**Questions and Answers**

GFO-23-309

Virtual Power Plant Approaches for Demand Flexibility

May 02, 2024

The most up-to-date solicitation documents (including the solicitation manual) are available at the solicitation webpage: [GFO-23-309 - Virtual Power Plant Approaches for Demand Flexibility (VPP-FLEX) (ca.gov)](https://www.energy.ca.gov/solicitations/2024-03/gfo-23-309-virtual-power-plant-approaches-demand-flexibility-vpp-flex)

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 purpose of the solicitation and to determine whether their proposed project is eligible for funding by reviewing the Eligibility Requirements within the solicitation. The CEC cannot give advice as to whether a particular project is eligible for funding because not all proposal details are known.

Unless indicated otherwise, all section numbers identified are from the solicitation manual (for example, “Section II.B” refers to Section II.B of the Solicitation Manual). The solicitation manual is Attachment 00 found on the webpage linked above.

# **Technical Questions**

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| **#** | **Question** | **CEC Response** |
| 1 | **Can you explain what “internal” means? When asking for program design using metered electricity consumption, ideally using ‘internal’ metering datasets.**  **Are you asking for internal AMI datasets? Or can it be an end use recording device? And a Behind the meter monitoring device?** | This was a mistake. Addendum #1 updated the solicitation manual to remove the reference to “internal metering datasets”. The revised manual can be found here: <https://www.energy.ca.gov/solicitations/2024-03/gfo-23-309-virtual-power-plant-approaches-demand-flexibility-vpp-flex> |
| 2 | **Group 2: what is the definition of OEM? What companies are eligible? (Heating, Ventilation, and Air Conditioning (HVAC) OEM, controls OEMs, do thermostat count? Do software platforms- like ASO- count?)** | An original equipment manufacturer (OEM) is an organization that makes devices from component parts bought from other organizations. Addendum #1 updated the solicitation manual to expand partnership eligibility to any businesses providing energy management systems (EMS), including software platforms. |
| 3 | **Group 2: What is considered an OEM? are these only hardware vendors or also software platforms that are deployed as an overlay over hardware?** | See response to question #2 above. |
| 4 | **Group 2: How should we interpret “partnerships with at least one OEM” in terms or role in the project. Do they have to be a prime/sub or can they be involved as advisors/cost share providers?** | OEMs should be active participants in the project. Their role is to bring extensive experience in developing and integrating hardware and software, to test the standards in real-world applications, and to ensure the standards are functionally implementable at the equipment level.  Additionally, OEMs could help identify specific industry needs and challenges regarding communication protocols and address practical industry requirements and compatibility with a wide range of existing and future equipment.  The OEM or EMS business partner must be a prime recipient, subrecipient or, cost share provider. |
| 5 | **Are customers with VPP management of some distributed energy resources (DER) allowed to be on highly dynamic tariffs? How is flexibility of devices not managed by the VPP credited to the customer? If the VPP is operating in the wholesale market and the customer is on a dynamic tariff, how is double counting avoided?** | The solicitation manual does not specify what kind of signal is required to achieve the stated goals of reducing the annual peak by 1 MW, having a cost-effective program, and designing the program based on metered load shapes. Any kind of signal to achieve these stated objectives is acceptable. However, it is the responsibility of the applicant to propose a method to avoid double-counting the same VPP resources under different markets and/or programs. |
| 6 | **Group 2: What constitutes predictive in the description of the control algorithm?** | Group 2 does not require the use of predictive controls. In Group 1, predictive controls refer to a method that goes beyond simply reacting to current conditions. Instead, it uses models and forecasts to anticipate future customer and/or grid needs and manages loads accordingly. |
| 7 | **If the facility receives chilled water from a central plant that is not participating in the program nor owned by us, and we pay the operator /owner of the plant for our share of electricity for the chilled water used to the owner who pays the electric and water utility, can our load shedding during peak qualify if we can show our utility charges and chilled water usage from that facility on an hourly basis?** | This would be dependent on if this would qualify for a utility or Community Choice Aggregator load reduction program and if the central plant is located within a California investor-owned utility (IOU) service territory (PG&E, SDG&E, or SEC). If the plant is located in an IOU service territory and thereby generates chilled water through electricity generated within that territory, the load shedding may qualify. Applicants must justify project benefits to the IOU ratepayers and the grid. |
