

May 17, 2021

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Washington Utilities and Transportation Commission
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RE: Comments of Renewable Northwest, Docket UE-210220
Puget Sound Energy's Draft 2021 Request for Proposals for All Sources.

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I. INTRODUCTION

Renewable Northwest thanks the Washington Utilities and Transportation Commission (“the Commission”) for this opportunity to comment in response to the Commission’s April 6, 2021, Notice of Opportunity (“Notice”) to File Written Comments on Puget Sound Energy’s 2021 Draft Request for Proposals (“RFP”) Pursuant to WAC 480-107, which Puget Sound Energy (“PSE” or “the Company”) originally filed on April 1, 2021 and updated on May 10, 2021.¹

In these comments, we first address two broad topics related to capacity, requesting additional information regarding the analytical basis for PSE’s capacity need and seeking changes to PSE’s capacity contribution methodology based on issues that were not addressed during the development of PSE’s IRP. Next, we request additional detail on how PSE proposes to co-optimize this RFP with its targeted DER RFP. Finally, we raise a series of more targeted points, including: opposing a cost adder for power purchase agreements (“PPAs”), addressing several points related to transmission, opposing a restriction on best-and-final-offer pricing, requesting additional accommodation for long-lead-time resources, seeking additional requirements for thermal bids including a demonstration of Clean Energy Transformation Act (“CETA”) compliance, and finally requesting additional clarification about timelines and process toward the end of the RFP.

All in all we appreciate the Company’s efforts through this RFP to meet its system needs with new, CETA-compliant resources, and we are optimistic that the company can do so with a combination of renewables, storage, and demand-side resources at the lowest reasonable cost and risk to its customers. We are grateful for both the Company’s and the Commission’s consideration of these comments.

¹ Unless otherwise noted, all references in these comments will be to the May 10, 2021 updated RFP.

II. COMMENTS

1. Additional information is necessary to understand the scale of PSE's capacity need.

Renewable Northwest appreciates the May 10, 2021 updated RFP that PSE filed with the Commission, explaining how the Company's recent capacity contracts affect the capacity need it is seeking to fill in this RFP. However, we still have questions regarding the scale of PSE's capacity need.

While we understand the Company's concern about potential overreliance on market purchases for capacity given the possibility that multiple load-serving entities throughout the region may effectively be relying on the same resources at the same time, we seek clarification on the scale and timing of PSE's decision to reduce reliance on market purchases for capacity. Specifically, we request that PSE provide the Commission and stakeholders with more information detailing the analytical basis for the Company's selection of 1000 MW by 2027 as the values for its proposed reduction in market purchases for capacity.

Similarly, we question whether the analysis PSE has conducted so far supports a reduction in market purchases on the scale of 1000 MW across all hours of all days. For example, even assuming that a reduction in market purchases is appropriate to determine a conservative assessment of PSE's needs to reduce its loss-of-load probability at peak hours in winter, that reduction may not be appropriate in the shoulder hours when more energy is likely to be available on the market. As we discuss further below, we are concerned that the market purchase limitation as currently constructed is unnecessarily broad and may both overstate PSE's capacity need and artificially constrain the ELCC values for stand-alone and hybrid renewable-plus-storage projects.

2. The capacity contribution methodology from PSE's IRP does not accurately reflect the contributions of storage and hybrid resources.

Renewable Northwest has significant concerns about PSE's approach to modeling the capacity contributions of storage (including battery and pumped hydro) and hybrid renewable-plus-storage resources in its IRP; accordingly, we also have concerns regarding the Company's proposal in the RFP that "PSE will calculate ELCC values consistent with the 2021 IRP methodology for generic resources."² Since the Commission's decision on this RFP will be its first opportunity to take formal action on PSE's capacity contribution methodology, we request either that PSE adjust its methodology in the Final RFP or that the Commission exercise its

² RFP at 9.

prerogative under the Resource Purchase rules to require methodological changes as a condition of RFP approval.³

We note up front that some of the issues we raised with PSE's approach to modeling storage in its IRP will be addressed by the characteristics of bids we expect to see in the RFP. For example, we raised questions in our comments on PSE's IRP regarding the Company's portfolio modeling preference for two-hour battery storage over the industry-standard four-hour battery; we expect to see bids that reflect these longer-duration batteries and therefore will be better equipped to help PSE meet its capacity needs than the Company's modeling shows.

