aligns with parties in the following areas:

- Support for the creation of a MHD-FCI program;
- Support for an increase in the overall MHD-FCI program size;
- Support for the holdback credit investments in M/HD;
- Eliminate geographical restrictions for crediting eligibility;
- Eliminate the FSE cap; and
- Adjust the minimum nameplate power rating.

In addition to the comments provided by the Joint MHD EV Infrastructure Parties (and other stakeholders), PACT provides a series of recommended modifications that would strengthen the M/HD sector's ability to leverage the benefits of the program. These recommendations are intended to provide the M/HD industry with both market flexibility and are structured to encourage innovation. PACT positions on each of these items is further detailed below.

V. Support for MHD-FCI Program

PACT members applaud CARB's leadership for developing a first-of-kind capacity credit program for the M/HD sector, and encourage CARB to expedite the passage of the MHD-FCI provision. The MHD-FCI provision will send clear market signals to the M/HD sector and its stakeholders that the industry can feel confident that the support needed to advance M/HD ZEVs will be available. The staff's proposal to create the MHD-FCI program will play a key role in ensuring that more investments are made in M/HD ZEVs and the requisite charging infrastructure.

PACT agrees with parties who have highlighted that the LCFS has the potential to be a paradigm-shifting resource to help California meet its electrification targets ratified in the Advanced Clean Trucks ("ACT") and Advanced Clean Fleets ("ACF") regulations,⁹ and its decarbonization goals. While the Proposed Amendments would help fund M/HD ZEV infrastructure, further modifications are warranted, which will unlock further potential of the

⁹ Parties include the Joint M/HD EV Infrastructure Parties, Environmental Defense Fund



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program to accelerate the deployment of critical ZEV technologies. PACT believes that with the incorporation of recommended adjustments, the overall effectiveness of the program will be substantially increased.

VI. Increase in the Overall MHD-FCI Program Size

PACT appreciates CARB's efforts to support M/HD ZEVs by creating the M/HD-FCI program. The Board has an opportunity to be even more forward leaning in this effort, however, by incorporating the following recommendations.

Increase MHD-FCI Program Cap

PACT agrees with parties who have proposed increasing the MHD-FCI program cap from 2.5% of previous quarter deficits to a minimum of 5% of previous quarter deficits.¹⁰ As noted by the Joint MHD EV Infrastructure Parties, the 2.5% cap would not support the modest load projection of 2,900 MW of M/HD charging estimated by 2025.

To meet California's ambitious targets, fleets and FSE providers will need certainty that the available incentives will adequately scale to support the deployment of sufficient infrastructure. Increasing the cap will act as a means to further incentivize the buildout of infrastructure needed to support future M/HD ZEV adoption.

Support for Public and Private Crediting Eligibility

PACT appreciates CARB's recognition that M/HD charging infrastructure crediting should include private infrastructure due to the steep initial costs associated with the initial buildout of infrastructure and the unique refueling needs of truck fleets, among other factors.

PACT encourages CARB to consider creating credit parity between private and public infrastructure investments by equalizing the credits earned for both private refueling infrastructure and public refueling infrastructure, per charging station. As mentioned above, CARB's staff proposal acknowledges the critical nature of private charging credits to the success of M/HD charging generally. To meet California's regulatory mandates, trucks refueling at private depots and trucks refueling at public stations will both need the necessary infrastructure to continue operations. Furthermore, with respect to meeting regulatory and air quality targets, the benefits provided by electric trucks do not depend on whether the charging infrastructure

¹⁰ Parties include Joint M/HD EV Infrastructure Parties, NRDC, Voltera.



used is public or private. Whereas lowering credit eligibility for private charging would ultimately hamper California’s ability to meet its own regulatory targets, establishing this suggested parity will help set uniform market signals, which in turn will better help achieve these goals.

Additionally, offering equal crediting eligibility for private as public charging will bring the LCFS more in line with current operational needs, which are diverse across the M/HD sectors, and vary across many use cases and business needs. Equal treatment for public and private charging infrastructure will expand the anticipated climate and revenue benefits of the LCFS program and incentivize maximum participation.

