

**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 CALIFORNIA ENERGY STORAGE ALLIANCE ON  
THE ADMINISTRATIVE LAW JUDGE'S RULING REQUESTING COMMENTS ON  
TRACK 1 MICROGRID AND RESILIENCY STRATEGIES STAFF PROPOSAL**

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In accordance with Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the California Energy Storage Alliance (“CESA”) hereby submits our reply comments on the *Administrative Law Judge’s Ruling Requesting Comments on Track 1 Microgrid and Resiliency Strategies Staff Proposal* (“Ruling”), issued on January 21, 2019.

**I. INTRODUCTION.**

The large number of opening comments filed in response to the Ruling conveys the major importance of implementing resiliency strategies and deploying resiliency technologies and resources to mitigate wildfire risks and limit the impacts of public safety power shut-off (“PSPS”). In our reply comments herein, CESA responds to a few key points made by parties, which can be summarized as follows:

- The 2020 utility proposals should be limited and temporary in scope and be positioned as pilots that can be reevaluated within a long-term framework.
- Interconnection barriers should be addressed in phases where storage interconnections are well-positioned for near-term actions.
- Reliability and policy risks related to the Storage Charging Proposal can be mitigated with sufficiently large windows prior to and after PSPS events to switch modes.

- Interconnection Proposal 4 to enable islanded microgrid operation warrants immediate consideration and adoption given its significant potential as a low-cost and scalable resiliency solution.
- Energy storage is a safe resiliency technology that advances the state’s decarbonization goals and can address many resiliency use cases.

**II. THE 2020 UTILITY PROPOSALS SHOULD BE LIMITED AND TEMPORARY IN SCOPE AND BE POSITIONED AS PILOTS THAT CAN BE REEVALUATED WITHIN A LONG-TERM FRAMEWORK.**

CESA shares the view of many parties regarding whether the 2020 proposals from the investor-owned utilities (“IOUs”) represent resiliency strategies that adhere to the state’s long-term energy and equity goals<sup>1</sup> and consider the best alternatives (*e.g.*, grid-hardening investments, clean distributed energy resources [“DERs”]) in line with the resiliency needs and policy goals of the state.<sup>2</sup> Given the urgency to implement resiliency strategies and deploy resiliency projects (*e.g.*, solar-plus-storage resources, microgrids) in a very compressed timeframe, many parties argued for the Commission to assess the IOU proposals with an eye toward a more comprehensive evaluation of alternatives and to pursue temporary or pilot strategies (*e.g.*, backup generators or other mobile resiliency technologies) as a stopgap to provide additional time to allow cleaner and potentially more cost-effective alternatives to be developed and deployed.<sup>3</sup> Southern California Edison Company (“SCE”) aptly summarized this point by stating that “designating a proposal as a pilot or an interim solution, accompanied by a plan to revisit the proposal using the more

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<sup>1</sup> Doosan Fuel Cell America (“Doosan”) comments at 11 and 13; Sierra Club comments at 4, 8-9, and 11; FuelCell Energy (“FCE”) comments at 9; California Clean DG Coalition (“CCDC”) comments at 4; California Hydrogen Business Council (“CHBC”) comments at 12; National Fuel Cell Research Center (“NFCRC”) comments at 19-20; California Environmental Justice Alliance (“CEJA”) comments at 4, 16, and 21-22; Doosan Fuel Cell America (“Doosan”) comments at 11 and 13; and GRID Alternatives comments at 3 and 9.

