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June 10, 2022

Tony Brasil
California Air Resources Board
1001 I Street
Sacramento, CA 95814

Submitted to regulatory docket electronically.

Re: Advanced Clean Fleets Draft Regulatory Language (May 2, 2022 Version)

Dear Tony,

On behalf of the members of the California Council for Environmental and Economic Balance (CCEEB), we appreciate the opportunity to comment on the second set of draft regulatory language for the California Air Resources Board (CARB) Advanced Clean Fleets (ACF) rule(s), released in advance of the May workshops. CCEEB continues to believe that the ACF rule is one of the most significant and ambitious ever undertaken at CARB, and its expected impact extends well beyond medium- and heavy-duty trucking to include transformation of the state's electrical, energy, and goods movement systems. The scope of these proposed changes will affect every facet of the state's economy, making ACF "too big to fail", and therefore getting to a workable set of rules is paramount. It is with this in mind that CCEEB offers the following comments.

- **Reliance on hard targets and timelines means the program lacks long-term flexibility and places fleets in immediate compliance jeopardy**. While CCEEB understands the desire for market signal certainty, we also recognize that trying to foresee transportation technology and infrastructure development over the next two decades, as these rules do, is fraught with uncertainty and risk. CARB staff cannot predict all of the factors or circumstances that will arise and affect the program. Unfortunately, ACF, as currently envisioned, has no mechanism to adjust to meet the unexpected, and makes no attempt to gauge economic or energy conditions along the way.

- **Instead, CARB staff seeks to resolve problems through case-by-case exemptions using only Executive Officer discretion**. This creates great regulatory and business uncertainty for fleets, which must repeatedly petition CARB over a number of different compliance hurdles, likely resulting in uneven or inconsistent technology interpretations, depending on individual staff review or circumstances. It also lacks transparency, as the basis for

CARB decisions will not be public. Finally, as many have commented previously, CCEEB believes ACF will lead to an administrative logjam and procedural paralysis, especially in early years as thousands of fleets simultaneously petition CARB over vehicles they cannot buy or power and fuel that cannot be supplied to them.

- **Lacking a better approach, CARB must ramp up its ability to handle fleet petitions in ways that are fair, equitable, timely, and transparent. The best way to do this is with a hearing board.** A hearing board would add needed transparency, due process, and consistency, and decisions by a hearing board would be open to public scrutiny. Currently, CARB has no formal dispute resolution process; complaints are either settled using Executive Officer discretion or through the courts in litigation against CARB. CCEEB does not believe an agency should be judge, jury, and prosecutor over disputes with its constituents, nor should redress only be available to those that can afford to litigate.

- **Cost and reliability are fundamental to fleets. They should matter to CARB too.** As currently proposed, neither cost or reliability are considerations under the ACF. At a minimum, CARB must comply with Clean Air Act and Health & Safety Code requirements that mandate consideration of technological and economic feasibility and cost effectiveness.

- **Ensuring zero emission fueling infrastructure readiness is not just a pillar for the success of ACF, but for the reliability of the state's energy systems as a whole, particularly the electrical grid.**

- **The lack of public charging and hydrogen fueling stations, now and as the mandates kick in, must be elevated to the highest levels. Immediate action is direly needed.**

What follows is a more detailed discussion on commercial availability and the cost of medium- and heavy-duty zero emission vehicles (MHD ZEVs); infrastructure readiness; and specific comments on each section of the draft rule(s).

While CCEEB is committed to working with CARB to put forward the best rule possible given the short timeframe CARB has allowed, we do not believe we can arrive at a perfect solution for the long term. For this reason, we urge Chair Randolph, CARB board members, and legislative leaders to give CARB the flexibility it needs to successfully implement the ACF rule. We also urge the Administration to improve interagency coordination on infrastructure by aligning efforts on energy supply, distribution, and demand.

Commercial Availability and Cost of MHD ZEV Vehicles

Define "Commercially Available" and Set Forth Criteria in the Rule

CCEEB believes the term "commercially available" must be defined in the rule, either under "Definitions" in § 2013(b) or as a stand-alone section that describes, in clear and sufficient detail, what criteria *and* process(es) staff will use to develop the annual § 2015.3(e) list of commercially unavailable vehicles. Staff should also describe how they will evaluate fleet exemption requests. This term, which appears nineteen times in the draft text, is so critical to the rule itself that it cannot be left to staff guidance developed after the rule is adopted; it must be part of the rulemaking package brought before and considered by the Board. CCEEB believes such an omission would also jeopardize the rulemaking approval at the Office of Administrative Law, or OAL, as it would not meet the requirements for clarity under the Administrative Procedures Act.[1]

As already discussed, CCEEB strongly recommends that CARB establish a hearing board or some other independent dispute resolution process that allows fleets to further explain individual circumstances that may warrant granting an exemption or extension; to appeal CARB decisions on whether "good engineering judgment" was used or vehicle availability; or to request rule variances to address unique and unusual implementation hurdles unforeseen by the rule.

Exemptions are currently on a vehicle-by-vehicle basis. This is not acceptable for large fleets. There should be an option for filing bulk exemptions by vehicle type and/or with similar restrictions that would trigger the need for an exemption.

In terms of what factors CARB should consider for the definition, CCEEB includes in our comments Attachment A: Principles to Guide Commercial Availability Determinations. This work was informed, in part, by a series of informal dialogue sessions facilitated by CCEEB, which included a number of fleet representatives, energy producers, electrical utilities, academic researchers, and goods movement experts. We hope they serve as a useful starting point for discussions at CARB on commercial availability.

The Final ACF Regulation Must Include Economic Feasibility and Cost Effectiveness

CCEEB disagrees with the approach taken by staff whereby cost is not directly considered in the rule, and we continue to question some of the assumptions made in the Total Cost of Ownership (TCO) discussion document. On the latter, we include by reference our comments to staff from October 29, 2021 as they pertain to that document[2]. CCEEB also is concerned with some of the assumptions contained in the ACF Standard Regulatory Impact Assessment, or SRIA, including an assumed LCFS credit value of $200/ton. LCFS credit values are trending downward and are less than half of the assumed value as of this letter.

