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February 14, 2024

Liane Randolph, Chair
CARB Board Members
California Air Resource Board

Re: 45-day Amendment Package of Proposed Changes to the Low Carbon Fuel Standard

Chair Randolph and Board Members,

RPMG Inc. (RPMG) is a biofuel marketing company representing our owner and marketing partner ethanol facilities located throughout the Midwest. Our member facilities provide both ethanol and distillers corn oil (DCO) as essential inputs to California's low carbon fuels market in material quantities. Since the Program's inception over a decade ago, RPMG has supported California's clean transportation fuel policy, and worked diligently with CARB staff to improve the administration of the Program. RPMG looks forward to the approval and use of E15 in California. This logical next regulatory step for lowering the carbon intensity of California's gasoline supply will also provide further reduction in criteria air pollutants, thus achieving the dual goals being sought by CARB. The amount of ethanol used in California is not a function of LCFS incentives, but rather is a function of the State and Federal air quality rules requiring the use of Reformulated Gasoline and an Oxygenate. Ethanol's role in California's gasoline market is firmly established and has been since the mandated phaseout of MTBE. Under these air quality requirements, there is already a mandate for ethanol that is independent of the LCFS. The LCFS incents lower carbon ethanol *per gallon*, but the existing fuel regulations dictate the *total volume* consumed.

Our member facilities are continually investing in lower carbon technologies, innovating production methodologies and ways to reduce carbon emissions to the atmosphere. These technologies include corn kernel fiber ethanol, wholistic facility efficiency upgrades, waste heat recovery, and Carbon Capture and Storage (CCS).

RPMG appreciates the opportunity to comment on this important rulemaking effort. Our comments below reflect the issues directly impacting RPMG and our member plants. They are presented in order of importance. We respectfully request the Board direct staff to continue working on the following identified issues. Given the importance, and frequency at which LCFS amendments occur, it is critical to take the time now to correct these deficiencies.

Sustainability Requirements for Crop-Based Feedstocks [§ 95488.9(g)]

RPMG is fundamentally opposed to the proposal in § 95488.9(g) *Sustainability Requirements for Crop-Based Feedstocks* based on several significant practical, policy, and technical issues highlighted for your consideration.

Despite the title of this newly drafted section, there is nothing proposed that clearly defines or expresses what CARB's expectations regarding sustainability are, in theory or practice. Instead, CARB has outsourced this concept. This regulatory sustainability model was not workshopped, nor presented in any draft fashion to stakeholders over the previous two years of informal rulemaking efforts.

It is clear through reviewing transcript of the September 2023 CARB Board hearing and stakeholder feedback at the informal workshops, that questions and concerns have been raised and debated regarding a potential increase in crop-based feedstocks for Renewable Diesel from virgin materials. That dialogue does not reconcile with what is written as proposed regulatory text. Staff's proposal is too broad and far-reaching to be adopted on its first pass.

Set to begin in 2028, the proposed sustainability requirements unilaterally require *all* crop-based feedstocks used for *all* fuel pathways (liquid, gaseous, electric) indiscriminate of vehicle class or engine technology be certified. The requirement imposed on the marketplace is to 'maintain continuous' certification by a yet-to-be determined, yet-to-be vetted and yet-to-be CARB-approved certification system. The requirement's goal of demonstrating *all* agricultural-based feedstocks is farmed, harvested, and developed in a "sustainable" manner without elaboration stands in contrast to practical regulations. As proposed, without obtaining this TBD certification, all biofuel pathways will be assigned an uneconomic carbon intensity value equivalent to fossil diesel. Low carbon fuel producers have responded to the signals of the LCFS program to reduce carbon emissions quantified in the fuel products they supply to California. The introduction of this section in this manner, as written and without even a definition of 'sustainability', is disingenuous toward the investments made and common goals we seek to achieve in mitigating impacts to the environment we all share and will not achieve its implied purpose.

