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**Comments of OhmConnect, Inc. on August 8, 2017 IEPR Commissioner Workshop
on Demand Response**

Additional submitted attachment is included below.



August 22, 2017

California Energy Commission
Dockets Office, MS-4
Docket No. 17-IEPR-12
1516 Ninth Street
Sacramento, CA 95814-5512

Re: Comments of OhmConnect, Inc. on August 8, 2017 IEPR Commissioner Workshop on Demand Response

Dear Commissioners and Staff:

Pursuant to the California Energy Commission's (CEC) July 21, 2017 *Notice of IEPR Commissioner Workshop on Demand Response*,¹ OhmConnect, Inc. (OhmConnect) respectfully submits these timely comments on the August 8, 2017 IEPR Commissioner Workshop on Demand Response. This workshop was convened "to discuss the current status of progress in achieving California's demand response (DR) goals and opportunities and barriers for increased future DR participation".² Two representatives of OhmConnect spoke on panels at the workshop: Matt Duesterberg (Chief Executive Officer) and John Anderson (Director of Energy Markets). OhmConnect's present comments build upon Mr. Duesterberg's and Mr. Anderson's statements at the workshop regarding the role and importance of data in enabling a positive customer experience and fair competition between third-party and Investor-Owned Utility (IOU) DR programs.

I. OVERVIEW

OhmConnect is a third-party Demand Response Provider (DRP) founded in 2013 and headquartered in San Francisco, California. The company presently provides DR services to tens of thousands of residential and small commercial California IOU customers pursuant to Electric Rules 24 (PG&E and SCE) and 32 (SDG&E). Specifically, OhmConnect's free software service notifies households and businesses of impending DR events and pays them for their energy reductions, without requiring purchase or installation of additional hardware. OhmConnect is registered to participate as a DRP in the wholesale electricity market operated by the California Independent System Operator Corporation (CAISO).³ Furthermore, OhmConnect actively participated in the development of the 2016, 2017, and 2018 California Demand Response Auction Mechanism (DRAM) pilots and is one of the largest residential companies to participate in these pilots.

¹ See July 21, 2017 *Notice of IEPR Commissioner Workshop on Demand Response*, accessible at http://docketpublic.energy.ca.gov/PublicDocuments/17-IEPR-12/TN220294_20170721T111338_Notice_of_IEPR_Commissioner_Workshop.pdf.

² *Ibid.*, at p. 1.

³ See list of CAISO Demand Response Participants, at <https://www.caiso.com/Documents/ListofDemandResponseParticipants.pdf>.

Complete, accurate, and timely data is essential for OhmConnect to conduct its business and provide its customers with a positive and rewarding experience. Data is at the core of each of the following Rule 24/32 “direct participation” DR business functions:

1. Identification of potential DR customers;
2. Onboarding of new DR customers;
3. Customer registration at CAISO;
4. CAISO market performance and settlement calculations; and
5. Optimization of the customer experience.

OhmConnect acknowledges significant efforts by the California Public Utilities Commission (CPUC) and the CAISO to facilitate functions (2) and (3), respectively. The CPUC has worked with stakeholders to develop a streamlined online customer authentication and authorization process (the “click-through” process) whereby customers can easily and securely authorize third-party DRPs access to their personal data (as necessary to enable their participation in Rule 24/32 direct participation DR).⁴ Likewise, in late 2016 the CAISO implemented enhancements to its Demand Response Registration System (DRRS) that greatly simplify the process by which DRPs register their customers for direct participation DR.

Nevertheless, OhmConnect continues to encounter data-related issues that complicate its ability to carry out the above business functions. The goal of these comments, therefore, is to call attention to these issues and to propose some potential solutions. Section II focuses on data-related issues that affect steps in the customer journey that occur *after* the customer has learned about OhmConnect and decided to sign up for its DR service – i.e. business functions (2) to (5) above. Section III focuses on an important data asymmetry between the IOUs and third-party DRPs, and its consequences for business function (1) above.

