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VIA ELECTRONIC FILING

August 27, 2024

Matthew Botill
California Air Resources Board
1001 I Street
Sacramento, California 95814

Re: RNG Coalition's Comments on Low Carbon Fuel Standard 15-Day Amendments

Dear Mr. Botill:

The Coalition for Renewable Natural Gas (RNG Coalition) is a California-based nonprofit organization representing and providing public policy advocacy and education for the Renewable Natural Gas (RNG) industry.[1] RNG Coalition respectfully submits these comments to the California Air Resources Board (CARB) in response to the August 12, 2024 Notice of Public Availability of Modified Text and Availability of Additional Documents and/or Information for the Proposed Low Carbon Fuel Standard (LCFS) Amendments (15-Day Package).

We thank CARB staff for increasing the ambition of the LCFS programmatic targets in the 15-Day Package. Because of the LCFS, California has access to a robust portfolio of low carbon fuels that have collectively delivered far greater greenhouse gas reductions that initially targeted. CARB is correct to build on this success and strengthen the ambition of the program in the 15-Day Package to achieve even greater emission reductions.

We also support the 15-Day Package's full "credit true up" that properly recognizes the true greenhouse gas benefits of all low carbon fuels. This true up helps address the under crediting currently experienced by RNG projects as they await pathway approval.

Unfortunately, other specifics of the 15-Day Package still increase uncertainty about RNG investment. Phasing out RNG avoided methane crediting without a replacement strategy to ensure methane emissions reductions from various organic waste streams are achieved should be revisited.

Sincerely,

/S/
Sam Wade
Director of Public Policy
Coalition for Renewable Natural Gas

[1] For more information see: http://www.rngcoalition.com/

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1 Increased Program Ambition is Critical for Continued Methane Reduction and Growth in All Low Carbon Fuels

1.1 We Support the 15-Day Package Increase in Ambition for 2025 but Market Response Has Been Muted Thus Far

The LCFS program's targets remain the most critical topic addressed in this rulemaking. Throughout the public process on this rule, RNG Coalition and a diverse group of clean fuel voices contracted with the consulting firm ICF to independently prepare and submit an analysis of what program targets are feasible. We are pleased to see that, while CARB did not set the near-term step-down target in 2025 at the threshold recommended by ICF's findings (10.5% to 11.5% step down), the 9% step down proposed in the 15-Day Package is much improved relative to prior proposals.

Attachment C to the 15-day package suggests that CARB's goal in increasing the near-term step-down in CI stringency in 2025 is "to balance the market in the near-term". We recommend that CARB further expand on this rational to explain what level of credit bank the proposal is designed to target. For example, the ICF work implies that the goal should be more correctly stated as "reduce the existing credit bank to the equivalent of 2-2.5 quarters worth of deficits." We do not believe that a 9% step down fully achieves this objective.

ICF's work continues to show significantly different outcomes than CARB's analysis, especially with respect to the rate of drawdown of the credit bank and associated price trends. We believe that ICF's outlook is better informed by the true near-term supply outlook across all low carbon fuels, deeper analysis of clean fuel production costs, and a better understanding of the potential other areas of public policy support (e.g., federal biofuel and clean vehicle policy). We continue to support more ambitious 2025 targets, in line with ICF's analysis, which we understand ICF will be updating in response to the new constraints proposed in the 15-Day Package.

Further, observable (actual) LCFS credit prices have increased in response to the 15-Day Package, but only modestly relative to what CARB's analysis in Attachment C to the 15-Day Package suggests. We do not understand why CARB staff continue to believe that, in all scenarios analyzed, 2025 market prices will return to >$130 per credit. If the current price is on the order of $54 per credit, a swift return to >$130 in 2025 implies a huge arbitrage opportunity that market actors are not recognizing.

Simply put, we believe that a price recovery in line with Attachment C scenarios is unlikely to occur at the 9% step down. Should CARB retain that level of 2025 target change, near-term RNG project economics will remain challenging and SB 1383 goals for methane reduction will still face significant risk. If CARB publishes a second 15-Day Package, we recommend additional ambition be added to achieve the maximum technologically feasible and cost-effective greenhouse gas reductions from all clean transportation fuels.

1.2 A 2030 Target of Greater than 30% can be Achieved

The ICF work continues to show that a CI reduction of >40% by 2030 is feasible, which would achieve greater GHG emission reductions than the 15-Day Package and be more in-line with economy wide goals for GHG reduction. We continue to recommend that CARB target at least a 35% CI reduction by 2030 and adjust their medium-term forecasting to better reflect ICF's input.

