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 REPLY COMMENTS IN RESPONSE TO ORDER INSTITUING RULEMAKING TO MODERNIZE THE ELECTRIC GRID FOR A HIGH DISTIRBUTED ENERGY RESOURCES FUTURE

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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 in response to the Order Instituting Rulemaking to Modernize the Electric Grid for a High Distributed Resources Future, issued in the above captioned proceeding on June 24, 2021 and the September 22, 2021 Proceeding Organization Workshop. Party comments and the September 22 Workshop make it clear that with such an ambitious agenda for the proceeding — which the Clean Coalition supports and believes is necessary — effective organization is essential to address each opportunity for reform in a timely fashion. Foundational change is essential to help the state decision making agencies become proactive and forward looking, shifting the state out of a 20th century grid and transitioning to a two-way grid. Understandably, change on such a grand scale takes time to study and implement, but it cannot stand in the way of near-term reform to increase the number of DER on the grid and other interim steps necessary to unlock a High DER Future. As the Climate Center suggests in opening comments, the Commission should acknowledge that an electric grid powered by a large number of DER, "is both necessary and inevitable," a transition that will increase the number of cost-effective solutions and the flexibility of the grid.[1] Throughout the 2020s, the state will continue to see Public Safety Power Shutoffs, reliability concerns due to extreme weather events, and wildfires — all of which will be exacerbated by climate change. A declaration by the Commission about the value of DER is best way to bring regulators, utilities, industry, and other stakeholders together; state policy standards already make the end goal clear but embracing DER is the means to achieve that end.

The Clean Coalition believes that due to the range of complicated issues that need to be studied and thoroughly debated, using parallel Tracks is the best method to deal with low-

[1] The Climate Center Opening Comments at 2

hanging fruit in addition to properly considering the most effective methods for grid planning and utility business models. We advocate:

- As part of the longer Track 1 on a DSO model, the Commission should prioritize designing and implementing performance-based metrics ("PBR") in the near-term.
- Track 2 should prioritize improving ICA and the DRP Portals. The other subjects originally scoped into Track 2 could be pushed back or litigated in a different track.

These two shorter tracks will make it easier for developers to smartly site DER and demonstrate the viability of a shifting utility business model, both of which are essential parts of the transition to a High DER Future. In addition to the shorter tracks, the Clean Coalition also wants to make sure that this proceeding takes steps to ascertain the true value of DER through the proper allocation of costs and considering the spectrum of benefits a DER provides.

- We agree with Synergistic Solutions that an opportunities assessment should be conducted to consider the optimal siting of generation close to load.
- Work with the microgrids proceeding to ascribe a standard value of resilience.
- The Commission should work to end the Transmission Access Charges market distortion currently suppressing the value of DER by allocating costs at the Transmission-Distribution substations.

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 distributed energy resources ("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. Short-Term Actions

i. The Commission should prioritize implementing performance-based metrics as part of Track 1.

The Clean Coalition strongly believes that a DSO model is necessary for the state to be cast away the shackles of a 20th-century central procurement grid and transition to a much more flexible grid populated with DER. Both opening comments and the September 22 Workshop demonstrated that there is strong buy-in from stakeholders, including the utilities, about studying different DSO models and detailing how an electric grid with a DSO could still result in a reasonable profit for the different market participants. The big elephant in the room is not whether the end goal of a DSO will be beneficial to the system — that much is already clear — instead, it is what kind of creative steps will be needed to ensure a smooth transition to a DSO. A shift from the Cost Plus model,[2] which rewards any utility capital investment made on electrical infrastructure, must offer an alternate method for making money that aligns the utilities directly with the ratepayers, necessitating PBR. With the multitude of parties that support a DSO model, the Clean Coalition advocates, and notes utility support during the September 22 Workshop, for practical PBR solutions that can demonstrate the viability of a DSO model.[3] PBR has been a priority of the Commission for a number of years now, as was evident from the Memorandum of Understanding the CPUC signed with the Hawaii PUC in 2019.[4] This proceeding should capitalize on the opportunity to use the experience Hawaii has had with PBR, particularly because Hawaii has dealt with many issues California's electric grid is (or will be) facing.

ii. Track 2 should prioritize improving ICA and the DRP Portals

The Load ICA and accompanying Portals provide essential data to developers looking for ideal siting opportunities for DER as well as to stakeholders about the pace of grid modernization and necessary upgrades. It is also critical that CCAs and other LSEs are easily able to site local resources within the territory they serve. During the September 22, the Clean Coalition and other parties made it clear that because ICA is an essential tool for proper siting of DER, reform that increases access and transparency can be viewed as low hanging fruit.[5] The

[2] 350 Bay Area Opening Comments at 11
[3] Supporters of a DSO model include MRC, the Climate Center, 350 Bay Area, eleXsys, Sunrun, Cal Advocates, PCF, and others.
[4] https://www.publicpower.org/periodical/article/calif-hawaii-pucs-collaborate-renewables-other-issues
[5] Other supportive parties include the Joint CCAs, the Microgrid Resources Coalition, San Jose Clean Energy and PG&E.

