



December 1, 2022

Ms. Cheryl Laskowski  
Chief, Transportation Fuels Branch  
California Air Resources Board  
1001 I Street,  
Sacramento, CA 95814

RE: e-Mission Control Comments on August 18, 2022, CARB LCFS Workshop

Dear Ms. Laskowski,

Energy Mission Control, Inc. (e-Mission Control, eMC) appreciates the opportunity to comment on the proposed Low Carbon Fuel Standard (LCFS) Public Workshop and proposed changes to the program. e-Mission Control is a Sacramento-based technology company that helps facilitate participation in the LCFS, as well as in Oregon's Clean Fuels Program, and shortly, Washington's Clean Fuel Standard, for hundreds of small- and medium-sized businesses operating electric material handling equipment, cargo handling equipment, electric refrigeration units, and on-road light, medium, and heavy-duty vehicles. Building upon nearly two decades of clean-transportation industry and public funding experience, eMC has developed a comprehensive and streamlined software platform that eliminates many of the administrative roadblocks that traditionally preclude small fleets from opting into clean fuel programs 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 support, additional background on typical industry practice, information on the current state of affairs on electric off-road vehicle and equipment fleet participation, and a series of suggested alternatives or improvements on the current regulation language and amendment proposals:

**e-Mission Control supports the accelerated and strengthened GHG reduction targets discussed by CARB.** Electrification and emission reduction efforts in the transportation sector are significantly ramping up in California, and an accelerated reduction target will further strengthen the impact of the LCFS program.

**As outlined in our previous letters, e-Mission Control strongly does not support the idea of "phase-outs" of electrified vehicles and equipment, regardless of their commercialization status.** After the July workshop, e-Mission Control, along with many other workshop attendees, submitted verbal and written comments against the philosophy supporting phase outs. **e-Mission Control respectfully asks that CARB addresses these concerns in a written commitment.** Our original comment that provides a rationale for maintaining existing equipment status is included below.

**Regarding Third-Party Verification for the electricity provisions, e-Mission Control supports extra visibility into data submissions as long as it avoids generating prohibitive burdens for small generators.**

According to FSE-level data provided in a public records request by the ARB (accurate as of July 11th), aggregation service providers represent approximately 94% of FSEs participating in the LCFS, which we suspect is due largely to the burden of reporting and transaction activities. Specifically, the verification process should not be so burdensome as to prevent small generators from participating in the program, with or without an aggregator. eMC encourages the ARB to further clarify the process of EV charging verification. Specifically eMC would like the ARB to provide explicit definitions for the level of risk or uncertainty tolerated in the proposed review process. This will help current and potential members of the program assess the impact verification may have. In regards to site visits, program participants would benefit from understanding what information other than meter data would need to be verified. If the addition of verification increases participation costs, small fleets and/or aggregators may be prevented from helping small groups participate in the LCFS program.

If verification is expanded to include EV Charging transaction types (eTRU, eCHE, and eOGV Fueling, etc), **e-Mission Control would support the exemption threshold of 6,000 credits or deficits that currently applies to liquid fuels.** This exemption will help ensure small generators are not deterred from participating in the program.

**Original comments regarding “phase-outs” of electrified vehicles and equipment in response to the July 7 Workshop:**

**e-Mission Control strongly does not support the idea of “phase-outs” of electrified vehicles and equipment, regardless of their commercialization status.** As has long been established, the LCFS is meant to incentivize the adoption and use of low-, zero-, and negative-carbon fuels, and any policy within the program that facilitates this goal should be supported. e-Mission Control currently represents many hundreds of small and medium-sized fleets, all of whom are operating some mix of equipment and vehicle types. For example, a small company may operate a few forklifts and a number of light-duty cars as part of their general operation. Simultaneously, a large company may operate hundreds of forklifts, thousands of refrigeration units, dozens of light and heavy duty vehicles, several off-road pieces of equipment (i.e. yard trucks or rail car movers), and a host of other transportation technologies. In our experience, **none** are entirely zero-emission across their operation. The LCFS program should holistically support fleets of all types, mixes, and sizes, and, as there is no prohibition on spending of funds generated from one technology (i.e. forklifts) on another (i.e. converting TRUs to hybrid eTRU 's), CARB should continue incentivizing zero-emission technologies until entire fleets, not specific technologies, are entirely zero-emission.

