



February 20, 2024

Honorable Chair Liane Randolph and Honorable Board Members California Air Resources Board
1001 I Street
P.O. Box 2815
Sacramento, CA 95812

Re: SUPPORT Proposed Amendments to the Low Carbon Fuel Standard Regulation

Submitted to <https://ww2.arb.ca.gov/applications/public-comments>

Dear Chair Randolph and Honorable Board Members:

The Electric Vehicle Charging Association (EVCA) and CalETC appreciate this opportunity to SUPPORT the Low Carbon Fuel Standard (LCFS) regulation and provide feedback for the California Air Resources Board (CARB) Board member consideration. This letter largely supports the proposed draft regulation order and provides some suggested modifications for consideration. We also appreciate the tremendous effort and accessibility of CARB staff during the extensive public process leading up to this hearing.

EVCA is a not-for-profit trade organization of twenty leading EV charging industry member companies and two zero-emission autonomous fleet operators. The association was established in 2015 to comprehensively represent the entire EV charging value chain and provide a collective industry voice for decision makers.

CalETC is a non-profit association committed to the successful introduction and large-scale deployment of all forms of electric transportation including plug-in electric vehicles of all weight classes, transit buses, port electrification, off-road electric vehicles and equipment, and rail. Our board of directors includes Los Angeles Department of Water and Power, Pacific Gas and Electric, Sacramento Municipal Utility District, San Diego Gas and Electric, Southern California Edison, the Northern California Power Agency, and the Southern California Public Power Authority. Our membership also includes major automakers, manufacturers of zero-emission trucks and buses, developers and operators of charging stations and other industry leaders supporting transportation electrification. CalETC supports and advocates for the transition to a zero-emission transportation future to spur economic growth, fuel diversity and energy independence, ensure clean air, and combat climate change. Please note that the views and comments reflected in this letter represent the positions of the CalETC board of directors and some, but not all, of the members of CalETC.

Over the past 10 years, the LCFS has been tremendously successful in supporting the transition from petroleum to cleaner transportation fuels including electric fuel. Clean low-carbon fuels

have replaced a percentage of petroleum and, in doing so, have reduced climate change pollutants as well as a myriad of air and toxic pollutants that adversely impact communities. The LCFS has served as a catalyst for billions of dollars of investments in clean fuels and infrastructure.

The most recent Intergovernmental Panel on Climate Change (IPCC) report along with countless studies cannot be clearer on what science tells us. We must act decisively with an amplified focus on mitigation if we are to limit the most severe impacts of climate change—impacts that will be disproportionately borne by those least equipped to adapt. The Governor and the Legislature’s leadership to address the threat that climate change poses to the health of Californians and the economy is emphatic and reflected in a series of actions including statutorily mandated greenhouse gas reduction targets and an unprecedented budget commitment.

The 2022 update to the Scoping Plan is the state’s response to the need for a holistic strategy to achieve legislatively mandated greenhouse gas reduction targets including achievement of carbon neutrality by 2045. The 2022 Scoping Plan is built on science and robust analysis, presenting an irrefutable case for ramped-up mitigation and public investment relying heavily on strengthening programs that have been effectively implemented for years. In short, there is no path to achieve the state’s climate goals without strengthening the LCFS.

We have been participating in staff workshops for several years and have had several constructive conversations with staff in that time. We very much appreciate their accessibility and commitment to LCFS.

For a summary of our comments, please see the Executive Summary, immediately below. Thank you again for the opportunity to provide CalETC’s feedback on this important program.

Executive Summary of CalETC’s Comments

EVCA and CalETC largely support the proposed amendments to the LCFS (also referred to as draft regulation order). However, we have many significant concerns and requests for amendments. A summary of our support positions and requests for changes is as follows:

1. EVCA and CalETC recommend the hearing on the new LCFS be no later than 2nd Quarter 2024,
2. EVCA and CalETC support the proposed carbon intensity targets in Table 1 (e.g., 30% in 2030 and 45% in 2045),
3. EVCA and CalETC appreciate the proposal to extend the existing Fast Charge Infrastructure (FCI) program for light duty EVs at public charging locations, but the proposed size and rules governing this program are inadequate to meet California’s needs for 83,000 public DC fast chargers by 2035 needed to support the Advanced Clean Cars II (ACC II) regulation,
4. EVCA and CalETC appreciate the proposal to create a new FCI program for medium-, and heavy-duty EVs (eMHDVs) at public, fleet, and shared depot locations but the proposal includes several limiting parameters that will undercut its effectiveness in supporting

California's Advanced Clean Truck (ACT) and Advanced Clean Fleet (ACF) requirements. EVCA and CalETC oppose the geographic limits and prescriptive site limits and specifications included in the proposed LCFS. A larger, more flexible program is needed to meet industry needs, accelerate deployment, reduce costs, and align with California's truck electrification ambitions,

5. EVCA and CalETC oppose the proposed requirements for parties to pay for visits to individual charging stations by third-party verifiers to check for accuracy at public and private charging stations for light-, medium-, and heavy-duty EVs and incremental residential credits when reviewing quarterly fuel transaction reports. Instead, we recommend parties pay for desk-top reviews by third-party verifiers at central data locations that do not duplicate existing accuracy regulations established by the California Department of Food and Agriculture's Division of Measurement Standards and the California Public Utilities Commission (CPUC) and that generators of small numbers of non-residential credits be exempted from these requirements,
6. EVCA and CalETC recommend at least an immediate 7% step down in carbon intensity (CI) to better account for historical overcompliance and push the market to greater levels of emission reduction and attract the private capital needed to meet state requirements and goals,
7. EVCA and CalETC support the proposed automatic acceleration mechanism but recommend that the mechanism can be triggered as soon as 2027,
8. EVCA and CalETC continue to recommend the new LCFS create a level playing field for emerging transportation electrification end-uses in airports, agriculture, mining, marine, aviation, and recreation by adding conservative default EER of 2.0. while excluding certain end-uses such as golf carts and indoor sweeper/scrubbers that are already electric,
9. EVCA and CalETC support the proposal for all sizes of electric forklifts to remain in LCFS,
10. EVCA and CalETC support expanding LCFS to new sectors. We support expanding LCFS to include new types of transportation (e.g., sea and air transport). Including new types of transportation will further necessitate increasing the stringency of LCFS. The Low Carbon Fuel Standard is a successful tool for decarbonizing transportation and should be expanded to other types of transportation given the climate crisis.

EVCA- CalETC Comments on the January 2024 LCFS Draft Regulation Order

EVCA and CalETC appreciate this opportunity to comment on the proposed LCFS amendments. Our comments focus on the electricity-related provisions.

1. *EVCA and CalETC recommend the hearing on the new LCFS be no later than the 2nd Quarter 2024.*

The first CARB workshop on amending the current LCFS was in late 2020. We previously recommended the new LCFS go into effect in January 2023 if not sooner. The market participants need a new LCFS in effect by the end of this year at the latest.

