GLOBAL COLD CHAIN ALLIANCE®

August 8, 2022

SUBMITTED ELECTRONICALLY

California Air Resources Board
Attn: Cheryl Laskowski
Transportation Fuels Branch
1001 I Street
Sacramento, CA 95814

Re: Comments on Potential Changes to the Low Carbon Fuel Standard

Dear Ms. Laskowski:

The Global Cold Chain Alliance ("GCCA") appreciates this opportunity to provide feedback to the California Air Resources Board ("CARB") on potential changes to the Low Carbon Fuel Standard ("LCFS") Program. GCCA represents 1,100 member companies in 85 countries, including strong representation from members with operations in California, who serve the food industry by providing third-party, temperature-controlled supply chain services. Our members provide temperature management of perishable products to maintain quality and safety through the distribution chain to the final consumer. As an industry that involves transportation of goods across California and the country, we look forward to working with CARB to advance low-carbon and zero-emission transportation solutions. We provide the below comments in response to CARB's July 7, 2022 public workshop on potential changes to the LCFS Program (the "July 7 Workshop").

I. COMMENTS ON CAPACITY CREDITING FOR MEDIUM- AND HEAVY-DUTY TRUCK REFUELING INFRASTRUCTURE

In its July 7 Workshop, CARB requested public feedback regarding potential inclusion of medium- and heavy-duty ("MHD") zero-emission vehicle ("ZEV") refueling infrastructure in the LCFS Program. CARB stated that there is an opportunity to support MHD refueling infrastructure, similar to the existing provisions for capacity crediting of light-duty vehicle fast-charging infrastructure ("FCI") and hydrogen refueling infrastructure ("HRI"). As noted by staff, CARB's Advanced Clean Trucks and Advanced Clean Fleets regulations demonstrate the need for charging and refueling infrastructure to support increasing numbers of ZEV MHD trucks.

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GCCA is supportive of including MHD refueling infrastructure in the LCFS Program. Doing so could represent a tremendous opportunity to incentivize the infrastructure required to enable the transition of MHD trucks to ZEV.[1] As CARB noted in the Draft Scoping Plan Update, "[r]efueling infrastructure is a crucial component of transforming transportation technology" and such refueling stations "must become easily accessible for all drivers to support a wholesale transition to ZEV technology."[2]

Not only is such infrastructure critical, CARB has acknowledged that "[p]rivate investment in reliable, affordable and ubiquitous refueling infrastructure must drive the transition as the business case for ZEVs continues to strengthen."[3] Providing LCFS credits for the development of MHD refueling infrastructure would provide a strong incentive for private investment and support the state's goals of transitioning the MHD fleet to ZEV as soon as feasible. To ensure a successful transition occurs as quickly as possible, participation in the LCFS Program for MHD refueling infrastructure should be broad, including infrastructure at private facilities with large numbers of truck visits, and the crediting period should be long enough to provide a strong market signal for private investors.

Eligibility Requirements

In the July 7 Workshop, CARB staff asked for public feedback on how eligibility requirements for MHD refueling infrastructure in the LCFS Program can be designed "to best support behavior of MHD ZEVs utilizing public refueling infrastructure."[4] This question should not be limited to *public* refueling infrastructure—rather, how can the LCFS Program best support the behavior of MHD ZEVs, *as they operate today*?

GCCA firmly believes that providing ample ZEV refueling infrastructure in locations *where MHD vehicles already are visiting* best supports those vehicles in the transition to ZEV technology. Incentivizing MHD refueling infrastructure at locations where these trucks are stationed on standby prior to and during loading or offloading, during off hours, and at locations they are visiting on their normal duty cycles, will allow for refueling opportunities to fit in with the vehicles' existing behavior and minimize disruption to their mode of operations. The availability of MHD refueling infrastructure at certain private facilities could have the added benefit of reducing truck vehicle miles traveled ("VMT") and/or idling emissions—if a truck arrives onsite ahead of its scheduled time, it could be allowed onsite in order to plug in or refuel with hydrogen, rather than idling offsite or circling nearby until its scheduled arrival time, as is sometimes currently the case.

