UE-210220

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October 21, 2021

Via E-filing

Mark L. Johnson
Executive Director Secretary
Washington Utilities and Transportation Commission
621 Woodland Square Loop S.E.
Lacey, WA 98504

Re: Puget Sound Energy Request for Proposals; 2021 All-Source RFP for Renewable and Peak Capacity Resources
Docket No. UE-210220

Dear Mr. Johnson,

Please see the enclosed comments from Plus Power, LLC regarding Docket No. UE-210220 in response to the Notice of Opportunity to file written comments related to Puget Sound Energy's Effective Load Carrying Capability estimates and use in the Company's All-Source Request for Proposals ("RFP"), issued June 30, 2021. Plus Power appreciates the opportunity to continue engagement in a transparent process, and to provide feedback on the documents and methodologies presented to stakeholders during the ELCC workshop held August 31, 2021.

Plus Power is pleased to engage with Puget Sound Energy's efforts to meet the peak capacity needs of the Pacific Northwest region. Please feel free to reach out to me with any questions.

Sincerely,

Aaron Pupa
Director of Origination
Plus Power, LLC
apupa@pluspower.com

BEFORE THE WASHINGTON UTILITIES

AND TRANSPORTATION COMMISSION

In the Matter of PUGET SOUND ENERGY COMPANY, 2021 All-Source Request for Proposals for Renewable and Peak Capacity Resources	**DOCKET UE-210220** COMMENTS OF PLUS POWER, LLC

I. INTRODUCTION:

Pursuant to WAC 480-107, Plus Power, LLC ("Plus Power" or "Plus") submits these additional comments to the Washington Utilities and Transportation Commission (the "Commission") regarding the 2021 All-Source RFP for Renewable and Peak Capacity Resources (the "RFP") filed by Puget Sound Energy ("PSE") on June 30, 2021 and the materials presented during the Effective Load Carrying Capability ("ELCC") Workshop held on August 31, 2021.

In continuing to review RFP documents and updated methodologies, especially those provided by Energy + Environmental Economics ("E3") in response to the initial round of stakeholder comments in response to the Draft RFP documents and the ELCC Study, it is clear the ELCC values assigned to certain resources such as standalone energy storage ("BESS") still leave stakeholders with a high level of uncertainty of how resources will be evaluated and treated during the RFP process. Plus Power continues to encourage the Commission and PSE to closely evaluate and apply an appropriate ELCC for each specific resource bidding into the All-Source RFP.

II. COMMENTS:

Plus Power continues to call into question the lack of updates to ELCC values for standalone storage resources (2-hour and 4-hour Li-ion batteries)[1], especially given the feedback and detailed review by E3 as presented during the ELCC Workshop[2]. Plus Power reiterates its position that the values are overly conservative and implores the Commission and PSE to levy additional scrutiny on the ELCC metric during the RFP evaluation process. It is understood that PSE's unique seasonal (with a winter peak expected to span from November through March) and double-daily peak load profile will result in different resource-specific ELCCs than other balancing authorities dealing with large influxes of renewable intermittent power, however, this does not appear to be reflected in the ELCC values for Variable Energy Resources ("VERs") such as wind generation as will be further noted below.

i. ELCC of Batteries (BESS or Energy Storage)

There appears to be no movement in the projected ELCC values for BESS facilities that was reflected in the ELCC Workshop materials and appears to have been questioned by E3 as not

[1] https://apiproxy.utc.wa.gov/cases/GetDocument?docID=113&year=2021&docketNumber=210220
[2] https://apiproxy.utc.wa.gov/cases/GetDocument?docID=115&year=2021&docketNumber=210220

being in alignment with industry standards in their initial materials. E3's ELCC Study[3] whereby E3 states PSE's assumptions are generally reasonable while further following with the recommendation of a number of additional studies leaves much to be desired from the perspective of a developer and participant in this process. Plus Power agrees with E3's determination that PSE should run additional modeling assuming regional capacity standards are met across the planning horizon, such that Energy Storage ELCC value is not unfairly disadvantaged in the portfolio evaluation.

To reiterate, PSE's ELCC value for Li-ion 4-hour BESS of 24.8% is far below industry standards, including its neighboring utility, Portland General Electric ("PGE") as noted in previously filed comments. While the divergence of ELCC valuation between the utilities does not appear to have been directly addressed in a quantitative manner at this time, Plus Power recognizes the locational value of resources to each respective utility. As discussed on Page 29 of PSE's ELCC Workshop Presentation, Energy Storage located in a load pocket should be afforded a higher ELCC value due to location. However, the manner in which higher value would be assigned has not been quantified for bidders.