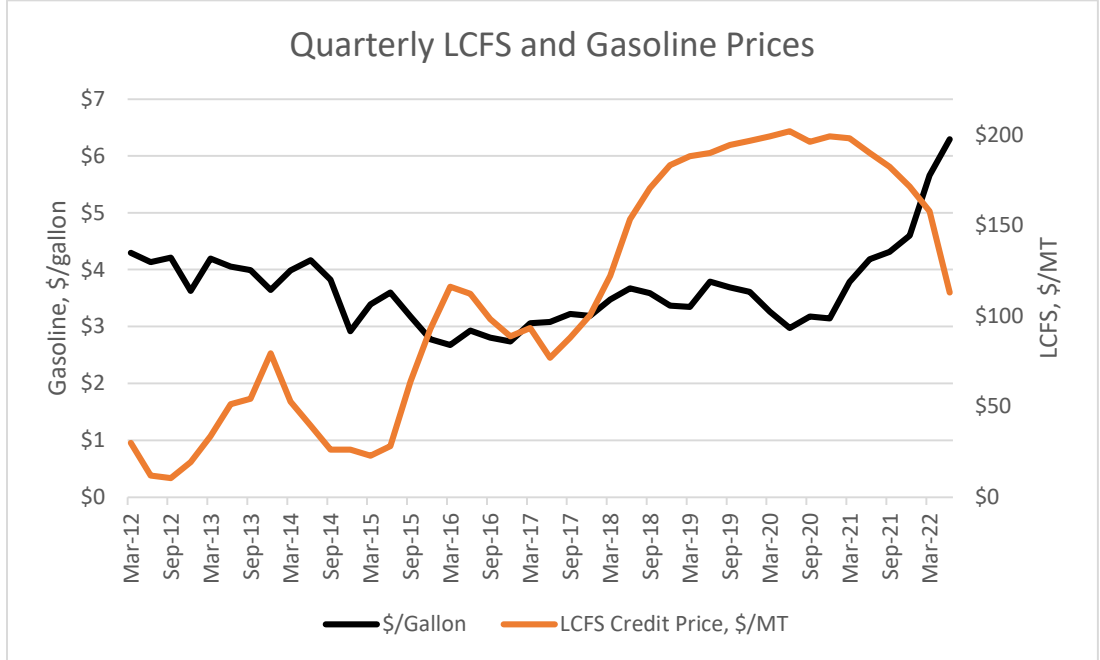
2. *EVCA and CalETC support the proposed carbon intensity targets in Table 1 (e.g., 30% in 2030 and 45% in 2045).*

EVCA and CalETC applaud staff for aligning the proposed Table 1 requirements with CARB's Scoping Plan vision and providing industry and stakeholders with the certainty needed for LCFS to be successful to planners, implementers, and investors.

Currently the LCFS is overperforming as the carbon intensities are too easy for the market to meet, leading to low credit prices that are undermining investment in electric cars, trucks, buses, and charging infrastructure, as well as infrastructure for other low-carbon fuels. Multiple models support increasing the stringency of the LCFS to a minimum 30 percent reduction in carbon intensity by 2030. It is essential that the stringency be increased expeditiously and be implemented as soon as possible to ensure the LCFS continues to contribute substantially to the state's clean air, climate change, and zero-emission transportation requirements and goals. The LCFS has been a highly successful program as part of a broad package of regulations and incentives to address climate change. For the LCFS program to continue to be successful, the annual compliance requirements on regulated parties should be strengthened and extended. Currently, the LCFS credit market suffers from credit oversupply issues. When the 2030 standard was adopted, the CARB Board made it clear the standard could be adjusted if market circumstances called for adjustment. CARB must expeditiously address this market supply issue; increasing the overall stringency of the LCFS regulation is one way to accomplish this.

While there are impacts to retail gasoline prices from LCFS compliance, the correlation between LCFS prices and gasoline prices is not nearly as significant as global macroeconomic factors that play a much larger role in price swings of this global commodity. The impact of increased LCFS stringency on gasoline prices is overshadowed by other factors. This makes it difficult to determine how the regulated oil industry is responding to increased stringency in LCFS with respect to consumer pricing of gasoline and diesel. The graph below¹ does not show a direct, quantifiable link between quarterly LCFS prices and the price of gasoline. Further, as gasoline faces competition from low-carbon fuels in the next decade, it is likely that any price impact between LCFS stringency and gasoline prices will be further muted.

¹ https://www.eia.gov/dnav/pet/hist/LeafHandler.ashx?n=PET&s=EMM_EPM0_PTE_SCA_DPG&f=M



3. *EVCA and CaETC appreciate the proposal to extend the existing Fast Charge Infrastructure (FCI) program for light duty EVs at public charging locations but the proposed size and rules governing this program are inadequate to meet California’s needs of 83,000 public DC fast chargers by 2035 to support ACC II.*

The proposed LCFS would create a new light duty vehicle FCI program 2026-2030 where the cap on prior quarter deficits is 0.5% (instead of the current 2.5% cap) and limit FCI projects to disadvantaged communities (DACs) are rural areas only instead of the entire state like the current light duty (LD) FCI.

EVCA and CaETC support the following aspects of an FCI program. The current FCI program (which ends in 2025) is a well-designed program that has been effective in helping attract capital to build public DC fast charge stations in California by helping to de-risk investment and, if not for the pandemic, would have been even more successful. One of its most attractive aspects is that it results in charging plazas and refueling stations being able to exit the FCI program and transition to traditional LCFS credits. Put another way, both FCI and hydrogen refueling infrastructure (HRI) capacity credits decrease over time as the utilization of the stations increases and the station generates more traditional LCFS credits.

Recommendations. The proposed LD-FCI program has limits, caps and rules that are very different than the current program and that are inadequate to support the infrastructure needed for the ACC II regulation. In summary, we recommend the existing light duty FCI program be continued to 2035 with only a few modifications to the existing program.

- **Changes to the existing program that we support.** The proposed regulation makes the LD FCI credit life 10 years instead of five years and the formula for calculating LD FCI credits to be linear rather than exponential. Both of these changes make LD FCI have rules that align with the proposed LD HRI. The proposed regulation removes requirements on connectors and raises the minimum charger kW from 50 to 150 kW.
- **Keep the existing program rather than the proposed changes.** The existing LD FCI program has a 2.5% cap on prior quarter deficits, but the proposed regulation lowers this to 0.5%. The existing LD FCI does not have geographic limits on public DCFC locations, but the proposed regulation does. The existing regulation caps sites at 2.5 MW with exceptions allowed up to 6 MW, but the proposed regulation caps sites to 1 MW and four connectors per site which encourages 250 kW chargers. We discuss these issues in detail below.
- **Other recommended changes.** The proposed LD FCI should allow applicants to have zero carbon electricity just like the proposed LD HRI does, and few exceptions should be allowed for DCFC projects in cities and towns that serve apartments and condominiums with DCFC located at curbside or in public, private and non-profit parking lots outside of the apartment or condominium. We discuss these recommendations in detail below.

Keep in the new LD FCI the current 2.5% cap on prior quarter deficits: The CARB Scoping Plan, ACC II, and the AB 2127 report by the California Energy Commission (CEC) all call for or inherently require rapid build-out of DCFC infrastructure to support the light duty vehicle electrification for all use cases. However, the 0.5 percent cap for light duty FCI in the proposed LCFS does not reflect the widespread demand and need for fast charging to meet state requirements.

