

Replacement Report Addressing PSE’s Electric Conjunctive Demand Service Option and the Design and Evaluation Elements in Staff’s Pricing Pilot Proposal

Pursuant to Paragraph 596 of the Final Order 08 and Order 13 in Dockets UE-190529 and UG-190530 (*consolidated*) (“Orders”), PSE has collaborated with Commission Staff (“Staff”) to use the design and evaluation elements in Staff’s pricing pilot proposal as general guidelines and apply those elements PSE deems relevant in developing its Conjunctive Demand Service Option (“CDSO”) Pilot (“Pilot”). PSE discusses those elements, as well as the elements PSE deems to have little or no application to this Pilot. In addition, PSE describes the pros and cons of the Pilot and how it envisions expanding the Pilot over time.

This Replacement Report should be viewed in connection with the attached Schedules 26 and 31 Conjunctive Demand Service Option Pilot Monitoring and Reporting Plan (“Attachment A”) and Electric Charging Conjunctive Demand Service Option Pilot Monitoring and Reporting Plan (“Attachment B”).

Design—Goals:

Goals and Purpose of CDSO

The purpose and goals of the CDSO Pilot are described in the CDSO Pilot Monitoring and Reporting Plans, attached hereto and referred to hereafter as Attachments A and B.

‘SMART’ Goals

Attachments A and B describe the detailed Monitoring and Reporting Plans that include Specific, Measurable, Achievable, Relevant, and Time-Bound (S.M.A.R.T) goals, metrics, and measurements for the two CDSO goals for the large commercial and industrial customer pilot group and the EV charging customer pilot group, respectively.

Structure:

Meaningful Signal

As Described in Exh. JAP-9, slightly more than a third of demand related costs in Schedules 26 and 31 are associated with the recovery of production and transmission costs. Therefore, that portion of the participating customer’s demand charge in this pilot would be charged using its conjunctive demand. The remainder would be charged in the same manner it is today, using the peak demands at that location in the billing period. PSE, as well as customers engaged in the design discussions, maintain the view that affording these customers the ability to save on such portion of their demand related costs would be meaningful. (For both general commercial and industrial customers and electric vehicle-related customers.)

Cost Causation

Again, referring to the Prefiled Direct Testimony of Jon Piliaris, from the perspective of power and transmission cost causation; customers served by PSE through multiple locations have no materially different cost of service than a single customer with similar load characteristics. Customers served at

multiple locations pay more for these services through their demand charge when the sum of the demands at their individual locations exceed what they would be if measured through a single meter in the same billing period. To this end, PSE maintains that the pilot's pricing structure better aligns to these customers' cost causation for the demand portion of their power and transmission costs. (For both general commercial and industrial customers and electric vehicle-related customers.)

Possible to implement

PSE's selection of the CDSO eligibility criteria coupled with the deployment of AMI meters and data systems, as well as pre-engagement with some applicable customers avail PSE of the ability to implement this new service. (For both general commercial and industrial customers and electric vehicle-related customers.)

Administration:

Internal Validity

WUTC Staff's requirement that pricing pilots have "internal validity" is not well suited to this particular pilot, as every participating customer is likely to have a unique set of circumstances that makes it less likely that one could conduct a "statistical extrapolation" of results to some larger population of customers.

Consistent & Regular Reporting

PSE intends to report on the following:

- Magnitude of customer savings.
- Evidence of customer load shifting due to CDSO.
- Evaluation of the administrative process and potential for scalability.
- Potential for other similar (or additional) rate design approaches that may be more suitable with AMI.

Progress Report

In addition to the previously mentioned items that will be reported after eighteen months after the Pilot initial implementation. PSE will, in compliance with the Orders, provide documentation showing if the revenues for Sch. 26 and Sch. 31 customers has increased or declined over this time and if all these customers' rates are recovering their costs imposed on the system.

In addition, PSE will provide the number of charging facilities served by Sch. 26 or 31, and the approximate electric load used by the respective billed customers (not end-users).

Final Report

PSE's intent is to carry out evaluation for expanding or continuing or revising the CDSO based on the results of the specific metrics in Attachments A and B to this Replacement Report and furnish its conclusion and the subsequent evidence in PSE's final CDSO Pilot report. This final report will be filed with the Commission six months preceding the scheduled Pilot end date.

Prioritize customer engagement and communication

Customer engagement will continue to be primarily handled through PSE's Business Services Group. As these are generally more sophisticated commercial and industrial customers with specific needs, the business services group is adept to communicating with their respective customers on a case-by-case basis to afford them the ability to maximize their ability to participate in this service. (For both general commercial and industrial customers and electric vehicle-related customers.)

Evaluation Elements

SMART Goals Assessment

PSE would revisit the SMART goals listed above and assess accordingly.

Communications with pilot participants and suggestions for improvement.

