March 5, 2018
Via email

California Public Utilities Commission, Energy Division
505 Van Ness Ave
San Francisco, CA 94102
JL2@cpuc.ca.gov

Re: Response of OhmConnect, Inc. to Questions for Informal Comment: Demand Response Pilot for Disadvantaged Communities

Dear CPUC Energy Division Staff:

OhmConnect commends the Commission for increasingly supporting disadvantaged communities in California's clean energy transition, and we respectfully submit these informal comments for the straw proposal for pilots targeting demand response (DR) to benefit disadvantaged communities (DACs). OhmConnect provides a free residential DR software platform and has been successful in encouraging residential investor-owned utility (IOU) customers to participate in DR events through behavioral and automated responses. OhmConnect has a simple message to its users - *Save Energy. Get Paid.* - and we empower customers to participate in and be rewarded for reducing electricity during wholesale DR events.

Currently, OhmConnect has a growing concentration of users in disadvantaged communities (~17%), and as we aim to meet the State's goal of 25% penetration amongst DACs, we are hopeful that these pilots will address existing barriers to helping DACs participate in demand response opportunities. Below, please find OhmConnect's responses to questions 1 and 3 regarding the demand response pilot for disadvantaged communities.

<u>Question 1. Regarding the draft straw proposal</u>:

- What would you propose for pilots targeting disadvantaged communities?

Based on our experience in engaging customers, OhmConnect recommends the demand response pilots for targeting disadvantaged communities address three primary areas: incentives, notifications, and education.

Incentives

Through our current CEC grant, *Empowering Prosumers to Access Wholesale Energy Products* (EPC-15-083), OhmConnect has experimented with different incentive structures both for DR events (e.g., payout price per kWh reduced) as well as for smart devices (e.g., rebate structures for WiFi thermostats) to understand the financial benefits to which customers are most responsive. With these grant experiments, OhmConnect has seen a strong uptick of signup rates of DAC customers, from ~7% to ~17%; however, OhmConnect users in DACs have had relatively lower adoption rates of smart devices.

Smart, connected devices assist the grid by automatically responding to DR events, thereby reducing the need for natural gas generation in DACs during peak demand periods. More importantly, OhmConnect users with smart devices have, on average, a higher yield - i.e., the total kWh users reduce during residential DR events - thus increasing a user's potential payout.

However, smart devices often have a high upfront cost, and even with a rebate, IOU customers in DACs may face a cost barrier in adopting these environmentally and financially beneficial products.

Based on these initial findings, OhmConnect recommends the DR pilots for DACs experiment with the rebate structure and types of incentives available for smart, energy-efficient devices, such as WiFi thermostats and smart plugs. These incentives should mitigate any need for out-of-pocket expenses or similar financial burdens to avoid having members in DACs risk losing money to participate in the DR pilots.

One example incentive for this pilot is utilizing a points system, where points are earned per kWh reduced during DR events. Points can be utilized by customers in a variety of different ways; for example, simply "cashing out" (i.e., exchanging the points for a cash value that can be transferred to a user's bank account or other means of financial deposit) or donating the points to charities and schools. An alternative use could be using the points to offset the cost of smart devices. For example, rather than using cash or credit to purchase the smart devices, customers would apply their points (which are not yet cash-in-hand) to a gift card to a third-party store that sells pre-approved smart devices.

Another optional pilot could test the efficacy of providing eligible customers the device for free using a loan system. The device would not require any upfront payment, but earnings received from participating in DR events after the device is received and connected would serve to pay back the device. This loan program potentially de-risks DAC customers spending out-of-pocket money on devices, and it also creates a financially sustainable method for the IOUs around smart device loans.

Notifications

OhmConnect dispatches its users for DR events in coordination directly with the California Independent System Operator's (CAISO's) energy markets. Once an event date and time has been established, OhmConnect users are notified of the DR event via email and SMS. However, as Southern California Edison identified in its Workshop presentation, low-income customers may have limited internet access. Furthermore, low-income customers may have pay-per-text or pay-per-data usage cell phone plans, making regular SMS and in-app mobile notifications costly. Assuming these barriers to low-income customer participation in DR are also true for customers in DACs, the current means of DR notifications could be inaccessible to many DAC IOU customers.

To address this barrier, OhmConnect recommends the DR pilots for DACs experiment with non-traditional, more creative forms of DR notifications that are sensitive to technical limitations and cultural demographics. For example, notifications can be in-person interactions, shifting to occur via word-of-mouth: a leader in the DAC could announce to the community when a DR event is occurring in a method that they know to be most impactful.

Moreover, rather than using day-ahead notifications exclusively, CAISO could analyze historical energy usage data in a sub-LAP to determine which time each week would be most beneficial for electricity customers in the community to reduce in aggregate. As a result, DR events could become community events, where DAC customers gather together to have a focused conversation around any topic of their choice (perhaps even around energy usage and the environment). DR events could even be rebranded amongst the DAC community to be a time to

be together. The community event would be at the same time each week, creating a regular cadence of participating in DR events. These events are not directly correlated to day-ahead CAISO price signals; instead, they apply in-depth analysis of energy usage trends across the DAC.

Lastly, DR event notifications can be incorporated into the San Joaquin Valley Air Pollution Control District's Air Alert system. By tying in energy usage to an established, successful air pollution messaging platform, DR events can reach a large group of DAC residents through a method with which they are already familiar. Additionally, alerting DAC residents about DR events through this pathway ties in the environmental benefit behind saving energy.

