



July 11, 2019

California Independent System Operator
250 Outcropping Way
Folsom, CA 95630

RE: Energy Storage and Distributed Energy Resources Phase 4 Stakeholder Workshop

Electrify America, LLC (“Electrify America”) appreciates this opportunity to comment regarding the California Independent System Operator (“CAISO”) Energy Storage and Distributed Energy Resources (“ESDER”) Phase 4 Stakeholder Workshop held on June 27, 2019 and the Straw Proposal (the “Workshop” and “Straw Proposal,” respectively). Electrify America commends the CAISO on its continued efforts to lower barriers and enhance the abilities of these resources to participate in CAISO markets and concurs with the CAISO that such resources will serve an important role in the future grid.

Electrify America is investing \$2 billion over the course of a decade - \$800 million of which will be in the State of California alone - in zero emission vehicle (“ZEV”) infrastructure, education and awareness, and access efforts to support the increased adoption of ZEV technology in the United States. In our first cycle of investment, we are building a national network of ultra-fast, DC fast chargers across 42 states, with over 600 such dispensers planned for deployment across California by the end of this year. Our state-of-the-art 350kW-capable dispensers will be at select locations nationwide. These systems can provide roughly 20 miles of range per minute to capable cars, allowing for a charging experience approaching gas station refueling speeds. Electrify America will also offer ‘no-money-down’ residential Level 2 chargers and installation as part of its Cycle 2 California ZEV Investment Plan. The plan will allow drivers with a home charger to potentially earn financial rewards for plugging in and supporting a demand response (“DR”) platform.

High-powered electric vehicle (“EV”) charging dispensers are expensive to operate in areas where demand charges are extremely high. A single charging session can cause an EV charging company to absorb a significant demand charge for a high-power, customer-friendly charging experience. This problem is exacerbated when coincident high-powered charging occurs at multi-dispenser locations. To help mitigate such costs, Electrify America is planning to install energy storage systems at over 100 of its locations in 2019, totaling over 25 MW of anticipated behind-the-meter storage across the United States.

However, in addition to the behind-the-meter use of such storage, Electrify America believes that behind-the-meter storage can serve a larger role in wholesale markets via enhanced multiple-use application (“MUA”) provisions under ESDER Phase 4 for Non-Generator Resources (“NGR”). This letter serves to reiterate our prior comments and request the CAISO to address these concerns in their ESDER Phase 4 final proposal as well as upcoming stakeholder workshops.

Behind-the-Meter Technology Applications – Removal of 24x7 Participation requirement

As stated in the ESDER Phase 4 Issue Paper, Non-Generator Resources (“NGR”) in the CAISO market are 24x7 wholesale market resources irrespective of any dispatch instruction. For behind-the-meter electric storage resources in a NGR, this results in financial implications that can jeopardize the primary behind-the-



meter application for which they were initially procured, resulting in many resources electing not to partake in CAISO markets.

Electrify America in prior comment letters encouraged the CAISO to make removal of the 24x7 participation requirement for NGR a priority during ESDER Phase 4 given the increasing amount of energy storage being deployed in the State of California, and stated that it was pleased that the Straw Proposal addressed this request. In Electrify America's prior comment letter dated May 17, 2019 regarding the Straw Proposal, Electrify America provided answers to address clarifying questions to stakeholders posed by the CAISO, including regarding how a utility distribution company ("UDC") would prevent settling a resource at a retail rate when a behind-the-meter NGR was participating in the wholesale market, as well as how such a resource would be prevented from charging at a wholesale rate and then discharging to provide retail or non-wholesale services.

Electrify America was discouraged that the Workshop did not further address this topic, and requests the CAISO to make removal of the 24x7 participation requirement for NGR a priority in future stakeholder workshops and subsequent ESDER Phase 4 proposals. To reiterate, Electrify America plans to deploy in aggregate over 15 MW of behind-the-meter energy storage systems at its DC fast charging locations in the State of California in the next few months, primarily for retail demand charge mitigation. The lack of baseline load from highly variable electric vehicle charging at Electrify America's DC fast chargers inhibits the ability of such resources to meaningfully participate via the CAISO's proxy demand response ("PDR") participation model. Without removal of the 24x7 participation requirement for NGR, these storage resources are unable to practically provide wholesale services to the CAISO from behind-the-meter.

Demand Response Enhancements – Multiple Resource IDs under a Single Service Account

The Straw Proposal and the Workshop did not address the issue of multiple resource IDs under a single service account.

As stated previously, multiple DR assets cannot currently participate independently in DR programs from behind the same retail meter/location. This limits demand response participation in CAISO markets, especially as the penetration of such DR-capable resources grows at a location and even if the capabilities of such newer DR assets exceed the 'first' such DR registration. For example, a thermostat already registered in a DR program may preclude an electric vehicle charger in the same household from participating in the market. Electrify America reiterates its request for CAISO to facilitate assignment of multiple resource IDs under a single service account in ESDER Phase 4 to allow participation of an electric vehicle supply equipment ("EVSE") embedded sub-meter in DR programs independent from the retail meter.

As stated during a previous workshop by multiple stakeholders and in Electrify America's previous comment letters, the CAISO is already technically introducing multiple resource IDs under a single service account for the approved PDR-LSR mechanism under ESDER Phase 3 as well as allowing for different baseline methodologies to be applied to sub-metered EVSE load. Thus, the CAISO should be able to assign multiple resource IDs for different behind-the-meter resources that are sub-metered without the measurement and verification concerns it expresses. The implementation of this under ESDER Phase 4 by



the CAISO would encourage other relevant parties to move forward on reforms to allow such registration practices and thus facilitate greater participation in CAISO demand response markets.

Electrify America thanks the CAISO again for this opportunity to comment regarding the ESDER Phase 4 Workshop and Straw Proposal, and would be happy to further discuss any of the requests raised in this letter.

Respectfully submitted,

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