



## **EAST BAY COMMUNITY ENERGY ENERGY RESILIENT MUNICIPAL CRITICAL FACILITIES REQUEST FOR OFFERS**

### **ATTACHMENT E: PRELIMINARY ENGINEERING PACKAGE**

Each Respondent must submit just one Preliminary Engineering Package that describes the technical approach to the design and construction of the Solar and Solar + Storage projects. The file must contain responses to all the information requested below, organized under the appropriate section headers and maintaining the listed numerical section order.

The Offer Supplement must be submitted as a PDF file via the Respondent's Dropbox folder. The file name should be saved as "Preliminary Engineering Package\_RespondentCompanyName".

#### **TECHNICAL SOLUTION & APPROACH**

*All Project Viability Requirements described in the RFO must be addressed in the Preliminary Engineering Package. Please limit the Preliminary Engineering Package to 15 pages.*

1. Describe the technical approach, design, equipment, installation, including:
  - a. Panel, inverter, and racking specifications
  - b. Equipment and workmanship warranties
2. A conceptual design of the Solar and Solar + Storage facilities including exhibits showing proposed layouts and system single line diagrams.
3. PVSYST Report or similar indicating production of the proposed system.
4. Proposed monitoring system/solution with screenshots of monitoring software.
5. Example of facility monthly billing.
6. Example of Performance Guarantee Reporting.
7. Operations & Maintenance Plan offered for the project.
8. Propose auditing process.
9. Describe your strategy for managing supply chain risks.

## PROJECT SCHEDULE

Please include a proposed schedule for the development of Solar and solar plus storage facilities. Respondents should create a schedule in their own preferred format clearly showing critical milestones for each facility, with overall information on start and finish date for the portfolio. This schedule will be updated in Phase 2 once more detailed site information is provided to the selected Respondent.

## SYSTEM GUARANTEES

### i. Solar PV Production Guarantee

The Respondent will specify their proposed Solar PV system's year one (1) metered electricity kWh output ("Year One System Output"). The Respondent shall offer a production guarantee of at least ninety percent (90%) metered kWh of the Year One System Output. The maximum allowable annual system degradation is 0.7% per year for twenty (20) years. The Contactor shall specify their proposed system degradation factor. The performance guarantee should be measured by the Respondent and, if appropriate, any damages should be provided as a credit to EBCE on an annual basis.

### ii. Battery Energy Storage Guarantee and Associated Services

Proposed Operations and Maintenance services should include the following components.

1. Annual Preventive Maintenance cleaning and inspection
  - a. Cleaning should clear any current or potential blockages in the ventilation system, enclosure interior and exterior, and heat sinks.
  - b. Inspections should involve checking for electrical issues, enclosure leaks, and communication system integrity.
2. Monthly performance reports which should provide the following:
  - a. Cycles per month, used to track performance-based incentive progress.
  - b. Charge and discharge ratios used to track parasite loads for the BESS.
  - c. State of charge health used to track the battery cell health and indicate if replacement batteries are needed.
  - d. Typical daily operations for that month, should include a visual for an average day at the site for that month plotting building load, solar, and battery production. This can be useful for finding load shifting opportunities or other savings in the future.
3. Requirement of a 72-hour service for battery faults/notifications or battery outage
  - a. This is a requirement for the maintenance provider to send a tech out to the site within 3 days of a battery error or outage to diagnose the system and create a plan to address the issue and make the repairs in a timely manner.

4. Battery refresh/replacement within PPA pricing

- a. The batteries will usually be warrantied for up to a 10-year maximum, covering the batteries before their maximum state of charge falls below 85% of nameplate. The maintenance provider should be capable of swapping the batteries out at the end of year 10 to ensure system longevity.
- b. Battery refresh/replacement is included for the duration of the contract if the maximum state of charge falls below 85% of the system nameplate.

iii. Training

1. Provide plans for initial and ongoing training on the use of any analytical tools and platforms, including system management during outage, in order to support facility users and managers to meet their resilience goals with the proposed facilities.