DOCKETED	
Docket Number:	22-RENEW-01
Project Title:	Reliability Reserve Incentive Programs
TN #:	255066
Document Title:	Michaels Energy Comments - DEBA DER GFO Draft Solicitation Concept
Description:	N/A
Filer:	System
Organization:	Michaels Energy
Submitter Role:	Public
Submission Date:	3/14/2024 9:18:58 AM
Docketed Date:	3/14/2024

Comment Received From: Michaels Energy
Submitted On: 3/14/2024
Docket Number: 22-RENEW-01

DEBA DER GFO Draft Solicitation Concept

Additional submitted attachment is included below.

March 14, 2024

California Energy Commission
715 P Street
Sacramento, CA 95814

REFERENCE:
Docket No. 22-RENEW-01: DEBA DER GFO Draft Solicitation Concept

Dear Commission Members and Staff:

Michaels Energy appreciates the opportunity to comment on the CEC's DEBA DER GFO Draft Solicitation Concept. Michaels manufactures thermal energy storage (TES) systems in California for use in chilled storage applications. When TES-equipped facilities are synchronized in response to a demand response signal or a peak period, Michaels' proprietary thermal energy storage system can yield utility-scale energy storage for eight to ten hours. Our solution utilizes food-safe materials, and unlike Li-ion batteries and other technologies, does not present a fire hazard or even require a grid connection.

When used for cold storage, these systems allow energy-intense refrigeration equipment to be shut down during times of high electrical grid stress. Chilling equipment can be re-started during off-peak hours when electricity is more affordable, and the chilling systems run more efficiently. During peak periods when chilling equipment is shut down, the pre-cooled PCMs undergo phase transitions that absorb substantial amounts of thermal energy while holding temperatures constant. This provides stable temperatures within refrigerated spaces for extended periods—over 8 hours—without the need for energy-intensive cooling equipment. Essentially, adding thermal energy storage allows refrigeration systems to act as a long-duration battery, providing a cost-effective, behind-the-meter solution for demand and energy management.

Michaels responds to the DEBA Draft solicitation questions in the following pages.

Michaels Energy, Inc.
608-785-1900
Info@michaelsenergy.com

400 Main St., Ste. 200
La Crosse, WI 54601
www.michaelsenergy.com

MichaelsEnergy

Solicitation Requirements

1. ***Are the minimum and maximum award amount funding levels and match requirements appropriate for each Group?***

   The minimum award amount of $1 million aligns well with the scope and requirements for implementing Thermal Energy Storage (TES) solutions in refrigerated facilities, providing adequate funding to support project development and deployment. However, the available funding limit of $60 million may be insufficient, particularly given the smaller scale and scope of projects within Group 2 and 3. Given the significant potential impact of large DER implementations, such as TES systems, it is recommended to maintain the maximum award limit at $20 million while increasing the overall funding allocation. By expanding the available funding pool, the California Energy Commission can better support the implementation of a broader range of large-scale DER projects, facilitating greater grid reliability, energy resilience, and sustainability across the state.

2. ***Is the proposed timeline in the solicitation, including application submission windows, reasonable to accommodate project proposals for project group?***

   The proposed timeline in the solicitation, including the application submission windows, presents certain challenges in identifying large behind the meter customers. Extending the timeline for submission to September 2024 would offer several benefits, particularly in enabling more time to identify and secure customer sites. By providing additional time for project development and customer engagement, the California Energy Commission (CEC) could mitigate the risk of delays and enhance the likelihood of large DER implementations being executed in a timely manner. This extension would promote greater certainty in securing more customer sites, thereby facilitating more comprehensive and impactful DER projects. Adjusting the timeline to allow for a longer submission window until September 2024 would align better with the complexity and scale of large behind the meter DER projects, supporting successful implementation and achieving the objectives outlined in the solicitation.

Michaels Energy, Inc.
608-785-1900
Info@michaelsenergy.com

400 Main St., Ste. 200
La Crosse, WI 54601
www.michaelsenergy.com

3. ***Is it reasonable to allow project proposals that do not have all sites or customers pre-identified at the time of application? Are there any concerns with this approach?***

   By providing more time to identify customers upfront, as suggested in the previous response, the risk associated with incomplete customer identification can be mitigated. This approach supports more accurate forecasting of project results and enhances the overall success rate of behind-the-meter projects. Additionally, incorporating mechanisms for ongoing customer engagement and site identification throughout the project lifecycle can further strengthen project implementation and ensure alignment with program objectives.

