



Growth Energy™  
Expanding America's Bioeconomy

February 20, 2024

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California Air Resources Board  
P.O. Box 2815  
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*Via electronic submission*

RE: Growth Energy Comments on Proposed LCFS Amendments

Chair Randolph:

Growth Energy appreciates the opportunity to provide comments to CARB regarding potential amendments to the Low Carbon Fuel Standard (LCFS) (“Proposed Amendments” or “Proposal”). Growth Energy is the world’s largest association of biofuel producers, representing 97 U.S. plants that each year produce 9.5 billion gallons of renewable fuel; 115 businesses associated with the production process; and tens of thousands of biofuel supporters around the country. Together, we are working to bring better and more affordable choices at the fuel pump to consumers, improve air quality, and protect the environment for future generations. We remain committed to helping our country diversify its energy portfolio to grow more green energy jobs, decarbonize the nation’s energy mix, sustain family farms, and drive down the costs of transportation fuels for consumers.

Growth Energy has previously submitted extensive comments demonstrating the vital role low carbon biofuels and higher biofuel blends can play in meeting California’s ambitious climate goals. As we have previously noted, biofuels have been among the largest contributors to the success of the LCFS program to date and are poised to continue to do so with appropriate updates to the program.<sup>1</sup>

Unfortunately, the Proposal could impose new, costly, and unnecessary compliance burdens on bioethanol producers in the form of as-yet unknown and undefined “sustainability requirements”<sup>2</sup> that risk reducing the availability of credit-generating biofuels within the LCFS Program. Of most significant concern, contrary to the California Administrative Procedure Act (APA) and the California Environmental Quality Act (CEQA), CARB is not providing the public and regulated community notice

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<sup>1</sup> *Decarbonizing Combustion Vehicles*, Transportation Energy Institute (July 2023)  
[https://www.transportationenergy.org/wp-content/uploads/2023/07/Decarbonizing-Combustion-Vehicles\\_FINAL.pdf](https://www.transportationenergy.org/wp-content/uploads/2023/07/Decarbonizing-Combustion-Vehicles_FINAL.pdf)

<sup>2</sup> Proposed 17 C.C.R. § 95488.9(g).

and the opportunity to comment on the substance of these requirements. Rather, CARB intends to outsource development of these vague sustainability “certification systems” covering a host of undefined “environmental, social, and economic criteria” to third parties. The Proposal specifies that CARB alone will determine which certification systems suffice, removed from the California regulatory process intended to protect the public and regulated community and without consideration of potential adverse environmental impacts consistent with CEQA. Without any clear indication in the Proposal or voluminous rulemaking materials as to what such “certification systems” may entail, it is difficult to determine whether they may in practice, unintentionally or otherwise, exclude as much as 60% of the current credit-generating fuels from the LCFS program. Such a reduction would create increased demand for fossil fuels, resulting in higher emissions of GHGs as well as toxic air pollutants.

If such “certification systems” did function in that manner, whether due to economic, social, or environmental criteria, the regulations could not comport with AB32’s requirement for cost-effective, technology-neutral greenhouse gas (GHG) emissions reductions. For example, removal of even a portion of currently credit-generating biofuels could substantially increase compliance costs on obligated parties and passed-down costs to consumers at the pump, disproportionately harming low-income communities that are most impacted by fuel costs. None of these potential impacts have been adequately identified or evaluated in CARB’s rulemaking materials accompanying the Proposal.

The proposed sustainability requirements are also legally flawed because they are not reasonably necessary to effectuate AB32, or to address any regulatory purpose provided in CARB’s rulemaking materials. Put simply, CARB has failed to identify any credible evidence of direct land use conversion that could be mitigated by some form of feedstock tracking based on social, economic, and environmental criteria of an unknown form and substance. As many decades of data has demonstrated, increases in bioethanol demand have consistently been met with increased yield per acre, not with increased corn acreage. Further, other regulatory mechanisms — including oversight from the U.S. Environmental Protection Agency (EPA) under the Renewable Fuel Standard (RFS) Program — adequately ensure that U.S. feedstocks are sustainably sourced and do not contribute to land use conversion. CARB itself also already imposes a highly conservative and overestimated penalty to the carbon intensity of bioethanol in the LCFS program that greatly disincentivizes bioethanol as compared to other fuel types. And CARB lacks authority under AB32 to, through a third-party certification system, impose wide-ranging socio-economic criteria that are unrelated to the cost-effective reduction of GHG emissions.

We understand that CARB is postponing the public hearing on the Proposed Amendments in order to undertake “more consideration of the proposed sustainability

guardrails, among other topics.”<sup>3</sup> Growth Energy agrees such additional consideration is necessary. Indeed, consistent with the California APA, if the Proposed Amendments intend to encompass some form of feedstock tracking requirements tailored to address a specific environmental need, we urge CARB to allow regulated parties to comment on a subsequent proposal that includes consideration of potential environmental and economic consequences.

In addition to these issues, the Proposed Amendments fail to include several key updates and as a result, fall far short of unlocking the LCFS Program’s full decarbonizing potential. These omissions include declining to recognize and incentivize low-carbon agricultural practices, failing to update emissions factors and lifecycle modeling to reflect the best available science, and continuing to prohibit the use of E15 in the state.

We encourage CARB to reconsider these aspects of the Proposal to ensure the real and significant GHG emissions reductions benefits of biofuels are realized under the LCFS. We look forward to engaging collaboratively with the agency to support its efforts.

## **I. Bioethanol Has Been and Must Continue to Be a Key Driver of Transportation-Sector Emissions Reductions in California**

The transportation sector is responsible for 39% of California GHG emissions — far larger than any other sector.<sup>4</sup> Light-duty vehicles (LDVs) alone emit more than any other entire sector, with over 27% of the state’s total emissions.<sup>5</sup> Critically, over 97% of LDVs on the road in California today rely on liquid fuels.<sup>6</sup> On-the-road fleet turnover is a lengthy process, meaning impacts from California’s 2035 zero-emission vehicle (ZEV) new vehicle sales requirements are still many years away.<sup>7</sup> To decarbonize the transportation sector today, California will need to decarbonize the liquid fuels being used by the vast majority of its vehicles by displacing fossil fuel consumption with low-carbon, renewable biofuels, including bioethanol.

Beyond LDVs, low-carbon biofuels will also play a substantial role in reducing emissions from harder-to-abate subsectors including medium- and heavy-duty vehicles, maritime fuels, and aviation. With lower ZEV adoption to date and longer fleet turnover

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<sup>3</sup> Email from CARB to stakeholders, “Postponed: [LCFS] Public Hearing” (Feb. 14, 2024).

<sup>4</sup> Based on 2021 data available at *Current California GHG Emission Inventory Data*, <https://ww2.arb.ca.gov/ghg-inventory-data>.

<sup>5</sup> *Id.*

<sup>6</sup> See 2022 Light-Duty Vehicle Registration Counts by State and Fuel Type, U.S. DOE Alternative Fuels Data Center, <https://afdc.energy.gov/vehicle-registration>.

