

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

Order Instituting Rulemaking on the Commission's Own Motion to improve distribution level interconnection rules and regulations for certain classes of electric generators and electric storage resources.

Rulemaking 11-09-011
(Filed September 22, 2011)

**REPLY COMMENTS OF THE CALIFORNIA ENERGY STORAGE ALLIANCE ON
THE E-MAIL RULING DIRECTING PARTY COMMENTS**

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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 reply comments on the *E-Mail Ruling Directing Party Comments* (“Ruling”), issued by Administrative Law Judge (“ALJ”) Kelly A. Hymes on November 23, 2021.

I. INTRODUCTION.

CESA reiterates our recommendation that a working group process should be established to collaborate with the Commission, California Independent System Operator (“CAISO”), and the investor-owned utilities (“IOUs”) to develop consensus technical recommendations that addresses the gaps in the Rule 21 tariff regarding interconnection and operational requirements for large Net Energy Metering (“NEM”) systems (greater than 1 MW) interconnecting on the transmission system. In reviewing the opening comments, CESA’s procedural recommendations are affirmed. Several key interconnection, communication, and operational gaps are validly raised by the CAISO, but absent specific changes or recommendations, the Commission does not have a sufficiently developed record on what or how to change to address those gaps.

Understandably, working groups are time and resource intensive for stakeholders, but regarding matters of a highly technical nature and where the details of the specific changes or requirements are important in terms of reliability and reasonable balance against costs to interconnection customers, working groups have been an effective and proven means to deliver consensus outcomes in most cases in Rule 21 proceedings (R.11-09-011, R.17-07-007). While the development of specific and concrete solutions can be better achieved through a working group process, CESA provides some preliminary perspectives on some of the concerns raised by CAISO in these reply comments. We also respond to Haddington Ventures, who submitted opening comments on several out-of-scope issues and considerations but has yet to be granted party status in this proceeding.

II. APPROPRIATE CHANGES TO THE INTERCONNECTION REQUIREMENTS SHOULD DISCUSSED AND INCORPORATED INTO THE RULE 21 TARIFF AND NET ENERGY METERING ELIGIBILITY SHOULD BE MAINTAINED.

Like it has done in previous comments and in the past workshop, the CAISO highlights several potential technical reliability and operational issues that need to be addressed for transmission-connected NEM systems, to which the CAISO has no visibility or operational recourse in the event of contingencies. Some of these issues or gap areas include the following:

- **Forecasting:** The CAISO notes that NEM systems have no forecasting and does not transmit meteorological data to the CAISO system operator.¹ Considering the CAISO typically uses these forecasts to set an upper economic limit for a market award and dispatch, CESA seeks whether reasonable visibility into forecasting data can be provided to support operational concerns and whether such systems could

¹ CAISO comments at 2-3.

potentially use the CAISO’s forecasting services given the potential costs to NEM customers of investing in the equipment to provide this type of data.²

- **Telemetry:** CAISO highlights the lack of telemetry data as an issue but does not address whether the current 15-minute granular data is sufficient for their operational considerations, other than to say that the CAISO relies on instantaneous telemetry to address, for example, frequency deviations.³ Meanwhile, Pacific Gas and Electric Company (“PG&E”) cites National Energy Regulatory Commission (“NERC”) standards requiring CAISO to address contingencies within 10 minutes.⁴ CESA seeks to understand whether visibility in itself (where there is none currently) would sufficiently address the CAISO’s concerns and whether the granularity of existing telemetry requirements in Rule 21 sufficiently is sufficient. If not, the CAISO should specify their recommended telemetry requirements.
- **Operational point of contact:** The CAISO explains that NEM resources do not have a scheduling coordinator (“SC”) to contact in the event of a potential reliability issue.⁵ Since these NEM systems do not intend to or want to participate in the CAISO wholesale markets, CESA wishes to explore alternative or additional paths to establish an operational point of contact without the requirement to register with a certified SC, which comes with SC fees. The SCs, after all, play the primary role in bidding the resource in the markets and scheduling operational outages, something that is not applicable to these NEM systems.

² See, e.g., CAISO Tariff Section 4.8.2. CAISO allows SCs of hybrid resources to elect to use the CAISO-provided forecast, subject to a Forecast Fee.

³ CAISO comments at 2-4.

⁴ PG&E comments at 2.

⁵ CAISO comments at 2.

- **Frequency and other technical requirements:** The CAISO discusses the frequency requirements of transmission-connected wholesale generators (*e.g.*, operations, equipment),⁶ but it does not specify a recommendation regarding whether the Rule 21 tariff should align to the same requirements, where there is a slight difference.⁷ If alignment is needed, this should be explored and specified.
- **Masked load and non-export:** The CAISO indicates that while non-exporting systems do “not present threats as significant as exporting resources, they can still challenge the CAISO’s ability to maintain transmission safety and reliability.”⁸ CAISO again explains that the challenge is not whether the system interconnects under Rule 21 or the CAISO tariff, instead it stems from a lack of visibility into the system’s output and any means of curtailing output should system conditions necessitate this. PG&E also briefly touches on masked load issues as still presenting potential problems for the CAISO.⁹ To this point, CESA believes additional discussion and exploration is warranted to better understand the specific circumstances where a non-exporting system would create material operational challenges for the CAISO, relative to the circumstances CAISO must address regardless of the presence of these solar systems. It is not clear, for example, how, from an operational standpoint, the ebbs and flows of solar production from large, non-exporting systems impacts the variability the CAISO sees in demand stemming from the vagaries of demand more generally. For example, large industrial facilities

⁶ CAISO comments at 3-4.