With the adoption of the ACC II regulation requiring 100 percent of new vehicle sales be battery EVs, fuel cell EVs and plug-in hybrid EVs with 50-mile all-electric range in 2035, California is requiring a dramatic increase in sales of light-duty ZEVs. The rapid deployment of ZEVs accessible to all Californians and the success of ACC II depends upon substantially more access to ZEV fueling infrastructure than currently exists. Therefore, it is counter to the state's ZEV requirements and goals and the commensurate need to build out sufficient fueling infrastructure to reduce the capacity credit generation cap to 0.5 percent for the LD FCI program and 0.5 percent for the LD HRI program. This is particularly true in 2026-2035, when the state anticipates massive ZEV sales increases and a commensurate build out of public fueling infrastructure. It is too early to declare "mission accomplished" on light duty electric vehicle charging. In the technology adoption life cycle, we are now past the early adopters and into the mainstream of car buyers. These buyers tend to be more risk-adverse and more concerned with the availability of charging infrastructure. It is crucial that we continue to maintain a 2.5% cap to create a positive charging experience for these mainstream customers and use the FCI program to build

infrastructure in advance so that we can continue to advance the ACC II towards 100 percent of new car sales.

While an increase in battery EV sales will likely lead to greater utilization of DCFC in a manner that reduces the need for FCI credit generation in certain areas, DCFC usage is not uniform across the state; regrettably, a more restrictive cap on light-duty FCI credits will adversely affect DCFC deployment opportunities in communities with less favorable station economics, which may include rural, low-income, and disadvantaged areas of the state which need more DCFC than a 0.5 percent cap can provide.

Moreover, light-duty FCI credits are also critically important for supporting ongoing operating costs for fast chargers and help enhance station reliability. With charging experience topics emerging as a state and national priority, EVCA and CalETC assert that maintaining broad pathways for light-duty FCI credits will be important for driving consumer confidence in EVs and charging technology – particularly at stations that have yet to achieve robust levels of utilization.

According to the modeling done by Southern California Edison using the Bloomberg New Energy Finance model, the impact of a ten percent cap on prior quarter deficits for capacity credits (light-, medium and heavy duty for both FCI and HRI programs) to the overall LCFS out to 2030 is manageable and the lower cap in the proposed LCFS is not needed.² Furthermore, as shown by the CEC (with the National Renewable Energy Lab), 37,000 public DCFC will be needed to support 8 million EVs in 2030,³ and 83,000 public DCFC will be needed to support the nearly 14 million EVs expected in 2035 under the ACC II regulations.⁴ In fact, data from the CEC and NREL confirm that substantially more DC fast chargers will be needed than the Governor’s prior Executive Order.⁵ CARB’s new LCFS should be aligned with the needs of ACC II. Absent further analysis from CARB demonstrating materially adverse effects from preserving the current light-duty FCI credit structure, EVCA and CalETC recommends that CARB maintain the size of the light-duty credit pool at 2.5 percent of prior quarter deficits.

Keep in new FCI the eligibility of LD FCI sites statewide. The proposed regulation’s limit on LD capacity credit generation to fueling infrastructure located in low-income, rural, or disadvantaged communities (DAC) does not align with the state’s efforts to reduce impacts in those communities, nor does it ensure benefits to those communities. While there may be situations where a low-income or disadvantaged community benefits from fueling infrastructure located in the community, alternatively some communities may prefer that the preponderance of fueling

² See SCE’s [letter](#) December 21, 2022 on the LCFS workshop docket, pages 12-13.

³ Figure 1. Final AB 2127 [report](#) from the California Energy Commission (CEC) 2020.

⁴ Comments by [NRDC](#) on ACC II regulation, page 5.

⁵ Governor’s Executive Order is 10,000 DC fast chargers by 2025.

infrastructure be primarily located outside the community to limit the traffic flow within the community. DAC residents travel beyond their communities and benefit from DC fast chargers outside of the DACs. Also, there may be fueling infrastructure facilities that serve light-, medium-, and heavy-duty ZEVs. And as explained above, the need is so great to meet ACC II that public DCFC are needed in all parts of the state.

The proposed regulation has a restriction that effectively limits LD FCI stations to rural areas because it limits FCI stations to be no closer than ten miles from an existing DCFC station. We oppose this because it is not workable to develop LD FCI stations and check federal maps (e.g., Alternative Fuel Data Center) on a daily, monthly, or even quarterly basis to see if the planned station remains within ten miles of some other public DCFC station.

If our recommendation for no geographic restrictions is not acceptable, we recommend the new LCFS use the term “rural area” instead and it be defined to align with the new definition used by the US Census Bureau. Specifically, we recommend the following edits to Section 95481: “Rural Area” means a census tract ~~with at least 75 percent of its population~~ identified as ~~rural~~ non-urban by the latest US Census data. This definition aligns with the United States Treasury Department and Internal Revenue Service (IRS) guidance on station eligibility for the 30C alternative fuel vehicle fueling property tax credit, which was designed to support the deployment of EV charging infrastructure in non-urban (rural) communities across the US and updated in the Inflation Reduction Act.⁶ The U.S. Department of Energy has also published a clear mapping tool that shows which census tracts meet IRS definition of non-urban census tracts.⁷ The federal definition of non-urban census tracts is easily understood, stable, and remains in effect through 2030 until the Census Bureau updates determinations of urban and non-urban areas.⁸

We also recommend that the FCI program should be slightly modified in order to address the “chicken and egg” infrastructure problem associated with placing public-access DCFC in cities and towns to serve EV drivers who live in apartments and condominiums and where the DCFC is placed in locations such as curbside of a street or in public, non-profit or private parking lots. Building charging at multifamily residences is a well-recognized challenge and placing level 2 chargers on site is not always attractive or in many cases even possible. CARB has an opportunity with this LD FCI program to address this problem by encouraging DCFCs at nearby locations that will work not only for residents of apartments and condominiums but also for

⁶ <https://www.irs.gov/pub/irs-drop/n-24-20.pdf>

⁷ <https://experience.arcgis.com/experience/3f67d5e82dc64d1589714d5499196d4f/page/Page/>

⁸ <https://www.irs.gov/pub/irs-drop/n-24-20.pdf> and <https://www.census.gov/programs-surveys/geography/guidance/geo-areas/urban-rural.html>

residents of single-family homes in denser urban areas where off-street parking is limited. We recommend the following three changes to the proposed regulation:

- The 24-7 requirement for public access should, at minimum, be slightly modified so that non-profit and private locations in our proposal do not run into problems with rights-of-way laws. For example, a site such as a church or a bank needs to close their parking lot for at least one day a year in order to not lose their property rights. Ideally, CARB should also accommodate, through an exception process, other times that access could be blocked for a few hours (e.g., neighborhood festivals).
- CARB should allow less than 150 kW chargers through an exception process (applications to the Executive Officer). An example: adding two 25 kW DC fast chargers curbside is possible next to underground vault transformers in an urban area.⁹ While this may not be a common application, it is a worthy experimental program that could be easily added to the new LCFS.
- Finally, if CARB keeps the proposed geographic restrictions in the proposed LCFS, we recommend that the geographic restriction be lifted for our proposal above to serve those EV drivers who mostly live in apartments and condominiums anywhere in California.

Keep in the new FCI the current rules allowing a 2.5 MW per site cap with exceptions allowing up to 6 MW and more chargers per site. Also, encourage 150 kW rather than 250 kW chargers. To reach the infrastructure needs of ACC II charging sites discussed above much larger than 1 MW sites limited to four connectors per site are needed. The NEVI minimum standards, which CARB uses to justify the increase to 150 kW, state that four ports are the *floor* not the ceiling for eligible NEVI sites.¹⁰ If CARB's intent is to align with NEVI, then CARB should not artificially cap site size if we are trying to build larger sites that EV drivers want. Further, CEC and Caltrans are strongly encouraging NEVI applicants to build corridor sites on I-5 and I-15 that exceed four ports per site. CARB should better align with CEC/Caltrans plans for rural/corridor charger buildout and not artificially restrict site size.¹¹ We strongly recommend returning to the current rules allowing 2.5 MW per site with exceptions to go higher and the only limit on chargers per site would be based on a 150-kW charger minimum. Charging developers are fast moving to 350 kW which also shows that 1 MW is an inadequate cap. Further, charging developers need flexibility to meet consumer demand and the different use cases at DCFC sites where they may want or need 150 kW chargers.