II. DATA AND THE OHMCONNECT CUSTOMER EXPERIENCE

To sign up for OhmConnect’s DR service, a customer must explicitly authorize her IOU to release to OhmConnect certain confidential data,⁵ including:

1. Name, service address, service agreement number, load-serving entity (LSE), and Sub-Load Aggregation Point (Sub-LAP) in the CAISO network;
2. Up to one year of historical electric usage data; and
3. Electric usage data on an ongoing basis.

The data in (1) is necessary for OhmConnect to register the customer in the CAISO’s DRRS. The data in (2) enables OhmConnect to identify patterns in the customer’s electricity usage that can help to optimize the timing, frequency and duration of her DR events. Finally, the data in (3) enables OhmConnect to calculate the customer’s performance during DR events and, ultimately, to pay the customer for her participation in OhmConnect’s DR service.

⁴ See, for instance, CPUC (Draft) Resolution E-4868, accessible at <http://docs.cpuc.ca.gov/PublishedDocs/Published/G000/M191/K996/191996741.pdf>.

⁵ Depending on the IOU, the customer can presently authorize OhmConnect access to her data via a paper or pdf authorization form, or via an online authorization portal on the IOU’s website. Beginning in 2018, the IOUs will implement the “click-through” process discussed above.

Thus, complete, accurate, and timely data is essential for OhmConnect to provide its customers with a positive and rewarding experience. Section F.2.b of Rule 24/32 states that each IOU “shall provide the DRPs (or their designated agents) with reasonable and timely access to meter data as required to allow the proper performance of billing, settlement, scheduling, forecasting and other functions”.⁶ In general, each of the IOUs provides OhmConnect with its authorized customers’ meter data on a daily basis, approximately 48 hours after the fact. (For example, meter data for customers’ usage on Monday is typically provided to OhmConnect two days later, on Wednesday.) Nevertheless, in the approximately 18 months since Rule 24/32 “go live”, OhmConnect has encountered many recurring data problems, as described in the following paragraphs.

1. Dates with missing usage data for many or most authorized customers.

There have been dates for which OhmConnect was not provided usage data for all its authorized customers until many days after the fact. In July 2017, for example, there were four different dates for which, even after 10 days had elapsed, one of the IOUs had still provided OhmConnect with usage data for fewer than 40 percent of its tens of thousands of authorized customers. When customer usage data is missing, OhmConnect is unable to calculate customers’ performance during DR events, which is a function of both usage on the event day and usage on previous days (via the CAISO baseline calculation).⁷ Although the CAISO tariff technically allows DRPs 48 business days to submit usage data for wholesale market settlements, OhmConnect has found that data delays of more than 2-3 days negatively affect the customer experience. Having now conducted more than two million user-events, OhmConnect has learned that customers want to see and be paid for their performance as soon as possible after each DR event. OhmConnect can only satisfy these customer demands if each IOU routinely provides complete, accurate, and timely usage data for all its authorized customers.

2. Customers whose data access authorizations terminate without explanation.

Customers have the right to revoke their data access authorizations at any time. Moreover, customers’ data access authorizations will terminate automatically should they close their IOU service accounts (e.g. due to changes of address). However, OhmConnect has encountered situations where customers’ data access authorizations appear to have terminated for neither of these reasons, such that OhmConnect suddenly and inexplicably stops receiving usage data for these customers. As in (1) above, this precludes OhmConnect from calculating the affected customers’ performance during DR events. The customer experience again suffers, because customers for which usage data is not provided by the IOU receive neither feedback on, nor payments for, their participation in OhmConnect’ DR service.

⁶ See: https://www.pge.com/tariffs/tm2/pdf/ELEC_RULES_24.pdf; https://www.sce.com/NR/sc3/tm2/pdf/Rule_24.pdf; and http://regarchive.sdge.com/tm2/pdf/ELEC_ELEC_RULES_ERULE32.pdf.

⁷ See, for instance, *CAISO Demand Response User Guide, Version 4.6 (May 5, 2017)*, accessible at <http://www.caiso.com/Documents/DemandResponseUserGuide.pdf>.

