

DOCKETED

Docket Number:	23-ERDD-01
Project Title:	Electric Program Investment Charge (EPIC)
TN #:	262545
Document Title:	Josh Harmon Comments - PG&E Comments RE Electric Vehicle Charging with Solar Microgrids – EPIC Scoping Workshop
Description:	N/A
Filer:	System
Organization:	Josh Harmon
Submitter Role:	Public
Submission Date:	4/1/2025 4:45:24 PM
Docketed Date:	4/1/2025

*Comment Received From: Josh Harmon
Submitted On: 4/1/2025
Docket Number: 23-ERDD-01*

**PG&E Comments RE Electric Vehicle Charging with Solar
Microgrids – EPIC Scoping Workshop**

Additional submitted attachment is included below.



Josh Harmon
CEC Liaison
State Agency Relations

1415 L Street, Suite 280
Sacramento, CA 95814
(628) 777-4138
Joshua.Harmon2@pge.com

1 April 2025

California Energy Commission
Docket Number 23-ERDD-01
715 P Street
Sacramento, CA 95814

RE: CEC EPIC Scoping Workshop on EV Charging and Solar Microgrids

Pacific Gas and Electric Company (PG&E) appreciates the opportunity to comment on the California Energy Commission's (CEC) EV Charging and Solar Microgrids – EPIC Scoping Workshop held on March 18, 2025.

PG&E would like to support DER Maximized EV Charging and use cases through its Flex Connect programs.

PG&E would like to offer CEC and EPIC applicants the ability to identify and enroll pilot sites that can be used to collect data and validate key hypothesis about customer experience, DER value, cost, and operational challenges of a flexible connection.

We have included detailed responses to select CEC Scoping the questions below.

DER Maximized EV Charging

What verifications are needed to ensure power control systems' interoperability with IOUs and coordination with customer energy management systems?

PG&E has tested and certified customer-owned telemetry (COT) vendors listed [here](#) for interoperability with PG&E's Common Smart Inverter Profile (CSIP)-certified IEEE 2030.5 solution. Customers are free to select other gateway or aggregator vendors; however, new solutions would be required to be tested and configured for interoperability with PG&E's CSIP-certified IEEE 2030.5 headend server, which could result in additional time and costs for the customer.

The list of certified-interoperable vendors is expected to expand as PG&E continues to work with vendors to provide COT solutions. For vendors wishing to certify interoperability with their gateway or aggregator with PG&E or if customers wish to use a gateway or aggregator platform not yet certified-interoperable by PG&E, PG&E will provide a cost estimate and timeline to complete an evaluation of the requested device. For more information, please refer to the [PG&E Distribution Interconnection Handbook COT requirements](#).

PG&E will produce a day-ahead capacity forecast and automatically communicate the forecast with the customer's equipment in the form of hourly limits. These limits may be updated in real-time due to emergency conditions. As shown in Figure 1, Overall Communication Architecture, the DERMS system will communicate with a cloud-based aggregator using the IEEE 2030.5 protocol. The aggregator provides a stable point of communication that minimizes the number of connections that the DERMS system must make. The aggregator will communicate with local devices that are owned by the customer. The Local Site Communication Device or DER Gateway will be responsible for receiving daily schedules that allow higher power limits and translates the schedule and control messages to a protocol that is supported by the Local Site Control Device or Edge Controller. The Local Site Control Device will be the interface to the controllable energy system that the customer is operating. Telemetry information can be provided by the Local Site Control Device, another data acquisition system, or directly from the meters. If the customer has a Local Site Control Device that can communicate directly with the Aggregator then that would also be acceptable.

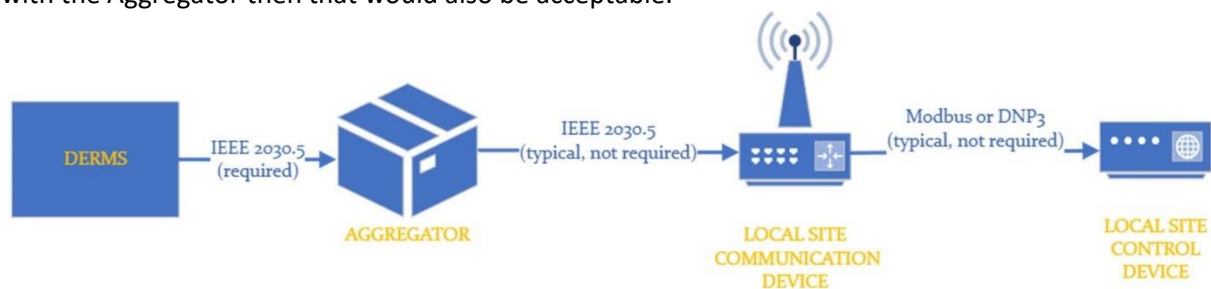


Figure 1: Overall communication architecture

What kinds of data/measurements should be collected to align with goals of IOU flexible service pilots?

