**GFO-20-304: Evaluating Bi-directional Energy Transfers and**

**Distributed Energy Resource Integration for Medium and Heavy-duty Fleet Electrification**

**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 Questions**

1. **When will a recording of this session be published?**
   1. A recording of the pre-application workshop was posted on 10/16/2020 at the following link: <https://www.energy.ca.gov/solicitations/2020-09/gfo-20-304-evaluating-bi-directional-energy-transfers-and-distributed-energy>
2. **Can you publish the list of the zoom participants?** 
   1. The list of participants from the pre-application workshop can be found in the following link: <https://www.energy.ca.gov/solicitations/2020-09/gfo-20-304-evaluating-bi-directional-energy-transfers-and-distributed-energy>
3. **Can proposals be submitted via email?**
   1. No, proposal submissions by email are not allowed. Submissions must be made through the CEC Grant Solicitation System (<http://gss.energy.ca.gov>) by the solicitation submission due date and time. Please refer to Section III of the GFO manual for more information.
4. **Why are demonstration sites limited to California Investor-Owned Utility (IOU) service territories?**
   1. The Electric Program Investment Charge (EPIC) program is funded by a surcharge to IOU ratepayers, and projects funded through EPIC must provide benefits to these ratepayers by promoting greater reliability, lower costs, and increased safety. See Section II.A.1 of the Solicitation Manual, and [CPUC Decision 12-05-037](https://docs.cpuc.ca.gov/PublishedDocs/WORD_PDF/FINAL_DECISION/167664.PDF) from the CPUC for more information.
5. **Can we get some examples of "benefit questionnaires" that will be expected to be responded to during course of the project?**
   1. The Commission has not posted examples of benefit questionnaires because a new template is undergoing pilot review and testing with recipients before being finalized. The new benefit questionnaire template is tailored to different project types, but in general gathers standard project information, including data regarding the project team, project performance metrics, knowledge generation, business growth, employment, and technological advancement achieved over the course of the project. Examples of technical benefits collected include project level energy savings, load shifted, or installed renewable generation capacity.
6. **Are CCAs and locally owned electricity providers excluded? If so, can you explain why this is?**
   1. Community choice aggregators (CCAs) are eligible to apply for this solicitation. Publicly owned utilities, as defined in California Public Utilities Code section 224.3, are not eligible. Please refer to Section II.A.1 of the solicitation manual for more information.
7. **RE: “Application contains confidential material” Does this mean that the components (HW or SW in the solution description cannot include non-disclosed roadmap items?** 
   1. Proposals submitted to the Commission are subject to Public Records Act Requests and may become available to the public. The Commission will not accept or retain applications that identify any section as confidential. Applicants should describe hardware and software innovations in a manner that does not disclose confidential information while being specific enough to address the scoring criteria.
8. **Do the project host sites have to be in IOU territory?**
   1. Yes, all demonstration sites must be in the service territory of a California IOU. Please refer to answer 4.
9. **What is the networking solution/portal where parties can find interested partners (e.g. primes) that was mentioned at the pre-application workshop?** 
   1. The networking tool created by the CEC and discussed during the pre-application workshop is the “Empower Innovation Network.” Empower Innovation is a networking tool that can help build connections between interested parties for solicitations such as this, including potential applicants, subcontractors, and sites looking to host demonstrations. To learn more about Empower Innovation, visit the website at <http://www.empowerinnovation.net>.
10. **Can you confirm that an applicant can submit multiple applications?** 
    1. Yes, applicants may submit multiple proposals. However, each proposal must be separate and distinct.
11. **Are nonprofits eligible to apply?**
    1. Yes, nonprofits are eligible to apply.

# **Community Based Organizations**

1. **Would the CEC like to see the community engagement piece directed toward the school district staff, teachers, and students working at and attending the school (district), or are you expecting an engagement strategy that will reach out to the broader community?** 
   1. Proposals should define their community constituents and describe why outreach to this group is appropriate in the Project Narrative. The requirement for engagement with community-based organizations is to ensure that community needs and goals are reflected in project development and execution. In general, the CEC strives to reach the broader community, but a case could be made that the school district, staff, teachers, and students are in themselves a community.
2. **For the CBO involvement piece, what is the definition of ‘Community’? Could we satisfy community input/engagement with Local Educational Agency (LEA) officials/school boards or do we need to outreach with the broader community?**
   1. Please refer to answer 12 above.

