



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)

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**OPENING COMMENTS OF THE CENTER FOR ENERGY EFFICIENCY AND
RENEWABLE TECHNOLOGIES ON ASSIGNED COMMISSIONER AND
ADMINISTRATIVE LAW JUDGE'S RULING SEEKING COMMENT ON POLICY
QUESTIONS AND AN INTERIM APPROACH FOR MINIMIZING EMISSIONS FROM
GENERATION DURING TRANSMISSION OUTAGES**

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**FOR: Center for Energy Efficiency and
Renewable Technologies**

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The Center for Energy Efficiency and Renewable Technologies (CEERT) respectfully submits these Opening Comments on the Assigned Commissioner and Administrative Law Judge’s (ALJ’s) Ruling Seeking Comment on Policy Questions and an Interim Approach for Minimizing Emission from Generation During Transmission Outages, mailed in this proceeding on September 4, 2020 (September 4th Ruling). These Opening Comments are timely filed and served pursuant to the Commission’s Rules of Practice and Procedure and the September 4 Ruling.

**I.
BACKGROUND**

CEERT is a nonprofit public-benefit organization founded in 1990 and based in Sacramento, California. CEERT is a partnership of major private-sector clean energy companies. CEERT designs and fights for policies that promote global warming solutions and increased reliance on clean, renewable energy sources for California and the West. CEERT is working toward building a new energy economy, including cutting contributions to global warming and reducing dependence on fossil fuels. CEERT has long advocated before the Commission for increased use of preferred resources and for California to move towards a clean energy future.

II. CEERT'S OPENING COMMENTS ON THE OVERALL POLICY QUESTIONS

CEERT appreciates the opportunity to comment on the policy questions related to utility deployment of temporary generation and alternatives to diesel fuel and technology, in addition to the interim approach for minimizing emissions during transmission outages. As directed by the September 4th Ruling, CEERT has organized and submits its Comments on the Staff Proposals in the same order as listed in that Ruling.¹ Each topic is listed, with CEERT indicating any on which it has no comment at this time.

2.1. Topics Regarding Emerging Energy Resource Alternatives

2.1.1. General Policy Questions

1. *Regulatory Simplicity & Ratepayer Maximizing Ratepayer Benefit: Are there duplicative efforts relating to infrastructure hardening and resiliency planning occurring between this proceeding, Rulemaking (R.) 19-09-009, and other proceedings such as R.18-10-007, the Order Instituting Rulemaking to Implement Electric Utility Wildfire Mitigation Plans Pursuant to Senate Bill 901, or general rate cases, that could expose ratepayers to either duplicative or excessive costs?*

CEERT is concerned that the persisting inability of microgrids and other potential resiliency technologies to export to the grid will result in ultimately higher costs to ratepayers. Prohibiting these technologies from exporting energy to the grid during normal grid operation prevents them from reaching resource adequacy (RA) and California Independent System Operator (CAISO) market revenue streams. Microgrids and other distributed energy resources (DERs) have the potential to supply both local and system RA capacity value, in addition to providing resiliency during transmission outages. However, the current RA structure essentially prevents these clean technologies from acquiring a Net Qualifying Capacity (NQC) designation that sufficiently reflects the full suite of benefits they bring to the grid. These essential technologies are significantly undervalued, resulting in unnecessarily high costs to ratepayers,

¹ September 4th Ruling, at p. 3.

disincentivizing their development, and leading to over procurement of fossil fuel generation. In order for clean alternatives to be accurately paid and compete fairly with diesel, the consequences of the inadequate RA structure must be examined and rectified.

The Federal Energy Regulatory Commission (FERC) recently issued a final order establishing Federal policy to mandate that RTO/ISOs allow export of microgrid energy and capacity to the wholesale grid, and provide fair compensation for grid services provided.² The Commission needs to take notice of this policy shift and align the RA structure to this new Federal policy. The next step should be to explore this issue in depth in the upcoming multi-agency workshop on DER integration in Track 3a of R. 19-11-009 (RA).³

2. Energy Resource Cost Effectiveness & Reliability: What fuel and technology resources should the Commission consider, as preferred solutions that reduce reliance on diesel for providing power during transmission outages?