[1] Ca Government Code section 11349.1
[2] https://www.arb.ca.gov/lists/com-attach/127-acf-comments-ws-VWcCNAQ3VTcKIgU0.pdf

Staff asserted at the May 2022 workshops that cost does not need to be in the rule because ACF gives fleets "flexibility." Staff further reasoned that TCO will quickly be at parity with internal combustion engine vehicles (ICEVs). However, CARB has not fully evaluated fleet compliance costs, and may not even be able to do so given the lack of available data – to date, heavy-duty zero emission vehicle (HDV-ZEV) deployments have been at small scale, heavily subsidized, and located where there has been sufficient electrical charging or hydrogen fueling opportunities. On-road data about operation and maintenance of these early HDV-ZEVs is still being collected, and lessons learned are not clear. For now, CCEEB notes that several recent studies seem to support anecdotal stories from the public workshop participants, all of which suggest higher costs and more downtime from ZEV deployments than ICEVs. CCEEB recommends that staff hold at least one more workshop on its cost analysis before releasing the 45-day formal rulemaking docket and the Initial Statement of Reasons (ISOR) so that stakeholders can discuss with staff what improvements are being made to CARB's analysis released over seven months ago, prior to the latest staff proposals.

Because CARB cannot accurately estimate future infrastructure, fueling, capital, or maintenance and operation costs, and in order to meet Clean Air Act[3] and California Health & Safety Code provisions[4] regarding cost feasibility and cost effectiveness, CCEEB strongly urges staff to develop a cost feasibility exemption, as well as a method or framework by which cost feasibility could be evaluated on a per vehicle and per fleet basis. CCEEB believes staff should consider this as a "do no harm" enhancement; if staff assumptions about TCO are correct, the exemption would never be triggered. If, however, staff assumptions are wrong or slow to materialize, then this exemption would allow CARB to make surgical adjustments to a fleet's compliance targets and ensure that statutory cost feasibility and cost effectiveness requirements are met.

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[3] U.S. Code, Title 42, Section 7511b.(e)(1)(A) requires that ozone measures and "best available controls" be both technologically and economically feasible. Subpart (e)(2)(B) further requires agencies to consider the cost-effectiveness of controls, as well as comparable costs of alternatives, among other factors.

[4] See Health & Safety Code Sections 39602.5 and 43013, which require that measures adopted by CARB be "necessary, technologically feasible, and cost effective."

Infrastructure Readiness

ACF Success Rides on Big Picture Infrastructure Issues, Which Aren't Being Addressed

The ACF rulemaking is advancing against a backdrop of uncertainty about reliability and affordability of California's electrical system. Notably, on May 5, 2022, senior Newsom Administration officials shared forecasts that the state could face a potential shortfall of 1,700 MW to 5,000 MWs during peak demand this summer, depending on conditions.[5] This is roughly equivalent to the power needed for up to 3.75 million homes. State officials also warned that electricity rates would increase between 4 and 9 percent annually through 2025. This adds to the steady pace of rate increases since 2010, as shown in CPUC data below.

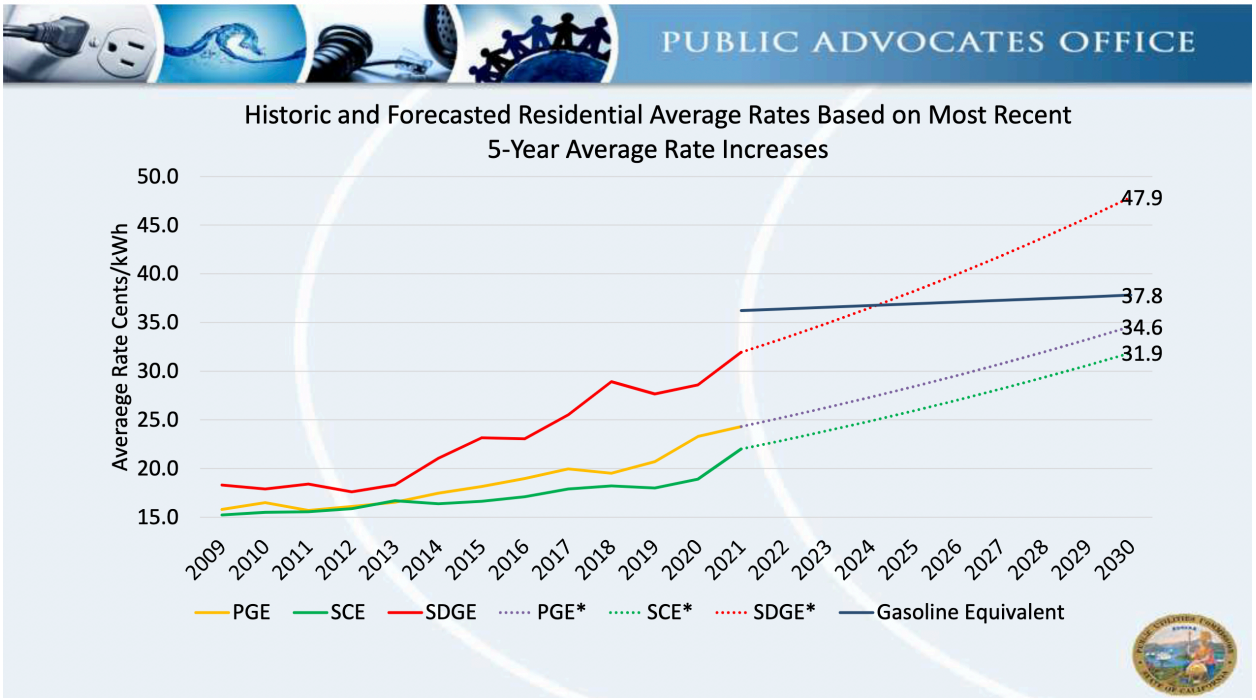

Figure 1: CPUC Public Advocates Office Presentation at the February 24, 2021 Rates En Banc Proceeding

The state's electricity supply shortfalls could grow even worse after 2023 when the last of the once-through cooling (OTC) power plants retire, adding to the loss of generation from the Diablo Canyon nuclear plant, which is set to go offline in August 2025 when its final license expires. The OTC plants have a capacity of about 5,300 MWs[6] and Diablo Canyon has another 2,200 MWs, or about 8.6 percent of the state's total generation.