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[1] Executive Order ("EO") N-79-20 aims to achieve 100% in-state sales of ZEV MHD trucks by 2045, where feasible.

[2] CARB, Draft 2022 Scoping Plan Update at p. 150 (May 10, 2022).

[3] *Ibid*.

[4] CARB, Low Carbon Fuel Standard Public Workshop: Potential Changes to the Low Carbon Fuel Standard at p. 27 (July 7, 2022).

For these reasons, while publicly available MHD refueling infrastructure also should be supported by the LCFS Program, **GCCA recommends that the eligibility requirements not be limited to only refueling stations open to the general public**.

For MHD refueling infrastructure that is not open to the public, GCCA recommends that CARB include pre-approved types of locations for such stations to be eligible for LCFS credit generation. These locations should include common destinations for MHD trucks, such as ports, distribution centers, warehouses, large retail centers, and fleet headquarters. If ZEV refueling infrastructure is available at both the trucks' home location, and locations that trucks routinely visit, certain populations of MHD trucks could likely access sufficient refueling for normal operations such that separate, energy-consuming trips to a publicly accessible refueling station are not necessary. This would be especially true for drayage and regional trucking operations. In turn, MHD truck owners and operators would be motivated to transition to ZEV more quickly.

Our members' cold storage warehouses are a critical part of the global food supply chain, and it is imperative that operations at those locations, and downstream ultimately to the consumer, are reliable. As the MHD truck fleet transitions to ZEV, the availability of refueling infrastructure is necessary to provide that reliability.

The more seamlessly new technology can be integrated into a fleet's regular operations and duty cycles, the more likely it is to be adopted. CARB should encourage investment in MHD refueling infrastructure at certain private facilities that will enable and accelerate the transition to MHD ZEV trucks.

Appropriate Crediting Period

CARB also requested public feedback on the appropriate crediting period to incentivize long-term investment and operation of MHD refueling infrastructure. Currently the LCFS program provides crediting periods of 15 years for HRI, and 5 years for FCI. GCCA believes that MHD refueling infrastructure would be more analogous to HRI in terms of technology development and the status of adoption in the industry. Like hydrogen, MHD ZEV technology and adoption lags behind passenger car battery-electric ZEV technology and adoption. Adoption of that emerging MHD technology is underway, but refueling station availability must be addressed in order to speed adoption.

GCCA recommends that CARB adopt a crediting period for MHD refueling infrastructure of 15 years. A sufficient crediting period is required to send the appropriate market signal that this private investment will have an adequate return. MHD FCI, in particular, is expected to have significantly higher capital investment than light-duty passenger car FCI. To provide effective electric charging for MHD trucks the infrastructure will require more physical space at a location, and greater energy demand, which will in turn potentially require significant electrical upgrades by electric Load-Serving Entities. MHD hydrogen refueling infrastructure would likely need to be constructed from scratch at significant capital expense. A crediting period of 15 years would be appropriate for both MHD FCI and MHD HRI given these substantial costs.

II. E-TRU CHARGING CREDITS

GCCA requests that CARB also consider revising the LCFS Program regulations regarding how electric transport refrigeration units ("eTRU") generate LCFS credits. CARB included eTRU as a category of electric transportation eligible to generate LCFS credits in the 2018 LCFS amendments. Staff noted that "[t]his zero emission vehicle technology could increase the use of electricity as a fuel to displace gasoline or diesel and reduce GHG emissions" and that "[a]llowing them to generate LCFS credits will send a signal to the market to expedite the penetration of such zero emission technologies."[5]

The LCFS regulations provide that the owner of the eTRU fuel supply equipment ("FSE") is the fuel reporting entity and the credit generator.[6] Staff noted in its 2018 response to comments that allocating the LCFS credits to the FSE owner (with optionality to contract otherwise) "is consistent with other electricity applications where the FSE owners are the default credit generator as *they are the ones supplying electricity as fuel*."[7] However, for eTRU the FSE is defined in the LCFS regulations as the eTRU itself,[8] even though the eTRU does not supply the electricity. It is the eTRU *charging equipment* that supplies the electricity to the eTRU.

