



October 15, 2020

California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

RE: Comments on Potential Regulation Amendments, First Fuel Reporting Entity for Electric Forklifts and eTRU's, Use of Metered Data for Electric Forklifts

Energy Mission Control, Inc. (e-Mission Control) appreciates the opportunity to comment on the proposed amendments to the Low Carbon Fuel Standard (LCFS) regulation. e-Mission Control is a Sacramento-based technology company that helps facilitate participation in the LCFS for many small-to-medium sized businesses operating electric material handling equipment, primarily eCHE and electric forklifts. We have developed a comprehensive and streamlined software set that eliminates many of the administrative roadblocks that traditionally preclude small fleets from opting into the LCFS program and allows them to take clear, affirmative, and immediate steps to reinvest in the electrification of their goods movement and material handling operations.

We offer additional background on typical MHE industry practice, information on the current state of affairs on electric forklift fleet participation, and request the following adjustments to the proposed amendments:

- 1. We suggest the first fuel reporting entity for electric forklifts be the entity that makes facility and equipment use decisions, operates the equipment, and pays utility costs, i.e. the "Fleet Operator".**

Background: Unlike eOGV, cargo handling equipment, or transportation refrigeration units, businesses utilizing propane and electric forklifts often utilize long-term lease agreements with forklift suppliers/dealers, typically in the three to five-year leases. These lease agreements are almost always packaged with associated chargers and batteries. The mix of owned vs. leased equipment within any specific fleet varies substantially from business to business, however it is always the case that the fleet operator make the use decision on the equipment type, quantity, charging/fueling systems utilized, and ultimately foots the bill for fuel and operational costs. In the case where additional infrastructure is required to support new equipment, it is the fleet operator that must manage the project and build in the associated installation costs into their bottom line. Additionally, it is almost always the case that the fleet operator or business owner who is developing and managing internal company greening initiatives, which frequently includes decisions on use of more efficient and less carbon-intense vehicle types.

In Port ecosystems (for eCHE) and on-road trucking logistics ecosystems (for eTRU<sup>1</sup>), the terms “Fleet Owner” and “Fleet Operator” may typically be used interchangeably<sup>2</sup>, however in warehousing, cold storage, food and beverage, or the myriad of other industries utilizing electric forklifts, the definition of “Fleet Owner,” and by extension, the right of claim to first fuel reporting entity is less clear. Importantly, this has led to current in-use practices where leasing companies (in partnership with consultants) have opted-in their leased equipment, retained credit ownership, and have seen financial returns, while not disclosing as much to the actual operator of the equipment. In our experience with such situations, we’ve found that no financial net benefit is returned to the fleet operator to help them advance their own business operations in a “greener” direction through the terms of the lease agreement. Often, the only time a fleet operator become aware of this situation is when they try to opt-in their owned equipment at the same facility, but, due to the mechanics of the LRT-CBTS FSE registration process, are rejected due to facility coordinate conflicts. As discussed later in this letter, a portion, potentially large, of the newer electric forklift LCFS participation can be attributed to this practice.

While we appreciate CARB’s attempt to streamline category mechanics and the recognition of avoiding conflicts and multiple claims for the same charging, modifying the first fuel reporting entity from “fleet owner” to the charging equipment owner will not change the state-of-affairs for electric forklifts fleets, even if Regulatory Guidance 07-02 (Methodology for Determining Electricity Consumption of Electric Forklifts) is rescinded and metered data is required for participation. The same conflict of right to ownership will exist since leasing companies will retain ownership of the charging equipment. To-date, as we understand it, CARB has taken these situations on a case-by-case basis, comparing conflicting equipment serial numbers and permitting a resubmission, but this results in two immediate problems:

First, it results in delays and confusion on the fleet operator’s behalf, as they have to come to an understanding of the situation, find the existing FSE owner, collect relevant information, and reengage and explain to CARB that the non-leased equipment is eligible for a resubmission of a FSE registration. Unfortunately, many small businesses have missed out on valuable LCFS participation while these situations are sorted out.

Second, and most importantly, e-Mission Control, as well as those signing in support of this letter, see the intent of the LCFS regulation to help facilitate increased market penetration of low-carbon fuels. In the most-granular sense, helping offset increased fuel costs, electricity in this case (especially increased zero-carbon electricity costs), is a fundamental underpinning of the program. Redirecting these funds to “fleet operators” who are in the most direct need and in the best position to advance electric forklift adoption should be the first fuel reporting entities.

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<sup>1</sup> e-Mission Control has additional comments on shipping-containerized eTRU’s typically owned by large shipping conglomerates.