Additionally, considering specific technologies for a phase-out simply based on the equipment total cost of ownership or commercialization readiness becomes an extremely slippery slope. In addition to

forklifts, total cost of ownership analysis for light-duty vehicles<sup>1</sup>, shore power<sup>2</sup>, hybrid eTRUs<sup>3</sup>, natural gas Class 8 trucks, and soon, heavy-duty vehicles<sup>4</sup>, all regularly show a net benefit, even without incentive from the LCFS. This trend will continue as manufacturing becomes more effective, supplies become more readily available, and efficiencies and storage capacities increase substantially over the next five to ten years. We believe that the argument for equipment-specific total cost of ownership exclusion, if based on the concept of additionality (whereby a key decision maker would have made the decision to electrify a certain piece of equipment anyway, even without the LCFS), should be fleet-focused, and not equipment-focused. As mentioned above, being equipment-focused is a short-sighted perspective considering the volume and mix of equipment at any one company, and is entirely juxtaposed with the intention of the LCFS. For example, the question should not be, “Will a fleet operator purchase a forklift even without the LCFS value?” but instead should be, “Without the funds that an electric forklift would generate from the LCFS, would that fleet operator have upgraded vehicles or equipment on site that does not have a beneficial TCO?” If “No” is the response to the second question, then no equipment, regardless of commercialization or TCO, should be excluded from the LCFS.

Also, while it is not in CARB’s jurisdiction to consider other states or geographies developing clean fuel programs/standards, CARB should note that much of California’s LCFS regulatory language is often heavily utilized in the deployment of other programs (i.e WA and OR both use much of the FSE definition, EER values, and much more). In the same way that the localized emission reductions from out-of-state renewable fuels imported into the state are seen outside of California (i.e. methane avoidance in Iowa is counted toward the CA transportation CI score average), CARB should consider the implications of regulatory change influencing other agencies considering adoption of similar programs. Excluding technologies now will set a bad precedent, intentional or otherwise, for states that need to lean on the CARB LCFS regulatory language for success, and worse, heavily influence greenhouse gas emission reduction in areas that do not have wide adoption of electrified vehicles and equipment.

**Regarding forklifts specifically, e-Mission Control strongly does not support the phase out of zero-emission forklifts.** At only a 40% market adoption of electric forklifts, there is still a significant amount of equipment that needs to be transitioned to a zero-emission fuel source. This 40% is also primarily indoor, warehouse-type operations. The adoption rate for outdoor and heavy-lift applications is much lower, closer to 0%. As mentioned in the paragraphs above, many of the companies we facilitate LCFS access for have mixed fleets and rely on the funds from their LCFS participation to expedite the continued conversion of their forklifts and to work towards full conversion of their on- and off-road fleets. e-Mission Control supports the continued use of the Calculated Methodology used for forklift energy consumption, though technical revisions could be considered to ensure data accuracy and integrity. To date, telematic deployments are still cost-prohibitive on a per-unit/battery level to be

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<sup>1</sup> [https://ww2.arb.ca.gov/sites/default/files/2020-06/190225tco\\_ADA.pdf](https://ww2.arb.ca.gov/sites/default/files/2020-06/190225tco_ADA.pdf)

<sup>2</sup> [https://theicct.org/sites/default/files/publications/ICCT-WCtr\\_ShorePower\\_201512a.pdf](https://theicct.org/sites/default/files/publications/ICCT-WCtr_ShorePower_201512a.pdf)

<sup>3</sup> <https://www.safeconnectsystems.com/the-ultimate-user-guide-to-etru/six-steps-to-convert-to-etru/> & <https://www.mass.gov/doc/etru-grant-brochure/download>

<sup>4</sup> [https://ww2.arb.ca.gov/sites/default/files/2020-06/190225tco\\_ADA.pdf](https://ww2.arb.ca.gov/sites/default/files/2020-06/190225tco_ADA.pdf)



installed just for purposes of LCFS participation, have difficulty with data access and transfer within confined warehouse operations, and may not be appropriate across mixed OEM fleets.

e-Mission Control thanks CARB for the opportunity to comment and participate in the amendment process and looks forward to working with the agency on future improvements that facilitate the transition of California's transportation fuel pool toward a more sustainable and decarbonized future.

Sincerely,

A handwritten signature in black ink, appearing to read "T. Trauman".

Energy Mission Control, Inc.

CC: Todd Trauman, CEO  
Colby Green, Director of Business Development  
Elaine O'Byrne, Director of Operations