Commission should view it as a quick, but important victory at the beginning of a very complex proceeding. At the request of Energy Division Staff to provide details, Clean Coalition would like to offer the following recommendations to improve the user experience and the benefit the Portals can provide:

- ICA maps do not indicate which violation is limiting the integration of generation. Definitions on ICA User Guides state that either thermal, voltage, distribution protection, or operational flexibility violations could be the issue. Instead, each feeder segment should be more transparent and indicate the limiting factor to the integration of more generation.
- Each IOU's interactive ICA map should be available without the need to sign in or request access. Currently, for PG&E's ICA map, it is necessary to create login credentials before beginning use. To use SDG&E's ICA map, a user needs to request access, which often requires multiple days of waiting before a response, and then create login credentials. SCE's interactive ICA map, on the other hand, provides immediate access without the need to register or create login credentials.
- Each of the IOU's interactive ICA maps should provide an easy way to download the ICA spatial data in multiple formats (GEarth, geodatabases, etc). So far, PG&E and SDG&E, allow users to download just ICA geodatabases, but only after users create login credentials and/or request access, whereas SCE allows users to download KML, shapefile, XML and GeoJSON formats of ICA spatial data through its interactive ICA map.
- The IOUs should disseminate open access instructions on how they created their interactive ICA maps so other Load Serving Entities (LSE) across the nation can replicate the process.
- There should be an opt-out feature for the 15/15 rule, allowing for confidentiality of a sites' load profile if specifically requested by a developer rather than limiting access to information, irrespective of a developer's wishes.

In addition, during the most recent iteration of ICA refinement, the ALJ Ruling directed a number of party proposals be considered in the High DER proceeding.[6]

- Green Power Institute's proposal for an ICA uncertainty assessment and data validation demonstrates that further progress is needed to ensure the ICA, including the Uniform Load component, can "support existing and needed use cases."[7]
- CESA argues that Load ICA could "evolve to provide more than just static guidelines and instead provide forward-looking guidance as well as more definitively support project investment decisions."[8]
- IREC suggests that the "ICA's Uniform Load results should be useful to guide the placement of new load, e.g., electric vehicle chargers, battery storage, and the electrification of buildings and displacement existing natural gas infrastructure, on the IOUs' distribution systems."[9]
- AEEE discusses ways that load, "ICA are particularly germane to EVSE deployment".[10]

Each of these proposals will make Load ICA more dynamic and practical for decisionmakers and DER providers, a necessary step for a truly two-way electrical grid.

b. Long-term Actions

i. Ensuring the optimal siting of DER should be one of the overarching goals of this proceeding.

