

**EXH. PJP-__X
DOCKET UE-210795
2022 PSE CEIP
WITNESS: PHILLIP J. POPOFF**

**BEFORE THE
WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

In the Matter of
PUGET SOUND ENERGY, INC.
2021 Clean Energy Implementation Plan

Docket UE-210795

**EXHIBIT TO THE CROSS-EXAMINATION OF
PHILLIP J. POPOFF
ON BEHALF OF NW ENERGY COALITION AND FRONT AND CENTERED**

JANUARY 24, 2023

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

**Docket UE-210795
Puget Sound Energy
PSE 2021 Clean Energy Implementation Plan**

Front and Centered and NW Energy Coalition Data Request No. 177

“CONFIDENTIAL” Table of Contents

	“CONFIDENTIAL” Material
Data Request No. 177	Shaded information is designated as CONFIDENTIAL per Protective Order in Docket UE-210795 as marked in Attachment A to Puget Sound Energy’s Response to Front and Centered and NW Energy Coalition Data Request No.177.

BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION

**Docket UE-210795
Puget Sound Energy
PSE 2021 Clean Energy Implementation Plan**

FRONT AND CENTERED AND NW ENERGY COALITION DATA REQUEST NO. 177:

Topic: Popoff Testimony

Please provide the following information for the “CETA” and “No-CETA” portfolios described in the Rebuttal Testimony of Phillip J. Popoff (PSE-Exh-PJP-1T-12-12-22) over 2022-2045:

- a. Annual resource additions (in MW) by resource, including all supply side resources;
- b. Annual resource retirements (in MW) by resource;
- c. Annual energy (in MWh per year) associated with:
 - i. Existing resources,
 - ii. New supply-side resources, broken out by resource,
 - iii. Market purchases, and
 - iv. Market sales;
- d. Annual GHG emissions (in short tons per year) associated with:
 - i. Existing resources,
 - ii. New supply-side resources, broken out by resource,
 - iii. Market purchases, and
 - iv. Market sales;
- e. Total annual GHG emissions (in short tons per year);
- f. Total annual revenue requirement (in \$ per year); and
- g. Total annual portfolio SCGHG (in \$ per year).

Response:

Puget Sound Energy (“PSE”) interprets the Front and Centered and NW Energy Coalition Data Request No. 177 as pertaining to the “CETA” and “No-CETA” portfolio calculation using Dr. Elaine Hart’s methodology, where the social cost of greenhouse gas (“SCGHG”) is applied as a dispatch cost. Please see the following responses for the “CETA” and “No-CETA” portfolios used to reflect Front and Centered and NW Energy Coalition’s methodology as outlined by Elaine Hart in Exh. EKH-1T.

- a. Please see Attachment A to PSE’s Response to Front and Centered and NW Energy Coalition Data Request No. 177, under the tab entitled,

- "ResourceAdditions" for annual resource additions (in MW) by resource, including all supply side resources
- b. The scheduled coal retirements of Colstrip Units 3 and 4 are included in both the "CETA" portfolio and the "No-CETA" Portfolio. No economic retirements were found in either the "CETA" or the "No-CETA" Portfolio.
 - c. Please see Attachment A to PSE's Response to Front and Centered and NW Energy Coalition Data Request No. 177, under the tab entitled, "Energy," for the information requested in Front and Centered and NW Energy Coalition Data Request No. 177(c).
 - d. Please see Attachment A to PSE's Response to Front and Centered and NW Energy Coalition Data Request No. 177, under the tab entitled, "Emissions" for the information requested in Front and Centered and NW Energy Coalition Data Request No. 177(d).
 - e. Please see Attachment A to PSE's Response to Front and Centered and NW Energy Coalition Data Request No. 177, under the tab entitled, "Emissions," in the row named, "Grand Total," for the total annual GHG emissions (in short tons per year).
 - f. Please see Attachment A to PSE's Response to Front and Centered and NW Energy Coalition Data Request No. 177, under the tab entitled, "RevReq," for the total annual revenue requirement (in \$ per year).
 - g. Please see Attachment A to PSE's Response to Front and Centered and NW Energy Coalition Data Request No. 177, under the tab entitled, "Emission Cost," for the total annual portfolio SCGHG (in \$ per year).

Please note that in preparing its response to Front and Centered and NWECA Data Request Nos. 177-178, PSE discovered certain inadvertent errors in the assumptions used to calculate the data provided in Tables 1, 2, and 3 of the Prefiled Rebuttal Testimony of Phillip J. Popoff, Exh. PJP-1T, as described below. PSE will be correcting information in the testimony with the data provided in PSE's Response to Front and Centered and NWECA Data Request Nos. 177-178. PSE is in the process of correcting the calculations, and it will submit revised testimony reflecting the corrected Tables 1, 2, 3, and related text, as soon as possible.

Table 1:

Due to a drafting error that occurred while finalizing testimony, incorrect numbers were inadvertently copied and pasted into the "New Non-emitting" CETA case column for SCGHG as externality cost and the SCGHG in Dispatch cost. As a result, the numbers in the "New Non-emitting" column and the associated totals in Table 1 are incorrect.

Table 2:

In calculating the detailed annual incremental costs for PSE's Response to Front and Centered and NWECA Data Request No. 178, PSE discovered an error in the Aurora model run that went into the no-CETA cases, the data from which is shown in Table 2 of Exh. PJP-1T. PSE inadvertently used the 2021 IRP generic resource costs instead of the 2021 National Renewable Energy Laboratory's Annual Technology Baseline generic

resource costs consistent with the 2021 CEIP filing. The model has been rerun and updated for the no-CETA cases. The corrected data is included in response to this data request.

Table 3:

As a result of the above-referenced corrections in Table 2, the new resources builds of the no-CETA cases changed with the above corrections to the generic resource costs. The resource adequacy check in Table 3 will be updated.

Shaded information is designated as CONFIDENTIAL per Protective Order in Docket UE-210795 as marked in Attachment A to PSE's Response to Front and Centered and NW Energy Coalition Data Request No. 177.

**ATTACHMENT A to PSE's Response to
FRONT AND CENTERED AND NW
ENERGY COALITION Data Request No.
177**