

**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 THE  
ASSIGNED COMMISSIONER'S AMENDED SCOPING MEMO AND RULING FOR  
TRACK 3**

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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 these comments on the *Assigned Commissioner’s Amended Scoping Memo and Ruling for Track 3* (“Ruling”), issued by Assigned Commissioner Genevieve Shiroma on February 9, 2020.

**I. INTRODUCTION.**

Distribution grid resiliency in the face of wildfire and public safety power shut-off (“PSPS”) risks continue to be important areas for the Commission to improve and enable through a number of tools, resources, and strategies, including from energy storage resources and microgrids. While Track 1 of this proceeding addressed short-term strategies to mitigate near-term resiliency needs ahead of the 2020 wildfire season, Track 2 began to dive into some of the details of the various barriers and issues by laying out proposed frameworks, definitions, and solutions, supported by a Staff Concept Paper in July 2020 and culminating in the issuance of Decision (“D.”) 21-01-018. The Track 2 Decision made some incremental changes to, for example, Rule 18/19 and established a statewide \$200-million Microgrid Incentive Program, which should address some of the financial and regulatory barriers for the development of microgrids, but it still fell short of adopting a broader microgrid policy, tariff, and framework to identify where, when, and to what degree microgrids can be supported as a distribution resiliency solution, particularly for multi-property microgrids.

CESA thus appreciates the Commission’s continued consideration on addressing barriers to the commercialization of microgrids, pursuant to Senate Bill (“SB”) 1339. As laid out in the

Scoping Memo and Ruling, Track 3 of this proceeding will tackle complex issues involving the value of resiliency, multi-property tariffs, microgrid interconnection and standards, and standby charges. Our comments herein focus on the applicability and level of standby charges, as directed in the Ruling, but the consideration of standby charges can be challenging to view and assess in isolation without policies or proposals on other aspects of microgrids, many of which would be incorporated in a more broadly applicable microgrid tariff that delineates applicability, roles and responsibilities, operational and interconnection requirements, value of resiliency and compensation, among other items.

Having a comprehensive tariff that governs all these areas is not absolutely necessary, as different components such as the value and compensation of resiliency can be “layered” onto any ultimate microgrid services tariff as, for example, a rider; however, the consideration of standby charges in response to the Ruling may be inextricably linked to these other considerations and issues, especially since standby charge waivers or reductions are being contemplated as tied to the commensurate benefit to all other customers. This quantification or estimation of commensurate benefits are destined to be tied to the consideration of these other policy and technical issues in our view.

Furthermore, as CESA understands it, the merits, structure, and level of standby charges have not been updated in many years. According to a presentation by San Diego Gas and Electric (“SDG&E”) at the Resiliency and Microgrids Working Group (“RMWG”) on February 19, 2021,<sup>1</sup> standby charges are litigated rates through each of the respective investor-owned utilities’ (“IOU”) General Rate Case (“GRC”) Applications, such that deeper reforms to standby rate structure requires more comprehensive discussions on the cost of service and cost recovery approaches for any standby service as well as regarding the definition of such service in the context of today’s distribution resiliency issues. For example, as further detailed below, CESA believes standby charges need to be reformed to address the diversity factor of microgrid customers as well as for the different resource types supported in the microgrid configuration. More granularity to how standby charges is calculated for planned versus unplanned distribution outages may also better align with customers paying for the standby service they actually receive.

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<sup>1</sup> “Resiliency & Microgrids Working Standby Service Charges Discussion” presentation by SDG&E on February 19, 2021 at 12.

Notwithstanding the above overarching concerns, CESA is supportive of the Commission’s consideration of the appropriate applicability and level of standby charges. CESA generally supports the Commission’s suggested approach to addressing the appropriate level of standby charges, whereby any waivers or reductions would come in the form of an “exchange” for the commensurate benefits for all other customers. While the costs intended to be recovered by the standby charge is not being met with the increase in distribution outages and PSPS events, CESA believes that a waiver or reduction alone would not address cost-shifting concerns since all other non-participating customers are left bearing these standby costs. However, if any standby charge waivers or reductions are granted where the electric or non-electric services provided by the customer supported by a resilient microgrid confers broader societal benefit, it is wholly reasonable to adjust standby charges commensurate with these benefits.

**II. BACKGROUND AND QUESTION.**

**Question 1: Do you agree with the overview of standby charges provided in section A above? If not, please explain.**

CESA agrees with the overview of standby charges provided in Section A in Attachment A of the Scoping Memo and Ruling.

