

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

Order Instituting Rulemaking to Consider
Streamlining Interconnection of Distributed
Energy Resources and Improvements to
Rule 21.

Rulemaking 17-07-007
(Filed July 13, 2017)

**COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE ON THE E-
MAIL RULING DIRECTING RESPONSES TO QUESTIONS ON WORKING GROUP
FOUR REPORT AND ISSUES 11 AND 13**

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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 *E-mail Ruling Directing Responses to Questions on Working Group Four Report and Issues 11 and 13* (“Ruling”), issued by Administrative Law Judge (“ALJ”) Kelly A. Hymes on November 16, 2020.

I. INTRODUCTION.

CESA appreciates the Commission’s consideration of additional Rule 21 proposals included in the Working Group 4 Report in addition to outstanding issues from previous Working Group proposals – many of which are part of an effort to streamline and improve the interconnection of distributed energy resources (“DERs”) and to accommodate the changing and dynamic nature of the grid. In these comments, CESA offers our general views/positions on various proposals as well as initial responses to select questions. In reply comments, we plan to provide additional detail and respond to parties’ comments and concerns.

II. RESPONSES TO ISSUE 11 PROPOSALS AND FOLLOW-UP QUESTIONS.

CESA appreciates the Commission's additional consideration of Issue 11 regarding whether the Commission should adopt a notification-based approach in lieu of an interconnection application for non-exporting storage systems that have a negligible impact on the distribution system – an issue that the Commission acknowledged in D.20-09-035 required further examination before adopting a particular approach, despite finding value in the concept.

CESA strongly supports the concept and the Commission's follow-up consideration of the issue. As a starting point, CESA supports the consideration of notification-only approaches for non-export energy storage systems that are rated at or below 30 kW – from which the Commission can test the concept and potentially scale at a later time to larger systems if demonstrated to be safe, reliable, and efficient.

Question 1: Consider a non-export energy storage system (ESS) with a nameplate rating at or below 30 kW and a UL 1741 Power Control System certified to control inadvertent export in less than two seconds. Based on the current Rule 21 language and any revisions adopted by D.20-09-035, describe the initial review screens such a system would be exempt from or would definitely pass? Where the answer differs between standalone systems and systems that are paired with existing generation, explain the reason for the difference.

Tesla's proposed eligibility criteria in Attachment B of the Ruling represents a good starting point that could be applied to standalone storage and storage paired with existing generation.

Question 2: In response to Working Group Three recommendations on Issues A & B, D.20-09-035 adopted a specific definition of non-export systems. To the extent that additional specificity is required in order to scope the consideration of a notification-only interconnection process for non-export ESSs, parties are directed to provide the applicable requirements and provide a thorough technical justification for each.

See our response to Questions 1 and 7 in Section II of these comments.

Question 3: Party Comments on the Working Group Two Report suggest that the streamlining of interconnection procedures for non-export ESSs, considered by Issue 11, will increase in relevance as storage installation numbers increase in response to resiliency concerns (Tesla February 1, 2019 Comments at 12-13; CALSSA February 1, 2019 Comments at 12-13). Have these increases occurred? If not, is there evidence to suggest that storage installation numbers will increase in the near future?

Yes, non-export energy storage systems are increasingly being installed, driven significantly by customer interest in resiliency needs and in bill savings in response to shifting time-of-use (“TOU”) periods, as well as due to the support and funding provided in the Self-Generation Incentive Program (“SGIP”). The SGIP data highlights the growing levels of storage installation over the past few years and the large expected number of installations going forward, highlighting the exponential trajectory of projects that could benefit from streamlined interconnection procedures, especially with the potential role of these systems in providing near-term resiliency in response to Public Safety Power Shut-off (“PSPS”) events and in delivering incremental capacity in response to emergency reliability needs identified in R.20-11-003.