# **Letters of Support**

1. **Will a support letter from our community choice aggregator (CCA) rather than a letter from an IOU suffice?** 
   1. There is no requirement for a letter of support from the IOU providing service although it is encouraged for all proposals. Letters of support from CCAs are also welcome as relevant for the proposal, however these are not specifically encouraged for all proposals as is the case for a letter from the IOU providing service. The objective of an IOU support letter is to demonstrate early engagement with electric distribution companies that own and maintain the distribution infrastructure.
2. **If an IOU writes a letter of support for the project, does that mean that they are giving permission for bi-directional operation? If so, is the same required from the California Independent System Operator, California Public Utilities Commission, and manufacturers at time of application?** 
   1. No, a letter of support does not have to grant permission to operate bi-directional chargers or vehicles. The CEC expects that established interconnection procedures will be followed for all demonstration sites in all groups. Letters of support from the IOU providing service are encouraged for all groups. Letters of support from other stakeholders such as the California Independent System Operator or automotive manufacturers are not required but are welcome as relevant for the proposal. At least one letter of support must be provided for each proposal.

# **Budget Related Questions**

1. **Regarding retention held by the CEC, can an applicant include cost of money as an expense line in a proposal and bill for it accordingly? This expense line would simply be a projection of Retention Withheld multiplied by reasonable (prevailing) interest rate.**
   1. No, CEC does not allow for cost of money on retention funds to be included in the budget. Please refer to EPIC Terms and Conditions for more details on unallowable and allowable costs.
2. **Is there a cap on funding per applicant?**
   1. No, there is not a cap on funding per applicant. The funding cap for each proposal is: $3,000,000 per proposal under Group 1; and $4,000,000 per proposal under Groups 2 and 3. Applicants can submit proposals to more than one group; however, they must be separate and distinct projects. Applicants must also have enough staff and resources to execute multiple projects simultaneously if awarded.
3. **Is there a limit on what percentage of the budget can be spent on equipment?**
   1. Yes, a maximum of 70 percent of the EPIC funding may be used for equipment purchases in all Groups. See Section I.D.1 and Section I.K of the Solicitation Manual.
4. **Would this project fund the purchase of electric school buses and chargers?** 
   1. Up to 70% of project funding is available for chargers and other equipment. However, EPIC funds cannot be used for the purchase of vehicles. Recipients may use match funds to purchase vehicles. See Section I.D.1 and Section I.K of the Solicitation Manual.
5. **Is product development - including hardware, software, integration, and testing - an eligible cost?**
   1. Yes, software and hardware development, testing, and integration are all eligible costs in this solicitation. Note that components should generally be at or beyond a technology readiness level (TRL) of 4 (i.e., being tested in laboratory environment) at the time of proposal submission. Any components at earlier TRLs should be justified in the project narrative.
6. **Is greenhouse gas (GHG) benchmarking an activity that could be funded by this solicitation?** 
   1. While benchmarking of GHG emission reductions associated with electrification of vehicles and site operation is not the primary focus of this solicitation, it is an eligible cost in support of larger proposal objectives.