**III. OVERARCHING SCOPING QUESTIONS.**

**Question 1: Should the CPUC require the IOUs to waive or reduce standby charges for a customer operating a microgrid if specific conditions are met?**

**a) If so,**

**(i) What are the specific conditions that should be met to qualify for a standby charge waiver or reduction?**

**(ii) Which standby charges should be reduced or waived, and by how much? (iii) Please explain any additional details of how a standby charge waiver or reduction should be implemented that are necessary for the CPUC to consider.**

**b) If not, why not?**

Yes, CESA believes that the Commission should reduce standby charges for a microgrid customer under certain conditions related to: (1) nature, type, and location of customer; (2)

enrollment in a program to deliver grid services or avoid certain capital expenditures; and (3) reduction in GHG emissions and mitigation of air quality issues.

First, standby charge reductions can be justified and conditioned on the nature and type of customer seeking to deploy a microgrid. By virtue of being able to have electric service that is resilient to transmission and distribution disturbances or outages, the customer can be able to provide critical functions and services that are necessary for a functional and safe society. Some of the more obvious examples are hospitals and first responders, which are critical facilities that must have power to provide essential services during both emergency and non-emergency conditions, where standby charge reductions are justified since a microgrid would ensure that all customers, not just the host customer or facilities, benefit from the non-electric services and public goods provided. The reduced amount of costs recovered via reduced standby charges is thus offset by the delivery of public or societal benefit, supported by microgrids. The public or societal benefit is further increased if such customers or facilities are located in disadvantaged communities (“DACs”) or low-income areas, or serve significant portions of DAC, low-income, or access and functional needs (“AFN”) customers. These customer groups have been identified by the Commission as being the most vulnerable and have disproportionately been burdened with the impacts of climate change, GHG emissions, and air quality issues.

Fortunately, the Commission has already developed a robust record of such priority customers in R.18-12-005 and R.12-11-005.<sup>2</sup> To the greatest degree possible, the Commission should seek to align with the most up-to-date definitions across proceedings focused on microgrids, resiliency-focused programs such as the Self-Generation Incentive Program (“SGIP”), and de-energization guidelines and protocols, where Phase 3 of R.18-12-005 is kicking off with some potential considerations of additional updates and modifications to the guidelines. So long as some “public benefit” can be justified or quantified (*e.g.*, schools), the Commission should allow for some level of standby charge waiver for customers by virtue of the public good and/or

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<sup>2</sup> See, *e.g.*, De-Energization Phase 1 Guidelines from Appendix A of D.19-05-042 at 4-6: <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M296/K598/296598822.PDF>; De-Energization Phase 2 Updated and Additional Guidelines from Appendix A of D.20-05-051 at 74: <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M339/K524/339524880.PDF>; and D.20-01-021 at 40-41 where the Commission “justifies updating the eligibility criteria for the SGIP equity resiliency budget to better include customers most impacted by PSPS events”: <https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M325/K979/325979689.PDF>.

essential service that they provide to society. In this way, not only are microgrid projects better supported financially, but also the cost-shifting concerns are mitigated since the benefits of the customer's resiliency is socialized.

Second, standby charge reductions can be justified and conditioned on whether the microgrid is contracted to provide grid services or be enrolled in a grid-service program. There is nothing to stop a microgrid from participating in the California Independent System Operator ("CAISO") market for energy or ancillary services and/or participate in all-source solicitations to deliver Resource Adequacy ("RA") capacity or distribution deferral services in blue-sky conditions to provide broader grid benefits and supplement microgrid project development with revenue streams; however, these opportunities are competitive and face a number of other challenges (*e.g.*, availability of deliverability, market participation models) that may require further work. Instead, there may be more targeted and immediate opportunities for microgrids to "exchange" standby charge reductions for commensurate broader grid services that can be uniquely delivered by microgrids.

For example, in R.20-11-003, the Commission is considering the development of an Emergency Load Reduction Program ("ELRP") that would seek the participation of demand-side resources in a potentially multi-year program outside of the CAISO market and outside of the RA and California Energy Commission ("CEC") planning framework. Additionally, the Staff Proposal is considering compensation for the emergency load reduction and/or energy supply as an after-the-fact "pay-for-performance" payment instead of a standby or capacity-like payment. With this in mind, microgrid customers could receive standby charge reductions in exchange for enrollment in the ELRP, whereby microgrids would be required to respond to IOU signals to island, operate in parallel to the grid, and "shed" segments of load that must be served by the broader grid. Rather than shedding a single customer's load, as typically considered for emergency demand response ("DR"), microgrids have the ability to "shed" pools of customer loads under a multi-property configuration by having onsite generation and storage resources serve these loads, thus providing the CAISO and IOU grids with relief in emergency situations. Since the ELRP will not be counted for RA or embedded in the CEC load forecast, issues around ensuring deliverability to the system for microgrids acting as emergency capacity. Rather than seeking voluntary and uncompensated load reductions during Stage 3 emergencies as done in the August 2020 outages, a compensated load shed could be incorporated in the ELRP for microgrid customers who have the generation

