March 15, 2023

Cheryl Laskowski, Chief, Low Carbon Fuels Standard Branch
Matthew Botill, Chief, Industrial Strategies Division
California Air Resources Board
Per email: LCFSWorkshop@arb.ca.gov

Comments and suggestions in response to the February 22, 2023 Public Workshop: Potential Changes to the Low Carbon Fuel Standard

Ms. Laskowski and Mr. Botill:

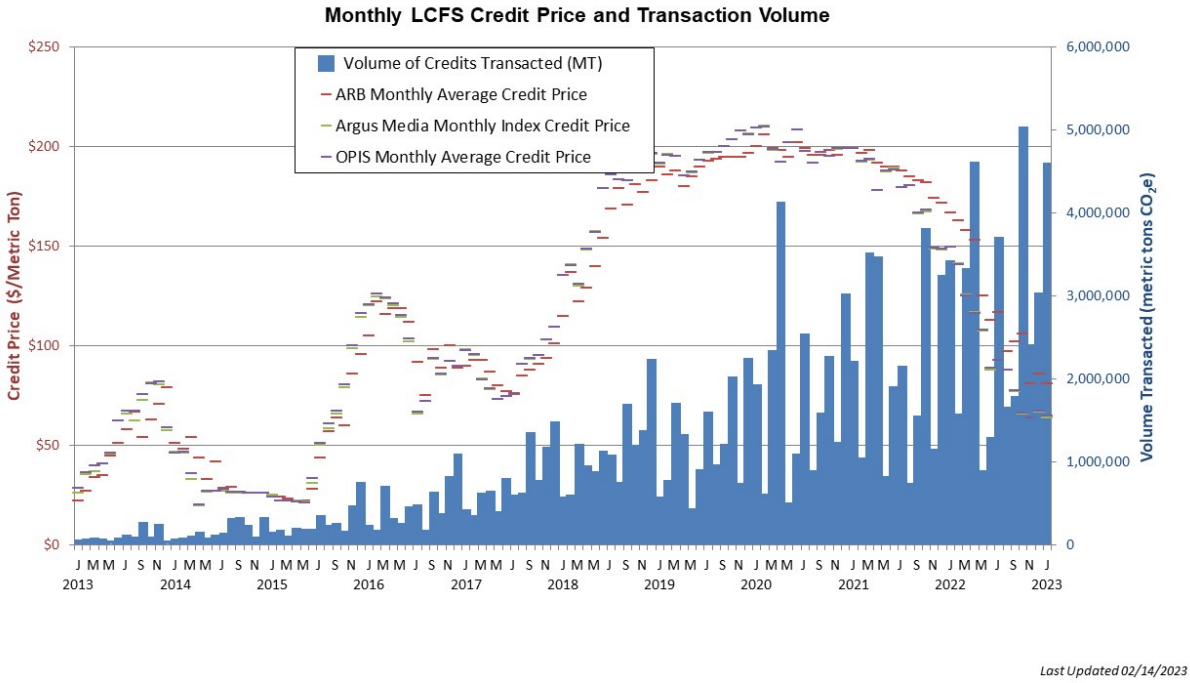
Climate Action California and 350 Sacramento thank you for the opportunity to comment on the Low Carbon Fuel Standard Program (LCFS). We have several suggestions for strengthening the program, making it more effective and efficient in reducing greenhouse gas emissions.

The LCFS program is intended to incentivize production of low-carbon fuels, by requiring high-carbon fuel providers to purchase credits from low carbon fuel producers.

While we support the goals of the program, we believe that some broadly applicable changes could improve it significantly:

- We support a credit multiplier for zero emission fuels—or another mechanism for rewarding fuels with long-term zero-emission potential (unlike internal combustion fuels).

- We support tightening the overall carbon intensity (CI) standard. Excess CI credits contributed to the crash in the price of a carbon credit from its high of $210/Mt in early 2020 to its present value of $60/Mt in the CARB dashboard, figure 4 .



A report from Karbone Research.[1] dated February 2023 shows the reason for this is that the LCFS credit bank now has accumulated 13.4 million credits.

- Pathway certification and each fuel source's continued CI value should be conditioned on compliance with all local, state and federal environmental laws (lest rogue, dirty facilities profit from LCFS credits at their neighbors' expense).