1.3 The Auto Acceleration Mechanism Should Be Able to Trigger Earlier

We are disappointed to see that the 15-Day Package continues the proposed timeline for implementing the Auto Acceleration Mechanism (AAM), such that 2028 remains the first year in which the AAM can amend the CI reduction targets. 2025's performance should be able to trigger the AAM to avoid further near-term market disruption. A 2025 data-year triggering would be able to impact CI targets in 2027. Simply put, the AAM should be allowed to trigger as early as possible, to guard against the case where the step down in not sufficient to address the current oversupply.

1.4 Removal of Fossil Jet Deficits Necessitates More Ambitious Percentage Numbers to Achieve the Same Demand for Low Carbon Fuels

Aviation is a long run end use sector that is likely to need renewable molecules and RNG is well suited to serve as an input to Sustainable Aviation Fuel (SAF) production. For this reason, we were disappointed by the 15-Day Package walks back the ISOR proposal to impose intrastate fossil jet deficit generation. At a minimum, if this change is maintained, it necessitates a more ambitious target (all else equal relative to the ISOR proposal) to achieve the same amount of greenhouse gas reduction from low carbon fuels, because a significant quantity of deficits has been removed from the system.

2 15-Day Package RNG-Related Changes Are Helpful, but More is Needed to Improve RNG Investor Confidence and Increase the Pace of Methane Emissions Abatement by 2030

Despite CARB staff's stated support for RNG throughout the rulemaking process, investors remain concerned about how the Proposed Rule shifts the LCFS's RNG crediting framework. The simple fact is that many anaerobic digestion (AD) RNG projects in planning and construction across North America currently rely on LCFS revenues to be built and operated.

It took an almost decade-long history of LCFS credit being awarded to RNG projects, clear recognition of the methane reduction benefits across a variety of feedstocks, and consistent positive statements from CARB leaders before investors begin to seriously rely on this program to construct RNG projects.

If CARB truly wants methane abatement from sources such as agricultural wastes to continue, and for new sources of RNG activity such as organic waste diversion from the municipal waste stream to develop, they must reconvince the clean fuel investment community that RNG will remain a viable and important contributor to the LCFS framework.

2.1 The Proposed Full True-Up Helps RNG Project Economics but is Not a Full Substitute for Continuing Avoided Methane Crediting.

We support the 15-Day Package's inclusion of a full credit "true up". Using a full true up to verified actual CI performance for all pathways (Temporary, Provisional, and Fully Certified) is simply smart policy.

RNG Coalition strongly supports the 15-Day Package modification to the true up to include the temporary period. The 15-Day change will help streamline the application review process, alleviate or mitigate any business impacts associated with a delay in pathway certification, and allow for the recognition for the full of climate benefits of a fuel.

However, fuel pathway holders should not have to wait until after verification—which occurs in the year after they get their provisional scores—to receive their first true up. Rather the first true up should be from the Temporary to the Provisional CI upon awarding of credits for the first quarter in which the Provisional CI score is approved for use.

Finally, while we support the true up concept improvements, the true up should not be viewed by CARB as a substitute for making rational choices on avoided methane crediting, as discussed below.

2.2 4-to-1 Penalty Should be Eliminated

It is disappointing to see the 15-Day Package retains a "4-to-1" penalty for the case where a verified CI is higher than the certified CI. The ISOR Proposed Rule required that the quantity of deficits generated by CI exceedance be assessed as four times the difference between the verified operational fuel pathway CI and the reported CI (multiplied by the quantity of fuel reported using that fuel pathway during the applicable year).[2] Therefore, if over crediting occurs by one ton, the pathway holder must "pay back" four tons of credits.

This is overly punitive and unsymmetrical. We continue to recommend that, if the verified CI is higher than the certified CI, the project should simply repay CARB for any excess credits claimed, and not be subject to any further enforcement liability (unless there is malfeasance or other such separate cause).

We are also concerned with a change in the 15-Day Package[3] that implies that the 4-to-1 penalty may be applicable during the temporary period, when a project cannot (currently) add a conservative margin of safety (MOS). Eliminating the 4-to-1 penalty would eliminate any potential conceptual conflict during that period. Alternatively, CARB could allow adjustments to the margin of safety a pathway may apply as needed throughout the year, as operational data becomes available, and at a minimum quarterly. This will allow a pathway to adjust the CI of the pathway to ensure a pathway holder can correct CI exceedance proactively.[4]

2.3 Avoided Methane Crediting Makes Many RNG Projects Possible, Incentivizes Maximum Greenhouse Gas Capture During RNG Production

The 15-Day Package would reduce the total number of crediting periods for avoided methane emissions for some subset of projects breaking grand before January 1, 2030, from three to two. This is an extremely problematic change as both agricultural and organic waste diversion projects are heavily dependent on LCFS revenue for profitability, driven by the avoided methane components of their CI scores.

