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

Order Instituting Rulemaking Regarding Microgrids Pursuant to Senate Bill 1339 and Resiliency Strategies. Rulemaking 19-09-009 (Filed September 12, 2019)

# REPLY COMMENTS OF THE CLEAN COALITION IN RESPONSE TO TRACK 1 MICROGRID AND RESILIENCY STRATEGIES STAFF PROPOSAL, ISSUED AT THE CALIFORNIA PUBLIC UTILITIES COMMISSION ON JANUARY 21, 2020.

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#### I. INTRODUCTION

Pursuant to Rule 14.3 of the Rules of Practice and Procedure of the California Public Utilities Commission ("Commission"), the Clean Coalition respectfully submits these reply comments in response to initial comments made by parties regarding the scope and procedural structure, as well as the specific questions presented in track 1 of the Order Instituting Rulemaking (OIR) Regarding Microgrids Pursuant to Senate Bill 1339, issued September 12, 2019.

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, advanced inverters, demand response, and energy storage — and we establish market mechanisms that realize the full potential of integrating these solutions. The Clean Coalition also collaborates with utilities and municipalities to create near-term deployment opportunities that prove the technical and financial viability of local renewables and other DER.

#### **II. SUMMARY OF CLEAN COALITION RESPONSES**

• As part of Track 1, long-term strategy should be considered and begin to be developed when discussing short-term effects and resiliency. The process that the IOUs are going through to report on their progress related to microgrids and their plans for the upcoming year before the fire season begins should be continued

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annually, and what is decided here will certainly have long-term implications. While aspects of long-term resiliency will be considered in Track 2 of this proceeding – which will focus on implementing broader state goals, including pilot programs – as well as Track 3 — which will focus on implementing SB 1339 requirements and other long-term resiliency planning – each will build upon the foundations set in this track. The Clean Coalition agrees with CESA, who wrote in their opening comments,

> "A long-term and sustainable framework is needed to more comprehensively develop resiliency solutions that identify, assess, and prioritize locations and customers for resiliency solutions, ensure competitive and cost-effective outcomes, align the solutions with the state's various policy goals (e.g., decarbonization, equity), and reduce barriers for all types of resiliency solutions."<sup>1</sup>

The Clean Coalition would add to this list that it is imperative create a framework that facilitates conversation and cooperation between the IOUs and third parties – including solutions developers, local governments, and CCAs – ensuring that the best cost-effective renewable microgrid solutions are developed. Even with the urgent schedule, there is no reason that a municipality or CCA should find out that gas generation is going to be proposed and developed in its territory through an RFO process, as PG&E has done. Instead, there should be mandated cooperation in choosing a site and technology or design that all stakeholders can be involved in. The Redwood Coast Airport Microgrid is a perfect example of this; when the stakeholders – PG&E, the Redwood Coast Energy Authority, the California Energy Commission, and Schatz Energy Research Center – worked together, they were able to design and start to implement a true Community Microgrid. Granted, this project had already begun development before Track 1 of this proceeding got into full force, but it can still serve as a standard for the way microgrid projects should be developed.

• The definition of critical facilities should be expanded to facilities that provide critical functions in a community, though they are not traditionally considered

<sup>&</sup>lt;sup>1</sup> CESA Comments (Page 2)

critical facilities. Grocery stores, for example, provide vital resources to a community in the event of an extended outage and require power for cold storage. The Clean Coalition agrees with the Office of Public Advocates that even if they are not normally considered critical facilities, grocery stores and supermarkets should receive this designation during PSPS event. Similarly, schools are mentioned in the current definition, but should be prioritized because they can often be community shelter sites and have large amounts of space where microgrids can be installed. In the Goleta Load Pocket, the Clean Coalition is helping the Santa Barbara Unified School District to site solar + storage microgrids on each of the 18 campuses.<sup>2</sup>



Map of Santa Barbara Unified School District Schools

Installing microgrids at each location brings tremendous resiliency to the area and in the event of a PSPS or other disaster, naturally orienting the community towards schools that will be energized during outages. The Office of Public Advocates mentioned in their comments, "For example, microgrids that would serve community centers and other buildings that provide services to the public during a PSPS event should be given priority over microgrids that would serve individual persons,"<sup>3</sup> making it all the more relevant that a framework is developed to determine criteria to rank the importance of specific critical facility microgrids. Even among critical facilities, there needs to be some kind of ranking

<sup>&</sup>lt;sup>2</sup> Article on Solarpowerworldonline.com <u>https://www.solarpowerworldonline.com/2019/12/clean-coalition-santa-barbara-unified-school-district-solar-microgrids/</u>

<sup>&</sup>lt;sup>3</sup> Office of Public Advocate Opening Comments (Page 12)

system to determine priorities. Development of such a framework should be subject to the priorities of local communities, who know their own needs best. The Clean Coalition sees the potential of a suggestion made by the Microgrid Resources Coalition to allow communities to work with the Office of Emergency Services to determine a list of their own critical facilities.<sup>4</sup> The action of listing critical facilities will naturally make resilience a bigger priority by listing potential locations for critical facility microgrids and will allow the state to better plan for disaster relief in the long run.