VII. Support for Holdback Credit Investments in M/HD

PACT is encouraged by the staff’s proposed amendments to the holdback equity credit investments, which specify opportunities for utilities to use holdback credits for a diverse array of M/HD investments. PACT appreciates this expanded list, which will encourage wider and more diverse utility investments in the transportation electrification sector. With respect to M/HD fleets and infrastructure, PACT supports the staff proposal to expand LCFS rebates for drayage vehicles to include other M/HD or off-road vehicles and investments in grid-side distribution infrastructure. PACT also supports the staff proposal to require that at least 75% of such credits be invested in transportation electrification.

The CPUC decision concerning holdback revenue utilization, developed in consultation with CARB, determined that holdback credits should be focused on funding for transportation electrification programs that address equity and resiliency.¹¹ Funding for M/HD electrification projects is an appropriate use for holdback credits because M/HD electrification will create e-miles which have considerable equity benefits for all communities and corridors where M/HD ZEV fleets travel.

VIII. Widely Interpret the Locational Benefits of M/HD ZEVs on Disadvantaged Communities

There is an existing overlap between disadvantaged communities and where M/HD electrification will largely take place. For example, disadvantaged communities often overlap with industrial centers and ports, as well as key corridors and arterials. These communities inherently experience an outsized environmental impact from truck and bus operation.

¹¹ California Public Utilities Commission, Decision Concerning Low Carbon Fuel Standard Holdback Revenue Utilization, R.18-12-006 (Dec. 21, 2020).



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Electrifying the M/HD sector will naturally support mitigating the adverse environmental impacts of M/HD trucking in these communities. This applies to both charging sites as well as the vehicles themselves. For these reasons, locational or geographic requirements are not necessary. While PACT acknowledges the unique air quality challenges of disadvantaged communities, PACT also recognizes that projects need not be directly in a specific community to provide benefits to that community.¹² PACT also supports CalETC’s recommendation to update the definition of “rural.”¹³ Aligning the definition of “rural” with the U.S. Census bureau’s will create more opportunities for potential equity benefits as M/HD ZEVs operate in a variety of communities—not just urban areas—depending on the vehicle use case.

In addition to potentially building a stronger alignment with the state’s overarching disadvantaged communities policies, adopting this broader definition of “rural” may provide more “territorial” flexibility to the Electrical Distribution Utilities (“EDUs”) to use holdback credits (to invest in, for example, grid-side distribution infrastructure for M/HD ZEVs) in the areas where the EDUs anticipate the potential for the greatest equity impact.

IX. Eliminate Geographical Restrictions on MHD-FCI Eligibility

To promote flexibility for the M/HD-FCI sector, PACT encourages CARB to reject the 1-mile requirement for capacity credits.¹⁴ PACT favors greater flexibility for stakeholders to identify site locations based on their market demand and applicability to business needs. In this regard, PACT aligns with other parties and encourages CARB to not adopt the staff’s proposed geographic limitations on M/HD-FCI eligibility.¹⁵

The M/HD ZEV market is growing, but still nascent and as such needs an adaptable approach. As noted by the Energy Commission, there were only 3,784 M/HD ZEVs at the end of 2023

¹² SMUD, Sacramento Municipal Utility District’s Comments on the Proposed Amendments to the Low Carbon Fuel Standard, page 7; PG&E, PG&E Comments on the Proposed Amendments to the Low Carbon Fuel Standard Regulation, page 3

¹³ CalETC, SUPPORT Proposed Amendments to the Low Carbon Fuel Standard Regulation, page 7

¹⁴ Section § 95486.3(b)(1)(B)2 in the Proposed Regulation Order states that the proposed MHD-FCI chargers must be “Located within one mile of a reading or pending electric vehicle Federal Highway Administration Alternative Fuel Corridor or on or adjacent to a property used for medium or heavy-duty vehicle overnight parking, or has received capital funding from a State or Federal competitive grant program that includes location evaluation as criteria.”