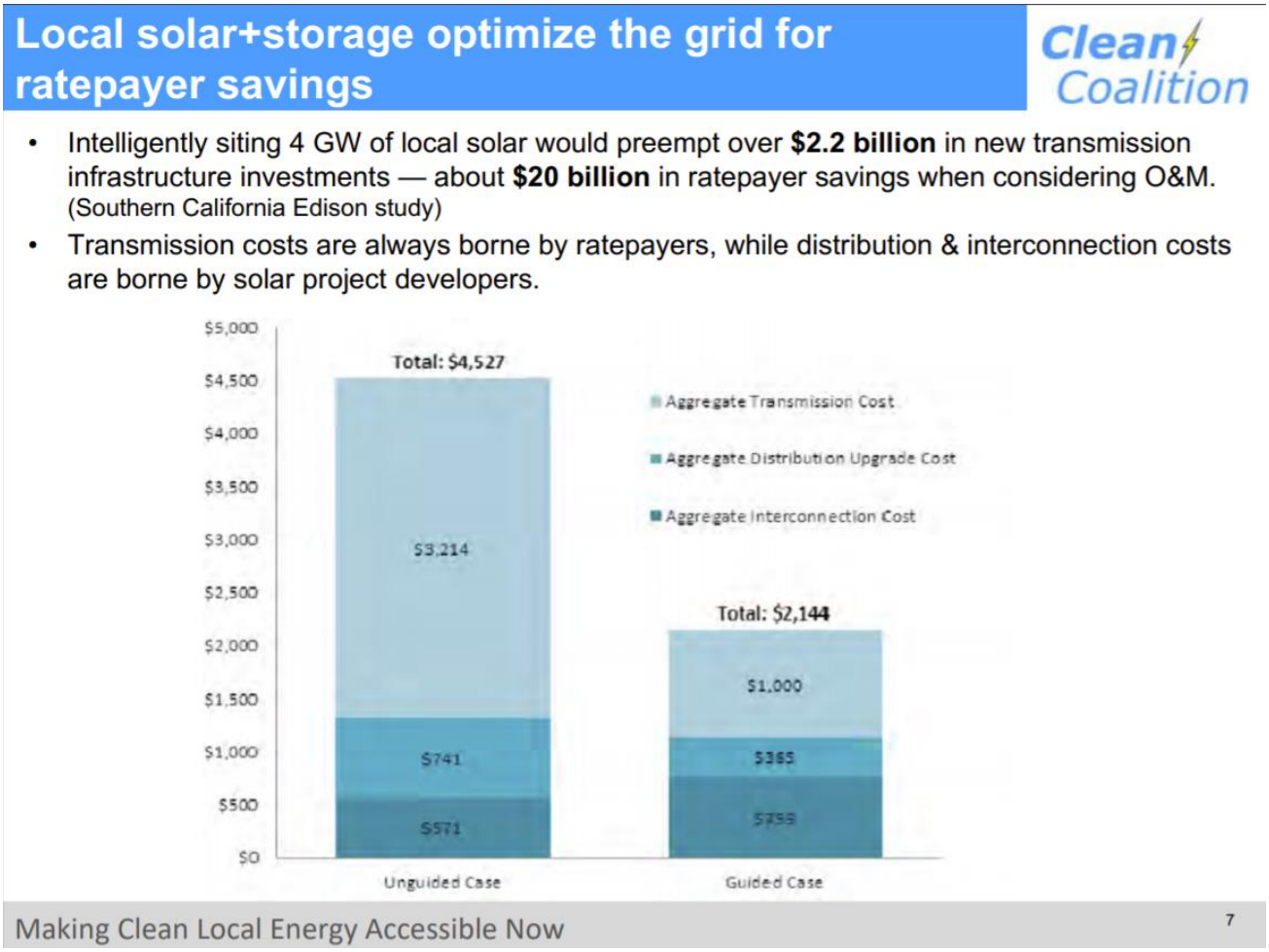
Acknowledging the value of DER as multi-purpose resources capable of creating a flexible and dynamic grid will fundamentally change the distribution planning process ("DPP") and grid modernization. Rather than focusing specifically on infrastructure, the planning process will consider deploying DER to meet load growth as well as tailored solutions based on other community needs. Whereas a community sited in a Load Pocket, such as the Goleta Load Pocket,[11] would be the ideal location for a Community Microgrid, a disadvantaged community

[6] ADMINISTRATIVE LAW JUDGE'S RULING ORDERING REFINEMENTS TO LOAD INTEGRATION CAPACTIY ANALYSIS at 4
[7] GPI ICA Refinement Proposal at 1
[8] CESA ICA Refinement Proposal at 2
[9] IREC ICA Refinement Proposal at 2
[10] AEEE ICA Refinement Proposal at 3
[11] https://clean-coalition.org/community-microgrids/goleta-load-pocket/

with low penetrations of DER might be better equipped with a dStatcom for conservation voltage reduction.[12] The current planning process does not achieve that level of granularity, particularly when it comes to strategically deploying DER. In the 2021 DIDF process, PG&E announced that it has identified zero proposals as capable of meeting the full deferral needs, meaning that likely be more distribution infrastructure upgrades and a greater percentage of imported energy from the transmission system.

We need to site generation closer to our load centers, reducing the inefficiency that comes with transporting energy over long distances.[13] Between reduced line losses and less wear and tear on the transmission system, increasing the amount of DER should be viewed as an investment in the future and the flexibility of the entire system. A study by SCE, seen in the figure below, demonstrates this fact using the example of distributed solar.