| 8 | **How does the CEC view utilizing passive phase change material for building thermal energy storage coupled with HVAC for 4-hour thermal energy load shifting?** | The grant funding opportunity (GFO) allows customer DER, including thermal energy storage, to support demand flexibility. However, the purchase of this DER during the term of the agreement would have to be with match funding (not EPIC funds) and would be allowed only if this asset is owned collectively by the participating community(ies) and directly related to the project. |
| 9 | **Must the baseline assume a dynamic pricing or time-of-use (TOU) rate is in place for demo sites?** | The baseline must use historical energy consumption data. The rate used for the baseline must therefore be whatever was already in use at that site. |
| 10 | **Group 1: What is the duration of shift required during peak demand?** | The minimum duration of load shift or shed is 1 hour. |
| 11 | **What is the recommendation on VPP operations where following CAISO peak load is detrimental to local grid conditions?** | It may be difficult to anticipate the impact of a VPP on local grid conditions during the design and proposal phase. However, as long as the program is following market signals, we would defer to the utility on how projects should support local grid needs. We support and encourage projects to seek value stacking and possibly adding this kind of distribution-level grid signal as a secondary layer in partnership with a utility to increase benefits from the program. |
| 12 | **Is there a minimum period that customer sites must be on a TOU or dynamic rate for to establish a baseline?** | There is no minimum period requirement. Baseline calculations should use credible methods and be defined in the application. |

# **Funding/Eligible Costs/Match Questions**

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| 13 | **For Group 2 - can the funding be used for storage (BESS) capital assets?** | EPIC funds are not allowed to be used on these types of DER. CEC funding can be used for the procurement of demand flexibility systems, such as DERMS, equipment controls, sensors, smart devices, monitoring and communication, and enrollment incentives. Purchase of other types of DER assets during the term of the agreement and directly related to the project, such as solar, battery, thermal energy storage, or incremental cost of vehicle-to-grid systems relative to unidirectional managed charging, can only be counted as match funding expenditures, and only if these assets are owned collectively by the participating community(ies) and directly related to the project. |
| 14 | **For Group 1 - would approach be focused on funding of asset deployment (smart devices) or would funding support enrollment of smart devices into a VPP (specifically funding the VPP aggregation rather than assets)?** | The awarded funding can be used for both asset deployment and to support enrollment. CEC funding can be used for the procurement of DERMS, project/program management, smart devices, consumer participation incentives such as enrollment credits and utility bill protection, and consumer education and outreach efforts. Using CEC funding for the procurement of smart device is allowed for any customers, but CEC funding for the installation of smart devices is only allowed for low-income customers such as California Alternative Rates for Energy (CARE)-enrolled customers, including both owner and renter households. |
| 15 | **Are matching funds limited to cash, or are in-kind contributions, such as software licenses and overhead recovery accepted as well?** | Under this solicitation, both cash and “in-kind” contributions are acceptable forms of match funding. See section I.K of the solicitation manual for details on what types of expenditures can qualify as “in-kind” match. |
| 16 | **Are software costs (for integration, development work, etc.) eligible for CEC funding?** | Yes. Software services can be purchased from a third-party or developed under the project by the prime or a subrecipient. Costs related to software development and integration work would be considered labor costs and should be listed as such in the budget worksheets. |
| 17 | **Can a site in a publicly owned utility (POU) service territory be included in the community VPP demonstration, if the POU site does NOT receive any CEC funds? Can a POU or POU site provide cost share?** | No. All demonstration sites must be located within a California IOU territory or community choice aggregations (CCA) territory served by an IOU (i.e., PG&E, SDG&E, or SCE). However, POUs can participate as match partners. |
| 18 | **Does "demand flexibility" extend beyond pure load response and also refer to the ability to export power to the grid? Does the GFO allow PV installation in low-income communities to be reimbursable?** | Onsite generation or the ability to export power to the grid is not considered a demand flexibility resource and therefore is not an allowable CEC funding reimbursable expense. However, match funding may be used for DERs like solar PV, which can be a part of the VPP portfolio and included in the cost-effectiveness and cost recovery calculations. Just keep in mind that exporting power is not the primary emphasis of this solicitation. |
| 19 | **Did I understand a previous response correctly that generation is not an eligible DER under this program?** | See response to question #18 above. |