   Alternatively, if the CEC chooses not to delay the application deadline to September 2024, another viable option is to establish a commitment date for the total load of DERs by a specified deadline, such as November 2024. This approach provides a clear timeline for project developers to finalize customer engagement and site identification without incurring penalties. By setting a commitment date, project developers are incentivized to expedite customer identification efforts while ensuring accuracy and feasibility. This also enables the CEC to maintain oversight and monitor progress towards achieving program goals, ultimately maximizing the impact and effectiveness of the solicitation. This commitment date approach is often used in Demand Response RFP's.

4. ***To mitigate the risks of funding multiphase projects, staff have proposed minimum deployment targets for multiphase projects under "Project Readiness" (25% by June 1, 2025, 50% by June 1, 2026, and 100% by June 1, 2027). Are these proposed deployment targets reasonable? What measures should the CEC take in the event of a deployment shortfall?***

   The proposed deployment targets for multiphase projects under "Project Readiness" are reasonable for Thermal Energy Storage (TES) projects, which typically require around 120 days for implementation. Achieving 25% deployment by June 2025 provides a feasible timeline for project development

and initial deployment. In the event of a deployment shortfall by a developer, it is essential for the CEC to implement measures to address these challenges. One effective approach is to require project developers to submit modified project development plans demonstrating how they intend to achieve the end goal by June 1, 2027. If the commitment date for the overall size of large DER projects is provided in November, as suggested, this would likely reduce the risk of projects falling short of their deployment targets, as it allows for more time for customer engagement and site identification, thereby enhancing the likelihood of achieving targeted results. This proactive approach ensures accountability and supports the successful implementation of multiphase projects within the specified timeline.

5. ***Is the proposed payment structure, with 50% of the award disbursed during project development, and 50% disbursed annually based on successful performance, adequate to ensure successful performance by DEBA assets, including during emergencies?***

   Yes.

6. ***This GFO proposes to amend the DEBA Program Guidelines, First Edition, to grant eligibility under Group 1 to projects connecting to the transmission grid behind-the meter at a load center not receiving distribution service. Please comment on whether this use case is of interest and, if possible, describe potential proposed projects and the reliability benefit they would offer.***

   No basis for response.

Project Requirements

7. ***Are the Project Group definitions and requirements clear and adequate to sufficiently target DER technologies and projects capable of supporting statewide grid reliability?***

   The Project Group definitions and requirements appear clear and adequate to target DER technologies and projects capable of supporting statewide grid reliability.

8. ***Are the minimum project capacity requirements for each Group reasonable or should they be adjusted?***

   The minimum project capacity requirements for each Group are reasonable, although there is potential for adjustment to enhance feasibility, particularly for Group 1. The current minimum project size of 6MW is attainable, especially with adequate time to identify customers with large sites of 100KW or larger. However, reducing the minimum size to 4MW could streamline the process and make achieving the target more manageable. This adjustment would offer greater flexibility and encourage broader participation by facilitating the inclusion of smaller-scale projects of 200KW that still contribute significantly to the program's overall objectives.

9. ***Are there any additional eligible technologies that should be included, or any currently eligible technologies that should be excluded?***

   There is a comprehensive selection of eligible technologies outlined in the GFO that aligns well with the program's objectives. These technologies encompass a wide range of distributed energy resources (DERs) and offer ample opportunities to address grid reliability.

10. ***Are the proposed performance pathways sufficient and flexible enough to accommodate the variety of eligible technologies and project groups targeted by this solicitation?***

    The proposed performance pathways are very flexible to accommodate the variety of eligible technologies and multiple ways to tailor behind the meter technologies to the customer's need.

11. ***What data should be required from DEBA Program participants for measurement and verification purposes as well as other public reports and initiatives?***

    For measurement and verification purposes, participants in the DEBA Program should be required to adhere to the Standard Protocol (Option A) outlined in the International Performance Measurement and Verification Protocol (IPMVP®). This protocol ensures consistency and reliability in assessing project

performance, aligning with established practices in other California programs. Additionally, participants should utilize revenue-grade Current Transformers (CTs) and electronic metering devices for all DER measurements, ensuring accuracy and compliance with utility M&V requirements. These metering devices should possess an ANSI C12 calibration certificate and meet program standards for accuracy and reliability.

