

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

Order Instituting Rulemaking Regarding  
Microgrids Pursuant to Senate Bill 1339.

Rulemaking 19-09-009  
(Filed September 12, 2018)

**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE ON THE  
ORDER INSTITUTING RULEMAKING REGARDING MICROGRIDS PURSUANT TO  
SENATE BILL 1339**

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October 21, 2019

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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”)<sup>1</sup> hereby submits our comments on the *Order Instituting Rulemaking Regarding Microgrids Pursuant to Senate Bill 1339* (“OIR”), issued on September 19, 2019.

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<sup>1</sup> 174 Power Global, 8minutenergy Renewables, Able Grid Energy Solutions, Advanced Microgrid Solutions, Aggreko, Alligant Scientific, LLC, AltaGas Services, Amber Kinetics, Ameresco, American Honda Motor Company, Inc., Avangrid Renewables, Axiom Exergy, Better Energies, Boston Energy Trading & Marketing, Brenmiller Energy, Bright Energy Storage Technologies, Brookfield Renewables, Carbon Solutions Group, Clean Energy Associates, ConEd Battery Development, Customized Energy Solutions, Dimension Renewable Energy, Doosan GridTech, Eagle Crest Energy Company, East Penn Manufacturing Company, EDF Renewable Energy, eMotorWerks, Inc., Enel X North America, Energport, Energy Vault, Engie Storage, E.ON Climate & Renewables North America, esVolta, Fluence, Form Energy, General Electric Company, Greensmith Energy, Gridwiz Inc., Hecate Grid LLC, Highview Power, Ingersoll Rand, Innovation Core SEI, Inc. (A Sumitomo Electric Company), Lendlease Energy Development, LG Chem Power, Inc., Lockheed Martin Advanced Energy Storage LLC, LS Energy Solutions, LS Power Development, LLC, Magnum CAES, Malta Inc, NantEnergy, National Grid, NEC Energy Solutions, Inc., NextEra Energy Resources, NEXTracker, NGK Insulators, Ltd., Nuvve, Pattern Energy, Pintail Power, Plus Power, Primus Power, PolyJoule, Quidnet Energy, PXiSE Energy, Range Energy Storage Systems, Recurrent Energy, RES Americas, SNC-Lavalin, Soltage, Southwest Generation, Stem, STOREME, Inc., Sunrun, Swell Energy, Tenaska, Inc., Tesla, True North Venture Partners, Viridity Energy, VRB Energy, WattTime, and Wellhead Electric. The views expressed in these Comments are those of CESA, and do not necessarily reflect the views of all of the individual CESA member companies. (<http://storagealliance.org>).

## **I. BACKGROUND.**

Founded in 2009, CESA is a non-profit membership-based advocacy group committed to advancing the role of energy storage in the electric power sector through policy, education, outreach, and research. CESA's mission is to make energy storage a mainstream energy resource which accelerates the adoption of renewable energy and promotes a more efficient, reliable, affordable, and secure electric power system. As a technology-neutral group that supports all business models for deployment of energy storage resources, CESA membership includes over 80 companies constituting technology manufacturers, project developers, systems integrators, consulting firms, and other clean-tech industry leaders.

## **II. INTEREST IN THIS PROCEEDING.**

CESA has a direct interest in this proceeding because electrical, thermal, and mobile energy storage resources are likely to play an instrumental role in supporting microgrids to provide resiliency. Senate Bill ("SB") 1339 also identified energy storage resources within its definition of microgrids as part of the suite of resources. As a representative of the energy storage and electric vehicle ("EV") industry and a party to a number of Commission proceedings that relate to microgrid issues (*e.g.*, R.14-08,013, R.17-07-007, R.12-11-005), CESA aims to actively participate in this proceeding to present our unique views and perspectives.

