

Summary of the California Public Utilities Commission's High DER Future Grid Study Workshop #3

Wednesday, May 1, 2024 | 11 a.m. - 5 p.m. PT

Overview:

On May 1, 2024, Gridworks facilitated the final of three workshops for the California Public Utilities Commission's (CPUC or Commission) 2024 Future Grid Study workshop series under Task 7 Track 2 of Rulemaking (R.) 21-06-017. Throughout this workshop series, Gridworks, a contractor supporting the Commission, facilitated conversations between utilities, stakeholders, and the CPUC on how to ensure additional distributed energy resources (DERs) installed provide maximum value to the grid through effective distribution system operations. This three-part series identified operational needs, assessed gaps and developed recommendations to address gaps, and provided an opportunity for parties to collaborate to modernize the electric grid for a high DER future. Each workshop in the series built upon the previous workshop to assist parties to develop their input on the rulemaking.

The third workshop focused on developing recommendations for five topic areas:

1. Implementation of Flexible Generation Interconnection
2. Scoping of IOU system upgrades to support dynamic rates
3. DER Visibility to
 - a. DSOs
 - b. CAISO
4. Roadmap for Distribution-Level Grid Services from Flexible Load Energization
5. Data Sharing in a High DER Future

Presentation slides, the Operational Needs Gaps Assessment and the workshop recording are posted online.

Workshop Materials:

- [Workshop Agenda](#)
- [Presentation Slides](#)
- [Recording](#) (Passcode: c1pF200^) – includes transcript and chat log
- [Operational Needs Gaps Assessment](#) (download/excel file)
- Materials for all three Workshops are posted at <https://gridworks.org/initiatives/california-future-grid-study/>

Workshop Objectives:

- A. Review the Operational Needs and Gaps identified in response to key questions in the Amended Scoping Memo in Rulemaking R.21-06-017.

“What are the operational needs necessary to efficiently operate a high DER grid, unlock economic opportunities for DERs to provide grid services, limit market power, reduce ratepayer costs, increase equity, support grid resiliency, and meet State policy objectives?”

“What are the existing gaps and barriers in achieving the needs identified above within our current Distribution System Operator (Utilities)?”

- B. Co-create solutions to the identified gaps and barriers.

“What are the potential solutions in overcoming these barriers?”

Workshop Structure:

Workshop #3 spanned six hours and covered five discussion topics. There were 127 participants in total. Throughout the workshop, the audience had the ability to use the chat feature in Zoom to ask questions and provide comments.

Commissioner Houck’s Deputy Chief of Staff, Amanda Singh, provided welcoming remarks at the beginning of the workshop. Gridworks then provided an overview of the preliminary Operational Needs Gap Assessment, including how it was developed and planned additions. Gridworks dedicated most of the workshop to facilitated discussions of the five topics named above. For each discussion topic, Gridworks provided an overview of the topic area and discussion questions to prompt dialogue. The summaries below provide an overview of each topic and a summary of the discussion.

Workshop Summary:

1. Implementation of Flexible Generation Interconnection

Overview: [Slide #13](#) from the workshop presentation summarizes the key dockets and recent CPUC actions related to Flexible Generation Interconnection.

Discussion: Participants discussed some of the limitations in tracking progress on this topic through the existing Grid Modernization Plan progress reports, General Rate Cases, and reporting on smart grid investments. Most of the discussion focused on potential actions the CPUC could take to improve interconnection processes overall and accelerate implementation of flexible generation interconnection.

Participants shared the following possible actions to implement Flexible Generation Interconnection:

- Several participants raised significant concerns with the current interconnection process and recommended that the CPUC consider hiring an independent entity to manage

interconnection, which could include a more specific focus on the Integration Capacity Analysis (ICA) maps.

- Several participants raised concerns with the accuracy of the ICA maps and that the inaccuracies in the analysis may not support using Limited Generation Profiles in Flexible Interconnection.
- A stakeholder proposed a statewide DER Registry to track DER assets
 - Registry would provide a standard way to track asset attributes
 - Several stakeholders expressed support for this recommendation
- Technical support to the CPUC – Some participants identified additional engineering support to the CPUC to assist in the review of the ICAs and potentially more frequent review of the IOU Grid Modernization Plans (currently reviewed in General Rate Cases approximately every 4 years). IOU's also provide semi-annual [Grid Modernization Progress Reports to the CPUC](#).
- A participant noted that implementation of flexible interconnection is currently covered in multiple CPUC proceedings and sought feedback if consolidating the focus could facilitate faster implementation.