The Notice for the 15-Day Package incorrectly states that the proposed modifications to the credit true-up concept (discussed above) ensure sufficient return on investment for fuel pathways reporting using Temporary fuel pathways during the pathway certification process. During the informal workshop period of this rulemaking, many of our members have, on a confidential basis, individually supplied

[2] See proposed text in § 95486.1(g).

[3] Attachment A-1 Page 181, § 95488.10(a)(7) states that "If the verified operational CI is found to be greater than the certified CI (including provisionally certified) ~~C~~land/or an associated temporary pathway CI for the same feedstock-fuel combination processed at the same facility"

[4] If this approach is adopted, a MOS of should also be allowed to be added to a temporary CI.

CARB with detailed economics for the development of dairy RNG facilities that clearly demonstrate the importance of avoided methane crediting to project economics.

At current LCFS credit prices, a framework without avoided methane crediting does not cover even operating costs for some existing agricultural projects. For projects where that is true—absent some new market that covers the cost of operations—existing digesters will not continue operating after their avoided methane crediting periods expire, potentially reversing progress made by the program.

Further, the proposed 15-Day Package change provides *less* incentive to develop methane capture projects during the critical period between 2025 and 2030. As discussed by CARB staff at the recent dairy workshop held on August 22, 2024, "while the State has made significant progress toward meeting the SB 1383 target for the dairy & livestock sector, additional mitigation measures are still needed."[5] Therefore, it is baffling to see the 15-Day Package propose *diminishing* credit for RNG projects that could be built in a timeline to help achieve this goal.

Attempting to recover capital costs over 20 years will mean that projects built between now and 2030 will need much higher LCFS prices, all else equal, than they would if they could count on a full 30 years of avoided methane crediting. Even if LCFS prices recover more quickly, as suggested by the scenarios in Attachment C to the 15-Day Package, fewer RNG projects will be viable because of this proposed change.

2.4 Avoided Methane Crediting Should Continue in LCFS Unless and Until a Realistic and Proven Replacement Policy is Implemented

We are extremely disappointed to see the 15-Day Package's approach to avoided methane crediting remains untethered to any long-run strategy that would ensure continued methane abatement. It is unwise and irresponsible to propose an arbitrary phase-out of avoided methane crediting without a detailed plan for developing a supporting replacement policy. The treatment of avoided methane continues to create significant project uncertainty and increases the potential for stranded assets—an issue correctly cited by CARB staff during prior workshops as a key outcome to be avoided.[6]

Beyond the new availability of the true-up value, the only other rational for reducing crediting periods for avoided methane provided in the 15-Day Package Notice is alignment with the end-dates for avoided methane pathways that break ground after December 31, 2029, as proposed in the Initial Statement of Reasons (ISOR). This is not sufficient policy rational, as the ISOR proposal's end dates for pathways built in 2030 and beyond is also arbitrary.

2.5 New CADD Data Implies that Emissions Leakage Should Be a Bigger Concern in the Dairy Sector

At the August 22, 2024, Dairy Workshop CARB Staff presented the California Dairy and Livestock Database (CADD) and showed that California's statewide dairy manure cow population may be declining

[5] See CARB staff's presentation at the August 22, 2024, dairy workshop, slide 55. https://ww2.arb.ca.gov/sites/default/files/2024-08/CARB_Dairy_Sector_Workshop_Staff_Presentation_08-22-2024.pdf

[6] See CARB's Presentation at the February 22, 2023, LCFS Workshop, slide 31. https://ww2.arb.ca.gov/sites/default/files/classic/fuels/lcfs/lcfs_meetings/LCFSpresentation_02222023.pdf

more quickly than previously understood.[7] In our comments on the ISOR, we warned that a California-only mandate for dairy manure methane control would likely drive "economic leakage" (unless LCFS support continued as well).

Economic leakage in the environmental context occurs when a regulatory environment in one jurisdiction drives the migration of a key business sector to another region without similar regulations. This can lead to simply shifting the pollution location without any global reduction in GHGs. This is particularly likely to occur in markets with the demand for the product is steadily increasing, such as the market for milk products.[8] Given this, it seems unlikely that it would be smart policy to phase out the current incentive-based approach to manure methane abatement (including LCFS credits) and replace it with a California-only mandate to control.