Table 1: SGIP Applications and Project Rated Capacity¹

| Year | Number of SGIP Applications | Sum of Rated Capacity (kW) |
|-------------|------------------------------------|-----------------------------------|
| 2016 | 71 | 10,034 |
| 2017 | 2,941 | 106,983 |
| 2018 | 5,792 | 63,702 |
| 2019 | 5,278 | 76,046 |
| 2020 | 19,144 | 495,289 |
| Grand Total | 33,226 | 752,054 |

¹ Excluding cancelled projects, see SGIP Real-Time Public Report downloaded on November 5, 2020 at <https://www.selfgenca.com/home/resources/>

The data above can be partitioned and disaggregated further to identify additional trends where streamlined interconnection procedures could be targeted in efficient ways, if taking on too much at once is unmanageable. For example, a large portion of the Equity Resiliency Budget (“ERB”) projects are smaller systems. At the same time, larger projects tend to face the longest and more complex interconnection timelines and studies, such that there is significant benefit in focusing on this segment as well.

Question 4: If a notification-only interconnection process was adopted for non-export ESSs, what timelines and fees should apply to eligible projects?

CESA has no comments at this time.

Question 5: If a notification-only interconnection process was adopted for non-export ESSs, what changes to the interconnection agreement or other documents would be needed to support the approach?

CESA does not believe that there need to be any changes to the interconnection agreements at this time, with existing customer terms of service and potential new developer attestation processes supporting a notification-only approach. There could be some processes implemented, such as a 10-day period for the IOU to “object” within certain bounds to the project interconnecting under a notification-only approach, thereby subjecting the project to additional processes. Otherwise, under a notification-only approach, the IOUs should leverage virtual inspection processes (*e.g.*, sending in pictures) in lieu of on-site inspections to provide assurances of safe and reliable interconnection in line with the eligibility criteria and parameters. Such virtual or remote inspection processes are already being put into place across Rule 21 processes, including for non-export energy storage systems.

Question 6: There has been significant discussion within the proceeding of cost responsibility for distribution upgrades necessitated by load reductions. In their reply comments to the Administrative Law

Judge’s Ruling Directing Responses to Questions on Working Group Two Report, the California Energy Storage Alliance argued that customers should not be penalized for adopting non-exporting ESSs to offset their own load, stating that customers have a right to their load and should not be held responsible for any upgrade costs associated with distribution system upgrades identified as being needed for reliability issues created by other distributed energy resources on the grid (CESA Reply Comments February 22, 2019 at 2-3). Parties are directed to respond to this assertion.

The IOUs assert that, with large penetrations of DERs, there is a real risk that a discharging battery, even if non-exporting, to serve their own customer load can cause *other resources* to backfeed on the grid. CESA reiterates our view that customers should not be required to pay for upgrades or studies nor wait for a system impact study due to the customer with a non-export energy storage system reducing their own load. Customers have a right to manage and reduce their own load, and having anything otherwise would subject a non-export energy storage system to discriminatory treatment relative to other load-modifying resources such as demand response (“DR”). Cost responsibility should lie with the DERs specifically causing the grid problem (*e.g.*, backfeed onto the grid). In reply comments, we look forward to reviewing and responding to other parties’ comments on CESA’s assertions.

Question 7: Parties are directed to respond to the proposal for “a notification-only approach for a specified subset of project types”, put forth by Tesla in their Opening Comments on the Proposed Decision Adopting Short Term Actions to Accelerate Microgrid Deployment and Related Resiliency Solutions at Section B in the Microgrids Rulemaking, (R.19-09-009), attached as Attachment 2.

CESA generally supports the Tesla proposal on a notification-only process for non-export energy storage projects under their specified eligibility criteria (*e.g.*, configurations, operational requirements). Tesla details a screen-by-screen analysis and leverages existing certifications on how their proposed eligibility criteria and process would ensure that projects pass these screens and would avoid any concerning grid reliability and safety impacts. The proposed installer pre-

approval process, “track record” demonstration, and sampling/auditing regime also appears to be a reasonable means to provide the necessary oversight and protections against bad or irresponsible actors, where, without such processes and regimes in place, the notification-only process may make the IOUs uncomfortable to be made widely available to all. In sum, CESA supports Tesla’s proposal and looks forward to addressing parties’ or the Commission’s concerns and to developing implementation details, if the Commission pursues the development of this process.

