

**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)

**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE ON
PROPOSALS SUBMITTED IN RESPONSE TO THE E-MAIL RULING ON
POTENTIAL MICROGRID & RESILIENCY SOLUTIONS FOR COMMISSION
RELIABILITY ACTION TO ADDRESS GOVERNOR NEWSOM'S JULY 30, 2021
PROCLAMATION OF A STATE OF EMERGENCY**

Jin Noh
Policy Director

Grace Pratt
Policy Analyst

CALIFORNIA ENERGY STORAGE ALLIANCE
2150 Allston Way, Suite 400
Berkeley, California 94704
Telephone: (510) 665-7811
Email: cesa_regulatory@storagealliance.org

September 24, 2021

**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)

**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE ON
PROPOSALS SUBMITTED IN RESPONSE TO THE E-MAIL RULING ON
POTENTIAL MICROGRID & RESILIENCY SOLUTIONS FOR COMMISSION
RELIABILITY ACTION TO ADDRESS GOVERNOR NEWSOM'S JULY 30, 2021
PROCLAMATION OF A STATE OF EMERGENCY**

In accordance with Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the California Energy Storage Alliance (“CESA”) hereby submits these opening comments on parties’ proposals filed in response to the *E-Mail Ruling on Potential Microgrid & Resiliency Solutions for Commission Reliability Action to Address Governor Newsom’s July 30, 2021 Proclamation of a State of Emergency* (“Ruling”), issued by Administrative Law Judge (“ALJ”) Collin Rizzo on August 23, 2021. CESA previously submitted several proposals in response to this Ruling on September 10, 2021.

I. INTRODUCTION.

CESA reiterates our support for the Commission’s consideration of proposals in this proceeding to address electric grid challenges intensified by climate change. Microgrids represent one of many potential solutions to address the system capacity shortfalls for Summer 2022/2023 that may be identified in Rulemaking (“R.”) 20-11-003. Upon review of parties’ proposals and comments, CESA offers the following responses, comments, and recommendations:

- Islanding is one but not the only means by which microgrids can support system capacity needs.
- The range of specific microgrid projects have potential but require greater justification regarding their ties to emergency capacity needs identified in R.20-11-003.

- Capacity payments or programs including such compensation are needed to position microgrids for emergency reliability.
- Prescriptive microgrid production profiles are arbitrary and unnecessary.
- Interconnection strategies are needed to support timely project deployment.

II. ISLANDING IS ONE BUT NOT THE ONLY MEANS BY WHICH MICROGRIDS CAN SUPPORT SYSTEM CAPACITY NEEDS.

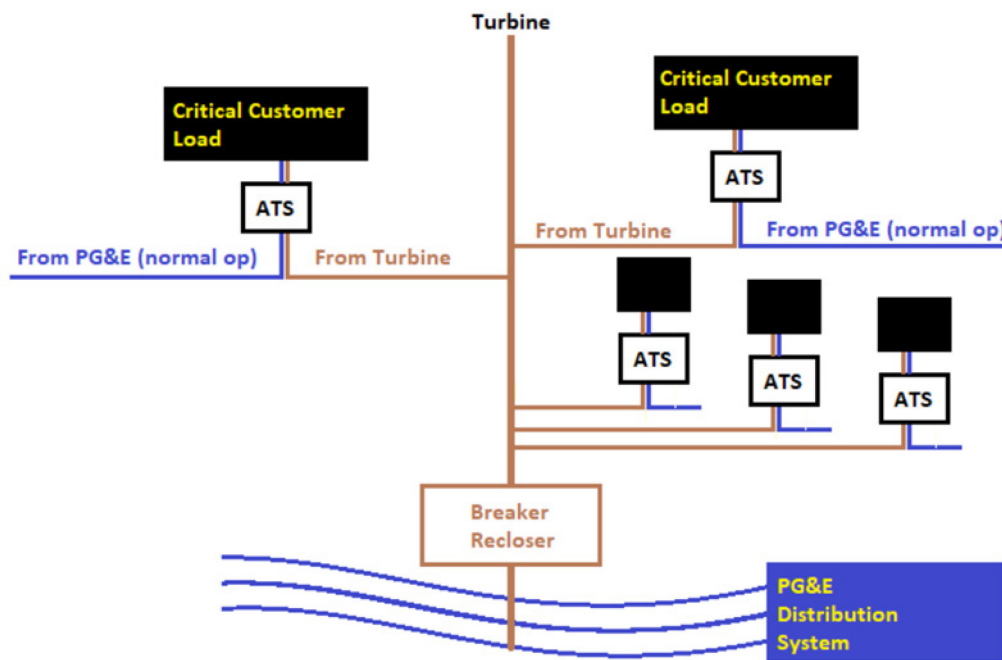
Each of the investor-owned utilities (“IOUs”) comment on how islanding function of the microgrid does not address system capacity shortfalls and may in some cases exacerbate them depending on how the distribution circuits are configured at the microgrid project location, where the value of microgrids would instead be in providing any excess generation as exports to the system grid or in supporting customer load reductions.¹ CESA agrees to the extent that in-front-of-the-meter (“IFOM”) generation and storage resources within a microgrid would provide clear contributions to system reliability by exporting its power to the system grid. In addition, behind-the-meter (“BTM”) microgrids could support system reliability by reducing customer load and/or having the generation/storage resources within the BTM microgrid serve the residual customer load, thereby further reducing customer load. However, there are mechanisms in place to procure these resources, where, despite being part of a microgrid configuration, IFOM generation and storage resources can seek bilateral RA contracts or compete in various solicitations to contractually commit and compensate their exports to the grid, while BTM resources can participate in demand response (“DR”) programs. While energy exports to the system and/or customer load reduction are the more obvious means for the resources constituting a microgrid to support system capacity shortfalls, there are barriers to these mechanisms, which are being contemplated here and in R.20-11-003.²

