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April 23, 2018

Mary Nichols  
Chair, California Air Resources Board  
1001 I Street  
Sacramento, CA 95814

## **RE: Clean Energy's Comments to Amendments to the Low Carbon Fuels Standard**

Dear Chair Nichols and Board Members,

Clean Energy is thankful for the opportunity to submit comments in response to the proposed amendments to the Low Carbon Fuel Standard (LCFS). Clean Energy remains a committed supporter of California's LCFS program and appreciates ARB Staff's diligent work and collaboration with industry stakeholders throughout the regulatory amendment process. We appreciate the opportunity to highlight our concerns with the proposed amendments, and we are confident that through our collective efforts, these issues can be sufficiently addressed to benefit the LCFS as a whole.

### **Carbon Intensity Reduction Targets Through 2030**

Clean Energy supports the proposed amendment to increase the stringency of carbon intensity (CI) targets in order to achieve California's 2030 GHG reduction goals as established in SB 32. Increasing the 2030 CI reduction target to 20% and normalizing the annual reductions from 2020-2030 is a sensible approach for promoting the increased use of a diversified mix of low carbon fuels in state while maintaining credit market stability and transparency. Clean Energy cautions Staff from considering any further increases to the 2030 CI target beyond 20% at this time as this proposed target relies on various assumptions for growth in transportation fuel demand and electrification that remain unproven at this time. Market stability is key for increasing low carbon fuel project development but if the program falls short of an aggressive 2030 CI target, the LCFS program becomes subject to uncertainty which is detrimental to low carbon fuel growth. Clean Energy recommends any increase of the 2030 target should be reviewed at a later date when more data on the actual supply of low carbon fuels becomes available.

Furthermore, we understand Staff's concerns with the near term CI reduction target in 2020 and the potential draw-down on the credit bank but Clean Energy requests that Staff keep the 2020 CI reduction target at 10%. The 10% CI reduction by 2020 was the original goal and foundation of the LCFS program from its inception. The current market supply together with the credit bank provide a pathway to achieve the 10% reduction goal by 2020, which we believe is necessary to solidify the success of the LCFS and thereby strengthen credit markets. Reducing the short term target to 7.25% sends a bearish signal to a highly sensitive and volatile LCFS market which drives cash flow for low carbon fuel producers. Additionally, reducing the current short term CI reduction creates a perpetual sense of regulatory uncertainty with respect to the path to the 2030 target and beyond. Reducing the 2020 CI target sets a bad precedent that may inadvertently call into question the 2030 (or any future) CI reduction target, which could then undermine the LCFS credit

market and corresponding project development. Clean Energy requests that Staff reconsider the importance of keeping the 10% CI reduction target for 2020 and implement a linear reduction of 20% in 2030.

### **Buffer Account**

Clean Energy supports the effort of Staff to improve liquidity in the LCFS market by minimizing buyer liability through the establishment of a buffer account. However, we encourage Staff to reconsider the source of credits deposited into the buffer account. We agree that stranded credits from deactivated LRT-CBTS accounts, as well as a percentage of credits from carbon capture and sequestration projects (using a project risk rating framework) are appropriate sources of buffer account credits, especially the latter considering the perpetual risk of loss associated with carbon capture and sequestration projects. However, actual, verified GHG reductions achieved by active biofuel producers in the LCFS should not be deposited into the buffer account.

Under the proposed verification program, a producer's credit generating ability is capped at either the certified CI or the operating CI, whichever is higher. If a producer's operating CI is higher than the certified CI, the producer will have to forfeit the quantity of credits that were over-generated. Conversely, if the operating CI is lower than the certified CI the producer cannot recognize that incremental GHG reduction and economic value as these "stranded" credits will be deposited into the buffer account. We believe the credit value should remain with the producer not only because by doing so encourages a producer to become more efficient, it also is just as the producer is the entity taking on the risk. The operating CI represents an accurate and actual GHG reduction achieved by the producer from delivering its fuel to the transportation fuel market. Producers who work diligently to lower their CI score should be allowed to recognize the full benefit of this reduction instead of having this value diverted into the buffer account, especially considering that the producer is subject to ongoing verification costs to validate its annual operating CI.

Considering the proposed verification program limits buyer liability on credits generated by biofuel producers, we believe that biofuel producers with verified credit generation should not have any "stranded" credits deposited into the buffer account. Instead, Clean Energy recommends that Staff develop a "true up" strategy that allows biofuel producers to recognize the actual GHG reduction benefit of their operations, as based on the operating CI.