# **Funding Sources and Match Funding**

1. **The solicitation manual states that “Match funds” do not include CEC awards and EPIC funds received from other sources. Does this mean that investor-owned utility EPIC research funds (non-CEC) cannot be used as match?**
   1. Correct. EPIC funds from the investor-owned utilities (IOUs) cannot be used as match funds for this solicitation.
2. **Are the match funds only required to be provided by the prime or are the subcontractors also eligible to contribute?**
   1. Match Funds may be provided by the prime, subcontractor, or other project partners. There is no requirement that match funds come from the prime. Please see Section I.K for more details on Match Funds.
3. **Can an applicant capture Low Carbon Fuel Standard (LCFS) credits within a project?** 
   1. Yes, so long as your project qualifies for that program and that participation in that program does not compromise the use of assets for the purpose of this solicitation. However, LCFS credits cannot be counted as match funding for the purposes of scoring the proposal unless they have been secured at the time the proposal is submitted.
4. **Will LCFS credits remain with the meter owner who owns the plug-in electric vehicle fleet?**
   1. CEC does not administer LCFS and cannot comment on the ownership or eligibility for LCFS credits.
5. **With the exception of CEC awards and EPIC funds received from other sources, are other sources of state funds eligible to use as match funds (e.g., can you stack local air district awards)?** 
   1. Yes, non-CEC state funds can be eligible for match. However, funds must be secured at the time the proposal is submitted and appropriate commitment letters included.
6. **What funding types can and cannot be used for local match?**
   1. “Match funds” includes cash or in-kind (non-cash) contributions provided by the applicant, subcontractors, or other parties including pilot testing, demonstration, and/or deployment sites (e.g., test site staff services) that will be used in performance of the proposed project. More information regarding match funding can be found in section I.K of the solicitation manual.
7. **Does paying the upfront Capex and then creating a long-term operating agreement count for the match funding?**
   1. No, long-term operating agreements would not count as match funding for the purposes of proposal scoring unless the funds for the term have been pre-paid (in-hand) at the time the proposal is submitted. Paying for capital expenditures that will be used in the project can be claimed as in-kind if purchased prior to the proposal submission, or cash match, if the purchase will occur after the award and execution of the agreement with the Energy Commission.
8. **If the recipient is a private company, will the CEC allow the recipient to use grant funding to build and own the DER packages, and then bill a project partner to provide charging services for their fleet operations?**
   1. No. The equipment provision in the all EPIC Terms and Conditions provides that a recipient may not sell, lease, or encumber the property during the term of the agreement without the CEC’s prior written approval.
9. **Can a CCA contribute towards match-funding?**
   1. Yes, CCAs are eligible to participate in this solicitation and can contribute match funding.
10. **Can we use any of the cash match to purchase electric vehicles?** 
    1. Yes. All cash used to purchase vehicles during the agreement term can be counted as cash match funding.
11. **Can future vehicle purchases be counted toward match share? Can the value of vehicles purchased prior to the CEC agreement start date be counted towards match share?**
    1. Previously purchased PEVs used for the project can count as in-kind match so long as it was not provided by CEC or EPIC funding. Money allocated for purchasing PEVs in the future can count as cash match provided it is already secured (in-hand), did not come from CEC or EPIC, and is spent within the terms of the agreement. See Section I.K of the solicitation manual.
12. **Can previously purchased buses, which will use the infrastructure funded by this CEC GFO-20-304, procured with non-CEC grants be used as match funding?**
    1. Yes, please refer to answer 32 and see Section I.K of the solicitation manual.
13. **Can funding for electric school buses from the air quality districts and programs administered by other governmental entities be used as cash match share?** 
    1. Yes, funding from both air quality management districts and non-CEC state programs can be used for match share. However, funding must be in-hand at the time of proposal submission and spent during the term of the agreement to be eligible for match.
14. **Can funding applied for through another entity (e.g. air quality district) prior to the GFO submission deadline that is approved by that entity during the duration of the project be used as cash match share?**
    1. No. Funding must be secured and in-hand at the time the proposal is submitted to count as cash match in scoring.
15. **Can a school bond measure that will be paid during the duration of the project be used as cash match share?**
    1. No. Funding must be secured and in-hand at the time the proposal is submitted to count as cash match in scoring.
16. **According to the solicitation manual, “Match funds do not include … 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).” Does this apply to existing structures (e.g., PV systems) or structures that will be added during the duration of the project?**
    1. This applies only to existing structures. For example, if a PV system were to be purchased with non-CEC funds as part of the project, the costs could be counted as match funding. The intent is to ensure that the equipment purchases are expressly for the project.
17. **We understand that EPIC funds cannot be used as match. Can other CEC funds and California Air Resources Board (CARB) funds be used as match? Please clarify if there are any other restrictions regarding the source of match funds.**
    1. Match funding cannot come from CEC or EPIC funds. Other sources of funding including CARB and Air Quality Management Districts are eligible for match funding.
18. **Are there any constraints that partners who are involved in other CEC EPIC projects and recipients of grants therein need to be aware of?**
    1. No, previous and current EPIC recipients are eligible for this solicitation; however, the submitted proposal must be distinct from previous awards.
19. **Match funding is difficult for businesses and schools in these economic times. Would the CEC consider lowering the match requirement?**
    1. Yes, in Addendum 1 to the solicitation manual, the match requirement has been waived for Groups 1 and 3 and reduced from 50% to 30% for Group 2. Match funding brought by all groups in excess of the requirement will qualify the proposal for bonus points. See pages 12, 13, and 38 of Addendum 1 to the solicitation manual for more information.