<sup>2</sup> Marin Clean Energy (“MCE”) comments at 7; GRID Alternatives comments at 8; Public Advocates Office (“PAO”) comments at 16, 22-23, and 26

<sup>3</sup> Microgrid Resources Coalition (“MRC”) comments at 20; Tesla comments at 26; MCE comments at 9; and Placer APCD comments at 13.

traditional stakeholder process and timelines, accomplishes the goal of facilitating immediate action to address the 2020 wildfire season...[and] allows for further thoughtful engagement on the issues with the added benefit of real data, results, and lessons learned.”<sup>4</sup>

Precedents or regretful permanent solutions should be avoided in this time of exigency for resiliency solutions. While stopgap measures such as reliance on temporary fossil-fueled generators would represent a short-term step back in pursuit of California’s ambitious environmental goals, the Commission would avoid locking in resiliency solutions on a long-term basis that would contravene the state’s energy and environmental goals. Notwithstanding, there may be cleaner temporary solutions, such as mobile solar and storage units, Interconnection Proposal 4 (smart remote disconnects), and third-party solutions<sup>5</sup> that have not been adequately considered. In particular, a greater focus on third-party and customer-owned projects should be made in both Track 1 and 2 of this proceeding.

With this in mind, CESA observes that many parties had the greatest issue with the Distributed Generation-Enabled Microgrid Services (“DGEMS”) Make-Ready Program proposal from Pacific Gas and Electric Company (“PG&E”). In particular, due to the potential for the DGEMS Request for Offers (“RFO”) to procure new gas-fired generation in response to the Integrated Resources Plan (“IRP”) proceeding, many parties highlighted how the RFO was structured to not facilitate the participation of non-gas resources and risks contracting for a solution on a long-term basis that will not meet the IRP requirement (D.19-11-016) that prohibits the

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<sup>4</sup> SCE comments at 1-2.

<sup>5</sup> Vote Solar comments at 5; Bright Canyon Energy comments at 3-4; Shell Energy North America (“Shell”) comments at 6; Bioenergy Association of California (“BAC”) comments at 15-16; The Climate Center comments at 8 and 14; and MRC comments at 19

procurement of new gas-fired generation, contrary to the law and the state’s policy goals.<sup>6</sup> Similarly, for all IOU proposals seeking to deploy fossil-fueled solutions, there is limited discussion or detail on the phase-out timelines for cleaner alternatives,<sup>7</sup> amplifying concerns about the short-term mitigation measures becoming longer-term or permanent solutions that derail the state’s progress toward its decarbonization goals.

In sum, CESA reiterates our recommendation from our opening comments that the Commission limit the scope of the IOU proposals to a smaller and temporary scope that could pilot some near-term approaches but not be precedential or permanent in any way without an adequate comprehensive evaluation of the best and most cost-effective solution under a long-term framework in Track 2 of this proceeding. This framework would not only support a more comprehensive evaluation of microgrid and resiliency needs, but it would also establish proposal evaluation criteria, assess the most appropriate sourcing approach (*e.g.*, tariffs versus competitive solicitations), establish parameters where utility-owned solutions prioritize key areas where third parties are less able to serve, direct coordination activities between IOUs and community choice aggregators (“CCAs”), among many other issues.

### **III. INTERCONNECTION BARRIERS SHOULD BE ADDRESSED IN PHASES WHERE STORAGE INTERCONNECTIONS ARE WELL-POSITIONED FOR NEAR-TERM ACTION.**

Overall, CESA finds that many parties broadly support the various interconnection, storage capacity limit, and storage charging proposals<sup>8</sup> and thus encourages the Commission to adopt the

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<sup>6</sup> MCE comments at 3 and 7; Sierra Club comments at 1, 4, 6-7, and 10; The Climate Center comments at 9-10; Tesla comments at 24; and CEJA comments at 13.

<sup>7</sup> CEJA comments at 23 and Center for Energy Efficiency and Renewable Technologies (“CEERT”) comments at 4.

