

**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 RULING
SEEKING ADDITIONAL INFORMATION ON DER ENABLED NEAR TERM
FLEXIBLE CONNECTIONS**

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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 Ruling Seeking Additional Information on Distributed Energy Resources (“DER”) Enabled Near Term Flexible Connections*, issued on November 3, 2025, and the November 19, 2025, *Email Ruling Modifying Party Response Date*. We appreciate the opportunity to submit comments on flexible connections and support the Commission’s inclusions of standard definitions for clarity, which will streamlined the development of a policy framework.

Bottlenecks at every level of the grid must be managed effectively to avoid costly grid upgrades that lead to rate increases. Finding solutions that fit together to optimize the distribution grid, a process we call [Energy Tetris](#), leads to unique value creation opportunities that cannot be replicated at the transmission grid level.¹ Increasing amounts of distributed generation, flexibility, and demand response make it viable to systematically meet loads as close to the point of origination as possible, reducing the impact on the transmission grid at peak times and flattening the duck curve. **Flexible connections are a key “Energy Tetris” strategy that should be pursued on both a bridging and non-bridging basis to maximize the ratepayer value and promote grid reliability.** With details about the flexible connection entrenched in the interconnection agreement, mandatory participation makes the capacity from a flexible connection a certainty that can be relied on to a greater degree than traditional opt-in programs. The Commission should move forward swiftly since technical standards for interoperability and cybersecurity are well established—and being improved—and pilots are being conducted.

¹ <https://clean-coalition.org/news/energy-tetris-part-1-effectively-managing-the-grid-of-the-21st-century/>

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

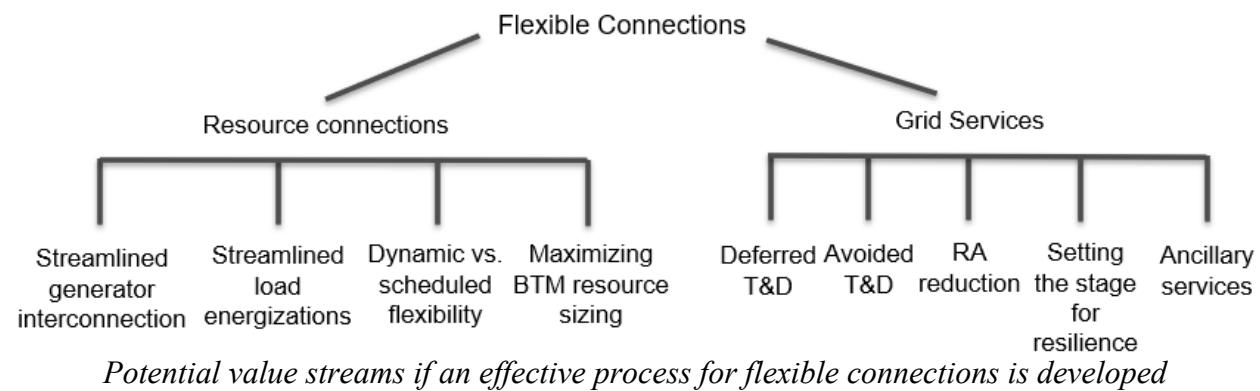
16. Does the value provided by the ability to signal maximum import values via IEEE 2030.5 to sites on the polyphase grid during emergent abnormal grid operation justify the technical and contractual effort necessary to develop this ability?

A flexible service connection is an important tool to reduce control energy imports at a particular location on the grid, with important implications for mitigating grid upgrade costs. Since energizations are normally based on static hosting capacity, the ability to send dynamic signals or time-based signals to set a maximum import value ensures that the distribution grid has sufficient capacity to meet demand while providing the customer certainty that grid energy will be available to serve onsite loads. A customer capable of meeting demand with onsite generation and grid energy under a flexible service connection provides ratepayer value in comparison to a customer requesting additional capacity that triggers the need for a grid upgrade, adding cost and taking up limited utility resources.