# **Funds Spent In California**

1. **Can you provide more explanation on the funds spent in California scoring requirement?**
   1. The funds spent in California scoring requirement (Scoring Criterion 6 in Section IV.F.) designates what percent of the 10 total points will be awarded based on the percentage of CEC funds spent in California versus the total CEC funds requested. For instance, if an applicant requests $4 million in CEC grant funds of which $3 million will be spent in California, then this equals 75% of CEC funds spent in California. The table in scoring criterion 6 shows that the applicant would receive 50% of the total available points for this criterion, or 5 points. The applicant must state how much of the requested EPIC funds will be spent in California on the Budget forms (Attachment 7).
2. **Are you accepting proposals with sub-contractors outside California? If permitted, will such a proposal receive a lower score?** 
   1. Yes, proposals with sub-contractors outside California are eligible. However, payments made to out of state workers do not count as funds spent in California, and if these payments are made using EPIC funds, they will impact the applicants score on scoring criterion 6. Match funds spent outside California will not impact an applicant’s score on scoring criterion 6. See sections IV.E and I.L of the solicitation manual for additional details.
3. **Is there any preference for spending cost-share funds in California or is there no preference as to where the cost-share funds are spent?**
   1. There is no preference as to where the cost-share funds are spent. However, these funds must be directly related to the project and spent concurrently with EPIC funds during the project term.

