**Energy Research and Development**

**Questions and Answers**

GFO-24-304

**California Battery Pilot Manufacturing Line**

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# **Pilot Line Capabilities**

1. **Question:** The solicitation identifies that the pilot line must be able to produce both pouch and cylindrical cells. Are there any reasons why prismatic cells were excluded?

**Answer:** During solicitation scoping, CEC staff received feedback from technical and industry experts indicating that cylindrical and pouch cells are the most feasible and relevant to expected market demand given the available budget and line capabilities. The solicitation does not prohibit the pilot line from producing prismatic cells *in addition to* pouch and cylindrical cells. Production of pouch and cylindrical cells is a minimum requirement.

1. **Question:** Is module impact testing essential for the application, or can this requirement be fulfilled by partnering with a test facility?

**Answer:** Module and pack testing would be considered enhancing features; they are not required capabilities. It is acceptable for the applicant to partner with an academic institution with module and pack testing capabilities. However, applicants are encouraged to co-locate as many services as possible into a single facility, as proximity was one of the primary values identified during scoping discussions.

1. **Question:** What's the minimum cell capacity for 10,000 cells?

**Answer:** It is up to the applicant to choose an amp-hour cell capacity that fits the need of the anticipated users of the pilot line. As for a minimum manufacturing capacity, the equipment, facility, and staff must have the ability to produce at least 10,000 cells per year.

1. **Question:** Is the target of 10,000 cells per year the sum of pouch and cylindrical cells, or each?

**Answer:** The 10,000 cells per year target refers to the minimum total number of pouch and cylindrical cells combined.

1. **Question:** Can the pilot line be primarily a different kind of pilot line, not lithium-ion based?

**Answer:** No. The pilot line must focus on next-generation lithium-ion battery cell manufacturing and the production of cells that incorporate technologies beyond what is currently commercially produced. This includes, but is not limited to, lithium metal anodes, silicon anodes, novel electrolyte formulations, and emerging cathode chemistries.

Non-lithium technologies such as sodium-ion or lithium-sulfur batteries may be included as enhancing capabilities but should not be the pilot line’s primary focus.

1. **Question:** How broad is the "emerging battery technologies" mandate? Can we future proof this line?

**Answer:** The pilot line must focus on lithium-ion based technologies. Within that framework, the applicant has discretion to propose the range of technologies the pilot line can support with the available funding. The applicant may implement non-lithium technologies (e.g., sodium-ion and lithium-sulfur) as enhancing features, while recognizing the trade-off between budget limitations and pilot line capabilities.

1. **Question:** Can applicants partner with organizations like CalTestBed for the cell and module testing part of the application?

**Answer:** No. Cell testing must occur at the pilot manufacturing line facility because the pilot line is primarily a cell fabrication assembly line, and cell testing is a minimum required feature. Applicants may partner with other entities for enhancing features such as module and pack testing.

1. **Question:** Does coating and electrode manufacturing start from cell manufacturing? How much upstream manufacturing (e.g., manufacturing powders) is expected?

**Answer:** The pilot line should be capable of battery cell production starting at the electrode production stage. The pilot line is intended to support a wide range of battery innovators developing component-level advancements (e.g., advancements to the anode, cathode, electrolyte, or separator) and help the innovator produce full cells. The pilot line must be able to take the innovative component as an input and complete the remaining manufacturing steps. For example, if a company is developing a novel anode, the facility must be able to provide the cathode, electrolyte, separator, and associated equipment needed to produce pouch or cylindrical cells.

1. **Question:** Page 16 of the presentation states that the pilot line shall be capable of both pouch and cylindrical cell production. Could an application plan to address a pouch cell pilot line only, or must it address both cell types?

**Answer:** The pilot line must be capable of producing both cell types.

# **Pilot Line Location and Operation**

1. **Question:** Can you provide additional details on the level of site control required at the application stage? Can site control be contingent on the CEC award, or must applicants already own or lease the proposed facility?

**Answer:** The applicant does not have to own or lease the proposed facility at the time of application. However, applicants must identify a proposed site for the pilot line and discuss, in their application, their plan for securing the site if they receive the award. Applications that demonstrate an ability to promptly secure a site will be more competitive.

1. **Question:** The battery facility must be in a disadvantaged or low-income community. Are there any buffers such as the facility being within a mile of the low-income community?

**Answer:** The facility must be located in a disadvantaged or low-income community. Locations that are adjacent to or near these communities are not allowed. Applicants may use this mapping tool to determine whether a location is in a disadvantaged or low-income community: <https://gis.carb.arb.ca.gov/portal/apps/experiencebuilder/experience/?id=5dc1218631fa46bc8d340b8e82548a6a&page=Priority-Populations-4_0>

1. **Question:** For clarification, does the pilot line have to physically be in California?

