**GFO-20-309**

**Advancing and Commercializing Energy Efficiency in California’s Industrial, Agricultural, and Water Sector**

**(2021 ACEE Program)**

**Questions and Answers**

**(Posted February 2021)**

**Administrative/General Questions**

| Number | Question/Answer |
| --- | --- |
| Q.1 | Will you share the participants on this call? |
| A.1 | Yes, the Pre-Application workshop list of participants, presentation and zoom recording are posted at the following link:  <https://www.energy.ca.gov/solicitations/2020-12/gfo-20-309-advancing-and-commercializing-energy-efficiency-californias> |
| Q.2 | Will you be making available a copy of today's presentation to potential bidders, and if so, how do we obtain a copy? |
| A.2 | Please see response to Q.1. |
| Q.3 | Can we apply for both Group 1 and Group 2? |
| A.3 | Yes, applicants may apply for either or both groups, but a separate application is required for each group. Applicants may also submit multiple proposals for a group if each proposal is for a distinct project, i.e. no overlap with respect to the task described in the Scope of Work. |
| Q.4 | Is there are any limitations as to who the applicant can be? For example, only the end-use customer? |
| A.4 | This solicitation is open to all public and private entities with the exception of publicly owned electric utilities. Please see section II.A of the solicitation manual for additional information. |
| Q.5 | Where to find definitions of tech readiness levels? |
| A.5 | As indicated in Section I.B, Key Words/Terms, Technology readiness levels or TRL are a method for estimating the maturity of technologies during the acquisition phase of a program.  Source: U.S. Department of Energy, “Technology Readiness Assessment Guide”. <https://www2.lbl.gov/dir/assets/docs/TRL%20guide.pdf> |
| Q.6 | How many awards do you expect to make for Group 1? |
| A.6 | It is anticipated that 2-3 proposals will be awarded for Group 1. However, the number of actual proposals awarded funding will depend on the number of passing proposals, the requested funding per passing proposal, and availability of funds. |
| Q.7 | Is industry collaboration a requirement for this solicitation? |
| A.7 | Yes. The goal of each demonstration is to ensure that the technology is applicable and useable for other industrial operations beyond those participating as a demonstration site. All technologies demonstrated must have a pathway to commercialization. Please refer to Section I.C of the solicitation manual for specific items pertaining to each group. For Group 1 applicants, details on how you will deploy the technology to ensure market adoption beyond the demonstration sites with buy-in from stakeholders, such as trade groups and other industries in California, must be discussed in the Project Narrative (Attachment 3, Technical Approach, item f) as indicated in Section I.C.1. For Group 2 applicants, details on how you will deploy the technology to ensure wider industry adoption beyond the demonstration sites must be discussed in the Project Narrative (Attachment 3, Technical Approach, item f) as indicated in Section I.C.2.  Additionally, applicants are required to include at least one letter of support from a project stakeholder. Please see Section III.D.10 and Attachment 10 for additional information. |
| Q.8 | Responding to an earlier answer, for Group 2, do you prefer one $4M award, or no preference? |
| A.8 | There is no preference. However, your application must justify the amount requested in Attachment 3 under Budget and Cost-Effectiveness. |
| Q.9 | While IOUs may not be prime, can funds from IOUs be considered towards matching fund requirements? |
| A.9 | Yes, IOU funds can be used as match funds, provided they meet the match fund requirements described in Section I.K.  Note: IOUs could apply to this GFO as a prime, but they must explain how they can achieve and meet the requirements, objectives and focus of the GFO. IOUs may be better suited to participate as project partners such as providing support in obtaining sites, providing match funds, and contributing technical expertise. |
| Q.10 | Can you clarify the CEQA process and timeline? |