# **Disadvantaged Communities (DACs)**

1. **Can one also use the latest Opportunity Zones designations to identify 'low income'/'disadvantaged' communities?**
   1. No. Applicants must use the [CalEnviroScreen 3.0](https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30) and the [Priority Populations Map](https://www.arb.ca.gov/cc/capandtrade/auctionproceeds/communityinvestments.htm) to determine if locations are in disadvantaged or low-income communities, respectively. Please refer to Section II.A.4. of the GFO manual.
2. **Could you clarify if you mean the CEC will choose at least one project site/proposal within a DAC for each group?**
   1. The requirement is that *every proposal* have at least one demonstration site within a DAC. As such, everyaward granted through this solicitation will have at least one site within a DAC. Clarifying language has been added to Section I.C. of the revised solicitation manual (Addendum 1).
3. **During the pre-bid workshop it was stated that at least one project needs to be in a DAC. Does that mean one project out of ALL of those awarded for GFO-20-304, or one DAC site project in EACH of Group 1, Group 2 or Group 3.**
   1. Please refer to answer 45 above. *Every* proposal must have at least one demonstration site within a DAC regardless of group.
4. **For school buses, if the stops are in disadvantaged communities, but the depot where the technology is deployed is not, does this disqualify?**
   1. Yes, it would disqualify the proposal. The physical location of the depot must be in a DAC to pass the screening criteria of this solicitation. Clarifying language has been added to the solicitation manual in Addendum 1 which reads: “At least one demonstration & deployment site **per proposal** must be located in a Disadvantaged Community per CalEnviroScreen 3.0, and in a California electric investor-owned utility (IOU) service territory. This requirement applies to all proposals in all groups.
5. **Does the actual location where the DER project itself is have to physically be in a disadvantaged community (DAC), or would the project be eligible if the buses being charged serve the DAC on a daily basis.** 
   1. The physical location where the DER package and charging infrastructure reside must be in a Disadvantaged Community to pass the screening criteria of this solicitation. Please refer to answer 47 above.
6. **Will you please clarify if school buses operating in DAC adjacent census tracts and low-income areas qualify? The project we have in mind would do depot charging in a DAC but the school buses operate outside the DAC.**
   1. If the project equipment is installed in a DAC, that would qualify as the demonstration site, and satisfy the DAC requirement. Please refer to answer 47 above.
7. **Our City operates transit with routes primarily in DACs, but the charging equipment is not in a DAC. Would we be eligible to submit for this grant opportunity?**
   1. No, please refer to answers 47 and 48 above.
8. **We are requesting clarification if this grant requires submissions to be located in the top 25% of DACs or are all DACS qualified?** 
   1. This solicitation requires that at least one site be located in a DAC, which is defined as the top 25% of areas mapped on CalEnviroscreen 3.0 (areas that are ranked from 75%-100%).
9. **If we submit two proposals in two different groups, may the DAC demo site be the same for both?**
   1. Yes, the demonstration site located in a DAC may be the same for both proposals. However, the proposals must be separate and distinct from one another, and if awarded, should separately track work and expenses. This should be reflected in the equipment purchases proposed in each application.
10. **Do Title 1 schools meet the qualification of a Disadvantaged Community? In other words, will a project site on a Title 1 school’s property meet the solicitation’s requirements for a site located in a “disadvantaged community”?**
    1. No, Title 1 schools have a different definition than Disadvantaged Communities. A disadvantaged community is defined as census tracts ranking in the top 25% on CalEnviroscreen 3.0. To use the CalEnviroscreen tool, go to: <https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-30>
11. **Our Disadvantaged Community Score is 50-61%. Would we qualify for this grant, and if not, could you suggest any assistance we would qualify for to help us with bi-directional vehicles, solar, and islanding microgrids?**
    1. For a proposal to pass the screening criteria, at least one demonstration site must be located in a DAC. In the case described, no the project would not qualify. Please refer to answer 51 above. There are a number of programs and incentives available through a variety of entities. We recommend searching those programs and incentives here: <https://www.dsireusa.org/>
12. **In addition to being in a disadvantaged community, must this site also be on a capacity constrained feeder?**
    1. No. It is optional but preferred that the feeder(s) are classified as capacity constrained on Integrated Capacity Analysis maps for the sake of evaluating DER charging in that context.

# **Types of Eligible Vehicles**

1. **The grant specifically requests the use of medium and heavy duty (MDHD) Plug-in Electric Vehicles (PEVs). Can we propose a mix of hydrogen and battery electric MDHD vehicles?** 
   1. No. This solicitation will only fund projects supporting plug-in electric vehicles.
2. **For the purposes of Groups 1 and 3, would buses operating on university campuses be eligible and count as school buses?**
   1. No. University school buses do not qualify for groups 1 and 3. School buses must serve a Local Educational Agency, which are defined by the California Department of Education and Energy Commission as: county offices of education, school districts, charter schools, and state special schools. This definition has been added to the solicitation manual in Addendum 1 on page 8.
3. **Would an off-road only project be eligible and/or competitive under Group 2?**
   1. Yes, class 2b-8 off-road plug-in electric vehicles are eligible for this solicitation. Proposal competitiveness is evaluated based on the scoring criteria described in Section IV of the solicitation manual.
4. **Are off road fleets at port terminal facilities eligible?**
   1. Yes, class 2b-8 off-road plug-in electric vehicles are eligible for this solicitation. See answer 58.
5. **Why are MDHD fuel cell vehicles (FCEVs) excluded from this GFO? Is there a parallel GFO for MDHD FCEVs?**
   1. This solicitation is focused on plug-in electric vehicles, although the use of fuel cells as distributed generation is allowed in the DER package to charge stationary storage or plug-in electric vehicles. Fuel cell electric vehicles and associated hydrogen delivery infrastructure are outside the scope of this solicitation. Please continue to check our funding website for opportunities related to FCEVs: <https://www.energy.ca.gov/funding-opportunities/solicitations>.
6. **Can you please clarify the definition of drayage trucks for the purpose of this solicitation so that we clearly understand what will be excluded?**
   1. For the purposes of this solicitation, drayage trucks are defined as: On-road heavy-duty class 7 or class 8 vehicles (GVWR greater than 26,000 lbs) that transport cargo going to, or coming from, California’s ports or intermodal rail yards. This has been clarified in Addendum 1, page 6 of the solicitation manual.