and storage resources, with the compensation coming in the form of a standby charge reduction commensurate with this benefit. In some ways, this exchange is similar to how the IOUs offer automated demand response (“ADR”) incentives to customers but condition this technology incentive payment on customer enrollment in a DR program, thereby balancing ratepayer costs with ratepayer benefits. Beyond the ELRP, other eligible grid-service programs or contracts could be identified as justifying the standby charge reduction.

Third, standby charge reductions can be justified and scaled based on the level of GHG emissions of the microgrid configuration. Generally, the quantification or estimation of this benefit is more challenging because a baseline is needed by which to measure these GHG reductions or air quality improvement. If compared to a wires investment to address the resiliency need and obviate the need for the customer to invest in microgrids in the first place, microgrid resources may actually increase emissions or worsen air quality issues by involving some combination of diesel generation and/or natural-gas-fueled fuel cells. Alternatively, the default use of diesel generation could be used as the baseline by which to calculate the scaled benefits that are then used to reduce standby charges. Despite these complexities, some consideration of environmental impacts could be incorporated to serve as an added reduction to standby charges, which advance the state’s decarbonization goals and policies. If it is difficult to scale reductions commensurate with the GHG and pollutant reduction benefits, then a simpler standard could be set where the grid must incorporate a minimum percentage of zero-carbon fuels or renewables to be granted this incremental standby charge reduction.

Therefore, as summarized above, CESA generally supports the Commission’s consideration of standby charge reductions commensurate with the broader benefits that could be provided to all customers related to: (1) nature, type, and location of customer; (2) enrollment in a program to deliver grid services or avoid certain capital expenditures; and (3) reduction in GHG emissions and mitigation of air quality issues.

In addition to these conditions, CESA also wishes to explore whether standby service could be waived or significantly reduced for microgrid customers under a certain capacity threshold (*e.g.*, 3 MW) due to the potentially *de minimis* impact to costs or distribution reliability when accounting for the diversity and small size of such microgrid customers. The odds of all of these small microgrid customers requiring standby service at the same time due to simultaneous partial or

complete shutdowns of their onsite generation is likely low if microgrid customers have diverse load profiles and diverse resource types. Such an exploration or deeper data analysis may be appropriate at a later time or in a different proceeding, but we raise this for the Commission’s consideration as an immediate policy, which could be adopted in this proceeding as an interim measure that may support data collection and evaluation on cost and service impacts.

**Question 2: What are potential consequences of waiving standby charges? Please quantify wherever possible.**

- a) If reducing or eliminating standby charges for microgrids would facilitate the installation of new microgrid capacity that would create benefits for non-microgrid customers, please detail how, and quantify the benefits.**
- b) If reducing or eliminating standby charges for microgrids would result in a cost shift prohibited by SB 1339, please detail how, and quantify the cost shift.**

This approach may be a reasonable proxy to account for the societal benefits and/or the value of resiliency, which will be helpful but difficult to quantify, let alone on a universal basis. The exemption or reduction would recognize the value of having resiliency for the particular customer(s). Meanwhile, the grid-service benefits that would be “exchanged” for receiving the waiver or reduction may be more easily calculated based on average capacity prices, avoided emergency reliability procurement prices, or avoided distribution investments. To support the distribution-related benefits calculation, however, there needs to be greater transparency into wildfire mitigation costs and expenditures.<sup>3</sup>

#### **IV. EXISTING RATE SCHEDULE FEATURES.**

**Question 1: Describe the existing ways a customer generator or microgrid project can take service that would not obligate the customer to incur a standby charge, citing for reference to the exact applicable CPUC authorized tariffs, rates, or rules. Are there existing exemptions from standby charges that could apply to certain microgrid use cases? If so, describe.**

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<sup>3</sup> See, e.g., “Designing Electricity Rates for an Equitable Energy Transition,” published by Next 10 and the Energy Institute at UC Berkeley’s Haas School of Business at 5 and 27.  
<https://www.next10.org/sites/default/files/2021-02/Next10-electricity-rates-v2.pdf>



Net Energy Metering (“NEM”) customer-generators are currently exempt from standby charges for policy reasons to advance a number of goals, including encouraging conservation, reducing demand for electricity, and stimulating in-state economic growth. Similar “policy reasons” could be leveraged to advance the goals of SB 1339 to support the commercialization of microgrids, albeit with additional considerations to address cost-shifting risks, as discussed above.

