

September 28, 2023

California Air Resources Board
1001 I Street
Sacramento, CA 95814

Dear Members of the Board,

I am retired UC Berkeley research scientist whose work has focused on the climate effects of biofuels [1-11]. I co-authored the two-part 2007 UC Berkeley/Davis study [12, 13] on the LCFS for then-Governor Schwarzenegger and worked closely with John Curtis and his team for many years, focused primarily on biofuels-induced (indirect) land-use change, or ILUC [4, 14]. I was the primary developer of the AEZ-EF model [15, 16] used in the LCFS to estimate ILUC emissions. I have also consulted for US EPA since 2014 on its modeling of GHG emissions from biofuels [17].

I have developed, reviewed, or used various models of the climate effects of biofuels and ILUC. As a result, I have become skeptical of the climate benefits of biofuels. This is not because they have been proved to be harmful to the climate, but because the uncertainty [7, 10, 14], subjective modeling choices [9, 10, 18, 19], and methodological errors [17, 20] in the estimates of their effects prevent us from knowing whether they are helping or hurting efforts to combat climate change [21]. Claims by the Board that the LCFS has reduced GHG emissions are based on treating modeled carbon intensity ratings as accurate estimates of their climate effects, despite these subjective choices, methodological errors, and uncertainties. In fact, carbon intensity is not a fixed property of a fuel production system [5, 21], but an artifact of modeling choices and can vary greatly with different, but equally reasonable assumptions or models.

My bottom-line finding is that we still don't know whether the use of crop-based biofuels mitigate or exacerbate climate change. Given the accelerating climate crisis, we don't have time to waste on questionable mitigation tools.

AB32 requires that the state's global warming emissions reductions be real, permanent, quantifiable, verifiable, enforceable and additional. The purported emission reductions from the use of crop-based biofuels are not quantifiable (reliably) or verifiable, may not be additional (e.g., owing to market reshuffling) and therefore may not be real.

I urge the Board to cap the use of crop-based biofuels in California, and to phase them out as quickly as possible.

Sincerely,

Richard Plevin, Ph.D.
Portland, OR

References

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