<sup>7</sup> See 13 C.C.R. § 1962.4.

lead times, these subsectors are even more reliant on biofuels to achieve California’s decarbonization goals.

Already, we’ve seen biofuels provide the foundation for the LCFS. In fact, biofuels like bioethanol have generated more than 75% of LCFS credits.<sup>8</sup> In 2022, domestically produced bioethanol made up ~50% of credit-generating biofuels by volume.<sup>9</sup> This group of fuels has been among the largest contributors to the success of the LCFS Program to date, and will need to continue to be a central component of California’s transportation sector decarbonization strategy if the LCFS is to continue its success into the future. Indeed, according to recent data from Environmental Health and Engineering, today’s bioethanol reduces GHG emissions by nearly 50% compared to gasoline and can provide even further GHG reductions with additional readily available technologies.<sup>10</sup> For example, over a decade ago, CARB reported the average carbon intensity (CI) for bioethanol at 88 g/MJ. Through the third quarter of 2022, the average recorded CI for bioethanol decreased to 59.39 g/MJ, a 33% reduction in CI, even including overstatements in modeled indirect land use change emissions.<sup>11</sup>

The world is in a decisive decade to address GHG emissions while critical climate goals remain in reach, and biofuels have the greatest potential to reduce GHG emissions across the transportation sector this decade — while also achieving benefits for air quality through reductions in harmful particulates and air toxics, as discussed further below.

## **II. The Proposed Sustainability Certification Requirements for Biofuels are Legally Flawed**

### *A. CARB Cannot Outsource Development of a Sustainability Certification System to Third Parties with No Meaningful Public Participation from the Regulated Community and No Notice as to What the Sustainability Criteria Will Be.*

The California APA was designed both to “advance meaningful public participation in the rulemaking process” and “create an administrative record assuring effective judicial review.”<sup>12</sup> Central to these goals is the principle of fair notice so the regulated community can understand, anticipate, and participate in the development of the legal requirements they will be subject to. As the California Supreme Court has

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<sup>8</sup> Based on 2022 gasoline-gallon-equivalent data available at LCFS Data Dashboard, Figure 2, <https://ww2.arb.ca.gov/resources/documents/lcfs-data-dashboard>.

<sup>9</sup> Based on 2022 gasoline-gallon-equivalent data available at LCFS Data Dashboard, Figure 10(a), <https://ww2.arb.ca.gov/resources/documents/lcfs-data-dashboard>.

<sup>10</sup> Scully, et. al. *Carbon intensity of corn ethanol in the United States: state of the science*, 16 Environ. Res. Lett. 4 (2021).

<sup>11</sup> Based on data available at LCFS Pathway Certified Carbon Intensities, <https://ww2.arb.ca.gov/resources/documents/lcfs-pathway-certified-carbon-intensities>.

<sup>12</sup> *Voss v. Superior Ct.*, 46 Cal. App. 4th 900, 908, 54 Cal. Rptr. 2d 225, 229 (1996).

explained, the APA works “to ensure that those persons or entities whom a regulation will affect have a voice in its creation, as well as notice of the law’s requirements so that they can conform their conduct accordingly.”<sup>13</sup> To support fair notice, the APA mandates regulations be presented with sufficient clarity so as to be “easily understood by those persons directly affected by them.”<sup>14</sup> A regulation is not presumed to comply with the clarity standard if it “can, on its face, be reasonably and logically interpreted to have more than one meaning” or “uses terms which do not have meanings generally familiar to those directly affected by the regulation, and those terms are defined neither in the regulation nor in the governing statute.”<sup>15</sup>

The APA’s collaborative public rulemaking process not only benefits the public and regulated community but CARB as well, since “the party subject to regulation is often in the best position, and has the greatest incentive, to inform the agency about possible unintended consequences of a proposed regulation.”<sup>16</sup> The process also “directs the attention of agency policymakers to the public they serve, thus providing some security against bureaucratic tyranny.”<sup>17</sup>

Here, the Proposed Amendments would remove all meaningful public participation by assigning to a third-party development of sweeping “certification systems” intended to determine which fuels are eligible and ineligible to generate credits under the program. The Proposal does not provide biofuels producers with any notice of what “environmental, social and economic criteria” will be included, how the producer might accomplish “demonstrable means of evaluation,” or what “sanction mechanisms” could be levied for non-compliance. Each of these vague and open-ended terms is susceptible to many differing meanings and is not defined in either the regulation or the governing statute, therefore lacking the clarity required by the APA. Indeed, Appendix E, which purports to explain the purpose and rationale for specific regulatory provisions, suggests the certification standards will ensure biofuels are “sustainably produced,” but nowhere does CARB define what that means or how a complex certification system encompassing wide-ranging social, economic, and environmental considerations would accomplish that end.<sup>18</sup>

Not only is the certification system still undefined today, CARB proposes that the system — which will have the power to potentially exclude the majority of the fuels currently generating credits in the LCFS — will be developed not through a CARB public rulemaking process, but rather by a third-party entity requiring only the sign-off of the

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<sup>13</sup> Morning Star Co. v. State Bd. of Equalization, 38 Cal. 4th 324, 333 (Cal. 2006).

<sup>14</sup> Cal. Gov. Code § 11349(c); *see also* Sims v. Dep’t of Corr. & Rehab., 216 Cal. App. 4th 1059, 1076 (Cal. App. 2013).

<sup>15</sup> 1 C.C.R. § 16.

<sup>16</sup> Tidewater Marine W., Inc. v. Bradshaw, 14 Cal. 4th 557, 569 (1996).

<sup>17</sup> *Id.*

<sup>18</sup> Appendix E at 80.

CARB Executive Officer. This extremely broad delegation of authority to third parties outside the regulatory process is highly concerning.

More fundamentally, as detailed below, the overwhelming evidence does not support a need to institute a feedstock tracking system for U.S. bioethanol producers. However, to the extent CARB does intend to proceed with the development of feedstock tracking requirements tailored to ensuring land conversion is not occurring, it must develop those requirements itself, through public engagement and the APA rulemaking process. The agency cannot simply outsource a complex rulemaking process to third parties, guided by only vague statements of “environmental, social, and economic criteria” without notice and opportunity for the regulated community to comment on the scope, form, or stringency of the future standards.<sup>19</sup> Absent an informed decision-making process, the “sustainability” certification systems may function to erroneously exclude low carbon fuels from the LCFS Program with dire consequences both for the Program and the environment. Because such requirements are yet unknown, CARB itself has not yet adequately analyzed the potentially complex environmental impacts of the Proposed Amendments, as explained further below.