In terms of public reporting, participants should provide load profiles along with relevant factors influencing these profiles, such as weather conditions and specific parameters pertinent to the technology application. This presentation allows for transparency and enables stakeholders to evaluate project performance effectively.

12. ***Are the metering and telemetry requirements for projects sufficient for measurement and verification purposes and determining performance of DEBA funded projects?***

    Answered in the question above.

Miscellaneous

13. ***What are the key performance indicators (KPIs) or metrics that should be used to evaluate and score VPP and Load Flex Aggregation projects and assess whether they will be reliable DEBA assets?***

    Key performance indicators (KPIs) and metrics should include several factors to ensure their reliability as Distributed Energy Resource (DER) assets within the DEBA Program. These may include:

    1. Demand Response Capacity: Measure the ability of VPPs and Load Flex Aggregation projects to respond to demand signals from the grid and adjust electricity consumption accordingly during peak demand periods.
    2. Grid Stability: Assess the impact of VPPs and Load Flex Aggregation projects on grid stability by monitoring frequency regulation, voltage

support, and overall grid reliability during normal and contingency conditions.

3. Reliability and Availability: Monitor the reliability and availability of VPPs and Load Flex Aggregation projects to ensure consistent operation and performance over time, including uptime percentages and response times to grid events.
4. Flexibility and Scalability: Measure the flexibility and scalability of VPPs and Load Flex Aggregation projects to accommodate changes in grid conditions, system requirements, and customer needs over time.
5. Economic Viability: Assess the economic viability of VPPs and Load Flex Aggregation projects by analyzing their cost-effectiveness, return on investment, and overall financial performance in delivering grid services and energy savings.

By utilizing KPIs and metrics, the CEC can effectively evaluate and score projects to determine their reliability and suitability as DEBA assets.

14. ***Are the proposed evaluation criteria, including preference points criteria, reasonable and sufficient to achieve the aims of funding DER projects that best bolster grid reliability in the state?***

To further align with the program's goals and timelines, additional emphasis should be placed on projects implemented in shorter timeframes. With the target date of June 1, 2025, and the requirement for 25% of project results to be delivered by that date, the timeliness of project completion should carry significant weight in the evaluation process. Prioritizing projects that demonstrate the capability to deliver tangible results in a short timeframe will ensure that the program effectively supports grid reliability and meets its objectives in a timely manner.

15. ***Are the provisions for supporting projects that either benefit or are located in DACs sufficient? What other application components could facilitate greater participation from projects located in or benefiting DACs?***

While the current provisions for supporting projects benefiting Disadvantaged Communities promote equity and inclusivity, there remains room for improvement to enhance DAC participation. Extending the application period would be beneficial for facilitating customer engagement, particularly for

behind-the-meter projects, which often require additional time and effort for development. This adjustment would align better with the timelines and complexities associated with DAC projects, thereby fostering greater involvement and ensuring that these communities receive adequate support and opportunities within the program.

16. ***What are the potential pathways for DEBA-funded projects across different Balancing Authorities and LRAs to continue to provide reliability value after the conclusion of the DEBA program?***

    No basis for response.

17. ***Are there any other recommended improvements or necessary clarifications for the CEC to consider for this draft solicitation concept document?***

    Based on the responses provided above, there are several recommendations for improvements that could enhance the effectiveness of the draft solicitation concept document. Considering the discrepancy in funding levels across different project groups, it may be beneficial to reassess the maximum award amount and available funding limit to ensure equitable support for all project types. Extending the application submission window could allow for more thorough customer engagement, particularly for behind-the-meter projects in Disadvantaged Communities (DACs). Providing a commitment date for the total size of large DER projects could mitigate risks associated with deployment shortfalls and facilitate more accurate forecasting of project outcomes. Placing greater emphasis on the timeliness of project completion in the evaluation criteria could incentivize projects that can be implemented within shorter timeframes which reduced risk.

    Additional clarification would be helpful around project development needing to occur in California. Many companies have staff across the United States to be cost-effective in the hybrid and remote work world. It makes sense to have the project be in California, benefit California's grid, and the manufacturing take place in California which is the case with our product. Can the project development labor such as engineering, take place in another state?

Thank you for your consideration, and for the opportunity to contribute to the advancement of the Distributed Electricity Backup Assets Program for California.

Sincerely,

Stan Nabozny

Stan Nabozny
Director of Thermal Energy Consulting
SPNabozny@michaelsenergy.com