At the same time, CESA disagrees in the sense that there may be certain microgrid use cases and projects where islanding can support system capacity needs by providing aggregated

¹ PG&E comments at 5, SDG&E comments at 7, and SCE comments at 8.

² For example, as discussed in our proposal in R.19-09-009 on September 10, 2021, securing Full Capacity Deliverability Status (“FCDS”) is necessary to compete in solicitations as eligible Resource Adequacy (“RA”) resources for IFOM generation and storage.

customer load reduction from IFOM generation and storage resources. For example, at the Microgrid Incentive Program (“MIP”) workshop on July 28, 2021, Trane presented on a potential microgrid project that leverages large photovoltaic arrays and closed-loop hydro turbines and pumps (*i.e.*, “tank on a hill”) to take the entire load of the critical facilities in the planned microgrid configuration. The new gen-ties from the hydro turbine to critical customer loads, combined with breakers and reclosers to allow for islanding from Pacific Gas and Electric Company’s (“PG&E”) distribution system upon their dispatch, allows for a collective DR to zero for the customers on the PG&E meters; upon safe islanding, the critical customer loads would now be served by the new-gen tie from the hydro turbine, thus providing DR from an IFOM generation resource via the microgrid’s islanding function.³



Use of the physical assets of a microgrid as a DR resource carries several benefits. One is that the mechanisms for contracting, measurement, and settlement are all already in place. A second is that classification of the impact of so-called “blue-sky” microgrid use as a qualified DR

³ This functionality could be provided on a more regular basis during blue-sky conditions if the Commission allows, which would improve the project’s financial viability and thus its ability to support resiliency applications in the face of de-energization events; At the same time, CESA understands that such allowances may require further deliberation before enabling this functionality beyond emergency outage or constrained system supply conditions.

resource allows the peak load impacts of the system to be sold to LSEs as a RA resources. Because RA resources do not need to go through the cluster study process, developers would be able to get remuneration for their kW contributions to the grid years faster, a potentially determinative element in deciding whether or not to move forward with a project. Finally, use in simply removing loads from the grid is axiomatically less burdensome from an analysis of grid stability standpoint than injecting power. This is amply demonstrated through the fact that DR resources have historically been exempted from power flow analysis and from the lengthy path required for exporting generators via the FCDS process, no matter the size of the DR asset being used.

There may be other examples of microgrid projects like the above that present a unique and innovative use case that is not currently accommodated in existing procurement mechanisms or programs and highlights how the microgrid islanding function can support system capacity needs, though islanding is not the only means by which to do so. As the IOUs explain in their comments, resources like the hydro turbine in the example above would provide system capacity benefits through exports of its energy to the system grid, but many projects like these are also caught up in interconnection delays in the cluster study process, as well as potential delays in the construction of upgrades to support deliverable RA capacity. As the Commission contemplates whether to support specific microgrid projects, CESA therefore recommends a consideration of how microgrids such as the one above with their islanding functionality can support system capacity needs.⁴

Finally, as discussed in our proposal in R.19-09-009 submitted on September 10, 2021, CESA proposed limited modifications to the Rule 18/19 tariff, including a new “condition” whereby microgrids could be operated to mitigate or avoid the risk of outages due to system-wide capacity shortfalls. A similar “state of emergency” was proposed by the City of Long Beach for its proposed Rule 18 modifications.⁵ Such changes, in addition to capacity payments, are needed to enable microgrid projects, as discussed above. To limit the scope of these exemptions to the customers who need it most, the Commission could consider criteria to those microgrid projects that are located in disadvantaged communities (“DACs”) and/or serve low-income customers, and

⁴ CESA understands that not all microgrids would seek to provide islanding as a means to support system capacity, reserving such capabilities to times of grid failure, but there may be some projects where this islanding functionality could be leveraged for system benefit.