| A.10 | The California Environmental Quality Act (CEQA) requires public agencies to identify significant environmental impacts of their actions, such as the approval of a grant project, and to avoid or mitigate those impacts. Grant projects funded under this solicitation may require public agencies to prepare a CEQA document(s) listed in Attachment 8 in order to identify the potential environmental impacts of the project. The public agency that has the greatest responsibility for supervising or approving the project as a whole, and for preparing CEQA documents, is called a “lead agency”. If the applicant is a public agency then it will normally act as the lead agency. If the applicant is a private entity then the lead agency is typically a local public agency that has general governmental powers such as a city or county. The CEC typically does not act as a lead agency and instead acts as a “responsible agency”, which means that it must review the funded activities and any environmental documents created by the lead agency and make its own findings under CEQA.  Grants awarded under this solicitation must be approved at a CEC business meeting prior to June 30, 2021 due to expiration of the funds and the CEQA process must be complete before a grant award is approved at a CEC business meeting. Therefore, applicants are encouraged to seek out and engage the lead agency as soon as possible to begin the CEQA process. Attachment 8 may assist applicants in identifying a lead agency for its project.  Note that, unfortunately, there is a possibility that the CEC may not be able to complete its CEQA review and approve a grant award prior to the June 30, 2021 deadline for every project. For example, if the lead agency determines there is substantial evidence that the project will have significant effects on the environment, an Environmental Impact Report may need to be prepared which can take months.  For further CEQA information see section I.I Additional Requirements and Attachment 8. |

**Technical Questions**

| Number | Question/Answer |
| --- | --- |
| Q.11 | For municipal wastewater treatment plants, would you consider software that adds intelligence to treatment to optimize treatment processes? |
| A.11 | Software-based energy efficiency improvements could be part of the proposal, but it cannot be the sole focus. Proposals must address the advanced primary treatment and/or advanced secondary treatment technologies to be demonstrated, as described in Section I.C.2. |
| Q.12 | Do you have a list of municipal wastewater treatment systems exceeding 500k gal / d? |
| A.12 | No. |
| Q.13 | Why Dairy chosen? Do you have data on inefficiency in this sector? |
| A.13 | Of the top ten commodities from California’s agriculture sector (in 2018), dairy products had the highest value commodity at $6.37 billion.[[1]](#footnote-2)  Further research is needed to address energy efficiency in the dairy industry through the digitation of its operations because of its continued importance to California’s economy and lack of research and development efforts from past solicitations. Also, dairies and dairy related operations are widespread in the State of California and contribute substantially to the wellbeing of underserved communities (rural, low income in both northern and southern California, etc.). |
| Q.14 | Will the CEC help identify test sites? |
| A.14 | No, identifying and obtaining letters of commitment from project demonstration sites is the responsibility of the Applicant. Applicants are encouraged to sign up to the Energy Commission’s Empowerinnovation.net to connect with possible project partners for this solicitation.  Please refer to the following link to this solicitation on the Empowerinnovation.net website:  https://www.empowerinnovation.net/en/custom/funding/view/19235 |
| Q.15 | How do you define advanced primary and advanced secondary treatment? Does any primary or secondary process that improves energy or capacity count OR do they need to meet the environmental engineering definitions for those terms (e.g., adding chemicals to the process)? |
| A.15 | The intent of Group 2 is to demonstrate emerging next generation technologies that change or improve the underlying primary and/or secondary treatment process to accomplish the following: reduce energy consumption and greenhouse gas emissions, increase treatment capacity of existing treatment infrastructure from implementation through retrofits, reduce footprint and capital costs for new construction, increase biogas production and/or lower the operation and maintenance costs over the facility lifetime.  Please see Section I.C.2 of the solicitation manual for a partial list of possible advanced primary and advanced secondary treatment technologies and additional requirements that must be included in Attachment 3 Project Narrative under the Technical Approach section.  Table 2 in the solicitation manual includes specific research goals that Group 2 Applicants must meet or exceed as part of the project. |
| Q.16 | Group 2 - Available funding is $4M and minimum ask is $2M. So, unless the top 2 finishers ask exactly $2M each, this is set up for only one award. Is there a way the minimum ask be lowered to $1 or $1.5M, so more than 1 award can be made? |
| A.16 | We will lower the minimum to $1.5M in an addendum. |
| Q.17 | Must test sites be in CA? |