From a technical perspective, and as has been pointed out by numerous LCFS stakeholders, this regulation already includes overly conservative Indirect Land Use Change (iLUC) values on all crop-based feedstock. iLUC is a sufficient mechanism for deterring high biodiverse land conversion within the supply chains of fuels delivered to California complying with the LCFS. It is important to note that an increased volume of ethanol used in California will not result in an increase of acreage used for feedstock production. To institute further, undefined, Sustainability certification requirements to these same crop-based feedstock supply chains ignores this pre-existing function of the regulation. It also infringes upon, and compounds, the conservative fundamental mechanics of performing a well to wheel lifecycle analysis.

The LCFS lives within a Federal Clean Air Act framework of fuel regulations. Underpinning this California program is the USEPA's Renewable Fuel Standard (RFS). Crop-based feedstocks are an integral part of U.S. domestic and global agricultural commodity markets. The RFS rightfully administers a feedstock aggregate compliance approach for domestic agriculture feedstocks under § 80.1454 (c)(1)(i). The domestic agricultural community has testified and commented on the complexities of commercial grain commodity markets in numerous federal, international, and regional fuel regulation proposals. RPMG points CARB staff to the public record comments submitted to USEPA for the RFS program on this issue for in-depth

resource review [1]. Given the crop-based feedstock sustainability requirements are not aligned with other policy frameworks, and as such are not needed, RPMG recommends § 95488.9(g), as proposed, be removed in its entirety.

From an authority perspective, CARB's proposal outsources the standard to an external certification body. The most prevalently used Sustainability certification standards in use at this time were mandated by directives and legal frameworks in foreign countries, and then developed by non-governmental organizations. RPMG understands the importance of sustainability, but developing a California legally binding requirement overseen by foreign non-governmental organizations and private entities is an abdication of authority, nor does it ensure domestic feedstocks meet the unknown definition of "sustainable." As written, there is no defined means of mitigating those risks should this proposed language be adopted. Should a satisfactory certification standard not be available, or the accepted standard changes, all crop-based fuels pathways in the LCFS program would default to a CI for fossil diesel.

The reasoning for this third-party auditing per the ISOR is based on the fact auditing has been done in other biomass-based energy programs. The introduction of more certification requirements is tantamount to more Audit Burden. There has not been any indication or case made that this proposal will result in emission GHG reductions, while forcing additional audit requirements, upstream to a U.S. domestic and global farmer stakeholder community that was not represented in the rulemaking process. This additional Audit Burden will only serve to increase costs, time demands, and superfluous recordkeeping without providing any benefit to the environment or to the LCFS carbon credit marketplace. There would be no economic incentive to put these additional requirements in place – for any fuel supply chain. It also further exacerbates a distinct increased demand for capable subject matter experts in field, available, and accredited auditors. The LCFS is already complicated, this proposal compounds that complexity several fold. Audit Burden, and stakeholder burn-out, are real issues, especially as clean fuel programs expand in a patchwork fashion across the continent, each with unique requirements. Cost benefit considerations are necessary yet haven't been discussed. RPMG recommends CARB take the time to have that conversation before instituting these requirements.

The debate for what constitutes "sustainable" activity or behavior is an important conversation. RPMG recommends we take the time to have that conversation before instituting requirements of this magnitude without even expounding upon what the time and cost requirements will be, nor the impact on national and international fuel markets. It is fundamentally necessary in RPMG's opinion to remove this proposed section in its entirety at this time. For these reasons RPMG is opposed to this new mandate as currently proposed.

[1] https://www.regulations.gov/comment/EPA-HQ-OAR-2005-0161-3210

Verification Body Rotation Requirements [§ 95503]

RPMG remains opposed to the existing mandated verifier firm rotation which requires verifiers to be on a six-year rotation and must suspend all services for three years following the rotation before providing any further verification services. RPMG has warned of the impact of this requirement in previous amendment packages[2][3]. We are revisiting this issue as the verification component of the Program has matured and pathway holders are getting close to the mandated rotation timeline. RPMG requests that CARB reverse this early policy decision.

