Exh. CRM-1Tr
Dockets UE-170033/UG-170033
Witness: Chris R. McGuire

BEFORE THE WASHINGTON
UTILITIES AND TRANSPORTATION COMMISSION

WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION, **Complainant,** **v.** **PUGET SOUND ENERGY, INC.** **Respondent.**	**DOCKETS UE-170033 and UG-170033** **(*Consolidated*)**

TESTIMONY OF

Chris R. McGuire

STAFF OF
WASHINGTON UTILITIES AND
TRANSPORTATION COMMISSION

Colstrip Units 1 and 2 – Depreciation Rates and Rate Base

June 30, 2017
Revised August 8, 2017

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I. INTRODUCTION

Q. Please state your name and business address.

A. My name is Chris R. McGuire. My business address is The Richard Hemstad Building, 1300 S. Evergreen Park Drive S.W., Olympia, WA 98504.

Q. Who employs you and in what capacity?

A. I work for the Washington Utilities and Transportation Commission ("Commission") as an Energy Policy Strategist in the Energy Section of the Regulatory Services Division.

Q. How long have you worked at the Commission?

A. I have worked at the Commission since May 2012.

Q. Would you please state your educational and professional background?

A. I graduated from the University of Washington in 2002 with a Bachelor of Science degree in Cell and Molecular Biology. I graduated from the University of Colorado in 2010 with a Master of Business Administration and a Master of Science in Environmental Studies. Prior to my employment with the Commission, I held various research and analysis positions at the University of Washington, the University of Colorado and the National Renewable Energy Laboratory's Strategic Energy Analysis Center.

Q. Have you previously testified before the Commission?

A. Yes. I have testified regarding Staff's guiding policy, attrition studies and overall revenue requirement in Avista's 2015 general rate case, Dockets UE-150204/UG-150205. I also testified on Staff's attrition studies and overall revenue requirement in Avista's 2014 general rate case, Dockets UE-140188/UG-140189, and Staff's policy recommendations on pro forma capital additions to rate base in Pacific Power's 2013 general rate case, Docket UE-130043.

II. SCOPE AND SUMMARY OF TESTIMONY

Q. Please describe the scope of your testimony.

A. I present Staff's recommendation on the proper ratemaking treatment for the remaining book value of Colstrip Units 1 and 2. My recommendation considers: 1) the appropriate annual depreciation expense for the remaining life of the plant, 2) the appropriate plant value to be included in Puget Sound Energy's (PSE or the Company) rate base, and 3) amortization of the depreciation reserve imbalance necessary to make the Company whole.

Q. Please briefly discuss the overarching principles guiding Staff's recommendation regarding Colstrip Units 1 and 2.

A. This case challenges Staff with presenting a fair, balanced, and equitable distribution of costs related to the recovery of a moribund asset; fair, in that current customers pay for their share of the consumption of the asset, balanced, in that the impending early closure

of Colstrip does not unreasonably burden ratepayers or shareholders, and equitable, in that the costs of abandoned plant do not unduly burden any one generation of ratepayers.

Q. What has Staff concluded in its analysis?

A. Staff concludes that PSE inappropriately proposes to recover the full remaining plant balance for Colstrip Units 1 and 2 – 50 percent of the original cost of the facility – over the next 4.5 years. Staff concludes that the *reason* PSE's proposed depreciation rates unfairly allocate depreciation expense to ratepayers going forward is that the accumulated depreciation reserve – the cumulative amount of depreciation PSE has collected through rates – is substantially out of balance with the facility's actual loss in service value to date. The primary cause of this imbalance is the decision to retire Colstrip Units 1 and 2 early, reducing the remaining service life from 18 years to 4.5 years.