The Commission should consider and give preference to all clean, non-emitting technologies. This includes behind the meter (BTM) solar + storage, as well as demand-side solutions such as demand response (DR) and targeted energy efficiency (EE). As the Sierra Club outlined in its presentation at the August 25th Diesel Alternative Workshop, BTM preferred resources and load reduction from DR and EE will reduce the overall need for diesel back up generation.⁴ This fact again highlights the urgent need for sufficient RA counting mechanisms in place that will correctly value DERs. If the Commission is placing a large amount of emphasis on the cost-effectiveness of technologies, DERs must be able to fairly and fully compete by being accurately valued for the RA and ancillary service benefits they bring to the grid, including the benefits they provide during normal grid operation.

² FERC Order 2222

³ Public Workshop Notice: CPUC, CEC, CAISO Workshop on Valuing the Capacity of Exporting BTM Resources on October 6, 2020, sent September 16, 2020 to the service list of R.19-11-009.

⁴ Sierra Club Diesel Alternatives Workshop Presentation Slides, at slides 3 and 9.

CEERT also shares the Sierra Club’s concern that installation of non-preferred resources will act as a barrier to later transition to preferred resources in the same location.⁵ Thus, CEERT believes that it is imperative that the Commission take a “least cost, best fit” approach in deciding which technologies are preferred solutions. The Commission must seriously consider factors in addition to cost-effectiveness and reliability, including community health, safety, and environmental benefits. Furthermore, there must be a clear plan in place and a hard deadline for transitioning to preferred technologies for any backup generation project that is not renewable, and the utility must be held accountable for ensuring that the transition happens as soon as possible. As backup generation is needed to mitigate public safety power shutoffs (PSPS) in response to wildfires, which are steadily increasing in severity and frequency as a consequence of climate change, the Commission must prioritize clean, zero-emission technologies. Otherwise, the State will perpetuate the exact problem that is causing the increasing need for temporary backup generation in the first place.

3. *Cost Implications: What weight should the Commission give to cost when weighing the need to transition to preferred resources for resiliency? How should alternatives be evaluated for their costs and benefits? How should those costs be allocated and collected?*

Please see CEERT’s response to 2.1.1 (2) above. While cost-effectiveness, especially as it relates to ratepayer costs, is an extremely important factor when comparing alternative options, the fact remains that DERs are not valued appropriately for the array of benefits they bring to the grid. These resources must be able to export energy and capacity to the grid during normal grid conditions, and count accurately for RA, in order to reach revenue streams that will allow them to fully compete for procurement and receive fair compensation. In addition, microgrids provide services that are outside the strict confines of Commission jurisdictional electric ratepayer costs

⁵ Sierra Club Diesel Alternatives Workshop Presentation Slides, at slide 8.

and will be at least partially funded outside of electric rates. The Commission must carefully define “costs” and “benefits” when assessing cost effectiveness.

4. *Continuity of Safe and Reliable Service: Is it reasonable for a utility currently relying on fleets of diesel generation to serve substations loads during a transmission outage, to transition incrementally or entirely to: (a) alternative fuel resources by September 1, 2021, or (b) alternative energy resources by September 1, 2021; while ensuring safe and reliable service to customers during an emergency?*

CEERT believes that both are reasonable. As displayed during the August 25th Diesel Alternatives Workshop, there are viable diesel alternatives that are commercially available today. The question is past whether or not it is reasonable to transition to diesel alternatives by September 1, 2021. Rather, the main question now is which of the various available technologies will effectively provide safe and reliable service while staying in line with California’s broader climate goals. Transition away from diesel by September 1, 2021 is very possible and reasonable, but again, CEERT is concerned that the development of non-preferred resources will hinder future transition to zero emission back up generation. Thus, the Commission must ensure that any utility incrementally transitioning to alternative technologies has a detailed plan and is held accountable for transitioning to zero emission back up generation as soon as possible.