<sup>8</sup> Sierra Club comments at 2-3; GRID Alternatives comments at 5; Center for Energy Efficiency and Renewable Technologies (“CEERT”) comments at 2-3; and Joint CCAs comments at 9 and 13.

proposals with some modifications. A number of parties argued that the interconnection proposals should be expanded to address interconnection issues related to other technologies and/or multiple technologies behind the customer meter, beyond just Net Energy Metering (“NEM”) solar and storage.<sup>9</sup> CESA agrees that single-line diagram templates should be made more technology neutral in a “second phase” of template development, with the Commission soliciting ideas at, perhaps, the next Interconnection Discussion Forum (“IDF”), as was done for solar-plus-storage resources at the December 16, 2019 IDF meeting, or in Phase 2 of the proceeding. However, CESA supports the development of single-line diagram templates as well as implementation of the other proposals in the Staff Proposal as part of a “first phase” for storage projects within a specified timeframe (*e.g.*, 60 days from Commission approval of the proposal) and parameters, as recommended by Tesla and others, to ensure timely deployment of storage projects,<sup>10</sup> which represents the majority of projects that could be deployed in short order ahead of the 2020 wildfire season to provide customer resiliency.<sup>11</sup>

Furthermore, CESA supports the IOU investments in human, IT and other technical resources that will accelerate the interconnection process and reduce delays. Multi-technology microgrids, especially those that combine electric and thermal technologies need to be addressed in Track 1 as these are the solutions that will provide the meaningful long-duration resiliency needed in many cases to address the impacts of PSPS events. Additionally, the Commission should

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<sup>9</sup> FCE comments at 3-4; Mainspring Energy comments at 4; Doosan comments at 5-6; CHBC comments at 5 and 8; Bloom Energy comments at 2, 4, and 6; Placer Air Pollution Control District (“APCD”) comments at 6; Bioenergy Association of California (“BAC”) comments at 9; Southern California Gas Company (“SoCalGas”) comments at 7; Camptonville Community Partnership (“CCP”) comments at 3; Microgrid Resources Coalition (“MRC”) comments at 3 and 7; and NFCRC comments at 5-6 and 12.

<sup>10</sup> Tesla comments at 4 and CforAT comments at 3.

<sup>11</sup> See PG&E comments at 24-25. Data shows vast majority of near-term resiliency solutions will be NEM-paired storage.

impose clear scheduling targets and requirements that the IOUs meet those timelines for each stage of the review process. Transparency with timelines and interconnection costs upfront will go a long way to reducing delays, lessen administrative burden for both IOUs and developers, and improve the customer experience overall.

**IV. RELIABILITY AND POLICY RISKS RELATED TO THE STORAGE CHARGING PROPOSAL CAN BE MITIGATED WITH SUFFICIENTLY LARGE WINDOWS PRIOR TO AND AFTER PSPS EVENTS TO SWITCH MODES.**

Many parties appear to be supportive of the Staff's Storage Charging Proposals, though concerns about Net Energy Metering ("NEM") integrity or reliability impacts of storage charging load have led to some additional proposals to layer charging restrictions on storage resources. Due to the increased load from storage charging during a pre-PSPS window, the IOUs commented on the potential risk of overloads on a distribution circuit especially if resources have been studied for "peak shaving" mode, leading to proposals to stagger charging windows, limit charging rates, establish two-day advanced notice windows, and prohibit charging in peak hours.<sup>12</sup> CESA acknowledges these concerns and recommends that the Commission pursue an approach that provides sufficiently large windows of notice (*e.g.*, 24-48 hours) to allow paired storage resources to charge, possibly at different times. Prescriptive or scheduled charging is administratively burdensome for the IOUs to manage and reduces the customer flexibility to prepare for PSPS events. Similarly, extensive post-PSPS verification regimes of mode switching can be onerous and burdensome; instead, customer attestation approaches should be pursued, as suggested by SDG&E. Additionally, while there may be legitimate concerns once the system experiences greater levels of storage penetration, at this point the concerns identified appear more theoretical than actual. Before considering the imposition of restrictive operational limitations, which, by

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<sup>12</sup> Appendix A of SDG&E comments at 12; PG&E comments at 35; and SCE comments at 36 and 41.

their nature, are at odds with enabling customers to effectively and expeditiously prepare for a PSPS event by charging their batteries as quickly as possible, the IOUs need to provide more specific information regarding where they see the issue of coincident charging posing an operational or reliability risk and/or the timeframes and level of penetration where such risks become more pressing.