Staff has concluded that correcting the imbalance in accumulated depreciation reserve, and amortizing the unrecovered balance over an appropriate time horizon, produces a fair, balanced, and equitable outcome. By correcting the reserve for accumulated depreciation for Colstrip Units 1 and 2, Staff's proposal generates the following three benefits:

1. An annual depreciation expense that fairly matches cost with ratepayers' annual, pro rata consumption of the facility;
2. A net plant in service amount that properly reflects the impact of early closure, thus ensuring ratepayers pay a return on only the remaining service value of the asset; and
3. Amortization of the accumulated depreciation reserve imbalance which makes the Company whole for its investment in the facility.

Q. Please summarize the dollar impact of your recommendation relative to PSE's proposed treatment.

A. The following table shows the expense, rate base, and return on rate base impacts of Staff's proposal as compared to PSE's proposal and rates currently in effect.

Table 1. Expense and Rate Base Impacts of Staff's and PSE's Recommended Ratemaking Treatment for the Remaining Plant Balance for Colstrip Units 1 and 2

	Staff	PSE	Current
Expense			
Depreciation Expense	$6,805,438	$27,241,335	$5,391,258
Amortization Expense	$7,090,530	-	
Total Depreciation/Amort Expense	**$13,895,968**	**$27,241,335**	**$5,391,258**
Rate Base Impacts			
Adjust to AMA	($3,402,719) ~~($3,545,265)~~	($13,620,668)	($2,695,629)
Accumulated. Reserve	($127,629,534)	-	-
Adjustment	**($131,032,253~~($131,174,799)~~**	**($13,620,668)**	**($2,695,629)**
Total Rate Base Impact			
Return on Rate Base			
At ROR = **7.37**%	**($9,657,077) ~~($9,667,583)~~**	**($1,003,843)**	**($198,668)**

Staff's recommendation represents an $8.5 million (or 158 percent) increase in annual depreciation/amortization expense relative to the level of expense currently embedded in rates. Relative to PSE's proposal, Staff's recommendation represents a $13.3 million (or 49 percent) reduction in annual depreciation/amortization expense. Given Staff's proposal to correct the accumulated reserve imbalance for Colstrip Units 1 and 2, in effect decreasing net plant in service, Staff's recommendation represents an annual return on rate base that is $8.7 million lower than what PSE proposes.

Q. Are your adjustments reflected in the overall revenue requirement exhibits sponsored by Staff Witness Ms. Cheesman?

A. Yes. My recommended depreciation rates are reflected in Exh. MCC-2, Adjustment 13.06. My recommended increase to the reserve for accumulated depreciation is reflected in Exh. MCC-2, Adjustment 13.06A. My recommended amortization expense, providing the Company with recovery of the adjustment to the accumulated depreciation imbalance, is also reflected in Exh. MCC-2, Adjustment 13.06A.

Q. Have you prepared any exhibits in support of your testimony?

A. Yes. I prepared Exhibits CRM-2 through CRM-5.

Exh. CRM-2 shows Staff's derivation of the fair, pro rata annual depreciation expense for Colstrip Units 1 and 2. This depreciation expense is reflected in Staff's revenue requirement through Adjustment 13.06.

Exh. CRM-3 shows the adjustment correcting the imbalance in accumulated depreciation reserve as well as the annual expense associated with the amortization of that reserve imbalance.

Exh. CRM-4 is an excerpt of the Report to the Audit Committees of the Boards of Directors of Puget Energy, Inc. and Puget Sound Energy, Inc., produced by PricewaterhouseCoopers LLP, and provided by PSE in its response to Public Counsel Data Request Number 177.

Exh. CRM-5 is PSE's response to Public Counsel Data Request Number 424, and provides PSE's narrative as to why the Company was required to record a book entry for the prospective abandonment of Colstrip Units 1 and 2.

III. UNCONTESTED ADJUSTMENTS

Q. Did you review any adjustments that you are not contesting?

A. Yes. I reviewed and do not contest the following adjustments:

Electric Adjustment 7.04 – ASC 815

Gas Adjustment 6.06 – Gas Depreciation Study

I also reviewed Electric Adjustment 6.06 – Electric Depreciation Study and do not contest the elements of the study beyond its treatment of Colstrip Units 1 and 2.