[5] See the May 6, 2022 report from Reuters, "California says it needs more power to keep the lights on." Accessed online at https://news.yahoo.com/california-says-needs-more-power-194133420.html on May 13, 2022.
[6] See the 2022 Report of the Statewide Advisory Committee on Cooling Water Intake Structures, March 14, 2022. https://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/docs/final_report.pdf#page=1.

Ongoing supply issues underscore long-term concerns about reliability and affordability. Beyond these system-level challenges, fleets may need to work with local utilities and other partners to install vehicle chargers. These projects can suffer their own delays when there is a lack of local distribution capacity. For example, a snapshot of the grid taken last November by the CEC shows that 76 percent of Southern California Edison circuits and 69 percent of San Diego Gas & Electric circuits have less than a megawatt of capacity available, generally meaning that utility upgrades would be needed before MHD-ZEV charging could be installed.

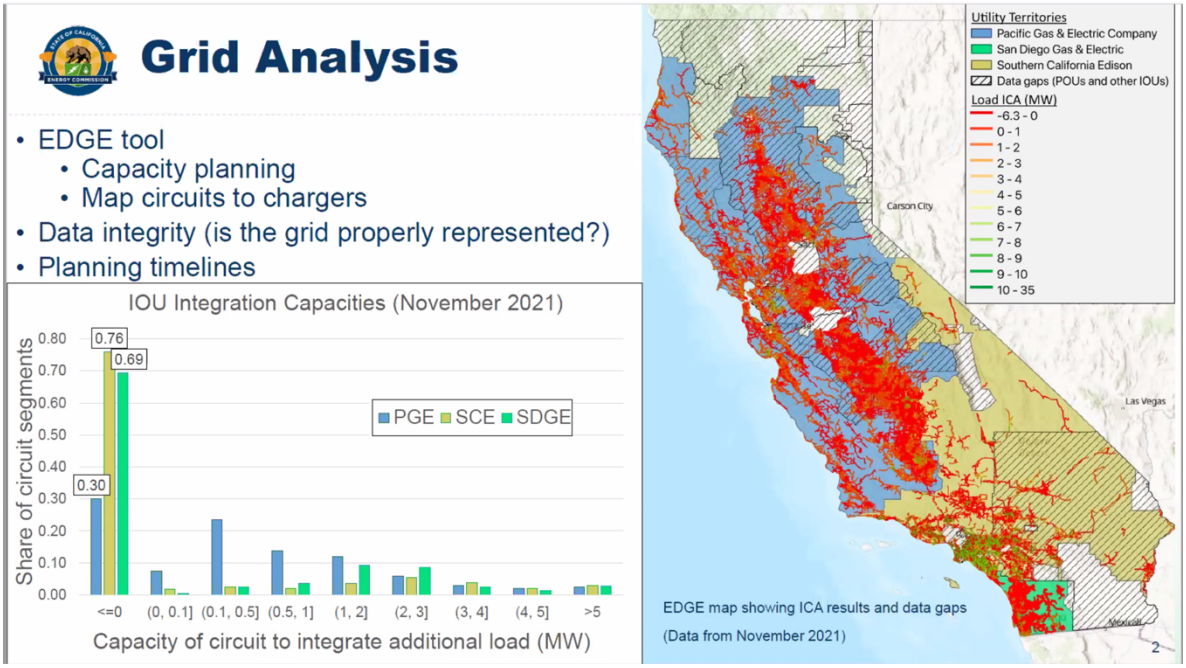

Figure 2: Screenshot from CEC Presentation at the January 12, 2022 Advanced Clean Fleets Infrastructure Work Group Meeting. Bar charts show a month-long "snapshot" of circuit capacity for the three IOUs in California.

CCEEB appreciates the addition of the Infrastructure Construction Delay Extension for public fleets and high priority and federal fleets, in Sections (§§) 2013.1(b) and 2015.3(c), respectively. However, these extensions do not address systemwide issues that could arise, such as persistent supply shortfalls in grid electricity that lead to widespread brownouts and blackouts, increased public safety power shutoffs or other regional service disruptions caused by wildfire risks, and spiraling energy costs that change cost effectiveness calculations. CCEEB believes CARB needs ways to respond to system challenges during ACF implementation, and, more generally, that CARB policies must complement efforts to decarbonize the state grid, never causing or seriously contributing to supply and demand imbalances.

Our concern is that CARB appears to be minimizing its responsibility for creating new electricity loads and other energy-related impacts. For example, in its draft Environmental Assessment for the 2022 State Implementation Plan, which includes ACF and other measures to electrify sources of combustion, staff argue that "…implementation of the 2022 State SIP Strategy would not result in the wasteful, unnecessary, or inefficient use of energy. Thus, long-term operation-

related energy impacts would be **less than significant**."[7] Similarly, during the May 2022 public workshops, staff answered questions about infrastructure by saying that partner agencies are "looking at it" and that considerable public funding is being invested.

CCEEB believes CARB can and should do more to develop mechanisms by which it can gauge risks to state energy systems, improve interagency planning and coordination to prevent any impacts to the fullest extent possible, and then mitigate remaining impacts, if needed, through programmatic adjustments to ACF that respond to reliability and affordability issues.

Improve and Formalize Interagency Coordination on Energy Infrastructure

To improve planning and coordination, CARB should enter into a formal arrangement with partner agencies. As an example, the State Water Resources Control Board (SWRCB) established the Statewide Advisory Committee on Cooling Water Intake Structures (SACCWIS) through a Memorandum of Agreement[8] with the California Energy Commission (CEC), California Public Utilities Commission (CPUC), California Coastal Commission, California State Lands Commission, California Independent System Operator (CAISO), and CARB for a similar purpose. The SACCWIS holds annual public meetings and publishes recommendations to the SWRCB on its once-through cooling policy, including recommended adjustments to compliance schedules for OTC power plants, in order to ensure and maintain grid reliability. The SACCWIS also reviews annual grid reliability studies done by the CAISO and the Los Angeles Department of Water and Power.

