



REQUEST FOR INFORMATION
for
Distributed Energy Resources

Expected Issue Date
May 14, 2021

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I. REQUEST FOR INFORMATION

Puget Sound Energy’s (“PSE”) Clean Energy Strategy (“CES”) group is requesting information from interested parties experienced in **distributed energy resources (“DERs”), including aggregated demand response (“DR”), energy storage systems (“ESS”) and small-scale generation, and standalone distribution interconnected ESS and generation.** The purpose of this Request for Information (“RFI”) is to solicit information on new and innovative DERs that could be incorporated into PSE’s energy portfolio. It is not required that responses include customer-facing programs. This RFI is issued solely for planning purposes, to assess potential vendor interest in, and potential type, scale, and content of products, services and resources to inform a future Request for Proposals (“RFP”). The draft DER RFP, which will include DR, will be filed with the Washington Utilities and Transportation Commission (“WUTC”) by November 15, 2021, and the final DER RFP is anticipated to be issued to potential bidders on February 15, 2022.

Washington’s new Clean Energy Transformation Act (“CETA”) sets a trajectory for electric utilities, including PSE, to be carbon neutral by 2030 and using 100% clean energy by 2045. PSE’s 2021 Integrated Resource Plan (“IRP”) modeling shows DERs as a growing part of PSE’s electricity resource portfolio. PSE anticipates that in addition to new large-scale resources, a diversified portfolio of DERs, including distributed renewable generation, distributed ESS, and flexible DR resources will be necessary, at scale, to effectively execute its approach. See Table 1 below for estimated resource additions by type.

Table 1. PSE’s 2021 IRP Incremental Resource Additions through 2045

Resource Additions (MW)	2022-2025	2026-2030	2031-2045	Total
Distributed Energy Resources				
Demand-side Resources	256 MW	360 MW	1,168 MW	1,784 MW
Battery Energy Storage	25 MW	150 MW	275 MW	450 MW
Solar - ground and rooftop	80 MW	150 MW	450 MW	680 MW
Demand Response	29 MW	154 MW	34 MW	217 MW
DSP Non-Wire Alternatives	22 MW	24 MW	72 MW	118 MW
Total DERs	412 MW	838 MW	1,999 MW	3,249 MW
Renewable Resources				
Wind	400	1,000	1,850	3,250
Solar	-	400	297	696
Biomass	-	-	105	105
Renewable + Storage hybrid	-	-	375	375
Total Renewable Resources	400 MW	1,400 MW	2,627 MW	4,426 MW
Flexible Capacity	-	255 MW	711 MW	966 MW

*Please note: this RFI should not be considered a solicitation for quotation or a request for proposals, and except as otherwise required by WUTC order or rule, PSE will not be obligated to issue any solicitations now or in the future or to consider any unsolicited responses. Further, PSE maintains no obligation to reimburse respondents for any costs incurred in association with this RFI.

A. Key Considerations for Respondents

- a. Products, services or resources must result in DERs that contribute energy and/or capacity, and are located on PSE’s distribution system. PSE considers behind-the-meter (“BTM”)

resources, including DR, to be located on the distribution system for the purposes of this RFI.

- b. Prospective respondents are not required to respond to this RFI in order to participate in any future RFP process. PSE, in its sole judgement, will determine with whom to engage in further discussion and/or request a proposal through a standard RFP process.
- c. Any products, services, or resources included in responses to this RFI should be available for operation starting between Q3 2022 – Q4 2023.
- d. PSE is under no obligation to select any provided response or move forward with any proposed product, service or resource.
- e. Confidentiality, Ownership and Use of Information - Your response to this RFI will become the property of PSE upon its receipt, and PSE may share this information as part of its internal evaluation system, including with regulatory stakeholders. Information will not be shared with other vendors. It is recommended that you do not include any information in your response that your company claims to be proprietary or confidential without the prior written agreement of PSE. Information submitted through this RFI could be used to assist PSE in preparing an RFP and to identify candidates for participation.
- f. PSE values diversity, equity, and inclusion in all areas of practice, including procurement and product, service and resource implementation. Black, indigenous, people of color, immigrant, women, LGBTQ and veteran led businesses and/or vendors that maintain strong relationships with the diverse communities of PSE's service area are encouraged to respond.