IV. COLSTRIP UNITS 1 AND 2 – DEPRECIATION AND RATE BASE

A. Background

Q. Does your testimony address costs associated with decommissioning and remediation of Colstrip Units 1 and 2?

A. No. I confine my analysis and ultimate recommendation to only the net book value of Colstrip Units 1 and 2. Staff Witness Christopher Hancock testifies to Staff's treatment of net salvage, including costs of remediation and decommissioning. This is consistent with the Company's depreciation study presentation, which sets the net salvage to zero for Colstrip Units 1 and 2 and considers remediation and decommissioning as matters separate from the determination of depreciation expense.

Q. Briefly describe any significant, recent events Staff views as relevant to the depreciation schedules for Colstrip Units 1 and 2.

A. On July 12, 2016, PSE and the Colstrip plant operator Talen Energy, along with plaintiffs Sierra Club and Montana Environmental Information Center, filed a consent decree with the United States District Court of Montana, in which the parties stipulated to the closure of Colstrip Units 1 and 2 on or before July 1, 2022.[1] The district court approved the consent decree on September 6, 2016. Though PSE claims litigation was not a primary factor in its decision to retire Colstrip Units 1 and 2,[2] the court's approval of the consent decree provides the legal basis for establishing the probable retirement date of July 1, 2022, which, in turn, is used in my analysis to develop a depreciation schedule for the facility.

Q. What impact did PSE's decision to enter into the settlement to close Colstrip Units 1 and 2 have on the expected remaining life of the facility?

A. Prior to the agreement to close Colstrip Units 1 and 2 by July 1, 2022, PSE expected the facility to remain in service until 2035.[3] Thus, PSE's decision to close Units 1 and 2 by July 1, 2022, reduced the expected remaining life by 75 percent, from 18 years to 4.5 years.

Q. As of the end of the test year, what was the remaining undepreciated balance recorded on PSE's books?

[1] *See* Roberts, Exh. RJR-18 at 6, ¶ 7.
[2] Roberts, Exh. RJR-1T at 34:8-9.
[3] Spanos, Exh. JJS-1T at 8:11-13.

A. As of September 30, 2016, PSE recorded the net book value of Colstrip Units 1 and 2 as $158,254,007.[4] This compares to the original cost[5] of the facility of $315,912,914. In other words, as of September 30, 2016, Colstrip Units 1 and 2 were only 50 percent depreciated.

B. Defining Depreciation

Q. What is the definition of depreciation?

A. According to the FERC Uniform Systems of Accounts for electric and gas utilities, depreciation means "the loss in service value not restored by current maintenance, incurred in connection with the consumption or prospective retirement of utility plant in the course of service from causes which are known to be in current operation and against which the utility is not protected by insurance."[6]

Q. Which elements of this definition are central to your recommendation?

A. Staff bases its recommendation on the need for depreciation to reflect:

1. The loss of service value incurred in connection with the consumption of utility plant, and
2. The loss of service value incurred in connection with the prospective retirement of utility plant.

[4] *See* McGuire, Exh. CRM-2 at Column H, Line 22.
[5] "Original cost" refers to the gross nominal plant or, equivalently, the sum of all transfers to plant, to date, over the life of the facility.
[6] 18 C.F.R. Part 101, Definitions at 12.

Ratepayers' consumption of utility plant is central to the question of whether depreciation rates are fair. Additionally, the service value, and loss thereof, of Colstrip Units 1 and 2 are tied to the decision to retire those units.

Q. What is the general purpose of depreciation expense?

A. Generally, depreciation expense accounts for the effects of wear and tear on capital equipment.[7] Conceptually, annual depreciation represents the value of an asset consumed in rendering service. Customers receiving that service should pay the cost of property used on their behalf.[8] Depreciation, then, implies a systematic allocation of plant costs that are recovered over time, consistent with a plant's useful life.[9]

Q. Typically, how often are depreciation studies updated?

A. The typical standard of practice is that a depreciation study should not be more than five years stale relative to the test period of a general rate case. Therefore, depreciation study updates are somewhat dependent on the frequency of a company's filing of general rate cases, though we typically see depreciation study updates occur every five to ten years.