| 20 | **Are there any restrictions on employing CEC funds to deploy smart technologies at low-income apartment buildings?** | There are no restrictions on employing CEC funds to deploy smart technologies at low-income apartment buildings as long as the smart technology is relevant to the objectives of the solicitation and meets the requirements in the solicitation manual. |
| 21 | **Can demonstration sites funded under CEC REDWDS grant also be included as demonstration sites under the VPP-FLEX GFO? If so, what are the restrictions (if any) for reimbursable vs. match funds at the same sites?** | Match funds cannot include other CEC awards. See section I.K of the solicitation manual for more details on match funding. Applicants can use the same demonstration sites used under other CEC-funded projects, as long as the benefits from these separate efforts are not double counted. The benefits accrued using this solicitation’s funding must be incremental to another CEC solicitation’s funding. |
| 22 | **Is the 1 MW of demand flexibility to be demonstrated in the context of deferral (e.g., 10 years), so that would not be double counting if already committed to demonstrate operational flexibility at the same site involved in CEC REDWDS?** | A minimum of 1 MW load shed/shift must be demonstrated during an LSE’s annual peak hour at least once before Year 5. The solicitation defines a long-term grid resource as one that continues to benefit the grid beyond the CEC agreement term. This has been built into the solicitation as a program design requirement to make these programs self-sufficient in that time frame.  While projects can expand the demonstration of a technology/strategy also funded by another solicitation, the tracking and enrollment of participation and demand flexibility objectives must be tracked and reported separately. See the response to question #21 above for additional information. |

# **General Project Requirements/Miscellaneous Questions**

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| 23 | **Why are only IOU demand response programs eligible under Group 2, as opposed to including CCA programs as well?** | CCA programs will be considered eligible demand response programs. Addendum #1 updated the solicitation manual to reflect this; the revised manual can be found here: <https://www.energy.ca.gov/solicitations/2024-03/gfo-23-309-virtual-power-plant-approaches-demand-flexibility-vpp-flex>. |
| 24 | **Can you pair this grant with additional CEC grants?** | Yes, but match funds cannot include other CEC grants/awards. See responses to questions #21 and #22 above. |
| 25 | **Are investor-owned utilities prohibited from applying?** | This solicitation is open to all public and private entities with the exception of publicly owned electric utilities. Therefore, investor-owned utilities are eligible to apply. |
| 26 | **For Group 1 -- Is a university campus an acceptable "community partner?"** | Yes. University campuses may be accepted as a local non-profit organization. However, projects must address one or more of the Group 1 research questions provided in Section I.A. |
| 27 | **How do you define a site or location? Is it possible to have a number of meters / transformers and gas meters on a single site or location?** | For Group 1: Project sites can include residential, commercial, industrial, and agricultural.  For Group 2: Commercial sites that can be served by an EMS are allowed. See section I.C of the solicitation manual (specifically under “Site Requirements”) for the site size and metering requirements. |
| 28 | **Can we work with SMUD or LADWP?** | Yes. While POUs such as SMUD and LADWP cannot be recipients of EPIC funds or host sites within their service territories, they can participate as match partners. See response to question #17. |
| 29 | **Are community choice CCAs eligible for utility partnering/contribution? Are unbundled customers eligible or only IOU bundled customers?** | CCAs are eligible to apply as prime or a subrecipient. CCAs do not require an additional local partner. There are no restrictions on the type of customers eligible to participate in the designed program other than those outlined in the solicitation manual. |
| 30 | **Group 2: Since OEMs are typically headquartered outside California, is there an exception to the spent in California rule for this group?** | There are no exemptions to the funds spent in California requirements. See solicitation manual (specifically, section I.L) for details on funds spent in California. This does not restrict entities outside of California from participating in the project, but the amount of CEC funds allocated outside of California will be considered in scoring criterion 6. Applicants are encouraged to use match funds for project costs outside California. |
| 31 | **Under Group 2, if customer is already enrolled in utility flexibility program, does that satisfy the DR participation requirement?** | Assuming the utility program services an IOU service territory, this would satisfy the DR participation requirement. |
| 32 | **Can you please share any accompanying materials about this proposal? I missed the intro.** | All solicitation materials can be found on this website: <https://www.energy.ca.gov/solicitations/2024-03/gfo-23-309-virtual-power-plant-approaches-demand-flexibility-vpp-flex> |