### **Annual CI Verification Proposal**

Clean Energy views the verification proposal as a vital addition to the LCFS program, but the annual CI verification requirement is disproportionate given the fact that a pathway applicant must supply two years of operating data in order to obtain a certified CI. The verification requirement should fall within the same parameters as pathway certification in order to maintain

consistency in the program. Specifically, the pathway verification should occur every two years, rather than annually. Disconnecting the verification period from the period used to establish the certified CI value can lead to false determinations that the facility is operating significantly differently than the certified pathway basis. An annual CI verification provision assumes that one year of operating data is reflective of “normal” operating conditions at a facility. Unfortunately, this may not always be the case as production facilities can experience unexpected variability in operating conditions causing deviations from a certified pathway. Production facilities experience periods of planned or unplanned maintenance and upgrades that can affect the annual CI score, but are otherwise captured in the two-year data used to certify the pathway.

The annual CI verification will have the most significant impact on dairy digester projects. The CI of dairy digester projects face a degree of variability over the course of an annual reporting period that is outside the control of the individual dairy digester producer. A variety of factors can cause fluctuations in CI, including temperature, weather patterns, the efficiency of gas collection, and the number and ratio of dairy to non-dairy cows on a farm. These fluctuations can cause operational CI’s for dairy digester projects to vary significantly from their certified CI’s. Given the significant variability of dairy digester operating conditions, Clean Energy recommends that Staff reconsider the annual CI verification requirement and instead adopt a biannual CI validation requirement that mandates all fuel pathway holders to obtain a new CI every two years based on the latest two years of operating data.

Pushing the CI verification out to two years eliminates the risk of modeling “atypical” operating conditions while effectively creating a rolling CI re-certification process that ensures that each pathway CI reflects the most recent two years of operating data. This two-year window of CI verification will also likely sync up with the timing of future GREET Model releases, which will also require pathway CI scores to be updated.

### **Margin of Safety**

Section 95488.4 of the LCFS amendments suggests that fuel pathway applicants should add a conservative “margin of safety” to increase the certified CI above any potential operating CI. The margin of safety is implied to protect against variability in operations to diminish the risk of non-compliance with the certified CI. This concept of a “margin of safety” is counterintuitive to the concept of real lifecycle fuel pathway emissions reporting. The LCFS utilizes the sophisticated GREET model to accurately model the well-to-wheels emissions for fuels delivered to California. CI modeling through GREET with an added layer of assurance through a mandated verification program should therefore preclude the need for a “margin of safety”.

Furthermore, Section 95488.10(a)(7) of the amendments indicates that non-compliance with a certified CI represents non-compliance with the LCFS regulation and subjects the fuel producer to possible enforcement action. However, we must emphasize that subjecting producers to

enforcement action for fluctuating operating conditions is excessively punitive towards an opt-in producer of a low carbon fuel that is helping California achieve its greenhouse gas reduction goals.

The proposed verification program will ensure the correct number of credits are generated, especially given the fact that producers will have to surrender credits if their operational CI exceeds their certified CI. Given the known fluctuation of operating conditions of biofuel projects, especially dairy digester projects, these particular provisions of the amendments regarding enforcement seem harmful to the program's overarching goal and will not promote further fuel pathway CI reductions. Clean Energy recommends that Staff remove both provisions mentioned from Sections 95488.4 and 95488.10(a)(7) and instead institute the two-year ongoing CI verification requirement referenced above.

### **Temporary Pathway for Dairy Digester Projects**

Clean Energy appreciates the addition of a temporary fuel pathway (TFPC) for digester projects (0 g/MJ for Dairies/Green waste and 35 g/MJ for Wastewater) however, the likely delta between the actual CI for one of these projects and the TFPC will be significant, especially for a dairy digester. For example, the most recent dairy application had a CI of -254 g/MJ which translates to an additional 0.25 credits per MMBtu of production relative to the 0 g/MJ TFPC. At current market pricing this can yield millions of dollars of lost revenue and LCFS value to the buffer account in just the first quarter of operation. A TFPC of 0 g/MJ may be appropriate for wastewater treatment and organic diversion digester projects but is overly conservative for dairy projects that have been proven to achieve CI scores as low as -254 g/MJ or more. Clean Energy recommends that Staff create a separate TFPC for dairy projects at -150 g/MJ, which is still conservative relative to anticipated dairy project CI scores but will allow producers to recognize appropriate value while their true CI application is under evaluation. A more accurate temporary pathway will provide dairy RNG producers more safety as they work to optimize facility operations during the start-up and registration periods, and provide a pathway for additional dairy RNG producers to develop and build their projects.

