



September 4, 2017

Sam Wade  
1001 "I" Street  
Sacramento, CA 95814

*Filed Online*

RE: Comments of Bloom Energy on August 7, 2017 LCFS Workshop

Dear Mr. Wade,

Bloom Energy (Bloom) appreciates the opportunity to provide these comments on potential amendments to the Low Carbon Fuel Standard Program (LCFS) to be considered in an upcoming rulemaking.

Bloom requests that as the Air Resources Board (ARB) considers amendments aimed at broadening the market potential for electricity participation in the LCFS, non-co-located electricity generation and indirect accounting mechanisms be included. Bloom agrees with staff's suggestion that "it is challenging to co-locate renewable electricity at scale with the location of vehicle charging"<sup>1</sup> and as such supports facilitation of co-location alternatives via program amendments so the market can better signal the need for, and encourage development of, a robust low-CI charging market to capture more near-term GHG reductions.

**Allowing non-co-located electricity generation enables greater low-CI electricity participation in LCFS and supports the policy goals of the ARB to facilitate biogas development and improve air quality**

Allowing participation of non-co-located electricity gives renewable electricity generators a meaningful option to access the LCFS markets and will create more options for biogas resources to develop thereby supporting multiple policy goals of the ARB. Bloom envisions contributing to the goals of the LCFS program by providing electricity generated from various sources of biogas available throughout the state for electric vehicle charging. This will directly contribute to the methane reduction goals of the Short-Lived Climate Pollutant Strategy, local Air District pollution control requirements of the State Implementation Plans and contribute to better overall local air quality. Bloom's fuel cells generate electricity

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<sup>1</sup> Air Resources Board Staff Discussion Paper: "Electricity as a Transportation Fuel", November 23, 2016, page 3

electrochemically, without the use of combustion, and can use methane from a range of sources including anaerobic digestion of dairy waste, from landfills, or from wastewater treatment plants, including those that support diversion and co-digestion of organic waste. In addition to advancing the achievement of the State's methane reduction goals, Bloom's fuel cells can significantly contribute to improvements in air quality due to the non-combustion process used to convert fuel to electricity. Methane that would otherwise be flared and result in emissions of particulate matter, etc., at a landfill site for example, can instead be put to productive use in a fuel cell to generate electricity onsite with no harmful air pollutants.

### **Multiple value streams from a given non-co-located electricity project enables more renewable project development**

It is current practice for a single fuel producer to be able to claim credit in a separate program and the LCFS for two separate but related abatement actions as long as evidence can be provided to show that the same volume of fuel was not double counted. One such example is a digester operation that exports some portion of biomethane to generate grid electricity and uses some biomethane for onsite vehicle fuel.<sup>2</sup>

Bloom requests that this same principle apply in the case of electricity generation resources that opt-in to the LCFS. That is, any framework for non-co-located electricity to opt-in to the LCFS should allow projects with electricity that is not used for LCFS to use that electricity in other programs. A critical component of such a strategy is a verification mechanism to ensure no double counting. For example, a landfill that captures methane for use in an onsite fuel cell may have multiple electricity offtake customers due to the volume of electricity produced and available: their own facility loads; a utility feed-in-tariff program to provide renewable electricity to serve grid needs; a bilateral agreement with a charging station provider for renewable electricity to supply EV charging stations in the utility territory.

In the upcoming rulemaking, the ARB should avoid proposals that would prohibit a project that participates in the LCFS from capturing value from other programs for separate electricity such as the example above. Precluding multiple end use development in the LCFS will hamstring the development of biogas projects, as

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<sup>2</sup> Air Resource Board Low Carbon Fuel Standard FAQs Related to the Re-adopted LCFS Regulation, January 6, 2016, page 22. <https://www.arb.ca.gov/fuels/lcfs/fuelpathways/faq-01062016.pdf>

the LCFS is the significant market program today for biogas use. Developing a single project for multiple end uses is sound practice for several reasons. First, it diversifies the revenue streams for a project, making financing easier to secure. Secondly, it is a cost effective approach to addressing multiple state goals because there is no need to develop separate projects to serve separate state goals, e.g. reducing methane emissions and providing renewable electricity for electric vehicle charging. These goals should be better harmonized in the upcoming rulemaking.

### **Feedback on specific option presented by ARB staff**

Below Bloom provides feedback on one of the considerations of flexibility for non-co-located renewable power presented in the Staff Discussion Paper from November 2016.<sup>3</sup> The language from the discussion paper is indicated in italics and Bloom's comments are in-line.