| A.17 | Yes, the demonstration sites for both groups must be ln California and within the service territory of any of the following investor-owned electric utilities:   * Pacific Gas and Electric Co. * San Diego Gas and Electric Co. * Southern California Edison Co. |
| Q.18 | How big/small must the dairy farm be? |
| A.18 | Note, Dairy industry as used in this solicitation includes industries in the milk and cheese processing lifecycle: dairy farms (cows), production of milk, cheese, and associated products (ice cream, butter, buttermilk, whey processing, etc.).  Though the GFO does not specify a maximum or minimum size for the operation the overall purpose of the solicitation is to fund development of pre-commercial technologies that can help this sector decarbonize. Thus, dairy operations that have the most potential to reduce greenhouse gas emissions and have the potential for broad deployment to other dairies are likely to score higher. Additionally, the value proposition of the project must be articulated in the Project Narrative (Attachment 3), such as the impact and benefits for California IOU ratepayers and budget and cost effectiveness. The information in the Project Narrative will include the majority of the applicant’s responses to the scoring criteria.  Table 1 in the solicitation manual states that the research goals of Group 1 is 10% electricity savings and simple payback of under 3 years. Therefore, a small 10 cow dairy or an artisanal cheesemaker producing a few hundred pounds of product may not score high enough under the Budget and Cost Effectiveness scoring criteria to be funded because the electricity savings may not justify a minimum $1.5 million grant award. Nor would it be likely that the project could demonstrate a three-year payback. |
| Q.19 | For group 1, you mentioned mid-sized dairy processing sites as target participating sites. Is there a lower and/or upper limit for size of participating sites? If so, what is the indicator (sales, energy consumption, square feet)? |
| A.19 | Please see response to Q.18. |
| Q.20 | Can you clarify what you mean by commercialized but underutilized in this sentence on page 7, group 1, of GFO: “Technologies sought are either pre-commercial or commercialized but underutilized…” |
| A.20 | This refers to technologies that are commercially available but due to lack of independently verified data under real-world conditions on performance, economics, reliability, etc. they are not widely used for the intended purpose in the intended industrial/agricultural/water sectors.  Please also see the definition of Pre-Commercial Technology in Section I.B., and the response to Q23. |
| Q.21 | Can an eligible site be included in multiple project proposals with different prime applicants? |
| A.21 | Yes, the same demonstration site(s) may be used by different applicants. However, each proposal must be separate and distinct (sufficiently different project, narrative, scope of work, and budget) such that separate grant awards would be justified.  Applicants that have a demonstration site that is included in multiple project proposals should also describe how the project would be impacted if multiple proposals are awarded and also describe how the applicant’s project would still be able to meet all of the goals and objectives, risk mitigation plans if the demonstration site is lost, as well as how any other project requirements stated in the solicitation manual might be impacted. |
| Q.22 | The WWT demo site chosen needs to treat 1 million GPD minimum, or 500,000 GPD minimum? |
| A.22 | Addendum 1 adds clarifying language on the distinction between the selected demonstration host-site and demonstration system treatment sizes.  The municipal wastewater treatment facility site selected for the demonstration must be treating at least 1 million gallons per day, but when evaluating technology performance during the M&V phase a minimum average of 500,000 gallons per day of wastewater must be processed.  Please see the addendum to the solicitation. |
| Q.23 | From the GFO document it’s stated that “grant funds may not be used to purchase commercially available technologies, such as pumps, motors, mixers, refrigeration units, renewable energy systems, etc.”. Question: Purchasing a commercially available equipment that will be customized to achieve the proposed goals for group 1 is allowed? |
| A.23 | Yes, purchasing of commercially available equipment (such as pumps, motors, package systems/units, nuts and bolts, etc.) to build the overall proposed technology is allowed. The proposed technology must currently be at a technology readiness level of 7-8 and the proposal must show how the project will lead to progress up one or more levels. However, purchasing stand alone, commercially available equipment cannot be funded by the grant.  Applicants are encouraged to use match funds for the purchase of commercially available equipment necessary for the building of the proposed demonstration system.  Applicants should not be proposing to use CEC funds for general capital improvement projects for the selected demonstration site(s). |