# **DER System Requirements**

1. **Do the DERs need to be sized to serve the entire fleet and/or facility during islanded operation? Or is demand response and load-shedding acceptable for islanded events?**
   1. The distributed energy resource system should be sized to serve whatever the fleet operator/business deems to be critical load. That could be the entire electrified fleet and facility or only select vehicles or loads as required by the fleet operations. The rationale behind DER sizing should be discussed in the context of use case in the Project Narrative (Attachment 3). Strategies such as load-shedding and strategic use of the energy management system are acceptable and encouraged to meet critical load.
2. **Does the DER package have to be able to power the entire facility? If so, for how long?**
   1. No. Please refer to answer 62 above.
3. **Are there specific minimum “islanding” requirements for the DER packages in Groups 2 and 3 (e.g. kWh available during outage) that must be met by all applicants, regardless of which of the three use cases is being demonstrated?**
   1. No. Please refer to answer 62 above.
4. **Are hydrogen distributed energy resource microgrids allowed to apply for the solicitation?** 
   1. Yes, hydrogen fuel cells are an eligible distributed generation technology for the DER packages in Groups 2 and 3 of this solicitation.
5. **Does the DER package requirement to have “multiple MDHD PEVs” mean different makes and models or just more than one?**
   1. Project proposals can meet this requirement by having more than one plug-in electric MDHD vehicle regardless of make and model (excluding drayage).
6. **Regarding the DER package requirements: Is it ok to have multiple single port chargers per project managed under a common solution architecture?**
   1. Yes.
7. **Can you clarify the need for multiple charging ports (Groups 2 and 3)?** 
   1. The requirement is to ensure a site can charge at least two vehicles at the same time and to manage simultaneous charging events. This can be accomplished with multiple chargers, each with a single port, or with multiple ports on a single charger.
8. **Does the list of DER components on slide 29 of the pre-application workshop presentation and on page 10 of the solicitation manual mean the DER package must include at least one of the items listed, or does it mean the package must contain all of these items, or some combination of them?**
   1. The DER package must include all components listed.
9. **Would a semi-stationary storage unit qualify for grant funding? Would it qualify if charging equipment, including multiple ports, are integrated with the storage? Similarly, would it qualify if it were part of a larger package of DER that would include stationary storage or distributed solar?**
   1. Yes, “semi-stationary” storage is acceptable so long as it is not inside a vehicle propulsion system and is allowable for interconnection by the IOU. The reasoning for using “semi-stationary” storage and description of the system should be included in the Project Narrative.

**Are super conducting magnetic energy storage systems for trucks and locomotives for zero emission ports eligible for this solicitation?”**

If the vehicles are plug-in electric and the super conducting magnetic energy storage system is part of the DER package that meets all requirements described for Group 2, this technology is eligible for this application. Development and demonstration of new storage or propulsion systems on-board the vehicle are not eligible for this solicitation. Note that PEV trucks in drayage operations are not eligible for this solicitation.