Another approach that could be taken is the one directed by AB 1318 (V.M. Perez, 2009) and codified in Health & Safety Code § 39619.8, which called upon CARB to consult with the CPUC, CEC, SWRCB, and CAISO in order to evaluate electrical system needs in the South Coast Air Basin and recommend the most effective and efficient ways to meet state and federal air quality laws, including adjustments to the South Coast Air Quality Management District's emission reduction credit program for the purposes of permitting power plants in the basin.

[7] See CARB Appendix B: Draft Environmental Analysis for the Proposed 2022 State Strategy for the State Implementation Plan, release date March 29, 2022, page 70.
[8] The MOA and information on the SACCWIS is available at https://www.waterboards.ca.gov/water_issues/programs/ocean/cwa316/saccwis/.

Establish a Program to Hasten Public Charging and Hydrogen Fueling Projects

The next major hurdle facing ACF fleets is the lack of public station charging and hydrogen fueling for HDV-ZEVs. Most HDVs use public stations along their routes, and some, like the drayage fleets, may be wholly dependent on public station fueling. For example, from the Advanced Clean Trucks (ACT) Large Entity data, 33 percent of reported vehicles do not typically return to their home base daily, and 55 percent do not use their home base as a primary means of fueling. Presumably, the majority of offsite fueling happens at public stations. For this reason, CARB should be at the forefront of efforts to spur public ZEV development, including efforts to help address the poor business case for investment during early years of the program. It would also be useful if the utilities could use location-specific ACT Large Entity data to help identify the charging needs in their respective territories and plan accordingly. This will help utilities get a head start on installing infrastructure upgrades necessary to support new fueling and charging stations.

"It is safe to say that in the near term, the level of publicly accessible heavy-duty charging infrastructure is grossly insufficient for the expected number of battery-electric trucks."

- *Fueling the Future Fleet* (September 2021)

Credits from the Low Carbon Fuel Standard may not be enough of a financial prompt to spur investment and development given, what CARB staff acknowledge, the "chicken-and-egg" market problem. That is, station developers have little incentive to invest in infrastructure today when there are no ZEVs, and fleets can't switch before public fueling and charging is ready. Additionally, LCFS credits go to the station owner and not the vehicle owner, therefore LCFS credits can't be used to offset capital vehicle costs for those that use public charging.

found that only 6% to 18% of public chargers needed for drayage fleets at the Port of Long Beach will be ready by 2025. By 2035, the port needs as many as 4,300 chargers, but currently, only nine are expected.

A good starting point is CARB's participation in the SB 671 freight corridor study being led by the California Transportation Commission (CTC), which will identify priority projects, help direct public and private funds, and make specific recommendations to the CTC, CARB, and CEC related to clean freight infrastructure and technology. However, the SB 671 work is limited in scope and time, and cannot address infrastructure needs statewide.

Evaluate State of Charging Technologies, Address Outstanding Technical Issues

Part of the problem with the business case for projects lies in the early but evolving state of charging technologies. As a recent detailed study for the Port of Long Beach found:

> "The effort to deploy adequate levels of public charging infrastructure is complicated by the limits of today's charging technologies and the poor business case for public charging. Public charging generally requires quick turnaround times – for the drivers and the station operators – but at the current power levels, the trucks take two to three hours to charge. Although faster charging rates are on the horizon, the truck

> manufacturers are not yet designing to those standards. Thus, in the near term, it is reasonable to minimize investments in publicly accessible opportunity-charging stations, instead focusing on overnight charging configurations or postponing major deployments altogether until the technology improves." [9]
>
> "For overnight charging, when trucks park for hours, the 50-350 kW 'slow' chargers are sufficient. For opportunity charging, however, these chargers are not ideal. The same truck may need to charge several times throughout the day in order to complete a shift. Thus, 'fast' charging of 500 kW or more is the best option for opportunity charging, although today, electric drayage truck manufacturers are not designing to this standard (Burnside, 2020), and there are no plans to do so in the foreseeable future."[10]

Equally troubling is a recent study of the reliability of light-duty vehicle public chargers conducted by UC Berkeley researchers. Their evaluation of 657 public chargers in the Bay Area found that 22.7 precent, or nearly a quarter, were non-functioning.[11] This mirrors anecdotal experiences of HDV early adopters with in-depot charging; chargers must be frequently tested and reconfigured to work as planned with HDV-BEVs.

One final comment on charging technology is the need for standards such that all MHD, or at least, HD ZEV vehicles can charge/fill with common infrastructure components—kw and bars. Without standards, public charging becomes much more expensive and complex.

At a minimum, CCEEB asks that CARB broaden its infrastructure construction delay extension to cover instances when installed charging infrastructure malfunctions and needs to be reconfigured or changed out. Currently, the draft rule only considers construction delays. Also, the exemption should not be limited to a single approval or a single year. Such hardwiring of the rule adds unnecessary difficulty to implementation.

Prioritize Development of Hydrogen Production and Distribution for Transportation

Parallel to the need for CARB to more heavily engage in charging infrastructure readiness, CARB and its partner agencies must also be at the forefront of efforts to develop affordable hydrogen supplies and HDV fueling stations and infrastructure.

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[9] See *Fueling the Future Fleet: Assessment of Public Truck Charging and Fueling Near the Port of Long Beach*, prepared by Starcrest Consulting, LLC, September 2021, Page 1. https://thehelm.polb.com/download/379/zero-emissions/12744/final-polb-charging-study-12-sep-2021.pdf/#page=9.

[10] Ibid.

[11] See D. Rempel, et. al., *Reliability of Open Public Electric Vehicle Direct Current Fast Chargers*, April 7, 2022. https://ssrn.com/abstract=4077554.

Section 2013. Public Fleet Requirements

Section 2103(a) Applicability

The ACF draft rule currently divides waste haulers between public and private fleets. However, both face similar and shared challenges trying to reconcile the ACF rule with separate organics diversion policies stemming from SB 1383 (Lara, 2016) and the CalRecycle regulation. CCEEB believes CARB should consider engaging SB 1383 fleets jointly, and work with them to develop coordinated solutions that recognize and complement SB 1383 goals and policies.