⁹ Conversation with Marvin Moon, deputy General Manager, Pasadena Water and Power.

¹⁰ <https://www.federalregister.gov/documents/2023/02/28/2023-03500/national-electric-vehicle-infrastructure-standards-and-requirements>

¹¹ See slides 18 -19 of staff presentation at <https://www.energy.ca.gov/event/funding-workshop/2023-11/pre-application-workshop-gfo-23-601-californias-national-electric>

Align the new LD FCI more closely with the proposed LD HRI program. We support having the 2026 – 2030 LD FCI program be more closely aligned with the 2026 to 2030 LD HRI program in the proposed regulation, and three recommendations make this alignment closer: 1) keeping the 2.5 MW per site cap in the current LD FCI and not lowering it to 1 MW is very similar to the proposed HRI, 2) allowing use of zero carbon intensity electricity in the FCI formula which is the same as zero CI hydrogen allowed in the proposed HRI formula, and 3) removing the limit of four charging connectors per site. (See our detailed explanation in the next section on this topic).

Extend the new LD FCI to 2035. We recommend that this program extend to 2035 and not sunset in 2030. We are in a challenging phase of light duty EV adoption as the market needs to capture more skeptical mainstream buyers to meet the “hockey stick” ramp inherent in the ACC II requirements. The light duty FCI remains a very elegant and desirable tool to address the chicken-and-egg problem of how to accelerate EV infrastructure and EV adoption. Without the changes we recommend to the light duty FCI the pace of DCFC build-out could dramatically slow which makes meeting ACC II much more challenging. Now is not the time to scale back this program. CARB can take a no-regrets approach to supporting the light-duty fast charging market by adopting a 2.5% cap with no geographic restrictions. While the addition of more credits into the market can lower credit prices several factors can counter this including the new acceleration mechanism.

4. *EVCA and CalETC appreciate the proposal to create a new FCI program for eMHDVs at public, fleet, and shared depot locations but the proposal includes several limiting parameters that will undercut its effectiveness in supporting California’s ACT and ACF requirements. EVCA and CalETC oppose the geographic limits and prescriptive site limits and specifications included in the proposed regulation. A larger, more flexible program is needed to meet industry needs, accelerate deployment, reduce costs, and align with California’s truck electrification ambitions.*

The FCI program, as demonstrated by the existing FCI for light duty EV charging, is an incredibly elegant tool to solve the “chicken and egg” problem that EVs and EV infrastructure face. We truly thank CARB for creating an FCI to 2030 for eMHDVs and support the addition of fleets and shared depot locations as eligible, as well as the addition of more corridors. However, as proposed the MHD FCI is simply not workable for most industry use cases (e.g., shared charging depots and fleets for drayage, short-haul, and delivery trucks), especially in the near term with uncertainty around utilization and truck deployment timelines. It also does not meet the infrastructure needs of CARB’s ACT and ACF regulations.

The proposed new FCI program for MHDVs, which starts when the new LCFS begins and ends December 31, 2030, includes a 2.5% cap on prior quarter deficits and restricts FCI locations to public truck stops and shared depots within one mile of

existing and pending corridors on the federal highway administration map as well as locations that are “on or adjacent to a property used for medium or heavy-duty vehicle overnight parking or has received capital funding from a State or Federal competitive grant program that includes location evaluation as criteria.” It allows projects built after January 1, 2022, to earn credits once the new LCFS begins, limits how many credits a single firm can earn per quarter, requires the minimum charger size to be 250 kW and for public chargers requires acceptance of “all major fuel, credit, or debit cards.” “Private” fleets would not receive as much FCI credit as public truck stops and shared depots. In addition, its rules focus on encouraging 1 MW chargers at truck stops for long-distance travel because the proposal only allows ten chargers per site and has a 10 MW per site cap not just for truck stops but for fleets and shared depots too.

In summary our recommendations are:

1. Remove the geographic restrictions completely; if that is not acceptable, expand the corridor boundary from one mile to five, clarify language around parking, and consider local funding along with state and federal when determining eligibility,
2. Remove the cap of ten chargers per site, and if that is not acceptable, remove this for shared depots and fleets or raise this to 100 chargers per site,
3. Lower the 250-kW charger minimum size to 150 kW, and if that is not acceptable, apply a 150-kW minimum only to shared depots and fleets. If lowering the 250-kW charger minimum is not acceptable, we request that LCFS exempt projects that began design and construction after Jan. 1, 2022, and before the start date of the new LCFS from the 250-kW charger size requirement,
4. Increase the cap the proposed 2.5% of prior quarter deficits on MHD FCI to 5%,
5. Increase the 10 MW cumulative charger nameplate capacity credit generating cap for sites to at least 15 MW or alternatively allow an exception by the Executive Officer for up to 24 MW,
6. Allow zero carbon intensity electricity just like the proposed HRI program,
7. Change the requirement for payment to be done by all major fuel cards to a single fuel card,
8. Include land costs for new sites as an eligible cost, as these stations are extremely difficult to site and new locations are often needed,
9. Clarify what is meant by networking requirements, and
10. Clarify that “private MHD-FCI stations” includes fleets owned by entities in the government, private and non-profit sectors.

Geographic restriction. The market will necessarily prioritize public truck stops in the most heavily trafficked freight routes. Adding additional geographic restrictions will undermine the program, slow charger deployment, and increase costs. EV charging infrastructure for trucks has different siting requirements than other types of liquid or gaseous fueling infrastructure. EV charging can be located closer to the point where

vehicles are domiciled and used, which may not be on or near highway corridors for many of the vehicle fleets that must be electrified.

It is difficult and expensive to find suitable sites for truck charging due to scarcity of land in urban areas (owning or 10-year leases), zoning restrictions, lease restrictions and, most importantly, the challenge in finding 5-20 MW (sometimes more) of grid capacity.¹² The Venn diagram overlap of these needs is small. Restricting FCI to sites within one mile of a corridor is unnecessary and exacerbates the challenges around infrastructure buildout. Expanding eligibility to a limited subset of sites with overnight parking will help in some cases, but greenfield sites with overnight parking will also be needed given fleet operational needs and constraints. Similarly, expanding eligibility to sites that have won specific state or federal grants is directionally helpful but insufficient to cover the broad array of sites the state will need to meet electrification goals.

As broad an area as possible would be helpful to expand opportunities as many shared depots and public access trucks stops will need between 5-20 MW.¹³ Many types of trucks will need shared depots which need to be closer to where the vehicles are domiciled. For example, short-haul trucks or trucks operated by independent-owner operators, which often need shared depots, are often not domiciled near corridors. Truckers who operate local routes need safe overnight parking with full charge in the morning with schedulable charging sessions for top-ups during the day. The focus on corridors in the proposed MHD-FCI may make sense for long-haul trucks, but the proposed LCFS's seeming focus on long-haul trucks versus other segments such as drayage, short-haul and delivery trucks is inappropriate given ACF and the nascent stage of the electric truck market. While single user fleets and shared depots have been added as eligible locations in the proposed FCI, their locations are not concentrated near corridors according to developers.¹⁴

Retaining the one-mile requirement could unintentionally trigger additional utility upgrades because developers will be incentivized to prioritize corridor proximity over existing grid capacity when making siting decisions. This then brings additional costs and delays with the energization and grid upgrade process. Removing the one mile from corridor restriction will open up locations where fleet needs intersect with existing grid capacity, resulting in faster and lower cost infrastructure deployment.

