Union of Concerned Scientists
ucsusa.org Two Brattle Square, Cambridge, MA 02138-3780 t 617.547.5552 f 617.864.9405
1825 K Street NW, Suite 800, Washington, DC 20006-1232 t 202.223.6133 f 202.223.6162
2397 Shattuck Avenue, Suite 203, Berkeley, CA 94704-1567 t 510.843.1872 f 510.843.3785
One North LaSalle Street, Suite 1904, Chicago, IL 60602-4064 t 312.578.1750 f 312.578.1751

July 5th, 2018

Sam Wade
Chief, Transportation Fuels Branch, Industrial Strategies Division
California Air Resources Board
1001 "I" Street
Sacramento, CA 95814

Re: Comments on LCFS Notice of Public Availability of Modified Text

Dear Mr. Wade,

On behalf of our more than 75,000 supporters in California, the Union of Concerned Scientists strongly supports the 2018 Low Carbon Fuel Standard (LCFS) amendments proposed in the Initial Statement of Reasons. We were very pleased that the Board resolved in April to advance the process of finalizing these amendments.

The Board instructed the Executive Officer to "[e]xplore with stakeholders the opportunities to increase the magnitude of ZEV vehicle rebates funded by [the] sale of LCFS credits." We agree that using revenue from the sale of LCFS credits to support a statewide point of sale rebate would effectively accelerate transportation electrification. As stakeholders, we are eagerly awaiting an opportunity to review and comment on these opportunities.

The Board also instructed the Executive Officer to develop a process to grant LCFS credits to hydrogen stations and DC fast chargers based on their capacity, in addition to credits received for fuel dispensed. While UCS opposed granting LCFS credits based on unused infrastructure capacity, we recognize the importance of infrastructure and are sympathetic to the Board's desire to ensure that infrastructure limitations do not impede the deployment of ZEVs. It is important that this deviation from the overall fuel neutrality of the LCFS is constrained in time, is limited in the extent to which it dilutes the rest of the program, and does not get extended to other fuels. It would not be appropriate to extend the same treatment to other fuels that do not provide the same health and other co-benefits that ZEVs offer. We also have two specific recommendations, which we describe below.

Include a declining cap on credits for unutilized infrastructure

The number of credits provided for low utilization infrastructure should decline over time. We recommend that the maximum unused capacity credited decline by 5% a year for the hydrogen station provisions and by 10% per year for the DC fast chargers. The materials presented in the workshop reflect an assumption that utilization of ZEV refueling infrastructure would increase over time, with support steadily shifting from infrastructure-based credits to credits based on delivered fuel. Indeed, this assumption is embedded in the calculations of subsidy value and economics. However, as written, there is no requirement

that infrastructure credits decline over time, and it is possible that a facility could draw credits based on its full capacity for the relevant timeframe (15 years for hydrogen and 5 for DC fast charging) while dispensing no fuel at all to customers during that time. A station whose economic viability depends principally on drawing infrastructure credits is a poor use of program support and is unlikely to survive once infrastructure support has ended. A declining cap on eligibility would provide early infrastructure support while still ensuring that fuel station operators have an incentive to attract customers. In aligning the incentives, the program will gradually shift stations from support for infrastructure to support for clean fuels dispensed and, ultimately, to a viable business model without ongoing policy support.

The economic impact of infrastructure credits should be reviewed in two years

One very basic concern we have is whether the level of support implied by granting LCFS credits for unused infrastructures is appropriate. Too low a level of support would be ineffective at substantially speeding transportation electrification, but too high a level of support could encourage poor decision making about infrastructure deployment. If a hydrogen station or DC fast charging operator can obtain a secure return on investment without substantial utilization, then they may build infrastructure where it is convenient and inexpensive to build, rather than where it will be most valuable to accelerate transportation electrification. There are probably some locations for infrastructure that would assist transportation electrification despite ongoing low utilization, but the LCFS infrastructure credit is a poor way to support these stations, since the LCFS has no mechanism to distinguish high value low utilization stations from low value low utilization stations. Other support mechanisms in which more discretion is available to program administrators would be a more appropriate means to support high value, low utilization infrastructure. The LCFS infrastructure crediting mechanism should focus on making stations more economically attractive in general, to accelerate the build out of ZEV infrastructure.

CARB has several levers that can be used to increase or decrease the value of the support the LCFS offers to ZEV infrastructure, including the number of years infrastructure is eligible, the number of hours per day that constitute full utilization, and whether there is a declining cap on credits for underused infrastructure. The material presented in the workshop and our own knowledge are insufficient to assess whether CARB has struck the right balance. We urge CARB to continue to analyze how LCFS infrastructure credits interact with other sources of support and the basic economics of the ZEV fueling infrastructure after the program has been operational for two years and to make appropriate adjustments to the program based on their findings.

Sincerely,

Jeremy Martin, Ph.D.
Senior Scientist and Fuels Lead
Clean Vehicles Program