| 33 | **Under Group 2, can one building within a campus that can’t enroll separately in a DR program be eligible?** | Yes. The solicitation manual was updated for Addendum #1 to provide clarification; the revised manual can be found here: <https://www.energy.ca.gov/solicitations/2024-03/gfo-23-309-virtual-power-plant-approaches-demand-flexibility-vpp-flex> |
| 34 | **Group 1 aims to 'evaluate the benefits and cost-effectiveness' of VPPs and distributed energy resource management systems (DERMS). Are third party evaluators preferred/required, or can awardees measure this themselves?** | Third party evaluators are allowed, but they are not preferred or required. Awardees may measure and report these metrics themselves using software and other tools. Projects must present a credible method for net benefit calculations using guidelines in Attachment 12 (Guidelines for Calculating Group 1 Project Net Benefits). |
| 35 | **For Group 2, are technologies that are already in the market (stage 9+) allowable?** | Technologies will be considered for this group only if they meet the definition of pre-commercial technology. As defined in section I.B of the solicitation manual, a pre-commercial technology is a technology that has not reached commercial maturity or been deployed at scales sufficiently large and in conditions sufficiently reflective of anticipated actual operating environments to enable the appraisal of operational and performance characteristics, or of financial risks. |
| 36 | **Group 1: Can a Utility-scale battery be used to achieve the 1MW shift goal?** | Yes. However, the resources used to demonstrate demand flexibility and achieve the 1 MW load shed goal must be on the customer/demand side. |
| 37 | **In CEC's definition of VPP, can VPPs include large flexible loads connected at transmission level? "VPPs are portfolios of distributed energy resources (DERs) such as smart thermostats, rooftop solar photovoltaics, electric vehicles (EVs), batteries, and smart water heaters that are actively controlled by software to benefit the power system, consumers, and the environment."** | Yes, the demonstration can include large flexible loads connected at the transmission level if the resource providing demand flexibility is on the customer side of the meter. |
| 38 | **Group 2: are subcontractors headquartered outside of California eligible?** | Yes, subcontractors headquartered outside of California are allowed. Please note this may impact scoring criterion 6 (CEC Funds Spent in California). Please refer to the solicitation manual for additional details related to funds spent in California and allowable subcontractors and vendors. |
| 39 | **How do we determine which market stage a technology is at (i.e., 7-9)? What documentation would you be looking for to verify that?** | The technology readiness levels are assessed relative to the Department of Energy’s TRL scale linked below in this response. Applicants should provide citations or other supplemental material that support the current TRL state of the technology they are claiming.  <https://www2.lbl.gov/dir/assets/docs/TRL%20guide.pdf> |
| 40 | **Under Group 2, would geographically separate facilities be eligible to be grouped together as a single project?** | Yes. Applicants should review the group site requirements to determine if submitting under one application is more favorable from a scoring perspective. Group 2 site requirements can be found in section I.C of the solicitation manual (specifically under “Site Requirements”). |
| 41 | **For VPPs, can a party apply as a sub-recipient or advisor on more than one application?** | Yes. |
| 42 | **Does the 1MW reduction at peak demand hour only apply to Group 1, or does it apply to Group 2 also?** | This requirement applies only to Group 1. |
| 43 | **Group 2: is minimum only HVAC? Or minimum HVAC + water heating + Lighting?** | The minimum is HVAC and lighting. Addendum #1 updated the requirements in the solicitation manual (section I.C). The revised manual can be found here: <https://www.energy.ca.gov/solicitations/2024-03/gfo-23-309-virtual-power-plant-approaches-demand-flexibility-vpp-flex> |
| 44 | **Can you please define a "Community Based VPP" -- what exactly does that mean?** | Community-based VPPs refer to programs in which a local government or local not-for-profit entity is involved in the demonstration of the program and generating benefits for the community members via the deployment of the program. Refer to section I.C of the solicitation manual for specific requirements. |
| 45 | **For building loads, for Group 2, if EV charging at the site is managed by the VPP, does that count for the building load reduction? The EV chargers are connected to the building load on the same account/meter.** | Yes, EV charging qualifies as an acceptable end-use for calculating load reduction. Please consider that this group requires a diverse array of resources and cannot exclusively comprise EV charging. See response to question #43 above. |
| 46 | **Are there any specific rates/programs that VPP assets are required to participate in?** | No, there are no specific requirements around rates and programs that VPPs must participate in. |
| 47 | **Do DERs within a single microgrid aggregated into a VPP qualify in Group 1? Are such projects less preferred by CEC in any way? And similar questions about campus please.** | A single customer’s DERs aggregated into a VPP would qualify for this solicitation. However, projects demonstrating advanced DERMS with aggregation of multiple sites may score higher under Technical Merit. Addendum #1 updated the solicitation manual to clarify. The revised manual can be found here: <https://www.energy.ca.gov/solicitations/2024-03/gfo-23-309-virtual-power-plant-approaches-demand-flexibility-vpp-flex> |