III. RESPONSES TO ISSUE 13 PROPOSALS.

CESA generally supports the consideration of proposals related to Issue 13 on whether to adopt a process for distribution upgrade cost sharing among developers. By assessing DER forecasts and/or commercial interest in the interconnection queue, CESA believes that there are opportunities to proactively evaluate the need for distribution upgrades that can be pursued by the investor-owned utilities (“IOUs”) and then to have benefiting developers pay for their *pro rata* share when utilizing the upgraded distribution capacity and investments. CESA does not have a concrete proposal at this time, but we look forward to reviewing other parties’ proposals.

IV. RESPONSES TO ISSUE 18 PROPOSALS.

CESA has no comment at this time on the Issue 18 proposals.

V. RESPONSES TO ISSUE 19 PROPOSALS AND FOLLOW-UP QUESTIONS.

CESA generally supports Proposal 19-a to enable residential home builders to submit interconnections applications based on street address and Proposal 19-b to enable residential home builders to submit applications for multiple units via single submission or via batch process, as proposed by the California Solar and Storage Association (“CALSSA”). These proposals consider the commercial realities of supporting streamlined interconnection procedures for the efficient

implementation of California’s Zero Net Energy (“ZNE”) building codes. We have no responses at this time on the specific questions posed in the Ruling.

VI. RESPONSES TO ISSUE 29 PROPOSALS AND FOLLOW-UP QUESTIONS.

CESA understands the Commission’s concerns with potential safety and environmental risks of interconnecting DERs, especially as DERs reach higher levels of penetration and technology changes in the future. However, Rule 21 interconnection rules and procedures and standards adopted therein address any interconnection safety and reliability risks. Meanwhile, environmental risks fall outside the scope of Rule 21, which, depending on the specific environmental risk that the Commission wishes to address, should be addressed in the appropriate forum outside of the Rule 21 proceeding, such as permitting offices (*e.g.*, fire safety), local air districts or California Air Resources Board (*e.g.*, local pollutants), and other forums as appropriate (*e.g.*, end-of-life management). Rule 21 incorporates safety standards and processes and its fundamental purpose is to have interconnection safety standards that can guide the growth of DERs.

Question 1: How would this proposal improve on existing venues for soliciting input? Where existing venues fall short, please provide specific examples.

If parties find that there are no suitable existing venues at this time to address environmental risks and other issues related to Issue 29, CESA recommends that the Rule 21 Interconnection Discussion Forum (“IDF”) could be an initial venue to raise these concerns and then to identify and direct this issue to the appropriate forum. At this time, CESA is unclear on the specific safety and environmental risks related to DERs that need to be addressed, such that the IDF could help more specifically scope the issue as well.

VII. RESPONSES TO ISSUE F PROPOSALS AND FOLLOW-UP QUESTIONS.

CESA supports the broader consideration of how interconnection rules can be adapted to take greater advantage of the IOUs' investment and deployment of Distributed Energy Resource Management Systems ("DERMS"). As energy storage plays a larger role in providing distribution services and/or interconnect at the distribution level to provide supply capacity and/or wholesale services, DERMS has the potential to enable greater and more flexible operations while better optimizing the need for distribution upgrades and ensuring interconnection safety and reliability.

Question 1: Report (at 83) says "Grid support from DERs has been advanced in pilot projects, in the local capacity requirements process, and in the DRP Distribution Investment Deferral Framework (DIDF)." To what extent has DIDF interconnected projects to meet distribution deferral?

To date, the Distribution Investment Deferral Framework ("DIDF") has procured in-front-of-the-meter ("IFOM") standalone storage to meet identified distribution needs. These DER solutions have been interconnected under the IOUs' respective wholesale distribution access tariff ("WDAT") without the use of DERMS to manage storage charging or communicate on a day-ahead basis to be dispatched for the periods of need and for amounts contracted, as CESA understands it. Importantly, the lack of behind-the-meter ("BTM") DERs procured via the DIDF Requests for Offers ("RFOs") should not be viewed as a sign that the Commission does not need to address DERMS or other Rule 21 interconnection matters. There are likely other issues, such as the procurement process, that have led to such results.