Partner or lead verifier rotation is a sufficient alternative. RPMG strongly believes mandated firm rotation is in conflict to CARB's and stakeholders' mutually beneficial desire to leverage efficiencies amongst existing stakeholder verification programs. CARB has historically stated their interest in incorporating a firm rotation requirement is to ensure "fresh eyes" and impartiality among firms. The stated benefits of mandated rotation by CARB can be achieved at the partner or lead verifier level. RPMG believes the program's detailed accreditation and CARB approval of verification plans and sampling strategies are sufficient to ensure impartiality.

CARB further elaborates this requirement has been successfully demonstrated through administering the Mandatory Reporting Rule (MRR) under Cap-and-Trade. RPMG maintains there are crucial differences between Cap-and-Trade and LCFS. Required firm rotation does not adequately allow for a regulated entity to consider a verification body's basic knowledge of an industry or individual business practices. This will result, without question, in a loss of engagement efficiency and overall dissatisfaction of the verification experience. Regulated entities have commercial operations to manage. Excessive time spent on repeated and recurring introductions of a new auditor to those operations is not an effective use of enterprise resources, and it will amount to a loss in productivity and increased costs—costs not considered by CARB.

A firm rotation requirement is not only problematic for regulated parties but also for verifiers. Verifiers are already required to become accredited and incur the associated cost of undergoing the necessary training and travel. Once accredited, the verifier experiences a forced reduction in revenue in off years due to loss of clients which results in a necessitation of higher base fees. This inflated cost structure ultimately makes its way to California fuel consumers, undermining program cost containment efforts. For all of these reasons, RPMG urges CARB to incorporate a partner rotation requirement in lieu of a firm rotation requirement for LCFS verifiers.

Indirect Accounting Mechanisms [§ 95488.8 (i) & (h)]

RPMG recommends that the proposed amendments for indirect accounting for low-CI electricity, biomethane and low-CI hydrogen be expanded to allow the use of indirect accounting mechanisms to all pathway types for process energy, e.g. liquid biofuel production. All other pathway holders must have

[2] Microsoft Word - RPMG LCFS Proposal Comment Letter 4.23.18 - Update 2.docx (ca.gov)

[3] Microsoft Word - RPMG LCFS 15-day Comment Letter 7-5-18 v5.docx (ca.gov)

direct connections from renewable or low-CI process energy in order to reduce the CI score. The following is suggested language to § 95488.8 (h) as well as removing the language regarding direct connection § 95488.8 (h)(1)(B).

> § 95488.8. Fuel Pathway Application Requirements Applying to All Classifications.
>
> (1) Low-CI electricity must be supplied from generation equipment under the control of the pathway applicant *or subject to a firm power purchase agreement (PPA) from generating equipment within the same balancing authority as the facility.*

The ISOR describes this preferential treatment as assistance and states this is necessary because there has been very little interest in indirect accounting renewable electricity ZEV pathways under the current rule. It may be true this accounting method has not been widely used in ZEV pathways, but it is a very narrow view of the fuel landscape. The 2022 Scoping Plan update clearly outlines a significant role for liquid biofuels through 2045. By tipping the scale, the proposed regulation is not "allowing the market to determine how the carbon intensity of California's transportation fuels will be reduced."[4] Not only is this a violation of technology neutrality, an original fundamental tenet of the LCFS, it leaves significant carbon reduction out of the program. Liquid biofuel producers have the capacity, both technical and capital, to greatly reduce their carbon intensity scores with the correct regulatory signals.

Credit True Up After Annual Verification [§ 95488.10 (b)]

RPMG strongly supports this aspect of the regulatory package.

Per the current regulation, fuel pathways that achieved additional carbon reductions demonstrated with a lower verified CI score had their additional generated credits assigned to the Program's buffer account. Under the proposed regulations, the fuel pathway holder that has a lower verified operational CI may perform a credit true up and the additional credits are assigned to the pathway holder.