B. Critical Requirements, Anticipated Use Cases and Additional Considerations

All responses must meet PSE's Critical Requirements, and should be aligned with PSE's Anticipated Use Cases and Additional Considerations in order to be considered for a future product, service or resource. PSE's Critical Requirements, as well as Anticipated Use Cases and Additional Considerations, are explained below.

a. Critical Requirements

All submitted products, services or resources must:

- Be located on PSE's distribution system
- Have a clearly defined project term
- Provide aggregated amounts of DR, ESS or small-scale generation, OR be a distribution system interconnected energy storage or generation resource
- For generation resources, be renewable or non-emitting under CETA definitions (RCW 19.405.020)
- For aggregated resources, have a total nameplate capacity of at least 100 kW AC
- For standalone resources, have a nameplate capacity between 100 kW AC and 20 MW AC

b. Anticipated Use Cases

Proposed products, services and resources should highlight how the respondent's product, service or resource would meet one or more of the following primary use cases:

- Generation (CETA-eligible MWh)
- Capacity (MW through energy provision or demand reduction) during peak hours with day-ahead or hour-ahead notification. Figure 1 illustrates PSE's typical monthly load shape and its hourly load shape for a typical winter day.
 - Heavy load: November-March hour ending 0700-2200
 - Super peak: November-January hour ending 0700-1000 and hour ending 1800-2100

PSE is also interested in learning more about how the respondent's product, service or resource may meet one or more of the following secondary use cases:

- Intra-hour capacity dispatch
- Frequency support/response
- Voltage control
- Load flexibility for daily peak management, renewables integration, carbon emissions reduction, market price signals, or another purpose
- Localized capacity (at or below the substation level)
- Summer peak capacity
- Resiliency
- Reliability
- Other(s) as described by respondents

c. Additional Considerations

PSE is also interested in how respondents address the following additional considerations:

- Diversity, Equity and Inclusion:
 - Inclusive marketing,
 - Direct benefit to highly impacted, hard-to-reach and vulnerable communities
 - Addresses an existing barrier to expand participation in DERs
- Data privacy and IT security
- Ability to scale

C. Solicitation Timeline

Per the WUTC's Order 05 in Docket UE-200413, PSE will release a DER RFP, informed by the responses to this RFI, on the timeline below. Feedback on the contents and structure of the draft RFI can be submitted to the WUTC between April 1 and April 30 through its [website](#) in Docket UE-200413.

Activity	Target Completion Dates
RFI Filed with the WUTC as Informational Filing Open for Comment	April 1, 2021
Comment Period on RFI	April 30, 2021
Issuance of RFI	May 14, 2021
Written Responses to RFI Due	June 30, 2021
Draft DER RFP Filed with WUTC	November 15, 2021
Issuance of Final DER RFP (if approved by WUTC)	TBD – Estimated in February 2022

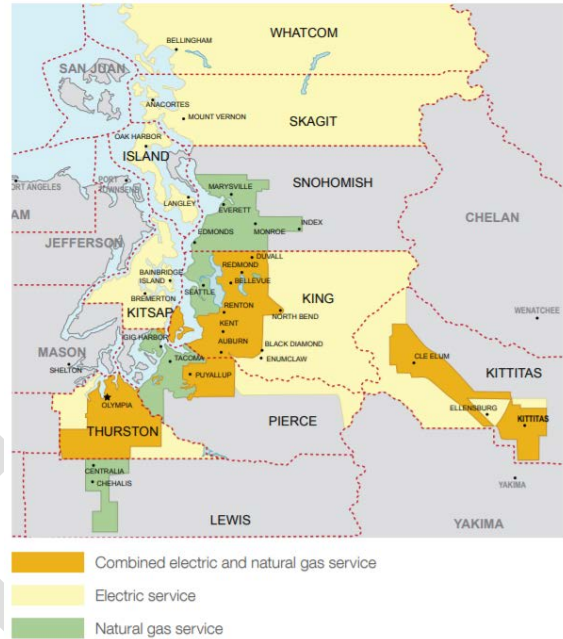
PSE is also in the process of acquiring a Virtual Power Plant (“VPP”) platform, which will also inform the future DER RFP. The VPP RFP is scheduled to be released on September 1, 2021, with responses expected to be due at the end of September 2021. The products, services and resources proposed through this RFI may inform the VPP RFP.

