

**GFO-20-306: Research Hub for Electric Technologies in Truck Applications (RHETTA)
Questions and Answers Document**

Disclaimer

The following answers are based on California Energy Commission (CEC) staff’s interpretation of the questions received. It is the Applicant’s responsibility to review the Solicitation Manual and to determine whether or not their proposed project is eligible for funding by reviewing the Eligibility Requirements within the solicitation. The CEC cannot give definitive advice as to whether or not a particular project is eligible for funding, because not all proposal details are known.

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Administrative

- 1. When will the power point presentation be made available?**
 - The pre-application workshop presentation was posted on 1/15/2021 at the following link: <https://www.energy.ca.gov/solicitations/2020-12/gfo-20-306-research-hub-electric-technologies-truck-applications-rhetta>
- 2. Is this solicitation open to servicing drayage fleets for all California ports? The solicitation explicitly mentions the Long Beach ports, so just wanted to confirm.**
 - This solicitation is open to drayage operations serving all California ports and intermodal railyards. Both the Port of Los Angeles and the Port of Long Beach were mentioned in the solicitation as illustrative examples. In the proposal materials, the applicant should provide information on the targeted geographic areas, what benefits are expected for local communities, and how the demonstrations will support California’s goals for heavy-duty electric vehicle and infrastructure deployment.
- 3. Are out-of-state companies able to apply? That is, California registered companies exclusive to the grant.**
 - As noted on Section II.A.1 of the Solicitation Manual, “This solicitation is open to all public and private entities with the exception of local publicly owned electric utilities.” Out-of-state companies are eligible to apply; however, note that the projects maximize the spending of CEC funds in California and is scoring criteria 6 as listed on page 51 of the Solicitation Manual. Per Section II.A.3 of the Solicitation Manual, “All corporations, limited liability companies (LLCs), limited partnerships (LPs) and limited liability partnerships (LLPs) that conduct intrastate business in California are required to be registered and in good standing with the California Secretary of State prior to its project being recommended for approval at an CEC Business Meeting. If not currently registered with the California Secretary of State, applicants are encouraged to contact the Secretary of State’s Office as soon as possible to avoid potential delays in beginning the proposed project(s) (should the application be successful).”
- 4. Are there a maximum number of partners or subcontractors for any application?**
 - No, there is no maximum number of project partners. Applicants are encouraged to identify the required partners and subcontractors to ensure that the goals of the project are successfully accomplished. Per Section III.D.4 of the Solicitation Manual “Identify by name all key personnel assigned to the project, including the project manager and principal investigator (if applicable), and individuals employed by any major subcontractor (a major subcontractor is a subcontractor receiving at least 25% of Commission funds or \$100,000, whichever is less).” The applicant should make clear how the team is coordinated, clearly describing members’ individual areas of responsibility.
- 5. For the proposed locations in our proposal, how firm do you expect these commitments to be? More detail will need to be studied to secure the agreements, and there would not be enough time to secure these agreements by the due date of the proposal.**

- Per Section III.D.10 of the Solicitation Manual, “A commitment letter commits an entity or individual to providing the service or funding described in the letter. A support letter details an entity or individual’s support for the project.” Applicants that are able to submit strong and firm commitment and support letters with their application and provide additional details within in their proposal on how the entities plan to support the project will give the evaluators confidence that the applicant has a solid work plan and will support the narrative being presented by the applicant.
6. **Will DMS and CARB regulations for Public Charging equipment be required on installed charging equipment?**
 - While the solicitation does not specify required regulations, applicants should identify and follow all relevant codes and regulations applicable to the proposed demonstration site(s) as configured to meet the solicitation objectives. The one regulation that is identified in the Solicitation Manual is the Electric Vehicle Infrastructure Training Program (EVITP), as noted on page 16.
 7. **By public charging stations, do you intend to have fully open chargers like a truck stop, or would a collective charging station where many fleets have dedicated access be eligible?**
 - The solicitation does not identify a particular design or approach. The public charging stations, however, cannot restrict access, and applicants should describe strategies to maximize utilization. Per Section I.C.3.a of the Solicitation Manual, “...maximize utilization with consideration of early BEV drayage truck deployments, and provide a foundation for broader electrification of the targeted freight corridor.”
 8. **By public stations, does the CEC intend for all pilot and corridor deployments to be accessible by any fleet, at any time (similar to a truck stop’s availability) or would the CEC permit collective stations, where a depot can support multiple fleets who have dedicated access to the chargers, but may not be accessible to any truck at any time. Utilization of chargers would be greater in collective depots at this early stage, and thus likely to attract more investment.**
 - As described in response to Question 7 above, CEC intends that all public charging stations deployed under this project be accessible by any fleet or individual truck owner. Applicants should describe strategies for increasing utilization.
 9. **Would a shared-use model (depot with multiple fleet access) for fleet partners be eligible for the initial demonstration pilot sites?**
 - As described in response to Questions 7 and 8, the public charging stations deployed under this project are intended to be accessible by any fleet or individual truck owner.

