

February 20, 2024

California Air Resources Board
1001 I Street
Sacramento, CA 95814

RE: Proposed 2024 LCFS Amendments

Dear California Air Resources Board,

EcoEngineers appreciates the opportunity to submit comments regarding the Proposed Low Carbon Fuel Standard Amendments.

EcoEngineers is one of the nation's leading auditing, verification and consulting firms for renewable fuel and clean energy technologies. We are accredited under the EPA Renewable Fuel Standard (RFS), the California Low Carbon Fuel Standard (LCFS) and the Washington and Oregon Clean Fuel Standards. We are also accredited by the American National Standards Institute (ANSI) National Accreditation Board (ANAB), in accordance with the International Organization for Standardization (ISO) standards ISO/IEC 17029:2019 and we are in the process of becoming accredited by the Canadian Government for the Clean Fuel Standard. We appreciate the opportunity to share some of our thoughts and comments on the proposed amendments.

EcoEngineers strongly supports the advancement of policies, regulations and programs that address the global reduction of greenhouse gas (GHG) emissions across all sectors. The LCFS program continues to be a vital tool that can assist California and the US in meeting their climate reduction goals. This program serves as an example to jurisdictions around the world looking to decarbonize their transportation fuel sector and as such, should continue to strive towards ambitious targets while closely considering market dynamics.

EcoEngineers presents the following comments on the Proposed Low Carbon Fuel Standard Amendments.

1- Compliance, Program Benchmarks, and Credit Generation

Strengthening the carbon intensity benchmarks throughout 2045 and including fossil jet fuel are necessary steps to ensure continued reductions in GHG emissions while providing industry with the regulatory certainty required to develop and grow low carbon fuel alternatives.

The inclusion of a "step-down" mechanism is a key element of this proposal. If implemented correctly, the mechanism could help stabilize the credit market. EcoEngineers recommends CARB implement a more active "step-down" mechanism that annually balances rates of production with

requirements. EcoEngineers also suggests including a “step-up” mechanism that can address potential credit surpluses.

Finally, EcoEngineers recommends that CARB provide clarity as to the stackability of CORSIA and LCFS credits. Similar to US Renewable Fuel Standard RINs, CORSIA credits in conjunction with LCFS credits would help facilitate uptake of SAF. This will also provide industry with additional clarity as they develop capital intensive SAF projects.

2- Equity-Focused Improvements

Even with the “step-down” mechanism as proposed, current EcoEngineers’ modeling shows credit prices in the near term will remain within the current range. The main factor driving price outlook is the near-term oversupply of credits versus the schedule, primarily from renewable diesel. Historic data and refinery planning indicate that renewable diesel use will continue to grow with current credit pricing till 2030. However, the modeling also shows a potential undersupply of credits toward the end of the decade without improvements in electric vehicle (EV) sales.

EcoEngineers believes that zero emission vehicle (ZEV) (includes battery electric vehicles (BEV) and fuel cell electric vehicles (FCEV)) uptake is a critical element of the LCFS program. There is clear evidence that point-of-sale and home charging economic incentives for ZEV purchases increase ZEV uptake. EcoEngineers suggests that CARB implement vehicle based LCFS ZEV credit accounting in conjunction with infrastructure credits. By having an accounting system based off vehicular data, OEMs would eventually be able to discount their ZEV sale prices by future LCFS credit generation. This would be similar to the approach adopted by the USEPA in the proposed RFS eRIN rules.

The proposed focus and increased investment on increasing the accessibility of ZEVs in disadvantaged, low-income, rural, and tribal communities coupled with the expansion of ZEV crediting to the medium and heavy-duty sector will be positive additions to the LCFS program.

3- Fuel Pathway Applications and CI Determination

EcoEngineers fully supports updating LCA modeling tools and emission factors to ensure the modeling is reflective of the most up-to-date scientific, evidence-based information. The update of the GREET model will help ensure the LCFS remains at the forefront of science-based GHG reductions including the addition of a Tier 1 Calculator for hydrogen.

EcoEngineers also supports sustainability requirements for crop and forestry-based feedstock. These requirements should be clearly defined, and sufficient time should be given to ensure industry can incorporate the necessary changes to meet the requirements.

4- Verification Program

EcoEngineers supports the proposed addition of third-party verification on hydrogen and electricity data types and deferral thresholds as well as on applications for project-based crediting. Third-party verification continues to be a reliable method of validating applicant information to ensure the integrity of the program.

Thank you once again for the opportunity to comment on the proposed amendments and please do not hesitate to contact me for more details. We look forward to continuing to work with the LCFS on implementing a successful program.

Sincerely,

Lisa Hanke,

Director, Regulatory Engagement
EcoEngineers