It is important to note that the financial incentives of the proposed FCI MDHD program are not enough to incentivize building the charging infrastructure at a

¹² As an example of the challenge of finding available grid capacity see Southern California Edison's new tool. <https://drpep.sce.com/drpep/>

¹³ See Figure ES-1 at <https://www.nationalgrid.com/document/148616/download> Much more is needed after 2035.

¹⁴ Conversations with Forum Mobility, EV Realty, Carbon Solutions and Tesla.

location that is not likely to see sufficient utilization. As with the light duty FCI program, developers will continue to build in locations that are expected to see utilization as the market matures. The geographic limits are therefore unnecessary from the standpoint of avoiding stranded assets. We recommend completely eliminating the geographic restriction to maximize the benefits of this program. However, if CARB must put a restriction in this new 2024 LCFS, we recommend expanding the corridor boundary from one mile to five from the existing and pending corridors in the Federal Highway Administration map.¹⁵ We also recommend clarifying the language to explicitly allow greenfield sites with overnight parking to support evolving fleet operations, and we recommend consideration of local funding sources (e.g., local air districts) in addition to state and federal as a trigger for eligibility. Overly restricting location for MHD-FCI sites will create adverse impacts on the grid, delay deployment, adversely impact meeting the ACT and ACF regulations and increase overall cost.

In order to address the siting challenges and considerations outlined above, we recommend completely striking section §95486.3 (b)(1)(B)2. Alternatively, increase flexibility with the following changes to the proposed LCFS:

2. Located within ~~one mile~~ five miles of a readying or pending electric vehicle Federal Highway Administration Alternative Fuel Corridor or on or adjacent to a property that allows ~~used for~~ medium or heavy-duty vehicle overnight parking at the time credits are claimed, or has received capital funding from a local, State or Federal competitive grant program. ~~that includes location evaluation as criteria.~~

Ten chargers per site. The proposed regulation caps the numbers of chargers at an applicant's site at 10 chargers.¹⁶ This is a huge problem that will severely restrict the usefulness of this important program. Many depots being designed around the state today serve upwards of one hundred trucks. At larger sizes, economies of scale deliver lower costs. Artificially restricting the size of eligible depots will not only slow deployment, but also raise costs – both of which are counter to the state's interest.

Also, the proposed limit on ten chargers per site and 10 MW per site implies the proposed MHD FCI is designed to encourage 1 MW chargers. The challenge with this is threefold. First, 1 MW chargers do not yet exist at broad commercial levels. Secondly, there are no trucks currently commercially available that can take 1 MW. Third, there is actually a strong policy interest in charging as low and slow as possible: doing so will maximize the utilization of the existing distribution network and thereby minimize rate impacts.

¹⁵ <https://hepgis-usdot.hub.arcgis.com/apps/5c4d9e173301473688468fc7cf6d9e19/explore>

¹⁶“The number of FSEs. The total number for all FSEs claiming MHDFCI credit owned by a single applicant within ¼ mile of an MHD-FCI site cannot exceed ten. The nameplate power rating (kW), connector type(s), and model for each FSE. The total nameplate power rating for all FSEs claiming MHD-FCI credit owned by a single applicant within ¼ mile of an MHD-FCI site cannot exceed 10 MW.”

The requirement in the proposed regulation for claiming credits on not more than ten chargers per site was never workshopped nor mentioned in our conversations with staff last year. For many large government, non-profit, and private fleets and for most shared depots, much larger sites are needed. For example, many developers are building sites with upwards of one hundred chargers – larger sizes bring down costs and make key reliability functions, such as security and technical support staff, economically viable. There is a trade-off between speed of charging and cost, and this is something that market participants should decide.

Minimum charger capacity. Instead of the requirement for a 250-kW minimum capacity for a DC fast charger, we recommend affording more flexibility to industry by setting a 150-kW minimum, and if that is not acceptable, have a 150-kW minimum only for shared depots and fleets. This supports the State’s interest in helping electrify Class 2b to Class 8 trucks that are included in ACT and ACF regulations and in better utilizing grid resources with lower and slower charging. Higher capacity fast charging that seeks to replicate liquid fueling times for combustion vehicles is neither necessary nor desirable in all cases, and unduly increases costs and grid impacts. In addition, there is a lot of variation between Class 2b and 8 trucks in use cases for charging times. An analogy is how CNG trucks found early success with cherry picker trucks (Class 5), transit buses (Class 7), and garbage trucks (Class 7). Similarly, with a shift to 150-kW minimums MHD FCI can better serve many use cases and classes of trucks. For example, small independent truckers will be heavily reliant on shared depots that offer many different kW levels so they can slowly charge overnight or top-off during the day. Our members tell us that their customers are price sensitive. Forcing super-fast charging in all circumstances, regardless of whether it can be served by cheaper and less impactful alternatives, is the equivalent of eliminating level 1 home charging and requiring DCFC for light-duty EV home charging. CARB should provide flexibility to charging developers and their customers instead of picking a certain technology.

As stated above, some fleet consumers and shared depot customers prefer the lower costs associated with 150-kW charging. While we understand the desire to ensure a positive customer charging experience, we do not believe our recommendation will negatively impact public truck stops because the developers and operators of these locations will be subject to market pressures to do what their customers want and will naturally gravitate toward higher kW as this is demanded. If this approach is not acceptable to CARB, we recommend allowing only private and shared fleets to have a minimum DC charger size of 150 kW in order to save costs and provide customers with choices.

In addition, we recommend that the 250-kW requirement for chargers not be applied to stations that began development prior to the start of the new LCFS. (Note: the

proposed LCFS allows stations that started development in 2022 to be eligible for FCI.) Doing so would be very expensive for a developer who already has stations (typically with 180 kW chargers) under development and would require re-engineering the project and potentially starting again in the queue for energization of the location by the local utility.

Cap on prior quarter deficits. The MHD-FCI program is limited to 2.5% of the previous quarter deficits. At 2025 deficit levels, we estimate this would support as little as 635 MW of capacity from MHD FCI credits, depending on utilization, uptime, and other assumptions.¹⁷ According to the CEC’s AB 2127 analysis, the state will need about 2,900 MW of charging from eMHDVs by 2025 and 11,600 MW of charging from eMHDVs by 2030.¹⁸ Additional support is needed to attract the scale of private capital required, particularly at this nascent stage of the market with less than 1,000 MHD trucks and vans on the road and with both fleets and OEMs citing infrastructure as a primary limiting factor.

We recommend increasing the 2.5% cap on prior quarter deficits, particularly in the early years of the program, to kickstart the zero-emission truck market especially for near-term trucks applications in the drayage, short-haul, medium-haul, and delivery segments. As momentum builds, CARB might consider reducing the cap in a future rulemaking. We recognize that there are tradeoffs and that the “right” cap depends on perspective. However, we are at a critical launch point for both ACT and ACF and believe a higher cap – we recommend 5% based on the above need - is warranted to begin deploying a network that will enable the market to take off. Solving the chicken-and-egg infrastructure problem by using FCI to build infrastructure in advance of vehicle adoption is critical to the success of ACF, ACT and the Scoping Plan.