What is less clear, however, is whether PSE's capacity contribution methodology will accurately account for the way storage resources will interact with PSE's system. Of particular concern is the broadly applicable reduction in availability of market purchases in PSE's IRP discussed above, which may be artificially constraining the ability of storage resources (including battery and pumped hydro storage) to meet PSE's capacity needs. By revising assumptions to reduce the availability of market purchases across the board, the IRP likewise imposes a 1000 MW market import limitation across the full 24-hour window on all days in January and February instead of only during "super-peak" and "heavy-load" hours.⁴ As a result, PSE's modeling suggests there may be insufficient energy to charge storage resources even though PSE has not presented analysis that specifically supports this lack of available energy in low loss-of-load hours. In other words, the IRP's modeling assumption does not appear to reflect expected system conditions but rather creates artificial conditions where storage resources do not have enough energy to charge during off-peak hours, thereby reducing their capacity contribution and availability to dispatch when PSE's needs are the highest.

Because we are concerned that the IRP's artificial market limitation may affect PSE's analysis of the capacity contributions of storage bids in the RFP, we request that PSE remove (or the Commission direct PSE to remove) the Company's market import limitations in the months of January and February for off-peak hours to ensure that storage resources are available to charge during off-peak hours and provide value to the PSE system during the heavy-load and super-peak hours.

Another factor that might be limiting the ability of battery storage resources to achieve maximum dispatch during high loss-of-load hours is the Company's conservative limitation on these resources' depth of discharge (DoD), apparently on the assumption that battery would be primarily used for ancillary services (which have shallower cycles) for the majority of the year. We recommend a higher DoD value (up to 90% of the discharge capacity) to be considered in ELCC modeling for the winter peak months essentially allowing maximum discharge during the

³ WAC 480-107-017(4) ("The commission will approve, approve with conditions, or suspend the filed RFP.").

⁴ Final PSE IRP at 7-36 to 7-43.

super-peak hours. On battery cycling, Table 5 describes the base configuration of battery storage in the RFP with a limitation of 60 cycles/year; this limitation appears to be at odds with the configuration's requirement of to allow two cycles/day for January and February. We recommend correcting the value to 120 cycles/year.

Finally, we are uncertain whether PSE's IRP considered the ability of hybrid renewable plus storage resources to charge from the grid in some circumstances without foregoing the Investment Tax Credit ("ITC"). The ITC effectively limits the source of charging for the storage component of hybrid resources only for the first five years starting from the date of commission. Once the ITC expires, grid charging the battery does not have any financial impact and creates a more flexible resource capable of providing regulation service and optimizing its State of Charge (SoC) to increase the capacity contribution of the entire hybrid resource. Additionally, there are also cases in the initial five-year period when the storage component of a hybrid resource would be able to charge a maximum of 25% of its capacity from the grid and still get a sizable pro-rated ITC. And finally it is worth noting that there is a stand-alone storage ITC currently under consideration at the federal level. Thus, limiting hybrid resources to only charge from renewables over the entire lifecycle of the resource would significantly undervalue these resources' capacity and ancillary services contributions. A commitment from PSE or order from the UTC that PSE's capacity contribution methodology must accurately reflect the physical and operational configuration of bids with storage components would help to ensure that both stand-alone storage and ITC-eligible hybrids are accurately assessed for capacity.

Although this discussion has focused on capacity, ultimately the optimal configuration of hybrid resources depends on much more than maximizing the resource adequacy contribution. Storage resources can also reduce solar's levelized cost of energy, especially when the photovoltaic panels are oversized relative to the inverter, by charging coupled storage using energy that would otherwise be clipped. Storage can also provide additional value streams, including energy arbitrage and ancillary services. It can also smooth the solar production profile due to passing clouds which could be of significant value to PSE's demand and supply balancing. Ensuring that storage and hybrid resources are accurately assessed in this RFP will be necessary to deliver customers a CETA-compliant portfolio at the lowest reasonable cost and risk.

3. We request additional clarification regarding how PSE will co-optimize the All-Source RFP with the Targeted Demand Response RFP.

It is uncontroversial that renewable resources and demand response can be highly complementary, especially when it comes to meeting the capacity needs of a highly decarbonized system like the one that CETA calls for. While we appreciate that this RFP and PSE's Targeted DER RFP will be coordinated to some extent (e.g. "Both the All-Source RFP and the

forthcoming targeted DER RFP evaluations are expected to conclude in mid-2022.”⁵), the RFP also stressed that the two will be “separate RFPs.”⁶ It would be helpful for bidders to understand whether, and if so how, PSE will co-optimize the two processes. For example, will PSE jointly model bids from the two processes to determine a single optimized resource portfolio? Or will PSE determine a shortlist from one RFP before assessing bids from the other? We recommend that PSE develop a single optimized portfolio that allows both resource classes to deliver to meet PSE’s peak capacity needs and ensure load-resource balance across all hours of the year.