Entities reporting lower verified CI scores have not been able to claim the additional credits due to the prohibition of retroactive credit claims in the regulation (95486(a)(2)). The addition of the proposed credit true up is an added benefit for the pathway holder, the program, and the environment as it provides the incentive to continue to lower greenhouse gas emissions.

RPMG also believes the credit true up proposal supports improved regulatory compliance and administrative efficiency. Today's system of subjecting pathway holders to both administrative adjustments and potential enforcement action for any CI exceedance, without the counterbalance of receiving additional credits for all incremental CI reductions is a scheme that is punitive in both directions. This newly proposed language is an incentive and will thus encourage pathway holders to improve CI

[4] https://ww2.arb.ca.gov/sites/default/files/barcu/regact/2018/lcfs18/fsorlcfs.pdf?_ga=2.118890249.1658159364.1707157899-1753130937.1706029505

scores without having to reapply for incremental production efficiency changes in their CI Scores. This administrative efficiency will also benefit CARB's pathway staff.

One additional note on this issue is that the proposed regulations need more clarification for entities utilizing Temporary CI scores. RPMG requests CARB provide further guidance document(s) to provide instructions on completing a credit true up for pathway holders who may have Temporary CI scores and certified or provisionally certified CI scores within the same compliance year.

New Automatic Deficit Obligation Penalty [§ 95486.1 (g)]

Beginning in 2025, it is proposed that a fuel pathway holder for a non-provisional fuel pathway generates a non-linear deficit obligation following a verified CI exceedance. If a verified CI exceedance does occur, pathway holders will face an automatic deficit obligation of a 4:1 ratio. RPMG understands this new section is intended to work in conjunction with the True Up provisions noted above. While we are supportive of the True Up change because it fairly addresses overcompliance, we oppose the current proposal for Deficit Obligation as it is unnecessarily punitive. If a pathway holder overperforms they receive a 1:1 credit, but if there is an underperformance, then the penalty is 4:1. An objective of the LCFS has always been to ensure that the environmental integrity of the market remains whole. Therefore, requiring a 1:1 adjustment of any deficit obligation before an enforcement action is initiated remains an appropriate remedy.

This two-step process would be a more balanced approach to pathway holders seeking to recertify under the new CA-GREET 4.0 model update required by the regulation. Each, and every, pathway will be updated in short order, and therefore each LCFS stakeholder will be tasked with the same decision of how much Margin of Safety to apply. With the current 4:1 vs 1:1 risk/reward structure, it can be imagined that more conservative CI scores will be requested. This will lead to a market lag in actual credit generation, a deferred return on investment, and potential unintended market consequences such as the impacts to the new Auto Acceleration Mechanism based on credit-deficit numbers that may not accurately reflect market conditions in real-time.

Tier I/II Applications [§ 95488.6 (a) & 95488.7 (a)]

All Tier 1 and Tier 2 applications must contain data consisting of the most recent 24-month period of operation, or at least three months of operation for provisional fuel pathway applications. Additionally, it is proposed that an application does not have more than three months between the end of the reported data period and date of its submission. RPMG understands that Tier 1 and Tier 2 applications with the most up-to-date operational data are essential. The proposed also states that if a pathway application cannot be validated, it must be resubmitted with the "most recent operational data".

RPMG recommends CARB clarify this "most recent operational data" requirement as it is unclear what time period is actually being sought or allowed. For example, if an application is resubmitted in January, does the provision require October through December data, or just a data period that is within three

months of the resubmitted application (July-September). If the applicant must resubmit operational data, the time and expense to gather the data is costly and time-consuming. CARB providing application approvals within an adequate time would ensure the application has up-to-date information and the responsibility is put on CARB rather than the applicant.