Due to these enhanced leakage challenges, we recommend an approach to ag and waste methane that looks across state borders (which aligns with our desire to see a robust North American Market for RNG, as discussed below). Markets for dairy and swine products are not limited to just within California, and a reasonable response to methane controls for those markets also cannot be limited to just one state.

It is possible that a more-effective Federal mandate to control manure methane could be developed, promulgated, and in effect sometime in the 2040s, and RNG Coalition would consider supporting Federal (or multi-state[9]) control requirements, if such requirements treated anerobic digestion with productive energy use as best available control technology. However, no changes to the current LCFS regulation would be required in the federal mandate case, as the current rule already specifies that, "in the event that any law, regulation, or legally binding mandate requiring either greenhouse gas emission reductions from manure methane emissions from livestock and dairy projects or diversion of organic material from landfill disposal, comes into effect in California during a project's crediting period, then the project is only eligible to continue to receive LCFS credits for those greenhouse gas emission reductions for the remainder of the project's current crediting period."[10]

Although we currently see no signs that such a federal or multi-state effort is on the horizon, we continue to support CARB requiring phase-out of avoided methane crediting once replacement policies are in place. However, we do not support the Proposed Rule's various phase-outs of avoided methane crediting *without* a suitable replacement policy.

2.6 We Thank CARB for Recognizing that There is No Evidence of a Perverse Incentive to Increase Farm Size from LCFS Credits to RNG Projects

The CADD data also shows that California farms with digesters have not expanded any faster than comparable farms without digesters.[11] This reinforces what we've stated in prior comments—LCFS

[7] See CARB staff's presentation at the August 22, 2024, dairy workshop, slide 42.

[8] Office of Environmental Farming and Innovation, California Department of Food and Agriculture, March 29th 2022 Workshop Presentation, Slide 3, Dr. Amrith Gunasekara, Manager. https://ww2.arb.ca.gov/sites/default/files/2022-04/dairy-ws-session-2-CDFA.pdf

[9] Multiple states are moving to adopt LCFS policies that could provide a regional framework for addressing these emissions. Beyond expansion of LCFS-style policy no other serious state-level collaboration on manure management methane emissions has yet been proposed.

[10] See § 95488.9(f)(3)(B) in the current rule.

[11] See CARB staff's presentation at the August 22, 2024, dairy workshop, slide 43.

credits from biomethane production does *not* incentivize manure production or increased herd size. Many dairy farmers remain reluctant to install digesters, which are a complex and expensive new asset, and farmers certainly are not changing herd sizes based on RNG LCFS credit value.

2.7 Deliverability Language Creates a Barrier to Imports, Should Not be Adopted in the LCFS

The 15-Day Package's changes to deliverability requirements are still problematic for RNG development. While RNG stakeholders will be happy to engage further with CARB staff about how the gas system currently functions, additional public process on this topic (proposed through June 2026) reduces investment certainty and delays investment in RNG projects and thus slows critical near-term methane reductions.

Conceptually, we fail to see how directional flow data from 2020 to 2023 should hold any relevance to permissible long-run delivery patterns for RNG. Assuming California (and hopefully other states) are serious about cutting fossil demand and increasing renewable gas supply at the rate called for in the Scoping Plan, the gas system would fundamentally change, from a system that is driven heavily by fossil gas flows to one driven by renewable gas flows.

As we described in our opening comments on the ISOR, gas flows change over time and are subject to pipeline operator business practices, market demand, and other factors outside of the control of RNG developers. It is illogical to exclude RNG projects that could serve California (if fossil gas wasn't ubiquitous and dictating flow direction today) based on a snapshot of the current gas system. It is also impossible for a RNG project developer to predict how flows might change in the future or where to build their project to guarantee flow will always reach a certain end user in California. This is not required for any fossil gas supply and is, frankly, impossible to implement physically from a practical perspective.

Protectionist language in California's RPS that created a de-facto ban on imported RNG (and also limited other forms of imported renewable electricity)—has not succeeded in creating a well-functioning California-only energy system, able to function entirely without imports and exports. Instead, the California Independent System Operator is currently trying to expand electricity markets regionally to make it easier to adopt more renewables[12] and *California currently imports more than 90% of our fossil gas* (a large portion of which is for power production).[13]

Given that California clearly benefits from broad North American and global energy markets for other types of energy—and the recent trend toward significant increases of the California-based supply of RNG,[14] with in-state production increasing from 6.74% in 2021 to 18.23% in 2023—we question why CARB would propose eliminating any imported RNG eligibility from any portion of the North American gas system. All RNG projects produce the desired benefits of displacing fossil gas, and most create significant methane reductions. Achieving these benefits should remain the primary focus for California RNG policy.

