BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Implement Dairy Biomethane Pilot Projects to Demonstrate Interconnection to the Common Carrier Pipeline System In Compliance with Senate Bill 1383	Rulemaking 17-06-015 (Filed June 15, 2017)

OPENING COMMENTS OF BLOOM ENERGY, INC. ON THE DRAFT SOLICITATION RELEASED PURUSANT TO THE DECISION ESTABLISHING IMPLEMENTATION AND SELECTION FRAMEWORK TO IMPLEMENT THE DAIRY BIOMETHANE PILOTS REQUIRED BY SENATE BILL 1383

Erin Grizard
Senior Director
Regulatory and Government Affairs
Bloom Energy Corporation
1299 Orleans Drive
Sunnyvale, CA 94089
Phone: (408) 543-1073
Fax: (408) 543-1501
erin.grizard@bloomenergy.com

February 5, 2018

BEFORE THE PUBLIC UTILITIES COMMISSION OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Implement Dairy Biomethane Pilot Projects to Demonstrate Interconnection to the Common Carrier Pipeline System In Compliance with Senate Bill 1383	Rulemaking 17-06-015 (Filed June 15, 2017)

OPENING COMMENTS OF BLOOM ENERGY, INC. ON THE DRAFT SOLICITATION RELEASED PURUSANT TO THE DECISION ESTABLISHING IMPLEMENTATION AND SELECTION FRAMEWORK TO IMPLEMENT THE DAIRY BIOMETHANE PILOTS REQUIRED BY SENATE BILL 1383

Pursuant to Section 5.3 of the recently released Joint Utility Draft Solicitation (Draft Solicitation), Bloom Energy, Inc. (Bloom) respectfully submits these Opening Comments on the Draft Solicitation.

Bloom has previously provided comments on the implementation of these pilots, and we thank the Commission for accepting most of our proposed changes to allow for electricity generation technologies to be considered as an end use for the biomethane from these pilot projects. Doing so includes key resources that can help to reduce methane emissions pursuant to SB 1383, provide significant air quality and GHG reduction benefits, and expand the market potential for pipeline biomethane use in California. These changes include allowing default inputs in the GHG Emissions Reduction Calculation tool to be modified with appropriate references in order to accurately account for emissions reductions, clarifying that end uses beyond transportation projects along major freight corridors also lead to air quality benefits, and explicitly allowing for project applicants to document air pollutant reductions from pipeline injected biomethane use in off-site electrical generation.

In these comments, we reiterate our previously filed comments on the Proposed Decision urging the Commission, in order to realize greater NOx reductions, to adopt a preference for

onsite generation that can meet the most recent NOx emissions standard in the California Air Resources Board Distributed Generation Certification Program.[1]

While these pilots are primarily intended to provide learnings about cost and processes related to pipeline interconnection, they cannot be isolated from the broader question of end use because financing capital intensive projects such as these requires a sound business model from feedstock to offtake. This is recognized in the scoring criteria which includes a score for a sound business model. It makes sense to consider the strength of the business model in order to determine which projects would be viable enough to actually progress to an interconnection phase where learning about costs and processes will occur. However, Bloom is concerned that these pilots will be used to determine "the" future business model for biogas development in California. Not only are policy makers looking to these pilots to provide guidance on the interconnection process and cost as the Commission is focused on, they are also keen to understand viable business models with an aim to enable further development of biogas resources in the state. With this in mind, we ask that technology and project diversity be a priority, as these projects will provide a framework for future development.

Based on our market discussions and participation in other policy initiatives aimed at biogas development, one example of a common business model is as follows: The majority of the biomethane resource is to be directed into the transportation market to capture the high value of credits in the state's Low Carbon Fuel Standard and the federal Renewable Fuel Standard markets. These markets are short term and bear a substantial amount of risk, so a long term revenue stream is often required to mitigate that risk. This long term revenue stream tends to come in the form of electricity generation contracts between an onsite generation resource and the regional utility through the BioMAT program using a portion of the developed biomethane. We have seen a strong developer preference to use more familiar but less efficient combustion engines for this onsite electricity generation which, while they are required to meet air district BACT emissions levels, are not the lowest emissions technology possible for electricity generation.[2]

[1] Bloom Energy Opening Comments on Proposed Decision, page 5.
[2] San Joaquin Valley Air Pollution Control District BACT Guideline 3.3.15, http://www.valleyair.org/busind/pto/bact/chapter3.pdf

Further, directing the majority of the biomethane supply to the transportation market for use in natural gas engines may not capture maximum air quality benefits. The Union of Concerned Scientists recently released a report highlighting that "while biomethane generates lower global warming emissions than natural gas when used in CNG vehicles, it produces even lower emissions when used to make electricity … likewise [this] results in lower emissions of smog-forming nitrogen oxides than using biomethane directly in a CNG vehicle."[3]

In Bloom's previously filed comments, we suggested that in order to maximize air quality benefits the Commission should encourage developers to use the most efficient, lowest emissions technologies for electricity generation. We suggested that such a preference could be in the form of a requirement or additional points in the environmental benefit score for a project application. An alternative approach we now suggest based on increased market participation is for the Commission to require at least one pilot project to supply biomethane to an ARB DG Certified technology either onsite or offsite within the air basin.

The Short Lived Climate Pollutant (SLCP) Strategy is meant to encourage new technologies as well as reduce SLCP levels: "The State should provide incentives to accelerate market transitions to cleaner technologies that foster significant system-wide solutions to cut emissions of SLCPs."[4] Despite this, significant barriers exist to new technologies entering the market. Among these are the fact that there are a small number of project developers, many of the projects currently under development have been being developed for years, and these projects are pulling from multiple sources of funding including Energy Commission and Department of Food and Agriculture grant programs as well as private financing. The desire by developers and agencies to leverage funding from multiple programs for a single project means that business models, including offtake and end use, have been determined before this proceeding was even started. Therefore, the scoring criteria in this solicitation will allow the Commission to weigh the benefits of the already planned projects, but will not be encouraging new behavior or technology adoption. While credit should be given to those who have been hard at work for years to develop

[4] Short Lived Climate Pollutant Strategy, page 3.

projects, if the Commission wishes to promote new, cleaner technologies then specific guidance must be set down in program rules to achieve this.

The draft solicitation already provides the selection committee with discretion with respect to ensuring geographical diversity. Bloom suggests that in order to balance the direction to encourage new technologies along with the need to promote the advancement of projects that have undergone significant planning efforts and are shovel ready, the Commission should have the discretion to set a separate project category with a requirement to supply biomethane to an ARB DG Certified technology either onsite or offsite within the air basin. SB 1383 directed the Commission to conduct *at least* 5 projects. This creates a floor not a ceiling and allows for additional projects to move forward under this separate category.

Bloom thanks the Commission for the opportunity to submit these comments and looks forward to continued engagement as development of California's biomethane policies moves forward.

Dated: February 5, 2018

Respectfully submitted,

/s/ Erin Grizard
Erin Grizard
Senior Director
Regulatory and Government Affairs
Bloom Energy Corporation
1299 Orleans Drive
Sunnyvale, CA 94089
Tel: (408) 543-1073
Fax: (408) 543-1501
Email: erin.grizard@bloomenergy.com