In line with PSE's Business Services Group's best practices, customer outreach would be performed on a case-by-case basis in line with that customer's particular needs and profile. The nature of this customer class predicates the existence of these dedicated business services contacts that keep a dialogue between PSE and the Customer. (For both general commercial and industrial customers and electric vehicle-related customers.)

Extrapolate how this applied to broader ratepayer population (where cost effective).

PSE believes this element is not applicable to this CDSO Pilot. This pilot was deliberately limited in size and scope to business customers that would likely immediately benefit from conjunctive demand billing. Applications to a broader population would have to be limited to other same and similar Schedules with similar demand characteristics based on lessons learned from this pilot.

Impacts on vulnerable population and mitigation strategies.

PSE believes this element is not applicable to this CDSO Pilot. Given the nature of the targeted commercial and industrial customers and the generally accepted understanding of the undefined term 'vulnerable' customers, an analysis and evaluation of the impacts of vulnerable populations would instead be applicable to a CDSO involving the residential classes. There is no relevant data related to Schedules 26 and 31 customers from which PSE could evaluate the impact of the CDSO Pilot on vulnerable residential customers.

Development and Administration:

State Assumptions in Design

Please see "Design-Goals" section above and additional design details in Attachments A and B.

Outline data collection needs and methods

Leverage technology such as the AMI system to afford customer choice and leverage existing software such as SAP and MDMS.

Detail customer outreach

In line with PSE's Business Services Group's best practices, customer outreach would be performed on a case-by-case basis in line with that customer's particular needs and profile. The nature of this customer class predicates the existence of these dedicated business services contacts that keep a dialogue between PSE and the Customer. (For both general commercial and industrial customers and electric vehicle-related customers.)

On-the-fly Refinements

PSE intends to utilize adaptive management and, as noted elsewhere, ongoing improvements.

Costs and Benefits:

1) Compare to another similar group of customers. (For both general commercial and industrial customers and electric vehicle-related customers.)

2) Compare to previous years' loads of participating customers. This may include customer bill impacts and customer electric load impacts – specifically the measurement of hourly peak demand.

Review of customer effect – Customer education, customer enrollment, customer understanding of rate structures, customer understanding of the new bill, customer understanding of benefits or costs, customer acceptance, and customer satisfaction. (For both general commercial and industrial customers and electric vehicle-related customers.)

A) Statistical review of cost and benefits from control group

Distribution of bill impacts for various customer segments.

PSE intends to analyze within the population of participating customers where the demand characteristics are consistent with the initially targeted schedules.

How load impacts vary by rate period and customer segments.

The criterion was selected for administrative scale and mitigation and limitation of revenue erosion. Additional schedules may be evaluated for inclusion for such service in the future.

How load impacts vary by different areas, climate, rural

PSE has determined that this element is not applicable to this particular CDSO Pilot. PSE believes it is not appropriate at this time to analyze how load impacts vary by different areas, climate and population density. Such analysis is not meaningful for large commercial and industrial electric customers served under Schedules 26 and 31.

Review of vulnerable customers in relation to other customer groups and the distribution of bill impacts

PSE has determined that this element is not applicable to this particular CDSO Pilot. These evaluation features lend themselves to a larger, more diverse Schedule population such as Residential, and are more appropriately evaluated when and if the Pilot is expanded to include residential schedules.

B) Summary of costs and benefits to the utility in comparison to a baseline like the IRP

Costs and benefits of the service to the utility

PSE will report on any revenue erosion at the 18 month mark. At pilot completion, an assessment would be made of the resource benefits to the system and possible implications of demand response to price signals.

Pricing pilot software and physical integration requirements and costs.

The software to implement the pilot would be the SAP, MDMS, and AMI systems; all of which are not unique to the pilot and are accounted for elsewhere; but there will be incremental costs related to these items in implementing the pilot, especially billing system costs but likely including all systems noted above.

Existing capabilities, limitations, and barriers to expansion

Limitations will be further understood in any future revenue erosion analysis. Examining barriers for expansion could also include evaluation of future customer feedback.

Long-term planning impacts

The potential responsiveness of customers to the monthly demand price signals are an area of study and would be evaluated for their potential as a “resource” or cost reduction to system costs as appropriate.

C) Effects on peak and energy consumption

How is it measured and verified, energy savings and reduction in peak usage.

A comparative analysis would need to be prepared with a baseline demand usage evaluated against the new usage patterns identified in possible response to the pilot.

D) Summary of Regional benefits, including greenhouse gasses, air benefits.

The commission has identified that the Company shall keep records-insofar as possible on the count and respective load of EV charging stations taking this service. In line with prevailing standards for calculation at the completion of the pilot, an aggregate analysis of avoided greenhouse gases could conceivably derived.

E) Customer acceptance, complaints and satisfaction

In line with PSE’s Business Services Group’s best practices, customer outreach would be performed on a case-by-case basis in line with that customer’s particular pain points and customer experience throughout the pilot. Issues that would impact the efficacy of the CDSO would likely be rectified during the pilot, but best practices can be documented as part of the evaluation.