1. **Is the focus equally strong on solutions for optimizing CAPEX and OPEX costs, or is there more weightage given to one or the other?**
   1. Cost management use cases should minimize total costs, including both CAPEX and OPEX. The relative significance of these costs will vary by project, and applicants should describe their strategy and reasoning in the Project Narrative.
2. **Do "electric sector GHG emissions" in the Renewable Integration use case refer only to the IOU's emissions and not the site's emissions? In other words, is there no focus on reduction of site GHG emissions from business activities at that site?**
   1. Greenhouse gas reductions quantified should include reductions from shifting charging or other site load to times of high onsite renewable generation, low GHG intensity from the grid, or both. Quantified emissions in the Renewable Integration use case should not include those associated with transportation fuel switching to electric vehicles from fossil fuels. The Energy Commission is however interested in the general calculation of emissions saved by fuel switching to electric vehicles. That calculation may be included in the proposal, but that is not the focus of the Renewable Integration use case.
3. **Which groups are required to have stationary storage as part of the DER package?**
   1. Groups 2 and 3 include a requirement for stationary storage in the DER package.
4. **For projects that plan to demonstrate multiple use cases, will the Evaluation Committee consider any of these use cases as more important than the others?** 
   1. There is no preference or priority assigned to one use case over another for scoring. Evaluation will be based on how the use cases were selected based on fleet consultation and operational requirements. Projects that demonstrate multiple use cases are encouraged to provide information on tradeoffs in design, operations, and alignment with state policy in the Project Narrative.

# **Group Specific Questions**

1. **Would you please describe bi-directional energy transfers from electric school buses and integrated DER packages for school buses in simple terms?**
   1. Bi-directional energy transfers (Group 1) refer to the ability to use the batteries within the school bus to power buildings or other loads during times without grid power, such as a public safety power shutoff (PSPS) event. Integrated DER Packages for Electric School Buses (Group 3) is focused on distributed energy resource packages (e.g. solar PV and lithium-ion stationary batteries) to charge electric school buses. The requirements for distributed energy resource packages are outlined in Section I.C.
2. **Can applicants propose the use of components whose development will be completed during the project window?**
   1. Yes, it is allowed to propose use of components that are still in development; however, these components should be beyond proof-of-concept (i.e., above approximate TRL 4). Applicants should provide a discussion of current technology readiness as well as risk management strategies in case of unforeseen challenges in component development.
3. **Do projects in Group 1 (Bi-Directional Energy Transfer from Electric School Buses) need to be full vehicle-to-grid or can they be bi-directional to a microgrid?**
   1. Proposals for Group 1 can operate bi-directional systems within a microgrid.
4. **Must the equivalence of the stationary storage system in Group 1 be made to the sum-total of the battery capacity of the electric vehicle fleet at the project site, or the sum of battery capacity of co-incident EV's participating in the energy transfer schemes at a particular time or in a particular window of time?**
   1. The equivalent stationary storage size for comparison required in Group 1 should be based on the capacity of bi-directional buses and chargers connected and performing bi-directional energy transfers at the time of demonstrations.
5. **Section I.C states that the cost management use case must include “a comparison to hydrogen fuel cell vehicle alternatives in addition to the fossil fueled and un-managed charging baselines.” If the demonstration site host has determined that there are currently no hydrogen fuel cell vehicle alternatives available that can meet their fleet’s operational requirements, are applicants for Groups 2 and 3 still required to provide a hydrogen fuel cell vehicle cost comparison? If this cost comparison is still required, will CEC provide guidance on which hydrogen fuel cell vehicle models to use for this analysis?**
   1. If no hydrogen fuel cell vehicles are available that meet the operational requirements of the fleet, that should be discussed in the Project Narrative. The CEC does not expect that a hypothetical analysis be done for vehicles that do not exist.
6. **Are school bus fleets permitted for Group 2, or must the project have other types of MDHD to qualify?**
   1. No, school bus fleets are only permitted in Groups 1 and 3. Group 2 projects are to be focused on fleets that are other than school buses.
7. **Given that V2G standards are evolving, it is expected that some communications will use extensions beyond the standard. Is there any objection to this?**
   1. There is no objection to this. Applicants should describe the communications architecture in the Project Narrative and identify instances in which existing standards are lacking to provide critical functionality or safety. All relevant rules (e.g., Rule 21) must be satisfied.
8. **Is an existing fleet of electric vehicles required to participate in this grant?** 
   1. No. Electric vehicles do not need to already be purchased to qualify. The cost of vehicle purchase can be used as “match funding” if shown as cash in-hand and vehicles are purchased and utilized within the terms of the agreement.
9. **For Groups 1 and 3, is there a minimum number of electric vehicles required to be tested at each site?**
   1. There is a minimum of two vehicles per project that generally would be expected to be located at the same site. If they are at different sites, please justify why they are split in the Project Narrative.
10. **Section I.A of the solicitation manual states that “Bi-directional energy transfer is allowed in Group 3, but not required.” Will Group 3 applications that include bi-directional energy transfer be viewed more favorably by the Evaluation Committee than those that do not, other things equal?**
    1. There is no expressed preference for bi-directional energy transfer in Group 3. That said, if all else were truly equal and the only differentiation between two projects was that one had bi-directional capability that cost-effectively increased the benefits of the project without substantially increasing the risks, it is likely that the proposal with bi-directional capability would receive a higher score.
11. **Section I.C states that “The less expensive system needs to be estimated for at least one electric IOU, and plan to achieve parity for all three electric IOUs by 2035.” For Groups 2 and 3, will the CEC provide standardized guidance for applicants on how to calculate DER cost parity with the three electric IOUs (e.g. annual rate escalation assumptions)?**
    1. No. The method used to calculate annual rate escalation and other assumptions required for forecasting costs in 2035 should be determined by the applicant and briefly outlined in the project narrative. There are several well vetted price forecasts, methods, and tools that could be used.
12. **For Group 3, would an off-grid school bus charging system be within the scope of this solicitation if it provides a fully resilient charging system?**
    1. The DER system must be interconnected with an investor-owned utility, as per EPIC rules. However, the bus charging system can have the ability to island and operate in ‘off-grid mode.’ This would be most applicable to the resiliency use case.
13. **For Group 3, would it be preferable that applicants engage directly with local educational agencies for the CBO requirement, or would a CBO that is not affiliated with the school district but serves the area be equally desirable?**
    1. Both are equally desirable. The weight of preference will be made by evaluating the outreach and reasoning described in the Project Narrative.