4. Additional comments

- a. Renewable Northwest opposes a cost adder for Power Purchase Agreements unless a similar adder is applied to ownership projects reflecting the rate of return PSE will earn.

PSE proposes that its “analysis will also include a cost adder for PPAs,” which the Company states is “consistent with rules set forth by CETA and codified in Chapter 80.28.410 RCW.”⁷ The rules and statute PSE references authorize the Company to earn a rate of return on power purchase agreements, but they do not support a cost adder in the Company’s RFP analysis unless PSE similarly includes a “cost adder” reflecting its own rate of return in analyzing bids that include utility ownership options. Renewable Northwest requests either that PSE eliminate the proposal for a cost adder on PPAs or clarify to stakeholders and the Commission that it will include the return it will earn on ownership projects when analyzing bids.

- b. Renewable Northwest supports PSE’s choice to make utility-owned transmission rights available to bidders, but we oppose PSE’s proposal that VERs delivering at Mid-C cannot receive a capacity credit, and we request the inclusion of PSE’s Colstrip Transmission rights and additional clarification on PSE’s proposed cost adder.

Renewable Northwest appreciates that PSE is making Company-owned transmission assets available to bidders, and we support this element of PSE’s RFP. Making transmission rights available to bidders significantly increases the likelihood that PSE will procure CETA-compliant resources for its customers at the lowest reasonable cost and risk. We do, however, oppose one element of PSE’s proposal and make two requests regarding the details of PSE’s transmission availability.

⁵ RFP at 17.

⁶ *Id.*

⁷ RFP at 26.

First, we oppose PSE's proposal that VERs delivering at Mid-C cannot receive a capacity credit.⁸ We note that the Mid-C transmission PSE is making available for bidders appears to correlate to its reduction in market purchases, and we appreciate PSE's decision to make this resource available to bids that may prove to meet PSE's needs more reliably than the market at the lowest reasonable cost and risk. However, we question the basis for PSE's proposal to render variable-energy renewable resources ineligible for a capacity credit when delivering at Mid-C, particularly if the available transmission capability does in fact correspond to PSE's reduction in market purchases. If a renewable resource aligns well with PSE's capacity needs, and PSE is not using its transmission from Mid-C to meet those needs, then that renewable resource should be credited for its contribution to PSE's system. It would be inappropriate to bake assumptions about the resources' ability to contribute to PSE's needs into the RFP without an explanation as to why.

As to requests, our first relates to the Colstrip Transmission System. Currently PSE's interest in the Colstrip Transmission System is not on the list of transmission assets available to bidders. With PSE removing Colstrip 3 and 4 from its portfolio after 2025, active conversations among Colstrip's owners about retiring the units on a timeline that aligns with PSE's capacity needs, and Montana wind resources performing well in PSE's IRP and offering ELCC values exceeding 40%, we request that PSE include Colstrip transmission on the list of assets available to bidders or else explain why it is not making Colstrip transmission rights available to bidders.

Second, PSE proposes that "since PSE actively markets excess transmission rights to reduce costs, proposals [using PSE transmission assets] will be evaluated with the transmission costs from the POD to PSE's system as a cost adder to the proposal."⁹ It is unclear, however, how PSE is currently using these transmission rights and how it will assess any potential lost revenue via a cost adder. It may be that some bids using these transmission assets will be complementary to PSE's current use and therefore yield no opportunity cost from lost transmission sales. We request that PSE provide additional detail on the cost adder to ensure that the details accurately reflect both the extent to which specific bids might actually use PSE transmission assets and the extent to which that use will displace other sales of PSE's transmission rights.

Finally, we also recommend that PSE not require bidders to demonstrate firm transmission to PSE's system. Other transmission products may be well-suited to delivering resources that match PSE's needs, and we encourage PSE to offer bidders more flexibility with the understanding that ultimately PSE will have the right to select and contract with the resources that meet the Company's needs at the lowest reasonable cost and risk.

⁸ RFP at 14, Table 4.

⁹ RFP at 13.

- c. Renewable Northwest opposes the RFP’s requirement that a best and final offer cannot be higher than a bid’s original price.