Product Risks

Sensitivity of outcomes to periods of wholesale price stability or instability.

This element does not apply to this particular CSDO Pilot. This Pilot is about peak demand management. Also, changes in the wholesale market will not have immediate impacts on PSE bundled retail customers as all rates (including demand and energy charges) are set through GRC. That is, the outcomes of this Pilot would be indifferent nor affected by periods of wholesale price stability or instability. Therefore, gathering such data would be unnecessary.

Summary of relationships with vendors directly or indirectly related to the service and any risks from their software on the operations of the general service.

This element does not apply to PSE's CDSO Pilot. The Pilot will not engage or involve the use of unique vendors, so no change is anticipated to any vendor relationship as a result of the pilot.

Customer outreach and engagement associated with a broader default participation rate, such as availability of call centers.

This element does not apply to PSE's CDSO Pilot. Customer communication and outreach related to availability of call centers will not be impacted by the CDSO Pilot because all such customer engagement is managed pursuant to existing Business Services Groups. Customer communication would continue to fall to the existing Business Services Groups.

Privacy implications from customer participation

This element does not apply to PSE's CDSO Pilot. All customer privacy information is subject to PSE's existing policies, practices, and recordkeeping requirements. This Pilot will not change PSE's management regarding private customer information. Customer information would be continue to be treated in a confidential manner in line with PSE normal billing and record keeping practices. Similarly, customer outreach related to availability of call centers will not be impacted by the CDSO Pilot because all such customer engagement is managed pursuant to existing PSE's Business Services Department

Pros and Cons of the CDSO Pilot

Pros

The CDSO is an objective and measurable plan to reduce the demand charge for eligible customers to levels more reflective of cost causation. Additionally, the plan creates an opportunity for customer response to the price signals that reduce costs to PSE. The plan incentivizes demand conservation across customers' multiple disaggregated Points of Delivery, which is likely to improve the overall customer experience.

PSE believes that it is achievable for customers to have reduced demand charges through the CDSO and customers should have some ability to respond to the price signals offered, allowing them to achieve further reductions their demand charges.

The CDSO service directly addresses customer requests for electric rates that better reflect cost causation. Importantly, the CDSO responds to such requests in a measured and objective manner.

The CDSO quantifies attributable avoided greenhouse gases for system and participating customers. This measure will provide transparent, valuable information to customers and other stakeholders. Observing a change in greenhouse gases due to the CDSO will likely improve the customer experience and add relevant scientific data for policy decisions.

The CDSO will last at least five years, with a filing in the final year to potentially extend or expand the service offering based on the initial results. The decision to expand, continue, or discontinue the service will be based on both qualitative and quantitative criteria in the form of objective data and direct customer feedback.

Cons

With regulatory lag, PSE may experience revenue under-recovery in the short term and other customer groups in the long term will eventually bear the burden of the revenue under-recovery.

The CDSO represents a new program that necessarily involves changes and creates some uncertainty and administrative burden on the part of PSE and Commission Staff. Assumptions may change or prove inapplicable. Administrative shortcomings may be identified.

Expansion of CDSO Pilot over Time

PSE will evaluate the case for continuing or amending the program based on the Pilot's effectiveness at achieving the goals of the pilot laid out in the Replacement Report. Specifically, PSE is interested in the Pilot's ability to incentivize customers to manage concurrent charging across their Points of Delivery, as well the Pilot's ability to reduce financial barriers for future non-residential EV charging. This evaluation would utilize the defined metrics of the two monitoring and report plans attached as Attachments A and B. Specific measures from Attachments A and B that PSE will utilize for this analysis are as follows:

Economic Efficiency:

1. Measure changes in billed demand charges to the participating Customers (i.e. longitudinal study)
2. Identify magnitude of shifts in peak load due to Customer CDSO participation to assess savings on a system level
3. Assess if participants increased EV charging capacity at their Points of Delivery
4. Comparison between CDSO participants vs. non-participants (i.e. cross-sectional)
 - a. Compare changes in billed demand charges between CDSO participants vs. non-participants (i.e. cross-sectional)
 - b. Assess how participating Customers' electrification trends compare to non-participant peers¹ in PSE's Service Area (i.e. cross-sectional study)
5. Quantify changes to PSE Schedules 26 and 31 demand charge revenues
6. Assess administrative capabilities and costs to scale this or like-kind products
7. Quantify attributable avoided greenhouse gases for System and participating Customers

Customer Appeal:

8. Assess changes in the participating Customer experience
9. Assess changes in participating Customer satisfaction

¹ : Non-participant peers include all commercial and industrial customers that are exclusively EV-charging but may or may not be receiving electric service under Schedule 26 or 31.

PSE's intent is to carry out evaluation for expanding or continuing or revising the CDSO based on the results of the above-referenced metrics and to furnish its conclusion and the subsequent evidence in PSE's final CDSO pilot report. This final report will be filed with the Commission six months preceding the scheduled pilot end date.