Funding Sources and Match Funding

10. **As a newly formed company, we won’t receive funding at that level to support additional testing and manufacturing hardware. Is the 25% match stated an absolute requirement to participate?**

- Yes, 25% match funding for Phase 1 is required. Match funding can be provided by the prime or subcontractors in the form of cash or in-kind contributions. See Section I.K of the Solicitation Manual for discussion of Match Funding.
- 11. Are the 25 and 50% match for phase one and phase two referred to proportions of the total project cost or just epic funds requested?**
- The 25% and 50% match for Phase 1 and Phase 2, respectively, are the minimum match requirements based on the amount of CEC EPIC funds requested by the applicant in that phase.
- 12. Can work completed before the grant agreement period, for example after the Notice of Proposed Award (NOPA) is released but before agreement execution, be incurred at the applicant's own risk? If so, could that work count towards match?**
- Work completed by the applicant prior to the agreement term will not be counted towards match funding and would be incurred at applicant's own risk. Per Section I.K of the Solicitation Manual, "Match funds must be spent only during the agreement term, either before or concurrently with EPIC funds. Match funds also must be reported in invoices submitted to the CEC." Per Section IV.B.2 of the Solicitation Manual, "Recipients may begin the project only after full execution of the grant agreement (i.e., approval at a CEC business meeting and signature by the Recipient and the CEC)."
- 13. Can any preparatory work, work from NOPA forward, be considered as "match?" Or must it be post-Award execution?**
- No. Per Section I.K of the Solicitation Manual, "Match funds must be spent only during the agreement term, either before or concurrently with EPIC funds. Match funds also must be reported in invoices submitted to the CEC." Per Section IV.B.2 of the Solicitation Manual, "Recipients may begin the project only after full execution of the grant agreement (i.e., approval at a CEC business meeting and signature by the Recipient and the CEC)."
- 14. Can the match funding be sourced externally?**
- Yes, match funds may be external to the prime applicant; however, funding from the CEC cannot be counted as match even if sourced externally. As described in Section I.K of the Solicitation Manual, "Match funds do not include: CEC awards, EPIC funds received from other sources, future/contingent awards from other entities (public or private), the cost or value of the project work site, or the cost or value of structures or other improvements affixed to the project work site permanently or for an indefinite period of time (e.g., photovoltaic systems)."

Technical

- 15. Do the two Phase 1 charge locations (task 3) need to be part of the Phase 2 corridor deployment?**
- There are no requirements that the Phase 1 public charging locations be a part of the Phase 2 corridor deployment, but applicants should provide justification and associated

benefits whether the Phase 1 public charging locations are or are not part of the Phase 2 plan.

16. Is integrating distributed energy resource (DER) a requirement for any pilot or corridor demonstration? Or would economic and ratepaying benefits be required to justify the presence or lack of DER?

- Yes, applicants are required to integrate DER(s) and evaluate their potential to limit impacts to distribution systems, reduce energy costs for ratepayers, increase renewable energy utilization, and reduce charging costs for fleets. Applicants should identify a DER package and provide details on the strategies for deployment.

17. Would advancing development of an existing prototype be eligible?

- Yes, advancing development of an existing prototype would be eligible. Applicants should describe what technology readiness level (TRL) the prototype has achieved and is expected to reach by the end of the project, and how this aligns with the Applied Research and Development or Technology Demonstration and Deployment phase of the project.