| 48 | **Group 2: does a utility pilot qualify as a utility program?** | Yes, a utility pilot can qualify as an IOU or CCA program for this solicitation. The terminology in the manual has been updated in the addendum to no longer state “utility program”.  The revised manual can be found here: <https://www.energy.ca.gov/solicitations/2024-03/gfo-23-309-virtual-power-plant-approaches-demand-flexibility-vpp-flex> |
| 49 | **Further to the EV charging/VPP question, if the VPP manages the load but it’s not connected to the building meter, does that count? The EV charging is on a separate meter/account but controlled by the VPP.** | Yes, the EV charging load would count, as long as it can be measured and validated. |
| 50 | **For Group 1: Would participating in DR programs alone without dynamic pricing sufficiently satisfy “Projects must develop and test technologies and approaches capable of shifting load out of the California Independent System Operator (CAISO) system net peak hours driven by the respective LSE’s actual electricity tariff or other incentives available at the time of the project demonstration?”** | There are no restrictions on the mechanism of participation in projects, as long as the key performance indicators of cost-effectiveness and cost recovery are met. Both dynamic pricing and participation in customer or wholesale market programs would be eligible. Projects are encouraged to take advantage of all applicable market programs and incentives for value stacking. |
| 51 | **Group 2: Do control strategies that reduce energy consumption at all times (minimum variable air volume airflow) count as demand flexibility, or do they have to be dispatchable?** | The focus of this solicitation is on demand flexible technologies and requires the resource to be dynamically managed based on tariffs or other grid signals. Energy efficiency technologies or upgrades are not eligible for CEC funding. |
| 52 | **In the GFO, under Group 2, it states that the measurement and verification (M&V) plan must be implemented by an independent third party. Thus, is it correct to say that M&V provider should not be a subrecipient in the proposal? If that is the case, would we add a line budget item for M&V services and request bids for the M&V work?** | Third party M&V providers can be subrecipients in the proposal. They can be listed as a “Third-party M&V provider” in the subcontractor section of the category budget. |
| 53 | **When will the recording be available?** | The recording is available at this website: <https://www.energy.ca.gov/event/funding-workshop/2024-03/pre-application-workshop-gfo-23-309-virtual-power-plant-approaches> |
| 54 | **Can we use the California Climate Investments Priority Populations 2023 map to define low-income communities?** [https://gis.carb.arb.ca.gov/portal/apps/experiencebuilder/experience/?id=6b4b15f8c6514733972cabdda3108348](https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fgis.carb.arb.ca.gov%2Fportal%2Fapps%2Fexperiencebuilder%2Fexperience%2F%3Fid%3D6b4b15f8c6514733972cabdda3108348&data=05%7C02%7C%7Cc544f7d0d8ad40f9503e08dc57f8e259%7Cac3a124413f44ef68d1bbaa27148194e%7C0%7C0%7C638481973680328858%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=Y0Ou0RGx6%2BI0sb9bt3YStZUQ2elOLTceqyrjmYOT7VQ%3D&reserved=0) | Yes. Refer also to the latest state income limits updated by the Department of Housing and Community Development to ensure that the communities chosen meet the definition listed. The solicitation manual was updated for Addendum #1 to provide clarification. The revised manual can be found here: <https://www.energy.ca.gov/solicitations/2024-03/gfo-23-309-virtual-power-plant-approaches-demand-flexibility-vpp-flex> |
| 55 | **Two resources mentioned on page 21 in the GFO have different results for Sonoma County in terms of what qualifies as a DAC. Which resource should we be using?** | Refer to <https://calepa.ca.gov/envjustice/ghginvest/> for the accepted designation of Disadvantaged Communities. The solicitation manual was updated for Addendum #1 to provide clarification. The revised manual can be found here: <https://www.energy.ca.gov/solicitations/2024-03/gfo-23-309-virtual-power-plant-approaches-demand-flexibility-vpp-flex> |
| 56 | **Can CEC funding be used for energy storage installations for CARE customers?** | No. CEC funding is only allowed for expenditures related to managing customer loads. See section I.C of the solicitation manual for more information. |
| 57 | **Can CEC funding be used for controls to manage already installed energy storage systems that are currently idle?** | Yes, the installation of advanced control systems for energy storage systems would satisfy the solicitation’s demand flexibility technology requirements. |
| 58 | **Can the project be paired with other programs to achieve the 1 MW peak load reduction (e.g. weatherization, energy efficiency, etc.)?** | No. The minimum load shift/shed requirement must be achieved by load management. Other types of DER can be used to increase the project’s impact beyond this minimum requirement. Efficiency technologies or upgrades are not eligible for CEC funding under this solicitation. |