Education

Most importantly, OhmConnect recommends working with representatives from DACs to learn the best means of educating the community on the financial and environmental benefits of DR, ensuring any cultural sensitivities, income barriers, and language needs are taken into consideration in the pilots. Only with appropriate communication strategies and impactful outreach will these pilots be successful. OhmConnect suggests ideas below on different means of encouraging on-the-ground outreach and education, and these ideas are subject to change depending on feedback from members of the community.

One example of an education tool in the DAC is selecting community "champions" to evangelise about the benefits of the DR pilots and help sign up members of the community. For such community members, the pilot could potentially create a new job market, where community champions receive an incremental salary for their engagement efforts.

Additionally, the pilots can work with schools local to the DAC to encourage parents of students to sign up for the pilot and donate money earned from DR events to the school. For example, the students that get the most parents to sign up for the DR pilots could be rewarded with a free trip to a theme park (e.g., Great America, Raging Waters, etc.) or receive another award of their choice. OhmConnect has found value in focused campaigns that benefit a specific issue, such as local schools, and these campaigns can enable DAC members to work together for a specific cause (e.g., nonprofit, school, etc.). Through a team-like function, DAC customers can work together to teach the community about the financial and environmental benefits of DR.

- What if any additional data is needed to inform the structure of the pilots?

OhmConnect recommends acquiring more data on DAC customer demographics for the pilots. This data can be aggregated across households in DACs to protect customer privacy. CalEnviroScreen shares whether a community is disadvantaged based on zip code, and while other information is used to determine the community's CalEnviroScreen score, this demographic data is not readily available to third parties. Furthermore, demographic data is not available through the traditional Rule 24 pathway. Therefore, these pilots create the opportunity to share valuable aggregated demographic data with the DR community to help push the goals of the pilots forward.

Acquiring demographic data provides the potential to better understand the best means of engaging individuals within DACs, enabling more fine-tuned messaging and outreach for the pilots based on things like culture, language, and income. Even further, by leveraging this data,

the pilots can target customers within DACs that stand to benefit the most, whether financially or environmentally, from the DR programs.

Example demographic data that would help inform the structure of the pilots includes:

- Primary language spoken at home
- Education level
- Employment status
- Income level
- Number of people in household
- Access to technology
    - Personal Computer
    - Internet
    - Cell phone
    - Cell phone plan
- Billing data
    - Payment methods
    - CARE customers
    - Ability to pay bills on time

Question 3. Strategy to test for possible large-scale implementation:

- What strategy or strategies should the pilots test (e.g. targeted marketing, special incentive structure, use of storage, new DR (increase use to avoid curtailment))?

Overall, the pilots should test for increased participation in DR by residential IOU customers. Increased participation can be tracked either by quantifying how many DAC customers enroll in demand response programs during the pilots, or the pilots can analyze how many DAC customers purchase smart devices and connect them to the grid (via a software platform) to ensure automatic participation in DR. By quantifying increased participation in DR, the pilots will test new DR opportunities that successfully penetrate DACs to mitigate the need for peaker plants in those areas.

In addition to increased participation, the pilots should test for customer retention in the demand response programs offered during the pilots. Retention is the percentage of customers that remain active on a product or program over time. For this strategy, the pilots could test how many IOU residential customers not only remain enrolled in the pilots over time (and for how long), but also how many customers are actively participating in DR events on a regular basis.

Furthermore, based on our suggested pilots described in Question 1 above, OhmConnect recommends the pilots test the following strategies:

Incentives: The DR pilots should test different special incentive structures to increase DAC uptake of smart devices. Specifically, this strategy should test how to best encourage automation in responding to DR events to ensure regular DAC participation in DR.

Notifications & Education: To test different notification and education strategies for DR within DACs, the DR pilots should test targeted marketing. For this, the pilots can test different communication tactics that overcome existing barriers for DACs - e.g., Does the marketing need to be in a different language? Is it culturally sensitive? etc. - as well as test which partners are

most impactful for on-the-ground outreach. There are many community nonprofits focused on environmental justice, and it is important to collaborate with these groups to ensure the DR pilots are successful amongst DAC IOU customers. The pilots should ascertain which nonprofit groups are best for communicating the environmental and financial benefits associated with DR in DACs and for encouraging customers to enroll in the pilots.

- Which customers or customer classes should the pilot target (e.g. residential customers, community organizations and small/medium businesses that serve the community, etc.)?

OhmConnect recommends the pilot target residential customers and community organizations, such as schools, churches, or a community center where users can convene for DR events (see responses to Question 1).

- Please note if the IOUs should hire a third party to implement the pilots, including what attributes the third party should have and why.

Rather than hire a third party to implement the pilots, OhmConnect recommends the IOUs collaborate with an on-the-ground nonprofit to help implement the pilots in the DACs as well as one or more third-party demand response providers that are focused on customer experience. Most importantly, these pilots should work with entities that seek a direct customer relationship where the IOUs can receive feedback directly from members in the DAC on how the pilots are working and where iterative improvements can occur.

Respectfully submitted,

/s/ LILLIAN MIRVISS

Lillian Mirviss
Project Manager
OhmConnect, Inc.
350 Townsend St., Suite 210
San Francisco, CA 94107

Telephone: (415) 606-2025
Email: lillian@ohmconnect.com