**Question 2: What obstacles prevent customer generators or microgrid project developers from using the customer provision of physically assured load reduction (for one example, refer to PG&E Electric Sample Form No. 79-1050)? Would options such as providing physical assurance through reliable firmware settings and less expensive protective relay equipment reduce those obstacles?**

As CESA understands it, the current provisions for physical assurance require the use of relay equipment will automatically and instantaneously protect the IOU’s distribution system in case the onsite generation fails to perform to its capacity,<sup>4</sup> but lower-cost non-relay options are not explicitly incorporated in these tariffs and forms and thus not allowed for use. Yet, firmware and software options that are functionally equivalent to relays are currently used for ensuring that NEM integrity is upheld,<sup>5</sup> where such functions are used to ensure either no grid charging or no storage export. Beyond just ensuring NEM integrity, these controls are also used for Rule 21 interconnection to ensure safety and reliability, where these firmware and software is similarly used to ensure limited or no exports, which would otherwise lead to voltage and other grid stability issues. Standards are in place to ensure safety and reliability (e.g., UL Power Control Systems CRD). Similar options should be allowed to meet the physical assurance provision.

**Question 3: If a microgrid project developer or customer generator account signs a physical assurance agreement, will they be eligible to participate in the base interruptible program, emergency load reduction program or other demand response programs, by promising to island when called and continuing to serve their own customer microgrid load?**

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<sup>4</sup> See, e.g., PG&E Form 79-1050 Section 5.3 and 5.4.

<sup>5</sup> See, e.g., PG&E Electric Schedule NEM2 Special Condition 9.a:  
[https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC\\_SCHEDS\\_NEM2.pdf](https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC_SCHEDS_NEM2.pdf)

CESA does not know the answer to this question, but this question warrants further exploration to understand how it impacts the ability of microgrids and/or its component DER resources to participate in load reduction programs.

**V. QUESTIONS FOR DEVELOPERS.**

**Question 1:** Please list examples of customers who were presented with a project cost estimate that declined to move forward in past five years based on concerns of economic feasibility, where it would be reasonable to expect that a complete elimination or partial reduction in standby charges would have changed the customer’s decision. Please include quantitative details on the project cost, customer’s economic feasibility threshold, and standby charges involved for each example.

CESA defers to specific developers to respond to this question.

**Question 2:** Please provide quantitative examples of hypothetical but realistic scenarios demonstrating how standby charges affect project economics and/or company profitability.

CESA defers to specific developers to respond to this question.

**Question 3:** Provide examples of customers who have contracted for a physical assurance agreement and describe the terms, conditions, costs, and experience using physically assured load reduction in lieu of paying standby charges.

CESA defers to specific developers to respond to this question.

**Question 4:** Please provide quantitative examples of realistic scenarios demonstrating how standby charges affect project economics and company profitability.

CESA defers to specific developers to respond to this question.

**Question 5:** What obstacles prevent customer generators or microgrid project developers from shifting fuels to renewable fuels in order to become eligible for current standby exemptions or utility rate schedules limited to fully renewable and/or lower carbon intensity technologies?

CESA defers to specific developers to respond to this question.

**Question 6:** Please estimate the forecasted market for microgrids under the following situations by completing the table below listing identifying

categories of market sectors or critical facility types defined by D.19-05-042. Please cite data sources where applicable: Total megawatts of microgrid generation capacity (excluding storage) that would be financially viable in California if standby charges were waived; Total megawatts of microgrid generation capacity (excluding storage) that would be financially viable in California if standby charges are not modified from their present form.

CESA defers to specific developers to respond to this question.

## **VI. RESOURCE ELIGIBILITY QUESTIONS.**

**Question 1:** Please indicate which resource types below should be granted a partial or complete waiver and explain why (multiple answers are acceptable).

