



September 19th, 2022

Dr. Cheryl Laskowski
Chief, Low Carbon Fuel Standard
California Air Resources Board
1001 I Street, Sacramento, CA 95814
P.O. Box 2815, Sacramento, CA 95812
Submitted electronically via helpline@arb.ca.gov

RE: LCFS Section 95483 Fuel Reporting Entities (c)(5)(A) Electric Transport Refrigeration Units (eTRU)

Dear Dr. Laskowski,

Smart Charging Technologies (SCT) is a high-tech firm focused on developing innovative IoT energy management and equipment solutions for the industrial transportation industry. We also provide energy credit management services, including managing the LCFS program administered by the California Air Resources Board (CARB) and the CFP program administered by the Oregon Department of Environmental Quality (ODEQ).

SCT respectfully submit the following comments to California Air Resources Board (CARB) Staff with the hope of advancing the LCFS program in a way that makes it easy and practical for concerned stakeholders to participate.

Our comments are related to:

- Section 95483(c)(5)(A): “For electricity supplied to eTRU, eCHE, or eOGV, the owner of the FSE is the fuel reporting entity and the credit generator.”, where section 95483.2(b)(8)(B)(7) defines the eTRU FSE as: “For eTRU, FSE refers to each eTRU.”
- Section 95481. Definitions and Acronyms. (49) “Electric Transport Refrigeration Units (eTRU)” means refrigeration systems powered by electricity designed to refrigerate or heat perishable products that are transported in various containers, including semi-trailers, truck vans, *shipping containers*, and rail cars.”



- *Section 95483(c)(5)(A): “For electricity supplied to eTRU, eCHE, or eOGV, the owner of the FSE is the fuel reporting entity and the credit generator.”, where section 95483.2(b)(8)(B)(7) defines the eTRU FSE as: “For eTRU, FSE refers to each eTRU.”*

We are of the opinion that favors having the charging equipment infrastructure owner have the first right to generate credits.

First, we see obvious drawbacks to the current regulation that gives the first right to generate credits to the eTRU owner:

- Considering eTRUs mobility across many warehouses, where the eTRUs are stationary and going thru loading/unloading or overnight charging, the entity that bares the cost of the electric infrastructure and the electricity used to power the eTRU is the charging equipment infrastructure owner. While considering the high cost for providing the charging infrastructure, it is only fair that the entity that bares such cost is allowed to recover it in a hassle-free manner by being the credit generator. Otherwise, facilities will not be incentivized to provide charging infrastructure and bringing eTRUs plugs to the parking area as it becomes a major challenge for the infrastructure owner, where the eTRU is stationary and charging, to recover the cost of charging (electricity cost and operating costs) from the, potentially many, eTRU owners.
- Under the current regulation, it is difficult to verify the charging claims of eTRU owners where eTRUs are not equipped to measure electricity consumption, or separate measuring devices are not available to measure electricity per eTRU. It’s also difficult to ensure that only the owners registered eTRUs is plugged in and no others. This is counter intuitive for the goals of the program which should enable fleets electrification by providing and incentivizing charging infrastructure for all types of EV vehicles. As a result, the current regulation only incentivizes the owner when their eTRUs are parked at their main facilities which will not enable this technology to flourish and deter from adoption. Again, a question of accuracy, verification, and technology adoption.
- Additionally, we are having additional complexities due to requiring owners to register eTRUs at every facility they stop at. For example, an eTRU owner has 150 eTRUs visiting 12 facilities. This means there must be 1800 registration records; many of them just to capture a single or few visits per facility. This is prone to errors and hard to manage. Not to mention the charging claims, from each location and for each eTRU, the eTRU owner must submit each quarter. It is not practical for the owner to register each eTRU at each facility they visit and prevents effective participation of eTRUs.
- Currently the plugs’ location is at the loading decks, in which the eTRU will be plugged in for loading and unloading, but the eTRU may need to move to the back parking area and can’t stay plugged in there. The facility owner has no incentive to have chargers in the back parking area. And many times, these eTRUs will be setting there with cargo overnight running diesel! Again, to promote adoption and real benefits, we feel that all facilities need to consider providing charging ports for all hosted equipment.