Apart from the telemetry data required to operate the control site, PG&E wants to collect direct feedback on the customer experience, cost, incremental customer benefits, and operational challenges of having a flexible service connection site. Additionally, PG&E collects information regarding compliance to the constraints, constraint monitoring, and benefits to the customer via added capacity and usage that were otherwise not available. PG&E would like to establish if such a service connection can be a permanent offering and if customers find flexible service connections acceptable as a long-term solution.

How can the projects create DER valuation frameworks to inform additional incentives or shared savings models for self-generation distribution upgrade deferrals?

At present, flexible service connections are designed to accelerate the energization as a bridge until full energization is permitted by completion of capacity infrastructure upgrade. In that case the primary beneficiary of the flexible service connection is the participating interconnected customer. Additional incentives may not be required to encourage participation in the program. PG&E would recommend waiting for more data about the customer experience, cost, benefits, and operational challenges of a flexible service connection site prior to considering additional incentives.

Development and exploration of additional DER valuation frameworks are best conducted as part of the relevant regulatory proceedings where there are active discussions on this topic rather than through individual demonstration projects. Utilizing DERs to provide distribution services is a complex topic that

has been evaluated as part of the Distribution Investment Deferral Framework and is currently being explored in a number of CPUC regulatory proceedings including the High DER Proceeding (Rulemaking (R.) 21-06-017) which is examining how DERs and load flexibility can be incorporated into utility grid planning and the different models for how DER services can be valued and procured for the benefit of the all customers.

Should there be a minimum size for the integrated solar microgrid (e.g. 1.5 MW solar, 3MWh storage)?

PG&E does not have a minimum size requirement to participate in Flex Connect; however, smaller projects may not see the benefit of the additional costs associated with DER installation and Flex Connect integration.

Utility Coordination

How do we verify support from IOUs in the application phase?

Request for partnerships with PG&E for EPIC projects can be submitted through [Emerging Electric Technology Programs](#). For inquiries about Flex Connect please reach out to FlexConnect@pge.com.

Is it feasible for IOUs to treat these projects as combined systems, alleviating the need for separate energization and interconnection requests?

PG&E would not be able to combine microgrid projects into a single process or require a single application because these projects may be subject to Rule 15, Rule 16, Rule 21, and Rule 29. The tariff requirements for each interconnection are unique and changing the requirements are outside of PG&E's jurisdiction; however, as indicated in the previous response, if the applicant can contact PG&E we can streamline the process and provide a single point of contact (account representative or customer representative) who collate the applicant information and minimize the administrative overhead required for the project.

PG&E would encourage the CEC to ensure that projects that are awarded CEC grants are compliant with existing rules and tariffs.

How should the CEC coordinate with IOU staff to align research goals?

PG&E would like to partner with CEC in identifying use cases or specific technology topics that have been a barrier in getting Flex Connect sites to scale. Furthermore, interoperability is not standardized today but costs could be lowered and speed improved by aligning on reference architectures that could be certified or pre-validated.

Use Cases

What kinds of sites would benefit most from solar microgrid-integrated EVSE? Where are they located?

PG&E presumes any site which is limited by a capacity constraint can be a good fit for this use case. The Flex Connect pipeline contains applications that are not limited to a geographical region. However, in areas where there are multiple applicants on the same constrained asset the cost to benefit ratio of microgrid/DER/Flex Connect becomes low.

How should "grid-constrained" be defined?

In the context of Flexible Service Connections "grid constrained" refers to any time a customer applying for service is not able to connect their full load to the grid due to a constraint on grid equipment. The Flex Connect program can only be offered to sites that are limited by a primary constraint (feeder or bank).

PG&E appreciates the opportunity to respond to the scoping workshop and looks forward to continuing to collaborate with the CEC. Please reach out to me if you have any questions.

Sincerely,

Josh Harmon
State Agency Relations