Q. Is it generally acceptable for updated depreciation rates to increase or decrease costs to ratepayers relative to a previous generation of ratepayers?

A. To a degree, yes. In general, we tolerate modest intergenerational inequity because it is impossible to perfectly allocate depreciation expense evenly across all generations of

[7] JONATHON A. LESSER & LEONARDO R. GIANCCHINO, FUNDAMENTALS OF ENERGY REGULATION 120 (2d. ed. 2013).
[8] *Providence Gas Co. v. Burke*, 419 A.2d 263, 266 (R.I. Aug. 22, 1980) (quoting JAMES C. BONBRIGHT, PRINCIPLES OF PUBLIC UTILITY RATES 213 (1961)).
[9] JONATHON A. LESSER & LEONARDO R. GIANCCHINO, FUNDAMENTALS OF ENERGY REGULATION 121 (2d. ed. 2013).

ratepayers – original cost constantly changes as components of the plant are continuously replaced and the expected retirement date constantly moves due to a variety of factors. So the typical course of action is to re-set depreciation rates from time to time, allocating the new level of unrecovered original costs over the updated expected remaining life of the facility. As a general matter, under normal circumstances this practice of regularly updating depreciation rates to reflect new plant totals and new life expectancies produces rates that represent a reasonably fair allocation of costs.

However, as described in further detail below, the overnight 75 percent reduction in expected service life of Colstrip Units 1 and 2 – from 18 years to 4.5 years – does not represent a normal circumstance. Treating it as if it is a normal circumstance would cause a dramatic increase in annual depreciation expense which would be decidedly unfair to the current generation of ratepayers.

Q. Why is understanding the *purpose* of depreciation expense important?

A. Understanding that there should be a relationship between the depreciation expense paid by ratepayers and those ratepayers' consumption of the asset provides the basis for allocating capital costs in a rational manner to the generations of ratepayers using that equipment. For most utility property, the common assumption is that consumption occurs evenly over the asset's productive life, i.e., on a straight-line basis.[10] Therefore, the determination of a fair depreciation expense should include consideration of ratepayers' annual consumption or use of the facility. Depreciation expense should *not* include

[10] ROBERT L. HAHNE AND GREGORY E. ALIFF, ACCOUNTING FOR PUBLIC UTILITIES § 6.03[1] (2012).

capital costs that are unfairly or irrationally allocated to a single generation of ratepayers in a manner inconsistent with the consumption pattern of that generation of ratepayers.

C. PSE's proposal

Q. How does PSE propose to recover the remaining balance of Colstrip Units 1 and 2?

A. PSE proposes to recover the entire remaining net book value – $158,254,007 – through depreciation expense over the next 4.5 years. Thus, PSE asks the next 4.5 years of ratepayers to pay for 50 percent of the plant despite the fact that those ratepayers will have only used the plant for less than 10 percent of its useful life.

Q. Is PSE's proposal consistent with the definition of depreciation discussed above?

A. No. PSE's proposal fails to meet the two basic elements of the definition highlighted above. Specifically, the Company does not account for the depreciation that has occurred in connection with the decision to retire Colstrip Units 1 and 2 and, consequently, the Company does not allocate depreciation expense to ratepayers in a manner that is remotely representative of those ratepayers' consumption of the facility.

Q. Please explain what you mean by the statement "the Company does not allocate depreciation expense in a manner that is remotely representative of those ratepayers' consumption of the facility."