⁵ City of Long Beach comments at 4.

are located in High Fire Threat Districts (“HFTDs”). A requirement could be included that the majority of the load on a microgrid would need to come from designated critical infrastructure accounts that have experienced at least two previous public safety power shut-off (“PSPS”) events. Arguments that an exemption of microgrid assets from Rule 18 compliance could cause widespread problems are mitigated by expressly targeting these exemptions. Limiting microgrid Rule 18 exemptions in this way comports with previous policy and recognizes the challenges of these communities from receiving reliable and consistent power.

III. THE RANGE OF SPECIFIC MICROGRID PROJECTS HAVE POTENTIAL BUT REQUIRE GREATER JUSTIFICATION REGARDING THEIR TIES TO EMERGENCY CAPACITY NEEDS IDENTIFIED IN RULEMAKING 20-11-003.

Several parties submitted proposals requesting funding and/or Commission approval for specific microgrid projects. The County of Los Angeles (“LA County”) requested \$41.4 million in Commission funding for three local government solar-plus-storage microgrid projects, along with a County-administered \$22.78-million Regional Microgrid Pilot Program, that would provide 15.95 MW in neat peak demand savings.⁶ Meanwhile, San Diego Gas and Electric Company (“SDG&E”) proposed four circuit-level energy storage microgrid projects: (1) Boulevard Substation energy storage microgrid with in-service date in second half of 2023; (2) Paradise Substation energy storage microgrid would be located on SDG&E-owned property with in-service date in second half of 2023; (3) Clairemont Circuit energy storage microgrid with in-service date in 2024; and (4) Elliott Circuit energy storage microgrid with in-service date in 2024.⁷ It appears that some of these projects were originally proposed and rejected as part of Application (“A.”) 18-02-006.

CESA is not categorically opposed to the Commission funding any of these proposed microgrid projects; however, more details are needed to make connections between the specific projects with the identified emergency reliability needs. LA County provided much more detail on their project proposals in this regard as compared to those of SDG&E,⁸ but there are also broader

⁶ LA County comments at 3-4.

⁷ SDG&E comments at 3-4.

⁸ SDG&E also proposed utility-owned energy storage projects in R.20-11-003 that plan on leveraging existing interconnection and deliverable capacity at specific sites, but the ties to Summer 2022/2023 capacity is less clear for energy storage microgrids proposed here, where, for example, similar type of discussion around whether there is deliverability is not made.

questions regarding cost effectiveness and whether a competitive solicitation⁹ may be more appropriate to identify the most feasible, shovel-ready, and cost-competitive microgrid projects to support emergency reliability, such as what was proposed by Bright Canyon.¹⁰ In doing so, the Commission will have a more complete view of the full range of microgrid projects in development that could be submitted for Commission approval and funding.

In addition, the Commission has not yet determined whether any incremental capacity to meet Summer 2022/2023 emergency reliability needs can be met by in-front-of-the-meter (“IFOM”) resources that may not qualify for RA due to the lack of FCDS, which would raise into question whether SDG&E’s proposed microgrid projects would count toward these requirements.¹¹ To our knowledge, all of the procurement in R.20-11-003 pursuant to D.21-02-028 and D.21-03-056 have been for RA resources that could be contracted for the summer months of need. To this end, CESA refers the Commission to our proposal in opening testimony in R.20-11-003 to allow for some flexibility to utilize Energy Only (“EO”), non-RA resources within certain bounds, which could better enable IFOM energy storage microgrid projects to support emergency reliability, as well as support the use of energy exports from BTM microgrids.

IV. CAPACITY PAYMENTS OR PROGRAMS INCLUDING SUCH COMPENSATION ARE NEEDED TO POSITION MICROGRIDS FOR EMERGENCY RELIABILITY.

Vote Solar proposed a new 10-year battery reliability incentive program modeled after Hawaii Electric’s (“HECO”) Battery Bonus Program to support batteries with \$850/kW incentives that could support 1,500 MW of incremental capacity through June 2023. A battery could be added to an existing solar system or as part of a new solar-plus-storage system, which in return, would be discharged daily during a two-hour period within the net peak window during the summer months.¹² CESA is supportive of this proposal, especially given the limited amount of funds

⁹ Alternatively, instead of a competitive solicitation, which can take time that is lacking in the face of Summer 2022/2023 emergency reliability needs, a consistent capacity incentive could be established and provided for any new microgrid project to ensure any microgrid that can be quickly developed/deployed is consistently paid for the per-MW value that they provide.