2. Scoping of IOU system upgrades to support dynamic rates

Overview: [Slide #15](#) from the workshop presentation summarizes the key dockets and recent CPUC actions related to dynamic rates.

Discussion: The discussion included:

- updates from Energy Division summarizing the proposals in the demand flexibility proceeding;
- IOU updates on dynamic pricing pilots;
- potential impacts of spikes in distribution system demand just outside high price periods;
- different approaches for managing distribution capacity that can complement pricing signals; and
- alternative approaches for setting distribution-level prices.

Some participants also recommended providing Load Serving Entities (LSEs) better price signals to use flexible demand to lower forecasted peak loads.

3a. DER Visibility to DSOs

Overview: In setting context for this discussion, [slides #18-19](#) from the workshop presentation summarized feedback from participants in prior workshops on this topic.

Discussion: During this session, IOUs briefly discussed current capabilities for DER visibility based on approved Grid Modernization Plans. Stakeholders engaged in discussion over the necessary level of visibility of DERs at different levels of the distribution grid. IOU

representatives described their current reporting to the CPUC through Grid Modernization Progress Reports.

3b. DER Visibility to CAISO

Overview: [Slide #21](#) summarized feedback from participants in Workshop #1 and identified two primary gaps for discussion on this topic:

1. What is the correct level of visibility to the CAISO?
2. How to coordinate use of DERs that could be used for grid services at either/both distribution and transmission level?

Discussion: Staff from the California Independent System Operator (“CAISO”) started the discussion with an overview of how day-ahead and 15-minute load forecasts inform operational decisions. The CAISO currently has good information on behind-the-meter (“BTM”) solar that is used for forecasts but lacks information on other types of DERs. As these resources grow, the CAISO sees a need for aggregated information on other DERs similar to information available on BTM solar. In this initial discussion, CAISO staff recommended a statewide data platform to share this information, similar to the existing DG Stats system.

Some stakeholders that have advocated for a statewide data sharing platform agreed with the CAISO’s recommendation.

Other participants reiterated the importance of coordination between the transmission- and distribution-system operators on data sharing and operations.

4. Roadmap for Distribution-Level Grid Services from Flexible Load Energization

Overview: [Slides #24-25](#) provided context on how flexible load energization can meet near-term customer needs and set a foundation for more complex distribution-level grid services.

Discussion: Energy Division staff started the discussion by highlighting the importance of avoiding delays and unnecessary upgrades in energization requests for beneficial electrification, such as electric vehicles charging. In addition, they noted that future distribution-grid service opportunities may emerge as additional flexible loads are connected to the distribution system. After this initial discussion, staff from Cal Advocates reiterated support for this concept along with other meeting participants.

Representatives from the IOUs discussed their pilot projects related to flexible energization and the volume of requests they are receiving for flexible load energization. Some IOUs are seeing an uptick in requests while others have not seen this growth/challenge yet.

The second section of the discussion focused on building distribution-level grid services markets.

A set of participants proposed a statewide market platform for DER grid services, which would expand the set of market actors and encourage consistent approaches across IOU service

territories. Some participants expressed support for this approach, while others questioned if the benefits would support the costs of establishing the platform.

Some participants suggested alternative approaches may be possible where a large, sophisticated customer negotiates an agreement directly with other customers to share capacity on a constrained circuit. and opportunities where dynamic pricing is complemented by agreements for capacity services.

Representatives from the IOUs discussed that they expect load growth from transportation electrification, which could provide opportunities for grid services. However, requests for distribution deferral have been challenging and markets for operational flexibility remain nascent. Despite these challenges, identifying the opportunities for grid services from flexible loads earlier in the distribution planning process could improve the likelihood of success. Finally, IOU representatives expressed the importance of integrating grid service market opportunities into grid operations.

5. Data Sharing in a High DER Future

Overview: [Slide #28](#) summarized suggestions on data sharing provided in prior workshops. Gridworks asked participants how the CPUC can enhance data access.

Discussion: A number of participants asked how this request interfaced with the existing proceeding on data access (R.22-11-013), which has proposed a working group to address a number of specific questions. Energy Division staff acknowledged the potential overlap, but noted that the working group has not commenced and that stakeholder feedback on data access in this docket would still provide useful information on potential next steps for the CPUC.

Several participants have advocated for a third-party, statewide data sharing platform throughout the workshop series and explained their reasons for this recommendation.

A participant noted that this proceeding was focused primarily on distribution grid data while the other proceeding is focused on consumption data and program participation.

Several parties concurred on the importance of this topic and urged near-term action by the CPUC to continue dialogue on how to improve data sharing while protecting private information.