Indeed, for other electricity applications eligible to generate credits in the LCFS program, the FSE is defined as the facility or equipment used to supply electricity to the vehicle or equipment. For electric forklifts, electric cargo handling equipment ("eCHE"), and electric ocean going vessels ("eOGV"), "FSE refers to the facility or location where electricity is dispensed for fueling."[9] Similarly, for non-residential EV charging, "FSE refers to each piece of equipment capable of measuring the electricity dispensed for EV charging"[10] and for hydrogen, "FSE refers to a fueling station."[11]

GCCA requests that CARB amend section § 95483.2(b)(8)(B)(7) such that for an eTRU, FSE refers to the facility or equipment used to supply electricity to the eTRU. This is consistent with the treatment of electric forklifts, eCHE, and eOGV, and also reflects the allocation of LCFS credits for fueling of zero-emission passenger vehicles, whether the fuel is electricity or hydrogen, to the equipment providing the zero-emission fuel.

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[5] CARB, Staff Report: Initial Statement of Reasons, Proposed Amendments to the Low Carbon Fuel Standard Regulation and to the Regulation on Commercialization of Alternative Diesel Fuels at p. III-40 (Mar. 6, 2018).

[6] 17 Cal. Code Reg. § 95483(c)(5)(A).

[7] CARB, Final Statement of Reasons, Amendments to the Low Carbon Fuel Standard Regulation and to the Regulation on Commercialization of Alternative Diesel Fuels at pp. 202-03; 860-61 (Nov. 2018) (emphasis added).

[8] 17 Cal. Code Reg. § 95483.2(b)(8)(B)(7).

[9] *Id*. at § 95483.2(b)(8)(B)(6).

[10] *Id*. at § 95483.2(b)(8)(B)(3).

[11] *Id*. at § 95483.2(b)(8)(B)(8).

CARB's recent—and forthcoming—efforts to electrify the eTRU fleet mean that increasing numbers of eTRU will be visiting GCCA members' facilities.[12] These eTRU will require infrastructure to plug-in while running during the loading and unloading of cargo, precooling empty trailer units that have been stored at a warehouse before their next loading, as well as to charge so that the eTRU may operate while the vehicle is in transit. Accordingly, GCCA members will have to make capital investments in order to accommodate this increased electrical load and to provide the necessary electric infrastructure to support eTRUs.

This eTRU charging infrastructure is required to enable CARB's proposed transition to zero-emission TRU fleets by 2030 (truck TRUs) and 2035 (all other TRUs), as directed by EO N-79-20 and consistent with CARB rulemaking. In order to make CARB's mandated transition to zero-emission TRU successful, the incentive of LCFS credit generation is best placed at the facilities where eTRU will require an electricity supply, such as the cold-storage warehouses operated by GCCA members.

A market signal from the LCFS Program is no longer necessary "to expedite the penetration of such zero emission technologies."[13] CARB is now mandating zero-emission TRU technology through regulation. But in order to *enable* that transition and support eTRU in operation, a market signal must now be sent to facilities where they visit to encourage installation of adequate electrical infrastructure to support the eTRU.

III. CONCLUSION

We would like to thank CARB for the opportunity to submit comments on the LCFS proposed amendments. We look forward to continued collaboration with CARB on this rulemaking.

Best Regards,

Matthew Ott, M.S., FASAE, CAE, CMP
CEO, Global Cold Chain Alliance

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[12] *See* CARB, Proposed Amendments to the Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets, and Facilities Where TRUs Operate, Resolution 22-5 (Feb. 24, 2022) (adopting ATCM amendments that require truck TRU fleets to transition to zero-emission by 15% per year starting in 2023, and directing Staff to develop a subsequent regulation for Board consideration in 2025 that requires trailer TRUs, domestic shipping container TRUs, railcar TRUs, TRU generator sets, and direct-drive units to transition to zero-emission by 2035).

[13] CARB, Staff Report: Initial Statement of Reasons, Proposed Amendments to the Low Carbon Fuel Standard Regulation and to the Regulation on Commercialization of Alternative Diesel Fuels at p. III-40 (Mar. 6, 2018).