*B. CARB Has Not Identified a Reasonable Need to Impose Sustainability Requirements on U.S. Bioethanol Producers*

As a threshold matter, under California law, “no regulation adopted is valid or effective unless consistent and not in conflict with the statute and reasonably necessary to effectuate the purpose of the statute.”<sup>20</sup> California agencies must provide “[a]n initial statement of reasons for proposing the adoption, amendment, or repeal of a regulation,” that must include, *inter alia*, (i) the specific purpose of the proposed rule, amendment, or repeal, (ii) the “rationale for the determination by the agency that each [rule] adoption, amendment, or repeal is reasonably necessary to carry out the purpose and address the problem for which it is proposed” and (iii) the benefits of the proposed rulemaking.<sup>21</sup> Here, CARB has failed to adequately articulate a reasonable need for the proposed sustainability requirements.<sup>22</sup> These requirements risk undercutting the broader purpose of the 2024 Amendments to implement the 2022 Scoping Plan by reducing GHG emissions, do not serve any function not already addressed through other regulatory measures, and extend far beyond the scope of what is necessary to effectuate AB32.

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<sup>19</sup> See, e.g. Morning Star Co. v. State Bd. of Equalization, 38 Cal. 4th 324, 328, (2006) (setting aside hazardous waste fee schedule developed without APA procedures); Vasquez v. Dep’t of Pesticide Regul., 68 Cal. App. 5th 672, 684, (2021) (setting aside township pesticide cap program developed without APA procedures).

<sup>20</sup> Cal. Gov. Code § 11342.2.

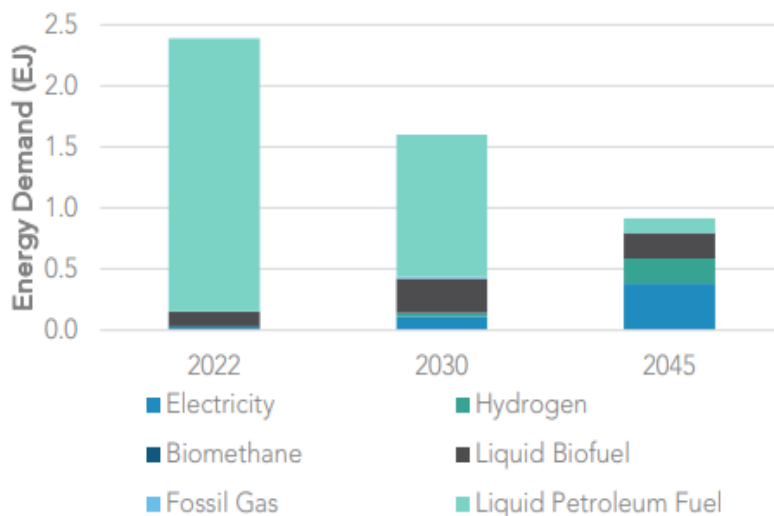
<sup>21</sup> Cal. Gov. Code § 11346.2(b).

<sup>22</sup> See Light v. State Water Res. Control Bd., 226 Cal. App. 4th 1463, 1495 (2014) (noting that regulations may be declared invalid if the agency’s determination of reasonable necessity is not supported by “substantial evidence”).

1. The sustainability requirements risk undermining the overarching purpose of the 2024 Amendments and 2022 Scoping Plan

CARB’s initial statement of reasons (ISOR) states that the Proposed Amendments are intended “to implement the 2022 Scoping Plan Update” by “reduc[ing] emissions by driving down fossil fuel demand in transportation, transitioning to zero-emission technology wherever feasible, and increasing the supply of low-carbon alternative fuels as quickly as possible.”<sup>23</sup> The 2022 Scoping Plan calls for substantial **increases** in liquid biofuels between 2022 and 2030, with demand in 2045 still remaining higher than current levels. Bioethanol, which currently makes up half of the biofuel used in California, will need to remain a major fuel source if the increases called for in the Scoping Plan are to be achieved.<sup>24</sup>

**Figure 4-2: Transportation fuel mix in 2022, 2030, and 2045 in the Scoping Plan Scenario<sup>332</sup>**



*The 2022 Scoping Plan calls for substantial increases to liquid biofuel demand. See 2022 Scoping Plan at 190.*

The proposed sustainability requirements, however, could undermine this stated purpose by levying unnecessary and substantial compliance costs on certain biofuels, and risk excluding certain low carbon fuels altogether. The effect of which would be to reduce the volume of credit-generating biofuel available to displace fossil fuels in the California market. Indeed, CARB’s own analysis in this rulemaking is clear that

<sup>23</sup> Proposed Low Carbon Fuel Standard Amendments, Staff Report: Initial Statement of Reasons (Dec. 19, 2023) at 22 [hereinafter “ISOR”].

<sup>24</sup> Based on 2022 gasoline-gallon-equivalent data available at LCFS Data Dashboard, Figure 10(a), <https://ww2.arb.ca.gov/resources/documents/lcfs-data-dashboard>

limitations on biofuels like bioethanol can result in increased fossil fuel consumption and increased GHG emissions.<sup>25</sup> Although the sustainability requirements are not an established cap on crop-based biofuels volumes, the potential for increased costs and decreased availability of qualifying fuels would limit the LCFS Program's ability to meet its carbon-intensity reduction targets by arbitrarily excluding certain low carbon intensity fuels for unknown "social and economic" reasons.

The Scoping Plan does caution that a "dramatic increase in alternative fuel production must not come at the expense of global deforestation, unsustainable land conversion, or adverse food supply impacts."<sup>26</sup> Growth Energy agrees. But CARB has failed to identify any credible evidence that U.S. bioethanol production is contributing to global deforestation, unsustainable land conversion, or adverse food supply impacts and no such evidence exists. Nor has CARB adequately described how the certification systems oriented towards a range of economic, social, and environmental considerations would protect against such impacts if they were a valid concern. Moreover, this single precautionary sentence is not an authorization to disregard the Scoping Plan's central purpose of achieving GHG emissions reductions, driven in part by increasing biofuel consumption in the transportation fuel mix.

2. CARB has not identified any credible evidence that domestically produced bioethanol contributes to direct land use change

The proposed sustainability certification requirements are introduced as a method to address *direct* land use change (dLUC).<sup>27</sup> As the feedstock tracking requirements presumably would follow only those crops used to produce biofuels eventually used in the California market, they would not and could not address *indirect* land use change (iLUC), which is a modeled estimate of price-mediated global land use impacts attributable to demand increases, regardless of whether a particular crop makes its way to the California market or is used in biofuel production at all. As such, CARB's analysis of whether new regulations are "reasonably necessary" must address whether the sustainability requirements are reasonably necessary to protect against *direct* land use change. For U.S. corn starch bioethanol that answer is unequivocally no, as there is no evidence that U.S. bioethanol production contributes to direct land use change. CARB suggests that "the growing demand for crop- and forest-based feedstocks for use in the LCFS program produce an increasing risk of deforestation and use of land with a high biodiversity value to meet this demand."<sup>28</sup> But there simply is no factual support for that statement as applied to U.S. bioethanol.

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<sup>25</sup> ISOR at 116 (analyzing the impacts of an alternative proposal which would place a specific cap on crop-based biofuels).