The technical standard for achieving a flexible service connection exists (IEEE 2030.5) as does the utility infrastructure, via programs like Pacific Gas & Electric's ("PG&E") Flex Connect and Southern California Edison's ("SCE") Load Control Management Systems Pilot. This up-front research and groundwork is the costliest aspect of implementing flexible service connections. An April 2025 SunSpec Alliance webinar on flexibility and IEEE 2030.5 CSIP Test Procedures underscores that interoperability and cyber security have been thoroughly tested and

will continue to evolve as additional functionality is needed.² However, the opportunities for value creation and widespread use of flexible connections remain out of reach despite technical viability.

With testing in places like Australia and ongoing pilots in California demonstrating the technical viability of flexible connections, the policy framework needed to fully enable flexible connections is the lagging factor. An interested customer should be able to easily determine a process for applying, costs, rate changes, the timeline, and any value stacking opportunities from a flexible connection. While the widespread potential of flexible connections is clear from a theoretical perspective, customers will jump at the opportunity to reduce costs and receive energy faster when a streamlined option is made available.



Sites connected to the polyphase grid often have a larger load or higher power quality needs than those with a single phase interconnection. Therefore, the impact of limiting the imports to a site connected to the polyphase distribution grid will likely be more valuable in reducing demand. The ability to curb imports on a feeder level can be a value tool on a daily basis to shape customer consumption patterns in a way that aligns with the available hosting capacity in a way that brings down the local peak or be reserved primarily for periods of extremely high system demand. A flexible connection primarily for use during an emergency provides the dual benefit of reducing the possibility of a grid outage and by bringing down the [total] system peak, limiting the amount of costly infrastructure required to meet demand in the future.³

² <https://clean-coalition.org/news/unlocking-grid-flexibility-updates-on-flexible-service-connection-2030-5-csip-test-procedures-17-april-2025/>

³ <https://clean-coalition.org/news/flattening-californias-duck-curve-with-local-solar-and-battery-storage/>

The Clean Coalition strongly supports using flexible service connections as a tool to support the grid in emergency conditions. To design an effective program a customer should easily be able to understand what the compensation is for events and the definition of an emergency condition under which an event may be called. Programs like the Demand Side Grid Support (“DSGS”), Emergency Load Reduction Program (“ELRP”), and other virtual power plants (“VPPS”) have had success in recent years in helping the grid avoid emergencies by providing capacity at key times.

Flexible service connections provide an even more ironclad form of capacity than VPPs and demand response programs because the agreement to participate during emergency events is a part of the interconnection agreement. Failure to participate is equivalent to violating the agreement. The utility can accurately determine the amount of capacity based on each agreement that is signed, providing a level of consistent and predictable performance that could otherwise qualify a behind-the-meter (“BTM”) resource as a load modifier. The value to the ratepayers of what is effectively dispatchable capacity from flexible service connections to help avoid grid emergencies is substantial and should be pursued by the Commission.

23. Should the Commission pursue non-bridging flexible connections as a way for single phase customers to avoid or defer grid upgrades? Please provide details as to how this could be implemented.

The Clean Coalition strongly supports flexible connections as a non-bridging (“permanent”) solution, given the affordability issues facing the state. At the heart of California’s high electricity rates is the substantial amount of spending on infrastructure. Transmission and distribution costs already make up close to two-thirds of customer rates, with spending projected to increase due to load growth, electrification, and climate change.

Mitigating grid spending should occur at every level of the grid, starting at the customer meter. Flexible connections are supported by the diversity of DER that can reduce a site’s demand for grid energy. Customers that deploy microgrids, smart appliances, smart circuit panels, generation, energy storage, managed charging, building energy management systems and autonomous controls are all capable of reducing onsite load in response to pre-set or dynamic signals from the grid operator. A customer that can permanently respond to utility-imposed import limits during constrained hours can prevent feeder overloads, enabling the utility to defer

or avoid otherwise-required distribution upgrades and delay upstream capacity investments. Faced with high upgrade costs and long waiting times or a flexible connection and a solar+storage deployment, many customers prefer the latter option, which allows them to receive electrical service as soon as possible.

IV. CONCLUSION

The Clean Coalition appreciates the opportunity to submit these comments and urge the Commission to support the development of flexible connections as bridging and non-bridging solutions.

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