BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Modernize the Electric Grid for a High Distributed Energy Resources Future.	Rulemaking 21-06-017 Filed June 24, 2021

CLEAN COALITION COMMENTS ON ASSIGNED COMMISSIONER'S AND ADMINISTRATIVE LAW JUDGE'S RULING SEEKING ADDITIONAL INFORMATION FROM PARTIES, SETTING FORTH FURTHER DIRECTION, AND MODIFYING SCHEDULE FOR TRACK 3

/s/ BEN SCHWARTZ
Ben Schwartz
Policy Manager
Clean Coalition
1800 Garden Street
Santa Barbara, CA 93101
Phone: 626-232-7573
ben@clean-coalition.org

March 13, 2025

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

Order Instituting Rulemaking to Modernize the Electric Grid for a High Distributed Energy Resources Future.	Rulemaking 21-06-017 Filed June 24, 2021

CLEAN COALITION COMMENTS ON ASSIGNED COMMISSIONER'S AND ADMINISTRATIVE LAW JUDGE'S RULING SEEKING ADDITIONAL INFORMATION FROM PARTIES, SETTING FORTH FURTHER DIRECTION, AND MODIFYING SCHEDULE FOR TRACK 3

I. INTRODUCTION

Pursuant to Rule 6.2 of the Rules of Practice and procedure of the California Public Utilities Commission ("the Commission"), the Clean Coalition respectfully submits these reply comments on the *Assigned Commissioner's and Administrative Law Judge's* ("ALJ") *Ruling Seeking Additional Information from Parties, Setting Forth Further Direction, and Modifying Schedule for Track 3*, issued on February 7, 2025 and the *Email Ruling Granting Schedule Amendment*, issued on February 20, 2025. Clean Coalition strongly supports the Commission's choice to dedicate time to creating standard terminology and a framework surrounding flexible service connection agreements ("FSCAs"). FSCAs represent a huge opportunity to more effectively utilize the existing grid, helping to minimize costs as the state decarbonizes and electrifies in an equitable manner. We urge a holistic approach to this subject that includes consideration of key issues such as the need for accurate/actionable data, efficient data sharing protocols, and how FSCAs can help unlock widespread resilience.

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

1. ***In response to the SIO Reports, parties generally supported prioritizing flexible grid connections, interconnection and grid services, operational flexibility with firm/non-firm capacity, and non-firm export/import limits in Track 3 of this rulemaking. Given these initial comments, where do parties believe implementation of changes will be most effective in ensuring that Distribution System Operators and DERs have the necessary flexible grid connections to enable the use cases outlined in the SIOWG report?***

The single most important change continues to be ensuring that accurate and actionable data is available via the ICA maps. For example, more than 80% of the major feeders in the downtown Santa Barbara area show no information on SCE's Generation ICA map, making them useless to a developer until a refresh is complete. This is equally true for a 100-kW project interested in a flexible connection and for a 1 MW project. Similarly, on the load side, it is unclear if SCE's maps are accurate, much less actionable in the interconnection process. Without accurate information on both the generation and load sides, an interested party will still be stuck submitting an application just to get up-to-date information from the utility about the actual hosting capacity on a feeder. Clean Coalition continues to urge the Commission to hold the utilities accountable on the ICA maps and ensure that prior directives are being complied with. A lack of accurate and actionable grid data leaves everyone guessing.

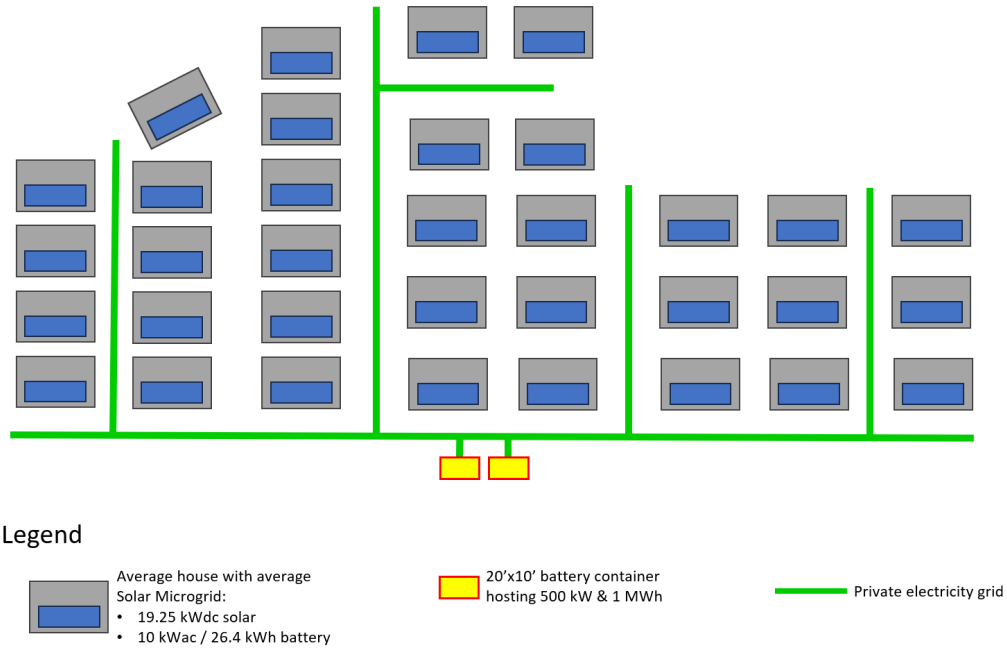
Following improvements to ICA maps, the legal and technical constructs must be set so that any party interested in a flexible grid connection can understand and complete the process in a timely manner and operate their connected systems in a safe manner. Promoting certainty in all steps of the process is critical for widespread success and adoption.

