**Questions and Answers**

GFO-23-316

Industrial, Agricultural, and Water Demand Flexibility Research and Deployment Hub (IAW FlexHub)

August 23, 2024

The most up-to-date solicitation documents (including the solicitation manual) are available at the solicitation webpage: [GFO-23-316 - Industrial, Agricultural, and Water Demand Flexibility Research and Deployment Hub (IAW FlexHub) (ca.gov)](https://www.energy.ca.gov/solicitations/2024-07/gfo-23-316-industrial-agricultural-and-water-demand-flexibility-research-and)

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 | **How does the CEC expect the IAW FlexHub to relate to the CEC-funded California Load Flexibility Research and Development Hub (CalFlexHub) program?** | IAW FlexHub and CalFlexHub will be separate and distinct projects. However, there may be related technology research from CalFlexHub that could be applied to IAW FlexHub research projects. In that case, the applicant must present in their application a strong case for using those proposed demand flexible technology solutions. |
| 2 | **What qualifies as an Industry, Agriculture, and Water (IAW) sector versus not? Is vertical farming considered eligible? Is there a facility size limit? For example, for cold storage or data centers?****Are there specific** **North American Industry Classification System(NAICS) codes or other taxonomy and criteria that defines which customers or customer end uses are permissible in meeting the minimum number of demonstration projects?** | A non-exhaustive list of what is considered eligible as IAW is included in the solicitation manual under the Project Focus. There are not any specific NAICS codes or a taxonomy that defines which customers or customer end uses are eligible. The applicant must clearly define how the proposed customer or customer end-uses classify under the industrial, agricultural, or water sector. Vertical farming, cold storage, and data centers qualify as IAW. Research associated with oil and gas processing is excluded from this solicitation.There is not a facility size limit for this solicitation. |
| 3 | **What’s the requirement on automation in technology demonstrations? Does it have to be fully automated, or can it be partially automated with human in the loop?** | The technologies demonstrated or deployed must be fully or partially automated with human-in-the-loop in their demand flexibility capabilities. |
| 4 | **Both applied research and development (ARD) and technology demonstration and deployment (TDD) projects are eligible. Does CEC expect a certain split in ARD vs TDD projects?**  | There is not a defined split of projects or funds between applied research or demonstration/deployment. However, the solicitation seeks to fund mostly deployment projects to advance cost-effective technology solutions into the market. This solicitation allows for applied research if there is a critical need to develop a demand flexible technology solution for the IAW sector. |
| 5 | **Will a list of eligible investor-owned utility (IOU) demand response (DR) programs be provided?** | No, a list of IOU/community-choice aggregatory (CCA) DR programs will not be provided. The applicant must justify why they are choosing the proposed DR program(s) and how their proposed projects fit into the program(s). |
| 6 | **Is the requirement “must demonstrate a minimum of 5 percent reduction in annual energy costs from demand flexibility” based on site total electricity consumption or controlled flexible load participating DR? Can electric vehicle (EV) charging count towards demand flexibility or the 5-year payback analysis?** | The 5 percent reduction in annual energy cost is based on site total electricity consumption. EV charging can count toward both demand flexibility and the 5-year payback analysis. |
| 7 | **Is the 5-year payback period requirement calculated based on both CEC reimbursement cost and match? Are non-energy benefits and operations and maintenance (O&M) savings allowed in the payback calculation? In which section of the proposal should the applicant document the payback information, and what level of details is required?** | The 5-year payback period is based on costs to the site. Yes, non-energy benefits and O&M savings are allowed as part of the payback calculation. Please include this analysis in the Impacts and Benefits for the California IOU Ratepayers section. |
| 8 | **Are industrial heat pumps and thermal energy storage considered emerging technologies of key interest to demonstrate? Must they be coupled with automation to satisfy the field demo requirement?** | Industrial heat pumps and thermal energy storage systems are considered emerging technologies and are of interest to this solicitation. They must be fully automated or partially automated with human-in-the-loop for dynamic demand flexibility control. This solicitation only allows for up to $1,000,000 in reimbursement of thermal energy storage system equipment and installation costs. |
