



July 23, 2021

Michael Li  
Bureau Chief, Bureau of Energy Technology and Policy  
Department of Energy and Environmental Protection  
10 Franklin Square  
New Britain, CT 06051

**PURA Docket No. 19-07-01RE02**

**Re: Written Comments of Bloom Energy on SCEF Year 3 Procurement Bid Preferences**

Dear Mr. Li,

Bloom Energy Corporation ("Bloom Energy") hereby respectfully submits the following comment letter in response to the Notice of Opportunity for Public Comment and Public Meeting, filed by the Department of Energy and Environmental Protection (DEEP) Bureau of Energy and Technology Policy (BETP). The Notice was dated July 8, 2021 and was filed in Public Utilities Regulatory Authority (PURA) docket 19-07-01 on July 16, 2021. This letter follows our written comments of February 19, 2021 and March 12, 2021, in which we outlined our support for the Department of Energy and Environmental Protection (DEEP) Bureau of Energy and Technology Policy's (BETP) development of a future bid preference designed to encourage SCEF projects that address resiliency issues. Those and additional thoughts are expanded upon here.

About Bloom Energy

Bloom Energy is a manufacturer of solid oxide fuel cell systems that generate electricity through an electrochemical process without combustion. Therefore, these systems do not produce local "criteria" air pollutants associated with combustion technologies, nor do they consume or discharge water. Bloom's Energy Servers are designed in a modular fault-tolerant format that provides mission critical reliability with no downtime for maintenance. Bloom's systems have proven resilient through outages caused by hurricanes, winter storms, earthquakes, forest fires, and other extreme weather and natural disasters. As a result, many of the world's leading companies rely on Bloom Energy Servers to secure their critical business processes from the risk of utility outages and reduce dependence on high-polluting backup generators.

Background

On February 1, 2021, DEEP (or "the Department") filed in PURA docket 19-07-01 a letter outlining the procurement price cap and bid preferences under the SCEF program's Year 2 solicitation. In the final Year 2 solicitation issued by the electric distribution companies (EDCs) on April 30, 2021 PURA and the EDCs held steady the prior year's 20% bid preference for projects sited on landfills or brownfields, but did not include a bid preference for resiliency. As DEEP and PURA contemplate developing these and additional bid preferences for the Year 3 procurement, we offer technical input and suggestions in response to the questions posed in DEEP's July 16<sup>th</sup> Notice.

In particular, we offer input on the development of a bid preference for projects that support resiliency. Recent and ongoing events in California, Texas, Canada, Europe, and elsewhere provide a stark reminder that historic assumptions about weather patterns no longer provide a reliable indicator of what weather will be like in the future. Connecticut has already experienced some of the longest-duration and most severe power outages in the region. It is now foreseeable that the electricity grid will be increasingly vulnerable to power disruptions as the growing consequences of climate change continue to impact the state. Reliable and/or dispatchable distributed energy resources (DERs) can help mitigate these impacts, in both behind-the-meter (BTM) and front-of-the-meter (FTM) configurations.

With respect to BTM projects, over the last 10 years the LREC program has engendered a broad range of microgrid projects that provide un-interruptible power to critical facilities that support communities across the state. Among other important facilities, these include hospitals, telecommunications providers, supermarkets, and retail stores that provide supplies such as food, clothes, water, and building materials before, during, and after storm events. As climate-induced severe weather continues to increase the need for resiliency it is important to recognize that FTM configurations – including SCEF projects – can mitigate the risk of widespread grid outages and set the stage for microgrids that are incorporated into electric utility distribution systems.

Since 2017, Bloom Energy has been operating an 800 kW microgrid in Hartford’s Parkville neighborhood that provides consistent power to the grid during normal grid operations. When the grid experiences a drop in voltage due to a power outage, the system isolates a predetermined area within the local electric distribution system (which includes a supermarket, senior center, school, library and gas station) and provides the area with uninterrupted power until the operation of the wider grid is restored. Bloom fuel cells have powered the microgrid through 17 separate outages since the system came online. Every SCEF project that involves a reliable form of eligible power generation has the potential to be the “anchor generator” of a future microgrid within the local utility distribution system.