| Q.24 | For group 2, does an increase in treatment capacity relate specifically to a comparison between the advanced treatment and the conventional treatment process or for the wastewater treatment plant as a whole? |
| A.24 | Group 2 projects should look at the increase in treatment capacity between the advanced treatment method proposed and the conventional treatment process AND the impact this increase will have on the overall treatment capacity of the wastewater treatment plant. Projects should meet the research goals listed in Table 2 of the solicitation manual. |
| Q.25 | 500 k gpd for wastewater is quite large. Would CEC consider lowering this requirement? |
| A.25 | No. The intent of Group 2 is to demonstrate at sufficient treatment capacity such that the results of the measurement and verification can be readily scaled up for retrofits/new construction at municipal wastewater treatment plants. |
| Q.26 | 1. For Group 1, can subsystems/areas of a large dairy farm (5000+) be considered as different sites? 2. Must different sites be under a different business name? |
| A.26 | 1. No. Every site must be a separate location. One of the goals of group 1 is to promote the market adoption of new technologies. This is best achieved by having independent sites. 2. Different sites can be under the same business name. However, multiple sites associated with one business entity which could back out of the project exposes the project to potential risks and this must be explained how this risk can be mitigated in the site commitment letter. |
| Q.27 | Can a site collaborate with different competing vendor proposals, assuming CEC would choose just one? |
| A.27 | Please see response to Q.21. |
| Q.28 | Clarification from your answer on my first question about pre-commercial and commercialized but underutilized technology. Can new VFD technologies (or old but underutilized) be used as part of the system to improve the overall goal and purchased with project funds? |
| A.28 | Please see response to Q.20 and Q.23. |
| Q.29 | Under Group 2, please clarify the first sentence on Page 10.... "The purpose of this research is.... that treats more than one million gallons per day". So, site chosen must treat 1 million gallons per day? |
| A.29 | Please see response to Q.22. |
| Q.30 | To calculate GHG impact of energy savings, is there a list of acceptable calcs/tools? |
| A.30 | Yes, Applicants must use Attachment 13 as a reference for calculating GHG savings from project energy savings. |
| Q.31 | For group 2, a secondary advanced technology that increases the treatment capacity over the conventional secondary treatment may not result in a facility-wide increase in treatment capacity due to some choke point at a different point in the treatment train, i.e. facility may be limited by their primary or tertiary treatment steps. Does a new advanced treatment installation need to address capacity limitations outside the primary or secondary process? |
| A.31 | Please see response to Q24. Projects are not required to address known facility capacity limitations as described in the question above. However, projects should meet the research goals listed in Table 2 of the solicitation manual.  If the proposed demonstration site has known constraints that would limit the ability for the proposed project to meet the research goals of Table 2 – the proposed demonstration site may not be suitable for the project and the Applicant should consider selecting a different project demonstration site. |
| Q.32 | For Group 2, are the test sites required to setup side stream processes to demonstrate the efficacy of advanced treatment systems? We may have situations where the participant would prefer to fully convert rather than set up a side stream. |
| A.32 | Applicants should work with their selected demonstration site to determine the best possible option (side stream, full conversion, both, etc.) for the proposed advance treatment system. |
| Q.33 | For Group 1, would you consider a project that target development of automated fault detection and diagnosis sensors used in dairy barn? |