# **Encouraged Activities**

1. **In regards to preferring sites that are capacity constrained, should the site(s) be constrained all the time or during some time-periods (during a time-of-day or seasonally etc.)? Is the IOU's assessment good enough for confirming that the chosen site is a capacity constrained one for the utility?**
   1. There is no minimum threshold for the frequency or duration of capacity constraints. IOU assessments, integration capacity analysis (ICA) maps, or other public data for capacity estimation are sufficient for capacity constraint determination in proposals.
2. **Are there additional points or other favorable consideration given to proposals that select sites with capacity constraints**
   1. Yes, sites operating in locations identified as capacity constrained are favored, though there is no express additional point assignment for capacity constrained project sites. Discussion of the importance of demonstrating in a capacity constrained site should be included in the Project Narrative.
3. **Is there any specific class-of-bus (e.g. class C, D etc.) requirement or minimum/maximum battery size of the participating e-Bus?**
   1. No, there are no requirements on bus types or minimum/maximum battery size other than being plug-in electric, and class 2b or higher as defined by ARB.
4. **Do we need to ask about any specific standards that our power-port chargers would be using -- EV side or Utility side communications?**
   1. No specific standards are required; however applicants should describe what standards are used and why they were selected. Standards should be selected based on the vehicle capabilities (EV-EVSE) and applicable rules (EVSE-utility).
5. **Is there any technology readiness level (TRL) threshold for components of the proposed solution?**
   1. Hardware and software components eligible in this solicitation should be between TRL 4-9, as defined by the U.S. Department of Energy. If a proposal includes elements (e.g., software, management strategies, etc.) that are not yet at TRL 4, please justify the need for use in the Project Narrative.
6. **Is the information sought in the commercialization plan requirement for Group 1 only related to California or broader geographies (e.g. in US or Globally)?**
   1. Commercialization plans elaborated by the applicant can be broader than California market deployment but are not required to be.