BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

FILED
03/10/21
04:59 PM

Order Instituting Rulemaking Regarding Microgrids Pursuant to Senate Bill 1339 and Resiliency Strategies.	Rulemaking 19-09-009

REPLY COMMENTS OF THE PUBLIC ADVOCATES OFFICE ON THE ASSIGNED COMMISSIONER'S SCOPING MEMO AND RULING FOR TRACK 3

FANGXING LIU
Utilities Engineer
STEVE SHOEMAKER
Analyst

Public Advocates Office
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102
Telephone: (415) 696-7330
Email: Steven.Shoemaker@cpuc.ca.gov

MICHAEL EINHORN
Attorney

Public Advocates Office
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102
Telephone: (415) 703-4852
Email: Michael.Einhorn@cpuc.ca.gov

March 10, 2021

TABLE OF CONTENTS

Page

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking Regarding Microgrids Pursuant to Senate Bill 1339 and Resiliency Strategies.	Rulemaking 19-09-009

REPLY COMMENTS OF THE PUBLIC ADVOCATES OFFICE ON THE ASSIGNED COMMISSIONER'S SCOPING MEMO AND RULING FOR TRACK 3

I. INTRODUCTION

The Public Advocates Office at the California Public Utilities Commission (Cal Advocates) submits these reply comments on the *Assigned Commissioner's Amended Scoping Memo and Ruling for Track 3* (Ruling).[1] Specifically, Cal Advocates responds to the Opening Comments of Bloom Energy Corporation (Bloom).[2]

Bloom has endeavored to provide quantitative data to support its recommendation. Specifically, Bloom argues that the reliability of its generators, combined with the generators' ability to help utilities avoid infrastructure costs, justifies a full standby cost waiver. However, Bloom has not proven that: 1) the purportedly high reliability of Bloom generators fully eliminates the costs that standby charges are designed to recover, 2) a standby charge waiver for Bloom's non-renewable resources aligns with California's environmental goals, or 3) a standby charge waiver is the appropriate way to compensate costs avoided by Bloom generators.

[1] Rulemaking (R.) 19-09-009, *Assigned Commission Amended Scoping Memo and Ruling for Track 3* (February 9, 2021) (Ruling).

[2] R.19-09-009, *Comments of Bloom Energy Corporation on the Administrative Law Judge's Ruling Requesting Comment on the Track 3 Microgrid and Resiliency Strategies Scoping Memo* (March 3, 2021) (Bloom Opening Comments).

II. COMMENTS

A. Bloom's customers – not ratepayers – should assume the risk of generator failure via physical assurance contracts.

Bloom argues that because its fuel cells are highly reliable, customers with Bloom fuel cells will rarely need the utility grid to provide standby service.[3] Based on that argument, Bloom asserts that the California Public Utilities Commission (Commission) should waive standby charges for microgrid resources with availability over 95%, a capacity factor over 85%, and no more than that 5% daily variation as compared to their median generation output over the past year.[4] However, standby charges are still necessary for these microgrid resources because a utility must invest in and maintain the transmission and distribution infrastructure even if the utility only needs to serve a small portion of the load usually provided by a microgrid. Bloom's acknowledgment that its technologies will not provide 100% availability means that Bloom's proposal would make ratepayers,[5] instead of Bloom's customers, financially responsible for providing standby electrical service when Bloom's generators fail or vary in production.

Bloom's proposal contradicts the Commission's conclusion in Decision (D.) 01-07-027, which provides a path for non-renewable resources to avoid standby reservation charges.[6] D. 01-07-027's "Physical Assurance" provision waives standby

---

[3] MRW and Associates for Bloom Energy Corporation, *Standby and Departing Load Charges and Avoided Costs for Fuel Cell Microgrids* (March 3, 2021), p.13 (MRW Standby Charge Report) ("Given their level of reliability, the likelihood of a fuel cell outage at times of peak generation, transmission or distribution capacity demand is exceedingly low. As such, current standby tariffs are a blunt tool for collecting the costs, if any, caused by these customers.").

[4] Bloom Opening Comments, p. 27.

[5] Bloom Opening Comments, p. 27.