2.1.2. Investor-Owned Utility Questions

1. *Logistics and Technical Requirements: What technical requirements must any substation-level generation resource meet? What are the logistical challenges for portable solutions deployed during PSPS events?*

CEERT believes that the current requirement that the entire substation load must be served is not warranted. Microgrids that only serve critical loads and/or planned non-essential load drops during the emergency must be a prominent feature of the program.

2. *Third-Party Access: Is it reasonable to allow third-party backup generation to interconnect at substation buses and to authorize third parties to place the third party owned equipment on utility substation property? What, if any, security risks would this present? Could any mitigation measures be placed to reduce risk?*

CEERT does not have a comment on this question at this time but reserves the right to do so in reply to the responses of other parties on this topic.

2.1.3. Alternative Resource Proponent Questions

1. *Portability: Rather than a permanent, stationary presence at a substation, can a diesel alternative resource be optimized as a mobile or portable solution? Please respond with a “yes” or a “no”. If yes, please provide and discuss the schedule, scope of product design, any manufacturing adjustments, and fueling/refueling logistics. If no, discuss your reasoning.*

CEERT does not have a comment on this question at this time but reserves the right to do so in reply to the responses of other parties on this topic.

2. *Testing at Scale: Discuss the testing and scale of the diesel alternative energy resource that the Commission is being asked to consider. In your discussion, you must state: (a) the extent to which this alternative energy resource has been deployed during a natural disaster or man-made emergency (i.e., earthquake, wildfire, etc.); (b) the demographics of the population the alternative energy resource served during this emergency; (c) the context of the regulatory framework under which the alternative energy resource was employed; (d) what stress-testing the alternative energy resource passed to ensure reliability during an emergency; (e) testing of the alternative energy resource in controlled settings; (f) dynamic tests; and (g) field tests.*

CEERT does not have a comment on this question at this time but reserves the right to do so in reply to the responses of other parties on this topic.

3. *Implementation: State an estimated timeline for implementing the use and deployment for the diesel alternative energy resource during future PSPS events.*

CEERT does not have a comment on this question at this time but reserves the right to do so in reply to the responses of other parties on this topic.

4. *Emissions Reduction Benefits: Provide information about the emissions for the proposed alternative energy resource, based on the air contaminants and emissions test data covered by the Portable Engine Registration Program Combined Regulation Airborne Toxic Control Measures.*

CEERT does not have a comment on this question at this time but reserves the right to do so in reply to the responses of other parties on this topic.

5. *Runtime: Provide information showing the estimated runtime the alternative energy resource has accumulated under commercial operation, for 2020 and by year for the past three years (2017, 2018, 2019).*

CEERT does not have a comment on this question at this time but reserves the right to do so in reply to the responses of other parties on this topic.

6. *Customer Solar and Storage: Should the Commission consider alternative energy resources that involve centralized management of behind the meter installations of customer solar and storage as a near-term alternative to deploying temporary diesel generation at the substation level? Why or why not? What is the estimated time and uncertainty related to customer adoption of residential solar and storage that could be centrally managed for the purpose of serving all customer load associated with the same substation? What is the basis for these estimates?*

Yes, BTM solar + storage is a strong, viable alternative to diesel generation. As outlined in Tesla's presentation⁶ and Sunrun's Neighborhood Grid Concept⁷ presented at the August 25th Diesel Alternatives Workshop, near-term solar + storage alternatives are feasible. BTM solar + storage not only reduces the need for backup generation, but also has the ability to provide benefits to the larger grid during normal grid operations. Furthermore, BTM solar + storage reduces system greenhouse emissions and promotes public health and safety. Thus, the Commission must actively identify and break down regulatory barriers to the implementation of these technologies, namely the current prevention of parallel integration with the grid. CEERT again references the recent FERC Order 2222 for support of this policy.