18. Are there requirements or a strong preference for third party data collection and evaluation? I.e., Bringing in third party as part of project team for collecting project data for evaluation.

- There is not a requirement or a preference for third party data collection and evaluation. Per Section II.B.4 of the Solicitation Manual, “The Project Narrative (Attachment) must include a Measurement and Verification Plan that describes how actual project benefits will be measured and quantified, such as by identifying pre and post-project energy use (kilowatt hours, kilowatts), and cost savings for energy, and other benefits.” Each applicant should describe its team’s capacity to perform the data collection and identify the entity on the team that has the experience to successfully conduct the work required.

19. Can you comment on vehicle-to-grid (V2G) in the context of vehicle grid integration (VGI) as I did not see it addressed at any level of detail in the solicitation?

- Discharging of energy stored in electric vehicle batteries to distribution systems (V2G) is not required in this solicitation. Applicants are encouraged to consider this as one of many potential vehicle-grid integration strategies based on discussion with drayage fleets, utilities, and other stakeholders as relevant for their proposal.

20. I work for Proof Energy, and we are developing a metal-supported solid-oxide fuel cell for use onboard large electrically powered trucks as a range extender. So essentially it is a mobile charger for truck applications. Would this use case be eligible for consideration? Or is this opportunity not for us.

- The on-board range extender technologies are not in scope with this solicitation.

Advanced Charging System

- 21. In Task 2b, it says to develop a system that 'can' deliver a \$500/kW charging system. Can you clarify what hardware is included in this cost target (i.e. what does the 'charging system' consist of)? Also, would that cost be required to be met in task 3 (which regards deployed systems)?**
- The charging system is broadly considered to include any hardware and software systems that convert, condition, and control site electricity through delivery into the vehicle, and is left broad to accommodate different potential architectures suggested by applicants. Neither installation costs (e.g., trenching, new concrete pads) nor site/distribution feeder upgrades (e.g., new transformers) count toward the \$500/kW price target. The prototypes developed are not required to be demonstrated in either phase 1 or phase 2.
- 22. What equipment would be counted towards the \$500/kW threshold? Dispensers, charging cabinets, transformers, civil works, etc.?**
- As described in response to question 21 above, the charging system is broadly considered to include any hardware and software systems that convert, condition, and control site electricity through delivery into the vehicle, and is left broad to accommodate different potential architectures suggested by applicants. Neither installation costs (e.g., trenching, new concrete pads) nor site/distribution feeder upgrades (e.g., new transformers) count toward the \$500/kW price target.
- 23. Should any advanced technology charger deployed during the project cost less than \$500/kW when delivered, or should the project team only demonstrate a pathway to commercialization that results in less than \$500/kW?**
- As described in response to question 21 above, the advanced high-power charger prototypes are not required to be demonstrated as part of Phase 1 or Phase 2, although applicants are encouraged to consider deploying them in Phase 2. In their proposals, applicants should provide information on the pathway to commercialization that results in high-power charging systems meeting the performance criteria, including the criterion of costing less than \$500/kW.
- 24. Is it a requirement to deploy the advanced technology charger during the Phase 2 corridor deployments?**
- As described in response to question 21 above, there is no requirement to deploy the advanced high-power charger system(s) as part of Phase 2, although applicants are encouraged to consider their pathway to deployment and associated impacts.
- 25. By charger modality, does the CEC intend for partners to develop chargers that can increase in speed over time by adding more power, or is the CEC strictly looking for a model that can be offered at different speeds?**
- Staff are unclear what charger modality refers to, as this term is not used in the solicitation manual. Applicants should describe their proposed charging hardware and system, how it meets the requirements described in the Solicitation Manual, and how it will provide flexibility for fleets to expand and accommodate increasing utilization.

Types of Eligible Vehicles

26. Would alternative freight/transportation approaches that are electric but could replace or remove trucks from the road altogether in a much more efficient and cost-effective manner be eligible to apply?

- No. This solicitation will only fund projects supporting battery electric drayage trucks.