

Comments of eMotorWerks on CAISO's 2019 Draft Three-Year Policy Initiatives Roadmap and Annual Plan

Submitted By	Company	Date
Marc Monbouquette Senior Manager, Regulatory and Government Affairs marc.monbouquette@emotorwerks.com (415) 488-6035	eMotorWerks, Inc.	October 3, 2018

eMotorWerks respectfully submits these comments on CAISO's 2019 Draft Three-Year Policy Initiatives Roadmap and Annual Plan. eMotorWerks manufactures and sells electric vehicle (EV) charging stations and aggregates EV charging loads for bidding into CAISO energy markets via the Proxy Demand Response (PDR) participation model. eMotorWerks has been an active participant in CAISO's Energy Storage and Distributed Energy Resources (ESDER) stakeholder initiatives, specifically the development of EV supply equipment (EVSE) submetering for DR measurement purposes in ESDER 3. EVSE submetering for PDR was included in the package of ESDER 3 policy enhancements approved by the CAISO Board of Governors on September 5, 2018.

eMotorWerks is pleased that the CAISO intends to pursue a fourth iteration of the ESDER initiative, as indicated in its 2019 Draft Three-Year Policy Initiatives Roadmap and Annual Plan presentation on September 18, 2018.¹ In that presentation, the CAISO indicated that ESDER 4 would launch in the beginning of 2019, and outlined the following potential in-scope topics for ESDER:

1. Expand DER and storage modeling to optimally capture value and leverage resource design attributes that support grid reliability
2. FERC Order No. 841 compliance
3. Regulatory framework to address:
 - a. DER and storage resource adequacy qualification rules
 - b. Qualifying capacity counting of DERs, e.g. weather sensitive DR
4. Clearly define multi-use applications to ensure sensible service and value staking that supports reliability and optimizes resource value

We provide the following comments on items 2 and 3(a):

- **FERC Order No. 841 compliance:** We agree that CAISO should harmonize its tariffs and market rules in response to FERC Order 841, which includes a requirement that energy storage participation models establish a minimum capacity requirement of 100 kilowatts (kW). This represents an easing of CAISO's minimum capacity requirements

¹ <http://www.caiso.com/Documents/Presentation-2019DraftPolicyInitiativesRoadmap.pdf>

for PDR (for ancillary services) and Non-Generator Resource (NGR) participation models, down from the 500 kW minimum currently in effect. CAISO is required to demonstrate compliance with Order 841 by March 1, 2019 and implement revised tariffs by June 4, 2019. eMotorWerks believes that these changes can be promulgated relatively efficiently and will not entail significant staff or stakeholder resources.

- **Regulatory framework to address DER and storage resource adequacy (RA) qualification rules:** Currently, it is not transparent how behind-the-meter (BTM) DERs (energy-limited, bi-directional, and uni-directional) participating via the NGR model can be fully recognized for their RA value at the CAISO and CPUC. We support CAISO's proposal to examine how more availability-limited resources can qualify for RA in ESDER 4. Expanding RA eligibility in this way would help develop reliability resources on the spatial and temporal granularities needed to integrate the levels of intermittent renewable energy called for by Senate Bill 100.

eMotorWerks would also like to raise the following additional issues for consideration in ESDER 4:

- **Frequency Regulation via PDR:** In ESDER 2, a Load Consumption Working Group developed the concept of a resource providing bi-directional (load consumption and curtailment) capabilities in PDR, as well as potential avenues for PDR participating resources to provide frequency regulation service. The work on bi-directional capabilities provided the foundations for the PDR Load Shift product adopted in ESDER 3; however, a pathway for PDR resources to provide regulation remains unresolved. eMotorWerks believes that ESDER 4 should re-examine a pathway for PDR frequency regulation given that two directly-metered resource types have been approved for PDR (stationary energy storage and EVSE) and are capable of providing the revenue grade telemetry and four-second control required for Frequency Regulation.
- **Load Shift product for submetered EVSE:** ESDER 3 includes a new Load Shift Product for BTM, directly-metered energy storage to provide additional services during oversupply conditions under the PDR participation model. The load shift product will develop certain functionalities allowing the resource to bid and be dispatched for both load consumption and curtailment from an aggregation of BTM storage resources. Given that a direct EVSE submetering pathway was adopted for PDR in ESDER 3, eMotorWerks wishes to examine in ESDER 4 how the Load Shift Product could be extended to submetered EVSE resources, potentially in conjunction with Load Shift considerations for all non-storage consumption sources..
- **Coordination between Load Serving Entities (LSEs) and DER aggregations for participation in the NGR model:** One of the key barriers to participating in CAISO's DER Provider (DERP) construct is that, if an NGR participating in a DERP aggregation is BTM, it is assessed the Locational Marginal Price for energy used to charge the NGR for wholesale services, plus the DER site host pays for the applicable retail rate for the charging energy drawn through the retail meter. As a result, the same kWh is paid for twice: once by the DERP and once by the LSE via the site host. This is especially problematic for a DER that only consumes electricity and does not discharge, such as EVSE being dispatched for managed or unidirectional charging. This condition may also cause duplicate day-ahead scheduling and real-time dispatch to serve the same kWh. ESDER 4 should examine potential avenues for coordination between the CAISO, DERPs, and LSEs to ensure proper handling of scheduling, dispatch, and

settlements. Ultimately, this would result in the LSE incorporating BTM DERP-NGR schedules into its load schedules and having wholesale electricity costs remaining with the applicable LSE. Resolving this issue would allow BTM DERs, especially those that only consume electricity, to provide ancillary services without unnecessary double payment for electricity.

Finally, eMotorWerks supports the inclusion of Frequency Response Phase 2 and Fast Frequency Response initiatives, which per the Policy Initiatives Roadmap and Annual Plan presentation would kick off in 2020. We agree with CAISO that new market structures and products are needed to source frequency response and inertia from any and all capable, participating resources in order to ensure reliability in the face of an increasingly renewable generation mix.

We appreciate this opportunity to provide comments, and look forward to working with the CAISO and stakeholders to refine market participation models and rules to expand opportunities for DERs to provide services in CAISO markets.