⁶ Tesla's Diesel Alternative Workshop Presentation, at slide 1.

⁷ Sunrun's Diesel Alternative Workshop Presentation, at slides 4-6.

7. *Critical Loads Microgrids Critical Loads Microgrids: Should the Commission consider alternatives to substation-level temporary generation that focus on serving a small segment of critical loads in lieu of energizing all substation load? (Note: Such an approach would leave some safe-to-energize customers without power.)*

See response to Q2.1.2.1 above.

III

CEERT'S COMMENTS ON THE INTERIM APPROACH FOR MINIMIZING EMISSIONS FROM GENERATION DURING TRANSMISSION OUTAGES

2.2. Interim Approach for Minimizing Emissions From Generation During a Transmission Outage in 2021

1. *Do you support the proposal for how the Commission can minimize the use of diesel to serve substation loads in 2021 and 2022? Please respond with a "yes" or a "no" and discuss your reasoning. If you do not support this proposal, provide an alternative proposal that minimizes the use of diesel for energizing substations.*

Overall, CEERT agrees with the premise of the Interim Proposal to 1) keep the lights on and 2) start the transition towards clean generation,⁸ as both are important in mitigating PSPS and its underlying causes. However, diesel generation should be the absolute last option for any temporary generation. Any approved diesel generation should be conditioned upon the utility setting a strict timeline with a detailed plan to transition to clean backup energy as soon as possible.

2. *Does a utility transmission de-energization event, such as a PSPS or other outage, present an immediate temporary need for the utility to operate generation to help alleviate a threat to public health and safety?*

Yes. The utility must ensure that, in the event of an outage, its customers' health and safety are prioritized. However, this concern also extends to the type of temporary generation used, as diesel generation poses serious public health and safety threats. Thus, CEERT strongly encourages the Commission and the utilities to consider all viable alternatives before defaulting to backup diesel generation. In addition, any diesel generation must be backed by a detailed

⁸ September 4th Ruling Attachment B, at p. 2.

transition and accountability plan with a strict deadline to move to cleaner alternatives as soon as possible.

3. *Does the proposal articulate appropriate conditions for authorizing a utility to reserve a temporary generation fleet, including diesel generation? Are there additional conditions that should be applied? Are any of the three conditions unreasonable or overly restrictive (Attachment B, Paragraphs 1.1-1.5)? Discuss.*

CEERT does not have a comment on this question at this time but reserves the right to do so in reply to the responses of other parties on this topic.

4. *As a first step toward transitioning away from diesel generation, is it reasonable to require a utility seeking to deploy temporary generation in 2021 to pilot clean substation microgrid projects that would be operational for the 2021 or 2022 fire seasons?*

Yes. This is a reasonable requirement, as microgrid technologies are commercially viable. However, CEERT maintains that the largest barrier to microgrid implementation is the prevention of parallel integration with the rest of the grid. The Commission must address this barrier in depth to successfully incentivize the development of microgrids.

5. *Please indicate support or opposition to the first condition for pilot projects (Attachment B, Paragraph 2.1). Is it reasonable to require a utility to install stationary generation, considering that there is a risk of stranded costs and a more comprehensive framework for transitioning from diesel has not yet been established?*

CEERT does not have a comment on this question at this time but reserves the right to do so in reply to the responses of other parties on this topic.

6. *Please indicate support or opposition to the second condition for pilot microgrid projects, listing the characteristics of substations where these projects would be developed (Attachment B, Paragraph 2.2). Is this a reasonable way to limit stationary projects to substations where they make sense as long-term, low-risk investments? Are there additional substation characteristics that should be included?*

CEERT does not have a comment on this question at this time but reserves the right to do so in reply to the responses of other parties on this topic.

7. *Please indicate support or opposition to the third condition for pilot projects, requiring that they be judged feasible by the utility and meet a set of minimum criteria (Attachment B, Paragraphs 2.3). Are there additional criteria that should be included?*

CEERT does not have a comment on this question at this time but reserves the right to do so in reply to the responses of other parties on this topic.