¹⁵ Parties include Joint M/HD EV Infrastructure Parties, Southern California Edison, CalETC and Electric Vehicle Charging Association (“EVCA”), NRDC



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(with approximately 2,000 buses, 850 trucks, and 870 delivery vans deployed). For Classes 6-8, which is PACT's focus, the number falls to approximately 760 trucks.¹⁶

In addition, mileage limitations may unduly disqualify potential site investments that are otherwise optimal for the M/HD operational model when considering land availability, land cost, energy capacity, and other factors. We share CARB's vision of accelerating fleet electrification, particularly in those places with the highest levels of truck traffic today, and believe added flexibility will support this objective by facilitating faster, lower-cost infrastructure deployment serving key freight hubs and connecting corridors. Further, the mileage limitation may create unintended consequences. As SCE and CalETC capture, the potential impact of this constraint could unintentionally trigger additional utility upgrades because developers will be incentivized to prioritize corridor proximity over existing grid capacity when making siting decisions.^{17,18} These upgrades would add costs and delays to the EV transition, including higher costs for ratepayers at a time when high electricity rates are already a cause for concern.

Moreover, the policy climate is rapidly evolving around M/HD charging, which suggests the need for flexibility at this critical and early stage. For example, the recently-released National Zero-Emission Freight Corridor Strategy "guides infrastructure deployment to meet growing market demands; catalyze public and private investment; and support utility and regulatory planning and action at local, state, and regional levels."¹⁹ This strategy will have a substantial impact on freight electrification, particularly around project siting and resource allocation. The strategy focuses initially on key freight hubs serving first-mover fleets with return-to-base operations and the hubs are defined broadly, with a 100-mile radius and no mention of any specific distance (e.g., one mile) from the corridors. We see value in aligning California policy with this strategy by giving greater flexibility to build out charging ecosystems in and around key hubs in addition to charging serving corridors.

It is too early to project whether the majority, or a significant portion of "first movers" in M/HD electrification would be captured by strict geographical requirements like the one proposed. In fact, the most likely first movers would be hampered by this proposal. For example, use cases such as short haul, hub-and-spoke operations, drayage, middle mile, and last mile deliveries are

¹⁶ California Energy Commission: Medium- and Heavy-Duty Zero-Emission Vehicles in California https://tableau.cnra.ca.gov/t/CNRA_CEC_PUBLIC/views/MDHDVehiclesPop/MDHD?%3Adisplay_count=n%3Aembed=y%3AisGuestRedirectFromVizportal=y%3Aorigin=viz_share_link%3AshowAppBanner=false%3AshowVizHome=n

¹⁷ SCE Support for Low Carbon Fuel Standard Regulation Amendments with Some Proposed Modifications and Clarifications

¹⁸ CalETC and EVCA, SUPPORT Proposed Amendments to the Low Carbon Fuel Standard Regulation, at page 12.

¹⁹ [National Zero-Emission Freight Corridor Strategy \(driveelectric.gov\)](#) at page iii.



not likely to overlap neatly with a corridor charging focus, which is more conducive to long-haul trucking operations. As CALSTART captures in their comments, M/HD ZEV charging does not necessarily mirror conventional fueling, and charging for the aforementioned use cases can often be located where these vehicles are in use or otherwise domiciled.²⁰

PACT also agrees with the Joint MHD EV Infrastructure Parties that such a geographic restriction would have further unintended consequences for fleet electrification. PACT's members include large national fleets pursuing zero-emissions solutions in California. Cost considerations are a driver for where, how, and when to electrify certain segments of the fleets. In addition to cost, fleets must navigate a slew of other issues such as power availability, zoning, permitting, and site size and design. Establishing a 1-mile boundary would artificially push fleet depots where the incentives are available. This would lower the available real estate for charging depots, further concentrate electric utility load, and drive-up costs for depot properties within the 1-mile boundary. Finally, customers should be enabled to find locations that would not potentially require multi-year grid upgrades. The 1-mile boundary constraints customers from selecting sites where there may actually be more capacity available for faster, less costly build-out. Siting infrastructure where there is existing grid capacity is critical for fleets looking to rapidly electrify their operations.

Should CARB determine that removing the 1-mile boundary is unacceptable, PACT aligns with parties who have recommended the boundary be expanded to at least 5-miles.²¹ Operational needs and project economics are sufficient to ensure that infrastructure will go to areas with high truck traffic and significant potential for near-term emissions benefits.