California will need to deploy charging infrastructure in advance of vehicle deployment to keep pace with the need to install over 50 MHD chargers per day every day through 2030.¹⁹ MHD FCI is a crucial tool to encourage charging

¹⁷ This calculation was derived leveraging the formulas from Appendix A-2 Proposed Regulation Order, section § 95486.3.(b)(2)(G) and section § 95486.3.(b)(5)(G) with the following assumptions: previous quarter deficits = 8,082,115 MT (based on CARB CATS model 2025 forecast); shared MHD-FCI charging site model selection; 85% uptime; and 5% utilization.

¹⁸ The California Energy Commission’s AB 2127 report uses the HEVI-load model to forecast the number of depot and public chargers required for MHD charging under the AATE3 primary scenario. This forecast predicts the number of chargers and their respective power ratings that will be required in 2025 and 2030, as seen in Appendix H, Table H-1. The sum of the total MHD charging capacity based on this forecast was calculated to be 2,900 MW and 11,600 MW by 2025 and 2030, respectively, by taking the sum-product of the number of chargers and their respective power rating.

¹⁹ Based on the more recent CEC AB 2127 report available at:

<https://www.energy.ca.gov/publications/2023/second-assembly-bill-ab-2127-electric-vehicle-charging->

infrastructure deployment in advance of vehicles – thereby removing a frequently cited barrier to electrification overall and ACF in particular. Encouraging the early adopters (e.g., shared depots and some fleets) to build the infrastructure to accommodate full electrification is critical even if the initial vehicle deployments are lower. This will help expedite the time frame for increasing the fleet's adoption rate of electric trucks. In the near future, turnaround time for new electric truck orders will be measured in weeks and the lack of infrastructure will delay adoption. Helping fleets move early will allow them to quickly add to their fleet after gaining comfort with the technology.

As mentioned above, the state will need about 11,600 MW of MHD charging by 2030 but we estimate the proposed MHD-FCI will only provide about 600 MW. The chart below also illustrates the size of the need for DC charging infrastructure and the pace of installation needed.²⁰ As for the impact of our recommendation on credit prices, see our points above in the LD-FCI section.

Table 27 - HEVI-LOAD Infrastructure Results for 112,000 BEVs in 2030 and 289,000 BEVs in 2035¹⁰⁵

Charger Power Level	2030			2035		
	Number Chargers (% Depot / % Public)	Charging Energy (%)	Charging Time (%)	Number Chargers (% Depot / % Public)	Charging Energy (%)	Charging Time (%)
19; 25 kW	9,509 (100 / 0)	2.74	21.69	24,638 (100 / 0)	2.29	19.94
50; 75 kW	12,174 (87 / 13)	7.56	37.45	31,529 (88 / 12)	6.46	36.38
100; 150 kW	33,558 (96 / 4)	29.15	2.42	90,599 (97 / 3)	27.34	2.85
225; 250; 300 kW	12,257 (82 / 18)	20.17	23.71	31,362 (85 / 15)	19.10	24.40
350; 450; 500 kW	9,882 (83 / 17)	18.92	9.20	25,190 (86 / 14)	18.19	10.10
750; 900; 1,000; 1,050 kW	1,112 (0 / 100)	7.77	5.46	2,499 (0 / 100)	8.88	6.25
1,200; 1,400; 1,600 kW	1,498 (0 / 100)	13.69	0.07	3,809 (0 / 100)	17.73	0.09
Total	79,990 (88 / 12)	100	100	209,626 (90 / 10)	100	100

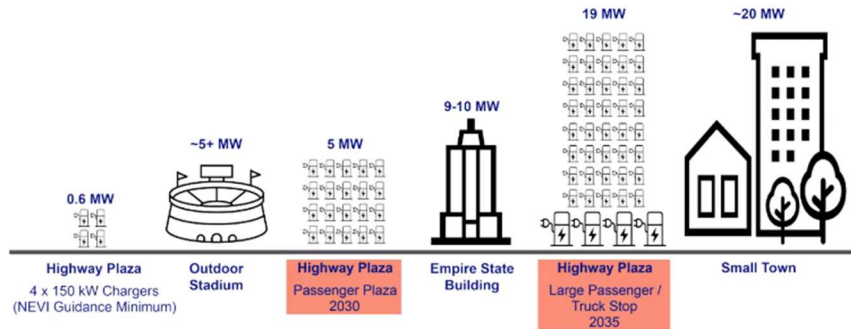
[infrastructure-assessment](#), to support medium- and heavy-duty plug-in electric vehicles, California will need about 109,000 depot chargers and 5,500 public chargers for 155,000 vehicles in 2030, and 256,000 depot chargers and 8,500 public chargers for 377,000 vehicles in 2035. **For 2030:** 114,500 chargers divided by 2146 days (from today) = 53 chargers a day through 2030 needed. What is the baseline of current chargers? 2000? that would bring it to fifty-two chargers a day. **For 2035:** 264500 chargers divided by 3972 days - 67 chargers a day; if we assume a baseline of 2000, then 66 a day through 2035.

²⁰ https://ww2.arb.ca.gov/sites/default/files/2022-01/Draft_2022_State_SIP_Strategy.pdf

10 MW cap per location. We recommend either raising the MW cap on cumulative nameplate charging capacity eligible for credit claiming per location to 15 MW or alternatively, allowing up to 24 MW with Executive Officer approval. The later recommendation is 4 times the current LD-FCI which is capped at 2.5 MW per location with up to 6 MW with Executive Officer approval. In addition, this approach is similar to the MHD HRI provisions which are five times larger than the current LD HRI. The chart below also helps illustrate the MW size of MHDV charging.²¹

Infrastructure – Ready for Future Deployments

Figure 21. Comparative Peak Loads for Illustrative Sites and Other Major Users³⁵



Source: Electric Highways: Accelerating and Optimizing Fast-Charging Deployment for Carbon-Free Transportation (2022 – National Grid, Calstart, RMI)

Allow zero carbon intensity (CI) electricity just like the proposed HRI program. The proposed regulation gives preferential treatment to hydrogen stations over electric vehicle charging stations when assigning the CI for capacity credits. Hydrogen stations utilizing the HCI pathway receive a CI of the “Company-wide weighted average CI for dispensed hydrogen during the quarter or 0 g/MJ, whichever is greater.” DCFC stations utilizing the FCI receive a CI of the “California average grid electricity carbon intensity” regardless of whether the EV charging company is utilizing 0 CI RECs for the rest of their charging. We encourage CARB in the new LCFS to harmonize Hydrogen refueling and EV charging by allowing EV charging FCI capacity credits to be generated off of a 0 CI if the company is using renewable energy credit (REC) matching for the rest of their charging.

Payment. We recommend a slight change to the payment requirements. We support the requirements for all major credit and debit cards for publicly accessible chargers but oppose the requirement for all major fuel cards to work for payment. Fuel cards for gasoline / diesel stations do not have this interoperability of station branded

²¹ See Figure 21 at <https://www.nationalgrid.com/document/148616/download>

payment cards. For example, a Shell branded refueling station card does not work with every other brand of gasoline/diesel stations. The same is true for light duty EV charging stations even though there are a few peer-to-peer agreements. For at least ten years, the light duty EV charging industry has tried to achieve payment interoperability between the cards offered by charging station brands but has not succeeded and nor has CARB's Electric Vehicle Equipment Supply Standards required this. In addition, we seek clarification that providing contactless payment is sufficient and there is no need for the older technologies (chip cards, magnetic swipe cards or toll-free phone numbers).