- a) **No additional resource types, i.e. standby charge exemptions limited to:**
  - i) **Resources that qualify for exemptions or waivers in existing CPUC authorized rate schedules, with no additional revisions;**
  - ii) **Resources that qualify for exemptions or waivers through implementation of physically assured load reduction and a physical assurance agreement executed with the utility;**
  - iii) **Only renewable electrical generating facilities as defined by the California Energy Commission Renewable Portfolio Standard Eligibility Guidebook and the Overall Program Guidebook;**
  - iv) **Backup diesel generators that serve health care facilities as defined by Health and Safety Code 41514.1 (referenced in P.U.C. 8371(d));**
- b) **Natural gas generators that comply with emissions standards adopted by the State Air Resources Board pursuant to the distributed generation certification program requirements of Section 94203 of Title 17 of the California Code of Regulations, or any successor regulation (referenced in P.U.C. 8371(d));**
- c) **Resources that meet some other set of criteria (please explain);**

- d) No limits other than meeting the criteria defined elsewhere that are not related to resource eligibility.**

As described in our response to Question 1 in Section III, CESA explains how additional standby charge reductions could be granted on a sliding scale with commensurate improvements in environmental impact. The baseline of environmental improvements could be measured against adopted emissions standards for various fossil-fueled resources, where increasing use of zero-carbon resources in the microgrid should be given additional standby charge reductions as a policy objective of the Commission's standby charge structure. Furthermore, some of the environmental objectives are also incorporated in retail rates with greater alignment with marginal GHG emissions and in grid-service programs where wholesale market participation is required, considering wholesale market prices are generally well-correlated with marginal GHG emissions.

**Question 2: If CPUC were to allow nonrenewable project resources to be eligible for a waiver or reduction in standby charges in exchange for a service, should it take additional actions to ensure consistency with statewide greenhouse gas emissions and criteria air pollution reduction goals? For example:**

- a) **Should the CPUC impose a maximum emissions limit other than one of those listed in the question above?**
- b) **Should the CPUC define periodic reporting requirements to demonstrate a reduced carbon intensity compared to a standard? Please explain any other suggestions you think would address this goal.**

CESA supports the Commission allowing non-renewable project resources to be eligible for standby charge reductions if they support a broader societal benefit and in leveraging existing emissions and air quality requirements. CESA also does not oppose the Commission establishing additional incentives to grant incremental standby charge reductions for projects that have greater renewable and zero-carbon fuel use, which is within the Commission's authority to set such a policy if it advances the state's decarbonization and DAC objectives.

## **VII. QUESTIONS TO IDENTIFY DETAILS OF PROPOSED SERVICE PROVIDED.**

**Question 1: What existing services (define and describe in detail) do distributed energy resources in microgrids already qualify for that the microgrid owner can offer to the IOU or the CAISO?**

The individual distributed energy resources (“DERs”) that make up the components of a microgrid can already participate in the CAISO market as Participating Generators to provide generation-only energy or ancillary services, Proxy Demand Resources (“PDRs”) to deliver biddable and scheduled load reductions, or as Non-Generator Resources (“NGRs”) to provide bidirectional energy and ancillary services (*e.g.*, energy storage). Similarly, the DER components of a microgrid can be contracted for RA capacity and distribution deferral services, among others, with IOUs or other load-serving entities (“LSEs”).

However, to CESA’s knowledge, there are some models available for microgrids with multiple generation, energy storage, and DR technologies to operate as a single controllable entity to provide grid services to the IOU or the CAISO. The CAISO’s developed and finalized proposals in 2020 where its wholesale market participation models now consider market modeling, forecasting, metering, and interconnection for hybrid and co-located resources.<sup>6</sup> Much of the discussion focused on solar-plus-storage resource types due to their prevalence and share of contracted capacity and the interconnection queue, where one generation and one storage resource are represented under either one (hybrid) or two (co-located) resource IDs. The RA counting rules were also recently updated in R.19-11-009 for in-front-of-the-meter hybrid and co-located resources.<sup>7</sup> Both of these developments can be broadly applicable to microgrids with multiple generation and storage resources behind the same meter or microgrid configuration, but the complexity of measuring, bidding/scheduling, and settling likely increases with the number and type of resources. When generation, storage, and DR resources are combined and in varying quantities of each, CESA imagines that there may be additional barriers and issues to address.

The issuance of Order No. 2222 and the requirement for the CAISO to submit compliance filings by July 19, 2021 may present an opportunity to address these barriers and issues. Among the various requirements and orders, the CAISO will be required to allow DER aggregations to register under one or more participation models accommodating their physical and operating characteristics. Currently, behind-the-meter (“BTM”) aggregations are able to incorporate multiple different technologies (*e.g.*, smart thermostats, EV charging, energy storage, controlled

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<sup>6</sup> See CAISO Hybrid Resources Initiative:

<https://stakeholdercenter.aiso.com/StakeholderInitiatives/Hybrid-resources>

<sup>7</sup> See D.20-06-031 at Ordering Paragraph (“OP”) 10-12.