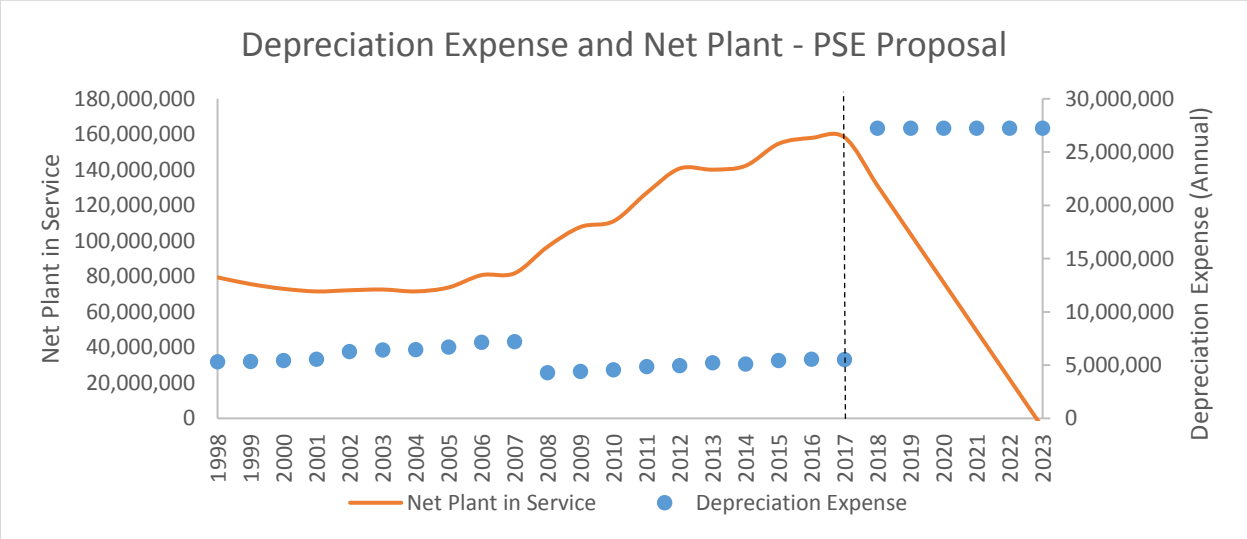
A. By allocating 50 percent of the original cost of the facility to the next 4.5 years of ratepayers – again, a generation of ratepayers who will have used the facility for less than

10 percent of its useful life – PSE does not allocate costs to customers in a manner consistent with those customers' consumption of the facility. PSE's proposed depreciation rates rest on accepting that ratepayers across 10 percent of the facility's useful life cause 50 percent of the total wear and tear on the facility. Staff rejects such a proposal as it does not represent a rational allocation of capital costs to generations of ratepayers using that equipment.

Q. Please provide an illustration depicting the effect of PSE's proposal relative to the past net plant balance and depreciation rates.

A. The following chart shows the depreciation expense for Colstrip Units 1 and 2, as well as the net plant in service, from 1998 through 2022. Estimates for 2018-2022 reflect the effect of PSE's proposed depreciation rates in this case.

Figure 1. Annual Depreciation Expense and Net Plant Balance for Colstrip Units 1 and 2 – Actual Historical and under PSE's Proposal.



As the above chart shows, PSE proposes to accelerate recovery of Colstrip Units 1 and 2 by increasing the depreciation rates 500 percent relative to the previous generation of ratepayers (annual depreciation expense is represented by the blue dots). PSE's proposed allocation of costs unreasonably holds ratepayers in 2018-2022 accountable for contributing to five times the wear and tear that previous generations of ratepayers placed on the facility. As a result, PSE's proposal unfairly targets those ratepayers for increased depreciation rates.

Q. Please explain what you mean by the statement that "the Company does not account for the depreciation that has occurred in connection with the prospective retirement of the facility."

A. Recall the definition of depreciation, above, which provides that depreciation includes the loss of service value incurred in connection with the prospective retirement of utility plant. In other words, PSE's decision to retire Colstrip Units 1 and 2 by July 1, 2022, itself, and at the moment the decision was made, contributed to a loss in service value of the facility. Importantly, PSE made the *decision* to retire the facility in the past and, thus, the loss in service value associated with that decision *has already occurred*. Therefore, it would be inappropriate to include in depreciation expense going forward depreciation that occurred in the past.