| 9 | **The grant funding opportunity (GFO) requires participating in DR programs. It also says, “evaluate innovative rate structures.” Would those rate structures need to be real and require demo customers to be enrolled, or can they be hypothetical for bill impact analysis? Can you please define “innovative rate structures?”** | The GFO requires evaluating real and available rate structures and programs to assess how they fit or can be adapted to complement demand flexibility control technologies in the IAW subsectors. Hypothetical or “innovative” rate evaluation may include flexible demand rates developed for current California Flexible Unified Signal for Energy (CalFUSE) pilots, such as those being offered by Pacific Gas & Electric (PG&E) and Southern California Edison (SCE) under the direction of the California Public Utilities Commission (CPUC), or other rates that reflect the principles outlined in the CalFUSE framework. The PG&E and SCE pilots are described in this fact sheet, and the decisions linked from it: <https://www.cpuc.ca.gov/-/media/cpuc-website/divisions/energy-division/documents/demand-response/demand-flexibility-oir/pilot-expansion-2024.pdf>. |
| 10 | **The GFO asks for customers from the IAW sectors to demonstrate demand flexibility technologies; however, it does not specify that demand flexibility must come, entirely or in part, from industrial process loads - as opposed to electricity used for heating, ventilation, and air conditioning (HVAC); lighting; and other services. For example, would a project that meets the GFO performance requirements with flexibility from automating HVAC load at an IAW customer site qualify? In another example, would a project with only an offroad EV charging demo in the scope qualify? If not, can CEC please specify which loads and distributed energy resources (DERs) would be counted towards meeting a minimum number of required demo projects?** | One of the goals of the solicitation is to develop comprehensive load flexibility strategies, which would include multiple end-uses at a facility, including, for example, HVAC, lighting, and EV charging. However, the primary goal is to focus on industrial process loads. Applications that propose strategies that have potential for realizing significant impacts from the most energy intensive end-uses at an industrial facility are preferred.  |
| 11 | **If a customer is interested in enrolling in a dynamic pricing pilot or real-time pricing program with an IOU, would they be considered an eligible site in the proposal? Is load flexibility in response to an existing price signal (time-of-use [TOU] or real-time pricing [RTP]) considered an eligible mechanism, or must load flexibility be in response to event-based DR programs? Would participating in Demand Side Grid Support (DSGS) or California Independent System Operator (CAISO) wholesale DR programs also make a site eligible?** | Customers who are interested in participating in an IOU dynamic pricing pilot or RTP program are considered eligible. Demand flexibility in response to TOU or RTP is an eligible mechanism. Responses to wholesale DR programs are allowed if the demand flexibility control technology can dynamically respond. The applicant must provide justification in their proposal that their participation in the wholesale DR program provides reliable and cost-effective demand flexibility.Please see Section I.C in Addendum #1 of the solicitation manual. |
| 12 | **Are technologies that enable pumped hydro for energy storage eligible for demonstration and CEC reimbursable funds?** | Yes, demand flexible technologies that enable pumped hydro for energy storage would be eligible for CEC reimbursement. Costs associated directly with pumped hydro are not eligible for reimbursement. |
| 13 | **GFO states that we should demonstrate at least 5 technologies in IAW. What does CEC like to see, in terms of expected # of technologies to be demonstrated?** | The CEC expects to see at least 5 different technologies demonstrated across at least 10 sites during the agreement. It is up to the applicant to decide how many technologies will be researched beyond the solicitation requirement. |
| 14 | **Can the control and communication technologies for projects be different for the demonstration/deployment projects, depending on what the interest from the industrial customer is? Should all the projects follow a consistent theme (for example, use the Market Informed Demand Automation Server [MIDAS])?** | The communication and control technologies can differ between demonstrations and deployments depending on the industrial customer needs and resources. Applicants using a price server must use MIDAS when feasible. If the applicant is using a price server that is not MIDAS, it is preferred that the price server used is compatible with the MIDAS data format JavaScript Object Notation (JSON). |