2. ***How can flexible grid connections and associated tools contribute to meeting the needs of a decarbonized future with regards to addressing timely energization (medium and long term), including distribution system capacity shortfalls, equitable access to the grid, and cost containment?***

Distribution feeders in disadvantaged communities are known to have less available capacity than feeders in non-disadvantaged communities. See the 2021 study by Brockway, Conde, and Callaway, which found amongst other things, that "over half of residential households served by

PG&E and SCE (57 and 59%, respectively) lack adequate hosting capacity for 4.5 kW of solar PV."[1] Widespread electrification necessitates far more local generation and will lead to far more demand for electricity. Combined with rapidly increasing spending on the distribution and transmission grid and long waiting times for infrastructure upgrades to be completed and the circumstances are in place that will make it difficult to achieve California's climate goals in a timely and affordable manner.

Related is the policy issue of ensuring that the grid is ready to handle the massive housing buildout required to meet California's housing needs. Wherever possible we need to be building all electric and avoiding hooking up new gas infrastructure. Flexible connections have an important part to play. Consider the example of Sierra Blanca, a new housing community with 34 units that is facing a $30 million bill to cover the cost of a new substation and a yearslong wait for the construction to be completed.[2] Rather than rely on the high-cost electric grid, the Clean Coalition has proposed a design with a Solar Microgrid (solar+storage and load management) at each unit and a Community battery energy storage system.



[1] Inequitable access to distributed energy resources due to grid infrastructure limits in California, Brockway, Conde and Callaway, *available at* https://escholarship.org/uc/item/6pc2k2tv

[2] Sierra Blanca is not located in an electric investor-owned utility service territory. SoCal Gas is the local gas utility.

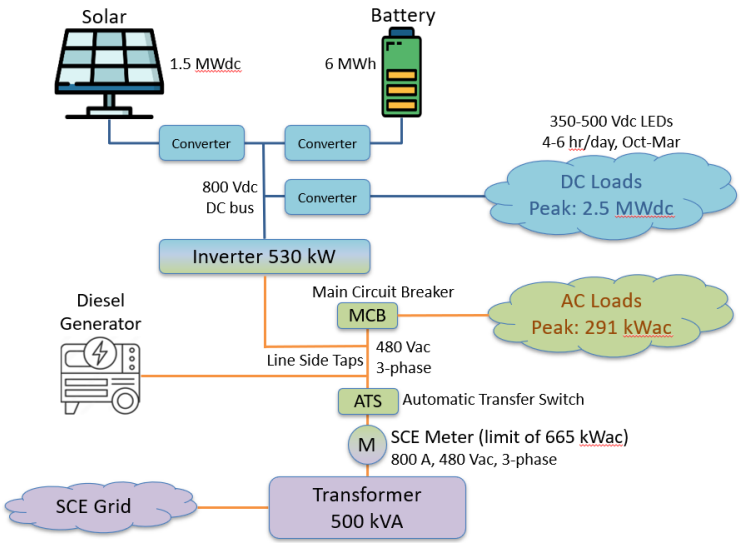
Sierra Blanca (scenario A) for an all-electric design. Scenarios B and C include gas generators or a hookup to the SoCal Gas grid. All three scenarios are far less expensive than covering the cost of a new substation.

In many locations where the electric grid is a limiting factor, municipalities may not be able to meet their housing targets. Solutions like flexible connections, which can help with the synergistic achievement of multiple policy goals should be prioritized. If Sierra Blanca was located in an electric IOU service territory, a flexible service connection agreement could be signed to enable these homes to receive service via a private grid prior to the buildout of the existing distribution infrastructure to serve these sites. Alternatively, if legalized, a Community Microgrid serving a master metered community could also be a viable solution.

Flexible connections are an important tool to support greater uptake of DERs in a timely manner, increase the utilization of the existing grid, and reduce the cost/time of upgrading the grid. While many use cases can be defined, Clean Coalition supports the development of an overarching framework that addresses two umbrella issues: streamlining interconnection and ensuring that DERs can provide value to the ratepayers in the form of grid services.[3] These two fundamental categories should be the origin for any discussion of use cases conducted in this proceeding and the energizations proceeding ("R. 24-01-018").