Networked chargers. CARB proposes a networking and communication requirement we request clarification around the data to be shared and the rationale. The proposed language states "Each FSE must be networked and capable of monitoring and reporting its availability for charging." This can be read to require public reporting of availability, which would not necessarily be relevant for shared chargers such as those found in multi-fleet charging depots with defined customers and reservations.

Other provisions we support: We support both HRI and FCI credits for MHDVs lasting 10 years as one way to make the two programs more similar and fairer. We support having fewer credits for single user fleets and appreciate CARB proposing to include this use case as eligible to generate credits as they also face challenges and risks in developing DCFCs.

5. *EVCA and CalETC opposes the proposed requirements for parties to pay for visits to individual charging stations by third-party verifiers to check for accuracy at public and private charging stations for light -, medium-, and heavy-duty EVs and incremental residential credits when reviewing quarterly fuel transaction reports. Instead, we recommend parties pay for desk-top reviews by third-party verifiers at central data locations that do not duplicate existing accuracy regulations established by the California Department of Food and Agriculture's Division of Measurement Standards and the California Public Utilities Commission (CPUC) and that generators of small numbers of non-residential credits be exempted from these requirements.*

The proposed regulation requiring site hosts to pay for third party verifiers for metered incremental residential credits, non-residential, and FCI credits for charging of light duty EVs and eMHDVs will result in high costs and a chilling of market development by site hosts, automakers, and charging developers. Section 95501 (b)(3) seems to indicate that site visits to each facility with a charging station is required (we see no mention of risk assessments or sampling affecting the number of site visits in the proposed regulation). We believe this requirement represents a massive time investment and cost for extraordinarily little benefit.

Metered electricity fuel credit generators are widely distributed, unlike other fuel providers that generate LCFS credits. Electricity is also economically regulated, unlike other transportation fuels. While there are approximately 10,000 gasoline / diesel stations in California, electricity is fundamentally different, with already 10,000 public DCFC, about 90,000 public level 2 charging stations, many thousands of fleet charging stations, and nearly one million residential charging stations. Soon these numbers will need to grow by a factor of eight or nine, as the ACC II, ACT, ACF and other regulations ramp up their compliance requirements. The sheer number of charging stations and their distributed nature makes travel to even a fraction of these an exorbitant cost.

Additionally, this requirement is not needed as EDUs have meter accuracy requirements that cover tens of millions of meters in private and commercial locations and a process to deal with inaccuracy complaints.²² Moreover, the California Department of Food and Agriculture's Division of Measurement Standards (DMS) regulates EV chargers for metering accuracy as well as many other consumer protection requirements,²³ and inspections to enforce this regulation are conducted by each California county's Department of Weights and Measures and paid through device registration fees paid to the counties.²⁴ Adding a requirement for site hosts to pay for third-party verification for data that is already aligned with the proposed measurement accuracy requirements in §95491.2(a)(1)(B) in Appendix A-2 Proposed Regulation Order²⁵ may cause smaller fleets or properties like multifamily residences to forego participating in the LCFS program and the sectors CARB more broadly wishes to support. We recommend that the new LCFS does not require site visits to the charging stations and defers to existing CPUC and DMS metering accuracy regulations.

Requiring third party verification for residential metered charging is particularly concerning, as there are already hundreds of thousands of EVs being reported to CARB in order to generate incremental residential LCFS credits with kWh measurement via EV telematics or a charging station. Conducting site visits to even a fraction of those sites will be tremendously expensive. It is also unclear how the verifier would check the EV's telematics data and engage with the EV owner. We see

²² Utility Meters are certified to ANSI C12 standards by Nationally Recognized Testing Labs (NRTLs). Here is a SMUD example on meter accuracy. For example, <https://www.smud.org/-/media/Documents/Going-Green/EVs/Engineering-Specification-T017---Electric-Vehicle-Chargers-Rev-0---3-6-18.ashx>. And <https://www.smud.org/-/media/Documents/Rate-Information/Rates/Rule-2-17.ashx> Utilities have processes to respond to high bill complaints and this can be escalated to the CPUC's Consumer Affairs Branch: <https://www.cpuc.ca.gov/consumer-support/file-a-complaint/utility-complaint>.

²³ https://www.cdffa.ca.gov/dms/pdfs/regulations/EVSE-OAL_EndorsedLetter-and-FinalText.pdf

²⁴ https://www.cdffa.ca.gov/dms/docs/publications/2023/2023_Combined_BPC.pdf

²⁵ <https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2024/lcfs2024/appa-2.pdf>

no corresponding benefit and recommend that site visits by a verifier to the EV or residential charger not be required.

EVCA and CaLETc propose that for incremental residential credits, FCI credits, and non-residential charging of light, medium- and heavy-duty EVs, that the only requirement is for desk top reviews to be done by third-party verifiers to check the accuracy of the calculations, except where a risk-based assessment reveals a reasonable concern about accuracy.

EVCA and CaLETc appreciate that the proposed regulation allows for a deferment in verification for small entities with fewer than 6,000 credits per year, but we do not think this goes far enough for the many small locations that are just entering LCFS. We recommend that any entity with fewer than 2,000 credits per year be exempted from all verification and that those applicants with 2,001 to 6000 metric tons of credits per year be eligible for deferment of paying for a verifier to visit the central data location. Our intent is to avoid a chilling impact that verification requirements will have on recent and new sites and to have a better cost -benefit ratio for these sites. Fleets, workplaces, multifamily buildings, grocery stores, small utilities and other businesses are often just one or two locations and only generating a handful to a few thousand credits per year.²⁶ We believe our proposal is reasonable to prevent the costs of verification from removing the financial benefits of generating credits or even discouraging the adoption of charging stations so needed to make ACC II, ACT, ACF, Innovative Clean Transit, Clean Miles Standard, Zero-Emission Airport Shuttle and other regulations effective.

Also, as noted below, we are recommending that many emerging EVs in agriculture, airports, mining, and recreation be allowed to be in LCFS immediately. We recommend these new TE end-uses be subject to the same deferment and exemption thresholds as listed above, and any site visits be determined by a risk-based assessment that considers whether there is a reasonable risk of inaccuracy from the meter or charging equipment itself rather than the calculations and reporting.

Finally, CARB staff indicated that base residential credits should not count toward a 6,000-credit cap for deferment of verification (or our proposed 2,000 credit cap for exemption). However, the current regulation language simply references credits in the LCFS Reporting Tool and Credit Bank & Transfer System (LRT-CBTS). Almost all of the utilities' LCFS credits come from base residential credits calculated by CARB (and therefore not subject to verification). However, the current LCFS LRT-CBTS does not differentiate between a utilities base residential credits and other metered credits.

²⁶ Medium and heavy-duty trucks and buses are often generating several thousand credits annually when they are starting out.

CARB should clarify that only credits subject to verification count towards the credit cap for deferment or exemption.

We recommend that CARB avoid the creation of duplicative reliability requirement as part of the proposed verification provisions on electricity. The CEC is in the process of drafting a reliability standard for publicly funded charging stations pursuant to AB 2061 (Ting). We recommend that CARB work closely with the CEC to understand how the CEC's reliability standards would affect Level 2 charging stations and DC fast chargers participating in the LCFS. It is important for CARB and CEC to align these standards, as harmonizing technical requirements for reliability will result in a more consistent charging experience across the state.