The grid benefits offered by FTM projects can also take another form. Looking at a distribution network holistically to identify relative weaknesses along the system, utility engineers are able to pinpoint interventions that would strengthen the broader electric grid overall. For instance, in New York City, Bloom Energy worked within the Con Edison “Brooklyn Queens Demand Management” initiative to install fuel cell projects at hospitals, retail stores, state agencies, and a low income housing development. All of these projects targeted overloaded circuits which were identified by utility distribution engineers and otherwise would have required costly equipment upgrades. This initiative allowed the utility to avoid traditional transmission and distribution investments that ended up totaling nearly \$1 billion in ratepayer savings.

In the following section, we respond in detail to several of the questions posed by DEEP in the July 16, 2021 Notice. On behalf of Bloom Energy, I would like to thank DEEP for starting the process of robust engagement on such a critical topic. We note that the issues surrounding some of the topics proposed for bid preferences, such as resiliency in the face of climate change and siting in environmental justice communities in the context of historic inequities with respect to renewables development, are challenging and complex. We encourage the Department to seek input from a range of stakeholders in a way that provides adequate time and opportunity to bring technical

expertise fully to bear. We note that the Tuesday morning, July 20 public meeting was noticed in the PURA docket at 3:30 PM on Friday, July 16.<sup>1</sup> This allowed scarcely more than one business day notice to interested parties. These written comments are our first attempt to provide greater detail on the substance of the request, but we believe that further engagement with stakeholders will be critical.

#### Responses to DEEP Questions and Discussion Prompts

##### **DEEP Question 1:**

*Discuss and provide support for any bid preferences that DEEP should consider for the Year 3 Procurement, and/or subsequent procurement years.*

##### Landfill or brownfield sites:

Support inclusion in Year 3 and subsequent procurement years. See detailed response to Question 2, below.

##### Projects that support resiliency:

Support inclusion in Year 3 and subsequent procurement years. See detailed responses to Questions 8 and 9, below.

##### Projects benefitting distressed municipalities and/or environmental justice communities:

Support inclusion in Year 3 and subsequent procurement years. See detailed responses to Questions 5 and 6, below.

##### **DEEP Question 2:**

*Should a bid preference for projects located on brownfields or landfills continue to be applied for Year 3? If yes, explain why and at what weighting value. If no, explain why not.*

We strongly support the existing bid preference for projects sited on landfills or brownfields, and this bid preference should continue to be available in Year 3 and subsequent procurement years. Providing a scoring benefit to projects that utilize sites that may otherwise be difficult to develop supports responsible land use, dissuades use of undeveloped greenfield sites, and serves the public interest. The 20% bid preference utilized in the Year 1 and Year 2 procurements acknowledges the additional costs of development at these sites.

##### **DEEP Question 4:**

*For each bid preference identified in response to Question 1 and/or 2, what clear standards, terms, parameters, or metrics should be used to evaluate whether a project qualifies for the bid preference?*

##### Landfill or brownfield sites:

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<sup>1</sup> The Notice of Opportunity for Public Comment and Public Meeting was dated July 8, 2021; however, the cover letter that accompanied the filing is dated July 16, 2021 and the filing is timestamped in the docket as 07/16/2021 03:31:31 PM. The cover letter referenced Docket No. 19-01-01RE02; however, the documents were filed under the initial Docket No. 19-07-01.

When determining if a particular bid qualifies for this bid preference, we recommend using the same standard set out for the Year 2 procurement in the Modified SCEF Program Requirements.<sup>2</sup> Those requirements reference the statutory definition of “brownfield” codified at Conn. Gen. Stat. § 32-760: “any abandoned or underutilized site where redevelopment, reuse or expansion has not occurred due to the presence or potential presence of pollution in the buildings, soil or groundwater that requires investigation or remediation before or in conjunction with the restoration, redevelopment, reuse and expansion of the property.”

While the term “landfill” is not similarly defined in the Modified SCEF Program Requirements, the term is generally understood and the referenced list of closed landfills provides helpful clarity. We recommend continuing to rely on these definitions in Year 3 and subsequent procurements.