We believe such a focused realignment would have a nominal impact on ACF outcomes, while improving overall environmental benefits. First, waste haulers represent a very small fraction of the total number of vehicles subject to ACF. From the ACT Large Entity data, waste haulers were only 3.33 precent of the public fleet respondents, and only 2.32 percent of the high priority or federal fleet respondents. Likewise, only three percent of *all* reported vehicles are natural gas, suggesting that the share of those that are also in SB 1383 fleets is even smaller. Second, nothing would preclude CARB from continuing with requirements to transition these fleets to ZEVs. Finally, we note that the current carbon intensity for renewable gas is less than any other option, including electricity. Given the opportunity for locational and process efficiencies available to waste and organics handlers, it seems reasonable that CARB could work with them to further increase greenhouse gas benefits through a better coordinated policy approach.

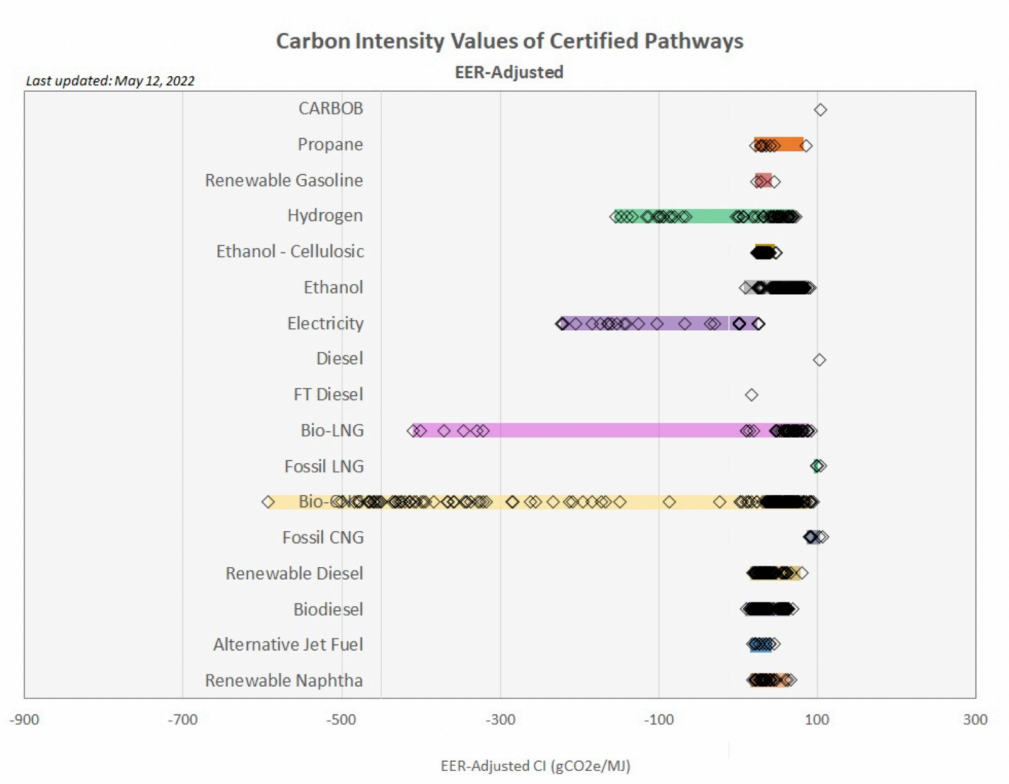

Figure 3: LCFS Pathway Certified Carbon Intensities, last updated May 12, 2022

Coordination Is Needed with Existing Air District Rules

CARB should be coordinating with local air districts , particularly in regards to potential conflicts between ACF and SCAQMD's Rule 1196. CARB should discuss with SCAQMD the details of how the two rules will interact. Many of the flexibility options proposed in the ACF such as the early action credits, 50% purchase requirement in 2024-2026, and mutual aid exemptions may not be possible for fleets if SCAQMD ultimately does not approve a second exemption, known as a Technical Infeasibility Certification Request. This double exemption process will lead to longer, more expensive and complex procurements by public fleets.

Section 2103(b) Definitions

*For definitions, terms that apply to all fleets in the rule are **highlighted**, and what we discuss under Section (§) 2013 applies equally to the other relevant sections.*

Terms That Need to Be Defined

"**Commercially Available**" – as discussed on above, this term must be defined.

"**Designated Contact Person**" **–** this term should define the person, as identified in the fleet report in §2015.4(c)(1), to whom CARB sends all notifications, even if in addition to another person within the organization to who receives CARB communications. For example, it is CARB's policy to send audit requests to the registered vehicle owner, which may not be the same as the designated contact person. Because an entity has only 72-hours to respond under the proposal, communications not properly routed to the designated contact person may not be acted on in time. CARB should also clarify in Section 2015.5 that CARB requests will be sent to the designated contact person.

Comments on Defined Terms

"Backup vehicle" – CCEEB appreciates and supports the change that allows fleets to exclude mileage accrued due during an emergency.

"**California fleet**" – although the definition is clear, CCEEB believes that fleets should have an option to bring an out-of-state vehicle into California temporarily, for a short duration, and under specified but infrequent circumstances short of a declared emergency. For national and multinational entities, situations may arise where a vehicle must enter California unexpectedly. This rare situation should not throw the entire fleet into non-compliance. CCEEB's intent is not to create a loophole, but as currently written, we believe ACF's "at any time" standard is overly stringent and unfair to entities that manage assets both in and outside the state.

"**Declared Emergency Event**" – It is not workable for the CARB EO to be the entity that decides when an emergency is over. These are very specific instances where the duration is based on "immediate threat to public safety" which may preclude come cleanup and repair activities. Finally, providers of essential public services may face local or system emergencies that fall short of a declared event.

"**Emergency operations**" – CCEEB disagrees that "Routine operation to prevent public health risks" does not constitute emergency operation. This definition should allow for non-emergency operation if time critical to prevent future or near-term emergencies.

"Near-zero-emissions vehicle" Include the complete definition of a "Near-zero-emission vehicle" in the ACF regulation. NZEV's are presented as a viable alternative but CCEEB has yet to hear a clear explanation from CARB of what one is and if they are even available.

Section 2013 Requirements

§ 2013(d) General Requirements – starting January 1, 2024, public fleets in most areas will need to purchase 50 percent ZEVs each calendar year until January 1, 2027, when they must purchase 100 percent ZEVs. Agencies in designated low population counties have no requirements until January 1, 2027, when they must purchase 100 percent ZEVs. This timeline does not allow for public agency procurement to occur. CCEEB suggests at least a 1-year lead time for the effective date of the rule. On the current schedule, there may only be a few months before compliance starts. Purchasing decisions will have been made long before.