As we illustrated and described in our opening comments, public databases of critical facilities are readily available as a starting point, and easily integrated into GIS mapping of other prioritization and suitability metrics.

- Each of the IOUs should be required to detail an annual report on microgrid activities to ensure they are using cost-effective solutions. The Clean Coalition agrees with this suggestion by the Office of Public Advocates; requiring the IOUs to be transparent to all stakeholders and the Commission will ensure greater accountability.<sup>5</sup> It will also pressure the IOUs to justify the steps they have taken over the course a given year and how they relate to state resilience and renewable energy goals.
- All IOU Track 1 proceeding developments should be verified to ensure that
  projects can be implemented before September 2020. The Clean Coalition
  maintains that costly gas generation will not be constructed in time for fire season
  2020, nor should it be considered resilient. As we previously noted and Grid
  Alternatives mentions in their comments, "Fossil fuels have a long supply chain
  and on-site renewable energy systems do not. In a catastrophic event (e.g.
  earthquake and wildfires), fuels that require long supply lines may be limited
  and/or restricted from providing the resiliency benefits they were purchased to
  provide."<sup>6</sup>

<sup>&</sup>lt;sup>4</sup> Microgrid Resources Coalition Opening Comments (Page 10-11)

<sup>&</sup>lt;sup>5</sup> Office of Public Advocate Opening Comments (Page 35-36)

<sup>&</sup>lt;sup>6</sup> Grid Alternatives Opening Comments (Page 8)



Time for Infrastructure Repair After a Disaster

Following a natural disaster, natural gas infrastructure can take 30 times longer to fix than electrical infrastructure, which can be restored to the majority of customers within three days. While we believe that any plans involving non-renewable resources should be changed immediately, if the IOU plans cannot be implemented in time for the fire season 2020, there should be a required project amendment. Since the development of these projects is being justified on the grounds of short-term resilience, if they unable to meet that goal (or know it is an unreasonable goal to achieve before project construction begins), there is no point in building expensive stranded assets that even the IOUs admit are being built for the purpose of temporary generation.

Fossil fuel generation should not be accepted if there is a more cost-effective renewable solution. In accounting for cost-effectiveness, calculations must include total resource cost, ratepayer impact, and societal costs; there are substantial negative consequences of long-term deployment and projected future use of fossil fuel generation. Gas generation is more expensive than preferred Distributed Energy Resources in most cases, especially considering that these projects are temporary, and additional costs will be accumulated through the de-commissioning process. The diagram below which was included in the Clean Coalition's opening comments, effectively demonstrates that the economics for Community Microgrids are better than natural gas plants.



Clean Coalition Cost Analysis of the Puente Peaker Plant vs. a Community Microgrid

Grid Alternatives captures this notion in their comments, writing, "however, GRID does not believe microgrid systems need to include fossil fuels when advanced, clear renewable technologies exist today that can provide multi-hour and multi-day energy to customers."<sup>7</sup> Installing grid isolation switches and other grid hardening technologies in specific locations will make a renewables-driven microgrid more effective at achieving long-term resilience, especially when much lower cost load reduction and modification measures are included.

In comments, parties made reference to PG&E having the worst proposal of the three IOUs. The Clean Coalition would reply that PG&E would have the best proposal if they moved towards renewables in a distributed way similar to what is being done with the Redwood Coast Airport Microgrid. The RCAM solution ensures that even if a part of the feeder is de-energized during a PSPS event, the airport could maintain power in islanded mode, allowing power on either side of the de-energized area. Load service should start with critical facilities and extend outward to include as many customers as possible, not start with substations and only proceeding if the entire substation load can be served in an "all or nothing" approach. PG&E's approach severely restricts the opportunity to serve a much higher number of critical facilities and other customers.