[6] D.01-07-027, *Interim Decision Adopting Standby Rate Design Policies* (July 12, 2001, proceeding R.99-10-025), Conclusion of Law 3 p. 81 ("Customers with onsite generation should not pay standby charges designed to recover the fixed costs associated with distribution service for the amount of capacity it provides to the utility with physical assurance."), available at https://docs.cpuc.ca.gov/published/final_decision/8823.htm#P72_1741.

reservation charges if a customer agrees to drop their load proportionally during a drop in generation from their on-site resources.[7]

Instead of proposing that Bloom's customers drop their load in proportion to a possible generator failure, Bloom proposes an outright waiver of standby charges that ensures those costs are borne by ratepayers. In other words, Bloom proposes that the risk of a drop in generation by Bloom's technologies should be borne solely by ratepayers.

While the changing nature of distributed generation could justify updating standby charges, recalibrating standby charges to align with modern distributed generation resources should not be confused with an outright waiver, which would have drastically different effects. As stated in its Opening Comments, Cal Advocates could potentially support an evidence-based reconsideration of standby charges in and build a record in a proceeding addressing potential modifications to standby charges.[8, 9] However, Bloom has not demonstrated that a complete waiver is justified.

B. Bloom's comments do not prove that a standby charge waiver would align with California's environmental goals.

As Bloom's Opening Comments point out, fuel cells operating on renewable fuels already qualify for standby charge waivers.[10] However, adopting Bloom's expanded standby charge exemption criteria – which only sets requirements for reliability, not greenhouse gas (GHG) emissions - would subsidize nonrenewable resources, an action that is inconsistent with California's environmental goals.

---

[7] PG&E Schedule SB, Sheet 7 ("A distribution-level customer receiving standby service under Schedule SB may elect to execute a contract for Physical Assurance…This contract requires that the customer's load automatically and instantaneously drop in an amount equal to the energy shortfall arising from a reduction in the on-site generator's output. Customers fulfilling the performance requirements of the physical assurance agreement do not pay the Reservation Charge Rate…"), accessed at https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC_SCHEDS_SB.pdf.

[8] R.19-09-009, *Comments of the Microgrid Resources Coalition on the Track 1 Proposed Decision of ALJ Rizzo* (May 19, 2020), pp. 10-11.

[9] R.19-09-009, *Opening Comments of the Public Advocates Office on the Assigned Commissioner's Scoping Memo and Ruling for Track 3.* (March 3, 2020).

[10] Bloom Opening Comments, p. 11 ("Pursuant to Pub. Util. Code Section 2827.1, for fuel cells operating on a renewable fuel, NEM tariffs are available and provide a standby waiver.").

Although Bloom's generators are able to run using renewable fuels, the majority of its fleet uses natural gas. Bloom's Prospectus, filed with the Securities and Exchange Commission in 2018, stated that only about 9% of their generators used biogas,[11] and their most recent 10-K form (filed in March 2020) referred to natural gas as the "primary fuel used in our Energy Servers."[12]

Cal Advocates' Opening Comments detailed how, given California's high electricity prices and the relatively low price of natural gas,[13], [14] microgrid owners will likely invest in natural gas generators absent regulatory action.[15] While Bloom argues that their natural gas fuel cells are superior to diesel generators from an emissions perspective,[16] the Commission has sought to limit the use of natural gas fuel cells.[17] Adopting Bloom's proposed standby waivers would be a reversal of existing Commission policies.

---

[11] Bloom Prospectus (July 24, 2018), available at https://www.sec.gov/Archives/edgar/data/1664703/000119312518227590/d96446d424b4.htm.

[12] Bloom Form 10-K (March 31, 2020), p. 26, available at http://d18rn0p25nwr6d.cloudfront.net/CIK-0001664703/2cb2719d-14a5-4af1-86d3-45fab852d821.pdf.

[13] The average retail price for electricity in California is $16.89/kWh, 7th highest in the nation. The US Energy Information Administration, *State Electricity Profiles* (updated November 2020), available at https://www.eia.gov/electricity/state/).

[14] The US Energy Information Administration, *Short-Term Energy Outlook* (February 9, 2021), available at https://www.eia.gov/outlooks/steo/report/natgas.php.).

[15] Hanna et al., *Evaluating Business Models for Microgrids: Interactions of Technology and Policy*, Energy Policy 103 (2017) 47-61, p. 47 ("We find that optimal investment leads to some deployment of renewables but that natural gas technologies underpin the most robust business cases—due in part to relatively cheap gas and high electricity rates."), accessed at https://www.sciencedirect.com/science/article/pii/S0301421517300101.

[16] Bloom Opening Comments, p. 23.