§ 2013(d) Requirement to Hire Compliant Fleets-Delete unnecessary provisions related to hiring compliant fleets. The draft rule includes provisions requiring any hiring entity to verify that hired fleets are in compliance with the ACF. CCEEB recommend deleting this provision, as it would be unduly burdensome to comply with, and is not the responsibility of a hiring entity to enforce compliance with the ACF.

§ 2013(j) Order Cancellations – Some order cancellations should be allowed for good reason, including significant operational or budgetary changes.

Section 2013.1 State and Local Government Fleet Exemptions

(a) Backup Vehicle Exemption

CCEEB appreciates the addition of (a)(2) that allows a fleet to exclude mileage accrued while performing emergency operations from the annual 1,000-mile limit for backup vehicles. Routine 'emergencies' and similar events not necessarily tied to a natural disaster, such as water main breaks or downed power lines, can also occur and should be included.

(b) Infrastructure Construction Delay

CCEEB supports this concept but would like to work with staff to refine it. First, in (b)(2), delays in receiving needed parts and equipment should be included, as well as delays due to faulty equipment that must be replaced.

Second, CCEEB asks staff to clarify how it will review and process requests for extensions, including discussion of what guarantees a fleet will have in terms of the timeliness of CARB decisions. For example, at what point in the project should fleets apply for the extension? As soon as they think a delay will occur? When they alert the vehicle vendor that infrastructure won't be ready? During the annual April 1 compliance reporting? And how long will CARB staff take to review and approve requests? What happens if the fleet operator and CARB disagree as to what constitutes "good engineering judgment" or whether or not the delay was "beyond its control"? These procedural and timing questions also apply to other exemptions and extensions. However, CCEEB believes that infrastructure cases will have many more factors involved, and consequently, evaluations are more likely to be subjectively determined.

This exemption doesn't provide any real benefit as written to public fleets. Also, CCEEB is concerned with requiring a letter signed by a utility. The delay could be caused by a variety of factors, and it would be difficult to determine who the responsible party should be. We note that infrastructure projects currently take as long as three or more years, depending on the scale of the project and local constraints. Fleets will want to cohesively install enough capacity, whether for battery charging or hydrogen fueling or both, for the *entire fleet in one build*, especially given the fast pace of turnover envisioned by the ACF rule. For example, a fleet of 100 that replaces 10 percent or 10 vehicles per year would be 95 percent ZEVs by 2034. The complexity of infrastructure installation grows quickly if fleets use more than one depot to service and maintain vehicles, since this means that multiple projects in more than one location would be needed. We again point to the value that a Hearing Board could lend to the program in dealing with exceptional but complicated infrastructure issues.

(c) ZEV Unavailability Exemption

The ZEV Unavailability Exemption does not apply to pickups, buses, box trucks, vans, or any tractors. CCEEB is unsure why this restriction is needed. If, as CARB staff believe, ZEV models in these categories are available now, then the exemption would never be triggered and none of the vehicles would ever be added to the annual list. If, however, fleets were able to document the unavailability of ZEVs to the satisfaction of CARB staff, then the vehicles should be added to the list, regardless of the category. Vehicles may not be practically available or meet fleets' needs. The definition of tractors is too broad to all be excluded from the ZEV unavailability and mutual aid exemptions. For example, 3 axle class A tractors are often used for mutual aid and are required to transport heavy loads and travel long distances. Tractors may be available that can carry lighter loads, but those may not be suitable for all cases.

Additionally, CCEEB believes that fleets should be able to apply for a ZEV Unavailability Exemption directly, even if a vehicle was omitted from staff's annual listing. While we appreciate and support the streamlining benefits of the annual list, there may be unintended omissions or new information that needs to be considered.

Finally, part (4) of this subsection should be reworded to improve clarity.

(d) Mutual Aid Assistance

CCEEB appreciates staff's consideration of mutual aid assistance and the need to have coordinated emergency response. The Mutual Aid Assistance Exemption requires that 75 percent of vehicles in a fleet must already be ZEVs before it can be triggered, and denies applicability to pickups, buses, box trucks, vans, or any tractors. See above comment for not including blanket vehicle categories.

We suggest replacing references to "mutual aid" with "emergency response" to extend the exemption to other essential public utilities that do not necessarily have mutual aid agreements.

The fleet must also prove that no mobile fueling option is commercially available. This requirement needs additional refinement and clarity. For example, mobile fueling needs to be capable of fueling or charging all vehicles responding, multiple times over multiple days.

In terms of the mobile fueling requirement, how does staff interpret "commercially available"? Does this mean that mobile fueling equipment is available for a fleet to purchase and deploy alongside emergency ZEVs? Or does it mean that a mobile fueler is available to hire or access but not owned by the fleet itself? If the former, has CARB estimated the cost to fleets for purchasing and maintaining mobile fueling equipment for these purposes? If the latter, then CCEEB believes this criterion should be removed; fleets will not know or be able to speculate where mutual aid assistance will be needed in the future, or what ZEV mobile fueling options would be available at that time and place.

Section 2013.3 Recordkeeping and Reporting

CCEEB makes the following suggested changes

- Suggest reporting changes annually (instead of 30 days).
- Suggest responding to audit within 5-10 business days (instead of 72 hours).
- Suggest clarification be included in the rule for early action credits.
    - Provide a list of grants or incentive programs allowable to generate credits.
- Clarification and/or removal of hiring complaint fleets and operator documentation requirements.

Section 2013.4 Compliance and Enforcement

Part (a) requires a "fleet owner" to provide records requested by CARB. CCEEB asks staff to revise this language to read: "Within 72 hours of a request by CARB, ~~a fleet owner or~~ **the designated contact person, as identified in Section 213.2(c)(1),** must make all records required to be kept per sections 2013 through 2013.4 available to the Executive Officer for audit to verify compliance and the accuracy of the reported information." If CARB sends notification to the owner on record with the California Department of Motor Vehicles, or registered owner listed in another state's records, then the person responsible for recordkeeping and reporting for ACF may not receive the audit request in time to respond. CCEEB believes CARB should correct this routing problem and use the contact information provided by the fleet in its annual reports.

