

August 27, 2024

Cheryl Laskowski California Air Resources Board 1001 I Street Sacramento, California 95814

Re: NRDC Response to 15-Day Changes to Proposed Regulation Order for Updates to the Low Carbon Fuel Standard

NRDC appreciates the opportunity to provide comments on the proposed 15-day changes. In this letter, we limit our comments to issues around the book-and-claim electricity accounting for electrolytic hydrogen production and to the electric transportation provisions.

I. Book-And-Claim Accounting For Low-Carbon Electricity Used In Electrolytic Hydrogen Production Must Use Hourly Matching

As described in our previous letter to the Air Resources Board dated June 14th 2023, electrolytic hydrogen must use the three pillars of incrementality, geographic deliverability and hourly temporal matching for any book-and-claim accounting of low-carbon electricity. Without these three pillars, electrolytic hydrogen will not fully account for its impact on emissions from the grid.

The change made to § 95488.8.(i)(1)(C) moves the LCFS methodology further away from hourly matching by changing the matching period from quarterly to three quarters of a year. Robust research has shown that hourly matching (together with incrementality and deliverability) is needed to account for the long-run emissions impacts, as well as consumer price impacts, of electrolytic hydrogen production.¹

II. Continue and Enhance the Electric Transportation Provisions in the LCFS

¹ Ricks, W., Xu, Q., & Jenkins, J. D. (2023). Minimizing emissions from grid-based hydrogen production in the United States. *Environmental Research Letters*, *18*(1), 014025. <u>https://doi.org/10.1088/1748-9326/acacb5</u>

<u>Stringency:</u> We support the LCFS 15-day change provisions that increase the stringency of the program, as reflected in Tables 1 and 2. These changes will reduce the size of the credit bank and help improve the LCFS regulatory signal.

EDU Credit Generation and Automakers:

The current structure of credit generation, whereby electric distribution utilities earn credits for residential charging, owners of the charging equipment earn the nonresidential credits, and various parties can earn incremental credits, is appropriate and should remain unchanged.² Regarding allowing the Executive Office to give residential base credits to automakers (OEMs), we oppose this change given existing OEM requirements under the Advanced Clean Cars (ACC) II program and the uncertainty whether LCFS credits would really be driving additional OEM actions beyond what is already required for compliance under ACC II. In addition, the shift in credit generation would reduce, or eliminate, the feasibility of a Clean Fuels Reward program for electric medium- and heavy-duty vehicles (eMHDV) Clean Fuel Reward.

If CARB determines it will keep these new OEM credit generation provisions, we recommend that additional requirements and safeguards be included. First, if the OEMs become LCFS credit generators, the acceptance of those credits should also have equity requirements associated to them like utilities currently have. To help ensure that proceeds from LCFS credits are used for additional actions, we recommend those actions be limited to providing charging incentives, while disallowing marketing, education and outreach or vehicle rebates that should normally be part of normal advertising and marketing budgets. Further, we recommend that these OEM provisions not go on in perpetuity and sunset after a few years. Also, CARB should ensure that credits going to small and medium sized utility holdback programs are not reduced if the executive officer creates this OEM program. Finally, we ask that the number of credits be limited to no more than 25% of base residential credits (instead of 45%), so that the eMHDV Clean Fuel Reward can be created.

Administrative Cost Cap:

<u>The</u> proposed five percent cap on administrative costs on the Clean Fuel Rewards program for electric medium- and heavy-duty vehicles and the seven percent cap on administrative costs for utility holdback programs is premature, particularly for programs focused on outreach to under-served communities. For consistency and real-world experience, CARB should instead look to CPUC definitions and percentages. The current ten percent cap for Clean Fuel Rewards and holdback programs should continue, absence a showing this would not harm outreach efforts, with the regulatory amendments instead allowing the Executive Officer to

² Examples of non-residential credits include charging of light-duty, medium-duty, heavy duty and non-road vehicles away from home, fixed guideway electrification, and fleet charging of vehicles, marine vessels, material handling equipment, aircraft and similar non-road equipment.

lower it after workshops to examine the details (e.g., impact on small vs large EDUs, impact of credit prices, fixed vs variable costs, role of marketing, education and outreach on programs).

Medium and Heavy-Duty Fast Charge Infrastructure Program

We support many of the 15-day change provisions in the proposed HD Fast Charge Infrastructure (FCI) program (e.g., extending the location of sites to five miles from a corridor instead of one mile, extending the program to 2035, removing restrictions on sites) and appreciate staff's efforts to incorporate many of the recommendations from NRDC and stakeholders on this issue. . However, we continue to recommend the FCI program increase its cap to five percent of the prior quarter deficits based on the California Energy Commission's analysis.³ We also request that the formula for HD FCI program include the same favorable formula as the HD hydrogen refueling program in order to treat the two programs equally. Absent these slight modifications, the program rules are inadequate to maximize the potential business case for HD fast charge infrastructure, including for near-term use cases such as drayage, short-haul and delivery trucks.

Light-Duty Fast Charge Infrastructure Program

We support many of the 15-day change provisions in the proposed LD Fast Charge Infrastructure (FCI) program (e.g., increasing the cap of prior quarter deficits to 2.5 percent, removing several restrictions on sites) and appreciate that many of the recommendations from NRDC and other stakeholders were accepted. To further improve the provisions, we ask the that the LD FCI program be extended to 2035 instead of 2030 and that the formula for the LMD FCI program include the favorable formula for the hydrogen refueling program to treat the two programs more equally.

Including Other Categories of Electric Transportation

Finally, CARB should allow more types of electric transportation technologies to earn credits in the LCFS. Currently other fuels can earn credits for most end-use applications, but many types of electric vessels, aircraft, and off-road equipment cannot because they lack an approved Energy Economy Ratio ("EER"). Companies investing in emerging electric technologies, many of whom are start-ups, do not have the expertise and funds to go through the detailed application to CARB for an EER. The solution is for CARB to establish conservative default EERs (e.g., 3.0) in LCFS Table 1 that can be used by these emerging electric transportation technologies. This default set of EERs would incentivize electrification in hard-to-reach electric transportation applications such as mining equipment, agricultural equipment, forest equipment, boats, marine vessels, ferries, aircraft, locomotives, tow-tractors, sweepers and other off-road equipment. In addition, because a 3.0 EER is not optimal, some industries would

³ According to the CEC's AB 2127 analysis, the state will need about 11,600 MW of MHD charging by 2030. See <u>https://efiling.energy.ca.gov/GetDocument.aspx?tn=247323</u> for November 2022 CEC workshop for more detail. We believe the proposed MHD FC program with deliver less than 1/10th of that need.

still be motivated to submit an application to CARB in order to establish a higher, more favorable EER over time. We are also supportive of excluding from this default EER certain enduses such as golf carts and indoor sweeper/scrubbers that are already electric. Supporting the development of clean, electric transportation technologies is essential to meeting California's climate goals while reducing air pollution and health harm to vulnerable communities.

Formula for Fixed Guideways:

We appreciate CARB accepting our comment to improve the formula for fixed guideways so that pre-2010 systems receive the same credit as post-2010 systems. These changes will support continued existing use of fixed guideway and help prevent deterioration in service And Ridership Levels.

We appreciate CARB's time and consideration of our recommendations.

Sincerely,

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