X. Eliminate FSE Caps

PACT supports the Joint MHD EV Infrastructure Parties recommendation to strike Section §95486.3(b)(2)(D), which establishes a limit of 10 eligible FSEs per application within a quarter mile.

PACT members, particularly fleets and FSE providers, are building and planning depots of all sizes, the vast majority of which are larger than 10 FSEs. Many fleets operating in California have more than 10 vehicles that would need to be transitioned to M/HD ZEVs. This proposed provision would be a significant impairment to the deployment of M/HD infrastructure, and would have a number of unintended consequences, particularly with the quarter-mile designation. As noted by the Joint MHD EV Infrastructure Parties, a steep rate of growth is

²⁰ CALSTART, SUPPORT Proposed Amendments to the Low Carbon Fuel Standard Regulation, at page 3.

²¹ Parties include Joint M/HD EV Infrastructure Parties, CalETC and EVCA, NRDC.



required to meet ACT and ACF targets. Artificially hampering the build-out of large private depots is counter directional to CARB’s goals.

XI. Adjust Minimum Nameplate Rating

The proposed amendments would create a minimum nameplate power rating of 250 kW per-FSE.²² FSE providers and fleets should have flexibility to plan for power levels that accelerate the deployment of M/HD EVs at scale and PACT aligns with other parties who have called for the removal of this requirement.²³ PACT aligns with other parties who have noted that not all M/HD ZEV use cases will require chargers with a nameplate capacity of 250 kW or higher. Furthermore, as other parties have also stated, developers are, and should have the flexibility to, utilize a mix of charging speeds at depots to provide customers with the option for overnight or long dwell charging—which also offers a potentially more cost effective solution for fleets who can utilize this charging model.²⁴ This again highlights the need to encourage flexibility so that customers are able to choose the right charging option that works for their operational needs. Removing the minimum nameplate requirement will encourage market flexibility, which is critically important for achieving the State’s decarbonization goals.

As an alternative to removing the minimum 250 kW requirement, PACT aligns with other parties who have suggested lowering the minimum requirement to 150 kW.²⁵

XII. Conclusion

PACT looks forward to continuing to work with CARB to maximize the potential benefits of the MHD-FCI program. PACT applauds CARB for the development of the MHD-FCI provision, and encourages CARB to strengthen the provision by:

- *Increasing the overall size of the MHD-FCI program.* PACT recommends that the program be adjusted to increase the cap from 2.5% of previous quarter deficits to a minimum of 5% of previous quarter deficits and to provide equal treatment for public and private charging infrastructure.
- *Expanding opportunities for utilities to use holdback credits for M/HD investments.* PACT supports the staff proposal to expand LCFS rebates for drayage vehicles to include

²² Section §95486.3(b)(1)(E) in the Proposed Regulation Order states that “Each FSE at an MHD-FCI site must have a minimum nameplate power rating of 250kW.”

²³ Parties include Environmental Defense Fund, Voltera, CalETC and EVCA, Joint M/HD EV Infrastructure Parties

²⁴ Parties include Joint M/HD EV Infrastructure Parties, CalETC and EVCA, NRDC

²⁵ Parties include Joint M/HD EV Infrastructure Parties, CalETC and EVCA, Voltera, EDF



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other M/HD or off-road vehicles and investments in grid-side distribution infrastructure and the staff proposal to require that at least 75% of such credits be invested in transportation electrification.

- *Eliminating the geographical restrictions for crediting eligibility.* PACT recommends that the 1-mile requirement be removed from the MHD-FCI program. Should the Board find this proposal unacceptable, PACT would encourage the Board to adjust the requirement to 5 miles.
- *Eliminating the FSE cap.* PACT recommends eliminating the 10 FSE-per site cap in order to promote market flexibility and innovation.
- *Adjusting the minimum nameplate power rating.* PACT recommends removing the minimum nameplate rating to promote market flexibility and better align with existing and future business operations. Should the Board find this proposal unacceptable, PACT recommends lowering the minimum requirement to 150 kW.

PACT stands in strong support for the proposed MHD-FCI program, including the holdback credit investments in M/HD, and looks forward to future engagement with CARB on these matters.

Sincerely,

PACT

/s/
David Bonelli
Partner
Venable LLP
On behalf of PACT