PSE proposes that a bid’s “updated best and final offer price ... may not be higher than the original price.”¹⁰ At the same time, however, the RFP also appropriately allows bids that do not yet have completed interconnection studies and whose upgrade costs are therefore unknown.¹¹ It is possible that a project could bid into the RFP using a reasonable estimate of the upgrade costs associated with the project, perform well in the Company’s initial bid assessment, receive higher-than-expected upgrade costs as a result of the project’s interconnection studies, and be unable to proceed without revising bid costs upward at a level that is still competitive within the RFP. Accordingly, in order to ensure a lowest-reasonable-cost-and-risk portfolio, we request that PSE’s proposed limitation on best and final offers be removed.

- d. Renewable Northwest recommends that the RFP include accommodations for long lead-time resources.

While we appreciate that PSE’s 2021 RFP allows bids for capacity resources that can deliver “no later than December 31, 2026” -- a longer lead time than many RFPs offer -- Renewable Northwest nevertheless requests additional flexibility on the delivery date for capacity resources in this RFP to account for the needs of resources that may be good fits for PSE’s needs but that need additional time from procurement to operation. In particular, given that the specifics of PSE’s capacity need are somewhat in question both based on unclear analysis underlying the Company’s constraints on market purchases and the Company’s own acknowledgment (see, e.g., the RFP at 7: “The glide path in Table 2 is not binding and PSE may select resources with different proposed timing, if those resources can help meet the need and reduce costs.”), extending the required delivery date by a year seems appropriate and would likely allow for more types of cost-effective capacity resources, such as pumped hydro storage, to bid into the RFP.

- e. Renewable Northwest recommends a firm fuel supply as a minimum requirement for biodiesel peakers.

Renewable Northwest is concerned about PSE’s expressed interest in biodiesel-enabled peaking units, both in terms of CETA compliance (i.e. would these be dual-fuel units that run primarily on gas but are biodiesel-enabled?) and in terms of practicality. To address these concerns, we request some additions to the RFP.

¹⁰ RFP at 24.

¹¹ RFP at 31 (“At a minimum, all qualifying bids must ... start the interconnection process by September 1, 2021.”).

First, we request that PSE require any thermal resource bidding into the RFP to include an explanation of how the resource will allow PSE to comply with CETA. This specific request would be consistent with the RFP's broad requirement that "[a]ll proposals must be compliant with the requirements of CETA,"¹² would be relatively easy for bids running primarily on CETA-compliant fuels to address, and would give important information to the Company in conducting the qualitative review elements of its initial screening.

Second, we request that PSE require any biofuel-enabled resource bidding into the RFP to include certain additional information, including: (a) as with gas and biomass resources, at least a fuel supply plan and ideally a firm fuel supply; (b) a plan for cold-weather storage, delivery, and combustion; and (c) data and information sufficient to demonstrate that the resource will be well-aligned with PSE's winter peaking needs.

As to the fuel supply plan and/or firm fuel supply, we expect there may be issues relating to the cost of biodiesel as demand for the fuel rises given accelerating decarbonization efforts in Washington over the life of any new thermal resource. We similarly expect there may be issues with fuel delivery during periods of peak demand, as fuel delivery issues have been a proximate cause of most electricity price spikes and reliability failures over the past several years. If available, a firm biofuel supply could mitigate these concerns; if a firm supply is unavailable, that result should raise questions about the actual contributions of a biofuel-enabled peaker to meeting PSE's resource adequacy needs.

Similarly, biodiesel may not be well-suited to meeting resource adequacy needs in cold weather - there can be issues with storage, delivery, and combustion of the fuel creating a situation where the capacity is theoretically available but there is no reliable fuel to generate and deliver to PSE. In order to mitigate this potential mismatch, a cold-weather plan will be essential.

Finally, because biofuel-enabled peakers are not a common resource in the Northwest, additional information may be necessary to ensure that such a resource aligns well with PSE's winter-peaking needs. We encourage the Company to request any and all information necessary from bidders to ensure accurate consideration of bids from biofuel-enabled peakers.

- f. Renewable Northwest requests additional Commission notification on the back end of PSE's procurement process.

PSE's RFP timeline points to selection of a final short list and notification of bidders in Q2 2022. We encourage PSE to build into its timeline additional clarity and specificity as to when it intends to finalize its short list, and we request that PSE notify the Commission and stakeholders when the final short list is determined as well.

¹² RFP at 20.

III. CONCLUSION

Renewable Northwest thanks PSE and the Commission for their consideration of this feedback. We are optimistic that the changes and additional analysis we have recommended above will help PSE to identify a least-cost portfolio that also puts the Company on a path to achieving CETA's clean energy standards and the Company's own emission reduction goals. We look forward to continued engagement with PSE's planning and procurement processes.

Sincerely,

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