

**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)

**REPLY COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE
TO THE ADMINISTRATIVE LAW JUDGE'S RULING DIRECTING RESPONSES TO
QUESTIONS ON WORKING GROUP TWO REPORT**

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In accordance with the Rules of Practice and Procedure of the California Public Utilities Commission (“Commission”), the California Energy Storage Alliance (“CESA”)¹ hereby submits these reply comments to the *Administrative Law Judge’s Ruling Directing Responses to Questions on Working Group Two Report* (“Ruling”), issued by Administrative Law Judge Kelly A. Hymes on December 7, 2018.

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

I. INTRODUCTION.

CESA submits these reply comments focused on the responses by Southern California Edison Company (“SCE”), Pacific Gas and Electric Company (“PG&E”), and San Diego Gas and Electric Company (“SDG&E”) around Option A of Proposal 8.i. in the Working Group #2 Report that would subject all non-exporting energy storage projects above 30 kVA to review under all screens. Both SCE and PG&E justify this proposal because the status quo process of bypassing Screens J, K, L, and M for non-exporting systems could potentially pose safety and reliability concerns (*e.g.*, overvoltage conditions) that could be later discovered without a power flow analysis. Without a study of how reduction of load from non-exporting energy storage systems on feeders with high distributed energy resource (“DER”) penetration, the investor-owned utilities (“IOUs”) claim that system upgrades may be required and an alternative solution to reduce generation would be reactionary. They also argue that these safety and reliability concerns will increase as DER penetration also increases and that these issues cannot be fixed by any cost-shifting agreement.²

While sympathetic to the IOUs’ reliability concerns, CESA does not agree with the adoption of Proposal 8.i. Option A because the IOUs should not be planning their distribution grid such that a single load shift or drop during certain hours would create overvoltage or other reliability issues. The Integrated Capacity Analysis with Operational Flexibility (“ICA-OF”) and any buffers considered in the ICA-OF or ICA Static Grid (“ICA-SG”) values should, in theory, mitigate concerns about deploying DERs “close to the edge” of thermal, voltage, or other limits. In addition, as noted in our response to Question 11 of the Ruling, CESA underscored the importance of not penalizing customers for adopting non-exporting energy storage systems to

² SCE’s comments at pp. 2 and 10-11, SDG&E’s comments at p. 8, and PG&E’s comments at p. 2.

offset their own load. The Commission should affirm the core principle that customers have a right to their load (and thereby the right to reduce and/or manage their load) and should not be held responsible for any upgrade costs or any interconnection delays associated with distribution system upgrades identified as being needed for reliability issues created by other DERs on the grid. CESA elaborates on this point below and offers a recommendation for how any distribution system upgrades should be handled in the interconnection process for non-exporting energy storage systems. Importantly, CESA recommends the adoption of Proposal 8.i. Option B to maintain the status quo process.

II. NON-EXPORTING ENERGY STORAGE SYSTEMS SHOULD BE MADE WHOLE FOR ANY INTERCONNECTION PROCESS DELAYS CAUSED BY DISTRIBUTION SYSTEM UPGRADES TRIGGERED BY RELIABILITY ISSUES CREATED BY OTHER DISTRIBUTED ENERGY RESOURCES.

Similar to how the adoption of other load-modifying DERs (*e.g.*, energy efficiency, demand response) is treated, customers should not be subject to Rule 21 upgrade costs when adopting non-exporting energy storage to manage their own load. Where a feeder is near its ICA limits, as SCE highlights, backfeed and overvoltage issues may occur when load is reduced during certain hours (*e.g.*, mid-afternoon solar production hours) from the operation of a non-exporting energy storage system. However, similar reliability issues may be created from other load reduction measures, and yet such customers with energy efficiency or demand response systems are not responsible for the associated upgrade costs or are not required to await grid upgrades to address this reliability issue. Energy efficiency and demand response systems are not Rule 21 jurisdictional, but the same key principle applies: customers have a right to manage their own load and should not be penalized for reliability issues created by other generating facilities. The use of non-exporting energy storage systems to reduce customer load is analogous to this situation in that non-exporting energy storage systems should not be responsible for the upgrade costs associated

with reliability issues created by other DERs given that customers have the right to manage their own load and should not be subject to delays in the form of being subject to all Rule 21 screens or other process delays that impact customer adoption. Interconnection process delays lead to loss in customer bill savings from the delay in operationalization for time-of-use (“TOU”) arbitrage or demand charge mitigation, and to higher cost of financing as projects pay interest every day until the system receives permission to operate (“PTO”).