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

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| **#** | **Question** | **CEC Response** |
| 15 | **The GFO states that the budget for the prime proposer is limited to 25% of requested funds. Does this include overhead on what is contracted out to sub-recipients?** | The 25% of requested Electric Program Investment Charge (EPIC) funds limited to the prime recipient includes funds allocated to all budget categories except Subrecipients/Vendors. Prime Indirect Costs associated with managing subrecipients and vendors count toward the 25% cap. |
| 16 | **Are costs of automation and control technologies eligible for CEC reimbursement? How about electrification equipment and installation costs (e.g. heat pump, offroad EV charging)?** | The costs for demand flexibility automation and control technologies are eligible for CEC reimbursement. Reimbursement for electrification costs is allowed if the demand flexible technology is being demonstrated on the electrified end-uses. |
| 17 | **We understand that cash match gets bonus points, but are in-kind matches also allowed?** | In-kind match is allowed for this solicitation to make up the 20% match funding requirement. In-kind match that is above the 20% match requirement will also be considered for bonus points under Scoring Criterion 8b. |
| 18 | **On page 16 of the terms and conditions regarding de minimis (indirect costs) is this language: "MTDC (Modified Total Direct Cost) is defined for purposes of this Agreement as all direct salaries and wages, applicable fringe benefits, materials and supplies, services, travel, and up to the first $25,000 of each subaward (regardless of the period of performance of the subawards under the award). MTDC excludes equipment, capital expenditures, rental costs, tuition remission, scholarships and fellowships, and the portion of each subaward in excess of $25,000."****Does this mean that if there is a $500,000 subaward, the subawardee can only claim indirect costs on $25,000 and not the remaining $475,000?** | If there is a $500,000 subaward, the prime recipient can only claim the first $25,000 of the subaward for the prime recipient’s indirect cost calculation for the de minimis option. The subawardee can follow the same rules for allowable expenditures as the prime recipient when calculating their own indirect costs; therefore, if the subawardee has a sub-subawardee, the subawardee can only use up to $25,000 of the sub-subawardee amount toward their indirect cost calculation when using the de minimis option. |
| 19 | **The solicitation manual states “Only CEC funds may count towards funds spent in California total.”****Can you provide addition detail on “Funds Spent in California?” Are there spending amount requirements?** | CEC funds spent on direct labor, fringe benefits, lodging, and indirect costs for research activities occurring within California count as funds spent in California. Materials and Miscellaneous and Equipment purchased from within California and travel to and from locations in California also count as funds spent in California. There is not a required funds spent in California amount; however, CEC funds spent in California are used to calculate the score for a scoring criterion. Match funds do not count toward funds spent in California. Please see Section IV.F for the scoring requirements. |
| 20 | **Will retention be released upon achievement of interim milestones, or will it remain until Agreement closeout?**  | Retention will be released upon successful completion of the project, which includes a complete and satisfactory Final Report. |
| 21 | **Since permit costs and the expenses associated with obtaining permits are not reimbursable under this agreement (except for University of California recipients), can these costs be used as in-kind match?** | Yes, permit costs and associated expenses can be used as match. |