| 59 | **Group 1: We've worked with Edwards Air Force Base before and we're keen to explore a pilot with them for this program. We could demonstrate one or two vehicles at the base with a system that would scale up. Would a small-scale demonstration followed by a scaled-up system at Edwards Air Force Base be within scope for the intentions of**[**GFO-23-309**](https://gcc02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.energy.ca.gov%2Fsolicitations%2F2024-03%2Fgfo-23-309-virtual-power-plant-approaches-demand-flexibility-vpp-flex&data=05%7C02%7C%7C5b6e40a9930546bbd05108dc57e5c2c9%7Cac3a124413f44ef68d1bbaa27148194e%7C0%7C0%7C638481891552647061%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C0%7C%7C%7C&sdata=VABrYPx2wN%2Bd3hqaS21mvSw0wVVA3ulDihGTsmpNnl0%3D&reserved=0)**?**  **Would local residential or commercial demonstrations with 1-2 vehicles be within scope?  The goal would be to scale up as we produce and deliver vehicles to be well over the 1MW threshold, but that might take 2-3 years.  Is that o.k.? We are making a mini-truck for both consumers and fleet operators.  Both have different needs and both could help contribute to aggregated grid services.  Please share any ideas you might have on how we might best contribute to the goals of the VPP-FLEX program.** | This solicitation seeks large-scale demonstrations. The Project Narrative should present a credible plan to recruit participants and achieve at least 1 MW of load reduction during the agreement term. Please refer to the solicitation manual for additional details on project eligibility and application requirements. |
| 60 | **Group 2: We are a vendor of intelligent energy control systems for commercial buildings; we control all flexible loads behind the meter, including HVAC, stationary batteries, and (in some cases) EV charging.**  **Our control is exercised through either (a) a gateway that speaks BACnet to an existing battery management system (BMS), or, when no BMS is present (b) through an interface that speaks to smart thermostats.  That second interface can be either local (through our gateway) or cloud-to-cloud, depending on the thermostat vendor.**  **From the Application Manual, Page 11:  "This grant requires partnerships with at least one OEM."**  **Question 1:  Are we an OEM?**  **We supply (but do not manufacture) our own gateway, and we speak via that gateway to multiple systems of interest for this grant.**  **If we are NOT an OEM, please describe the level of "partnership" required. If we get letters of commitment (per page 11 and 12), is that enough?  We have no partnership agreements with any of the multiple OEMs for which we have developed interfaces, and none have been required.  That appears to be OK for now, based on the sentence on Page 12: "• Include partnership agreements with OEMs as a deliverable in the SOW."**  **Question 2:  If the OEM is using the standards required here, what partnership agreement would be required?  Please elaborate.** | The CEC cannot give advice as to whether a particular project or potential applicant would be eligible for funding under the solicitation.  However, Addendum #1 updated the solicitation manual to expand partnership eligibility to businesses providing EMS. For details on partnership agreements and what is required in an application, please refer to the responses to questions #2 and #4 and Section I.C of the updated solicitation manual. The revised manual can be found here: <https://www.energy.ca.gov/solicitations/2024-03/gfo-23-309-virtual-power-plant-approaches-demand-flexibility-vpp-flex>  A letter of commitment from a project partner is required at the application stage outlining the partnership structure, each party's role and responsibilities, and a clear demonstration of your combined commitment to achieving the solicitation objectives and requirements. Partnership agreements, included as a deliverable in the Scope of Work (Attachment 4), will be executed during the term of the agreement and will expand on the details discussed in the letter of commitment and will formalize the partnerships. Projects where the prime applicant is an OEM or EMS service provider are exempt from this requirement. |
| 61 | **Group 2: Could you please provide clarification on the definition of total “Gross Floor area"?  Specifically, are we referring to the cumulative area of all floors within a building, or does it pertain solely to single floor?**  **Is there provision for the inclusion of parking lot areas within the floor area calculations? Considering the potential significance of EV charging infrastructure within the context of the Energy Management System (EMS), it is essential to ascertain whether parking lot areas can be incorporated.** | Gross floor area is often defined by local building codes or municipal codes. For the purpose of this solicitation, it is defined as the total gross horizontal areas of all floors of a building or enclosed structure.  There are no provisions for including parking lot areas within the floor area calculations. Potential benefits will be taken into consideration during the scoring phase, so projects that exceed the requirements may score higher. |