8. *Is it reasonable to require pilot projects to be cost-competitive with diesel temporary generation, accounting for other revenue streams (Attachment B, Paragraph 2.3)?*

No, it is not reasonable. Cost-effectiveness should be a factor when reviewing potential alternatives, however, the purpose of “pilot projects” is to learn about costs and benefits in a real-world setting and to factor the knowledge gained back into the ongoing program. Almost by definition, “pilot projects” should not be required to be “least cost” solutions in the narrow sense implied by this question. Again, microgrid technologies must be able to operate in parallel with the larger grid in order to access all possible revenue streams, including RA and CAISO market revenue streams. Without this ability, in addition to the lack of appropriate NQC designation, microgrids cannot be fully and accurately compared to diesel generation. Ultimately, preventing microgrids from exporting to the grid during normal grid conditions and the inability of DERs technologies to reach RA and CAISO market revenue streams will result in higher ratepayer costs and an unnecessary over-reliance on fossil fuel generation. Finally, non-wholesale market benefits and non-ratepayer funded investments are likely to be a prominent feature of microgrids, complicating the definition of “cost-competitive.”

9. *Please indicate support or opposition to the third condition for permanent microgrid projects, requiring them to meet certain emission reduction requirements? Are the specific reduction targets reasonable (Attachment B, Paragraph 2.4)?*

CEERT strongly agrees with and appreciates the Commission requiring projects feasible by 2022 to be completely renewable. However, CEERT also believes that projects feasible by

2021 should be held to a similar standard. Given the pilot nature of this proposal, the resulting microgrids should strive to virtually eliminate all emissions before including emitting generation. However, if the emissions standards outlined in Paragraph 2.4 are used, the utilities should include a detailed plan for transitioning to completely renewable technologies in a timely manner, in line with California's climate and clean energy goals.

2.3. Process for Transitioning to Clean Temporary Generation in 2022 and Beyond

- 1. Do you support the proposal for a process for transitioning to clean temporary generation in 2022 and beyond? Please respond with a "yes" or a "no" and discuss your reasoning. If you do not support this proposal, provide an alternative proposal for a long-term approach.*

Yes, CEERT supports the proposal for a process for transition to clean temporary generation in 2022 and beyond. However, CEERT recommends that the Commission clarify when the utilities must file these proposed procurement frameworks to ensure that the transition away from diesel generation occurs as soon as possible.

- 2. Does the proposal for a long-term approach to temporary generation articulate appropriate topics to be addressed in a utility application? Are there additional topics that should be addressed?*

CEERT believes that the proposal does articulate appropriate topics. However, CEERT also believes that emission targets must be kept in mind within each of these criteria. Furthermore, the Commission should clarify throughout that clean, renewable resources should be prioritized in this proposed procurement framework.

CEERT strongly agrees that the utilities must "propose an ongoing process for subjecting the utility's temporary or permanent generation emissions targets, needs, plans, evaluation criteria, solicitation protocols, and costs to oversight and review".⁹ As part of an interim approach, proposed long-term solutions must be revisited frequently in order to ensure that they

⁹ September 4th Ruling Attachment B, at p. 7.

are wholly beneficial to the community and in line with California’s climate and clean energy goals.

III. CONCLUSION

CEERT appreciates the opportunity to comment on the Assigned Commissioner and ALJ’s September 4th Ruling. CEERT strongly supports the rapid transition away from temporary diesel generation as a mitigation strategy to PSPS, as diesel generation only perpetrates climate change and more frequent PSPS events. However, DERs and other clean technologies must be valued accurately to incentivize their development and allow these technologies to compete fairly as procurement options. Furthermore, CEERT reinforces the importance of maintaining stringent emission standards throughout and in all aspects of this process so that potential “interim solutions” do not prevent the transition to better, cleaner preferred technologies in the future.

Respectfully submitted,

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