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PowerFlex Comments on May 9, 2023 IEPR Workshop

Additional submitted attachment is included below.



May 23, 2023

California Energy Commission
Docket Unit, MS-4
715 P Street
Sacramento, CA 95814

Re: Docket No. 23-IEPR-05—PowerFlex Comments on May 9, 2023 Commissioner Workshop on Clean Energy Interconnection – Electric Distribution Grid

California Energy Commissioners and Staff:

PowerFlex appreciates the opportunity to comment on the California Energy Commission's (Commission's) May 9, 2023 Electric Distribution Grid workshop. PowerFlex is a leading installer, owner, and operator of distributed energy resources (DERs) including non-residential solar PV, energy storage, and electric vehicle supply equipment (EVSE). With more than 60 MW of customer-sited solar PV, 20 MWh of customer-sited energy storage, and 10,000 EVSE installed in California, we have significant experience with interconnection and energization timelines with utilities and jurisdictions throughout California. Additionally, PowerFlex uses Automated Load Management (ALM) at each of its EVSE sites to dynamically control the EVSE according to driver and site needs, often avoiding the need to upgrade customer- and utility-side infrastructure. With this experience and perspective in mind, PowerFlex offers the following comments.

EVSE Energization Timelines:

Most of PowerFlex's projects in California have avoided the need to go through utility service and energization processes, such as Rules 15, 16, and 29/45, using our ALM technology. With ALM, we are able to oversubscribe service nameplate capacity and operate EVSE charging to stay within the service's limits. With more than 400 sites in California using primarily Level 2 (L2) chargers, only a few have required transformer upgrades and thus triggered utility energization processes. However, we expect that in the future we will need to go through the energization process for our EVSE more often. The following factors could impact this:

- More sites are pairing EVSE with solar PV and energy storage. Multi-technology projects that require interconnection could also trigger utility energization processes for the EVSE
- Direct Current Fast Charger (DCFC) needs are increasing for certain customers that will require higher power
- Some sites need more L2 chargers than we could support, even through ALM, on the existing utility transformer

Comments on May 9, 2023, Workshop:

At the workshop, parties mentioned that load management and ALM are good first steps to avoid infrastructure buildout, but they are not sufficient for all sites. We agree that ALM cannot avoid infrastructure buildout in all scenarios, but we also contend that a more serious effort should be made within California to use load management and ALM, including software, onsite DERs, and/or other approaches, to reduce the need for infrastructure upgrades. As Pacific Gas and Electric noted in its Electric Vehicle Charge Network 2 Application, sites that deployed ALM in its initial Electric Vehicle



Charge Network pilot program saved between \$30,000 - \$200,000 per site on avoided infrastructure.¹ Thus, significant ratepayer and customer cost savings can be achieved through a more concentrated use of ALM in California. Even at sites that require infrastructure buildout and utility energization, the size of customer panels, transformers, and wires can be reduced by using ALM. Thus, cost savings can be achieved at most sites through load management strategies.

Beyond customer and ratepayer cost reduction, ALM enables the ability to control EV load and utilize it as a grid asset, improving the daily load shape of the grid and creating a more resilient grid during critical peak periods through participation in net peak load reduction programs like California's Emergency Load Reduction Program and Demand Side Grid Support Program.

Recommendations:

PowerFlex provides the following recommendations to the Commission to facilitate energization timelines and reduce the need and cost of infrastructure buildout to support EV charging:

- Prioritize load management/ALM in all future EVSE funding programs and solicitations. Doing so will result in fewer sites requiring utility energization, less expensive infrastructure needed to support EV charging, and a more reliable grid.
- Work with the Public Utilities Commission (CPUC) and utilities to develop more streamlined energization processes, especially for sites that are multi-technology and/or are using less common types of load management, such as battery storage to offset DCFC charging load.
- Continue to host workshops and venues for data and information sharing between parties to encourage broad stakeholder input and perspective.
- Require publicly-owned utilities and work with the CPUC to require investor-owned utilities to take into consideration power control and ALM systems into their determination of a system's overall capacity at the time of interconnection. This will facilitate the interconnection of more DERs, a collective goal of the State, facilitate a more accurate portrayal of available hosting capacity on a particular circuit, and avoid unnecessary and costly distribution upgrades.

PowerFlex appreciates the opportunity to provide these comments in response to the Commission's May 9, 2023 workshop and looks forward to collaborating with the Commission on this topic in the future. Respectfully,

A handwritten signature in black ink that reads "Raghav Murali".

Raghav Murali
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¹ Pacific Gas and Electric Company Electric Vehicle Charge 2 Prepared Testimony, page 2-10, October 26, 2021.