### **RNG Storage Book and Claim**

Clean Energy requests that Staff clarify the book-and-claim provision for RNG in Section 95488.8(i)(2)(A) which states that a reporting entity must match a quantity of pipeline-injected RNG to California transportation fuel within a two-quarter time span. Clean Energy believes this two-quarter limitation for the recognition of environmental value should not apply to pipeline-injected RNG held in physical storage. All RNG projects are subject to lengthy project registration periods, especially at the federal EPA level with RFS and quality assurance plan (QAP) approval, which jeopardizes starting cash flow necessary for recouping up front capital investments. Furthermore, the LCFS regulation requires a minimum of three months of project operation before obtaining a provisional CI potentially leaving only one quarter for provisional pathway

approval under this book-and-claim timeframe limitation. Project developers cannot afford to lose any environmental value associated with produced RNG, especially in the vulnerable start-up phase. In order to protect their value, most RNG developers secure storage agreements to deliver initial production of RNG to physical storage while project and pathway registrations are pending. Delivering initial RNG to storage ensures that the RNG producer can recognize the full environmental benefit of the RNG as a transportation fuel when the necessary registrations are final. Clean Energy requests that Staff add clarifying language to Section 95488.8(i)(2)(A) exempting any RNG delivered to physical storage from the limited two-quarter timeframe for recognition of environmental benefit. This will ensure that RNG producers will not unnecessarily lose value, reduce unintentional financial risk to the RNG project, and will keep the LCFS regulation aligned with the RFS in terms of recognition of environmental attributes.

### **LCFS Verification Coordination with QAP**

Clean Energy again appreciates Staff's initiative to strengthen the integrity of the LCFS program through the implementation of a robust verification program. We remain concerned about the cost of verification to LCFS regulated entities and the general lack of qualified verification providers in the market today, given the strict conflict of interest provisions outlined in the proposed amendments. As of today, there are only two primary RFS QAP providers for the entire RFS program and both of these QAP providers are already verifying fuel pathway activities for numerous LCFS regulated parties. The strict conflict of interest provisions will likely prevent these QAP providers from also providing LCFS verification services due to the fact that their services regularly reach beyond QAP verification into industry expert consulting. Not only does this limit the existing pool of qualified verifiers but it also subjects LCFS regulated entities who already participate in the QAP program to substantial additional verification costs.

Clean Energy recommends Staff to partially exempt LCFS regulated entities who already participate in the RFS QAP program from the LCFS verification requirements with the exception of CI calculation and verification. Methodologies for tracking and allocation of renewable fuel are the same under both the LCFS and RFS regulatory programs, which means that the LCFS verification program should serve as a complementary level of verification for matters not covered under an RFS QAP program. Creating this complementary verification structure reduces costs of verification for entities already enrolled in QAP programs and allows for a larger pool of qualified verification providers, especially if the scope of LCFS verification can be limited to CI verification using the fuel specific simplified calculators.

### **Definition of Biomethane**

Clean Energy agrees with Staff's intent to expand the definition of biomethane to include methane that is derived from gasification of organic material. However, we disagree with the recommendation in the definition that requires biomethane to meet utility pipeline standards. There are at least three registered biomethane projects in California that currently facilitate onsite

vehicle fueling. Two of these projects (Clean Energy partners) use biomethane produced from diverted organic waste digesters to fuel their company-owned refuse fleets. Since the biomethane is delivered directly into the vehicle, it should not be held to the established California pipeline injection standards. Furthermore, the California Public Utilities Commission (CPUC) has adopted the most stringent gas quality standards in the country which do not align with current engine specifications which is why the State enacted SB 840 requiring the CPUC to review and possibly amend the California pipeline injection standards. Requiring all biomethane to meet California pipeline injection standards even if not injected into a pipeline is overly restrictive and will slow development of in-state sources of RNG. Clean Energy recommends that Staff remove this provision requiring biomethane to meet pipeline injection specifications.

### **Conclusion**

Clean Energy appreciates the opportunity to provide comments for the amendments to the LCFS and we commend Staff for diligently working with stakeholders throughout this long process. Please reach out to us directly should you have any questions or desire any additional information.

Sincerely,

A handwritten signature in black ink, appearing to read 'Todd Campbell', with a stylized flourish extending to the right.

Todd Campbell  
Vice President, Public Policy and Regulatory Affairs  
Clean Energy Fuels Corporation

cc: Mr. Samuel Wade, Chief, Transportation Fuels Branch, Industrial Strategies Division