⁷ Rule 21 Section Hh specifies frequency ride-through requirements of continuous operation within 58.5 and 60.5 Hz, whereas the CAISO Tariff specifies a range of 59.4 and 60.6 Hz.

⁸ CAISO comments at 3.

⁹ PG&E comments at 2.

may have load profiles which vary dramatically from day to day based on equipment tripping on and off, production schedules, etc. It would be helpful to understand if non-exporting solar facilities create demonstrably any more variability in load that CAISO needs to manage relative to the circumstances it has to address more generally. As it stands, and without further information this appears to be more of a theoretical concern rather than a practical one. CESA further notes that NEM systems are typically treated as load-modifying resources from a resource planning and California Energy Commission (“CEC”) forecasting perspective. Even if there are inadvertent or *de minimus* exports, there are controls and requirements in place in the Rule 21 tariff¹⁰ to avoid such concerns from becoming significant or material.

For each of the above, likely non-exhaustive, issues, CESA offers some perspective on how to address some of these issues, but to materially and specifically address these concerns, we continue to believe that a dedicated working group process could convene and work through what changes to make within the Rule 21 tariff that addresses any material technical reliability and operational issues, reasonably balanced against the unique considerations that these are ultimately NEM systems intended to support onsite customer load and bill management needs. In developing these recommendations, CESA also asks a fundamental question to the CASIO as to whether they simply seek visibility via telemetry and/or some data-sharing agreement to allow the CAISO to operationalize dispatch of wholesale market resources *around* the transmission-connected NEM resource, thus not directly subjecting NEM customers to CAISO dispatch requirements or commands. Such an approach could lead to quicker resolution of the aforementioned concerns, but

¹⁰ See Rule 21 Tariff Section M.

if the proposals are focused on not only getting visibility into these NEM systems but also to be able to command and control these resources as needed, there may be additional policy questions about whether NEM systems should be subject to exceptional dispatch despite not being market integrated and considering the treatment of NEM systems in general as load-modifying resources.

As noted, the CAISO argues that “[t]he issue, however, is not whether resources interconnect via Rule 21 or via the CAISO tariff” but whether Rule 21 could be modified to “require NEM resources directly interconnected to the transmission grid to provide the CAISO any information or data once online to help maintain reliability, or any means to control the generation even in the case of reliability issues.”¹¹ Considering the range of issues and the CAISO’s comments, CESA recommends that the Commission focus on how Rule 21 might be modified instead of considering solutions that would require these NEM systems to potentially forgo NEM participation and participate/integrate in the CAISO market through interconnection under the CAISO’s Open Access Transmission Tariff (“OATT”).

III. COLLATERAL ATTACKS AGAINST NET ENERGY METERING ARE OUT OF SCOPE AND SHOULD BE DISMISSED.

Haddington Ventures makes a number of collateral attacks against the NEM program around subsidy and cost-shifting impacts and grandfathering provisions.¹² These comments are out of scope in response to the Ruling and the general considerations of this proceeding that focus on technical interconnection requirements, and thus they should be dismissed. Advocacy around changes to the NEM tariff should be submitted in R.20-08-020.

¹¹ CAISO comments at 3.

¹² Haddington Ventures comments at 3-4 and 9.

Furthermore, Haddington Ventures argue that exports of transmission-connected NEM projects involve products and sales that are jurisdictional to the Federal Energy Regulatory Commission (“FERC”), thus requiring such systems to interconnect under the CAISO OATT.¹³ Not only are these jurisdiction-related comments out of scope to the immediate technical matter at hand, but it is also not accurate. FERC has already determined in *SunEdison* and *MidAmerican* that any sale is only considered wholesale if there is a *net* sale to the utility at the end of the billing period, which is subject to net surplus compensation (“NSC”) under California’s NEM program based on a 12-month rolling average of the market rate for energy.

In addition, CESA disagrees and respectfully requests that the Commission dismiss assertions that transmission-connected NEM projects are “similarly situated” yet competitively advantaged as similarly-sized in-front-of-the-meter (“IFOM”) clean energy projects.¹⁴ Whereas technical reliability, visibility, and operational impacts should be addressed, these two cases are obviously not the same because the former is managing onsite customer needs while the latter addressing system needs and/or load-serving entity (“LSE”) procurement requirements.¹⁵ These are wholly separate use cases that should not be viewed from the perspective of “competition concerns” as asserted by Haddington Ventures.

In sum, criticisms of NEM or questions around jurisdiction or competition are not apt for the purposes of addressing the issues raised in the Ruling and in past workshops and comments. Haddington Ventures does raise technical questions about the inability to curtail or the lack of

¹³ *Ibid* at 3 and 7-8.

¹⁴ *Ibid* at 9.

¹⁵ The comparison is apples and oranges. For example, one could theoretically assert competitive concerns around NEM solar not being eligible for compensation for renewable energy credits (“RECs”) only for excess generation that is eligible for the NSC rate, but this is the structure that has been established keeping in mind that NEM solar is intended to serve onsite customer load and bill management needs.

visibility into transmission-connected NEM resources.¹⁶ All other comments beyond these technical matters should be dismissed and considered in the appropriate forums.

IV. CONCLUSION.

CESA appreciates the opportunity to submit these reply 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 'J. Noh', written in a cursive style.

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¹⁶ Haddington Ventures comments at 10.