| A.33 | A project demonstrating sensors and software in a facility to optimize operations would likely be eligible. A project demonstrating improvements in the manufacturing or repair of said sensors would be considered too far afield and would not be eligible.  In general, projects considered too far afield from the intent of the GFO are not eligible. For example, a project evaluating sensors could be done in a lab and doesn’t have to be done in a working “dairy.” This type of project would not be eligible as we are looking for demonstration projects with a late stage TRL. The goal of the GFO is to show measurable benefits (as indicated by need for independent M&V). The intent of group 1 is to optimize existing operations in dairy and dairy related industries in a measurable way (electricity savings, water savings, verifiable dollars savings due to verifiable maintenance savings, etc.). The project must demonstrate ways to optimize existing operations.  So the questions you have to answer is “how do I show that this project needs to be done in a working facility and can’t be done equally well in a lab” and “how do I demonstrate a return on investment on the work being done”. If you can’t answer these questions, your proposal is not likely to be strong. |
| Q.34 | We offer comprehensive solutions that cover other end uses within a wastewater treatment plant and not just primary and secondary treatment processes. Can such solutions be considered under this proposal even if it is not addressing primary and secondary treatment processes? Majority of the savings will still come from primary and secondary process enhancements. |
| A.34 | Your application must focus on advanced primary and/or secondary treatment. Solutions focused in other areas can be included as match funds. Please also see response to Q.15. |
| Q.35 | 1. Who is responsible for measurement and verification? 2. Are we required to partner with an M&V firm as a part of this proposal? Or would M&V be performed by a CEC contractor? 3. Would the cost of performing M&V be part of total program budget if we are using a CEC contractor? |
| A.35 | 1. Applicants are required to have an independent third party conduct the measurement and verification (M&V) of their project during the demonstration phase. 2. The M&V contractor must be an independent third-party subcontractor. The project proposal should budget appropriately for M&V subcontractor cost, this subcontractor can be identified as part of the proposal or selected during the project before the M&V phase. The CEC will not perform the M&V. 3. Applicants can use CEC funds for the project M&V vendor. |
| Q.36 | Will solar + battery systems be allowed to submit? |
| A.36 | CEC funds cannot pay for solar and/or storage. However, these costs can be included as match if they are directly related to your project. |
| Q.37 | Under Group 1, should the advanced energy management and monitoring system focus on the entire dairy plant, or can the system focus on specific unit operations in the plant? For example, refrigeration and cold storage portion? |
| A.37 | Either approach is eligible. However, the applicant should carefully review the scoring criteria, Section IV.F and Section I.C.1 of the solicitation manual. Cost effectiveness is part of the scoring criteria and applicants should be aware that better value propositions are likely to receive more points under the scoring criteria. |
| Q.38 | We have a plant where the proposed technology underwent some pilot testing. We are proposing a more detailed assessment as a part of our proposal in response to GFO-20-309. Would this qualify as a demonstration project assuming that it meets all other minimum requirements of the solicitation? The technology will be permanently installed as a part of this approach.   This is an underutilized technology that provides significant energy savings. The results of evaluation through the CEC grant can be used to drive market transformation with other similar customers resulting in additional uptake of this technology |
| A.38 | Please refer to the project requirements for Groups I and II as indicated in Section I.C. to be sure that your proposed technology meets the requirements. Each group has specific target areas and proposals must meet all solicitation requirements to be eligible for funding. |
| Q.39 | We have a suggestion regarding the Grant Funding Opportunity (Advancing and Commercializing Energy Efficiency in California’s industrial, Agricultural, and Water Sector).   Our firm has the honor of working with several very compelling startup companies engaged in technology solutions that are likely to be very interesting to your agency. This draft GFO is directed towards technologies that are specific to the processing of waste and wastewater, this narrow focus does not support inclusion of several other water technologies we feel could be relevant to the intent of the GFO goals. We would like to encourage you to open up this language to accept technologies that expand this dialogue into all areas of potential interest. We would like to see technology deployment that works with general water facilities in support of energy cost savings. It seems to us that this GFO may be looking to support projects only in the wastewater arena. We would like to see the application of energy technologies included AND for the GFO to open up the solicitation to more than just wastewater treatment facilities.    We see nothing but benefits in expanding the current scope of technologies to include all technologies that may add additional benefits such as electricity generation from the water grid infrastructure. This approach could then apply the electricity and/or cost savings to a waste / water treatment plant as an additional benefit to the operation of said facility. We appreciate your consideration of this matter. We are happy to address further questions if clarity is needed. |