Staff believes that, had PSE properly accounted for the loss in service value associated with the decision to retire Colstrip early, and had the Company's proposal recognized that this depreciation happened in the past, the Company would have proposed correcting the depreciation reserve imbalance (i.e., the difference between

depreciation recovered through rates and the actual depreciation of the facility) and making itself whole through a regulatory asset. Indeed, that is precisely Staff's recommendation, as I discuss below.

D. Staff's Proposal – Purpose and Summary

Q. What is the purpose of Staff's recommendation?

A. Staff offers its recommendation to provide an alternative to the Company's proposal which, Staff contends, does not produce a result that is fair to ratepayers. Thus, Staff is compelled to generate a proposal that, in its judgment, reflects appropriate ratemaking treatment for a suddenly moribund asset and, consequently, better adheres to the principles of fairness, balance, and equity.

Importantly, PSE's proposal would produce rates that are unfair to ratepayers primarily because it does not correct the plant in service value for Colstrip Units 1 and 2 to reflect the loss in service value associated with the Company's early retirement decision. By not adjusting the plant in service value to reflect the early retirement, the depreciation expense PSE asks ratepayers to pay would be grossly out of step with those ratepayers' use of the asset. In addition, by not correcting the plant in service value for Colstrip Units 1 and 2, the amount of plant reflected in rate base (upon which ratepayers pay a return to shareholders) would remain artificially high, further exacerbating the unfair rates requested of ratepayers.

In its recommendation, Staff produces an alternative that is both fair to current ratepayers and makes the Company whole for its investment, while mitigating

intergenerational inequity. Staff achieves this principled result simply by correcting the plant in service value for Colstrip Units 1 and 2 and amortizing the uncollected balance.

Q. Please summarize Staff's recommendation for treatment of the remaining balance of Colstrip Units 1 and 2.

A. In order to produce rates that are fair to current ratepayers, Staff recommends that the Commission order an adjustment to PSE's reserve for accumulated depreciation to reflect the loss in service value associated with the Company's decision to retire Colstrip Units 1 and 2. Specifically, Staff recommends the Commission order PSE to increase the reserve for accumulated depreciation by $127.6 million.

Staff also has three ancillary recommendations stemming from the recommended increase in accumulated depreciation reserve:

1) The Commission should set the depreciation expense to recover the remaining plant balance ($30.6 million after the adjustment to accumulated reserve) over the remaining life of the facility (4.5 years). This results in an annual depreciation expense of $6.8 million. This annual depreciation expense aligns with ratepayers' fairly allocated, pro rata consumption of the facility.
2) The Commission should re-value the plant in service for Colstrip Units 1 and 2 by ordering a $127.6 million increase to the reserve for accumulated depreciation. This adjustment reduces plant in service and, consequently, rate base and also ensures ratepayers are not paying a return on an artificially inflated service value of the facility.

3) The Commission should authorize amortization of the $127.6 million adjustment to accumulated reserve. This transfer would make the Company whole for its investment in Colstrip. The annual amortization expense to recover the balance over the recommended amortization period of 18 years is $7.1 million.

i. Net Plant in Service – Colstrip Units 1 and 2

Q. Please remind the Commission of PSE's proposal.

A. In its direct case, PSE proposes to recover the entire remaining net book value of Colstrip Units 1 and 2 ($158,254,007) through depreciation expense over the next 4.5 years. Thus, PSE asks the next 4.5 years of ratepayers to pay for 50 percent of the plant, yet those ratepayers will have only used the plant for less than 10 percent of its useful life.

Q. Does Staff believe the net book value of $158,254,007 is the appropriate amount to consider for calculating depreciation expense and rate base?