<https://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M342/K083/342083913.PDF>

heat pump loads) that ultimately fall under the same PDR model and category of market response (*i.e.*, load reduction). These complexities likely increase when a microgrid could include an IFOM energy storage resource that typically fits under the NGR model, a BTM energy storage resource that typically fits under a PDR model with no valuation for exports at this time, a fuel cell that typically fits under the traditional generator model, and DR resources that fit under a PDR model and measure performance according to a single-customer baseline. When combined in a microgrid, it is not readily apparent how we reconcile all of these participation models and/or how we create a model that can flexibly accommodate these different resource characteristics.

**Question 2: Under what specific circumstances would it be in the public interest to require utilities to waive or reduce standby charges to a microgrid for intentional islanding? How should the benefits to the public be identified, measured, and valued?**

CESA mostly responds to this question in our response to Question 1 in Section III. CESA supports a reasonable measurement and evaluation framework to assess the costs and benefits of the standby charge reduction or waiver policy, if adopted.

**Question 3: Would providing electric service to a critical facility as defined by D.19-05-042 in situations where the IOU does not provide service, such as during a planned public safety power shutoff, be sufficient to merit waiving or reducing standby charges? (e.g., if a microgrid that serves a critical facility must island to continue to provide service to the critical facility during a utility planned outage such as a PSPS, should the standby charge be waived or reduced for that microgrid for any month in which that occurred?) If so, why should a waiver or reduction in standby charges be available to microgrids and not other types of backup generation? Please explain your answer. If you think criteria other than those defined in D.19-05-042 should be used to determine eligibility, please explain which criteria should be used and why?**

Yes, as explained in our response to Question 1 of Section III, a microgrid providing electric service to a critical facility where the IOU does not provide standby service merits standby charge reductions given the broader societal benefits by being able to maintain electric service to provide essential service (*e.g.*, food, water, telecommunications, transportation) at all times. Since the microgrid would be playing this standby service function at other times, not just during PSPS events, reductions may be warranted in other months as well.

**Question 4:** Other than islanding, is there a different type of grid service that can be uniquely provided by microgrids (or specific types of microgrids), and not the individual resources comprising the microgrids, that would merit a standby charge waiver or reduction (please define the type of microgrid and the grid service)? How should the benefits to the public be identified, measured, and valued?

Other than islanding, CESA believes that microgrids can provide any number of grid services once market participation models have been updated and refined to enable microgrid participation with the aggregate of its resources in a single response to a CAISO or IOU dispatch signal, as opposed with the individual responses in separate responses.

**Question 5:** How should a customer be required to demonstrate that it can provide a particular service in exchange for a standby charge waiver or reduction and why?

- a) Physical equipment meeting certain specifications;
- b) Software settings capable of inducing equipment behavior;
- c) Contractual obligation only;
- d) Combination of the above;
- e) Other.

CESA believes each of the above examples represent requirements that could sufficiently address concerns that the IOU does not need to provide such standby service. The tariff should also allow for reasonably scheduled maintenance-related outages such that IOU standby service is not needed.

**Question 6:** What trigger should CPUC require a customer to respond to in exchange for a waiver or reduction in standby charges and why?  
Examples:

- a) Warning of Stage 3 Emergency;
- b) Specific temperature threshold (please specify);
- c) Price threshold (please specify);
- d) Emergency situation on the electric distribution or electric transmission system (please specify);

- e) **Situation impacting system restoration (please specify);**
- f) **Emergency declaration by local, state, or federal authority;**
- g) **Designated situation specific to IOU bi-lateral agreement;**
- h) **Other.**

If microgrids are allowed to participate in the ELRP and the ELRP is listed as one of the options to exchange for a standby charge reduction, the trigger should be whatever the ELRP adopts for all other types of resources. In CESA’s testimony on January 11, 2021 in R.20-11-003, we provided a proposal for potential triggers that would be set at some of the highest percentile of observed day-ahead market prices on the extreme weather load days (*i.e.*, \$750/MWh for the 97<sup>th</sup> percentile),<sup>8</sup> but this may need to be adjusted depending on how frequently we wish this type of emergency response to occur.

#### **VIII. COST BENEFITS QUESTIONS.**

**Question 1: Are standby charges appropriately rooted in cost causation principles? If reducing or exempting microgrids from standby charges would result in a cost shift prohibited by Senate Bill 1339, please detail how.**

With the frequency and duration of PSPS events and the continued risk of extreme weather events (*e.g.*, heat storms, wildfires), the underlying assumption supporting standby charges is challenged, where the transmission and distribution lines are less likely to be “standing by” to provide electric service when onsite generation in a microgrid experiences a partial or complete shutdown. Instead, due to concerns about the reliability of electric service, customers are increasingly seeking their own resiliency solutions, such that the situation has been reversed in many ways where energy storage and/or microgrids are being pursued to be “standing by” when the transmission and distribution grid fails or goes on planned or unplanned outages. If a system is designed to island sufficiently to provide power when the grid is not available (*e.g.*, PSPS events), the larger grid is not “standing by” nor is a source of reliable power in the customer’s perspective. Viewed in this way, there is a case for standby charges to be waived or reduced.

