| DOCKETED | |
|---|---|
| **Docket Number:** | 22-RENEW-01 |
| **Project Title:** | Reliability Reserve Incentive Programs |
| **TN #:** | 248863-1 |
| **Document Title:** | CEC DEBA Program Comments 02172023 |
| **Description:** | N/A |
| **Filer:** | Kristine Banaag |
| **Organization:** | Bloom Energy Corporation |
| **Submitter Role:** | Public |
| **Submission Date:** | 2/17/2023 3:26:13 PM |
| **Docketed Date:** | 2/17/2023 |

Bloomenergy®

February 17, 2023

Honorable Siva Gunda
Vice Chair
California Energy Commission
715 P Street
Sacramento, CA 95814

**Re: Docket 22-RENEW-01 Bloom Energy Corporation Comments on Questions for Consideration Presented on the January 27, 2023, Lead Commissioner Workshop**

Dear CEC Commissioners and Staff,

Bloom Energy Corporation (Bloom) appreciates the opportunity to provide its expertise and comments to the California Energy Commission (Commission) as it works to identify resources to support near- and immediate-term reliability. The following comments are in response to questions posed during the January 27, 2023, lead Commissioner workshop regarding the Demand Side Grid Support and Distributed Electricity Backup Assets programs.

***Question 1 – How best can DEBA invest in assets for emergency load reduction without interfering in the Resource Adequacy Program or creating clean stranded assets? How can it best do both?***

As rates, the cost of the energy transition, and the reliability challenges all mount, it is increasingly important that California make every dollar spent on the energy system count towards the broadest range of energy system needs and policy goals. DEBA investments for emergency load reduction should align with the goals of the Resource Adequacy program and help reduce its costs, and vice versa. California simply cannot afford duplicative, inefficient investments, given the steep curve we have already begun to ascend.

The key is to tailor CEC programs toward resources that can be counted on to operate reliably during emergency events and that will *also* contribute to important state, energy system and environmental co-benefits and avoid long-term fossil fuel-only stranded assets. Bloom recommends that the CEC design the DEBA program to rapidly deploy reliable distributed energy resources (DERs) by providing base incentives for DERs meeting strict reliability criteria, as well as "adders" for demonstrable co-benefits and innovative mechanisms to prevent creating stranded fossil-only assets. By preferring resources that contribute to a variety of energy system needs and policy objectives, the Commission will substantially lessen the likelihood of creating stranded clean assets as well; the same cannot be said for short-duration,

emergency-only resources focused solely on immediate issues, but having decreasing relevance to the challenges just ahead for California's energy system.

DERs, including some fossil-fueled DERs, can reliably reduce peak load during extreme events while also creating emission reductions and other system, economic, social and environmental benefits outside of extreme events; some DERs that are currently fossil-fueled, such as fuel cells, can readily shift to low- or zero-carbon operations as clean fuels become increasingly available. Instead of contracting with existing fossil plants or spending limited budget dollars on diesel back-up generators, all of which detract from, rather than promote, California's social and environmental policy objectives, the Commission should instead incorporate specific eligibility criteria in the DEBA that advance the broad range of California's energy system objectives.

**Reliability Criteria**

To date, CEC programs implementing the AB 205 Strategic Electricity Reliability Reserve programs have been focused on "extreme events" with limited hours of operation or eligibility per year. However, as discussed in the workshop, the risks from project delays, project cancellations, extreme weather, and fire risks are negatively affecting the ability to maintain reliability over longer durations – risks that extend beyond just extreme events. The DEBA program can help reduce the broad range of serious reliability risks facing California by developing a set of criteria that prioritize resources capable of addressing those additional risks as well as immediate extreme event concerns. For instance:

- Recognizing that DEBA projects can reliably reduce load on the electric system during identified extreme events while simultaneously achieving other important objectives during and outside of extreme events;
- Offering incentive "adders" for projects that can also provide reliable capacity through the duration of longer-term grid emergencies; and
- Offering incentive adders for projects that are capable of powering critical facilities – both public and private - or other community assets (e.g. telecommunications, health care, higher education, food distribution, government facilities, transportation hubs, etc.) through extended outages.

