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Bloom Energy Comments on Proposed Final IEPR

Additional submitted attachment is included below.



February 7, 2018

Chair Robert Weisenmiller
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

Re: Proposed Final Integrated Energy Policy Report (IEPR)

Dear Chair Weisenmiller,

Bloom Energy (Bloom) appreciates the opportunity to provide these comments on the Proposed Final IEPR. We focus these comments on the IEPR recommendations regarding renewable gas. Bloom strongly supports the State's efforts to capture methane from waste stream sources and make it available as a renewable fuel. The need to capture methane from all available sources is a critical issue as the State seeks solutions to climate change. We strongly request that the Commission's recommendations reflect a holistic view of biogas development and end use in order to effectively encourage project development and capture maximal environmental benefit.

Bloom agrees with CEC staff¹ that long-term electricity generation contracts support project financing and that a successful strategy for project development should include offtake contracts in the electricity and transportation fuel markets. Longer term, fixed price agreements for electricity generation (10-20 years) provide a predictable base of revenue that will aid in the ability of renewable gas projects to be financed. Therefore, it is concerning that the first policy recommendation to encourage biogas project development promotes a focus solely on the transportation market.

*"State funding agencies... should focus on cost-effective strategies to develop markets for renewable gas. This 2017 IEPR has revealed that renewable gas produced from anaerobic digestion used as a transportation fuel in near-zero emission, heavy-duty vehicles is the most likely near-term solution."*²

The higher revenues from the transportation market are important for developers to cover the high costs of projects, but electricity generation offtake agreements that can occur now and provide long term financial stability now need to be part of the solution to encourage renewable gas project development. Policies to support both electricity generation and transportation end use should be developed in parallel as they are complementary markets that allow renewable gas developers to diversify their portfolio with multiple end uses from the same renewable gas project. Bloom

¹ Proposed Final IEPR, Chapter 9, page 349: "A proposed strategy is to produce both electricity and fuel, hedging the long-term certainty benefits of electricity generation against the more volatile high-revenue potential of fuel production."

² Draft IEPR, Chapter 9, page 363.

requests that serious consideration be given to the paradigm of hedging long-term electricity contracts against the more volatile transportation market in the Commission's policy recommendations. For successful and sustainable renewable gas projects to be realized, policies need to allow and encourage multiple end uses for the gas supply.

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 If the IEPR were to primarily encourage CNG vehicles as the preferred end use for renewable gas, it would limit innovative, and in some cases environmentally superior, technology applications and miss out on significant environmental benefits.

We thank the Commission for the opportunity to provide feedback and reiterate that near-term strategies should consider the positive impact that a long term offtake contract for renewable gas for electricity generation provides. We suggest that the first recommendation be adjusted to read:

*"State funding agencies... should focus on cost-effective strategies to develop markets for renewable gas. This 2017 IEPR has revealed that renewable gas produced from anaerobic digestion used as a transportation fuel in near-zero emission heavy-duty vehicles **and near-zero emission electricity generation** is the most likely near-term solution."*

With this flexibility, sectors of the economy beyond the transportation sector will be able to solve some of their most pressing emissions challenges while supporting a robust supply for the transportation market at the same time.

Respectfully,



Erin Grizard
Senior Director, Regulatory and Government Affairs