4675 MacArthur Court, Suite 800
Newport Beach, California 92660
Phone: 949.437.1000
Fax: 949.724.1397

www.CleanEnergyFuels.com

July 5, 2018

The Honorable 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:

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 commend staff for addressing a number of concerns during this latest round of amendments as expressed in our previous comment letters.

However, we believe there are several critical issues in the amendment package that remain unaddressed and could materially impact the future success and viability of the LCFS program. Clean Energy respectfully requests ARB address and take action on these outstanding issues.

RNG Storage Book and Claim

Clean Energy appreciates staff's consideration of stakeholder feedback in the decision to extend the limitation on book-and-claim accounting to three quarters. However, the proposed provisions for book-and-claim accounting, specifically with respect to biomethane, still do not provide adequate clarification for biomethane injected into physical storage.

Clean Energy believes that the book-and-claim limitation on environmental attribute recognition must not apply to biomethane injected into physical storage. All biomethane projects are subject to lengthy project registration periods, especially at the federal EPA level with RFS and quality assurance plan (QAP) approval, which jeopardizes the starting of 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 two subsequent quarters for provisional pathway approval under this book-and-claim timeframe limitation. Project developers cannot afford to lose any environmental value associated with produced biomethane, especially in the vulnerable start-up phase. Extending the book-and-claim limitation to three quarters provides zero assurances against lost environmental value for a producer who is subject to regulatory approval processes that have been proven to take over a year in some cases. To mitigate this

regulatory risk and protect their environmental value, the RFS allows biomethane developers to secure storage agreements to deliver initial production of biomethane to physical storage while project and pathway registrations are pending. Delivering initial biomethane to storage ensures that the biomethane producer can recognize the full environmental benefit of the biomethane as a transportation fuel when the necessary registrations are final. This is acceptable under the RFS and therefore should be acceptable under the LCFS as well.

Clean Energy requests that staff add clarifying language to Section 95488.8(i)(2)(A) to exempt any biomethane delivered to physical storage from the limited three-quarter timeframe for recognition of environmental benefit. This will ensure that biomethane producers will not unnecessarily lose value, will reduce unintentional financial risk to the biomethane project, and will keep the LCFS regulation aligned with the RFS in terms of recognition of environmental attributes.

Crediting to Hydrogen and DC Fast Charging Fueling Infrastructure

Clean Energy opposes the proposal to implement LCFS crediting for hydrogen and DC fast charging fueling infrastructure. Since inception, the intent of the LCFS program has been to reduce emissions of greenhouse gases (GHG) by lowering the carbon intensity of transportation fuels in California. The program set an initial goal of a 10% realized reduction in California's fuel carbon intensity by 2020 with a proposal to increase to a 20% reduction by 2030. According to the 2009 Initial Statement of Reasons:

"The LCFS framework is based on the premise that each fuel has a "lifecycle" GHG emission value that is then compared to a standard. This lifecycle analysis represents the GHG emissions associated with the production, transportation, ***and use of low carbon fuels in motor vehicles****."*

The foundation of the LCFS program has always been based around a lifecycle emissions standard for fuel (not infrastructure) which promotes two key elements of the LCFS program:

1. Real quantifiable GHG reductions of California transportation fuel;
2. Fuel Neutrality.

Implementing provisions to allow LCFS crediting for hydrogen and DC fast charging fueling infrastructure is a significant departure from the established lifecycle emissions standard and violates the founding principles of the LCFS program altogether. LCFS credit generation from station fueling capacity does not represent real quantifiable GHG reductions of California transportation fuel. An LCFS credit represents one metric ton of GHG emission reduction achieved from a specified volume of fuel **delivered and consumed** in California. An LCFS credit generated based on fueling capacity is not real and could be non-existent if a corresponding volume of that fuel is not delivered and consumed in the state.

Furthermore, if staff was to implement a concept of capacity crediting then it should apply to all low carbon fueling infrastructure in California and not limited to hydrogen and DC fast charging. The LCFS set forth a path to reduce the carbon intensity of California transportation fuel through a diversified supply of any low carbon fuels through the lifecycle emissions model. This performance based mechanism drives low carbon fuel innovation as evidenced by the declining (and even negative) carbon intensity of fuels in the program today. We believe ARB must adhere to these principles and uphold the performance standard established in the LCFS program to date. Fueling infrastructure that can achieve significantly low and even negative carbon intensity, such as biomethane, should be incentivized just as much as hydrogen or EV fueling infrastructure. Therefore, either all low carbon fuels should be able to generate credits based on capacity or there should not be any crediting for capacity.

The concept of crediting for capacity is also counter-intuitive with staff's proposal for annual carbon intensity (CI) verification and the concept of a "margin of safety" for all biofuel pathway CI scores. As proposed, biofuel producers will only be able to realize environmental value for LCFS credits representing actual verified reductions in GHG emissions. Generation of any excess LCFS credits above actual verifiable GHG reductions is deemed a violation of the LCFS Regulation and will leave the credit generator subject to enforcement penalties.

Furthermore, Section 95488.4 of the LCFS amendments suggest that biofuel pathway applicants should add a conservative margin of safety to increase a certified pathway CI to protect against variability in operations and avoid the risk of non-compliance through potential over-generation of credits. As proposed, biofuels would only be able to realize LCFS credits for real verifiable GHG emission reductions while hydrogen and DC fast charging station owners can realize LCFS credits for potential (non-guaranteed and potentially non-existent) GHG reductions.

In sum, biofuels are required to conservatively generate credits or else face enforcement while hydrogen and DC fast charging station owners can generate credits representing GHG reductions that have not yet occurred nor may ever occur. We understand that staff would intend to implement a true up system to correctly reflect the real quantifiable GHG reductions from capacity crediting but such a true up methodology has not been put forth in the rulemaking package nor has it been discussed in detail. Interestingly, in previous comment letters, Clean Energy proposed a similar annual credit true up for biofuel producers who outperform their certified CI, but this proposal has been rejected on numerous occasions by staff who believe such a process would be "administratively burdensome".

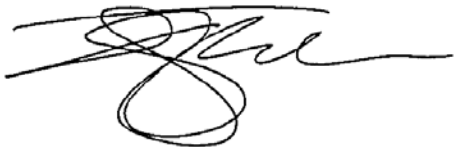
Clean Energy understands that the concept of crediting for capacity was included in response to the Governor's Executive Order B-48-18, but the development of hydrogen and EV fueling infrastructure should not come at the expense of the integrity of LCFS program and its foundation of real GHG reductions and fuel neutrality. Incentives for hydrogen and EV infrastructure pursuant to the Governor's Executive Order can come from other areas outside of the LCFS program. If not,

capacity crediting should be available to all low carbon fuel participating in the LCFS in order to maintain a performance based program of fuel neutrality.

Conclusion

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

Sincerely,



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

cc: Members, California Air Resources Board
Mr. Samuel Wade, Chief, Transportation Fuels Branch, Industrial Strategies Division