While DERMS would be helpful to streamline communication and monitor real-time needs, CESA underscores the DERMS are not needed for all types of distribution grid services. Currently, to provide distribution capacity in the DIDF, communications with DER contract counterparties or aggregators can be delivered on a day-ahead basis to ensure that DERs are

scheduled and deliver their contracted capacity during the expected event windows. For distribution services that can be managed and procured on a day-ahead basis, DERMS are not needed, and any enhancements to the current approach would likely require technical and technological enhancement to planning and forecasting tools, not operational tools such as DERMS. Our views on the role of DERMS in the DIDF can be found in recent comments in R.14-10-003.² At the same time, CESA believes that there may potential for DERMS, given its real-time monitoring, communication, and dispatch capabilities, to be used to enable distribution services that require real-time response, such as back-tie reliability. Such services have generally been screened out of the DIDF process due to the real-time and 24x7 nature of the service, which may be operationalized more easily with inverter-based DERs using DERMS.

Question 2: **Issues 8 and 9, referenced in Proposal F1 (Report at 86), apply buffers to both the static grid and operational flexibility values. Would a similar buffer be appropriate if Proposal F1 were adopted?**

CESA has no comment at this time.

Question 3: **The implementation of Proposal F1 would require that the allowable DER operational mitigations during abnormal grid conditions be defined. What DER operational mitigations should be allowed and under what conditions? If ambiguities exist, what venue is most appropriate for their resolution?**

CESA has no comment at this time.

Question 4: **PG&E notes in their position statement on Proposal F1 that capabilities required to implement the operational alternatives suggested in the proposal are still under development (Report at 87). Under what conditions and on what timeline should this proposal be implemented?**

² *Comments of the California Energy Storage Alliance to the E-Mail Ruling Introducing Distributed Energy Resources Tariff Staff Proposal and Directing Comments and Responses* filed on October 30, 2020 in R.14-10-003 at 21-22. <https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M349/K793/349793491.PDF>

CESA has no comment at this time.

Question 5: What tariff changes are needed to implement Proposal F1?

CESA has no comment at this time.

Question 6: What is the most appropriate venue for the discussions proposed in Proposal F2?

CESA has no comment at this time.

Question 7: Please describe near and long-term next steps envisioned for creating this proposed agreement.

CESA has no comment at this time.

Question 8: A variety of parties raise concerns on the scope of the proposed Smart Inverter Operationalization Working Group (SIOWG) (Report at 92). Where concerns exist, please propose a scope and set of discussion issues that you believe would best address the issues raised in the Working Group.

CESA has no comment at this time.

Question 9: Would participants in the SIOWG have different expertise than SIWG participants? If so, how would their expertise differ?

CESA has no comment at this time.

Question 10: In order for the SIO Working Group to yield the best results, a wide array of stakeholders will need to be involved. What groups, interests, and areas of expertise should be represented for optimal results? To what extent is that group of stakeholders currently engaged with a specific Commission proceeding and with which proceeding?

CESA has no comment at this time.

Question 11: This proposal states that, “The Commission should include SIO as an element of Grid Modernization and establish the DRP proceeding as having overarching authority on SIO.” Please describe how the two items, (1) including SIO as an element of Grid Modernization and (2) establishing the DRP proceeding as having

overarching authority on SIO, are related. Could either element could be adopted without the other? Why or why not?

CESA supports the consideration of Smart Inverter Operationalization (“SIO”) as an element of grid modernization. The Distributed Resources Planning (“DRP”) proceeding appears to be the appropriate proceeding to address these issues since Grid Modernization Plans are considered there and because SIO involves how inverter-based DERs operate within the larger distribution system for reliability and for potential grid services.

Question 12: How should SIO to be assessed, if included as an element of Grid Modernization?

CESA has no comment at this time.

VIII. 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,



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