3. OhmConnect not notified when authorized customers close their IOU accounts.

As stated in (2) above, when customers close their IOU service accounts, their data access authorizations with OhmConnect automatically terminate and OhmConnect stops receiving their usage data. Unfortunately, not all the IOUs notify OhmConnect when its authorized customers close their service accounts – which happens quite often in the case of residential customers. Consequently, when OhmConnect stops receiving usage data for some of its authorized customers, it is difficult to discern whether this has happened because the customers have closed their IOU service accounts or because the IOU is experiencing technical problems. OhmConnect requires accurate information about the status (i.e. “active” versus “closed”) of each of its authorized customers’ IOU service accounts, so that OhmConnect can ensure only customers with active IOU service accounts are registered in the CAISO’s DRRS. The IOUs are best positioned to provide such information to OhmConnect and other third-party DRPs.

4. OhmConnect not provided with authorized customers’ historical usage data.

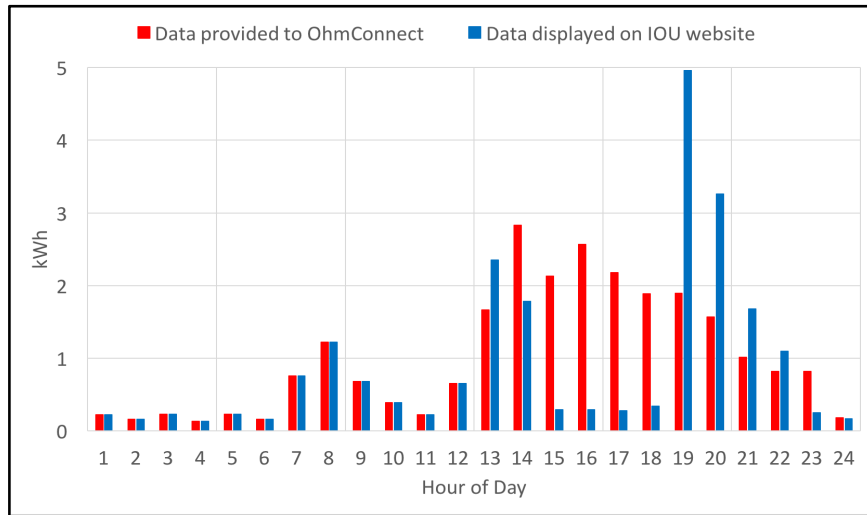
Rule 24/32 requires that the IOUs provide DRPs with “[u]p to 1 year of historical interval data, as it is available”.⁸ OhmConnect recognizes there are cases in which historical usage data is not available – for example, if a customer has just moved into a new home. In other cases, however, OhmConnect has not received historical usage data from the IOU for some of its authorized customers, despite these customers having interval meters and having lived in their homes for extended periods of time. If OhmConnect is not provided with customers’ historical usage data, then OhmConnect must postpone registering these customers in the CAISO’s DRRS until sufficient usage data becomes available for the post-authorization period, such that OhmConnect can calculate baseline usage in accordance with the CAISO tariff. The absence of historical usage data also delays OhmConnect’s ability to analyze customers’ usage patterns, which help OhmConnect to optimize the frequency, time, and duration of customers’ DR events.

5. OhmConnect provided with incorrect customer usage data.

OhmConnect presents its customers with information about their actual versus forecast usage for each DR event, based on usage data provided by the IOUs pursuant to customers’ Rule 24/32 data access authorizations. On several occasions, however, customers have informed OhmConnect that the usage data displayed on OhmConnect’s website does not match the usage data displayed on the IOU’s website – see, for instance, Figure 1 below. This indicates that (at least) one of the two usage datasets is incorrect. If it is the usage data provided by the IOU to OhmConnect that is incorrect, then OhmConnect’s CAISO performance and settlement calculations will be incorrect, too. In this case, the customer experience suffers insofar as OhmConnect is unable to accurately compensate customers for their participation in DR events.

⁸ See Electric Rules 24 (PG&E and SCE) and 32 (SDG&E), Section D.1.a.(2).

Figure 1. Discrepancies in usage data for an actual OhmConnect customer (08/10/2017)



6. Customers unable to authorize data access to OhmConnect on IOU website.

Customers have reported to OhmConnect multiple instances in which they were unable to authorize OhmConnect access to their usage data via the IOU’s website (as opposed to the IOU’s paper or pdf data authorization form). Specifically, some customers seeking to authorize OhmConnect access to their data appear to have encountered errors on the IOU website outside the control of either OhmConnect or the customers themselves. Figure 2 displays one such error: the customer’s service address on record with the IOU appears to be longer than the IOU’s online data authorization tool can accommodate. Figure 3 displays another error: the screen explains that the customer must “enter a valid email user ID”, but fails to provide a form field in which the customer can actually enter this information. These types of website errors have prevented customers from signing up for OhmConnect’s DR service in a timely manner.