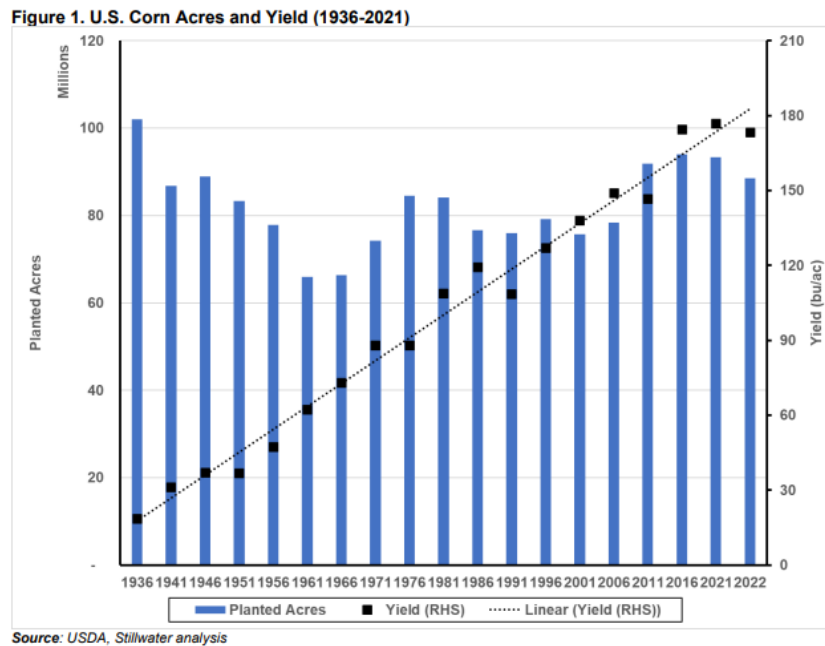
<sup>26</sup> *2022 Scoping Plan for Achieving Carbon Neutrality*, CARB, (Dec. 2022) at 191 [hereinafter "2022 Scoping Plan"].

<sup>27</sup> ISOR at 32.

<sup>28</sup> Proposed Low Carbon Fuel Standard Amendments, Appendix E: Purpose and Rationale at 79-80.



Indeed, decades of empirical data from the U.S. Department of Agriculture (USDA) that EPA closely monitors as part of the federal RFS demonstrates that the amount of corn acres planted has remained stable over time even as bioethanol production has expanded by billions of gallons over the past 15 years. U.S. farmers have consistently met increased demand through increases to the amount of corn yielded per acre, rather than through expanding the acreage in production:



*Demand increases have been consistently met with increases in corn yield and the demand-offsetting effects of dry distillers grain solubles (DDGS), without any need for land extensification.<sup>29</sup>*

Moreover, the RFS Program adds an additional layer of protection against cropland expansion by limiting eligible renewable fuels to those sourced from agricultural land that was cleared prior to 2007 in order to be eligible to generate credits under the program. To enforce this provision, U.S. EPA closely monitors aggregate cropland data in the United States to ensure that increases in biofuels demand do not result in increased cropland acreage. EPA may in the future determine that a feedstock tracking requirement is necessary if data shows that U.S. corn acreage begins to increase, but to date that agency has determined that it is unnecessary to do so given clear data indicating increased production absent land conversion. CARB’s proposal to apply sustainability requirements to domestically produced bioethanol is therefore an unnecessary “solution” in search of a not-yet-existent problem. Further, the Proposed

<sup>29</sup> Stillwater Assoc., LLC, *Assessment of Production and Consumption Capacity of Conventional Ethanol in 2023-2025* (Feb. 9, 2023).

Amendment's scope strays widely from what would be necessary to address land use change, if there were in fact a problem to address.

With no evidence that corn acreage is increasing, the potentially substantial compliance costs of the proposed sustainability requirements are not reasonably necessary to address CARB's stated purpose. At a minimum, U.S. corn bioethanol producers should be excluded from the requirements due to the decades of evidence showing stable domestic corn acreage, as well as the existing oversight from U.S. EPA as part of the RFS Program. Socio-economic sustainability requirements are not reasonably necessary to effectuate cost-effective GHG reductions or address direct land use change.

AB32 designated CARB as the state agency charged with "monitoring and regulating the sources of emissions of greenhouse gasses" to further the statute's goal to "achieve the maximum technologically feasible and cost-effective greenhouse gas emission reductions."<sup>30</sup> While the agency may "consider overall societal benefits" when crafting its regulations,<sup>31</sup> AB32 does not endow CARB with broad authority to enact economic and social regulations that are untethered from cost-effective GHG emissions reductions. The Executive Order establishing the LCFS has a similarly discrete focus: "to reduce the carbon intensity of California's transportation fuels."<sup>32</sup>

CARB does not specify the certification requirements that will eventually be adopted, but the Proposed Amendments include a vague, far-reaching list of topics with no clear nexus to whether a feedstock originates on land placed into agricultural production prior to a certain date. For example, the contemplated feedstock certification program must address "social and economic criteria" and include "economic . . . and social stakeholders," but nowhere does CARB explain why a certification system must encompass such wide-ranging concepts to address the purported issue of land use change.<sup>33</sup> While CARB's proposal provides no detail as to what will actually be required of biofuel producers, it is difficult to conceive how these socio-economic standards could be crafted in a manner that would be reasonably necessary to reducing GHG reductions in a cost-effective manner. Moreover, it is unclear why CARB selected January 1, 2008 as the date by which agricultural land must have been put to such uses or how regulated parties will retroactively prove out feedstock eligibility when the certification systems eventually take effect in 2028. More fundamentally, it should not be left to regulated parties, the public, or the courts to guess as to how these requirements will be crafted — CARB must clearly state the rationale for its reasonably necessary determination in its statement of reasons.<sup>34</sup>

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<sup>30</sup> Cal. Health and Safety Code § 38510; *Id.* at § 36569.

<sup>31</sup> *Id.* § 38562(b).

<sup>32</sup> Cal. Exec. Order S-01-07 (January 18, 2007).

<sup>33</sup> Proposed 17 C.C.R. § 95488.9(g).

<sup>34</sup> Cal. Gov. Code § 11346.2(b).