#### Projects that support resilience:

In order to ensure that a given project’s resiliency benefits are appropriately assessed, it is important to incorporate into the evaluation process a working understanding of how FTM generation can be configured to provide resiliency and/or maintain backup power in the event of an outage, as discussed above. Because resiliency in FTM applications can take a number of forms, there is no single criterion or metric that would capture the range of resiliency support provided by these projects. For example, when an FTM DER is targeted to specific locations on a utility’s distribution network that require load relief or resiliency for “downstream” users, they are providing needed support for the grid and therefore increasing reliability and resiliency. While FTM resiliency can look different from strictly BTM microgrids, both configurations depend on the system’s ability to isolate, or “island,” in conjunction with utility-operated switches and predetermined loads from the broader electric grid. If a project demonstrates this capability through the bidding process, it should be eligible for the resiliency bid preference. Importantly, the preference should only be given to projects that can provide resiliency indefinitely without interruption.

Reliable, uninterrupted power is critical to the modern economy and our ability to electrify entire sectors of the economy that currently depend on combustion, such as heating and cooling, cooking, and transportation. Moreover, the New England grid will become increasingly reliant upon the long distance transmission and distribution of electricity from remote areas. This trend will accelerate during the same time frames in which climate-induced weather instability is also becoming more severe. The ability to isolate portions of the electric distribution system with the knowledge that local generation is capable of operating within those areas is a critical aspect of risk mitigation and climate adaptation. For this reason, we believe that a 30% bid preference for projects that support grid resiliency accurately reflects the urgency and demand for resilient, reliable electricity even during extreme weather events. This number also accounts for the added cost required for these types of installations.

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<sup>2</sup> Included in PURA’s April 28, 2021 Final Decision; Filed as Attachment 1 to Eversource Energy’s April 30, 2021 compliance filing in PURA docket 19-07-01RE02. Available at: <http://www.dpuc.state.ct.us/dockcurr.nsf/8e6fc37a54110e3e852576190052b64d/5a9ab1a4a89f08c5852586c7006fd2c3?OpenDocument>

## Projects benefitting distressed municipalities and/or environmental justice communities:

Parameters for evaluating projects that benefit distressed municipalities or environmental justice communities should be set based on feedback from these communities and stakeholders who have particular experience with the types of projects contemplated here. This is one possible topic for further stakeholder engagement on the broader issue of bid preferences, and we look forward to participating in that process.

### **DEEP Question 5:**

*Discuss and provide support for a bid preference for projects located in and benefitting distressed municipalities and/or environmental justice communities. What are those potential benefits and how should they be quantified? What are the potential drawbacks and/or concerns with siting projects in distressed municipalities and/or environmental justice communities? What metrics should DEEP use to evaluate whether a project located in a distressed municipality and/or environmental justice community qualifies for a bid preference? How should distressed municipalities and/or environmental justice communities be identified for qualification purposes under the Request for SCEF Proposals (RFP) for the Year 3 Procurement?*

A project located in a distressed municipality and/or environmental justice community should be required to meet strict air emissions standards that will ensure that the burden of additional combustion-related pollutants is not imposed upon the community. This analysis should take into account the reality that in many cases the electric grid is backed up by diesel generators, which have profound impacts on distressed municipalities and environmental justice communities. Too often, however, they are overlooked by a policy framework that is focused exclusively on greenhouse gas emissions without accounting for local air pollution and backup diesel generators. We recommend that a bid preference for projects located in and benefitting distressed municipalities and/or environmental justice communities be based on how many tons of local air pollution that facility will avoid over the course of a given year and whether the project is configured in a way that would allow for continued provision of electric service to a community or critical facilities within a community (See response to Question 4 above), as well as whether the project avoids the use of diesel backup generation.

### **DEEP Question 6:**

*Relative to Question 5, how can DEEP and the Authority ensure such a community or municipality: (a) is willing to host a proposed project; and (b) has adequate opportunity to provide feedback about the proposed project?*

DEEP and the Authority have a long history of successfully conducting stakeholder engagement processes. The SCEF program could include a requirement that project developers consult with potential host communities and the provision could include related feedback to the selection team.