[12] eleXsys Energy Opening Comments at 6-8
[13] Synergistic Solutions at September 22 Workshop



If 4 GW of local solar is capable of preempting more than two billion dollars, full resource portfolio, accurately sited all over the state could save many times that. The Vibrant Clean Energy study raised in opening comments by the Climate Center explains that when DER are properly sited with utility scale resources as opposed to relying entirely on bulk resources, Californians would be poised to save around $120 on the pathway to decarbonization.[14] The existing DPP needs to be rethought to include DER as a central consideration.

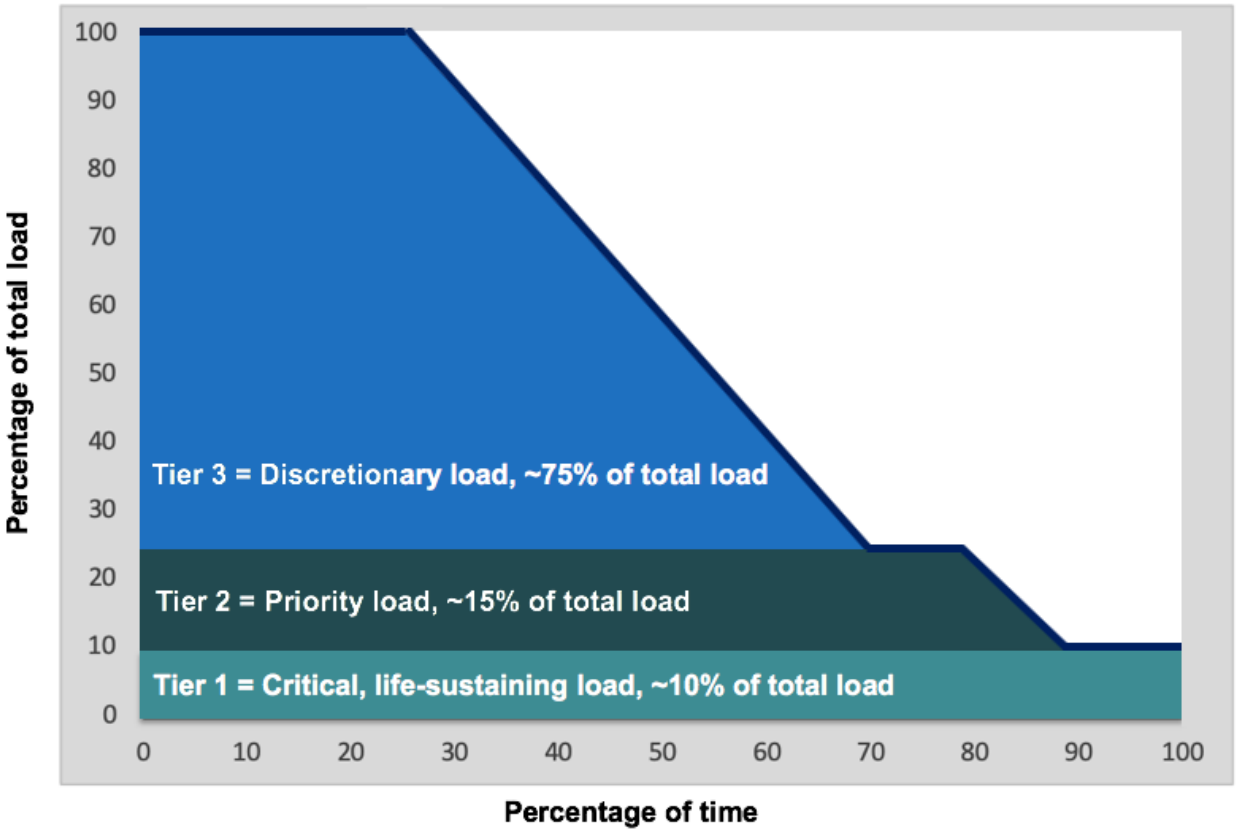
ii. The Value of Resilience ("VOR") should be a priority.

One of the key value propositions of DER is increased resilience, especially when paired with a microgrid. However, it significantly reduces the economic value of DER to provide a service

[14] The Climate Center Opening Comments at 3

without compensation; the state has agreed that resilience is essential but has not yet started the process of creating a standard VOR. Therefore, this proceeding should work in concert with the Microgrids proceeding (R. 19-09-009) to determine a methodology that can be used across the state. The Clean Coalition's VOR123 methodology categorizes a facility's load into three:

- **Tier 1**: Mission-critical, life-sustaining loads that warrant 100% resilience — usually about 10% of a facility's total load.
- **Tier 2**: Priority loads that should be maintained as long as doing so does not threaten the ability to maintain Tier 1 loads — usually about 15% of the total load.
- **Tier 3**: Discretionary loads that should be maintained only when doing so does not threaten Tier 1 and Tier 2 resilience — usually about 75% of the total load.