Although Plus Power recognizes that the ELCC of a particular resource is unique to each utility and it would be impossible to directly compare PGE and PSE's results, it remains a relative mystery how utilities with similar seasonal load profiles would end up assessing standalone energy storage resources so differently. Plus Power would appreciate greater transparency into the main drivers and assumptions for PSE's 24.8% ELCC valuation of 4-hour storage, and to better understand where the model diverges from PGE's result of 60.0 - 85.0% ELCC for the same 4-hour duration asset class.

The lack of clarification addressing previously filed comments is also concerning regarding the significant divergence of ELCC value for BESS when compared to PSE's 2017 IRP, which assigned a 4-hour Li-ion storage facility an ELCC value of 88%[4].

ii. Discussion of ELCC for Variable Energy Resources

In recent stakeholder presentations, PSE staff has expressed the desire to contract and own resources closer to its load centers for reliability purposes, and to decrease those procured out of the short-term market or via long-distance firm transmission. However, the methodology to be used during the evaluation of RFP submissions to assign added locational value to resources has not been made available.

With that in mind, Plus Power wishes to address the apparent inconsistency between ELCC for storage and VERs owned or under contract to PSE. For example, the Golden Hills Wind Farm under contract to PSE is assigned an ELCC value of 60.5% for the 2027 planning period. This wind farm is not yet in operation and will be delivered to PSE's system via firm transmission from the BPA John Day substation in Oregon, east of the Cascade Mountains. This stands in stark contrast to PSE's assumptions on Page 17 of the Resource Adequacy and ELCC Primer[5], where PSE notes VERs are non-firm resources that cannot guarantee firm supply during

[3] https://www.pse.com/-/media/PDFs/001-Energy-Supply/003-Acquiring-Energy/PSE--ELCC-StudySept-202110072021FINAL.pdf?sc_lang=en&hash=AB72B5C439BDF50E3B931DCC4A11D40B
[4] PSE 2017 IRP. Chapter 6, Page 9. https://pse-irp.participate.online/past-IRPs/2017
[5] https://apiproxy.utc.wa.gov/cases/GetDocument?docID=112&year=2021&docketNumber=210220

peaking events, and thus will not be granted any capacity credit (referring to Mid-C delivered resources). PSE further adds that cold-weather and summer events in recent years took place where 5 MW and 61 MW, respectively, out of an 800 MW portfolio of wind resources was deliverable to load or operating. Plus Power struggles to reconcile a 60.5% ELCC value for a distant wind project while being unable to deliver any firm capacity supply as a VER per PSE's characterization in contrast to such a low ELCC value for a dispatchable resource such as Energy Storage located within a load pocket.

iii. Understanding the full capability and value of stand-alone storage

As stand-alone Energy Storage resources are charged directly from the transmission grid are not co-located with renewable generators, they possess the ability to charge and discharge fully unconstrained. Dispatch can be driven directly from utility system needs and scheduled to optimize utility benefits from the resource, including meeting peak demand hours and other reliability needs such as ancillary services.

As noted by E3 on Page 10 of the ELCC Workshop Presentation[6], PSE's application of the minimum state of charge ("SOC") and one-way efficiency reduces the maximum and overall ELCC results for battery storage resources. It is further noted that PSE is currently utilizing a minimum SOC of 20%, which does not align with minimum storage limits in PSE's own HDR report[7]. E3 correctly assumes that most RFP bidders will design their projects such that the entire capacity would be provided for discharge purposes, and thus not improperly impairing ELCC valuation for Energy Storage.

Constraints on the charging and discharging limitations of a stand-alone energy storage resource should be considered purely from a system perspective, and not based on limitations of charging and discharging to meet minimum ITC / PTC thresholds, or from vague assumptions restricting charging capabilities when there are undefined "system outages".

III. CONCLUSION:

In conclusion, Plus Power appreciates the opportunity to be a part of the continuing public comment process made possible by the Washington Utilities and Transportation Commission and the ability to review the E3 ELCC Study report. Plus urges the Commission and PSE to continue examining the ELCC metrics utilized in the portfolio modeling and resource assessment in the All-Source RFP, to ensure that the benefits of all technologies such as stand-alone energy storage are accurately understood and valued properly for the benefit of PSE's ratepayers.

[6] https://apiproxy.utc.wa.gov/cases/GetDocument?docID=115&year=2021&docketNumber=210220
[7] https://oohpseirp.blob.core.windows.net/media/Default/PDFs/HDR_Report_10111615-0ZR-P0001_PSE%20IRP_Rev4%20-%2020190123).pdf