Importantly, CESA objects to the recommendation of The Utility Reform Network (“TURN”) to require NEM-paired systems leveraging Storage Charging Proposals 1 or 2 to be centrally dispatched to mitigate any unintended consequences.<sup>13</sup> This is unnecessary, administratively burdensome, and disruptive to customer choice and value propositions. Furthermore, even if such a capability were mandated, there is not currently a program or utility control systems to facilitate this. This concept, even as an opt-in approach, requires substantial discussions to work through the extensive technical, operational and contractual implications it raises. Metering requirements are in place to maintain NEM integrity and alternative processes (*e.g.*, time windows where settings must be reverted) can be considered and implemented.

Finally, CESA believes that policy issues related to Net Energy Metering (“NEM”) facilities (*e.g.*, assessing cost shifting) should be addressed in the appropriate proceeding (*i.e.*, R.14-07-002 or its successor) and should not deter the Commission from adopting a reasonable mitigation strategy for NEM-paired storage systems to provide near-term resiliency for customers.<sup>14</sup> Additionally, the California Independent System Operator (“CAISO”) raises concerns related to Storage Charging Proposal 1 as one that would “contravene NEM tariffs blur the line between retail and wholesale” that would allow NEM facilities to “take advantage of this

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<sup>13</sup> TURN comments at 5-6.

<sup>14</sup> Coalition of California Utility Employees (“CUE”) comments at 2-3 and Attachment A of San Diego Gas and Electric Company (“SDG&E”) comments at 1-2 and 13-14.



change in NEM tariffs to seek retail compensation for wholesale transactions.”<sup>15</sup> While in agreement that such wholesale-retail arbitraging is inappropriate, CESA believes that this issue should not deter the Commission from adopting Storage Charging Proposal 1 as, to our knowledge, minimal amounts of NEM-paired storage systems currently participate in the CAISO markets to engage in such activities.

**V. INTERCONNECTION PROPOSAL 4 TO ENABLE ISLANDED MICROGRID OPERATION WARRANTS IMMEDIATE CONSIDERATION AND ADOPTION GIVEN ITS SIGNIFICANT POTENTIAL AS A LOW-COST AND SCALABLE RESILIENCY SOLUTION.**

Several parties agree with CESA that Proposal 4 to enable islanded microgrid operation for DERs interfacing at the meter socket warrants immediate consideration and adoption as a viable, low-cost, and scalable resiliency solution. Given the advanced metering infrastructure (“AMI”) in place, significant capital investments are not needed in contrast to the IOU proposals that seek significant, permanent, and/or fossil-based generation and capital investments.<sup>16</sup> Stranded cost risks are mitigated and clean DERs are potentially utilized on a larger scale if a pilot is pursued and then potentially scaled in future years. Adoption of Proposal 4 in Track 1 of this proceeding would ensure that the Commission pursues a comprehensive approach to resiliency ahead of the 2020 wildfire season and allows for lessons learned around the logistical and/or technical challenges<sup>17</sup> – areas that the Commission would be unable to more specifically assess unless tested and evaluated via a 2020 pilot.

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<sup>15</sup> CAISO comments at 4.

<sup>16</sup> Clean Coalition comments at 4; Sierra Club comments at 2-3; SBUA comments at 3-5; and Vehicle-Grid Integration Council (“VGIC”) comments at 3.

<sup>17</sup> Connect California (“ConnCA”) comments at 7-8 and VGIC comments at 3.