[17] A 2015 Staff Proposal recommending lowering the emissions requirement for technologies eligible for energy storage incentives to a factor below that of Bloom's fuel cells. (R.12-11-005, Energy Division, *Staff Proposal to Modify the Self-Generation Incentive Program* (November 23, 2015), available at https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M156/K013/156013203.PDF.) Eventually, the Self-Generation Incentive Program was modified to require that eligible fuel cells use at least 50% biogas. (Bloom Prospectus (July 24, 2018), p. 25, available at https://www.sec.gov/Archives/edgar/data/1664703/000119312518227590/d96446d424b4.htm.).

C. A standby charge waiver is an inappropriate tool to compensate the avoided capacity provided by non-renewable resources.

MRW & Associates (MRW), a third-party consulting company hired by Bloom, used the Avoid Cost Calculator (ACC) and calculated the average avoided generation, transmission and distribution capacity costs for fuel cell installations to be $27.51/MWh, $30.62/MWh and $25.87/MWh for Pacific Gas and Electric Company (PG&E), Southern California Edison Company (SCE) and San Diego Gas & Electric Company (SDG&E), respectively.[18] MRW concluded that the averaged avoided costs are higher than PG&E's and SCE's standby reservation charges.[19] Based on that averaged value, Bloom asserts that waiving standby charges does not "impose a cost shift on other PG&E and SCE customers."[20]

MRW's use of averaged values is misleading and inappropriate because costs and demand vary greatly and skew average values, and constant, flat-rate, long-term standby charge exemptions are a mismatched tool for a generator's variability in avoiding capacity costs. MRW's report shows that the hourly avoided capacity costs for Bloom's fuel cells range from $0/MWh to $9,000/MWh. Although most hourly avoided costs are below $1,000/MWh, a few data points that stretch from $3,000/MWh to $9,000/MWh appear to have a significant impact on the averaged avoided costs.[21] The variance of avoided capacity costs is also apparent in other projects. Energy & Environmental Economics (E3), the creator of the ACC, demonstrated that the avoided capacity is only valuable during the peak hours of the day, when electricity demand is the highest (Figure 1).[22] Unlike avoided energy

---

[18] MRW Standby Charge Report, p.13.

[19] MRW Standby Charge Report, p.13. (MRW calculated the standby reservation charges for PG&E, SCE and SDG&E to be $7.22/MWh, $8.4/MWh and $29.33/MWh).

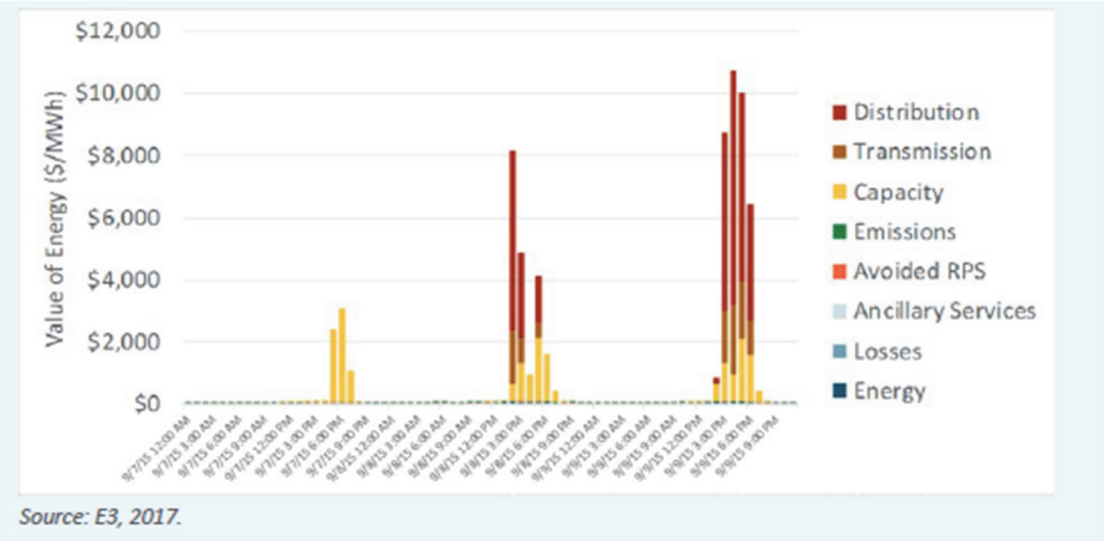
[20] MRW Standby Charge Report, p.13.

[21] MRW Standby Charge Report, p.12.