## **III. COMMENTS.**

In the aftermath of recent public safety power shutoff ("PSPS") events, the launch of this proceeding is timely to consider how DERs can be deployed and coordinated in microgrid configurations to provide customer resiliency, enhance grid reliability, and support the state's decarbonization goals. SB 1339 outlines a list of barriers to the commercialization of microgrids and directs the Commission and other agencies with a number of inquiries and tasks to facilitate

the commercialization of microgrids by December 1, 2020. CESA supports how the Preliminary Scoping Memo in the OIR has largely incorporated the inquiries and actions from SB 1339, but given the breadth and complexity of the issues, the Commission may face challenges in resolving all of these issues by the prescribed December 1, 2020 deadline. While the Preliminary Scoping Memo sets a tentative schedule to have a Proposed Decision issued by Q4 2020 to address SB 1339 issues, it also states the Commission’s intention to resolve all relevant issues within 24 months of the issuance of the OIR.<sup>2</sup> To address this, Commissions should work with stakeholders to identify and prioritize issues to be addressed.

In response to the OIR’s request for stakeholder comment on the appropriate prioritization and scope of issues, CESA offers the following comments and recommendations.

**A. Technical barriers to interconnection and permitting should be prioritized for resolution to open a pathway for getting more microgrids on the grid quickly but also safely and reliably.**

Interconnection rules and costs imposing limitations on microgrids were highlighted in the July 2015 California Energy Commission (“CEC”) final project report as being one of the top barriers for microgrid commercialization.<sup>3</sup> Similarly, in a workshop held by the California Energy Commission (“CEC”) on April 26, 2019 on microgrid demonstration projects from the Electric Program Investment Charge (“EPIC”) Program, the need for a standardized process for interconnection and permitting was highlighted as a key barrier. Microgrids typically fail Rule 21 Fast Track Initial Review and face wide-ranging timelines for approval, while energy storage systems continue to face local

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<sup>2</sup> OIR at 9.

<sup>3</sup> *Energy Research and Development Division Final Project Report: Microgrid Assessment and Recommendation(s) to Guide Future Investments* prepared by DNV GL for California Energy Commission on July 2015 at 10. <https://ww2.energy.ca.gov/2015publications/CEC-500-2015-071/CEC-500-2015-071.pdf>

permitting challenges and inconsistencies across different authorities having jurisdiction (“AHJs”). Meanwhile, given the lack of access to broader grid and load diversity under microgrid configurations and operations, there may be additional challenges for microgrids operating in islanding mode to maintain frequency and voltage. These technical challenges present an immediate barrier to supporting the autonomous adoption of microgrids by customers using third-party or private funds and will be a critical issue as well for pilot programs or investments using ratepayer funds. One of the priority goals by December 1, 2020 should be to ensure and streamline the pathway for microgrid interconnection and permitting.

At the same time, CESA understands that certain issues such as the development of a direct current (“DC”) metering standard and other standards/protocols may be outside of the Commission’s purview and control since they may need to be addressed elsewhere, such as through standards development organizations or through local permitting agencies. Where possible, interim pathways to interconnection and operations should be identified in coordination with R.17-07-007.

**B. The Commission should assess the applicability of public utility definitions and requirements to microgrid operators.**

A key threshold issue in this proceeding will be to assess the applicability (or non-applicability) of public utility definitions and requirements to microgrid operators serving multiple end-users, which will impact other aspects around how microgrids operate since public utilities are subject to the jurisdiction, control, and regulation of the Commission. CESA understands that various exemptions are made under Public Utilities Code Section § 218 but the ownership or operation of facilities in a microgrid for services or delivery of a commodity to the public, or a portion thereof, are not explicitly identified as being exempt

from the public utility definition. Discussion and upfront clarity on this issue will be helpful for the rest of this proceeding.

**C. Cost recovery principles and methods for microgrids should be explored and applied in more flexible ways to encourage microgrid commercialization.**

SB 1339 and the OIR detail how methods to reduce barriers for microgrid deployment should do so without shifting costs between ratepayers. CESA agrees that *unreasonable* cost shifts should be avoided, but at the same, the localized nature of microgrid investments creates challenges for completely avoiding cost shifts since the resiliency and reliability benefits of islanding and parallel operations will, by its nature, narrowly accrue to the microgrid customers. An overly strict application of this part of the statute will discourage any microgrid investments using broader ratepayer funds even though there are potential societal benefits. It will thus be important to align the microgrid commercialization objective with the state's broader policy objectives to decarbonize the grid and support disadvantaged communities ("DACs"). In doing so, even though the resiliency benefits may accrue to the microgrid customers, a broader assessment of the benefits of the microgrid would mitigate cost-shift concerns of these microgrid investments. However, the "without shifting costs between ratepayers" language in SB 1339 and the OIR appears to be overly strict and do not allow for reasonable measures to mitigate but not completely eliminate any cost shift.