**Answer:** Yes. The pilot line must physically be in California. The pilot line must also be located in a disadvantaged or low-income community in California. Please also see the response to Question 11.

1. **Question:** Does the CEC have a perspective on if data generated by the facility would be open source or kept private?

**Answer:** The CEC intends that all manufacturing and testing data coming out of the pilot line will be kept with the user-companies. Maintaining strict intellectual property protection is a critical feature of the facility. The solicitation manual requires applicants to describe their “approach to safeguarding and protecting the intellectual property of the battery innovators who will use the facility.”

1. **Question:** Are facility owners/operators permitted to charge a usage fee to battery companies for self-fabrication and testing during the grant period? This would primarily cover costs for materials specific to various battery chemistries.

**Answer:** Yes. The solicitation manual asks applicants to “describe your approach to establishing a sustainable ongoing operation model for the pilot line, demonstrating its effective continuation beyond the grant term. At a minimum, describe the proposed revenue model, upstream feedstock sourcing, and staffing plan, both during and beyond the grant term.”

1. **Question:** What happens at the end date of the agreement (March 2029)? Who owns the facility and is the expectation that it would still be a shared use facility?

**Answer:** The conclusion of the agreement term would have no bearing on the ownership of the facility (the pre-existing building or land) on which the pilot line is located. With regard to ownership of the pilot line, except in the case of early termination with or without cause, the CEC intends for Recipient to be able to operate the pilot line independently without additional CEC funding after the agreement term ends. Title to equipment acquired by the Recipient with grant funds will vest in the Recipient. The Recipient may use the pilot line equipment for as long as needed, regardless of whether the project or program continues to be supported by grant funds. The CEC expects the pilot line to continue as a shared use facility after the agreement term, as this would be consistent with the purpose of the grant.

1. **Question:** Do you anticipate that users of the facility would pay to use the facility?

**Answer:** Please see response to Question 14

1. **Question:** Will the nonprofit prime own the facility and all the equipment at the end of the award period?

**Answer:** Please see responses to Questions 14 and 15

1. **Question:** Is there a minimum operational period required for the pilot line during the grant period of performance?

**Answer:** While there is no minimum operational period required, the solicitation manual calls for the applicant to describe in the application the approach to have the pilot line up and running by mid-2026, if not earlier.

# **Eligible Applicants and Project Teams**

1. **Question:** What is meant by an academic institution for the purposes of the partnership? For example, would a state registered apprenticeship program that works alongside a community college for accreditation be considered such an academic institution?

**Answer:** The intent for this requirement is to have an entity capable of developing a workforce training curriculum that can leverage use of the pilot line. Academic institutions are not limited to universities. A state-registered apprenticeship program, among other types of educational entities, would be acceptable if the entity possesses technical expertise and a deep understanding of battery cell development sufficient to develop relevant curriculum and fulfill the expectations set forth under Section I.C. of the Solicitation Manual, “Leveraging and Expanding Partnerships.”

1. **Question:** Could you please explain more about the labor organization requirement?

**Answer:** Similar to the requirement of having an academic institution as part of the project team, the intent of including a labor organization is to leverage the pilot line to support workforce development efforts. These entities include, but are not limited to, unions, trade organizations, or other labor-related industry groups.

1. **Question:** What do you see as a possible role for community colleges?

**Answer:** Community colleges could fill the academic institution role requirement. Community colleges may support curriculum development efforts and generally promote battery manufacturing as a potential career path.

1. **Question:** Do you have a specific role or purpose definition of including labor organization and academic institutions?

**Answer:** Please see responses to Questions 19, 20, and 21.

1. **Question:** How close would a university have to be to the awardee, and to what extent can funds be used to establish resources at that university for workforce development?

**Answer:** There are no requirements or restrictions on proximity of the academic institution to the awardee or the pilot line facility. Use of project funds to establish resources at the academic institution is allowable; however, the academic institution is expected to already possess a suitable level of technical expertise regarding lithium-ion battery manufacturing at the time of application.

1. **Question:** Can you please better define prime and subrecipient? Could the facility be set up and run by a for-profit subrecipient?

**Answer:** The prime recipient is the legal entity that has a contract with the CEC, and that entity must be a private nonprofit organization. The subrecipients are the organizations under that prime applicant that will play different roles supporting various functions of the project.

1. **Question:** If the facility is operated by a subrecipient, is it allowed to take profit from user projects?

**Answer:** It is not the intent of the CEC or the solicitation for the pilot line to be a source of profit for a corporation. This is why the prime applicant is required to be a non-profit organization. As discussed in the response to Question 14, applicants should plan for a sustainable revenue model that can support ongoing operational and growth activities after the grant funds are expended, but profit should not be part of that revenue model.