# III. RESPONSES TO SPECIFIC POINTS

<sup>&</sup>lt;sup>7</sup> GRID Alternative Opening Comments (Page 8)

# a. Interconnection Proposals Interconnection Proposal 4

Multiple parties, including CESA, the Wild Tree Foundation, the Sierra Club, and the Small Business Utility Advocates all supported Interconnection Proposal Four to allow the use of smart meters for electrical isolation. CESA writes, "Pilot proposal to use smart meters for intentional islanding should be adopted given the tremendous potential to scale a relatively lowcost resiliency resource in future years; reliability concerns related to the proposal can be addressed in the pilot development process as well as tested during the pilot operation stage."8 The Clean Coalition agrees with this view; during PSPS events BTM customers would be able to island from the grid through existing smart meters and new inverters that are being mandated through the Rule 21 proceeding. Accepting Proposal 4 would help increase the rate at which smart inverters capabilities are being utilized and field tested and in the long run, will streamline the interconnection process. As the Small Business Utility Advocates point out, "even if some time and effort is required up front, eventually the wider application of multiple single-customer BTM DERs could accelerate implementation of microgrids since interconnection studies could be simpler (or unnecessary) in many cases."9 As long as the interconnection process was not duplicated, a facility that already had a smart meter installed would not necessarily need to be reevaluated as a microgrid since it already has islanding capabilities.

## **Standardized Inspections**

The Clean Coalition is in favor of streamlining interconnection as much as possible and wants to highlight Tesla's comments that, "Tesla estimates that on average, eliminating field inspections would reduce timelines by an average of 5-10 business days for those projects that would otherwise be subject to utility inspection."<sup>10</sup> Switching to virtual inspections and reducing the number of interconnection inspections that need to be done would streamline the process for developers; SCE mentions in its opening comments that it has already been carrying out virtual inspections in its service territory, something the PG&E and SDG&E should work to emulate.

That being said, we believe it would benefit deployment if the interconnection procedure is modified with the CESA's idea, "to incorporate a sampling protocol to reduce the

<sup>&</sup>lt;sup>8</sup> CESA Opening Comments (Page 4)

<sup>&</sup>lt;sup>9</sup> Small Business Utility Advocates Opening Comments (Page 3)

<sup>&</sup>lt;sup>10</sup> Tesla Opening Comments (Page 9)

interconnection timeline burden if interconnection applicants have successfully installed and field tested some threshold number of template projects (e.g., first five projects using a specified and approved template-based design)."<sup>11</sup> In a region like the Goleta Load Pocket, which needs to deploy 200 MW of solar and 400 MWh of energy storage to achieve indefinite renewables-driven backup power – even in the event of a full transmission outage — if an installer is able to get a few projects deployed, the shortened interconnection period would help to hasten the capacity in renewables-driven microgrids. Using that same rational, any duplicate interconnection procedures should be eliminated. CESA makes the argument that any facilities claiming SGIP credits for installed energy storage already goes through field inspections that should not be repeated if that energy storage was being interconnected under a critical facilities microgrid.<sup>12</sup> The Clean Coalition concurs; considering that large projects can take upwards of one year to be interconnected, any small detail to streamline the process and reduce that time should be implemented swiftly.

#### Single Line Diagrams (SLDs)

In opening comments, the Clean Coalition called for the development of template SLDs that would allow pre-approved projects to be deployed rapidly. We disagree with the Microgrid Resources Coalition comment that, "Microgrid single line diagrams will only benefit a very small subset of microgrids. One size almost never fits many."<sup>13</sup> Single line diagrams promote the use of renewable resources to develop microgrids quickly and efficiently. As it becomes apparent that other resources and technologies are being used, additions can be made to pre-approved diagrams; until that time, renewables should be promoted. Microgrids often aggregate individual DER, and these component DER could make use of template SLDs. Likewise, a template SLD could be used with the applicant noting specific modifications where necessary, meaning that only that modification will require individual evaluation.

# a. 3.2.1. Storage Charging Proposals Storage Retrofits

<sup>&</sup>lt;sup>11</sup> CESA Opening Comments (Page 10)

<sup>&</sup>lt;sup>12</sup> CESA Opening Comments (Page 8)

<sup>&</sup>lt;sup>13</sup> Microgrid Resources Coalition Opening Comments (Page 8)

The Clean Coalition agrees with the Tesla suggestion that the Commission could carry out, "A notification-only process for storage retrofits to existing solar facilities,"<sup>14</sup> would accelerate deployments of microgrids to exiting PV systems. Any notification process must conform to utility approved templates to avoid grid impacts that require interconnection review, such as adding storage to PV using the existing or comparably rated inverter.

#### **Grid Charging**

The Clean Coalition agrees with the SCE assertion that charging should begin two days before the forecasted PSPS even or when the customer is notified by SCE. However, if the Commission accepts SCE's request that charging, "will not increase the host customers' peak demand when charging the energy storage systems,"<sup>15</sup> then the IOU should be expressly clear about blackout windows. There should be a deterministic and easily accessible schedule that publishes hours when charging is acceptable. Until that type of schedule is created, there is no evidence that charging of energy storage will overly constrain the grid. Charging the energy storage with renewables and exporting that energy should not exacerbate problems on the grid. As long as the energy storage is being charged by a renewable resource, there should be no export limits.