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<sup>8</sup> *Opening Testimony of Jin Noh on Behalf of the California Energy Storage Alliance* served on January 11, 2021 in R.20-11-003 at 17-20.

<https://docs.cpuc.ca.gov/PublishedDocs/SupDoc/R2011003/3324/359864004.pdf>



Broadly speaking, the Commission should consider a deeper examination of standby charges in this proceeding. Standby charges could be more refined with greater granularity to account for local reliability factors, differentiate between standby service for planned versus unplanned outages,<sup>9</sup> diversity factors associated with multiple microgrid customers,<sup>10</sup> diversity factors associated with microgrids with multiple onsite generators,<sup>11</sup> and more. The time may be ripe to begin a broader reassessment.

At the same time, though the purpose and costs recovered by standby charges warrant further review and potential modifications for a number of reasons (*e.g.*, possibly through a third-party consultant evaluation), CESA does not believe that more substantive standby charge reform can be achieved in the amount of time allotted in the Scoping Memo. As a result, CESA supports a standby charge reduction or credit for microgrid customers who meet certain conditions as an interim approach to support microgrid project development. Since an unconditional or total waiver/reduction for a microgrid customer would only impose the costs recovered by standby charges on all other customers, certain conditions are necessary to ensure that broader ratepayer or societal benefit is being approximated and delivered, thereby addressing cost-shifting concerns as stressed by many parties in this proceeding. CESA believes that there are multiple dimensions

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<sup>9</sup> By scheduling maintenance schedules and taking planned outages in the “off-peak season”, the IOUs can mitigate the impacts of microgrid customers from paying for standby service that can be more efficiently accommodated within the capacity of the distribution system, instead of having to pay for this standby service assuming that any customer with onsite generation could take such planned outages at any time of the year. See <https://www.raponline.org/knowledge-center/standby-rates-for-combined-heat-and-power-systems/>. This may be already addressed in existing tariffs, but it is unclear on how scheduled maintenance impacts standby rates. See PG&E Schedule S at 15:

[https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC\\_SCHEDS\\_S%20\(Sch\).pdf](https://www.pge.com/tariffs/assets/pdf/tariffbook/ELEC_SCHEDS_S%20(Sch).pdf)

<sup>10</sup> Not all microgrids will need standby service at the same time, such that cost recovery for standby service assuming worst-case impacts (*e.g.*, failed generation at coincident peak for all customers) may be excessive. For example, microgrids will likely be deployed and shaped to address the aggregate microgrid customer loads, whereby we may have some microgrids with 3-MW morning peaking loads and others with 3-MW evening peaking loads. Accounting for this diversity, 3 MW of standby service could serve both customers, but the standby charges may be recovering costs for 6 MW of standby service in calculating these rates.

<sup>11</sup> With certain levels of redundancy with multiple onsite generation in a customer microgrid, the full amount of standby service may not be necessary. For example, a multi-property microgrid with multiple solar-plus-storage resources behind multiple inverters, any standby service from the partial or complete shutdown of one onsite generation could be backed up by other generation within the microgrid configuration, such that the full level of standby service for the aggregated capacity of generation in the microgrid is unnecessary and excessive.

by which these conditions could be applied to justify standby charge reductions for a given microgrid customer.

**Question 2: How can the estimate of public benefits to non-participating ratepayers not connected to a microgrid be quantified in such a way as to be able to provide a basis for waiving or reducing standby charges?**

Yes, the public benefits to non-participating ratepayers can be approximated qualitatively or valued qualitatively, measured based on the grid-service value, avoided costs, and public health and well-being benefits. For example, the public benefits to non-participating customers can be estimated by the number of customers who would benefit from the microgrid islanding and resiliency provided.

**Question 3: What form of evidence that the microgrid provides incremental benefit to other customers must the microgrid owner provide to justify the waiver? (e.g., If the microgrid can demonstrate measurable, quantified benefits to non-participating customers or the utility or the microgrid serves critical facilities, essential services and others identified by D.19-05-042.)**

With a pre-qualified eligible customer list (e.g., critical facilities list from D.19-05-042), pre-defined terms for eligible grid services (e.g., ELRP, specific distribution deferral), and upfront environmental requirements (e.g., minimum 50% renewable requirement), much of the demonstration will be done in accordance with these defined conditions. To enable some flexibility, the Commission may wish to allow for case-by-case determinations via an “application process” where microgrid customers can present evidence and make a case for standby charge reductions or waivers.