[12] http://www.caiso.com/informed/Pages/RegionalSolutions.aspx

[13] https://www.pge.com/assets/pipeline/docs/library/regulatory/downloads/cgr24.pdf.coredownload.pdf

[14] https://ww2.arb.ca.gov/resources/documents/lcfs-data-dashboard

3 Improving the Framework for Organic Waste Diversion Projects

3.1 The Definition of "Food Scraps" Has Been Improved but Still Needs Further Adjustment

We appreciate that the 15-Day Package includes changes to the definition of "food scraps". The initial ISOR definition unintentionally (and incorrectly) would have excluded all wastes that are handled as a liquid, even those liquified for treatment through AD. We appreciate that the 15-Day Package provides a fix on this topic, but additional attention on this definition is still needed.

The 15-Day Package definition effectively removes credit for processing organic waste that come directly from food manufacturers – which is normally "offspec" products, or excess supply that needs to be shed. Examples of food waste from food manufacturing plants that may be impacted include packaged or unpackaged liquids (e.g., expired juice, soda, dressing, condiments, yogurt) or solids (e.g., expired potatoes from a chip factory). Organic materials that come from food manufacturing plants in California do still enter waste streams and do produce methane when landfilled.

The definition should be adjusted to read as follows:

> "Food Scraps" is the portion of municipal solid waste (MSW) that consists of inedible or post-consumer food collected from residences, hospitality facilities, institutions, and grocery stores, as well as organic waste materials from industrial food manufacturing and distribution facilities that cannot be placed for feeding people or animals. Feedstocks that are not typically landfilled do not qualify as Food Scraps, including: fats, oils, or greases (FOG), and unpackaged liquids at the point of collection.

If necessary, we would also be happy to work with CARB staff (and/or verification firms) on tests to demonstrate that food scrap feedstocks could not otherwise be beneficially used to feed humans or animals and, if not sent to AD/compost, would otherwise have been destined for landfill.

3.2 Recognition of Methane Benefits of RNG Projects Diverting Organic Material from Landfills Should be Revisited and Expanded

We continue to emphasize that LCFS can do more to incent methane reduction from organic waste handling through better recognition of the benefits of RNG projects that divert organics from landfills and into dedicated digesters. Better quantification of the methane benefits of avoided landfilling and incenting such reductions in the LCFS should be a key focus for CARB, rather than setting arbitrary dates for sunsetting of avoided methane crediting or incorrectly limiting definitions of AD feedstocks, which both hurt the viability of such projects.

We are disappointed that this rulemaking appears to not be moving far enough to make this happen. We encourage additional public process on this topic.

4 Other Suggested Adjustments

The following key concepts highlighted in our ISOR comments were not addressed in the 15-Day Package:

- The temporary fuel pathway codes for hydrogen derived from RNG remain unnecessarily high. For example, compressed or liquified hydrogen derived from dairy or swine manure has a temporary CI of 40, yet registered pathways under the Current Rule producing hydrogen from such RNG are highly carbon negative.
- A temporary pathway for biogas to power should be established.
- RNG producers should be allowed to source renewable power from offsite to lower their CI scores.
- Accounting frameworks should allow RNG delivery to non-colocated power generation facilities, hydrogen production, and as an input to liquid biofuel production (and especially SAF production).
- The ability to increase methane capture rates and reduce flaring through landfill RNG projects should be fully recognized.

In the absence of attention to these issues, the LCFS will not maximize GHG reductions associated with RNG across all energy carriers and end uses.

5 Conclusion

RNG Coalition appreciates the opportunity for continued engagement on these topics. We also appreciate the increased program ambition in the 15-Day Package. Increased ambition is critical to reset incentives for rapid low carbon fuel deployment and greater GHG reduction. However, even more can be done.

Some portions of the package continue to ignore RNG benefits. If RNG is treated as a temporary solution that might be arbitrarily phased out—without regard to scientific analysis of ongoing emission benefits or development of a replacement strategy—investors will view RNG as a permanently "at risk" fuel, less favored by regulators and therefore not worthy of investment. The underlying facts that justify avoided methane crediting to RNG projects have not changed, CARB should leave the current framework in place.

CARB has an opportunity to provide clarity and investment certainty through another 15-Day Package to the Proposed Rule, leveraging renewable gas production to help reduce methane emissions, improve organic waste management, and decarbonize California's transportation sector. We thank CARB for your continued work toward these goals and look forward to the successful conclusion of the LCFS rulemaking.