

*2022 Distributed Energy Resources RFP:*

# Exhibit J. Demand Response Addendum

EXHIBIT J. DEMAND RESPONSE ADDENDUM

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**EXHIBIT J. DEMAND RESPONSE ADDENDUM****Introduction**

This addendum includes DR-related information details that is not described in the main RFP and is considered relevant for submission of DR proposals. It is supplemental to the DR-related information in the main RFP and covers the following topics:

- Additional description of PSE's secondary objectives pertaining to acquiring DR
- Aggregate customer count and sales information
- Performance Goals for DR
- Measurement and Verification
- Data Requirements

**Description of PSE's Secondary Objectives for DR**

The DR performance requirements tied to achieving PSE's secondary objectives are in excess of the minimum requirements stated for fulfilling PSE's primary objectives, described in the main RFP, and can enhance the value of a Respondent's proposal if determined by PSE to be cost effective. These performance requirements are as follows:

- Provide load curtailment during summer months. PSE's summer season is typically during the months of May through September. High demand periods during summer are from 2 p.m. to 6 p.m. PSE expects summer event durations to be no more than 4 hours. Further assume that summer DR events are likely to be called when the day-ahead forecasted temperature is 85 degrees F or higher.
- Have the DR resource available year-round in order to be able to provide load curtailment during shoulder months, if needed. Shoulder months are March, April and October, which are outside the winter and summer season definitions.
- Develop flexible DR capability that provides more rapid curtailment, and greater integration of DR dispatch with grid monitoring. For e.g., provide fast response with notification time of 10 minutes or less in order to help fulfill operating reserve requirements such as Spinning and Non-spinning Reserves and Fast Frequency Response from eligible resources.
- Schedule DR Resources in wholesale market operations and bid DR in CAISO's Energy Imbalance Market (EIM) and accordingly follow the EIM performance requirements.

PSE has future plans to aggregate load flexibility resources and make them available in the CAISO Energy Imbalance Market (EIM). As a result, smaller resources may need to meet the requirements of the larger resources ( $\geq$  5MW) per PSE's interconnection practices.

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- Offer potential for energy arbitrage by shifting consumption from high-priced to low-priced periods.
- Provide additional products/services (other than EE) that could be bundled with the DR program offering to enhance customer engagement, service, and satisfaction.<sup>1</sup>

In addition to these objectives, PSE envisions utilizing DR for addressing other types of requirements in the long-term. For example, PSE would like to utilize DR to help integrate intermittent renewable resources, such as wind and solar into future grid operations. Respondents are not expected to address these specifically in their proposal. However, PSE is interested in learning how vendor products/services being proposed for the 2023-2028 contract period could dovetail into addressing future potential use cases for DR.

Section below presents the latest customer count and electricity sales data by rate schedule and NAICS code for eligible customers.

**Aggregate Customer Information**

Table 1 below presents customer count and 2020 electricity sales data by North American Industry Classification System (“NAICS”) sector and by rate schedule for commercial and industrial (“C&I”) customers. Table 2 presents electricity sales by rate schedule and by county for C&I customer segments.

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<sup>1</sup>In addition, PSE’s preference is for the vendor to be able to provide other value added services/products that could be bundled and monetized along with the DR program offer.

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Table 1. *Customer count and electricity sales by sector and by rate schedule*

NAICS sector description	2020 GWh	Customer count by rate schedule <sup>2</sup>				Total count by sector
		Sch. 25	Sch. 26	Sch. 31	Sch. 49	
		>50 kW and ≤350 kW max. demand	>350 kW max. demand	>350 kW max. demand; delivery at 600 volts or higher	≥4,400 kVA demand; delivery at 50,000 volts or higher	
Accommodation and food services	205.3	683	40	7		<b>730</b>
Admin. support and waste management and remediation services	141.8	205	22	11	1	<b>239</b>
Agriculture, forestry, fishing and hunting	103.0	170	14	14		<b>198</b>
Arts, entertainment, and recreation	100.3	233	15	8		<b>256</b>
Construction	110.4	248	31	14		<b>293</b>
Educational services	255.9	445	49	72	1	<b>567</b>
Finance and insurance	114.5	198	21	6	1	<b>226</b>
Health care and social assistance	394.4	415	43	15		<b>473</b>
Information	352.8	145	14	8	2	<b>169</b>
Management of companies and enterprises	24.8	27	6			<b>33</b>
Manufacturing	810.2	583	92	83	4	<b>762</b>
Mining	-	3		1		<b>4</b>
Other Services (except public administration)	95.7	457	21	13		<b>491</b>

<sup>2</sup> Brief descriptions of rate schedules:

Schedule 25: Small Demand General Service (>50 kW and ≤350 kW max. demand customers)

Schedule 26: Large Demand General Service (>350 kW max. demand customers)

Schedule 31: Primary General Service (>350 kW with delivery at primary voltage (600 volts or higher))

Schedule 40: Large Demand General Service (>3aMW load on a distribution feeder)

Schedule 49: High Voltage General Service (Billing demands not less than 4,400 kVA and delivered at high voltage (50,000 volts or higher); customer provides all transformation and facilities beyond the point of delivery.

