

**BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Modernize the
Electric Grid for a High Distributed Resources
Future.

Rulemaking 21-06-017
Filed June 24, 2021

**CLEAN COALITION RESPONSE TO MOTION OF ENPHASE ENERGY, INC. TO AMEND
SCOPING RULING AND SCHEDULE TO ADDRESS OPTIONAL FLEXIBLE CONNECTION
AGREEMENTS AND THE UNDERWRITERS' LABORATORY 3141 STANDARD FOR
POWER CONTROL SYSTEMS IN INVESTOR-OWNED UTILITIES' ENERGIZATION RULES**

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I. INTRODUCTION

Pursuant to Rule 11.1 of the Rules of Practice and procedure of the California Public Utilities Commission (“the Commission”), the Clean Coalition respectfully submits this response to the May 6, 2024, *Motion of Enphase Energy, INC.* (“Enphase Energy”) to Amend Scoping Ruling and Schedule to Address Optional Flexible Connection Agreements and the Underwriters’ Laboratory 3141 Standard for Power Control Systems in Investor-Owned Utilities’ (“IOUs”) *Energization Rules*. The Clean Coalition supports the Motion, which will help harmonize the work that has been done in the Rule 21 interconnection proceeding (“R. 17-07-007”) with the development of the record in this proceeding. Standardizing the contracts and technical requirements for flexible connection agreements (“FCAs”) will enable deployments of distributed energy resources (“DER”) in locations that were previously considered cost-prohibitive due to the need for a costly main panel or distribution infrastructure upgrade. We also note that the Motion aligns with the core recommendations laid out in the 2023 Integrated Energy Policy Report (“IEPR”) to improve the resource procurement process, including (1) “evaluate utility interconnection and energization processes to identify opportunities for streamlining, automation, and eliminating redundant steps,” and (3) “encourage strategies and technologies that allow more flexible service connections to the grid and maximize use of available infrastructure capacity.”¹ The success of a “high DER future” is highly dependent on having standard and streamlined interconnection processes in place that enable efficient and safe resource deployments. We believe that it is appropriate for the Commission to adopt the Motion and amend the Scoping Memo to incorporate discussion of FCAs.

¹ 2023 IEPR, at p. 5.

II. DESCRIPTION OF PARTY

The Clean Coalition is a nonprofit organization whose mission is to accelerate the transition to renewable energy and a modern grid through technical, policy, and project development expertise. The Clean Coalition drives policy innovation to remove barriers to procurement and interconnection of DER — such as local renewables, demand response, and energy storage — and we establish market mechanisms that realize the full potential of integrating these solutions for optimized economic, environmental, and resilience benefits. The Clean Coalition also collaborates with utilities, municipalities, property owners, and other stakeholders to create near-term deployment opportunities that prove the unparalleled benefits of local renewables and other DER.

III. COMMENTS

A. Approving Enphase Energy’s Motion will better harmonize the High DER proceeding with the Rule 21 interconnection proceeding.

The 2020 Interconnection Working Group 4 Final Report (Issue F) addresses changes to the interconnection rules needed to enable operational flexibility, suggesting “that capability [operational flexibility] will only be available after the CPUC develops rules for contractual relationships between utilities and DER system owners through a stakeholder process.”² Work done to further refine the Integration Capability Analysis (“ICA”) and learnings from Pacific Gas & Electric’s (“PG&E”) operational flexibility pilot are moving the needle forward, but standardizing contracting and exploring applications for power control systems (“PCS”) in a stakeholder process remain essential steps needed to unlock the full value of DER. FCAs provide the distribution operator with greater control of the distribution grid due to increased flexibility, which can be quite beneficial in a number of different use cases, and significantly increase the number of possible locations to site DERs for both residential and non-residential customers.

Sites that trigger a distribution upgrade due to a request for increased service—either for load or generation—have limited options, most of which tend to be costly or require a long lead time. One option under development the Clean Coalition is aware of is the use of a physical limiter as a tool to maximize a site’s ability to import or export energy without triggering an infrastructure

² Working Group 4 Final Report, at p 82-84.
<https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M345/K416/345416776.PDF>

upgrade, which is a step in the right direction, albeit one that stops short of the functionality/benefits of FCAs. Instead of setting a hard ceiling on imports/exports, the terms of an FCA may allow a site to respond to utility signals in a number of different cases, eliminating the need for an upgrade (for that project) and providing additional benefits to the grid.

Creating a clear framework for FCAs will help unclog interconnection queues and reduce the need for costly distribution upgrades triggered by a single project. Projects that take utility engineers the greatest amount of time to study and result in the highest interconnection costs are almost always the ones where a grid upgrade is required. Under the status quo, an interconnection application will often be withdrawn and abandoned in the event that a costly upgrade is required, or the project design may be adjusted (and a new application submitted). In either case, the lack of viable alternatives to an expensive infrastructure upgrade results in a larger-than-needed amount of utility resources dedicated to a single project when applications are withdrawn or resubmitted. Therefore, deploying DERs sized appropriately to meet the needs of a site that can be operated in such a way as to fit in the constraints of the existing system is a far more ideal outcome for the ratepayers and the DER-system owners.

B. Approving the Motion will help reduce ratepayer costs of achieving state climate and energy goals.

Given the high price tag associated with decarbonization and electrification, the potential of FCAs to reduce ratepayer costs should not be overlooked. The electrification impacts study conducted by Kevala concluded that around \$50 billion will need to be invested in distribution grid upgrades by 2035 to handle increased load from electrification.³ Even if the true cost ends up being closer to the \$26 billion estimated by the Cal Advocates' Distribution Grid Electrification Model ("DGEM"),⁴ the Clean Coalition strongly believes that it is in the best interest of the ratepayers for the Commission to develop a myriad of solutions to mitigate costs wherever possible. For example, an applicant for Net Energy Metering ("NEM") project sized under 1 MW is only required to cover the cost of a standard interconnection fee, not all upgrade-related costs. Thus, a DER deployment with PCS and an appropriate FCA will save the

³ <https://www.kevala.com/resources/electrification-impacts-study-part-1>

⁴ <https://www.publicadvocates.cpuc.ca.gov/press-room/reports-and-analyses/distribution-grid-electrification-model-findings>

ratepayers money as compared to a project interconnected normally that triggers a distribution system upgrade. In areas where the grid is significantly constrained, a single deployment can lead to the need for upstream upgrades, as far as the substation. The image below shows that the timeline for a distribution upgrade in PG&E’s service territory is at least one year and can take as long as seven years—and cost millions of dollars—depending on the type of upgrade.

Table 1: Representative Timelines for New Capacity Projects From PG&E

Scope of Capacity Project (PG&E)	Current Timeline (Years)
Distribution line work to increase capacity or reconfigure circuits	1-3
Add a new circuit from an existing substation	2-3
Add or replace a substation transformer at an existing substation	3-4
Build a new substation	5-7

Source: PG&E responses in High DER Proceeding. [Answers to Administrative Law Judge’s Ruling Seeking Additional Information on the Distribution Planning Process.](https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M505/K839/505839889.PDF)
[https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M505/K839/505839889.PDF.](https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M505/K839/505839889.PDF)

FCAs will enable a way to use the existing distribution grid more efficiently, reducing the cost shouldered by the ratepayers. In addition, the ability to deploy a higher penetration of DER on the existing system will help reduce stress on the transmission grid, avoiding congestion, line losses, and costly infrastructure upgrades.

IV. CONCLUSION

The Clean Coalition advocates that the Commission should adopt the Motion of Enphase Energy and amend the Scoping Memo. We appreciate the opportunity to respond to the Motion.

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