Tier 1 Calculator and Instruction Manual

In reviewing the proposed CA-GREET 4.0 Starch and Fiber Ethanol T1 Calculator and Instruction Manual, RPMG encourages CARB to refine the following sections of the calculator and instruction manual:

1. A summary line should be added to the Site-Specific Input tab to aid in user reconciliation of aggregated monthly entries and Verifier reference in summarization detail.
2. The default value option for feedstock transport should be expanded to include more regions of biofuel production in addition to the present 9 state region identified. Identifying and producing records for harvest sites and collection sites is labor intensive. Without the option of a default value, certain applicants may choose simply not to participate due to this impediment. At the very least, the demonstration of feedstock transport mileage where a default value is not an option should be limited to a one-time Validation and not an on-going data collection exercise.
3. This iteration of the CA-GREET 4.0 T1 calculator should consider secondary and alternative energy directed to and allocated for co-product processing energy. For example, if an alternative energy source is consumed to operate only the drum dryer to bake Dried Distiller's Grain with Soluble, the entry field for co-products should be broadened to capture this alternative energy source emission factor for the relevant allocated proportion and not simply default to the assumed primary process energy emission factor as the only option for calculation.
4. RPMG proposes all CA-GREET 3.0 Standard Methods and CARB designated Protocols, used by pathway holders since the last amended regulation effective for 2019, be provided to the public in an accessible online library or website. This will help all applicants to be able to access the same information and provide awareness of existing Standard Methods and Protocols developed after the adoption and issuance of T1 Calculator materials.
5. We noted the Emission Factor for Fiber Enzymes has been modified transitioning from 1,207 grams CO_2e per pound in CA-GREET 3.0 to 525 grams CO_2e per pound in CA-GREET 4.0. Staff has been explained this change is attributable to assuming a 50% moisture content of Enzymes received and used, and that the EF now compensates for this rate of moisture inclusion. RPMG recommends documenting the rational and basis for this change. Further RPMG recommends that CARB affirm in program guidance or Instruction Materials that if the moisture content of a received Fiber Enzyme formulation is greater than 50%, a pathway applicant can approach CARB for an Operating Condition to allow the use of an alternatively modified moisture compensated Emission Factor and they do not need to pursue a T2 pathway application.
6. RPMG and our affiliated producer pathway holders support the incorporation of the Pathway Summary into the CA-GREET 4.0 T1 Calculator. The presence of Operating Conditions within the Pathway Summary should be relied upon for both formal pathway and Operating Condition

acceptance and thereafter for Annual Fuel Pathway Reporting (AFPR) re-affirmation. Having all Operating Conditions singularly incorporated here will simplify the report submission and Verification process for all stakeholders. This should be clearly expressed in AFPR guidance and instruction for reporting expectations.

7. The CA-GREET 4.0 SFE T1 Calculator applies an emission factor for "Evaporative Emissions." It is not clearly identified in LCFS CA-GREET 4.0 material what this emission factor represents. When consulted directly, Staff explained it is meant to consider emissions of Volatile Organic Compound (VOCs) assumed in the production profile of ethanol plants. However, all U.S. domestic ethanol production facilities are obliged to implement and comply with Leak Detection and Repair (LDAR) mandates overseen by USEPA. Adherence to LDAR makes the presence of this additional assumed emission factor unnecessary and results in an arbitrary inflation of the CI score result. This emission factor should be removed from the CA-GREET 4.0 SFE T1 Calculator.

In addition to the comments outlined above, RPMG supports the comments submitted by our industry partners including Renewable Fuels Association (RFA), Growth Energy, ACE Ethanol LLC, and Christianson PLLP.

In Closing

RPMG would like to again highlight the benefits that our industry has made to California's GHG programs and thank CARB for the opportunity to contribute toward the improvement of this regulatory proposal. We would also reiterate that with a regulatory structure which promotes innovation the biofuels industry can continue to lead the way in terms of reducing the Carbon Intensity of the biogenic liquid fuel market that will remain in the state for years to come. RPMG looks forward to continuing these conversations and is available to clarify any suggestion provided in this letter. Please contact me with any questions or comments at (952) 465-3255 or jnowicki@rpmgllc.com.

Thank you,

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