**General Project Requirements/Miscellaneous Questions**

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| **#** | **Question** | **CEC Response** |
| 22 | **The range of eligible entities for this solicitation is narrower than past CEC hub funding opportunities. Can you explain the reasoning or the goals behind the eligible entity requirements for this solicitation and whether applicants can expect to see this in future hub solicitations as well?** | The CEC has changed entity eligibility for this GFO to allow public institutions such as national laboratories and public universities to apply as prime applicants in addition to already being eligible as subrecipients. Please see Addendum #1 of the solicitation manual.Requirements and eligibilities on future solicitations cannot be commented on at this time. |
| 23 | **What is the estimated response time for this, or is each response in November?**  | The anticipated date for releasing the Notice of Proposed Award (NOPA) is the week of November 18, 2024. Please refer to the solicitation webpage (<https://www.energy.ca.gov/solicitations/2024-07/gfo-23-316-industrial-agricultural-and-water-demand-flexibility-research-and>) and the GFO manual. |
| 24 | **Could you kindly confirm that National Laboratories like Lawrence Berkeley National Laboratory may be subrecipients to prime applicants on GFO-23-316?** | Please see the response to Question 22. |
| 25 | **Will the CEC publish the list of attendees?** | Yes, the list of preapplication attendees was posted to the solicitation website (<https://www.energy.ca.gov/solicitations/2024-07/gfo-23-316-industrial-agricultural-and-water-demand-flexibility-research-and>).  |
| 26 | **What is the goal the CEC is trying to achieve by requiring 5 subrecipients?** | The goal is to investigate several demand flexibility issues across multiple IAW subsectors to advance demand flexible technology market adoption. Each end use and subsector has its own unique challenges to achieve demand flexibility to meet the state’s electrification and decarbonization goals. Prime recipients are required to have at least 5 subrecipients from at least 5 different subsectors to bring together industry experts in their fields best suited to learn and work on different demand flexibility applications to address these barriers. |
| 27 | **Are private universities eligible to be prime?** | Private universities are eligible to be prime applicants. |
| 28 | **Can an IOU apply as the prime?** | Yes, California IOUs may apply as prime applicants.  |
| 29 | **Does CEC expect to see in proposals an overlay of the CPUC’s CalFUSE program?** | This solicitation does not require integration with the CPUC’s CalFUSE program; however, it is preferred that applicants align their research with existing demand flexibility efforts in California. |
| 30 | **Do all subrecipients need to be specifically named? Or can selection criteria for subrecipient selection be sufficient?** | At least five (5) major subrecipients must be named in the application. Additional subrecipients can be named and added during the agreement term. See also Question 31 for additional information on subrecipient selection. |
| 31 | **Are there rules for how new subrecipients are selected and added? Does that selection need to be competitive, or can it be selected by the prime and subrecipient leadership team?** | The new subrecipients are selected by the prime recipient based on research and deployment needs. The selection does not need to be competitively bid. Selecting a new subrecipient must not drastically alter the prime recipient’s original proposal score. For example, selecting a new subrecipient from out of state could change the score on the funds spent in California scoring criterion. |
| 32 | **Do the projects need to be fully specified in the proposal, or is there value in maintaining flexibility through subsequent request for proposals (RFPs) (either internal or external) issued by the prime?** | At least three projects need to be fully described in the application. The applicant will define the future project determination criteria, and the preliminary selection process is outlined in the solicitation manual. Final project approval is subject to the CEC Commission Agreement Manager (CAM) and possible Business Meeting approval, which requires significant lead time and can cause project delays if not planned for accordingly. |
| 33 | **We understand that at least 3 projects should be proposed in Year 1. Is it possible to propose an RFP process for projects in Years 2-6?** | It is up to the applicant to determine how best to select future projects. The solicitation manual provides guidelines for project selection (e.g., previous research results, industry need, feedback from CAM/Technical Advisory Committee [TAC]). A formal RFP process is not required. All future projects must seek CAM approval with possible CEC Business Meeting approval. |