3. Inconsistent with best available science, CARB's lifecycle emissions modeling tool already substantially over-penalizes bioethanol for modeled land use change impacts

The proposed sustainability requirements are also not reasonably necessary because CARB *already* “disincentivizes sourcing biofuel feedstocks from crops with higher land-use change risks” through application of an outdated and overly conservative estimated land use change penalty to bioethanol’s carbon intensity.<sup>35</sup> CARB’s analysis for this rulemaking acknowledges that “the likelihood of [direct and indirect land use change] is at least partially (**and potentially fully**) accounted for by the LUC scores added to crop-derived pathways.”<sup>36</sup>

Specifically, CARB currently applies a LUC penalty of 19.8 gCO<sub>2</sub>e/MJ to U.S. corn starch bioethanol, derived from modeled estimates of iLUC.<sup>37</sup> However, through a multitude of refinements to model design and model inputs since CARB last updated its analysis in 2015, iLUC estimates for bioethanol have converged around a relatively narrow range that is substantially lower than CARB’s estimate, even when differing models and differing model inputs are considered.<sup>38</sup> This cross-model convergence is observed in both American and European analyses, and is particularly highlighted by comparing studies which have published updates to their initial analysis using otherwise similar methodology. The most recent credible iLUC models have continued to adjust, refine, update, and calibrate their methodologies, resulting in a downward trend of estimates and convergence around -1.0 to 8.7 gCO<sub>2</sub>e/MJ.<sup>39</sup>

As discussed, CARB’s proposed sustainability requirements would be ineffective at addressing iLUC, since the requirements apply only to crops physically used for biofuel feedstocks without consideration of global economic and land use patterns. However, to the extent that CARB’s proposal is intended to disfavor crop-based biofuels within the LCFS program, CARB’s inflated iLUC penalty already places a heavy finger on the scale to disincentivize such fuels.

*C. The Proposal Will Lead to Increased Fossil Fuel Consumption Resulting in Increased Emissions of Toxic Air Pollutants in Violation of AB32*

CARB may not undertake regulatory activities to reduce GHG emissions that interfere with federal or state efforts to reduce toxic air contaminant emissions in the

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<sup>35</sup> ISOR at 32.

<sup>36</sup> EIA at 44 (emphasis added).

<sup>37</sup> 17 CCR § 95488.3 at Table 6.

<sup>38</sup> See Environmental Health and Engineering, *Response to Proposed Renewable Fuel Standard (RFS) Program Standards for 2023–2025*, Exhibit 2 of EPA-HQ-OAR-2021-0427-0796 (Feb. 10, 2023).

<sup>39</sup> *Id.*; Scully, et. al. *Carbon intensity of corn ethanol in the United States: state of the science*, 16 Environ. Res. Lett. 4 (2021).

state.<sup>40</sup> The proposed sustainability requirements may reduce the amount of renewable biofuel consumed in California by placing significant compliance costs on producers of bioethanol and decreasing the availability of credit-generating biofuels. As a direct result of reducing the available volumes of biofuel, fossil fuel consumption will increase. This boost in fossil fuel consumption would increase not only GHG emissions, but also emissions of several toxic air pollutants.

As CARB acknowledges in the ISOR, higher amounts of renewable fuel consumption lead to significant reductions of both NO<sub>x</sub> and PM<sub>2.5</sub> emissions.<sup>41</sup> A recent study conducted by the University of California, Riverside also found that greater use of bioethanol-blended fuels can reduce carbon monoxide, ozone, and primary PM levels relative to the use of gasoline-only fuels.<sup>42</sup>

In addition, bioethanol boosts octane in fuel without the harmful impacts of alternative octane-boosting fuel additives, including methyl tert-butyl ether (MTBE), lead, and aromatics (including benzene, toluene, ethylbenzene, and xylene). Indeed, the level of aromatics in fuel decreases by about 7% for every 10% by volume increase in bioethanol content.<sup>43</sup> Decreasing aromatics in fuel has direct impacts on tailpipe emissions, with higher-ethanol fuels resulting in lower emissions of particulate matter (PM), black carbon (BC), particle number (PN), benzene, toluene, ethylbenzene, m/p-xylene and o-xylene (BTEX), and 1-3 butadiene as compared to higher aromatic fuels. Bioethanol blends are particularly effective at reducing cold-start PM and VOC emissions, with a 15-18% decrease in PM emissions for each 10% increase in bioethanol content by volume.<sup>44</sup> Primary PM<sub>2.5</sub> emissions have substantial human health impacts and have been shown to disproportionately impact racial and ethnic minorities, which are often located in urban areas where cold-start conditions are most common.<sup>45</sup>

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<sup>40</sup> Cal. Health & Safety Code § 38562(b)(4) (CARB must “[e]nsure that activities undertaken pursuant to the regulations complement, and do not interfere with, efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminant emissions.”).

<sup>41</sup> ISOR at 127 (noting that NO<sub>x</sub> and PM<sub>2.5</sub> reductions in the accelerated decarbonization alternative as compared to the proposal were “primarily due to higher amounts of renewable fuels used.”); see also ISOR at 66.

<sup>42</sup> Yang, et al. *Emissions from a flex fuel GDI vehicle operating on ethanol fuels show marked contrasts in chemical, physical and toxicological characteristics as a function of ethanol content*, 683 *Sci. of the Total Env't* 749 (Sep. 2019), <https://doi.org/10.1016/j.scitotenv.2019.05.279>.

<sup>43</sup> See Environmental Health and Engineering, *Response to Proposed Renewable Fuel Standard (RFS) Program Standards for 2023–2025*, Exhibit 2 of EPA-HQ-OAR-2021-0427-0796 at Part III (Feb. 10, 2023).

<sup>44</sup> *Id.*

<sup>45</sup> Tessum, et al., *PM<sub>2.5</sub> pollutants disproportionately and systemically affect people of color in the United States*, *Sci. Advances* (2021) at 7, <https://doi.org/10.1126/sciadv.abf4491>; Colmer, et al., *Disparities in PM<sub>2.5</sub> air pollution in the United States*, 369 *Science* 6503 (2020) at 575, <https://doi.org/10.1126/science.aaz9353>.

In short, the Proposal is legally deficient in failing to grapple with the fundamental issue that the sustainability certification requirements may be inconsistent with CARB's mandate to protect air quality while achieving cost-effective GHG emissions reductions. In addition to providing adequate notice to the regulated community of what the sustainability criteria will entail, CARB must disclose and carefully evaluate the air quality impacts of any such new requirements consistent with Health & Safety Code § 38562(b)(4).

*D. The Proposed Rulemaking Package Fails to Identify and Consider Potential Economic and Environmental Justice Costs of the Sustainability Requirements*

Throughout the rulemaking materials accompanying the Proposed Amendments, CARB's analysis systematically omits any evaluation of the potential impacts imposed by the applicability of new sustainability requirements in conjunction with tightening carbon intensity standards through 2045. Indeed, the sustainability requirements are so undefined that it is unlikely that CARB could estimate such potential impacts with any level of confidence. But that does not relieve CARB of its obligations under California law. If CARB is unable to properly identify and evaluate the impacts of the sustainability requirements, it cannot finalize those requirements as proposed.

