

NOYES LAW CORPORATION

July 5, 2018

Chair Mary D. Nichols
Air Resources Board
1001 I Street
Sacramento, CA 95812

(Comment submitted electronically)

RE: Request for language authorizing biomass-derived fuels in 17 CCR §95489, “Credits for Producing and Transporting Crudes using Innovative Methods”

Dear Chair Nichols,

Kore Infrastructure (“Kore”) appreciates the opportunity to provide comments regarding the Air Resources Board’s (“ARB”) proposed regulations to revise the Low Carbon Fuel Standard (“Proposed Regulations”). Kore’s proprietary process utilizes a pyrolysis technology to sustainably and cleanly convert biomass including dairy manure and agricultural residues into a biomass-derived gas which can be further purified to produce renewable natural gas and renewable hydrogen. Kore’s projects will reduce the release of the short-lived climate pollutant (“SLCP”) methane, as the facilities will utilize feedstocks that would otherwise release methane.

Kore will begin a commercial scale demonstration of its technology beginning Q4 2018. The pyrolysis facility is located at a Southern California Gas site. The facility will convert about 1 ton/ per hour of various biomass feedstocks into pyrogas and biochar. The pyrogas will be tested for its efficacy as a replacement fuel for natural gas to produce steam used in oil extraction. This application could qualify as an innovative crude production method. The biochar will be tested for its feasibility as a soil amendment and/or fuel. The testing facility is being supported by SoCalGas and the South Coast Air Quality Management District (“SCAQMD”). The facility has received its air permits from SCAQMD.

Kore Supports Further Expansion of Innovative Crude Provision

According to the Summary of Proposed Modifications, the intent of §95489 is as follows:

“In section 95489(c)(1)(A), additional technologies are proposed to be recognized as eligible to generate credits under the innovative crude provision. Geothermal, ocean wave, ocean thermal, and tidal current energy are proposed to be recognized as innovative methods. Uses of biomethane and biogas are also proposed to be recognized. For each method, proposed modifications clarify that energy must be physically supplied to the crude oil production facilities. Staff believes that each of these additional technologies are in keeping with the intent of the provision to promote

NOYES LAW CORPORATION

the use of innovative technologies to reduce emissions during crude oil production.”¹

Kore supports the expansion of the innovative crude provision to enable additional technologies to reduce emissions during crude oil production. Regarding the inclusion of biomethane and biogas as qualifying technologies, this expansion is likely based on ARB’s recognition that oil refineries have flexibility in their industrial operations to use a range of energy sources, including fuels that have undergone lesser refinement. While fuels such as biogas are not approved for shipping on the natural gas pipeline or for use in CNG vehicles, a refinery that is properly configured can utilize biogas as an energy source for steam generation, maintain or improve its criteria pollutant emissions, and significantly reduce its GHG emissions.

This same reasoning and approach supports the inclusion of biomass-derived fuels that do not meet the current definition of biogas or biomethane that are contained in the Proposed Regulations. A core principle of the LCFS is technology neutrality, and the regulation has been highly successful in applying a performance-based approach to reducing the CI of transportation fuels. Consistent with this approach, it is recommended that ARB revise the language of proposed §95489(c)(1)(A)(6) as follows:

(1) *General Requirements.*

(A) For the purpose of this section, an innovative method means crude production or transport using one or more of the following technologies:

(...)

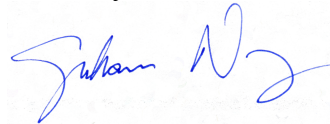
6. Renewable natural gas (RNG), ~~or biogas, energy or other biomass-derived fuels.~~ RNG, or biogas, or other biomass-derived fuels must be physically supplied directly to the crude oil production facilities.

Such an approach would further achieve ARB’s goal of enabling a wider range of innovative technologies to reduce GHG emissions in the transportation sector.

Conclusion

Thank you for your consideration of our input. We would welcome the opportunity to provide any further information that would be value to ARB on this subject.

Sincerely,



Graham Noyes

Cc: Cornelius Shields, Co-Founder & Executive Chairman
Kore Infrastructure

¹ See Notice of Public Availability of Modified Text and Availability of Additional Documents and Information dated April 20, 2018, Summary of Proposed Modifications at p. 19, available at <https://www.arb.ca.gov/regact/2018/lcfs18/15daynotice.pdf>