<sup>2</sup> e-Mission Control understands and can expand greatly on the relationship between Port’s and Terminal Operators and how CHE/eCHE equity, operational costs, and utility costs reflect FSE ownership, if requested.

Other programs, such as CORE, or utility infrastructure upgrade programs such as SCE's Charge Ready Transport, PG&E's EV Fleet, and others are available to help offset up-front costs for equipment, but the LCFS credit generation proceeds should largely offset ongoing operational costs.

## **2. We suggest maintaining the ability to utilize LCFS Regulatory Guidance 17-02.**

As mentioned by CARB during the October 14 workshop, there has been an approximate 200% increase in participation by electric forklift fleets over the past several years, however data from the LCFS Data Dashboard webmap<sup>3</sup>, (last updated sometime in 2019) shows that this growth is attributed almost exclusively to three consultancies acting as designees on behalf of fleets.

Further analysis would show that of these, many facilities are bucketed under the same corporate brands (i.e. grocery chains), implying large bulk opt-in of facilities but representing a limited number of independent companies. Additionally, the swell of registered facilities after April 2017 would imply that these FSE's are utilizing the CARB-approved estimation methods outlined in Guidance 17-02 in lieu of metered data. While we understand that there has been additional growth since the last dataset publication with new players in this space, e-Mission Control included, we believe there to still be very small relative LCFS participation by electric forklift fleets.

Further, in e-Mission Control's experience working with fleets, while "smarter" high-frequency chargers are seeing some penetration, the majority of fleets have some mix of exclusively dumb chargers, a scattering of smart chargers, or mostly smart chargers, but in almost all circumstances, fleet operators are not utilizing networking and data features offered by these systems. This is primarily because of associated subscription fees, exchange of charging hardware based on lease-agreements, or most commonly, because of physical limitations within warehouses preventing reliable access to data.

On-vehicle telematics are becoming more common as fleets recognize the ability of data-driven solutions to reduce overhead, however on-vehicle telematics that integrate on a battery level to monitor energy consumption are more uncommon, or integrate with very specific equipment brand's battery management systems.

While harmonization with the other LCFS programs that require metered data is a beneficial long-term goal, we believe that the flexibility garnered by Guidance 17-02 and its associated unique LRT-CBTS steps (ie. submitting and tracking of forklift fleet information) is instrumental in continuing the adoption and success of the LCFS program for electric forklift fleets. We estimate that if a method to calculate estimated energy consumption is not permitted, more than 90% of electric forklift fleet LCFS participation would be lost.

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<sup>3</sup> <https://webmaps.arb.ca.gov/lcfs/>

**3. Strong support for changing the eTRU first fuel reporting entity, but to define the “Fleet Operator” as the first fuel reporting entity and the FSE as the meter monitoring energy consumption to the eTRU(s).**

As the current regulation is written, each eTRU is its own FSE, and the owner of the FSE is the first fuel reporting entity. This is applicable to both over-the-road dry-box style containers as well as the “shipping container” style units.

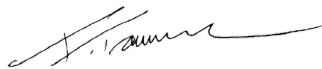
In practice, these shipping container eTRU’s are often moved from the ship then plugged in on-site akin to shore-powering a vessel before they are unloaded/loaded and sailed out again. Operationally, these eTRU’s are moved at the same frequency and with the same global footprint as typical dry-box shipping containers. They are exclusively owned by shipping lines and leasing companies but plugged in by distribution facilities and terminal operators. As a container arrives, it is plugged in, then may never see that same facility again after it leaves. Any single container is typically only on site for no more than seven days. These facilities have the capability to independently meter electricity consumption to just the eTRU’s, but can’t track to which eTRU, on a per-serial-number basis.

Importantly, there are many facilities state-wide that have no or very little infrastructure in place to directly plug-in eTRU’s on-site. These facilities must rely on diesel gensets to power the electrical componentry of the eTRU’s. Facilities that have opted to green their operations by installing associated electrical infrastructure have spent millions of dollars to do so and are also the entities paying utility costs. This industry example is the perfect candidate for the LCFS program to lessen the use of diesel fuel in thousands of gensets and increase penetration of grid-connected eTRU’s.

We suggest proceeding with a change of the first fuel reporting entity to be the “fleet operator” and to redefine the FSE as the meter monitoring energy consumption to the eTRU.

Thank you for the consideration of this material. e-Mission Control is a strong supporter of the hard work of the LCFS team and greatly appreciates the opportunity to provide these comments. We look forward to continued discussions.

Sincerely,



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