1. CARB Fails to Adequately Identify Potential Economic Costs

For major regulations, the APA requires agencies to publish a standardized regulatory impact analysis that includes "all costs" of the regulation on businesses in California.<sup>46</sup> The scope of this analysis must encompass "each type of business subject to the relevant proposals"<sup>47</sup> and is intended to provide to the agency and the public the "tools to determine whether the regulatory proposal is an efficient and effective means of implementing the policy decisions enacted in statute or by other provisions of law in the least burdensome manner."<sup>48</sup> Further, AB32 requires that CARB consider costs to employ technology-neutral and cost-effective GHG emissions reductions approaches.<sup>49</sup>

Nowhere in CARB's economic analysis does the agency address the potential costs of the proposed sustainability requirements. These requirements create plainly foreseeable potential impacts in at least two ways. First, the requirements are very likely to impose direct compliance costs on biofuels producers. CARB clearly overlooks the entire set of compliance costs imposed on low-carbon biofuels producers by asserting

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<sup>46</sup> Cal. Gov. Code § 11346.2(b)(2)(B); *Id.* at § 113463.3; 1 C.C.R. § 2000(e).

<sup>47</sup> *John R. Lawson Rock & Oil, Inc. v. State Air Resources Bd.*, 20 Cal. App. 5th 77, 114 (Cal. App. 2018) (finding CARB's economic analysis violated the APA for failing to consider impacts on intrastate trucking).

<sup>48</sup> Cal. Gov. Code § 11346.3(e).

<sup>49</sup> Cal. Health & Safety Code § 38562

that the Proposal's cost increases will "fall exclusively on producers of high-carbon intensity fuels," and consumer costs passed through by high-carbon fuels producers.<sup>50</sup>

Second, depending on how the sustainability requirements are eventually developed, there is potential for substantial costs on fuel producers as well as consumers if a large volume of credit-generating biofuels is unable to meet the sustainability requirements due to social, economic, or other considerations. The magnitude of this potential cost is unknown because the stringency and practicality of the sustainability requirements remain entirely undefined. But with bioethanol and other crop-based biofuels accounting for the majority of fuel in the program, poorly crafted sustainability requirements could create enormous disruption to the LCFS market if all or most of these fuels shift from credit-generating to deficit-generating volumes. CARB's fundamental failure to acknowledge and evaluate this potential risk in its economic analyses is highly concerning and contrary to law. As such, CARB must address in its record for this rulemaking a wide variety of economic cost impacts it ignores in this Proposal.

We encourage CARB to fully identify and evaluate the economic costs of the Proposal once any "sustainability" requirements are clarified prior to finalizing this rule.

## 2. CARB Fails to Adequately Identify Potential Adverse Environmental Justice Impacts

CARB's environmental justice analysis suffers from similar and overlapping flaws as its economic analyses by failing to consider the potential impacts of the sustainability requirements. As discussed above, unworkable or overly stringent sustainability requirements would likely lead to a decrease in available credit-generating biofuels in the LCFS Program. This would increase compliance costs on deficit-generating fuels producers, who would then pass through those costs to consumers in the form of higher fuel costs. This risks disproportionately burdening lower-income communities which spend a higher relative portion of their income on fuel expenses and for whom new electric vehicles may remain out of reach.

In addition, if the sustainability requirements displace volumes of biofuels, these volumes will likely shift to increased fossil fuel consumption, with resulting adverse air quality impacts as discussed above in Section II (C). This increase in toxic air pollution risks disproportionately burdening frontline communities located near major transportation corridors and around airports and ports.

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<sup>50</sup> Proposed Low Carbon Fuel Standard Amendments, Appendix C-1: Standardized Regulatory Impact Analysis at 57.

We encourage CARB to fully identify and evaluate the potential environmental justice impacts of the Proposal once any “sustainability” requirements are clarified prior to finalizing this rule.

### **III. The Draft Environmental Impact Analysis Fails to Comport with CEQA’s Requirements**

At its core, CEQA requires California agencies to inform decision makers and the public about the potential environmental impacts of proposed projects (including rulemakings), and to reduce adverse environmental impacts to the extent feasible. For the myriad reasons discussed above, the Proposed Amendments and the accompanying Draft Environmental Impact Analysis (EIA) fail to satisfy this requirement. Informed decision-making is infeasible where CARB has failed to elucidate the details of a critical component of the LCFS that may materially impact volumes and types of fuels within the California transportation fuel mix. In so doing, it impermissibly “deprive[s] decision makers and the public of substantial relevant information about the project’s likely impacts.”<sup>51</sup>

In particular, CEQA regulations require that a draft EIA include “[a] discussion and consideration of environmental impacts, adverse or beneficial.”<sup>52</sup> Nowhere does the Draft EIA grapple with the complex potential GHG and air quality implications of the poorly circumscribed “sustainability criteria.” Indeed, the Draft EIA misapprehends the Proposed Amendments’ scope entirely. It conceptualizes the sustainability requirement as tied exclusively to environmental considerations, i.e., confirmation of feedstock point-of-origin and potential conversion of land for use as feedstock.<sup>53</sup> It fails to recognize the “social and economic” considerations relevant to obtaining a certification and, in turn, fails to evaluate whether those criteria may drive low carbon and environmentally beneficial fuels like bioethanol out of the program.

Moreover, the Draft EIA summarily rejects an alternative option that eliminates the crop-based fuels sustainability criteria on unrelated grounds.<sup>54</sup> Specifically, the Draft EIA establishes a strawman: an alternative that it asserts does not meet the objectives of the Proposed Amendments and therefore need not be explored consisting of, among other things, a very aggressive 40% carbon intensity reduction requirement by 2030 coupled with no sustainability criteria. Without explanation, the Draft EIA claims this scenario “increases the risk of greater environmental impacts” without elaborating how specifically the sustainability criteria would function to abate impacts of concern, and why there may be environmental *benefits* to exclusion of such criteria.

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<sup>51</sup> *Ctr. for Biological Diversity v. Dep’t of Fish & Wildlife*, 62 Cal. 4th 204, 228, 361 P.3d 342, 356 (2015), as modified on denial of reh’g (Feb. 17, 2016).

<sup>52</sup> 17 C.C.R. § 60004.2.

<sup>53</sup> Draft EIA at 20 (emphasis added).

<sup>54</sup> *Id.* at 179.

Nor does the Draft EIA address why exclusion of the sustainability requirements is a relevant alternative scenario in only one of the multiple options evaluated. In accordance with California regulation, “[t]he range of feasible alternatives [must] be selected and discussed in a manner to foster meaningful public participation and informed decision making.”<sup>55</sup> Prior to finalizing the Proposed Amendments and EIA, CARB must further define the sustainability criteria, allow regulated parties and the public to comment on the requirements’ potential details and potential implications, and address any such comments regarding adverse environmental impacts that may follow from finalization of the requirements.

#### **IV. CARB Should Use the 2024 Amendments to Accelerate Decarbonization**

Despite the urgent need to address climate change and reduce GHG emissions from California’s highest-emitting sector, CARB declined to adopt an “Accelerated Decarbonization” scenario that could have maximized the GHG-benefits of the LCFS Program. We urge CARB to reconsider several specific components of that proposal for inclusion in its final rule, as well as to update its lifecycle analysis for corn starch bioethanol to incorporate the best available science.

