Bloomenergy

January 20, 2017

Richard Corey
Executive Officer
California Air Resources Board
1001 “I” Street
Sacramento, CA 95814

Dear Mr. Corey,

Bloom Energy[1] provides the following comments on the 15-day amendment text for the *Proposed Amendments to the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Regulation* released December 21, 2016. We have met with the ARB staff to discuss our concerns with the proposed removal of fuel cells from the list of emission sources without a Cap-and-Trade compliance obligation (i.e., Section 95852.2) and appreciate their attention to this important issue. After reviewing the 15-day language, Bloom Energy remains concerned by the proposed removal of fuel cell energy systems from the Section 95852.2 of the Cap-and-Trade program regulations.

The rationale provided for removing fuel cells from Section 95852.2 has been that it is needed to maintain consistency with a broader trend towards removing exemptions and fully accounting for all emissions. We respectfully disagree with this rationale. Fuel cells are the only emissions source that is being removed from Section 95852.2[2], and a new exemption is being added for fermentation emissions.[3]

In the original Cap-and-Trade rulemaking, the ARB included fuel cells in Section 95852.2. The significance of including fuel cells in Section 95852.2 and the letter you sent to Bloom Energy dated May 23, 2013 confirming the treatment of fuel cells cannot be overstated-- it offers a clear demarcation that fuel cells are GHG reducing with co-benefits that afford them unique treatment in recognition of these important attributes.

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[1] Bloom Energy develops on-site distributed generation using innovative fuel cell energy technology that utilizes natural gas or biogas. Our unique on-site power generation systems utilize an innovative new fuel cell energy technology with roots in NASA's Mars program. Derived from a common sand-like powder, and leveraging breakthrough advances in materials science, our technology is able to produce clean, reliable, affordable energy, practically anywhere, from a wide range of renewable energy sources or traditional fuels. Our Energy Servers® are among the most efficient energy generators on the planet; providing for significantly reduced electricity costs and dramatically reduced greenhouse gas emissions. By generating power on-site, where it is consumed, Bloom Energy offers increased electrical reliability and improved energy security, providing a clear path to energy independence.

[2] Proposed Amendments to the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Regulation, December 21, 2016, page 135-6.

[3] *Ibid.,* page 136.

The proposed amendments to the Cap-and-Trade program currently under Board consideration make a fundamental change to the regulation that will disrupt the market success of GHG reducing fuel cells. The proposed change would remove fuel cells from Section 95852.2 and lead to direct regulation of a small number of operators, but impact the perception of fuel cells for all customers regardless of whether they are a covered entity.

An important point of comfort for all customers is that fuel cell systems will not be directly regulated by the Cap-and-Trade program because they reduce GHG emissions. There is a broad perception that regulation under the Cap-and-Trade program means that the technology has no GHG-benefits because the Cap-and-Trade program is designed to discourage dirty technologies. We appreciate that this is not the ARB's intent, but we want to make sure that the ARB is aware of the perception.

In addition, customers would need to factor into their purchase decision the potential overhead costs of retaining staff to ensure and monitor compliance - costs that would be perceived as directly resulting from the purchase of a fuel cell that is otherwise cleaner than their current source of power. Direct regulation will not only pose a higher cost as small participants cannot manage their administrative costs as well as larger participants such as the natural gas sector, but there will be an intangible cost in the form of a new regulatory burden and risk.

Natural gas fuel cells are already accounted for in the Cap-and-Trade regulation via the phase in of the natural gas sector beginning in 2015. We appreciate that the phase in of the natural gas sector may lead to a partial minimization of Cap-and-Trade costs compared to other sources over 25,000 MT. We also appreciate that delay in the implementation of the natural gas compliance costs are a source of concern. However, any perceived preferential treatment a small number of fuel cell systems may currently receive is temporary and will in short order be accounted for via the full implementation of natural gas sector compliance. As the compliance costs are implemented and the natural gas sector is subject to a growing allowance consignment ratio, at some point between 2020 and 2030, fuel cell operators will face the same GHG costs as sources directly regulated by the Cap-and-Trade program. In fact, as recently as October 21st, the ARB staff proposed a 100% consignment date by 2021, which would ensure that sources not otherwise directly regulated by the Cap-and-Trade program bear 100% of the natural gas utility's carbon costs by 2021. Thus, as the natural gas sector is transitioned into the Cap-and-Trade program, natural gas fuel cells will face indirect compliance costs paid to the utility and will be accounted for under the cap. As outlined in your 2013 letter, such compliance costs associated with emissions from natural gas use will effectively spur private investment in efficient technologies, such as fuel cells.

Direct regulation of fuel cells is counterproductive to the broader goals of AB 32 and AB 197. Fuel cell systems are much lower GHG emissions sources than conventional natural gas generation. There is no combustion, and as a result, fuel cells also emit no criteria pollutants. It is precisely the type of activity that will "complement federal and state ambient air quality standards and reduce toxic air contaminant

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emissions" envisioned in AB 32 (i.e., Cal. Health and Safety Code Sec. 38562(b)(4)). Retaining fuel cells in Section 95852.2 is also consistent with the direction in AB 197 to encourage direct emissions reductions at large stationary sources (i.e., Cal. Health and Safety Code Sec. 38562.5(a)). Retaining fuel cells in Section 95852.2 is a longer-term step that will lead to GHG reductions and reductions in criteria pollutants.

We urge you to recognize that direct regulation of fuel cells can actually lead to foregone emission reductions associated with fuel cells and that any associated emissions will be managed in short order via full consignment in the natural gas sector.

Thank you again for the opportunity to provide these comments as well as your and your staff's attention to this important matter.

Sincerely,

Erin Grizard

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