| 62 | **Group 1: When assessing whether meeting the requirement of “20% cost recovery by Year 4,” would costs include match funding expenses or just CEC reimbursable expenses? If match is to be included, then what types of match funding would be counted in overall costs when assessing whether the 20% cost recovery goal is met (e.g., cash funding only or also in-kind advisory services from utilities)?** | The 20% cost recovery assessment should include all project costs including CEC and match funds (in-kind and cash). Refer to Attachment 12 (Guidelines for Calculating Group 1 Project Net Benefits) for additional details. |
| 63 | **Group 1: Could utility programs involving a community of end users on the same distribution circuit be defined as a "Community-based VPP," or must the proposed DR program use local government or not-for-profits for outreach to customers, device deployment, and implementation for the program?** | A IOU or CCA program that does not partner with local governments or not-for-profit entities for the demonstration of a program would not count as a community-based VPP. Please refer to Question 44 above for more information. |
| 64 | **Group 1: Does the minimum load reduction target of 1 MW refer to system-wide peak reduction of the utility, or can this refer to a transmission or distribution peak condition?** | The minimum load reduction target of 1 MW refers to the utility’s system-wide annual peak demand. |
| 65 | **Group 1: For a proposal with multiple demonstration sites across utility service territories, is the minimum load reduction requirement measured per utility service territory or in aggregate across service territories?** | The 1 MW load reduction target may be measured in aggregate if demonstration sites span multiple utility service territories. The VPP project should demonstrate a minimum total load reduction of 1 MW during each utility’s respective peak demand hour. |
| 66 | **Is the disadvantaged community requirement 75% and higher on the CalEnviro 4.0 tool?** | Refer to Question #55 for more information on designated Disadvantaged Communities. |
| 67 | **Group 2: Manual B.1. Unclear on the expected amount of “pre-commercial.” Manual refers to “sufficiently large.” What if a controls platform is at TRL 9 but some functionality has not yet been enabled – does this not-yet-enabled functionality count as pre-commercial and is it therefore eligible for this funding opportunity?**  **TRL 7-9 would seem to conflict with a system containing a sufficiently large amount of pre-commercial technology. Can you provide guidelines for what constitutes TRL 7-9 and how pre-commercial compares to technology that is nearing full commercialization?** | Based on the limited information provided, we cannot provide a definitive answer. Pre-commercial technology is defined as a technology that has not reached commercial maturity or been deployed at scales sufficiently large and in conditions sufficiently reflective of anticipated actual operating environments to enable the appraisal of operational and performance characteristics or of financial risks. The burden is on the applicant to make the case as to why the technology meets the definition of pre-commercial technology and the identified TRL. See response to question #39 above related to TRL. |
| 68 | **Group 2: Can a privately owned chilled water plant (district chilled water that serves a Ball Park, some multi-family housing units and a Convention Center in addition to our 400,000 square foot downtown City-owned main library) that gets electricity from the utility and charges the Library for the pro-rata share (20-40%) of IOU-supplied energy (and city water and sewer) based on hourly ton-hours and gallons serve as reduced load in the VPP? We would use the VPP to increase temperature settings, resulting in fewer ton-hours of chilled water during the peak hours. The reduction would be measured on our side of the building via an existing BMS and verified against the Chilled water plant’s meters and bills from the utility showing hourly plant usage. Our load shed would be visible on the plant’s utility interval data.** | Possibly, though it is the responsibility of applicants to determine whether their projects meet the solicitation requirements. See response to question #7 above. |
| 69 | **Group 2: We have a scenario where a vendor is contracted to provide EV charging in a City-owned parking lot. The vendor owns the EV charger and pays the utility bill. We propose to manage the charging with the VPP to reduce charging loads during peak hours. The load is metered hourly by the utility and the vendor. We can see the impact of the reduction on the vendor’s utility bill. Can this serve as a VPP load shed for the City that applies the VPP to 3rd party chargers on its property?** | This would be dependent on whether the EV chargers are located within an IOU or CCA service territory and qualify for one of their load reduction programs. If so, then the load shed may qualify. Applicants must justify project benefits to IOU ratepayers and the grid. The solicitation also requires a diverse array of resources and cannot exclusively be comprised of EV charging. See responses to questions #43 and #45 above. |