D. About Puget Sound Energy

Headquartered in Bellevue, Puget Sound Energy is proud to serve our neighbors and communities in 10 Washington counties. PSE is the state's largest utility, supporting 1.1 million electric customers and nearly 900,000 natural gas customers. PSE's mission today is deep decarbonization and greenhouse gas emissions reduction. PSE was an early leader in addressing climate change, investing billions in renewable resources and energy efficiency for homes and business.

a. Service Area

- 6,000+ square miles, primarily in Puget Sound region of Western Washington
- Population of approximately 4 million within the [service area](#)
- Counties within the service area:
 - Island (electric)
 - King (combined)
 - Kitsap (electric)
 - Kittitas (combined)
 - Lewis (natural gas)
 - Pierce (combined)
 - Skagit (electric)
 - Snohomish (natural gas)
 - Thurston (combined)
 - Whatcom (electric)
 - Whidbey Island (electric)



b. PSE Customer Experience Intent Statement

PSE places high value on our interface with and commitment to our customers. The following statement reflects the experience we want to provide to our customers. PSE expects vendors to embody this statement.

In every interaction with PSE, I know I am dealing with honest and caring people who understand me, anticipate my needs and make doing business easy. I can trust they will be fair and do the right thing.

If there's a problem, they respond quickly and work until it is resolved to my satisfaction. Their information, products and services provide value and benefit, are reliable and keep me safe.

They are committed to help me control my energy cost and to be a responsible steward of the energy I consume.

E. About Clean Energy Strategy (CES) – Sponsoring Organization

PSE is committed to deep decarbonization, greenhouse gas emissions reduction, and transforming our energy supply to deliver on the objectives of the Clean Energy Transformation Act (CETA).

CES' mission is to lead PSE in energy transformation and decarbonization efforts. The organization helps PSE plan and deliver clean, safe, dependable, affordable and accessible energy to all customers, and facilitates cross-company alignment on resource and program processes and implementation, including project delivery.

II. RESPONSE INSTRUCTIONS

A. Format

Responses are required to adhere to the specific format set forth below. Responses that do not follow the requested format will increase the time required to review, and may be discarded.

B. Questions

Feedback on the RFI structure and content can be made during the comment period in April, as stated in Section I.C. After the RFI is issued, a formal question and answer period will not be offered. PSE may ask respondents follow-up questions upon receipt of any written responses for clarity regarding the products, services or resources offered. These questions and answers will not be made public to all respondents.

PSE anticipates a formal question and answer period during the DER RFP process that follows this RFI.

C. Submitting RFI Responses

Responses should be submitted by email to DERRFPmailbox@pse.com no later than 5 p.m. PST on June 30, 2021.

- Information should be presented as three attachments in Word, PDF or Excel formats. Files over 10MB or in .zip format will not be accepted due to server restrictions.
 - **Attachment 1:** RFI Response (required)
 - **Attachment 2:** Load / Generation Profiles (required)
 - **Attachment 3:** Additional Information (optional)
- The response email must use the following subject line naming convention:
 - PSE DER RFI – [Company Name]
 - Example: PSE DER RFI – Distributed Resources Inc.
- PSE will confirm receipt of responses via an autoreply. If an Autoreply is not received, please email anne.marshall@pse.com to confirm receipt.

D. Response Template

In order to facilitate PSE's review of the submitted products, services and resources, respondents are required to provide responses in the following format:

- **Attachment 1:** RFI Response
 - Section 1: Cover Letter
 - Section 2: Product, Service or Resource Summary
 - Section 3: Performance History
- **Attachment 2:** Load / Generation Profiles
- **Attachment 3:** Additional Information (optional)

a. EMAIL ATTACHMENT 1: RFI Response

Section 1 - Cover Letter

Please copy and paste the following template, and insert the requested information. You may provide an RFI response for more than one product, service or resource. Each written response should be separately submitted with all components clearly labeled with your company name and the product, service or resource being proposed. Limit 2 pages.