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NAICS sector description	2020 GWh	Customer count by rate schedule <sup>2</sup>				Total count by sector
		Sch. 25	Sch. 26	Sch. 31	Sch. 49	
		>50 kW and ≤350 kW max. demand	>350 kW max. demand	>350 kW max. demand; delivery at 600 volts or higher	≥4,400 kVA demand; delivery at 50,000 volts or higher	
Professional, scientific and technical services	131.8	189	23	8	1	221
Public administration	380.4	559	33	65	3	660
Real estate rental and leasing	293.2	486	55	11	1	553
Retail trade	708.4	962	156	21		1,139
Transportation and warehousing	196.0	180	25	22	1	228
Utilities	101.3	140	9	13	1	163
Wholesale trade	182.4	315	36	17		368
Not assigned	515.3	1,202	74	55		1,331
<b>Total</b>	<b>5,217.9</b>	<b>7,845</b>	<b>779</b>	<b>464</b>	<b>16</b>	<b>9,104</b>

**Table 2. Electricity sales (GWh) by county and by rate schedule**

County	Sales by rate schedule				Total sales by county
	Sch. 25	Sch. 26	Sch. 31	Sch. 40	
	>50 kW and ≤350 kW max. demand	>350 kW max. demand	>350 kW max. demand; delivery at 600 volts or higher	>3aMW load on a distribution feeder	
Island	23.9	9.1	7.2	53.3	93.5
King	968.8	1,186.3	594.6	355.0	3,104.7
Kitsap	106.9	94.1	39.0	18.6	258.6
Kittitas	8.1	8.2	5.4		21.7
Pierce	140.3	134.6	131.6	11.5	418.0
Skagit	83.4	79.0	125.5	24.8	312.7

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Thurston	142.9	166.7	235.8	46.0	<b>591.4</b>
Whatcom	123.6	93.7	147.3	41.8	<b>406.4</b>
Not assigned	5.3	5.6	-		<b>10.9</b>
<b>Total</b>	<b>1,603.2</b>	<b>1,777.3</b>	<b>1,286.4</b>	<b>551.0</b>	<b>5,217.9</b>

### Performance Goals for Demand Response

PSE will pay Respondents based on megawatts of delivered load reduction that meet the performance parameters identified in the Primary Objectives. These payments will be provided as:

- **Monthly capacity payments**, based on the average actual load reduction provided during events that month or, if no events occurred, the monthly committed load reduction specified by the vendor, multiplied by PSE's monthly capacity payment rate
- **(Optional) Monthly energy usage payments**, based on the vendor's energy performance each month, multiplied by PSE's hourly energy usage payment rate.
- **Other payments** as structured in Respondent's response under Pricing Attachment (refer to Exhibit B tab "3c.DR") and agreed upon with PSE

If the vendor fails to commit or deliver megawatts greater than or equal to the minimum committed load reduction specified in the contract during a program month, PSE will reserve the right to withhold some or all of the monthly payments to the vendor for that particular program month.

Additionally, in order to ensure successful delivery of products and services, Respondents' performance and compensation will also be measured against specific pre-defined metrics,<sup>3</sup> which may include the following:

#### *Technology Products and Services:*

- System functionality meeting specifications identified in Respondent proposal
- Data collection/provision requirements (types of data and frequency of provision)
- Event monitoring and performance reporting (speed, comprehensiveness, and frequency)

#### *Implementation Services:*

- Timely enrollment of participants
- Timely installation of equipment

<sup>3</sup>These metrics will be specified at the time of the contract.

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- Minimum levels of customer service satisfaction
- Minimum levels of customer class participation (including named communities)
- Timely provision of customer enrollment data and forecasts
- Accurate customer enrollment data and payment processing

*Curtailment Objectives:*

- Annual growth targets
- Cumulative curtailment capability
- Event performance
- Timely provision of required event data, analysis and forecasts

**Measurement and Verification**

Proposals will be evaluated on a variety of criteria including, but not limited to: demonstrated competence and experience, management structure and assigned personnel, quality of proposed equipment and services, pricing, performance guarantees, and other criteria as outlined in Exhibit A.

PSE reserves the right to contact a respondent at any time for clarifications about any part of the respondent's proposal. Proposal review questions and communications will focus on clarifying the information set forth by the contractor in the proposals and will not be an opportunity for the contractor to revise terms.

