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23-IEPR-05 - CESA Comments - Distribution System Interconnection

Additional submitted attachment is included below.

May 23, 2023

California Energy Commission
Docket Unit, MS-4
715 P Street
Sacramento, California 95814
via email: docket.energy.ca.gov

Re: 23-IEPR-05 - "Identifying Barriers and Solutions in the Electric Distribution System" - Post Workshop Comments of the California Energy Storage Alliance

The California Energy Storage Alliance (CESA) thanks the California Energy Commission (CEC) and joint energy agencies for the opportunity to participate as a panelist in its *Identifying Barriers and Solutions in the Electric Distribution System* workshop, held May 9, 2023. CESA offers these comments to reiterate the points made in the panel with specific regard to distribution system interconnection barriers faced by energy storage projects and microgrids. These comments and recommendations are primarily focused on the Rule 21 tariff and process, under the jurisdiction of the California Public Utilities Commission (CPUC), and administered by the investor owned utilities (IOUs), as it relates to energy storage. As with the panel discussion, the issues presented herein are both immediate term and long term, both of which are equally important to begin resolving now.

1. Distribution Interconnection Timelines

The Rule 21 process has been very effective in interconnecting small and solar-only systems that participate in net energy metering (NEM) within 30 days of the customer filing its interconnection application. The adherence to timelines is mixed for larger systems and NEM systems paired with energy storage, as well as non-solar, and more complex DER systems, including storage and microgrids. This reality was clearly reflected in an analysis produced by Guidehouse Consulting[1] in 2021 that examined Rule 21 interconnection timelines across the three investor owned utilities, and is consistent with the experience of CESA members focused on distribution interconnected storage.

There are steps underway to expedite interconnection for non-NEM resource types. As representatives from the three IOUs explained in great detail in their panel on May 9th, they are designing new processes to resolve issues with timelines and processes. These new processes and process improvements will hopefully alleviate the longer and more uncertain timeframe with larger and non-NEM

[1] *Rule 21 Interconnection Program Evaluation.* Guidehouse Consulting. March 2021.

projects. In addition, there is a pilot under development at the CPUC that would allow small, non-exporting storage systems to interconnect on an expedited basis. It is a step in the right direction, and this process could be updated over time with both allowing for larger, as well as exporting, systems.

2. Main Panel Upgrades

Customer electrification, from whole home or whole building electrification, to on-site electric vehicle charging, to simply pairing storage with a customer's net metered system, will require upgrades to the main utility panel in homes and businesses. IOUs currently require utility electricians to be present when performing the disconnect and reconnect of the customer's main utility panel. Due to this requirement, and as a direct result of sufficient qualified utility staff to promptly physically attend each and every customer battery installation, customers often have to wait months to energize a system. This is after the customer has already invested in the system, leading to a negative customer service experience. The problem is only exacerbated in the near term by the recent and massive volume of interconnection requests from customers that wish to operate systems under the 2nd iteration of the state's net metering regime. The spike in applications was discussed in detail by representatives from the three IOUs on May 9th.

In several instances, individual utility field offices have let qualified electricians on the staffs of third party solar and storage installers perform the disconnects and reconnects. This practice is not consistent among the utilities, nor is it widespread. Allowing qualified electricians employed by third parties to perform this work will greatly support operationalizing these technologies far more rapidly. This is a simple and actionable solution that can happen in the short term. It does not require a decision from any agency nor a multi-stakeholder process.

In addition to process improvements, main panel upgrades are not accessible to a number of customers, and incentives have not historically been available. CESA understands that the CEC has requested funding in the current budget cycle, and that funding from federal sources could be available to support main panel upgrades.

Finally, the export valuation structure of the net billing tariff effectively changes the state's customer-sited solar market to a solar plus storage market, going forward. The need for main panel upgrades will only increase in the future as the solar industry finds its footing under the new tariff. As the CEC's David Erne highlighted at the start of the May 9th workshop, interconnections for customer sited solar, storage and EV charging will grow in a hockey stick pattern in the next ten to fifteen years. Funding for main panel upgrades for customers that need funding, and allowing qualified non-utility

personnel to perform the necessary work to energize, are two problems that must be prioritized and resolved.

3. Grid Services

California policy makers and utilities have created a number of programs over the last decade designed for provision of grid services from dispatchable customer load and behind the meter systems. These programs include, but are not limited to: Demand Response Auction Mechanism (DRAM), distribution service pilots, Emergency Load Reduction Program (ELRP), proposed Demand Side Grid Support (DSGS) program, utility-specific programs and procurements. Several Rule 21 provisions run counter to the goals of these programs and hinder full participation.

Storage only and generally non-NEM systems typically have non-export provisions in their Rule 21 interconnection agreements. Non-export provisions often result in suboptimal use or design of behind the meter storage assets - systems are often undersized and systems are not able to provide exports under emergency reliability programs. Increasingly, our leadership in California is relying upon distributed energy and load resources to dispatch in emergency grid conditions. Systems with a non-export relay cannot provide energy-only exports to programs like the ELRP, nor capacity exports under this CEC's proposed revisions to the DSGS program, which is contrary to the best interest of the grid and ratepayers and, clearly, evolving state policy.

Rule 21 interconnected storage may not participate in the wholesale market if exporting. Instead, these resources must pursue an entirely different interconnection process, called the Wholesale Distribution Access Tariff (WDAT), which is jurisdictional to neither the state of California nor the California Independent System Operator (CAISO) itself. This is one of the key barriers to wholesale market participation by these resources, and CESA is unaware of any practical, physical reason why this dual process must continue to exist. Rule 21 should be modified to allow exporting behind the meter storage to participate in the wholesale market rather than requiring a separate process.

4. Cost Sharing

In order for a standalone storage system or microgrid to export to the grid, the system must bear the full responsibility for upgrades to the utility distribution system that are determined to be caused by their projects. This cost typically would overwhelm the project and make it no longer cost effective to install, and so most of these systems are installed with a requirement to not export. Notably, there is no cluster study or cost sharing process akin to the processes for transmission interconnected resources at the CAISO, on the distribution side. CESA recommends that the agencies consider developing a cost sharing

approach. A cost sharing approach would more appropriately allocate the responsibility for distribution system upgrades between utilities and customers with storage. The premise of this approach is that the utility bears the cost of the in-kind replacements and normal upgrades to their distribution systems. Participating distributed storage customers would pay pro-rata shares of the costs of the incremental upgrades related to the operationalization and export from their systems.

5. Conclusion

CESA thanks the CEC and joint energy agencies for holding the workshop on May 9th to highlight the needed improvements to distribution system policy and practices. It is a much needed forum, and CESA looks forward to further discussion on these, and related, matters specific to advancing the deployment of distributed energy storage to support California's electric grid and its residents.

Sincerely,

Rachel McMahon
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Representing the California Energy Storage Alliance