1. Company Name

2. For any future contacts related to this RFI or potential RFPs resulting from this RFI please provide the following information:
 Primary Contact
 Title
 Email
 Phone
 City/State

3. Response relates to the following
 ___ Aggregated
 ___ Demand Response
 ___ Energy Storage
 ___ Small-scale generation - Generation type: _____
 ___ Standalone distribution system interconnected resource – resource type: _____
 Customer-facing product/service/resource? ___ Yes ___ No

4. Use cases provided by product, service or resource (Section I.B.b)
 Primary **Secondary**
 ___ Generation ___ Intra-hour capacity dispatch
 ___ Capacity ___ Frequency support/response
 ___ ___ Voltage control
 ___ ___ Load flexibility
 ___ ___ Localized capacity
 ___ ___ Summer peak capacity
 ___ ___ Resiliency
 ___ ___ Reliability
 ___ Other, please describe: _____

5. Company background:
 - a. Please provide a brief general overview of your firm: size, location(s), operations overview, etc.
 - b. Experience of respondent's company and key staff with technology, development, operations and maintenance
 - c. Number of employees
 - d. Number of years in business
 - e. Product, service or resource status (conceptual, design concept complete, design complete, in development, operational, etc.)

Supplier Commitment to Diversity, Equity and Inclusion

PSE values diversity, equity, and inclusion, and puts these values into practice through its Supplier Diversity process designed to: achieve best value in contracting, provide fair and equitable opportunity to contract with PSE, and strengthen our diverse communities by leveraging local businesses.

6. Describe how your company/program incorporates diversity, equity, and inclusion in its work.
7. What relationships do you have with ethnic minority business enterprises, women business enterprises, LGBTQ business enterprises, and service disabled veteran businesses to support PSE's overall commitment to empower our communities?
8. What certifications or designations does your company have with diverse/minority/women/veteran certification agencies (i.e. WBENC, WOSB, MBE)?

Section 2 – Product, Service or Resource Summary

Respond in less than 20 pages. Be specific, avoid broad general statements. Provide specific information regarding your proposed product/service/resource, and how it aligns with PSE's Critical Requirements, Anticipated Use Cases and Additional Considerations. It is essential that the response is thorough yet concise, and avoids broad, unenforceable, or unmeasurable content. Use the format and titles outlined below. Sections that are not applicable to your product, service or resource should be marked as not applicable (N/A).

DRAFT

Request / Question	Answer / Statement
2.1 Describe the Product, Service or Resource	
1. Please provide a general overview of your product, service, or resource.	
2. Describe the opportunities in PSE's service area, specific technologies or methods, and why this is the right time to deploy this product/service/resource.	
3. Describe the inter-relation between the anticipated use cases (Section I.B.b) that will be implemented with this product/service/resource.	
4. Targeted customer segment(s)	
5. Describe any potential barriers to implementation.	
6. Describe any dependencies and assumptions, including data availability, IT integrations, customer information sharing, etc., that would need to be met to deliver the product, service or resource.	
7. For generation and ESS products/services/ resources, will the technology be IEEE 1547.2018 certified? Provide details as needed.	
8. For standalone resources	
a. Project site details, if known, or desired site characteristics if site is not known	
b. One-line diagram (if available)	
9. Please describe any risks (i.e. fire, chemical, IT security, data privacy, etc.) your product/service/ resource presents to the public and to PSE, and how they are mitigated.	
2.2 Delivery Structure	
1. Deployment timeline and project term	
2. Ownership structure for equipment and devices (i.e. customer, PSE, vendor, etc.)	
3. Describe the operations & maintenance activities that are required, and delivery options.	
4. For DR programs	
a. Response time (day-ahead, hour-ahead, intra-hour, etc.)	
b. Availability: What months, hours, and/or days (weekday, weekend, holidays) is the resource available to be called?	
c. Maximum calls per season	