### **DEEP Question 8:**

*How does a resiliency bid preference comport with the legislative intent of §16-244z of the General Statutes of Connecticut? How do such resilience projects comport with the Modified Program Requirements relative to SCEF subscriber credits?*

A resiliency bid preference is in line with the legislative intent of Conn. Gen. Stat. §16-244z, which states at 16-244z(c)(3):

“(3) For any tariff established pursuant to this section, the authority shall examine how to incorporate the following energy system benefits into the rate established for any such tariff: (A) Energy storage systems that provide electric distribution benefits, (B) location of a facility on the distribution system, (C) time-of-use rates or other dynamic pricing, and (D) other energy policy benefits identified in the Comprehensive Energy Strategy prepared pursuant to section 16a-3d.”

As discussed in the previous section and in our response to Question 4, FTM DERs can provide resiliency and reliability benefits to specific locations on the distribution system, so long as those needs and locations are identified at the project’s inception. This reflects the clear intent of (B) in the excerpt above. Additionally, “other energy policy benefits identified in the Comprehensive Energy Strategy” surely include resiliency and reliability; in fact, Strategy 5 in the 2018 Comprehensive Energy Strategy is titled “Continue to improve grid reliability and resiliency through state and regional efforts.” SCEF procurements that provide a scoring benefit for projects that support resiliency clearly qualify as state efforts to improve reliability and resiliency.

The Comprehensive Energy Strategy lists a number of objectives under Strategy 5. Objective B under this strategy is to “continue to deploy community microgrids to support statewide resiliency goals in strategic locations and support the Energy Assurance Plan.”<sup>3</sup> Creating a bid preference for resiliency projects under SCEF that ensures the resiliency and reliability benefits of such projects are adequately valued will help to further the State’s progress towards this strategy.

Further, objective C specifically commits to supporting the resiliency of the distribution network. The objective is to “ensure coastal resiliency of substations and other critical grid infrastructure to support DEEP’s flood management goals.”<sup>4</sup> As noted, there is no consistent mechanism for addressing resiliency issues at the regional level; therefore, states and utilities are often left to their own devices in the context of resiliency projects and upgrades. SCEF offers an opportunity to address pressing resiliency and reliability needs in the absence of clear options for regional support.

At minimum, projects that support resiliency should earn subscriber credits at the same rate as other SCEF projects. In addition to the universal benefits of clean energy, resiliency projects provide additional benefits by supporting vulnerable grid infrastructure, providing power to critical facilities, and enabling overall community resiliency. For these reasons, it is reasonable to consider a higher subscriber savings rate for subscribers to projects that support resiliency.

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<sup>3</sup> See Comprehensive Energy Strategy, pg. 47. Available at: <https://portal.ct.gov/-/media/DEEP/energy/CES/2018ComprehensiveEnergyStrategypdf.pdf>

<sup>4</sup> *Ibid.*

**DEEP Question 9:**

*Should a bid preference for resilient projects, e.g., microgrids, mobile projects, be applied for Year 3? If yes, explain why and at what standard and weighting value. If no, explain why not.*

Yes. We support including a bid preference of 30% for projects that support resiliency, for scoring purposes only. While development on landfills or brownfields is important for supporting responsible use of the state's underutilized land, we believe that addressing resiliency and reliability issues is paramount to the state's ability to meet its aggressive decarbonization goals, which depend on a reliable and uninterrupted supply of power for an increasingly electrified economy.

**Conclusion**

Developing bid preferences for the Year 3 SCEF procurement and subsequent years provides an opportunity to acknowledge the important range of co-benefits provided by distributed generation. The bid preferences discussed above for development on landfills/brownfields, resiliency benefits, and benefits to distressed municipalities/environmental justice communities, each represent important additional value that could be procured and supported under the SCEF program. We reiterate our support for these three bid preferences, and encourage DEEP to consider this the beginning, and not the end, of robust stakeholder engagement.

We appreciate the opportunity to provide input on this important topic. Thank you in advance for your consideration of these comments. Please do not hesitate to reach out if I can provide additional information.

Sincerely,

*/s/ Jordan Garfinkle*

Jordan Garfinkle  
Sr. Policy Manager, New England  
Bloom Energy Corporation

973-632-2212

[jordan.garfinkle@bloomenergy.com](mailto:jordan.garfinkle@bloomenergy.com)

[www.bloomenergy.com](http://www.bloomenergy.com)