Figure 2. Data authorization failure due to length of customer service address

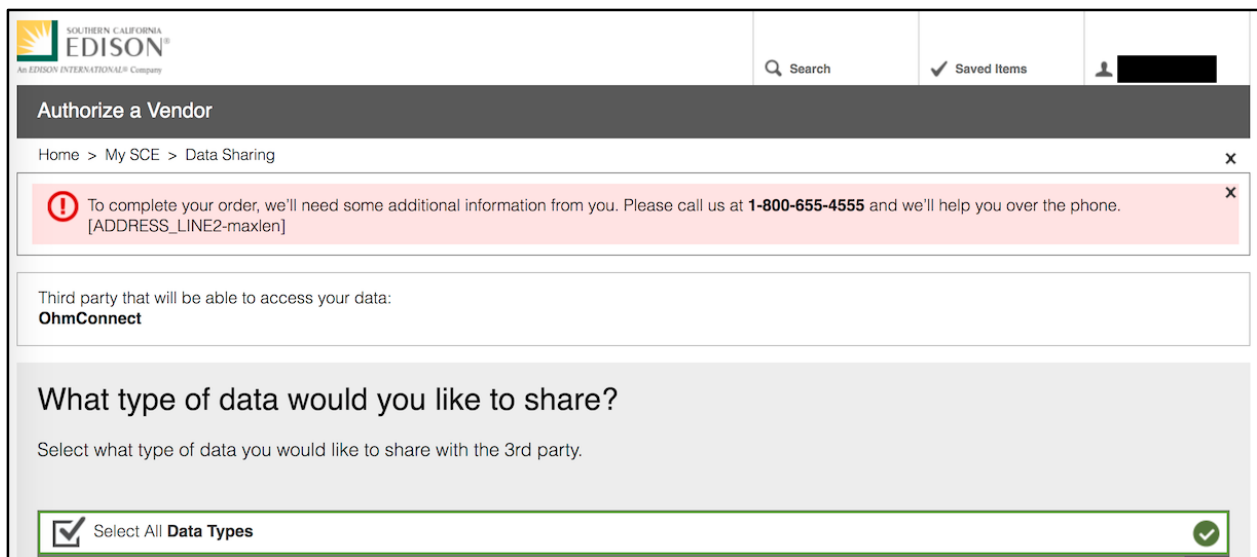
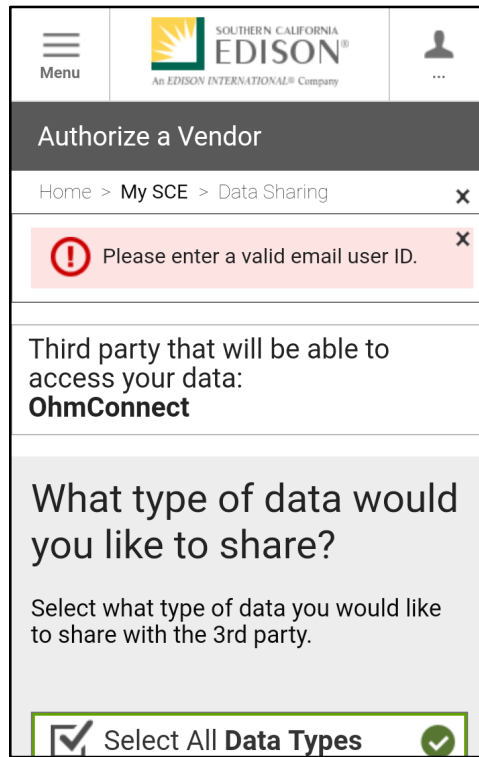


Figure 3. Data authorization failure due to missing customer email address



7. New customers’ data access authorizations not processed after many days.

The IOUs generally process new OhmConnect customers’ data access authorizations within just a few days. However, there have been many instances in which OhmConnect has not received notice from the IOU regarding the status (i.e. “accepted” or “rejected”) of a customer’s data access authorization after 10 days. (OhmConnect refers to such customers as “orphans”.) This can result in a very frustrating experience for the customer. Without data from the IOU, OhmConnect is unable to register the customer in the CAISO’s DRRS or pay the customer for participating in DR events. Moreover, if there is a problem with the customer’s data access authorization (e.g. misspelled customer name, incorrect customer service account number, etc.), OhmConnect is unable to remedy the problem without feedback from the IOU.