6. *EVCA and CalETC recommend at least an immediate 7% step down in carbon intensity (CI) to better account for historical overcompliance and push the market to greater levels of emission reduction.*

EVCA and CalETC support the proposed immediate “step down” in stringency to deliver additional near-term pollutant reductions. The step down in 2024 and the proposed automatic acceleration mechanism would not replace the need for increasing the overall stringency of the program as proposed in Table 1 (e.g., 30 percent reduction in CI by 2030). Rather, the stringency and step-down provisions would complement the increased compliance requirement on traditional high-carbon fuels industry both in the near- and mid-term. That said, we remain concerned about overcompliance creating an oversupply of credits that limit motivation for additional low carbon fuels investment and recommend at least a 7% step down instead of 5%. For additional details regarding this position, please see the letter submitted by AJW on this topic.

7. *EVCA and CalETC support the proposed automatic acceleration mechanism but recommend that the start date for the mechanism be 2027 instead of 2028.*

The LCFS includes several features designed to mitigate excessive costs for the petroleum industry by ensuring against potential shortages of credits. These features include:

- Unlimited banking
- No expiration date on credits
- Fungible use of credits to mitigate deficits irrespective of the deficit-generating fuel
- Credit clearance mechanism (CCM) with a price cap
- Mechanism to pull utility electric vehicle credits forward if the CCM is activated, and
- Ability to carry over deficits in the event credits are unavailable.

From the LCFS program’s inception, minimal attention has been directed at effectively protecting clean fuel providers by providing some certainty and market stability against the potential for a market glut of LCFS credits and very low credit prices. Specifically, the results of the current LCFS continue to stifle investment in electrification of the transportation sector, investment in charging infrastructure, and investment in all clean fuels. This is likely due to exceeding the CI reduction compliance targets resulting in a significantly reduced credit value and adding to a growing credit bank that now stands at over twenty million credits.²⁷ The historical response to market perturbation and glut of credits, which unfortunately means the full emission reduction benefits of the LCFS are not being realized, has been to implement amendments that increase the stringency of the program. However, anticipating the magnitude of innovation associated with developing progressively cleaner fuels and vehicles, like electricity fuel and electric vehicles, is exceedingly difficult. The market has consistently exceeded the CI reduction targets under the program and waiting for a new round of amendments has resulted in missed opportunities to reduce millions of tons of climate change pollutants and accelerate the transition to a zero-emission transportation future. In short, the problem is a suboptimal stringency requirement without a timely mechanism to correct it resulting in suboptimal climate change and other pollutant reductions, investment in innovative solutions, and/or investment by low carbon fuel providers. For these reasons, we support the adoption of an acceleration mechanism.

The acceleration mechanism will dynamically respond in the event of future sustained and significant innovation supporting a rapid escalation in credit generation by further tightening the stringency. Together with the proposed CI targets in Table 1, the acceleration mechanism in the new LCFS will provide greater certainty for clean fuel providers and customers, and better ensure that opportunities to deliver additional reductions of climate change pollutants, traditional (e.g., ozone-forming pollutants, PM2.5) air pollutants, and toxic emissions are not foregone. We believe the acceleration mechanism proposed in this regulation utilizes transparent metrics that trigger adjustments to the program’s stringency and the necessary certainty for clean fuel providers to plan accordingly. An acceleration mechanism keeps innovation, investment, and emission reductions accelerating faster than they would otherwise. By incorporating a responsive acceleration mechanism into the regulation, the program will provide the market with a clearer signal that investments in clean fuels will be rewarded, and that California will not leave climate change pollutant reductions “on the table” in the future.

CARB, with the credit clearance market and other features listed above, provided price and risk certainty to the oil industry. We believe that now is the time for CARB

²⁷https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/dashboard/quarterlysummary/Q3%202023%20Data%20Summary_013124.pdf

to adopt an acceleration mechanism, which would provide similar certainty to the low-carbon fuels industry, consumers, and society.

We support the proposed details of the acceleration mechanism except we recommend that the start date of the acceleration mechanism be 2027 instead of 2028 for the reasons that are provided in the letter submitted by AJW on this topic.

8. *EVCA and CalETC continue to recommend that the new LCFS create a level playing field for emerging transportation electrification end-uses in airports, agriculture, forestry, mining, marine, aviation, and recreation by adding a conservative default EER of 2.0, while excluding certain end-uses such as golf carts and indoor sweeper/scrubbers that are already electric.*

While LCFS supports many types of transportation electrification, it does not support emerging EVs used in agriculture, airports, mining, forestry, rail, warehouses, water transportation and recreation. This needs to be fixed so these hard-to-reach applications of EVs can easily participate in LCFS. The last 10 years have shown that these emerging EV industries do not have the wherewithal to develop the current LCFS requirement for a scientific study needed in a Tier 2 pathway to prove their Energy Economy Ratio (EER) which is their efficiency compared to gasoline or diesel. To solve this problem, we propose the new LCFS allow these industries to use a conservative default EER that is much less than other EVs. If they want a more realistic EER, these industries can do the full scientific study and the process outlined in Section 95488.7 (a)(3): *Tier 2 Pathways for EER-Adjusted Carbon Intensity*.

In other words, EVs which do not have an EER in the proposed Table 5 should be able to receive a default, conservative EER of 2.0 and allow them to compete with other low-carbon fuels which already earn LCFS credits. However, to address staff's concerns about applications that are mostly electric, we further propose that CARB does not allow this default EER for golf carts, indoor mobile sources such as walk-behind and ride-on sweepers, scrubbers and burnishers, airport heating and air conditioning units, conveyer belts and lawn and garden equipment. We believe this is a realistic compromise to the current situation that still provides an incentive for emerging TE industries to apply for a better EER via the Tier 2 pathway process. The Low Carbon Fuel Standard is a successful tool for accelerating the market for ZEVs and should be expanded to include all ZEVs given the climate crisis and the state's very ambitious regulations.

9. *EVCA and CalETC support the proposal for all sizes of electric forklifts to remain in LCFS.*

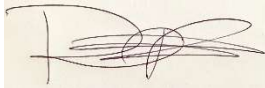
Previously, CalETC expressed many concerns with the staff's proposal to remove most electric forklifts from LCFS because this proposal was arbitrary. We argued that many

fuels and end-uses of low-carbon fuel technologies are regulated and/or already exist in the market (not just electric forklifts), and that any criteria for removal of a fuel or technology from LCFS eligibility should be fuel and technology neutral, transparent, support the state's requirements and goals to decarbonize transportation fuel and the transportation sector, complementary to existing regulations, and approved by the CARB Board.

The new proposal to keep all sizes of electric forklifts in LCFS but grant different EERs to forklifts with different lift capacities is an acceptable compromise. We also support the proposed LCFS provisions to remove estimation of kWh for electric forklifts and require metering and third-party verifiers.

We appreciate the opportunity to comment on these important changes to the LCFS regulation. Thank you for your consideration.

Regards,

A handwritten signature in black ink on a light beige background. The signature is stylized and appears to be 'Reed Addis'.

Reed Addis
Governmental Affairs
Electric Vehicle Charging Association

A handwritten signature in black ink. The signature is stylized and appears to be 'Laura Renger'.

Laura Renger, Executive Director
California Electric Transportation Coalition

cc: Rajinder Sahota
Matthew Botill
Jordan Ramalingam
Jacob Englander