Section 2015. High Priority and Federal Fleet Requirements

Section 2015 General Requirements

Section 2015(a) Applicability

Please clarify in subsections (C) and (D) that the "50 or more vehicles" refers only to vehicles operating in California, and not vehicles operated outside of the state.

Section 2015(b) Definitions

Please refer back to our discussion of definitions under Section 2013.

Corporate Organizational Issues

Section 2015(f) Controlling Party Compliance Requirements
Section 2015(g) Corporate Joint Compliance Option
Section 2015.4(d) Corporate Joint Compliance Reporting

CCEEB believes additional discussion on these sections is warranted given their complexity.

Sections 2015.1 and 2015.2 Requirements to Add ZEVs and Fleet ZEV Milestones

Waiver of Rights Established in Health & Safety Code 43021(a)

CCEEB is concerned that CARB would seek to have fleet owners "knowingly and *voluntarily*" waive away rights they have in the Health & Safety Code, as this appears to be an attempt to circumvent SB 1 (Beall, 2017). Indeed, the so-called "Flexibility Option" would, in most cases, not be "voluntary" at all. That is, fleets that could not immediately transition to ZEVs on January 1, 2024 would be left with no other option; we disagree, then, that this is a "voluntary" choice.

The purpose of this requirement is to force early retirement of ICEVs before the end of minimum useful life. However, CARB hasn't quantified what incremental emissions benefit could be gained by curtailment of private property rights and H&SC protections. We note, from the ACT reported data, that the vast majority of vehicles are replaced well before they reach the end of useful life;[12] we presume that the small fraction that remain are kept due to financial need or because they are highly specialized but low use.

While CCEEB supports a framework that allows fleets to choose between a ZEV purchase mandate or ZEV in-use milestones, it does not believe that either pathway authorizes CARB to bypass statutory requirements. CCEEB recommends that staff revert back to the regulatory framework previously proposed, whereby ZEV milestones apply but without circumvention of SB 1. Additionally, CARB should explicitly allow fleets to switch between pathways, as they improve their understanding of and experience with ACF implementation and ZEV deployments.

Section 2015.3 Exemption and Extensions

CCEEB asks for an expanded discussion in the rule that describes how CARB will accept, process, and evaluate requests from fleets for exemptions and extensions. Timeliness of CARB review and response is of utmost importance, and will greatly affect fleets' ability to plan for compliance and manage ZEV purchasing and deliveries.

CCEEB is concerned that uncertainty over when and how CARB decides exemption requests may mean that fleets need to overbuy or buy vehicles they cannot use, simply to ensure compliance. For example, imagine a high priority fleet comprised of 20 vehicles in Group 1 that plans in 2024 to buy one BEV and seek one daily mileage exemption in order to meet the 10 percent ZEV milestone for the 2025 compliance year. If CARB staff denied the exemption request, the fleet would be in violation unless it could procure an additional ZEV before the end of 2024. If in violation, would CARB issue a single penalty for missing the annual milestone, or would it seek daily penalties until the fleet came into compliance by putting a ZEV in actual use? Or imagine a fleet that received a one-year extension due to infrastructure construction delays, but the problem remained unresolved in the second year. Not only would it need to have delivered all of its exempted first year vehicles, it would also have to purchase second-year vehicles – even though it still had no means to fuel or power any of its ZEVs.

(a) Backup Vehicle Exemption

Comments made in regards to § 2013.1(a) and backup vehicle exemptions apply equally to this subsection (e) as well.

[12] The way the data is binned by CARB does not allow us to breakdown responses by year, but does indicate that 80 percent of reported vehicles are replaced an average of 15 years or less. Only 6 percent are kept more than 20 years.

(b) Daily Mileage Exemption

In order to be eligible to use the daily mileage exemption, a fleet must first prove that no other vehicle in its entire statewide fleet can be replaced with a ZEV. This is unworkable; staff should restructure this exemption and carefully consider how it can work under either compliance pathway. From the current draft [**emphasis** added]:

> *"Fleet owners may purchase an ICEV and exclude it from the ZEV milestone requirements of section 2015.2 if the fleet owner can demonstrate that **all** the remaining ICEVs in the fleet that are not already using an exemption or extension cannot be replaced by a new ZEV while meeting the daily mileage needs of any existing vehicle in the fleet if the criteria specified in section 2015.3(b) are met." Section 2015.2(e)(2)*
>
> *"A fleet owner may apply for an exemption to replace an existing vehicle with a GVWR greater than 14,000 lbs. with another ICEV if **all** the ZEVs that are commercially available to meet the primary intended function cannot meet the daily mileage or daily hours of service needs of **any** existing ICEV with a GVWR greater than 14,000 lbs.in the **California** fleet." Section 2015.3(b)*

The fundamental problem with the Daily Mileage Exemption is that it is blind to differences in vehicle type, duty cycle, and category. For example, if a fleet needed to replace a bucket truck, but no ZEV was available that could meet its needed mileage range or and power capacity, it would <u>not</u> be allowed to purchase a replacement unless and until it could first turnover every single other vehicle in its entire fleet, statewide, and regardless of the age or useful life of the other vehicles. This is, at best, impractical and in many cases, impossible. The fleet would be left without any bucket truck, unable to buy either a ZEV or an ICEV.

Staff should recognize that different problems arise under each of the compliance pathways:

> <u>ZEV-only additions pathway</u> (§ 2015.1) – as with our bucket truck example, the problems with the Daily Mileage Exemption are clear; a fleet could easily be stuck unable to buy either an ICEV or a ZEV, and unable to continue operating its existing vehicle.
>
> <u>Milestone in-use pathway</u> (§ 2015.2) – problems with this pathway are less clear, but still remain. For example, say there were a fleet of 100 box trucks where half (50) drove short ranges and half (50) drove long ranges. The fleet purchased 10 BEVs to meet its 2025 milestone target of 10 percent. During the year, however, one of its long-range trucks was totaled in an accident. Before it could buy a replacement, it would *immediately* need to purchase and *put in use* 40 additional BEVs, i.e., replace <u>all</u> of fleet that could be transitioned to ZEVs. Given the realities of purchasing and project timelines, and the lack of infrastructure preparation, it seems unlikely the fleet would be able to meet the eligibility requirements for the Daily Mileage Exemption, and, with no ICEV replacements allowed, the fleet would shrink to 99 vehicles.