[22] E3 breaks down avoided costs by type in PG&E's Sunnyvale territory over a three-day period. Only 4 out of 72 hourly avoided capacity values exceed $8000/MWh while about 60 hourly values are equal to zero. United States Environmental Protection Agency, *Assessing the Electricity System Benefits of Energy Efficiency and Renewable Energy*, Part Two, Chapter 3, p. 3-45, accessed at https://www.epa.gov/sites/production/files/2018-07/documents/mbg_2-3_electricitysystembenefits.pdf

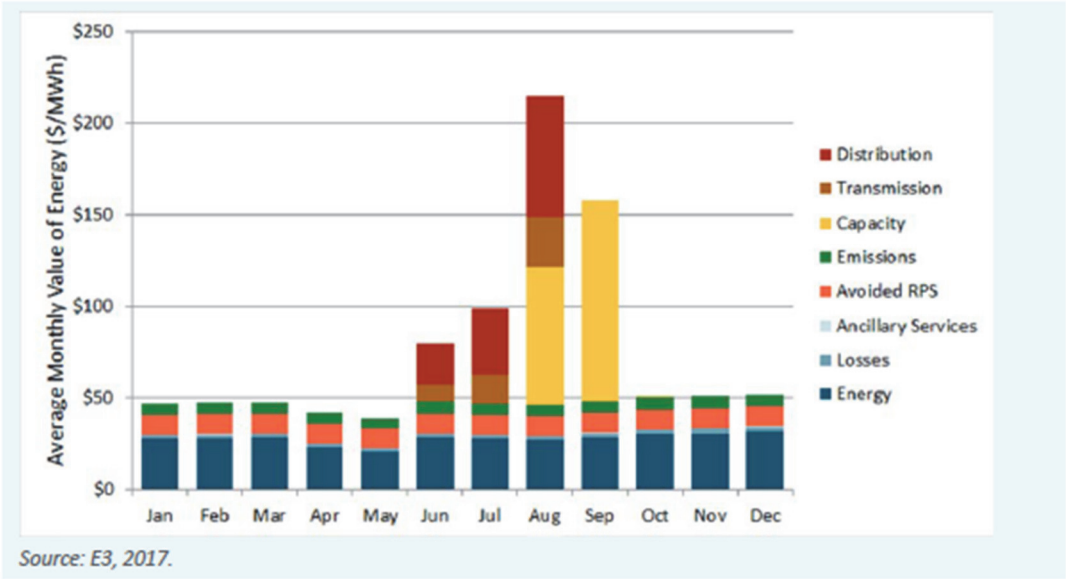
costs that are relatively constant throughout the year, avoided capacity costs only appear in the summer months and are virtually zero during the rest of the year (Figure 2).[23]

Figure 1. Three-Day Snapshot of Energy Values in Sunnyvale, CA (PG&E)



Source: E3, 2017.

Figure 2. Average Monthly Avoided Cost from Energy Efficiency in Fresno, CA (PG&E) in 2017



Source: E3, 2017.

[23] United States Environmental Protection Agency, *Assessing the Electricity System Benefits of Energy Efficiency and Renewable Energy*, Part Two, Chapter 3, p. 3-46, accessed at https://www.epa.gov/sites/production/files/2018-07/documents/mbg_2-3_electricitysystembenefits.pdf.

It is inappropriate to offset avoided capacity costs, which vary greatly depending on the time of the day and the year, by waiving standby reservation charges, a relatively constant charge per standby demand in MW. Standby charges are designed solely for recovering the utilities' expenses from providing power when customers' generation fails, and exemptions are not the most direct way to incentivize microgrid benefits. Cal Advocates supports realizing the system benefits provided by energy efficiency, conservation and zero emission self-generation, as stated by the Sierra Club.[24] However, existing policies and the available data indicate that the Commission should not subsidize non-renewable energy resources with a standby charge waiver at this time.

III. CONCLUSION

The Ruling and associated staff questions requested that the parties address the issue of whether microgrids provide benefits to justify an exemption from standby charges. Bloom did not demonstrate that microgrids provide resiliency benefits to non-participants (a particular focus of the Ruling) and did not demonstrate that standby charge waivers would further California's environmental and resiliency goals. While the Commission can and should initiate a proceeding to modernize standby charges, it is not appropriate to provide outright waivers at this time.

Respectfully submitted,

/s/ MICHAEL EINHORN

Michael Einhorn
Attorney for

The Public Advocates Office
California Public Utilities Commission
505 Van Ness Avenue
San Francisco, CA 94102
Telephone: (415) 703-4852
Email: Michael.Einhorn@cpuc.ca.gov

March 10, 2021

[24] R.19-09-009, *Sierra Club Comments on Amended Scoping Memo and Ruling for Track 3* (March 3, 2021), p. 3.