PSE prefers proposals that provide the lowest reasonable cost throughout the program or project life, taking into account the price of the proposal and other factors that impact PSE's overall cost. PSE intends to analyze the economic benefits of demand response proposals in a manner consistent with the Integrated Resource Plan ("IRP").

PSE will evaluate responses as described in Exhibit A. The benefits and costs shown in the tables below will be included in the proposal evaluation process when applicable, quantifiable, and significant. PSE prefers proposals and combinations of proposals that result in the lowest impact on PSE's revenue requirements and rates when included in PSE's existing generation resource portfolio.

PSE will adjust the respondent's proposed capacity during the evaluation process using effective load carrying capability ("ELCC") as shown in Table 3. The ELCC used in this evaluation will be dependent on the bidder's proposed resource availability, i.e., frequency and duration of events.

For the purposes of measurement and evaluation the respondent will:



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- Provide participant data (to PSE and third-party evaluator) from a sufficient sample of customers for purposes of estimating average load impacts.
- Be called upon to provide meter and payment data, calculation methodologies and other relevant information related to enrolled participants.
- Conduct measurement and verification for estimation of load impacts (method to be agreed upon mutually with PSE, and verified by PSE and an independent contractor).

**Table 3. Cost-effectiveness benefits for DR resources**

Benefits
Avoided capacity costs <ul style="list-style-type: none"> <li>- System wide peak capacity</li> <li>- Local/Distribution peak capacity constraints (location specific)</li> </ul>
Avoided energy costs <ul style="list-style-type: none"> <li>- Alleviate consumption during short duration, high energy system supply cost periods</li> <li>- Events improve alignment between customer loads and available carbon-free generation</li> </ul>
Avoided transmission and distribution costs <ul style="list-style-type: none"> <li>- Possible transmission cost savings where event capacity delivery is firm</li> <li>- Location specific infrastructure upgrade deferrals                             <ul style="list-style-type: none"> <li>○ Substation Expansions</li> <li>○ Feeder modifications</li> <li>○ New substations</li> </ul> </li> </ul>
Avoided environmental compliance costs <ul style="list-style-type: none"> <li>- Possible CETA compliance cost savings by shifting customer energy use to adjacent and available carbon-free generation periods</li> </ul>

**Table 4. Costs for DR resources**

Costs
Program administrator expenses
Program administrator capital costs
Financial incentive to participant
DR measure cost: Program administrator
DR measure cost: Participant contribution
Participant transaction costs
Participant value of lost service
Increased energy consumption
Environmental compliance costs

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**Table 5.** *ELCC based on frequency and duration of DR events*

Peak Capacity Credit for Demand Response			
DEMAND RESPONSE	Capacity (MW)	Peak Capacity Credit Year 2027	Peak Capacity Credit Year 2031
Demand Response, 3-hr duration, 6-hr delay, 10 calls per year	100	26.0%	31.6%
Demand Response, 4-hr duration, 6-hr delay, 10 calls per year	100	32.0%	37.4%

**Data Requirements**

This describes the data support requirements that Respondents need to address in their proposals. Respondents are requested to refer to the data support items listed below in Table 6 in conjunction with the Implementation Plan requirements listed in Exhibit B tab “3c. DR”.

- Provide secure, data uploads into PSE’s data tracking system.
- Provide participant data from a sufficient sample of customers for purposes of estimating average load impacts.

**Table 6.** *Data support*

1. CIS and work management software	Describe your CIS and work management software, including how customer information is entered and updated, how scheduling of installations is accommodated, and how service requests and other necessary information are incorporated.
2. Interface requirements	Describe the process by which PSE’s system is updated or fed with real time information, such as load curtailment activity and other predefined fields. Also, describe processes for providing updates/reports.

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<p>3. Data sharing and reporting</p>	<p>Respond in detail to the following:</p> <ul style="list-style-type: none"> <li>• What types of information/data will be exchanged with PSE, and how will this data be transferred in a secure manner? Is it pulled, pushed on a time basis, or both?</li> <li>• What access will PSE staff have to account status, and what information will be available?</li> <li>• What types of status reporting will be provided to PSE, with what level of detail, and with what frequency?</li> <li>• What are your data retention policies?</li> <li>• What is your QA/QC process for ensuring that your customer data is correct and valid?</li> </ul>
<p>4. Reliability and backup</p>	<p>Describe the protections and recovery methods for dealing with unforeseeable events (e.g., acts of nature, computer or hard drive failure in the computing resources, or security breaches) that may compromise vital customer or work management data.</p>
<p>5. Testing approach</p>	<p>Describe how the data transfer processes will be tested initially and how they will be checked during the project to assure functionality and accuracy.</p>