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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 electric transport refrigeration units

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 helps foodservice and grocery distributors reduce fuel consumption and refrigerated transport operating costs by switching to electricity instead of diesel fuel. 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) in the proposed amendments. Inclusion of eTRU in the LCFS will help incentivize and accelerate the transition of transport refrigeration toward the use of clean electricity instead of diesel to deliver our fresh, perishable, and frozen foods. The LCFS and other actions by CARB to incentivize electrified TRUs are necessary to help transform the market.<sup>1</sup>

Our specific recommendations regarding the eTRU provisions are:

- 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

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<sup>1</sup> Community Air Protection Funds Supplement to the Carl Moyer Memorial Air Quality Standards Attainment Program 2017 Guidelines [https://www.arb.ca.gov/msprog/cap/docs/cmp\\_proposed\\_cap\\_supplement\\_20180312.pdf](https://www.arb.ca.gov/msprog/cap/docs/cmp_proposed_cap_supplement_20180312.pdf)

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 that 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).
- TRUs on shipping containers should use the energy storage device as the FSE. All TRUs on shipping containers are electric powered for temperature control while onboard ships. Diesel-powered TRU gensets are used to provide power to TRUs on shipping containers while in transit over the road.<sup>2</sup> TRU battery packs for on-road use for TRUs on shipping containers displaces diesel fuel which is consistent with the intent of LCFS. On the other hand any electricity used in electric refrigerated container racks at ports and terminals is not displacing diesel fuel use and should not be eligible for LCFS crediting.

Thank you for the opportunity to provide comments on the proposed LCFS Draft Regulation. We look forward to continuing to work together to help carry out the goals of the LCFS program.

Sincerely,  
CleanFuture, Inc.



John A. Thornton  
President

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<sup>2</sup> Q&A TRU Gensets. [https://www.arb.ca.gov/diesel/tru/documents/q&a\\_tru\\_gensets.pdf](https://www.arb.ca.gov/diesel/tru/documents/q&a_tru_gensets.pdf)