| 34 | **The solicitation manual states, “Identified sites for future years are preferred.” Does this mean that project details for Years 2-6 should be explained in the proposal?** | Project details for at least three projects are required for this solicitation. Future project details are not required, but their inclusion in the application is favorable to help better understand the IAW FlexHub research direction. See also Questions 31 and 32 for more information. |
| 35 | **Are sites in CCA and municipal utility service territories with IOU distribution lines excluded?** | Sites in CCAs and Municipal Utility Service Territories within California IOUs are eligible for this solicitation. |
| 36 | **Can the Prime conduct the Measurement and Verification (M&V), or should the M&V be conducted by an independent sub-recipient?** | The M&V must be conducted by an independent third-party who can be a subrecipient, but that third party cannot also be conducting research under the grant. |
| 37 | **If a major sub-recipient is conducting the demonstration/deployment project, can they do the M&V? Or should it be conducted by another independent third party?** | See response to Question 36. |
| 38 | **Would all the verbal responses today be provided in writing in the question and answer (Q&A) response?** | All of the verbal responses given in the preapplication workshop are included in the Q&A response posted to the solicitation webpage. |
| 39 | **Are Direct Access customers eligible as technology demonstration sites?** | Yes, as long as they are within a California electric IOU service territory. |
| 40 | **Do facilities in IOU service territory necessarily need to be customers of that IOU? For example, would a facility in PG&E service territory be acceptable as a demonstration site even if its electricity were provided by the Sacramento Municipal Utility District?** | Facilities must receive their electricity from a California electric IOU to be eligible sites. Facilities receiving electricity from a publicly-owned utility (POU) are not eligible. |
| 41 | **In the California Environmental Quality Act (CEQA) Compliance document, Question 5 refers back to itself. Is there a missing question that should precede the #5 that's on this form?** | There is not a missing question on the CEQA Compliance form. If the applicant knows who the lead CEQA agency for the project will be, please select “Yes” and list the required information for the lead agency. Otherwise select “No”. |
| 42 | **We understand that technology readiness levels (TRLs) should be increased by a minimum level of 1. At the start of the project, what is the expected TRL level for ARD projects and for TDD projects?** | The starting TRL for ARD projects is 5, and the starting TRL for TDD projects is 7. |
| 43 | **Is an “industrial-sized warehouse” (e.g. Amazon warehouse) considered to be industrial? Is an “industrial refrigerated warehouse” that stores food products considered to be an industrial facility?** | Yes, industrial-sized warehouses and refrigerated warehouses are considered industrial facilities. |
| 44 | **Can a Prime be a subcontractor to a major subrecipient to provide technical services for which it is suitably qualified? If so, under this scenario, can the total funds to the Prime exceed the 25% limit, since the Prime would provide technical services above and beyond the Hub Administrator role?** | No, the prime cannot be a subcontractor to a subrecipient. The prime applicant may perform technical services within their allocated 25% limit of the requested EPIC funds. |
| 45 | **The solicitation states that at least 25% of EPIC TDD funding must be allocated to project sites in designated disadvantaged communities (DACs) based on CalEnviroScreen, and an additional minimum of 10% of funds must be allocated to sites in low-income communities.****Do these minimum requirements apply to this solicitation or the EPIC portfolio as a whole? If a project site is located in a census tract that is designated as both DAC and low income, does the funding to that project satisfy both DAC and low-income funding targets?** | This requirement applies to the EPIC portfolio as a whole; however, meeting this requirement for this solicitation is preferred. If the project site is both classified as DAC and low income, then it can satisfy both, but the applicant must identify how much that site is contributing to the DAC and low-income funding requirements. Applicants cannot use the entirety of the identified site funding to fulfill both requirements. For example, if $100,000 is going to a DAC and low-income site, $100,000 cannot simultaneously count toward the DAC and low-income requirements. The applicant must identify a split of the funds (e.g., 50%/50%). |
| 46 | **The solicitation states that TDD projects located in low-income and/or disadvantaged communities must allocate “appropriate” funding to Community Based Organizations (CBOs). What % of TDD project funding is considered to be appropriate for CBOs?** | There is not a required percentage of TDD funds for CBOs. The amount of TDD funds for CBOs is considered appropriate as long as the CBO can satisfactorily complete its relevant tasks as described in the Scope of Work. |