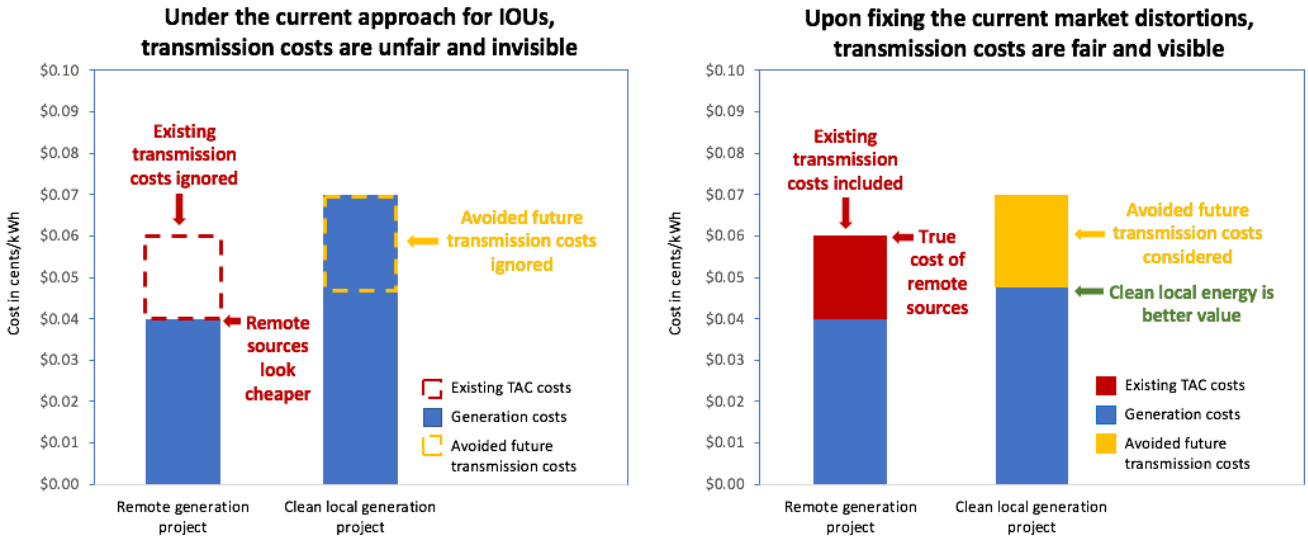


Percentage of time online for Tier 1, 2, and 3 loads for a Solar Microgrid designed for the University of

California Santa Barbara with enough solar to achieve net zero and enough energy storage capacity to hold 2 hours of the nameplate solar (200 kWh energy storage per 100 kW solar).

iii. Properly assessing Transmission Access Charges ("TAC") is necessary to determine the true value of DER.

TAC, which are charged by the IOUs to recover the cost of transmission infrastructure, artificially depress the value of DER, creating a market distortion through the way in which they are assessed to IOU customers.



Existing transmission costs, currently averaging 2¢/kWh, should be added to the cost of remote generation that requires use of the transmission grid to get energy from where it is generated to where it is used. Future transmission investments, currently averaging 2.5¢/kWh in the evenings, can be avoided via dispatchable local generation, and that value should reduce the evaluated cost of local generation. When correctly considering ratepayer impacts of transmission costs, dispatchable local generation provides an average of 4.5¢/kWh of better value to ratepayers than is currently assumed in the majority of instances.

Currently TAC are assessed at the customer meter, meaning all energy is charged for use of the transmission grid, regardless of where it is generated. BTM rooftop PV is charged the same amount as energy delivered from across California, forcing DER owners to increase prices to ensure that the economics of a project work out. If the TAC market distortion were fixed, through properly assessing TAC at the transmission-distribution substation rather than the customer meter, the true cost of bulk power projects will be revealed. In comparison, DER, which are clean and multi-functional resources, will provide much better value.

Ascribing the VOR will also unlock resilience as a service for large areas of the distribution, by reducing one of the main inhibitions to Community Microgrids, which will become an integral part of the distribution planning process.

IV. CONCLUSION

The Clean Coalition appreciates the opportunity to submit these reply comments and looks forward to providing future input.

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