| 70 | **Group 2: The City owns many parking lots with EV charging throughout the city. Must they all be considered contiguous to be included in the VPP, or can they be aggregated without having a common property boundary?**  **The City owns many facilities with BMS throughout the city. Must they all be considered contiguous to be included in the VPP, or can they be aggregated without having a common property boundary?** | For the EV charging scenario, see response to question #69.  For the dispersed facilities with BMS, Group 2 allows for multiple sites assuming at least one site exceeds 50,000 square feet of gross floor area as defined in the solicitation manual. Proposals that go beyond the minimum requirement of one site demonstration may score higher. However, the aggregation of smaller structures or EV charging stations is allowed under Group 1. |
| 71 | **Group 1: Does the statement below mean that grant recipient is required to carry out this VPP-FLEX demonstration at cost with no profit margins?**  ***The budget must NOT include any grant recipient profit from the proposed project, either as a reimbursed item, match share, or as part of overhead or general and administrative expenses (subrecipient profit is allowable, though the maximum percentage allowed is 10% of the total subrecipient rates for labor, and other direct and indirect costs as indicated in the Category Budget tab*** | Profit is not allowed for EPIC grant recipients. However, profit is allowable for grant subrecipients. For additional restrictions and requirements, please review the EPIC grant terms and conditions by visiting our funding resources webpage under “Research and Development Funding Information” here: <https://www.energy.ca.gov/funding-opportunities/funding-resources>. Also, see budget template (attachment 6) for additional information. |
| 72 | **Regarding Group 1, can the proposal work with a community that is already participating in another VPP pilot (e.g. Richmond), or are you only considering projects that are in communities that have never implemented any VPP pilots?** | There are no restrictions on the type of customers eligible to participate in the designed program, including those who may already be enrolled in other VPPs. However, only incremental changes in load reduction and incremental costs and benefits accrued due to projects from this solicitation may count towards the key performance indicators. |
| 73 | **Group 1: When including CEC REDWDS demo sites as demonstration sites under the VPP-FLEX GFO, are costs incurred under the former project excluded from the cost recovery calculation under the latter project (e.g., for sites that receive hardware funded under the CEC REDWDS award)?** | Yes. Costs covered by another funding resource that is not in the project budget (CEC reimbursable or match) would be excluded from the cost recovery calculations. |
| 74 | **Group 1: Are there any restrictions on allocating CEC funds to include business sites of commercial and industrial (C&I) customers for VPP demonstrations? Can CEC reimbursable expenses at C&I sites include software interfaces and ongoing service fees to interface with DERMS, or must match funding be used instead? Please clarify what types of expenses at C&I sites can be reimbursable versus would be considered as match.** | There are no restrictions on the type of customers eligible to participate in the designed program.  CEC funds can be for software-related expenditures. See section I.C of the solicitation manual for more information. Also, see questions #13 - #22. |
| 75 | **Group 1: Are EV/fleet charging stations considered smart devices eligible for CEC funding at C&I demonstration sites? Please elaborate on what types of technologies (e.g., smart water heaters, heat pumps, EVs, etc.) are considered "smart devices" reimbursable by CEC.** | Electric demand-side technologies, such heat pumps, lighting, and EV chargers, that are actively controlled by software and can respond to real-time signals to adjust the energy service provided are eligible for CEC funding. Smart EV charging stations could be included in the accepted portfolio of technologies if they meet these standards. |
| 76 | **Group 1: Would CEC reimbursable or match funds be used for costs to INSTALL smart devices in disadvantaged communities? How about for smart device costs in non-disadvantaged communities?** | CEC funds may be used to install smart devices only for low-income customers, such as California Alternative Rates for Energy (CARE)-enrolled customers regardless of whether they live in a Disadvantaged Community. CEC funds may not be used to install smart devices for any other customers.  CEC funds may be used to procure smart devices for all participating customers, including those who are not low-income or do not live in a Disadvantaged Community.  See section I.C of the solicitation manual for more information. |
| 77 | **Group 1: Would CEC reimbursable or match funds be used for the following costs incurred at C&I demo sites: electrician, power meters, gateway hub, ongoing software license fees, cabling, conduit, and related infrastructure for connection to the utility?** | CEC funds may be used for demonstration site costs such as those related to M&V, DERMS, smart devices, and other associated costs to achieve the solicitation objectives and requirements.  See section I.C of the solicitation manual for more information. |
| 78 | **Group 2: Clarify meaning of OEM and the expected partner relationship with the OEM. If OEM refers to a hardware manufacturer, is it expected that a proposed system would contain only the equipment of that OEM?** | See responses to questions #2 and #4. Projects may use equipment from different OEMs and EMS service providers. |