It is also important to consider microgrids relative to the ratepayer expenditures that would otherwise be pursued to provide grid resiliency or other services provided by microgrids. For example, CESA believes that many grid hardening investment costs, like undergrounding lines, can be broadly socialized, even if the benefits of those activities, as a practical matter, accrue to subset of customers. Microgrids should be viewed as

comparable to such investments from a cost responsibility standpoint when they are intended to provide comparable services or benefits.

CESA sees potential for microgrids in supporting the state's decarbonization objectives by having the various DERs in the microgrid support renewables integration and/or in providing resource adequacy ("RA") capacity when they are not needed in islanding mode to provide resiliency. Outside of these resiliency hours, microgrids have the potential to provide these broader benefits, though issues around wholesale market participation and/or demand response programs may need to be resolved. As a result, ratepayers benefit from greater utilization of existing assets and fewer new investments needed to support these broader grid needs by taking advantage of the multiple-use applications of microgrids. Some of these incremental grid-service revenues or value streams could feasibly be credited back to ratepayers for utility-owned investments or could be reflected in lower-cost investments for customer- or third-party-owned investments who account for these incremental revenues to offset their capital costs. Additionally, given that supporting DACs is an explicit *policy goal* established in SB 350, microgrid investments using ratepayer funds in these communities represents an area where a strict interpretation of avoiding cost shifts may be inappropriate and counterproductive.

Furthermore, CESA believes that a discussion on resiliency planning and investment standards, as mentioned in the OIR, is needed to identify and support the appropriate levels of resiliency service for microgrids that balance against costs. As CESA understands it, unlike reliability planning standards, there are no clear resiliency standards that set minimum requirements for resiliency service (*e.g.*, level and duration of load that need to be minimally served by any ratepayer-funded microgrid investments). Similar to

how undergrounding lines are subject to cost-effectiveness assessments and strategic targeting, such resiliency standards may need to be identified or developed, which can account for ratepayer interests for any socialized ratepayer investments.

**D. Development of programs, rates, and/or tariffs tied to policy goals will best facilitate microgrid commercialization.**

While the objective of this proceeding is to facilitate microgrid commercialization, the actual definition or metrics for commercialization success is not defined or detailed in the OIR. CESA believes that Issue 8 in the Preliminary Scoping Memo fits well as the ultimate objective of this proceeding, consistent with the requirements in SB 1339, whereby programs, rates, and/or tariffs developed in this proceeding can support the streamlined, scaled, and potentially autonomous deployment of microgrids.<sup>4</sup> With programs, rates, and/or tariffs in place, microgrids could have established resiliency and policy values to support the standardized and full-range value proposition of microgrid deployment or investment while also aligning with the state's broader policy objectives. Especially given the time likely needed to address wholesale market participation barriers and pathways, the valuation of full-stack benefits of microgrids via program incentives, rates, and/or tariff-based compensation will play a key role in supporting their financeability. Any resulting programs, rates, and/or tariffs should be technology neutral, business model neutral (*i.e.*, not discouraging either utility, customer, or third-party ownership), and in line with the state's prohibited resource policies.

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<sup>4</sup> OIR at 7.



**IV. SERVICE.**

All communications, notices, and other correspondences should be made to the following CESA representative:

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**V. CONCLUSION.**

CESA appreciates the opportunity to submit these comments to the OIR and looks forward to collaborating with the Commission and stakeholders in this proceeding.

Respectfully submitted,



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**CALIFORNIA ENERGY STORAGE ALLIANCE**

October 21, 2019