



August 30, 2018

**CleanFuture, Inc.**

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The Honorable Mary D. Nichols  
Chair, California Air Resources Board  
1001 I Street  
Sacramento, CA 95812

RE: LCFS 18 - Comments on Proposed LCFS Regulations for electrified freight and goods movement equipment

Dear Chair Nichols,

CleanFuture appreciates the opportunity to provide comments on CARB's proposed amendments to the Low Carbon Fuel Standard (LCFS). CleanFuture strongly supports the LCFS and CARB's efforts to encourage the use and production of cleaner low-carbon fuels.

CleanFuture is a nationally-recognized firm working to enable fleets to electrify and be more efficient, including the electrification of transport refrigeration and refrigerated fleet efficiency. CleanFuture also works with fleets on electrification of other freight and goods movement equipment. CleanFuture has direct experience with the technologies that currently exist and that are under development in this sector. Based on this experience, CleanFuture is providing input to CARB regarding what crediting structure will facilitate the expanded use of electricity in this sector.

CleanFuture supports the proposed inclusion of electric transport refrigeration units (eTRU), electric cargo handling equipment (eCHE), eOGV, and mechanisms for qualifying other transportation applications not included in Table 5. These proposed changes will help incentivize and accelerate the transition to lower carbon intensive technologies in the freight and goods movement sector. The amendments released in the First Notice of Public Availability of Modified Text on June 20, 2018 contained provisions for these applications (eTRU, eCHE, EOGV) were positive in incentivizing industry. However additional changes introduced in the Second Notice of Public on August 13, 2018 in certain sections are problematic as these second changes inadequately convey the incentive to the fleet owner; the entity that makes the investment, deployment, and use decisions. Furthermore, certain changes made in the Second Modified Text in respect to the First Modified Text are incompatible with the manner that industry uses certain equipment and/or equipment

reporting capabilities (i.e., few eTRUs have data acquisition reporting capabilities to serve as FSEs) and could impede instead of incentivize adoption.

Our specific recommendations regarding the eTRU provisions identified in our July 15 comments remain unchanged:

- At this stage of TRU electrification market development for trucks, trailers, and rail cars, the terms “Fueling Supply Equipment” and “FSE” should refer to the equipment that supplies electricity to the eTRU instead of the eTRU itself. The capability of data capture from the legacy eTRUs in use today is limited in some eTRU models and non-existent in other eTRU models. Currently, the equipment that can best capture eTRU usage data is the sub meter. The sub meter also serves as an aggregating point for all TRU electric outlets and is the most efficient way to track electricity usage in eTRU units.
- As advanced technology eTRUs come to market, we anticipate there will be enhanced reporting capabilities to better enable the eTRU itself to serve as the FSE for LCFS purposes or to use other methods to determine electricity supplied to eTRUs. CleanFuture requests that such advanced technology eTRU technologies be evaluated in any applications for *Tier 2 Pathways for EER-Adjusted Carbon Intensity* per §95488.7(a)(3). Any approved Tier 2 Pathways could incorporate advanced reporting capabilities as detailed by the pathway applicant.

Additionally, we strongly recommend these modifications be incorporated:

- The fleet owner for forklifts, eTRU, eCHE, or eOGV to be the first priority credit generator.
- For eTRU the FSE should refer to the facility or location where electricity is dispensed for fueling unless otherwise approved per §95488.7(a)(3).

CleanFuture recommends modifications to incorporate elements of both the First Modified Text and the Second Modified Text. To better emphasize the combination of First Modified Text and Second Modified Text, our recommended text is highlighted in green, with deletions highlighted in red.

#### **§ 95483. Fuel Reporting Entities.**

95483 (c) (6)

(...)

(6)(5) Electric Transport Refrigeration Units (eTRU), Electric Cargo Handling Equipment (eCHE), Electric Auxiliary Engines Power for Ocean-going Vessel (eOGV).

(A) For electricity supplied to eTRU, eCHE, or eOGV, the ~~operator owner~~ **of the eTRU, eCHE, or eOGV FSE** is the fuel reporting entity and the credit generator ~~for electricity supplied to a specified each respective unit.~~

(B) Subsection (A) above notwithstanding, **the eTRU, eCHE, or eOGV** ~~operator owner~~ **of the FSE** may elect not to be the credit generator and instead designate another entity to be the credit generator if the two entities agree by written contract that:

1. The **eTRU, eCHE, or eOGV** ~~operator owner~~ **of the FSE** will not generate credits and will instead provide the electricity data to the designated entity for LCFS reporting pursuant to sections ~~95483.1~~ **95483.2**(b)(8), 95491 and 95491.1.
2. The designated entity accepts all LCFS responsibilities as the fuel reporting entity and credit generator.

(...)

## § 95483.2. LCFS Data Management System.

### Registration of Fueling Supply Equipment

95483.2 (8) (B) (6)

(...)

6. For electric forklifts, **eTRU**, eCHE, or eOGV, FSE refers to the facility or location where electricity is dispensed for fueling. ~~Fuel reporting entities for electric forklift, eCHE, or eOGV must provide name of the facility at which FSE is situated, street address, latitude, and longitude of the FSE location. If there are multiple FSEs capable of measuring the electricity dispensed at the facility or location, then it is optional to provide serial number assigned to each equipment by the OEM and the name of OEM.~~

~~(H) 7. For eTRU, FSE refers to each eTRU. Fuel reporting entities for eTRU fueling must provide the serial number assigned to the unit by the OEM and the name of the OEM.~~

(...)

In summary, CleanFuture supports the addition of §95488.7(a)(3) for other transportation applications not contemplated in Table 5.



Thank you for the opportunity to provide comments on the proposed LCFS Draft Regulation. CleanFuture is available to discuss these comments in more detail with staff at any time. We look forward to continuing to work together to help carry out the goals of the LCFS program.

Sincerely,  
CleanFuture, Inc.

A handwritten signature in black ink that reads 'John A. Thornton'.

John A. Thornton  
President