##### *A. CARB Should Recognize and Incentivize Low-Carbon Agricultural Practices*

Growth Energy strongly supports the appropriate crediting of on-the-farm low-carbon agricultural practices in the LCFS. As the Scoping Plan recognizes, climate-smart practices have “significant potential” to increase soil carbon storage and reduce GHG emissions, with important social and environmental co-benefits including in public health, water quality, water availability, and biodiversity.<sup>56</sup>

The ISOR states that consideration of low-carbon agricultural practices was rejected because “there is not yet a mechanism within the LCFS for quantifying, verifying, and including greenhouse gas emissions reductions or soil-carbon sequestration from changes in individual farm-level management practices in LCFS fuel pathways.”<sup>57</sup> But there are more than enough tools and systems available to CARB to create such a mechanism, including the GREET FD-CIC model from U.S. Department of Energy’s (DOE’s) Argonne Laboratory, as well as USDA national standards for climate-smart agriculture. Specifically:

- *Use of cover crops.* Use of cover crops improves soil health and enhances soil organic carbon (SOC) sequestration. By sequestering atmospheric carbon dioxide in the soil, such use of cover crops offsets other carbon dioxide emissions from feedstock production, and lowers the lifecycle GHG emissions of

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<sup>55</sup> 14 C.C.R. § 15126.6(f).

<sup>56</sup> 2022 Scoping Plan at 254.

<sup>57</sup> ISOR at 125.



bioethanol produced from corn feedstock grown using this method. USDA currently offers cover crop initiatives as part of its climate smart agriculture programs and has issued national conservation practice standards to define the practice.<sup>58</sup>

- *Effect of tillage.* Another method to enhance SOC sequestration is switching to no-till or reduced-till practices. Reduced disturbance of the soil supports greater sequestration of atmospheric carbon dioxide. USDA has also issued national conservation practice standards for both no-till and reduced-till agriculture.<sup>59</sup>
- *Manure application.* Application of agricultural byproducts and waste products such as manure can materially increase SOC sequestration. GREET's FD-CIC model can calculate changes in SOC emissions resulting from the use of swine, dairy cow, beef cattle, or chicken manure.
- *Improved fertilizer practices.* Precision application of fertilizer through "4R" techniques (right time, right place, right form, right rate) can significantly reduce emissions attributable to fertilizer usage. Similarly, applying bio-based fertilizers to corn, such as nitrogen-fixing biological products, legumes, or manure can significantly reduce the need for conventional fertilizer, providing a lower carbon-intensive source of fertilizer for the corn. In addition, nitrogen stabilizers can reduce the loss of nitrogen into the environment. This often leads to a reduced application rate of fertilizer, further reducing its environmental impact.<sup>60</sup>
- *Green or low-carbon ammonia.* Ammonia used to make fertilizer can be produced using renewable energy (where hydrogen from electrolysis of water reacts with atmospheric nitrogen) or with carbon-reducing technologies, reducing lifecycle GHG for producing corn feedstock to bioethanol production.<sup>61</sup>

There has been a wealth of data on the substantial benefits of these and other low-carbon agricultural practices, including a recent study by Argonne National Laboratory showing the possibility of a 35% reduction in carbon intensity through

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<sup>58</sup> USDA Press Release No. 0005.22, *USDA Offers Expanded Conservation Program Opportunities to Support Climate Smart Agriculture in 2022* (Jan. 10, 2022); USDA Conservation Practice Standard # 340, *Cover Crop (Ac.)* (Sep. 2014).

<sup>59</sup> USDA Conservation Practice Standard # 329, *Residue and Tillage Management, No Till (Ac.)* (Sep. 2016); USDA Conservation Practice Standard # 345, *Residue and Tillage Management, No Till (Ac.)* (Sep. 2016).

<sup>60</sup> GHG reductions from precision application of fertilizer and use of nitrogen stabilizers are available from standard values in GREET's FD-CIC module. GHG reductions from bio-based fertilizer can be calculated based on farming inputs.

<sup>61</sup> GHG reductions from green ammonia are available from standard values in GREET's FD-CIC module. GHG reductions for low carbon ammonia can be calculated based on the ammonia production process.

adoption of current best on-farm practices.<sup>62</sup> With the LCFS' verification requirements, capturing these on-the-farm benefits for biofuel pathways is now more realistic and scalable. To the extent that CARB decides to implement additional verification requirements in the form of the proposed sustainability requirements, it would be especially arbitrary to simultaneously disallow credit-generation of verifiable low-carbon agricultural practices. Appropriately crediting climate smart ag will help biofuels producers continue to further innovate and lower their carbon intensity, while providing key incentives for farmers to adopt these effective conservation practices.

*B. CARB Should Update Its Lifecycle Analysis for Bioethanol to Incorporate the Best Available Science*

As discussed above in Section II(A)(3), CARB's current lifecycle analysis for U.S. corn starch bioethanol is outdated and a substantial overestimate as compared to the best available science. This overestimate is driven by an inflated iLUC penalty, which CARB has not updated since 2013-2015. Unlike CARB's iLUC estimate, the science of lifecycle emissions modeling has not remained stagnant over the past decade. Instead, through various improvements to both models themselves and the data models rely on, iLUC modeling has improved significantly in recent years with a clear downward trend converging around iLUC values that are less than half of CARB's current estimate.

This trend is made most obvious by comparing studies from the same authors that have updated their work. For example, EPA initially estimated in 2009 iLUC associated with ethanol that was more than double the value it ultimately incorporated into its final rule establishing the 2010 Renewable Fuel Standard.<sup>63</sup> More recently, studies from Taheripour, et al. demonstrated that using an updated land use module in GTAP-BIO resulted in iLUC estimates one-third to one-half of the magnitude of estimates using an outdated land use module within the same model.<sup>64</sup>

One key input in iLUC modeling where CARB's current methodology is particularly outdated is CARB's choice of emissions factors. Estimates of iLUC are the result of multiplying the acres of land that a model projects will be converted from various existing land uses to crop production (in order to meet a perceived increase in biofuel demand) by the additional GHG emissions that are attributable to that land conversion. The second input in this equation, estimating the GHG emissions attributable to each acre of land conversion, is referred to as the "emissions factor." Emissions factors vary based on the type of land converted. For example, converting forestland to cropland has greater GHG emissions than converting pastureland to cropland. Emissions factors are built on a multitude of assumptions relating to carbon

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<sup>62</sup> Liu, et. al., *Shifting agricultural practices to produce sustainable, low carbon intensity feedstocks for biofuel production*, 15 Environ. Res. Lett. 8 (2020).

<sup>63</sup> See Environmental Health and Engineering, *Response to Proposed Renewable Fuel Standard (RFS) Program Standards for 2023–2025*, Exhibit 2 of EPA-HQ-OAR-2021-0427-0796 (Feb. 10, 2023).