#### b. 3.2.2. Storage Capacity Limit Proposals

It its comments, SCE supports Staff's Proposal 1 to remove sizing limits and to require islanding ability for energy storage systems larger than 10kw<sup>16</sup>. The Clean Coalition agrees with this sentiment, but does not think that the proposal should only be limited to customer in key PSPS-likely areas. Such a limit would hinder the potential for widespread resilience and impedes the deployment of larger battery systems, which are needed for an increasingly renewables-driven grid. An extension of this proposal beyond PSPS zones should also be scoped for consideration. Since the IOUs are in favor of the proposal, a decision formalizing the proposal along with the extension beyond PSPS zones can be implemented quickly, providing short-term resilience benefits.

<sup>&</sup>lt;sup>14</sup> Tesla Opening Comments (Page 6)

<sup>&</sup>lt;sup>15</sup> SCE Opening Comments (Page 36)

<sup>&</sup>lt;sup>16</sup> SCE Opening Comments (page 46)

The image below is the site of Direct Relief, a non-profit in the Goleta Load Pocket. Direct Relief installed a BTM microgrid at their property and wanted to expand the amount of backup power they had with a larger PV array and energy storage system.



Direct Relief Microgrid Case Study

This would allow a site like the Direct Relief example to serve as a backup for others on the same feeder. With proper grid isolation switches, Direct Relief could help the Santa Barbara Airport, which is down the feeder, during an outage or PSPS.



Making Clean Local Energy Accessible Now Map of PSPS in the Goleta Load Pocket

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Based on the map above, if Direct Relief were located in an area at risk for PSPS and SCE de-energized the feeder, Direct Relief would still be able to provide backup energy for the islanded section of the grid. Similarly, if a section of the feeder between the Direct Relief

building and the Goleta Substation were to be de-energized, Direct Relief could help serve the rest of the feeder. The combination of ending sizing limits for energy storage and installing grid isolation switches will allow microgrids to serve as functional resources for the benefit of an entire community.

# c. 3.3. Ensuring Local Government Access to Distribution Infrastructure Data to Facilitate Development of Resiliency Projects

The Clean Coalition supports the comments by the joint CCAs to establish themselves as equally deserving of cooperation and information sharing with the IOUs as local governments and local government agencies. CCAs are local; they are essential partners to ensure the rapid deployment of Community Microgrids and should have open access to information required to make that occur. Specifically, we agree with the joint CCA request that, "Proposal 5 should be modified to eliminate the requirement that CCAs execute a nondisclosure agreement with IOUs in order to access the essential information provided in IOUs' data portals."<sup>17</sup> CCA board members are the same County Supervisors and City Counselors comprising local governments.

#### d. 3.4.1. All Investor Owned Utility Proposals

#### **Cost Recovery**

The Clean Coalition agrees with GRID Alternatives, "that cost recovery should only be used for investments in renewable energy and energy storage microgrid assets (and any advanced controls needed to integrate these resources into the microgrid and surrounding distribution system) in the utility proposals and deny the fossil fuel based microgrid assets seeking cost recovery."<sup>18</sup> Part of SB 1339 includes language that rates and tariffs developed will not subsidize diesel backups or natural gas generation. Cost recovery should, however, be allowed for IOU funds spent developing grid isolation switches and renewables-driven Community Microgrids.

<sup>&</sup>lt;sup>17</sup> Joint CCA Opening Comments (Page 21)

<sup>&</sup>lt;sup>18</sup> GRID Alternatives Opening Comments (Page 5)

#### **Pilot Programs**

The Clean Coalition wants to make sure that suggestions made in SCE's comments that, "Given the expedited nature of Track 1, SCE respectfully requests that the Commission consider designating as an interim or pilot solution any approved proposals, where appropriate, to be revisited after a certain number of months (e.g., 24) or in a later track of this proceeding or any subsequent proceeding,"<sup>19</sup> do not become a way to accept temporary fossil fuel generation now that will be removed later. A better pilot program would be a true renewables-driven Community Microgrid like the Montecito Community Microgrid Initiative.

#### **IV. CONCLUSION**

The Clean Coalition appreciates the opportunity to submit reply comments on the Track 1 Staff Proposal and IOU Proposals. We look forward to continuing to work with other stakeholders and the commission to break the barriers inhibiting the rapid deployment of Community Microgrids.

> Respectfully submitted, /s/ BEN SCHWARTZ Ben Schwartz Policy Associate for the Clean Coalition

Dated: February 6, 2020

<sup>&</sup>lt;sup>19</sup> SCE Opening Comments (Page 1)