**Environmental Criteria**

As noted above, to date CEC programs implementing the AB 205 Strategic Electricity Reliability Reserve programs have focused on generation during short-duration extreme events. This approach has the effect

of discounting the potential for DEBA projects to not only address longer-duration reliability challenges, but to also reduce emissions and energy-related water use outside of officially designated "extreme events." By expanding the focus beyond the limited set of extreme event hours, the CEC can shape DEBA to displace diesel generators and other short-term "band-aids" that have their own negative consequences, and instead create a signal for investment of more durable, beneficial, and more transition-compatible resources that contribute tangible environmental and social benefits. Criteria that would achieve more value for California and its overall energy system objectives could include:

- Requiring that projects comply with the emissions standards adopted by the California Air Resource Board, pursuant to the distributed generation certification program requirements of Title 17 of the California Code of Regulations Section 94203 and/or its successor regulations;
- Offering incentive adders for projects that reduce more overall system emissions over time (via higher capacity factor operations combined with either high efficiency and/or low air pollutant technologies); and
- Offering incentive adders for projects that reduce or eliminate impacts on water resources based upon demonstrated reductions in energy-related water use.

**Energy Transition/Stranded Assets Criteria**

In the course of designing the DEBA program the Commission should explicitly recognize and discern between the fundamental differences between various energy technologies, rather than lumping varying technologies into broad, undifferentiated categories (e.g. "fossil fuels"). For example, non-combustion fuel cells emit near-zero criteria pollutants, use virtually no water in operation, have virtually no noise or vibration, are inherently reliable, and can be deployed almost anywhere for short project terms (such as a few years), unlike many of the fossil fuel resources that the CEC and Department of Water Resources have already contracted for under other Strategic Electricity Reliability Reserve programs. Fuel cells can also operate on renewable fuels like biogas, green hydrogen, and green ammonia, or blends of those fuels. Criteria that recognize these types of distinctions among technologies and project types within broader categories are critical to the program's overall success and will result in more efficient and cost-effective investments. In short, DEBA will be most successful when its investments serve as a "down payment" on the energy transition. Bloom offers the following recommendations regarding energy transition related criteria that would have this effect while also serving to avoid the potential for stranded assets:

- Require, by manufacturer certification, the capability to operate using a renewable fuel source, such as renewable natural gas, biogas, or green hydrogen;
- Limit project terms to ten (10) years or less; and
- Require posting of a decommissioning performance surety bond that guarantees the project will be removed upon the expiration of the ≤10-year project term if not converted to renewable fuels

The creation of adders in DEBA to incent performance and contributions to the Commission's overall energy system objectives, as we understand the Microgrid Resources Coalition is proposing, will help ensure California's energy system cost-effectively and successfully meets all of those objectives, including DEBA's immediate emergency event priorities, Resource Adequacy reliability needs, as well environmental and social concerns. As currently presented and with these additional recommendations, the proposed DEBA program should not detract from, or otherwise interfere with, the Resource Adequacy program.

***Question 2 – Are the proposed program frameworks reasonable? What modifications could unlock additional resources for emergency events?***

Bloom Energy recommends that the Commission adopt a framework that is agile and that it remain receptive to novel ideas and unique contract structures, especially those that do not fit in existing programs. Under the CPUC's currently-pending Proposed Decision in its Integrated Resources Plan proceeding (R.20-05-003), jurisdictional Load Serving Entities are expected to procure another 4,000 MW of supplemental mid-term reliability procurement for 2026 and 2027, much of which may be sourced from out of state and transmitted long distance. DEBA projects can complement this larger effort by securing more distributed and resilient local capacity that offers local energy, environmental and social benefits, simultaneously addressing urgent emergency event concerns *and* creating additional and highly valuable enhancements for customers in all classes and for California's communities.