1. **Question:** Does the nonprofit entity have to be set up before submission or can it be done after submission of the applicant?

**Answer:** The nonprofit entity must be set up before the application is submitted because the nonprofit entity must be the organization that is submitting the application.

1. **Question:** Can the San Diego State University Research Foundation (SDSURF) serve as the prime applicant to meet the eligibility requirements. SDSU research foundation is a non-profit auxiliary corporation authorized by California's Education Code to support San Diego State University. <https://foundation.sdsu.edu/>

**Answer:** Yes. As long as the entity is a non-profit organization, it is eligible to apply as the prime applicant for this solicitation.

# **General and Administrative**

1. **Question:** Is there only one award recipient receiving $25 million?

**Answer:** Yes, it is anticipated that there will be only one awardee for this solicitation.

1. **Question:** Will an attendees list for today’s discussion be provided?

**Answer:** The attendee list for the pre-application workshop will not be posted, but interested individuals can request an attendee list from the Commission Agreement Officer whose contact information can be found in Section I G of the Solicitation Manual.

1. **Question:** Is there a minimum requirement of CEC funds spent in California? Is there any preferential scoring for applications with a higher percentage of CEC funds spent in the state?

**Answer:** There is no minimum requirement for CEC funds spent in California. However, Scoring Criteria 6 awards points based on the amount of CEC funds spent in California; the more CEC funds spent in California, the more points the application will receive for this criterion.

1. **Question:** Can existing equipment be considered as part of the match with some pro rata?

**Answer:** Yes, existing equipment may be considered part of match funding. Section I. K. of the Solicitation Manual states that existing equipment qualifies as in-kind match, and the “value of existing equipment must be prorated for its use in the project and depreciated or amortized over the term of the project using generally accepted accounting principles.”

1. **Question:** Is it challenging to find battery assembly equipment suppliers in the US? Can CEC funds cover costs of equipment purchased outside the US?

**Answer:** Yes, CEC funds may be used to purchase equipment outside of the United States. Section II.A.4. of the Solicitation Manual states, “CEC funds may cover the costs of equipment purchased outside of the United States, subject to any legal restrictions including but not limited to United States federal law, including federal export control laws prohibiting certain activities between the United States and foreign companies. CEC funds must not be spent outside of the United States without prior written approval by the CEC Commission Agreement Manager.”

1. **Question:** Are there any restrictions on where equipment for the battery line should be purchased?

**Answer:** Please see response to Question 32.

1. **Question:** A lot of the best battery cell pack assembly equipment comes from China. Is that allowed at the moment?

**Answer:** Please see response to Question 32.

1. **Question:** Are there restrictions on how much of the funds should be spent on facility operations, including staff and administration of the grant?

**Answer:** No, there are no requirements regarding allocation of funds among different uses. Applicants must discuss their proposed funding allocations in the project narrative and application budget.

1. **Question:** How has the market need for more prototyping cell assembly been validated?

**Answer:** CEC staff conducted extensive research with stakeholders, including technical experts, industry representatives, academic institutions, and labor organizations, to inform and scope this solicitation. CEC staff also held a public scoping workshop to share initial staff proposals and gather further feedback. The scoping workshop can be found here: <https://www.energy.ca.gov/event/workshop/2024-09/scoping-workshop-california-battery-pilot-manufacturing-line-funding-concept>

1. **Question:** Can CEC funds be spent on trainees/apprentices within the program? Specifically, could CEC funds be used as stipends to off-set costs for students being trained on-site and working on the Battery Pilot Manufacturing Line?

**Answer:** CEC funds may be used to support the training program in a pilot setting. Ongoing operations for the training program should be factored into the overall revenue model for the manufacturing line.

1. **Question:** What type of flexibility will there be if there are delays in shipment of equipment?

**Answer:** Applicants should present their plan for acquiring the necessary equipment for the pilot line and include risk mitigation and contingency strategies in their proposal. Once the project is underway, the CEC will work closely with the recipient to help to address challenges, such as equipment delays, if and as they arise.

1. **Question:** While I am not applying for this proposal, I would like to contribute by serving as a proposal reviewer for GFO-24-304 (California Battery Pilot Manufacturing Line). With my hands-on experience in helping companies set up pilot lines, along with end-to-end knowledge of battery manufacturing, data analytics, and expertise in equipment selection and process development, I believe I can provide valuable insights during the review process. Could you please share details on the qualifications required and the application process for becoming a reviewer? I would appreciate any guidance on how I can contribute.

**Answer:** Proposal review and evaluation are typically conducted by CEC staff. On occasion, the CEC will contact external experts to provide technical review.