Second, eTRUS mobility scenarios are very similar to non-residential EVs, eOGV, eCHE, and Hydrogen vehicles, where these vehicles may visit many facilities/charging stations. For these applications, the charging infrastructure owner gets the benefit of generating LCFS credits **(95483(c): (2)(A)(Non-Residential Evs), (5)(A)(eCHE &eOGV), 95483(b)(1)(E)(Hydrogen))**. We see no reason why eTRUs are any different.

Third, reference is made to The Global Cold Chain Alliance (“GCCA”) [letter](#) to CARB on potential changes to the Low Carbon Fuel Standard (“LCFS”) Program, section II. E-TRU CHARGING CREDITS. GCCA, an alliance of 1,100 member companies in 85 countries, made the argument for having “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.”

Finally, it is worth mentioning that other regulatory bodies are moving in the direction of having the “Charging Site Host” to be the credit generator from electricity transportation applications. Reference is made to Canada’s Clean Fuel Regulations article “Electricity — charging-site host 101(1)”.

For all the above, we strongly recommend having the charging equipment owner have the first right to generate credits from eTRU charging.

- *Section 95481. Definitions and Acronyms. (49) “Electric Transport Refrigeration Units (eTRU)” means refrigeration systems powered by electricity designed to refrigerate or heat perishable products that are transported in various containers, including semi-trailers, truck vans, shipping containers, and rail cars.”*

With respect to shipping containers (Reefers), SCT believes that Reefers at “Intermodal facilities”¹ are a special case of eTRUs, and favors having the charging equipment infrastructure owner have the first right to generate credits.

First, incentives (LCFS credits) are given to the equipment or facility owner to incentivize investing in environment-friendly transportation. In the case of Reefers, unlike eTRUs that are alternatives to conventional diesel-powered TRUs, they (Reefers) have been in business, before incentive schemes, to transport temperature-sensitive products across oceans, i.e. Reefers are not a new alternative to diesel-powered TRUs that needs to be incentivized. It was a business need that caused Reefers to exist, it was not an incentive scheme, and as such, there is no point in incentivizing the Reefer owner when it is powered at an Intermodal facility.

Second, in the case of Intermodal Facility owner, he has two options, electricity from gensets(diesel), or from the Grid (infrastructure), which is more environment friendly. In this

¹ California Code of Regulations, Title 13, Division 3, Chapter 9, Article 8, Section 2477 (54) “Intermodal Facility” means a facility involved in the movement of goods in one and the same loading unit or vehicle which uses successively several modes of transport without handling of the goods themselves in changing modes. Such a facility is typically involved in loading and unloading refrigerated shipping containers and trailers to and from railcars, trucks, and ocean-going ships.



case, it makes sense to incentivize **Intermodal Facility** owner to power Reefers from the grid. To SCT, incentivizing the **Intermodal Facility** owner is very similar to incentivizing the owner of the facility, where electricity is supplied to eOGV (95483(c)(5), 95483.2(b)(8)(B)(6)), instead of incentivizing the owner of the eOGV.

Third, at Intermodal Facilities, it is quite possible the Reefers are Non-California based² and owned by foreign shipping companies that are regularly assigned to terminals outside of California and operate in California from time to time. The ownership requirement in this case is limiting and doesn't incentivize intermodal facilities.

For all the above, we strongly recommend having the charging equipment owner have the first right to generate credits from Reefers at Intermodal facilities.

Thank you for taking our comments into consideration. We look forward to continued participation and discussion.

Sincerely,

By (Signature):

A handwritten signature in black ink, appearing to read "Khalid Rustom", written over a horizontal line.

Khalid Rustom, PhD.
GM, Energy Program
Smart Charging Technologies, LLC

² California Code of Regulations, Title 13, Division 3, Chapter 9, Article 8, Section 2477 (64) **"Non-California-Based TRUs and TRU Gen Sets"** means TRUs and TRU gen sets that are equipped on or used in trucks, trailers, shipping containers, or railcars that a reasonable person would find to be regularly assigned to terminals outside of California and operate in California from time to time for the purpose of transporting perishable goods into or out of the state.