*Renewable electricity would be eligible for an improved carbon intensity score if it meets all of the following criteria:*

- *generated on land owned by the charging station operator and located within the same EDU territory as the charging station;*

Requiring the charging station operator to own land where the generation is located presents issues for entities such as landfills, dairies, and wastewater treatment plants that would generate renewable electricity onsite from waste methane and contract with the charging station operator to deliver electricity for vehicle charging, especially if those entities plan to direct separate volumes of electricity from that project to distinct end uses (e.g. onsite use or utility feed-in tariff). We suggest that a land ownership requirement is not necessary.

- *the renewable generation system is developed expressly for supplying the station's power demand, meaning the project is developed concurrently or after the station is installed, as existing resources may not be shuffled to meet the station's demand;*

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<sup>3</sup> Air Resources Board Staff Discussion Paper: "Electricity as a Transportation Fuel", November 23, 2016, page 4

Bloom requests clarification that the project may be developed for multiple reasons, in addition to serving charging stations. That is, we agree new resources should be developed to capture additional GHG emissions, but this requirement should not be written in a way that implies that other revenue streams for renewable electricity projects are not permitted.

- *meets the renewable eligibility requirements in the California Energy Commission (CEC) Renewables Portfolio Standard Eligibility Guidebook (RPS Guidebook);*

Bloom agrees that renewable electricity projects that are non-co-located that opt-in to the LCFS should be subject to the State's RPS requirements.

- *does not produce RECs or other attributes recognized under any program except RFS2*

Bloom requests clarification that the *electricity volume that is opted in* cannot generate both an LCFS credit and a REC, but that a project with multiple offtake customers can generate RECs associated with electricity that is not committed to the LCFS market. Separate volumes of electricity from a project that is not committed to the LCFS should not be penalized as "not renewable" for other markets or customers. Bloom agrees that generators must not double count generation, and there should be a robust verification mechanism to ensure the integrity of this provision.

### **Current renewable electricity tracking mechanisms offer another potential approach to ensure no double counting**

An alternative approach to staff's proposal to disallow REC generation is to develop a mechanism to track the LCFS credit generation via the Western Renewable Energy Generation Information System (WREGIS) with a new function designed to convert RECs generated by a renewable electricity project to LCFS credits. WREGIS is a software system for tracking, verifying and retiring RECs. It has a long track record and has been tested and proven to be a robust system that can protect against double counting. New functionality could be designed into the

WREGIS system to track and retire RECs from a specific renewable electricity project that has contracted to provide electricity for EV charging to generate the appropriate corresponding amount of LCFS credits. This approach also leverages existing WREGIS functionality to ensure the electricity is not used for participation in another program (e.g. RPS, BioMAT). This can also be expanded to ensure that electricity is not associated with a REC and an LCFS credit at the same time. To ensure the electricity claimed for LCFS credits is used for EV charging, the charging load of customers contracting with the renewable electricity provider should also be verified by the LCFS program to ensure the electricity generated and consumed and the renewable attribute are contractually linked. This aspect is different than the RPS eligibility requirements which allow for different types of RECs.

The opt-in entity (e.g., the renewable electricity generator or an EVSP contracting with the renewable generator) would be the owner of the RECs that are retired in a new WREGIS subaccount specifically designed for retiring credits to be converted into LCFS credits. Once the RECs have been retired to the LCFS WREGIS Subaccount, the retirement would be permanent and irrevocable. In addition, the serial numbers of RECs in this LCFS subaccount would not be permitted to match the serial number of any RECs in any WREGIS account holder's subaccount for RPS retirement. These administrative requirements would ensure there is no double counting when the ARB updates ELC002-1.

### **Conclusion**

Developing a mechanism for non-co-located renewable electricity to be used for EV charging and generate LCFS credits will increase market participation from companies like Bloom that provide unique renewable electricity generation resources (i.e. electricity from biogas) that achieve critical co-benefits (addressing Short Lived Climate Pollutants and reduction of criteria air pollutants). Doing so will address multiple state policy goals, and allow for synergy among programs to spur further development of renewable resources.

Bloom Energy appreciates the opportunity to provide these comments and looks forward to continued engagement as these discussions move forward.

Respectfully,



Erin Grizard  
Senior Director, Regulatory and Government Affairs