



ENVIRONMENTAL ENTREPRENEURS®

The Independent Business Voice for the Environment

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February 17, 2015

California Air Resources Board
1001 I Street
Sacramento, CA 95812

Dear Member of the Air Resources Board,

We applaud your continued work to implement and improve the Low Carbon Fuel Standard (LCFS). E2 encourages you to vote to re-adopt the LCFS. As a direct result of the LCFS, California is leading the world in the effort to establish commercially-viable fuel options that will contribute to lower greenhouse gas (GHG) emissions from transportation.

E2 is a nonpartisan, national community of business leaders who promote sound environmental policies that grow the economy. We are entrepreneurs, investors, and professionals from every sector of the economy who collectively have been involved in the financing, founding or development of more than 1,700 companies that have created more than 570,000 jobs. Our members manage billions of dollars in venture and private equity capital that will flow over the next several years into new companies in Oregon and beyond.

Importantly, the LCFS is already driving tangible and valuable business activities in California. Companies are investing in infrastructure to expand retail availability of the low carbon-intensity (CI) fuels they are currently selling in the state. Meanwhile, California is the focus both for efforts to pioneer additional low CI fuel options and for investments to reduce the CI of conventional fuels such as petroleum and ethanol.

We have helped develop, implement and refine the LCFS since its conception. Over the years we have seen the market grow in some unpredicted ways, such as the rise of natural gas and renewable diesel. What we did expect was the array of alternative fuels that would all scale to meet the standard, and now have proof positive that the standard is working as intended. To date, we have seen the flexibility of the LCFS encourage credit trading from dozens of fuel types, and expect even more fuel diversity by 2020.

E2 conducts an annual assessment of the domestic advanced biofuel industry. According to our 2014 report, North America's advanced biofuel industry reached a production capacity of more than 800 million gallons in 2014, almost double the capacity in 2011. This is roughly enough to fill an entire lane of Interstate 5 from Seattle to San Diego with nothing but large tanker trucks filled with advanced biofuel.

The report, "E2 Advanced Biofuel Market Report 2014," projects that by 2017, as many as 180 companies are expected to produce 1.7 billion gallons of advanced biofuel, doubling current capacity.¹ Additionally, the work recently completed by ICCT shows how advanced biofuels will

¹ Scodel et al. E2 Advanced Biofuel Market Report, 2014. Available at:
http://cleanenergyworksforus.org/wp-content/uploads/2015/01/E2-Biofuel-Market-Report-2014.Final_Web.pdf

combine with other alternative fuels to meet or exceed 2020 reduction targets, especially if the standard is expanded into Oregon and Washington. Overall, low-carbon fuels could reduce the carbon intensity of on-road transportation fuels across the Pacific coast state by 14-21% by 2030.²

As the Air Resources Board (ARB) considers re-adoption of the LCFS, E2 recommends that the program be strengthened in ways that will increase and accelerate private sector investment activities. To that end, we wish to identify certain elements of the re-adoption proposal that will help strengthen the program, and propose additional considerations for staff to develop in the future:

1. E2 strongly supports ARB's proposal to keep LCFS compliance at 10% in 2020. The ARB should maintain this compliance curve through 2020 and establish stronger compliance curves to continue progress beyond 2020. Compliance curves will be the foundation for investment in infrastructure and in innovative production strategies in California.
2. Adoption of a Credit Clearance Market will protect markets in the event of a lack of liquidity in supply of either low CI fuels or LCFS credits. The ARB should adopt transparent and predictable market rules to ensure that temporary challenges in the supply of low CI fuels or LCFS credits will not disrupt the market.
3. E2 supports ARB staff's recommendation to include petroleum emission reductions from refineries. This supports the technological neutrality and carbon reduction goals of the program, and provides obligated parties with additional compliance flexibility.

Future staff proposals and considerations should include:

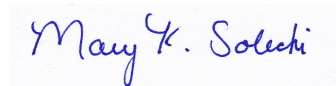
4. In complement to the proposed Credit Clearance Market, a credit price floor may serve to secure additional investment in low carbon fuels, thus helping ARB maximize emission reductions in a cost effective manner. The purpose of a LCFS credit price floor would be to reduce uncertainty in the minimum value of credits, to spur investment into new low-carbon fuel projects, and thereby further AB 32's goal to reduce greenhouse gas emissions in California.
5. In line with creating transparent and predictable market rules, ARB should more clearly define the penalty and enforcement provisions in the event fraudulent credit trades are discovered in the market. Clearly defined rules regarding the nature and scope of violations, culpable parties, and penalties will help deter violators, enable market participants to operate within demarcated compliance boundaries, and may facilitate the discovery of fraudulent credits by ARB.
6. Since lifecycle analysis is a continuously developing science, carbon intensity pathways will be updated on an ongoing basis. Providing a clearly defined process and timeline by which new science is considered and incorporated into pathways will provide more investor certainty, and inform alternative fuel project development.

² Malins et al. Potential Low Carbon Fuel Supply to the Pacific Coast Region of North America. International Council on Clean Transportation. Available on the web at: <http://bit.ly/PacificLCF>

7. Expanding the credit trading market to third parties in parcel with developing an exchange can: increase credit price transparency and frequency of trades; alleviate long-term staff resources to broker a credit market; allow ARB to focus on the regulation of credit transactions and credit verification; and provide a platform by which other states may easily harmonize with the LCFS credit market.

The future program considerations we have outlined may be integrated at a later date. **Today, we encourage the Board to re-instate the LCFS by voting to re-adopt the program.** We commend the Board for your collective leadership and guidance on this landmark regulation.

Sincerely,



Mary Solecki
E2 Western States Advocate
mary@e2.org