PSE IRP Consultation Update
Webinar 12: Delivery System Planning 10-year Plan, Flexibility Analysis Results, Economic, Health and Environmental Benefit (EHEB) Assessment of Current Conditions Status Update, Portfolio Draft Results
February 10, 2021

03/03/2021

The following consultation update is the result of stakeholder suggestions gathered through an online Feedback Form, collected between February 3 and February 17, 2021 and summarized in the Feedback Report dated February 24. The report themes have been summarized and along with a response to the suggestions that have been implemented. If a suggestion was not implemented, the reason is provided.

Stakeholder questions and suggestions spanned a wide variety of topics and not all are included in this Consultation Update. As always, line-by-line responses to each stakeholder comment are provided in the Feedback Report[1]. Similarly, many stakeholder questions received from the December 15th Webinar have been answered in the Draft IRP, which is now available for review on the IRP website[2]. PSE encourages stakeholders to review these materials in concert with this Consultation Update.

PSE has contacted the following stakeholders to clarify their comments:

- Bill Pascoe, Pascoe Energy, was contacted on February 12 to clarify his request for clarification concerning Pumped-Hydro Energy Storage (PHES) and Montana Wind. The correspondence was conducted outside of the feedback form, but the outcome is included in this Consultation Update to communicate the result of the inquiry for all stakeholders.

Delivery System Planning 10-Year Plan

PSE received several clarifying questions from Kyle Frankiewich (WUTC) concerning the 10-year Plan developed by the Delivery System Planning group. PSE would direct stakeholders to the feedback report for specific line-by-line responses to these questions.

PSE would highlight one WUTC recommendation to incorporate a “tipping-point analysis” into the framework for determining the efficacy of non-wire alternatives. PSE’s Delivery System Planning group agrees a tipping-point analysis may be beneficial for decision making and will work to incorporate this methodology into future assessments.

Economic, Health and Environmental Benefit (EHEB) Assessment of Current Conditions Status Update

PSE received stakeholder feedback from Kyle Frankiewich (WUTC) concerning the Economic, Health and Enviornmental Benefits (EHEB) Assessment. PSE was able to incorporate some recommendations from WUTC staff into the Final IRP EHEB Assessment, but some recommendations will be incorporated at later date due to time constraints.

Recommendations incorporated into the Assessment are:

- Incorporation of tribes into the highly impacted communities named population
- Alignment of naming convention to switch “assessment metrics” to “customer benefit indicators” and “customer benefit indicators” to “customer benefit indicator areas”

Recommendations which will be incorporated at a later data include:

- Identification of vulnerable populations based on demographic, instead of geographic criteria
- Identification of vulnerable populations based on a binary criteria, instead of based on averages of multiple criteria
- Incorporation of customer input into customer benefit indicators and other components of the Assessment

Flexibility Analysis

PSE received feedback from Invenergy and Renewable Northwest concerning calculation of resource Flexiblity Benefit. Further detail into the flexibility modeling process and results will be made available with the Final IRP filing. PSE also looks forward to continuing to develop our modeling procedures and will investigate inclusion of hybrid resources, fast-frequency response and voltage support in future IRP cycles.

Other Updates

The following items have been updated after the Webinar 12:

1. Bill Pascoe, Pascoe Energy, asked for clarification concerning Pumped-Hydro Energy Storage (PHES) and Montana Wind. A call was arranged between Bill Pasoce and Elizabeth Hossner, Manager, Resource Planning

[1] February 10, 2021 Webinar Feedback Report: https://oohpseirp.blob.core.windows.net/media/Default/2021/meetings/Feb_10_Webinar/Webinar%2012%20-%20Feedback%20Report.pdf
[2] PSE 2021 Draft IRP: https://pse-irp.participate.online/2021-irp/reports

and Analysis. This was also followed with a discussion with the developers of the Gordon Butte Pumped storage hydro project in Montana. Both discussions suggested some updates to the operating characteristics of pumped storage hydro. Since it was too late to incorporate this information in the 2021 IRP, PSE will update the pumped storage hydro operating characteristics for future IRPs.

2. During the webinar, Bill Pascoe asked about the updated transmission cost assumptions. Since PSE did not have the table immediately available during the webinar, it is provided below. The following figure has been updated from the draft IRP with updated costs, and will also be available in the Final IRP (in Chapter 5):

Transmission Costs by Generic Resource Type (in 2020 $)

Generic Resource	Fixed Transmission Cost ($/kW-yr)	Variable Transmission Cost ($/MWh)
CCCT	0.00[a]	0.00
Frame Peaker	0.00[a]	0.00
Recip Peaker	0.00[a]	0.00
WA Solar East - Utility Scale	30.48	9.53
WA Solar West - Utility Scale	8.28	9.53
Idaho Solar – Utility Scale	154.78	9.53
WY Solar East – Utility Scale	227.90	9.53
WY Solar West – Utility Scale	207.80	9.53
DER WA Solar - Rooftop	0.00[a]	0.00
DER WA Solar – Ground-mount	0.00[a]	0.00
WA Wind	33.36	9.53
MT Wind – East	49.65	9.53
MT Wind - Central	49.65	9.53
ID Wind	157.66	9.53
WY Wind East	230.78	9.53
WY Wind West	210.68	9.53
Offshore Wind	33.36	9.53
Pumped Storage	22.20	0.00
Battery 2hr Li-Ion	0.00[a]	0.00
Battery 4hr Li-Ion	0.00[a]	0.00
Battery 4hr Flow	0.00[a]	0.00
Battery 6hr Flow	0.00[a]	0.00
Solar + Battery	30.48	9.53
Wind + Battery	33.36	9.53
Wind + Pumped Storage	49.65	9.53
Biomass	22.20	0.00

NOTE

a. Fixed transmission cost is not applied, because the resource is assumed to be built within PSE service territory.