¹⁰ Bright Canyon comments at 6-7.

¹¹ SDG&E generally describes how revenue from CAISO market participation would offset some ratepayer costs. CESA reads this as having these energy storage microgrid projects as participating in the CAISO wholesale market as energy-only resources. *See* SDG&E comments at 5.

¹² Vote Solar comments at 2-4.

available in the Self-Generation Incentive Program (“SGIP”). Alternatively, CESA and the California Solar and Storage Association (“CALSSA”) submitted separate proposals in R.20-11-003 that could serve as viable solutions to support Summer 2022/2023 emergency reliability, relying on capacity payments for energy storage resources that can be dispatched against California Independent System Operator (“CAISO”) price triggers, inclusive of energy exports as directly measured by sub-meters. Other parties also highlighted the importance of capacity payments to incentivize the development and procurement of microgrids for emergency reliability purposes.¹³ To bring on new and incremental installed and available capacity from resources that can be frequently dispatched, program proposals such as those from CESA, CALSSA, or Vote Solar can advance the objectives and needs identified in R.20-11-003.

V. PRESCRIPTIVE MICROGRID PRODUCTION PROFILES ARE ARBITRARY AND UNNECESSARY.

Building off its SGIP comments, Southern California Edison Company (“SCE”) proposed that, in support of emergency reliability, new BTM customer microgrid projects be required install isolation devices that allow them to separate from the grid and operate as a BTM microgrid with a minimum of four hours of support to the host customer critical load. New BTM customer microgrid projects must provide production profiles capable of minimum 75% of generating nameplate capacity during summer peak periods and require response to CAISO emergency orders within 15 minutes.¹⁴

CESA does not support this proposal since the four-hour requirement and 75% of nameplate capacity is arbitrary and overly prescriptive for BTM microgrid projects, where individual customer load profiles and needs may dictate a different profile and resource capabilities. The proposed performance requirements are also unreasonably and unnecessarily high, making it potentially infeasible for microgrids,¹⁵ particularly BTM solar-plus-storage

¹³ SoCalGas comments at 3-4 and Unison Energy comments 2.

¹⁴ SCE comments at 4 and 6-7.

¹⁵ For example, for a typical 7 kW rooftop solar PV system and a 5 kW (13.5 kWh) Tesla Powerwall battery storage system, SCE’s proposal would subject this residential customer’s BTM microgrid to a 45 kWh production profile assuming a 4-9pm peak period (5 hours) and 12 kW nameplate capacity of the combined microgrid system – *i.e.*, 12 kW * 0.75 & 5 hours = 45 kWh. This proposal would thus drain the 13.5 kWh battery storage system and require solar to generate 31.5 kWh in the 4-9pm period to be eligible under SCE’s proposal, which seems implausible, especially in early June and late September.

microgrids, while no compensation for the services is contemplated even though these requirements could serve as a major constraint to solar and storage system sizing. Finally, the implementation and applicability of this proposal are unclear, such as whether these performance requirements would become a condition of interconnection or waivers of standby charges, and how this would be enforced except through an attestation process. For all of these reasons, CESA opposes this proposal.

VI. INTERCONNECTION STRATEGIES ARE NEEDED TO SUPPORT TIMELY PROJECT DEPLOYMENT.

Multiple parties such as Microgrid Resources Coalition (“MRC”), Applied Medical Resources Corporation (“AMR”), and Unison Energy advocated for streamlined and standardized microgrid interconnection processes, as well as reduced interconnection costs.¹⁶ Green Power Institute (“GPI”) urged for automation of interconnection reforms, particularly for larger solar and storage projects.¹⁷ Finally, SCE proposed the use of the Rule 21 Fast Track process for projects intended to support the capacity shortfall.¹⁸ CESA supports these comments and reiterates our previous calls to pursue various interconnection strategies to process interconnection requests in a timely manner.

VII. CONCLUSION.

CESA appreciates the opportunity to submit these opening comments on the proposals filed in response to the Ruling and looks forward to collaborating with the Commission and stakeholders in this proceeding.

Respectfully submitted,



Jin Noh
Policy Director

¹⁶ Unison Energy comments at 3, AMR comments at 5-6, and MRC comments at 5.

¹⁷ GPI comments at 4-5.

¹⁸ SCE comments at 4-5.

September 24, 2021