Comments of OhmConnect, Inc.
Energy Storage and Distributed Energy Resources (ESDER) Phase 2
Second Revised Straw Proposal

Submitted by	Company	Date Submitted
John Anderson john@ohmconnect.com	OhmConnect, Inc.	October 11, 2016

OhmConnect, Inc. (OhmConnect) respectfully submits the following comments in the stakeholder process for the California Independent System Operator's (CAISO) Energy Storage and Distributed Energy Resources (ESDER) Phase 2 initiative September 19, 2016 Second Revised Straw Proposal (Proposal).

OhmConnect's comments focus on the control group settlement methodology for Proxy Demand Resources (PDRs) proposed by the Baseline Analysis Working Group (BAWG) in section 4.2.2 of the Proposal. As one of the largest non-utility residential Demand Response Providers (DRPs) in California, OhmConnect wishes to highlight certain implications of the proposed control group settlement methodology for PDRs comprised of large aggregations of residential end-use customers. Residential PDRs confront unique operational challenges: for example, a PDR's Master File parameters (PMax, Ramp Rate, etc.) may be relatively constant over time, but the set of end-use customers comprising the PDR can change significantly. Indeed, the CAISO is implementing enhancements to its Demand Response Registration System (DRRS) to enable DRPs to more effectively manage the customer composition of their PDRs active in the market. OhmConnect believes that three minor changes and clarifications to the proposed control group settlement methodology will improve its functionality for residential PDRs:

1. DRPs should be able to update their control groups more frequently than once per month;
2. DRPs should be allowed to use smaller and more recent sets of data to perform the statistical checks for control group validity; and
3. DRPs should be allowed to use a common control group to settle PDRs in different utility service territories.

These recommendations are discussed in greater detail below.

1. DRPs should be able to update their control groups more frequently than once per month.

The Proposal recommends (on page 38) that "assignment to treatment and control groups [...] be updated on a monthly basis". OhmConnect believes that allowing DRPs to update their control groups more frequently will complement the resource management flexibility afforded by the CAISO's DRRS enhancements and improve the user experience for participating end-use customers. Specifically, DRPs should be able to update their control

groups anytime they add customers to, or remove customers from, their PDRs. Not only will this ensure that the control group remains representative of the PDR as a whole, it will also ensure that customers are not excluded from DR events for prolonged periods of time (which, in OhmConnect's experience, is a major cause of customer attrition). OhmConnect recommends that the CAISO augment the process in the enhanced DRRS for creating a new Registration to include assignment of the customer Locations within the Registration to control and treatment groups. In this manner, the CAISO will have a record of the treatment and control groups applicable to each PDR utilizing the control group settlement methodology at each point in time.

2. DRPs should be allowed to use smaller and more recent sets of data to perform the statistical checks for control group validity.

Section 4.2.2.6.1 of the Proposal (pages 32-34) outlines a process for demonstrating the statistical equivalence of the treatment and control groups. This process would use "hourly data from the previous applicable [Resource Adequacy (RA)] season", which means the data could be up to 18 months old.[1] OhmConnect anticipates at least two problems with this approach in the case of residential end-use customers. First, in any given month a non-trivial number of residential customers move, which requires that they close their existing electric service accounts and open entirely new accounts. These new accounts do not have historical consumption data; consequently, if statistical checks for control group validity are performed using data from the "previous applicable RA season", many customers will be excluded for extended periods of time from PDRs using the control group settlement methodology. Second, technology adoption by residential end-use customers can significantly change their load profiles over the course of a 12- or 18-month period. For example, if customers install solar PV at their homes or purchase electric vehicles, their consumption profiles will be very different from the "previous applicable RA season". For these reasons, OhmConnect believes that DRPs should be allowed to perform the statistical equivalence checks (i.e. the bias and precision calculations) recommended in the Proposal using a smaller and more recent set of data – for instance, hourly customer-level interval meter data for the most recent 30 days for which data is available. Even after averaging across customers, per the Proposal, there would remain a sufficiently large sample of data (720 observations) to reliably perform the bias and precision calculations that establish control group validity.

3. DRPs should be allowed to use a common control group to settle PDRs in different utility service territories.

The Proposal states (on page 32) that "a single control group may be used for multiple subLAP settlement groups". OhmConnect seeks clarification that the Proposal would allow a DRP to use a single control group to settle two or more PDRs located not only in different

[1] The Proposal notes, on page 38, that "the RA seasons are currently defined as summer from April to October and winter from November to March". Thus, to validate a control group for the month of October, the DRP would need to draw upon data from as long ago as April of the previous year in order to perform the bias and precision calculations in the Proposal.

subLAPs, but in different utility service territories. For example, OhmConnect believes a common control group could be used to settle PDRs in the SDG&E subLAP and most SCE subLAPs. Allowing control groups to span the boundaries between utility service territories will minimize the number of customers withheld from participating in DR events, to the benefit of DRPs and the market alike. Therefore, OhmConnect recommends the CAISO work with stakeholders to develop guidelines on the comparability of end-use customers in different subLAPs during different times of the year.