The most important thing the Commission could do to unlock additional resources is to recognize that DER projects – and especially customer-sided projects – have an unavoidable gestation period and that every week that elapses between now and when program rules are released reduces the likelihood that projects will be deployed on time. Customers will continue to invest in resources that help assure their own energy supply; unfortunately, the evidence is clear and growing that absent intervention such as DEBA incentives, they will invest in diesel backup generation,[1] which is neither consistent with the

[1] Back-up Generator Populations in Bay Area, South Coast Continue to Grow; San Diego Home to a Significant Number of Generators, Mostly Diesel-Power. M.Cubed. December 2023.

Commission's energy, environmental and social concerns nor, in the end, sufficiently reliable. We strongly suggest that the Commission consider sending a clear and unequivocal signal to developers and customers as soon as possible that it does in fact intend to release a program solicitation, and when, including basic information on what that solicitation will generally consist so that it can be used as a forcing function to rapidly advance developer/customer decisions.

***Question 3 – Are there additional criteria that the CEC should consider when evaluating projects? How should the CEC rank or weight the evaluation criteria?***

In addition to those items listed as potential eligibility/adder criteria in response to Question #1 above we reiterate our suggestions made in response to the RFI. In addition to the criteria suggest above we suggest that the Commission take the following criteria into account:

- *Environmental benefits*, including emissions reductions, air quality, avoided water use, local noise, vibration and visual impacts, and other land use impacts. These benefits should be considered for resource deployment generally, both during and outside of extreme events. As written, the only environmental aspects captured are GHG and pollutant emissions. The CEC should expand beyond this and consider not only emission outputs, but also emissions and energy related water use avoided over time.

- *Lack of Siting/Resource Impacts,* including noise, visual impacts, emissions, compatibility with habitat or existing human uses, contiguous sizeable land, resource thresholds (such as insolation or wind quality), permitting obstacles, development limitations, etc.

- *Local benefits,* including addressing capacity needs in transmission-constrained areas, and enabling timely retirement of aging, often highly polluting local resources, and deferring or eliminating the need for costly and time-consuming transmission and distribution upgrades.

- *System benefits*, including capability to provide ancillary services and maintain power quality; avoided or lessened transmission and distribution investments; avoided system wear and tear; meet growing electrification and economic development needs; and avoided line losses both during and outside of extreme events.

- *Resilience benefits*, including the capability to serve load during extended grid disruptions and outages, such as during public safety power shut-off (PSPS) events. Resources should be able to provide electricity during any weather and during any time of the day to truly increase resiliency.

- *Energy Transition benefits*, including short project lives and the ability to utilize renewable fuels. A technology that is ultra-reliable, skid mounted or otherwise capable of relocation to other sites when needed elsewhere, deployed for <10 years, non-combustion, and uses hydrogen as its native fuel is fundamentally different than a large fossil combustion plant and the Commission should adopt program rules that recognize these types of differentiating features.

***Question 4 – What are reasonable exceptions to non-performance in an emergency event?***

Projects should not be responsible for variations in utility voltage, frequency, and phase jumps outside of established parameters.

***Question 5* – What level of funding is needed to spur the development of a project?**

To produce a healthy amount of program participation, funding for DEBA projects should include a base incentive (whether in the form of annual capacity payments or as an up-front payment, as we understand the Microgrid Resources Coalition is suggesting), plus adders for certain project characteristics, as described above.

In closing, Bloom appreciates the opportunity to provide recommendations for consideration in support of the DEBA program. We applaud the progress made thus far and encourage the Commission and its Staff to move expeditiously toward finalizing the program, which will allow customers and developers with adequate time to prepare.

Best Regards,

**Christina Tan**
Sr. Energy & Environmental Policy Manager