For example, consider the configuration below, which shows a DC Solar Microgrid design for a farm looking to serve new greenhouses. The SCE feeder that the site is connected to is severely constrained, limiting the site to exporting 665 kW (ac) before a multi-million-dollar (and multi-year) grid upgrade is triggered. So while the solar is sized at 1.5 MW(dc), the inverter is sized at 530 kW to ensure that system exports never exceeds the limit imposed by SCE and the site only imports from the grid briefly each day.

[3] Comments of CALSSA on Smart Inverter Operationalization Working Group Reports, at p. 2, and Reply Comments of the Clean Coalition on Smart Inverter Operationalization Working Group Reports, at p. 2.



1.5 MW DC coupled solar microgrid at a farm sited to serve 2.5 MWdc loads

A FSCA would enable this configuration and likely increase the amount of generation/load permitted beyond the existing 665 kW limit. Moreso, the deployment of a system like can be achieved in six months or less, far faster than the multi-year timeline associated with conducting the traditional grid upgrade. As a result, the Solar Microgrid and an FSCA will enable the farm to scale up business operations, rather than being hampered by the standard inflexible process of conducting a grid upgrade.

CALSSA raised two important examples on the subject of receiving conditional permission to operate, the first being that, "there is no set process for customers to request it or for utilities to consider it, and the second, "that the grid capacity the customer wants to utilize may exist at some times and not others, but the customer cannot use that capacity at all until it is always available."[4] Adopting a proper framework must include a way for customers to request an FSCA and for the utilities to address each request in a timely manner. The Clean Coalition supports a clear deadline before which a utility must address a customer's inquiry and/or request about a flexible connection.

3. ***When considering the examination of static (i.e., firm) and dynamic (i.e., non-firm) flexible grid connections for imports and exports:***
    a. ***What are the project type and specific examples that would benefit from the development of the more complex use cases identified in the High-DER***

[4] *Ibid*, at p. 2-3.

Proceeding and SIO Report(s) record to date involving non-firm import and export limits? Explain if these project types are load only, generation only, or combined load and generation.

The response to this question is categorized based on the two umbrella topics that should be considered in a flexible connections framework.

Streamlined Interconnection/Energization

1. Supporting greater penetrations of DERs
2. Supporting faster connection of DERs (including as bridge solutions prior to needed grid upgrades being completed). This is especially true for large loads and long lead time resources.
3. Maximizing the size of BTM resources without triggering grid upgrades.
4. Supporting configurations that promote resilience, especially at critical facilities and/or facilities with a high percentage of critical loads.
5. Ensuring that distribution projects do not result in an affected system.

Grid Services

1. Increasing hosting capacity on a distribution feeder.
2. Deferring grid upgrade costs, allowing the prioritization of work in other sections of the grid.
3. Enabling greater control over voltage balancing and reactive power management, especially at the end of a feeder
4. Maximizing the value of demand flexibility on an individual feeder and at the system level.
5. Helping to right-size upgrades by maximizing the utilization of the existing grid.
6. Increasing grid utilization, especially during non-peak times and months
7. Reducing grid-side curtailment

b. Based on your response to question 3(a), what import and export limiting technology will be needed?

In addition to other software and hardware solutions, Clean Coalition advocates that customer-owned meter socket adapters should be permitted for residential and commercial and industrial customers.

4. ***As the investor-owned utilities operationalize Advanced Distribution Management Systems and Distributed Energy Resource Management Systems (DERMS), which types and sizes of DERs should be able to communicate with the DERMS in each system development stage and for which SIOWG use case?***

Any resource seeking a flexible connection should be able to communicate with the DERMS, as should any exporting (or dispatchable resource).

5. ***Since the SIO Ruling was issued in May 2024, have any new developments occurred with technology, Commission proceedings, certifications or methods for addressing SIO reports, or use cases that should be reflected in the record of this proceeding?***

No comments at this time.

6. ***How should the Commission evaluate the cost-effectiveness and rate impact of SIOWG use cases and methods for operationalizing them?***

The Commission should focus on accounting for the total benefits, including non-energy impacts. Avoided transmission and distribution costs should be included, especially in cases where infrastructure upgrades are avoided, and the utilization of the existing grid is increased.

7. ***What, if any, additional information should the Commission consider in development of a proposal for addressing the issues in Track 3?***

No comments at this time.

IV. CONCLUSION

The Clean Coalition appreciates the opportunity to submit these comments and supports the Commission's decision to solicit information on FSCAs, which are an important legal/technical construct to maximize the value of the existing grid and save the ratepayers money.

/s/ BEN SCHWARTZ
Ben Schwartz
Policy Manager
Clean Coalition
1800 Garden Street
Santa Barbara, CA 93101
Phone: 626-232-7573
ben@clean-coalition.org

Dated: March 13, 2025