Another aspect of the Daily Mileage Exemption that causes concern is the way it unfairly penalizes fleets spread-out over large geographic areas. For example, say a fleet has a large depot where it is already installing chargers and plans to transition vehicles domiciled there as soon as possible. However, it also has three small, rural facilities where it keeps a few F-250s needed to service remote sites, and these vehicles never travel to its main depot. If that fleet needed to take a Daily Mileage Exemption, it could not do so until it had replaced all of its remote service F-250 and installed charging at its rural depots – regardless of the age of the F-250s, how much useful life remained, or the impracticality of installing chargers on short notice.

(c) Infrastructure Construction Delay Exemption

Comments made in regards to § 2013.1(b) on infrastructure construction delay extensions apply equally to this subsection (e) as well.

(d) Vehicle Delivery Delay Extension

Similar concerns to § 2013(j). There may be circumstances whereby a fleet should have the right to cancel an order and not be penalized, i.e., granted this exemption. For example, a newly marketed vehicle receives widespread reports of problems and the fleet wants to cancel its order.

(e) Vehicle Unavailability Exemption

Comments made in regards to § 2013.1(c) on commercially unavailable vehicles apply equally to this subsection (e) as well.

(f) Exemptions Pursuant to Declared Emergency Events

Comments made in regards to § 2013.1(d) on public fleets mutual aid assistance apply equally to this subsection (f) as well.

Section 2015.6 Compliance and Enforcement

Comments made in regards to § 2013.4 and public fleet compliance and enforcement issues apply equally to this section as well. CARB notifications must be sent to the designated contact person on record in order to fleets to have time to respond within 72 hours.

Section 2016. 100 Percent Medium and Heavy-Duty ZEV Sales

Section 2016(d) requires that all on-road vehicles over 8,500 lbs. GVWR that are "produced and delivered for sale to the ultimate purchaser in California must be ZEVs," starting with Model Year 2040. However, applicability is limited to vehicles "for sale in California." This makes it unclear whether and how the rule could apply to vehicles purchased out of state but brought into California. It is also unclear how the rule affects third party sales since the rule only applies to vehicle manufacturers.

We hope these detailed comments are helpful to CARB staff as it considers both the rulemaking process and proposed regulatory framework for Advanced Clean Fleets. While clearly much more work and public discussion is needed to refine the rule, we believe that ACF is "too big to fail." There is no question about California moving forward with its ZEV goals; rather, it's a question of how best to align transformative actions across the state's transportation, energy, and goods movement systems in ways that benefit all. We thank staff for considering our comments. Should you wish to follow-up with CCEEB, please contact us at (415) 512-7890 or cceeb@cceeb.org.

Sincerely,

Bill Quinn
President
CCEEB

cc:
Jackson Gualco, The Gualco Group, Inc.
Jon Costantino, Tradesman Advisors, Inc.
Members of the CCEEB Air Project

Attachment A – Commercially Available

Principles to Guide Understanding of "Commercially Available"

Problem Statement

For zero-emission heavy-duty vehicles (ZE-HDVs), defining the term "commercially available" can mean very different things to different fleets and different use cases. However, understanding what this term means for regulatory purposes will be crucial for fleets subject to the California Air Resources Board (CARB) proposed Advanced Clean Fleets (ACF) rule. CARB uses the term nineteen separate times in its May 2, 2022 draft rule, yet does not define the term, nor does it explain how staff will interpret it during implementation. This needs to be clear and explicit from the outset. CARB and fleets need to agree upon what is and is not "commercially available" so that fleets can make informed and timely purchasing decisions and, if needed, have some certainty about CARB evaluation of exemption requests caused by the commercial *un*availability of ZE-HDVs. Just because a vehicle has been piloted in demonstration projects or advertised in marketing materials does not mean that it is commercially available.

Solution: Agree Upon a Set of Principles to Guide Definition of "Commercially Available"

CCEEB believes that CARB should work with stakeholders and its Board to define "commercially available" in the ACF rule and establish a set of guiding principles that staff will use as the basis for evaluating fleet compliance. The rest of this brief lays out a set of suggestions that we hope can serve as a foundation for CARB efforts in this area and be incorporated into the proposed draft rule.

Drive and Duty Cycle Principles and Criteria

A commercially available ZEV should meet the drive and duty cycles of the internal combustion emission vehicle (ICEV) it is replacing, i.e., a "one-to-one" replacement. A fleet should not be expected to significantly change its business model or limit its current operations.

Maximum range matters more than average mileage. If a ZEV cannot meet maximum range needed, then the fleet cannot put it into service to replace an ICEV that can.

Along with mileage, a ZEV must meet the power takeoff (PTO) needs and/or payload capacity of the ICEV being replaced. Evaluations of range, power, and payload for battery electric vehicles (BEVs) need to further factor in ambient temperature, which affect battery capacity.

Actual mileage and power capacity must be evaluated, not nominal ranges or capacities advertised in marketing materials. This is consistent with the concept of "achieved in practice" for best available control technologies; equipment must operate as promised in real world conditions.

Purchasing and Delivery Principles and Criteria

Fleets should be able to choose from more than one automaker (i.e., original equipment manufacturer or "OEM"). Having only one option is a monopoly, not a market.

Ideally, at least one OEM will be a major automaker with established market capitalization.

If the OEM or vendor cannot guarantee delivery within a year of placing a purchase order, then the vehicle is not currently available.

Operation and Maintenance Principles and Criteria

An OEM or vehicle vendor must be able to provide trained service technicians and vehicle support.

A fleet must be able to reliably fuel a hydrogen fuel cell electric vehicle or charge a BEV. Infrastructure-vehicle connectivity and durability fits within considerations of commercial availability. For example, if a fleet needs a 350+ kW charger for a Class 8 truck, both the charger and truck need to be commercially available.

Other Issues

Total Cost of Ownership (TCO) should factor in the expected loss of residual value from early generation ZE-HDVs. It will take time and volume for a secondary market to emerge, and early generation vehicles are less likely to be resold.