**Question 4: What controls are needed to ensure that the customer generator or microgrid project is not over-compensated and not double-counted from among multiple programs, including the Base Interruptible Program, the Emergency Load Reduction Program, individual power purchase agreements or bilateral contracts, Net Energy Metering, and the various incentive programs such as the Self Generation Incentive Program?**

CESA believes that this dual participation and double compensation issue may need to be addressed if the benefits are tied to both aggregate microgrid and individual DER component

response. CESA has no specific ideas or proposals at this time but looks forward to working with the Commission and stakeholders on developing the appropriate controls.

**IX. QUESTIONS TO IDENTIFY DETAILS OF POTENTIAL WAIVER.**

**Question 1: What specific parts of the standby charges rate schedule should be waived or reduced, if any waivers or reductions are granted?**

- a) Reservation;**
- b) Other (please explain).**

CESA believes that reductions to the reservation portion of the standby charges is the most appropriate. We look forward to reviewing other parties' responses.

**Question 2: What amount of standby charges should be waived if waivers are granted, and why?**

- a) All;**
- b) Proportionate to benefit;**
- c) All if no demand charges in that billing period;**
- d) Other (please explain).**

As explained in our response to questions in Section III above, CESA supports reductions proportionate to the estimated benefit as opposed to a full waiver of standby charges, unless microgrid customers opt to have them fully waived as part of a physical assurance agreement.

**Question 3: How long should a waiver be granted if any waivers are granted, and why?**

- a) Indefinitely;**
- b) Certain number of years (please specify);**
- c) Annual, with annual renewal;**
- d) Certain capacity enrolled;**
- e) Other (please explain).**

Since regulatory certainty supports the financeability and development of microgrid projects, CESA favors indefinite waivers or reductions of standby charges. At the same time, given

the complexity of this issue and the possible need to refine estimates of commensurate benefits, CESA understands that the Commission may wish to reassess the waiver or reduction mechanism at some point in the future to ensure microgrids are delivering on the wider benefits to justify the standby charge reductions. Furthermore, if the Commission embarks on broader reforms to standby charges, it may not be appropriate to indefinitely continue the standby charge waiver/reduction policy adopted in this proceeding. To this end, CESA recommends that the Commission adopt a standby charge waiver/reduction policy that could be applicable for at least a certain number of years (*e.g.*, until December 31, 2025) to provide sufficient forward certainty to microgrid project developers and to give the Commission an opportunity to evaluate the impacts of this policy. In this interim period, the Commission may adopt other resiliency or microgrid policies and/or frameworks that could impact the standby charge waiver/reduction policy.

CESA favors an approach that establishes a time period for the standby charge waiver/reduction policy as being more equitable than one based on capacity enrolled and as being more stable than one with annual renewals. Given the length of time and capital required to develop more complex microgrids, such projects can be disadvantaged by a structure that narrowly favors simpler projects that can better leverage a first-come, first-served model (*i.e.*, based on certain capacity enrolled) or by a structure that creates start-and-stop policies that is disruptive to projects with multi-year development timelines.

**Question 4: If the CPUC takes the action above such as modifying the standby charge, should CPUC limit the applicability of the standby charge waiver to new projects, or should the waiver apply to existing projects as well? Please justify your answer, after first stating your position:**

- a) Please describe what types of incremental benefits a waiver of standby charges would be likely to enable existing microgrids to provide to non-microgrid customers. Please describe in detail how a waiver of standby charges would enable the delivery of each proposed benefit, and how the benefit would be incremental to the present circumstances.**
- b) Please estimate, in \$/MW, the financial value of each incremental benefit that waiving standby charges for existing microgrids would deliver to non-microgrid customers.**

Yes, CESA recommends that the Commission apply the standby charge waiver or reduction to existing projects as well, especially if this waiver or reduction is granted in exchange for incremental services to be provided by the project. For example, without some form of compensation or charge reduction, existing microgrid will have no incentive to enroll in the ELRP to provide broader societal benefits. If such incremental service can be provided to all customers, then waivers or reductions of standby charges commensurate with these benefits are reasonable and warranted.

**X. CONCLUSION.**

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

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Jin Noh', is positioned above the typed name and title.

Jin Noh  
Policy Director  
**CALIFORNIA ENERGY STORAGE ALLIANCE**

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