<sup>64</sup> *Id.*

stocks of particular land types, including both above ground carbon (i.e., in trees or vegetation) and below ground carbon (including soil organic carbon). The choice of emissions factor that a model applies can have a significant impact on iLUC estimates.<sup>65</sup>

CARB's current iLUC modeling is based on the AEZ-EF emissions factors. Argonne National Laboratory — the authors of the GREET model that CARB incorporates for non-iLUC aspects of lifecycle emissions modeling — instead utilizes the CENTURY and Winrock emissions factors as part of the Carbon Calculator for Land Use Change from Biofuels (CCLUB). The CCLUB emissions factors are more scientifically defensible than AEZ-EF for multiple reasons. For one, CCLUB is updated by Argonne regularly to improve its estimates as the best available science develops.<sup>66</sup> In contrast, AEZ-EF was created for a particular modeling exercise completed to develop CARB's iLUC estimate in 2014, and has not been updated in the decade since, notwithstanding significant refinements in understandings regarding critical inputs like SOC estimates.<sup>67</sup> By its authors' own admission, AEZ-EF "relies heavily on IPCC greenhouse gas inventory methods and default values" from **2006**.<sup>68</sup> CCLUB also incorporates U.S. soil organic carbon estimates rather than relying on outdated international defaults,<sup>69</sup> and CCLUB's treatment of cropland pasture — one type of land that could potentially be converted for cropland — is informed by empirical data from USDA. This makes CCLUB more evidence-based than AEZ-EF, which simply assumes that converting cropland pasture to cropland releases 50% of the emissions associated with converting pasture to cropland. In addition, CCLUB accounts for a broad range of soil, climate, and management conditions, which "is consistent with the technique of the Intergovernmental Panel on Climate Change of continuously updating carbon stock change factors based on such factors as management activities and various yield scenarios."<sup>70</sup>

Further, empirical data show that iLUC is far lower than the range predicted by agro-economic models from more than a decade ago and is substantially overstated in those models. A recent International Energy Agency report, for example, evaluated real-world data from 2005-2015 and found "no link" between increased U.S. biofuel

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<sup>65</sup> Taheripour, et al., *Biofuels induced land use change emissions: The role of implemented emissions factors in assessing terrestrial carbon fluxes (2022)* at Table 2.

<sup>66</sup> See, e.g. Kwon, et al. *Carbon Calculator for Land Use and Land Management Change from Biofuels Production (CCLUB) Users' Manual and Technical Documentation*, Argonne National Laboratory (Oct. 2021).

<sup>67</sup> Plevin, et. al, *Agro-ecological Zone Emission Factor Model v52*, (Jan. 2014).

<sup>68</sup> Plevin, et. al, *Agro-ecological Zone Emission Factor Model* (Sep. 2011).

<sup>69</sup> Cf. Kwon, et al. (2021) at 8 (describing CCLUB approach to modeling soil organic carbon changes in the U.S.; Plevin, et. al. (2014) at Table 20 (citing IPCC defaults).

<sup>70</sup> Taheripour et al. *Response to "how robust are reductions in modeled estimates from GTAP-BIO of the indirect land use change induced by conventional biofuels?"* 310 *Journal of Cleaner Production* 127,431 (2021).

production and corn production or deforestation in Brazil.<sup>71</sup> Instead, the report casts doubt on any causal relationship between biofuel production and corn prices or animal production.<sup>72</sup>

Ample scientific evidence currently exists for CARB to promulgate an updated LUC value for bioethanol that is consistent with the reduced range of iLUC values observed across the recent scientific literature. Growth Energy has submitted an abundance of evidence in both state and federal rulemakings to demonstrate the current state of the science, and we would be happy to work with CARB to address any outstanding concerns that may be delaying a much-needed update to CARB's lifecycle analysis.

*C. CARB Should Take Concrete Steps to Allow the Use of E15 Fuel in California*

We continue to urge CARB to expedite its approval of E15 fuel. E15, a blend consisting of 15% bioethanol, has been approved for use by the EPA in all passenger vehicles model year 2001 and newer — more than 96% of the vehicles on the road today — and is now for sale at more than 3,400 locations in 31 states. It is striking that in the state with the most aggressive climate policy in the country, the lowest carbon intensity gasoline product on the market (E15), remains unavailable to consumers and as a compliance tool for parties obligated to reduce the greenhouse gas emissions of California transportation fuel under the LCFS. In addition to its climate benefits through displacing more fossil fuel, E15 also provides substantial public health benefits through the reduction of criteria air pollutants, particularly PM<sub>2.5</sub> as discussed above. And E15 provides substantial cost benefits as well, selling for 15 cents less per gallon on average this summer where it was available. In certain states, these cost savings reached as high as 60 cents per gallon. Many of these benefits are especially impactful to communities that are disproportionately overburdened by pollution, including urban communities in close proximity to highways and vehicular traffic, and low-income communities for which fuel costs make up a higher proportion of household expenditures.

We appreciate the Multimedia Working Group's continued work on the multimedia evaluation of E15, and we strongly encourage CARB to make material commitments towards expediting the approval of E15 for California consumers and to help drive immediate GHG reductions.

*D. CARB Should Allow Biofuel Producers to Access Crediting for Low-CI Power*

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<sup>71</sup> *Towards an improved assessment of indirect land-use change*, IEA Bioenergy (Oct. 2022), [https://task43.ieabioenergy.com/wp-content/uploads/sites/11/2022/10/IEA-Bioenergy-iLUCreport\\_Final.pdf](https://task43.ieabioenergy.com/wp-content/uploads/sites/11/2022/10/IEA-Bioenergy-iLUCreport_Final.pdf).

<sup>72</sup> *Id.*

The Proposal also fails to recognize the carbon-reduction potential in crediting low-CI power sourcing in the production of biofuels, reserving this crediting mechanism solely for hydrogen used as a transportation fuel. This narrow provision provides no satisfactory justification, instead citing faulty arguments about resource shuffling and restricting low-CI power for other sources if the provision is expanded. Firstly, the Proposal fails the LCFS' fundamental policy goal of reducing carbon intensity in transportation fuels used in California. Allowing bioethanol producers to source *new* contracted low-CI power that is not included in a utility resource plan via a power purchase agreement does not impact electricity demand. Secondly, biofuels production occurs largely outside of California, in other electricity markets. Not only does this render the resource shuffling argument moot, but it also denies California the opportunity to lead other jurisdictions towards low-CI power capability.

*E. Accelerating the Use of Sustainable Aviation Fuel (SAF)*

As producers of one of the most scalable feedstocks for SAF production, we appreciate the Board's attention to development of this key market through its proposal to remove the exemption for intrastate jet fuel. We encourage CARB to continue to work with SAF producers, biofuel feedstock producers, and airlines to continue to seek ways to accelerate use of these important fuels to help decarbonize the aviation sector.

**V. Conclusion**

Thank you for the opportunity to provide input on the 2024 LCFS Amendments. The LCFS Program is a critical tool to addressing climate change, and we look forward to working with CARB to ensure the role of biofuels in making California's fuel mix more sustainable and help the state achieve its progressive climate goals through the expanded use of bioethanol.

Sincerely,



Christopher P. Bliley  
Senior Vice President of Regulatory Affairs  
Growth Energy