2017 IRP Advisory Group

PSE PUGET SOUND ENERGY

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Colstrip Results: Carbon Regulation That Affects Dispatch Cost Will Challenge Economics of Colstrip

$ in Millions

	Base Case				Base No CO2			
	Carbon		Benefit/(Cost)		No Carbon		Benefit/(Cost)	
Base Portfolio	$	11,915			$	10,442		
Colstrip 1&2 in 2018	$	11,944	$	(30)	$	10,456	$	(14)
Colstrip 3&4 in 2025	$	11,766	$	149	$	10,647	$	(192)
Colstrip 3&4 in 2030	$	11,833	$	82	$	10,508	$	(66)

Colstrip transmission: analysis does not reflect changes in amortization of transmission related capital costs, which may tend to slightly overstate the benefit of early retirement.

Eastern interconnect: contract expires in 2027

Garrison to PSE transmission (BPAT): assume contract expires in parallel with Colstrip retirement

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Assumptions

The costs for Colstrip operations is as follows:

- Fixed and variable O&M
- Coal costs
- Capital costs
- Relevant taxes
- Transmission

Continuing post shutdown

- Operational and ongoing environmental costs past the shutdown date

Dispatch of the units is based on the market vs. variable cost of running the units

- Carbon tax starting in 2022 at $19/MWh (base scenario) would limit the dispatch on Colstrip

Depreciation Expenses

- Early shutdown of Colstrip 1&2 in 2018: assumes 5 year amortization of unamortized costs
- Colstrip 3 & 4: The 2025 and 2030 cases adjust depreciation to match the shutdown dates

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