At the same time, CESA understands that distribution system upgrades may still be needed for certain non-exporting energy storage interconnections due to the minimum net load issue at locations with high DER penetrations, as the IOUs commented. Even as non-exporting energy storage systems should not bear the cost responsibility of these upgrades, CESA understands that the IOUs may still need to build these upgrades prior to granting PTO to non-exporting energy storage systems. CESA maintains that non-exporting energy storage systems should not be subject to all Rule 21 screens after Screen I but that one additional layer of review may be warranted to check for these issues. If a need for an upgrade is identified, the non-exporting energy storage system may need to await these upgrades before receiving PTO. In this situation the customer would be subject to potentially substantial interconnection delays that are fundamentally not the customer’s responsibility.

Given the impact of aforementioned interconnection process delays on non-exporting energy storage deployment costs, CESA recommends that the Commission and the IOUs develop a modified interconnection process/agreement that creates a commitment that interconnections will be approved upon completion of the identified upgrades within a certain timeline, and that ‘make-whole’ payments be given to the non-exporting energy storage system subject to the delay for an upgrade that it did not cause. CESA views such a payment as reasonable and fair and helps

to offset the ‘hard’ costs borne by the customer in the form of reduced/delayed bill savings and higher financing costs, as well as the ‘soft’ costs in the form of poorer customer experience. Moreover, if the make-whole payments are structured as a rate for each day of delay (*e.g.*, \$/kWh/day), then the IOUs will also have an incentive to complete the upgrades in a timely manner. The appropriate payment rate and source of this payment will require further discussion in this proceeding, but the make-whole payment in principle is reasonable and fair in CESA’s view given that the non-exporting energy storage system would be subject to an interconnection process delay in these scenarios that has real costs but was caused by conditions created by other generating facilities.

While CESA acknowledges that make-whole payments for interconnection delays is an untested concept in California interconnection regulations, a simple analogy can illustrate why such a mechanism is not only justified but in fact required to provide just and reasonable treatment to California ratepayers. This scenario is analogous to an industrial customer with a large process load that decides to change their production schedule to save money on their electricity bill. This change could cause the kind of overvoltage issues described by the IOUs if nearby generation had been serving that customer’s load. While the distribution utility could reasonably request that the customer not shift their load until the grid could complete necessary upgrades, it would be fundamentally unjust for the customer to suffer financially for this. Because this is a failure in grid planning by the distribution utility, the utility must ensure that the customer incurs no financial harm and the only way to do this, while still denying PTO, is to compensate the customer for the delay.

CESA asserts that this minimum load issue and the concern that a customer’s load reduction or management could trigger an upgrade should be quite rare if the utility conducts

appropriate hosting capacity and N-1 analysis during the interconnection of distribution generation. By leveraging the new ICA tools developed over the past few years, CESA believes that many of the concerning situations raised by the IOUs can be mostly avoided, making it imprudent to subject all non-exporting energy storage systems to unnecessary interconnection review processes as under Option A of Proposal 8.i. If the issue does arise, that would be an indicator of a problem in the distribution planning process but is still clearly not the responsibility of the non-exporting storage customer. In addition, it may be premature to adopt Option A of Proposal 8.i. given that the IOUs note this is a future issue. CESA believes that these imminent issues can be addressed through the smart use of the ICA tools and through an incremental review step, as proposed above, without subjecting non-exporting energy storage systems to the full review process.

III. CONCLUSION.

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

Respectfully submitted,



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