Request / Question	Answer / Statement
d. Maximum event duration	
e. Dispatch optimization approach	
f. Any other key operational parameters	
5. For ESS programs	
a. Availability of resource and response time	
b. Availability to provide peak capacity (nameplate vs. actual)	
c. Cycling or depth of discharge limitations	
d. Maximum event duration	
e. Dispatch optimization approach	
f. Will the ESS export power to the grid, or be non-exporting and only serve BTM customer loads?	
g. Any other key operational parameters	
6. For variable generation resources	
a. Typical uptime commitments	
b. Are you willing to provide secondary use cases such as frequency response by operating below maximum output to allow for up and down regulation, or by allowing PSE to periodically curtail production? Provide details as needed.	
7. For customer-facing products/services/resources	
a. Customer relationship management	
b. Marketing strategy	
c. How do you incorporate diversity, equity, and inclusion in the end-to-end customer experience (i.e. design, marketing, operations and support)?	
d. PSE and vendor roles	
e. Data privacy and security	
8. For aggregated resources	
a. Billing structure	
b. Provide information on how the product, service, or resource can be scaled up, such as lead time on adding new capacity, limiting factors, economies of scale and fixed upfront costs.	
c. Aggregation, Dispatch & Coordination Model	

Request / Question	Answer / Statement
d. Which virtual power plant (VPP) and/or Distributed Energy Resource Management Systems (DERMS) have you completed integrations with, or is your product/service/resource compatible with?	
e. Communications standards supported (i.e. HTTPS, IEC-61850, DNP 3.0, Modbus TCP, OpenADR 2.0 etc.)	
9. IT integration and security	
a. Level of visibility and controllability	
b. Data management (including real-time data)	
c. IT security	
d. Software platform used	
1. Are you SOC2 Type 2 certified? Provide details as needed	
2. Is the software platform located on-premise, hosted or a hybrid? Provide details as needed	
3. Are there on-going software related costs? Provide details as needed	
2.3 Pricing Structure	
1. Briefly describe your recommended pricing structure. Are the categories below fixed, variable or not applicable?	
a. Energy costs	
b. Capacity costs	
c. Availability payments	
d. Performance payments	
e. Customer incentives	
f. Customer participation costs	
g. Customer enrollment costs	
h. Start-up costs	
2. Contract term	
a. What duration would you recommend for a contract term?	
b. Should contracts include an option for extension? If so, for what term?	
3. How would economies of scale impact pricing?	
a. Is there a minimum scale of implementation that you would recommend to maximize cost-effectiveness?	

Section 3 – Performance History

Fill in table for up to 3 existing deployments that demonstrate your relevant experience in delivering the product, service or resource.

Request / Question	Answer / Statement
3.1 Performance History	
1. Description of overall concept	
2. Utility and project location	
3. Size (MW and/or MWh)	
a. If applicable, number of enrolled customers	
4. Key performance metrics, including any indicators of customer benefit	
5. IT integration experience	
a. Software platforms used	
b. Utility VPP/DERMS platform integrated with	
c. Experience integrating with utility's SCADA system	
6. Timeline from concept to deployment	
7. Customer acquisition strategy and relationship management (if applicable)	
8. Describe the pricing structure	
9. Describe the actions taken to incorporate diversity, equity and inclusion in the product, service or resource (may include sourcing, staffing, design, contracting, marketing, etc.)	

Section 4 – Term Sheet Feedback and RFP

Provide any feedback on Exhibit A: Prototype Clean Energy PPA Term Sheet and its applicability to your product, service, or resource. Please limit written feedback to 1 page. Optionally, you may also submit a redline of proposed edits to the Term Sheet. This is for informational purposes only.

b. EMAIL ATTACHMENT 2: Load / Generation Profiles

Please provide your product's, service's or resource's expected load and/or generation profiles.

1. For generation products/services/resources: provide an 8760 generation profile in Excel.
2. For capacity and other use case products/services/resources: provide a 24-hour profile for an event day showing the dispatch shape for each use case in Excel.

c. EMAIL ATTACHMENT 3: Additional Information

This is an optional opportunity to attach a company overview, staff qualifications, case studies, product details, awards, testimonials, etc.

Please also include any information that was not explicitly asked for in Attachments 1 or 2 that is important to your product, service or resource.

Additional Information may only be reviewed in the event that PSE determines that the proposed concept is feasible and may inform an RFP. Additional Information must be attached as one file in Word, PDF or Excel format.

Reminder that PSE email system will not accept emails greater than 10MB and that the system will not accommodate .zip files.

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