III. DATA AND FAIR COMPETITION BETWEEN DR PROGRAMS/PROVIDERS

Recently, the CPUC has taken actions to expand the set of opportunities available to third-party DRPs and to encourage competition between IOU and third-party DR providers and programs. Rule 24/32 and the DRAM pilots are prime examples. Furthermore, in Decision (D.) 16-09-056, the CPUC adopted a set of principles for all Commission-regulated DR programs, which include:

- “Demand response customers shall have the right to provide demand response through a service provider of their choice and Utilities shall support their choice by eliminating barriers to data access”; and

- “Demand response shall be market-driven leading to a competitive, technology-neutral, open-market in California with a preference for services provided by third-parties through performance-based contracts at competitively determined prices”.⁹

OhmConnect strongly supports customer choice of DR programs and fair competition among DR providers (whether third-party or IOU). However, the IOUs have a significant competitive advantage over third-party DRPs in terms of access to customer-specific data, which results in increased costs to third-party DRPs of recruiting customers to their DR programs (i.e. business function (1) in Section II above). The IOUs can access interval meter data, rate schedules, and billing histories for *all* customers, thereby enabling them to conduct highly targeted marketing campaigns for their own DR programs. In contrast, third-party DRPs cannot access this type of information about a customer until *after* the customer provides an explicit data access authorization, and by this point in time the DRP typically has already incurred costs for marketing to the customer.

OhmConnect addressed this issue at length in its testimony and filings in the CPUC’s proceeding for the IOUs’ 2018-2022 DR programs and budgets applications (A.17-01-012 et al.).¹⁰ California law and regulations currently prohibit the IOUs from disclosing to third-party DRPs any confidential customer data without a customer’s explicit consent; thus, an alternative remedy is needed to compensate for the competitive advantage each IOU derives from its access to superior customer data. One such remedy is for the IOUs to create online DR “programs portals” on their websites that inform customers of *all* their DR options – both utility *and* third-party. These DR programs portals – which might resemble simplified versions of the online marketplaces the IOUs have built (or are building) for energy efficiency products and services¹¹ – would provide customers with basic and objective information, such as the name and logo of the DRP, the DR program name and description, and a link to the DRP/DR program website. The IOUs would then focus their marketing efforts on promoting awareness of, and driving customer traffic to, the online DR programs portals, via campaigns that seek to explain: (1) why customers’ participation in DR is desired; (2) how customers stand to benefit by participating in DR; and (3) that customers have “the right to provide [DR] through a service provider of their choice”.¹² This will ensure all CPUC-regulated DR programs align with the principles for DR adopted in D.16-09-056 and will help enable fair competition between IOU and third-party DR programs, to the benefit of all ratepayers.

IV. CONCLUSION

OhmConnect appreciates the CEC’s convening of a workshop on “opportunities and barriers for increased future DR participation”, and is grateful for the opportunity to provide these post-workshop comments. OhmConnect looks forward to working with the CEC Commissioners and Staff to put in place solutions to the data-related problems identified herein.

⁹ D.16-09-056 (*Decision Adopting Guidance for Future Demand Response Portfolios and Modifying Decision 14-12-024*), Ordering Paragraph 8, at pp. 97-98.

¹⁰ See, for instance, May 11, 2017 Direct Testimony of OhmConnect, July 24, 2017 Opening Brief of OhmConnect, and August 4, 2017 Reply Brief of OhmConnect.

¹¹ See, for example, <https://marketplace.pge.com/> and <https://marketplace.sdge.com/>.

¹² D.16-09-056, Ordering Paragraph 8, at p. 97.

Respectfully submitted,

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