

Attachment A

PSE's responses to Colstrip issues raised in the 2017 IRP (Dockets UE-160918 and UG-160919) acknowledgement letter

1. Regarding fuel source cost and risk:

a. What is the cost and physical supply risk of coal from the Rosebud mine due to the Westmoreland bankruptcy?

There currently is no cost or physical supply risk of coal from the Rosebud Mine due to the bankruptcy of Westmoreland Coal Company ("Westmoreland"). On October 9, 2018, Westmoreland and certain of its subsidiaries, including Western Energy Company, the Colorado-based owner of the Rosebud Mine that supplies the Colstrip Generating Station, filed for relief under Chapter 11 of Title 11 of the U.S. Bankruptcy Code in the U.S. Bankruptcy Court for the Southern District of Texas. In its filing, Westmoreland sought a restructuring support agreement with a majority of its lenders, claiming more than \$1.4 billion in debt and total assets of \$770 million, as of August 31, 2019.

On November 15, 2019, the U.S. Bankruptcy Court for the Southern District of Texas set terms for an auction of several mines, including the Rosebud Mine, on January 22, 2019. The auction was a "stalking-horse" auction in which Westmoreland Mining LLC ("Westmoreland Mining"), a company created by Westmoreland's first lien creditors, set an initial bid that establishes a floor that other bidders could not underbid. No qualified bidders submitted a bid in the auction. On March 1, 2019, the bankruptcy court approved the transfer of the Rosebud Mine to Westmoreland Mining and its continued operation.

Subsequently, PSE and all of the co-owners of Colstrip Units 3 and 4 other than Talen Montana executed a Coal Supply Agreement on December 5, 2019 with an effective date of January 1, 2020. Generally, the Coal Supply Agreement is a fixed-price contract, with a quarterly price adjustment based on federal indices. Coal transportation costs are included as part of the Coal Supply Agreement. The term runs from January 1, 2020, through December 31, 2025. Each buyer must purchase a minimum volume of coal. If a buyer exceeds its minimum annual volume requirement, then the base price per ton reduces for the tons in excess of the minimum annual volume. If a buyer fails to purchase its minimum annual volume requirement, then the buyer has an option (i) to pay a per ton fee that is less than the per ton price or (ii) purchase the make-up volume in the first six months of the following year.

b. As the need for fuel for Colstrip declines, how does the increased cost per unit of coal effect the economic dispatch of Colstrip? This should be explicitly modeled in PSE's IRP portfolio dispatch model.

In the 2021 IRP, PSE modeled the fuel costs for Colstrip Units 3 and 4, which are driven by the Coal Supply Agreement, along with the variable operations and maintenance costs that affect dispatch of those units.

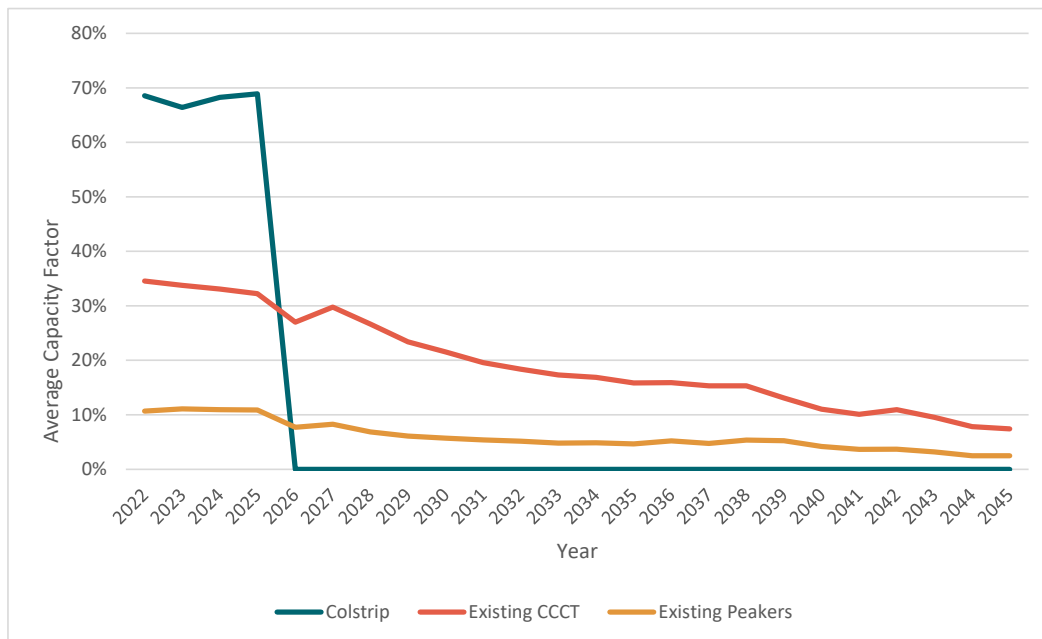
c. How does fuel supply risk for Colstrip compare to that of natural gas?

As mentioned previously, there currently is no cost or physical supply risk of coal from the Rosebud Mine. Westmoreland Mining, Westmoreland’s first lien creditors, acquired the Rosebud Mine in 2019 as part of the Westmoreland bankruptcy, and PSE and entered into a Coal Supply Agreement with Westmoreland Mining on December 5, 2019. The Coal Supply Agreement provides PSE with coal for Colstrip Units 3 and 4 through December 31, 2025, which is the date by which PSE must eliminate coal-fired resources from its allocation of electricity pursuant to RCW 19.405.030(1)(a).

d. How are the economics of Colstrip Units 3 & 4 affected if natural gas prices continue to remain relatively flat?

There are many factors to the economics of Colstrip Units 3 and 4 and most are related to the cost to dispatch the resource in comparison to market. As previously mentioned, PSE modeled the fuel costs for Colstrip Units 3 and 4, which are driven by the Coal Supply Agreement, along with the variable operations and maintenance costs that affect dispatch of those units in the 2021 IRP. Based on the updated costs for Colstrip Units 3 and 4, the forecasted dispatch of those units dropped from a projected 90 percent capacity factor to a projected 68 percent capacity factor in the 2021 IRP. In the 2021 IRP, the electric price forecasts are lower on average due to the increase of renewable resources in the region which is effecting the dispatch of both coal and natural gas resources. A full discussion of the electric price forecast is located in Appendix G of the 2021 IRP.

Please see the following graph for the projected capacity factors for Colstrip Units 3 and 4, PSE’s existing combined-cycle combustion turbines, and PSE’s existing peakers.



Please note that the graph above projects no capacity factor for Colstrip Units 3 and 4 beginning in 2026, which reflects the requirements of RCW 19.405.030(1)(a).

- 2. Has PSE quantified capacity replacement costs for Colstrip Units 3 & 4 that it could use as a basis of seeking replacement capacity as an alternative to any large capital investments it faces at Colstrip? This question should be answered in the context of the provisions of E2SSB 5116.**

Yes, PSE quantified capacity replacement costs for Colstrip Units 3 and 4 that it could use as a basis of seeking replacement capacity as an alternative to any large capital investments it faces at Colstrip. Specifically, PSE modeled the retirement of Colstrip Units 3 and 4 at the end of 2025, consistent with RCW 19.405.030(1)(a), including replacement resources for Colstrip Units 3 and 4 starting January 1, 2026. The lowest cost resource to replace capacity from Colstrip Units 3 and 4 is the frame peaker. The cost of the frame peaker is \$148/kw-yr, including social cost of greenhouse gases as specified in RCW 80.28.405.