CESA sees some potential opportunity to scope Proposal 4 into one of the IOU's proposed Track 1 programs, such as the Community Microgrid Enablement Program ("CMEP"), as recommended by Small Business Utility Advocates ("SBUA").<sup>18</sup> At the very least, the Commission should include this proposal for consideration in Track 2, with the reliability and deployment issues articulated more clearly and specifically so that they can be addressed in the pilot development process. We appreciate PG&E's support of this concept proposal in the near future and the insight provided on AMI bandwidth availability and results from their Electric Program Investment Charge ("EPIC") pilot projects.<sup>19</sup>

**VI. ENERGY STORAGE IS A SAFE RESILIENCY TECHNOLOGY THAT ADVANCES THE STATE'S DECARBONIZATION GOALS AND CAN ADDRESS MANY RESILIENCY USE CASES.**

As the Commission is likely aware, energy storage technologies represent a critical, though not singular, resiliency solution that can be deployed in the near term and long term. Any characterization of energy storage technologies as inherently unsafe should be dismissed,<sup>20</sup> considering a number of safety standards and certifications have been developed to ensure their safety and reliability.<sup>21</sup> Furthermore, in assessing the emissions impact of energy storage resources, energy storage resources should be assessed as not being a generator of point-source emissions. While storage charge and discharge operations can have emissions attributed to them,<sup>22</sup> storage technologies should be evaluated on a level playing field with other technologies (*e.g.*,

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<sup>18</sup> SBUA comments at 11.

<sup>19</sup> PG&E comments at 9 and 12-13.

<sup>20</sup> Coalition of California Utility Employees ("CUE") comments at 6.

<sup>21</sup> See Appendix C of *Comments of the California Energy Storage Alliance to the Assigned Commissioner's Ruling Seeking Comment on Implementation of Senate Bill 700 and Other Program Modifications* filed in R.12-11-005 on May 30, 2019.

<http://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M299/K659/299659232.PDF>

<sup>22</sup> FCE comments at 10.

point-source emissions) and be provided the appropriate signals to operate in accordance with marginal greenhouse gas (“GHG”) emissions. Finally, some parties doubt the role of storage serving long-duration resiliency needs. In some cases, this may be true, but this is a case-by-case assessment due to a combination of factors, including the sizing of the storage to load (*e.g.*, critical versus peak), whether it is paired with a generation resource, and emergence of longer-duration storage technologies. Sweeping characterizations of energy storage capabilities should be avoided since energy storage represents a broad asset class and can be deployed for a range of configurations and use cases.

## **VII. CONCLUSION.**

As mentioned in opening comments, CESA reiterates that the Commission should start to implement a long-term framework for microgrids in Track 2 of this proceeding. Mitigating the impacts of PSPS is very important, but this proceeding cannot solely focus on PSPS in such a reactionary manner without also considering the future of the grid. Microgrids are and will continue to be an integral component of California’s energy system and long-term planning needs to start now. The SB 1339 statute explicitly states that the Commission should facilitate “commercialization of microgrids through separate rates and tariffs as necessary.” Tariffs are necessary to achieve the goals of expanding DER and microgrid technologies that have tremendous value to the grid and ratepayers.

The Commission should look to facilitate a more transactive energy system. Tariffs will also ensure that customers have an incentive to stay connected to the grid long-term so they can provide grid services and other benefits. Customers want to engage in decarbonization efforts and help California achieve its aggressive climate goals. The Commission should be welcoming and helping them with their efforts. Commercialization of microgrids will have the added benefit of

mitigating the impacts of PSPS and providing long-term resiliency to our communities. It can be done more widely across the state and provide more value to a greater number of customers. The Commission should be embracing change as technological advancement continues to accelerate at a rapid pace. This is the intent of SB 1339 and the statute should still be followed in concert with addressing PSPS and community resilience needs.

CESA appreciates the opportunity to submit these reply comments on the Track 1 Staff and IOU proposals and looks forward to collaborating with the Commission and stakeholders in this proceeding.

Respectfully submitted,



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