- We urge CARB to support direct air capture (DAC) of carbon dioxide as part of the crediting for the LCFS. The oil industry is pushing for the LCFS to subsidize unproven carbon capture technology (CCS). Instead, CARB could consider new methods of direct air capture of carbon (DAC) when calculating CI. By crediting direct air capture, it could help to move the technology toward commercial viability. That is a technology (gigatons CO2e/year) that the world will require to remove the excess atmospheric carbon over 350 ppm in order to recover our stable climate. As outlined in a CARB workshop on the subject in August 2021, commercial R and D efforts to capture carbon dioxide from the

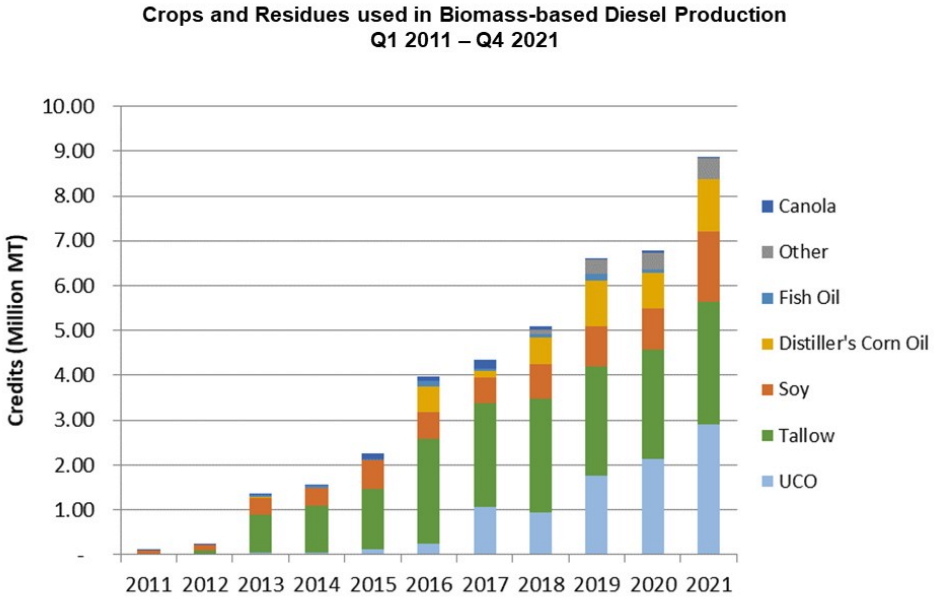
[1] https://docs.google.com/document/d/121qY8oRFZvFejlWBXU6hphlEqSMQIzSJI7Fx_IhE9RY/edit?usp=drivesdk&disco=AAAAs7xGT8chttps://drive.google.com/file/d/1wyM7fa_9iSBPBT3OszQBQmx-cPGY2aIw/view

air and sequester it need to be scaled up immediately, as we contemporaneously encourage sequestration on natural and working lands. CARB needs to study DAC, and offer it as a means for companies to reduce their fuel's CI. This would be an incentive to the market for advancing the commercialization of this technology. DAC included in the LCFS should be new/additional and accomplished in California, where CARB can verify the energy balance.

By incentivizing crop-based fuels the LCFS is in danger of causing detrimental consequences to people and critical habitat.

- Under the rubric of "sustainable fuels," the LCFS has encouraged investment by petroleum refineries in facilities that convert crops into diesel and jet fuel when they could feed hungry people. Furthermore, the credit for these fuels is too high, partly because the values ascribed to indirect Land Use Change are too optimistic. A higher value should be assigned to conservation of natural lands and farming lands used for food production. Because land use change models may not adequately capture the dangers inherent in deforestation – including tipping points – crop-based fuels should be gradually phased out of the program.

- Similarly, the LCFS is currently supporting the wrong biofuels—biofuels that compete with both truly sustainable zero emission fuels made from solar and wind power, and fuel-conserving energy applications that are available now (i.e., EVs, walking, biking, public transit). The vastly overbuilt California refining infrastructure selectively sucks edible oils out of the Western Amazon and the American midwest to refine gasoline and diesel. Californians don't need to subsidize fuels that increase global emissions. This can be seen in figure below from the CARB LCFS Dashboard, figure 6 , where fully a third of input for biodiesel is from food and feed crops.



In conclusion, we suggest the following reforms to the LCFS:

- Add a credit multiplier for zero emission fuels
- Tighten the CI standards
- Condition pathway approval on compliance with environmental laws
- Allow inclusion of negative emissions from direct air capture in the CI calculations where applicable based on the tons CO_2e they remove
- ILUC models are imprecise and likely understate effects. Therefore the precautionary principle suggests that crop-based fuels be gradually phased out.

Thank you for considering these comments. Please do not hesitate to contact us if you have questions about our recommendations.

Sincerely,

Steve Rosenblum
Climate Action California
pol1@rosenblums.us

Will Brieger
350 Sacramento
will.brieger@350Sacramento.org