| A.39 | Thank you for your suggestions on opportunities for increasing eligibility for promising new technologies for the water sector in general. However, we will not be expanding the scope of GFO-20-309.  The CEC will be developing research initiatives for the next EPIC Investment Plan this spring. This investment plan will cover investments from 2021 to 2025. You can participate in upcoming workshops, including for the next EPIC Investment Plan, by signing up for the CEC list serve at:   * <https://ww2.energy.ca.gov/listservers/index_cms.html>   In addition, you may also want to sign up for the CEC’s Empowerinnovation.net. This is a curated database that informs you of CEC and other funding opportunities. |
| Q.40 | We plan on applying for Opportunity in the Wastewater category as a primary and the Dairy Industry as a secondary. Do we need to have an identified partner for our submittal? Clarification: do we need to have an actual Wastewater Treatment plant (site) identified and legally partnered or an actual named Dairy Processing plant or farm (site) as a partner included in the submittal? |
| A.40 | For Group 1, Section I.C.1 requires the following: a) applicants must propose at least five project sites and at least three of these sites must be identified by name with commitment letters at the time of application, b) provide an installation price per site, c) identify all project fixed and variable costs, and d) provide an estimated GHG reduction potential per site.  For Group 2, Section I.C.2 requires that the demonstration be at a municipal wastewater treatment facility identified by name with a commitment letter at the time of application. The wastewater treatment facility must currently treat at least one million gallons a day and must treat a minimum 500,000 gallons average daily flow during the monitoring and verification phase using the proposed advanced treatment process.  Please refer to Section III.D.10 and Attachment 10 for Commitment Letter(s) requirements from project demonstration site(s). |
| Q.41 | Would you consider expanding the scope to technologies that harvest carbon free inexpensive electricity from the general water grid infrastructure (pressure reducing valves) and then applying the electricity and/or cost savings to a wastewater treatment plant? Example (replace a Pressure Reducing Valve located in the vicinity of a wastewater treatment plant with our technology and connecting the electricity produced directly into the plant or apply the power produced for the grid to the wastewater plant? |
| A.41 | The project as described is not eligible for this solicitation. Please see response to Q.15 and Section I.C.2 for research focus areas. |
| Q.42 | Regarding the Wastewater Treatment Plant: your suggested list of technologies is specific to the actual processing of waste and wastewater. Our technology works with the general facility in conjunction with integrated Pressure Reducing Valves that leads to major energy cost savings; are you looking for specific processing technologies or will other alternative energy technologies that work with the infrastructure but not the process be considered? |
| A.42 | The purpose of Group 2 is to demonstrate advanced treatment processes and technologies for municipal wastewater. The project as described in Q41 regarding use of pressure reducing valves in the water grid and applying the savings to a nearby wastewater treatment plant is not eligible for this solicitation. Please see response to Q.15 for focus areas of Group 2. |
| Q.43 | Would projects like the Purewater program being implemented in San Diego or the Purewater program in Oceanside be considered as wastewater treatment? Are you only referring to traditional wastewater treatment plants or can we apply our technology to reduce energy costs and GHG admissions to non-traditional wastewater treatment? |
| A.43 | Projects like the Purewater programs are not eligible for this solicitation. Municipal wastewater treatment is the focus of Group 2. Please see response to Q.15. |

1. http://www.cdfa.ca.gov/Statistics/ [↑](#footnote-ref-2)