A. No. The net book value of $158,254,007 does not incorporate the effect on service value of PSE's decision to retire Colstrip Units 1 and 2 early. By acting as if the decision to close Colstrip Units 1 and 2 early did not affect those units' service value, PSE advances its claim that 50 percent of the original cost of the facility *belongs* to the next 4.5 years of ratepayers. Common sense tells us that is false.

The cost that appropriately *belongs* to ratepayers is the remaining service value of the facility, and the remaining service value must reflect the effect of PSE's decision to retire Colstrip Units 1 and 2 early.

Q. Please describe how the decision to retire Colstrip Units 1 and 2 impacted the service value of the facility.

A. In Section IV(b), I explained that the definition of depreciation provides that the service value, and loss thereof, of Colstrip Units 1 and 2 are tied to the prospective retirement of those units. Importantly, the agreement to retire the facility pre-dates the rate-effective period in this case, meaning depreciation of the facility (i.e., the loss in service value) resulting from prospective retirement *has already occurred*. However, the depreciation expense embedded in rates over that time period was insufficient to cover the actual depreciation of the facility, and in particular the depreciation associated with PSE's decision to retire the facility early. Thus, there is an imbalance in the reserve for accumulated depreciation.

Q. What do you mean by an "imbalance in the reserve for accumulated depreciation?"

A. The Company's decision to retire Colstrip Units 1 and 2 caused a sudden decline in the service value of the facility, but the reserve for accumulated depreciation does not reflect the corresponding loss in service value. The gap between the accumulated depreciation expense collected through rates and the total cumulative loss in service value represents the imbalance in the reserve for accumulated depreciation.

Q. Is it unusual that a regulatory body would consider the adequacy of a utility's depreciation reserve?

A. Not at all. In fact, one of the purposes of a depreciation study is to test the adequacy of the depreciation reserve.[11] Further, the National Association of Regulatory Utility Commissioners (NARUC) notes specifically that a change in estimated service life may create a reserve imbalance,[12] and that if analysis confirms a material imbalance, one should make immediate depreciation accrual adjustments.[13] The sudden change in the service life of Colstrip Units 1 and 2 indeed has created a substantial reserve imbalance, but PSE has not made the appropriate depreciation accrual adjustment to correct the imbalance. If the reserve imbalance is not corrected, ratepayers will be allocated an unfair level of costs associated with the facility. The Commission has a statutory obligation to regulate in the public interest. Insofar as rates that result from a reserve imbalance are shown to be unfair, that statutory obligation includes rectifying the reserve imbalance.

Q. How should the Commission estimate the remaining service value of Colstrip Units 1 and 2?

A. Staff recommends consider two distinct pieces of information, either of which suggests a remaining service value of approximately $31 million. The Commission should consider:

1) The theoretical depreciation reserve, calculated by assigning to each year of ratepayers over the course of the facility's life an equal share of depreciation expense; and
2) PSE's own accounting entries reflecting probable abandonment.

[11] ROBERT L. HAHNE AND GREGORY E. ALIFF, ACCOUNTING FOR PUBLIC UTILITIES § 6.03[1] (2012).
[12] NATIONAL ASSOCIATION OF REGULATORY UTILITY COMMISSIONERS, PUBLIC UTILITY DEPRECIATION PRACTICES 188 (1996) (herein after "NARUC Depreciation Manual").
[13] *Id.* at 189.

Q. Please discuss the concept of a "theoretical reserve."

A. The theoretical reserve is an estimate of the balance that *should* be in depreciation reserve today,[14] had depreciation expense embedded in rates been sufficient to cover the actual loss in service value of the facility. In other words, if the total cost of the facility were spread evenly across the total service life of the facility, in accordance with straight-line allocation of cost, all years of ratepayers would have paid an equal pro rata share of the depreciation expense. By assigning each year of ratepayers an equal pro rata share of the depreciation expense, we can calculate what the total accumulated depreciation *should be*. This is the theoretical reserve.

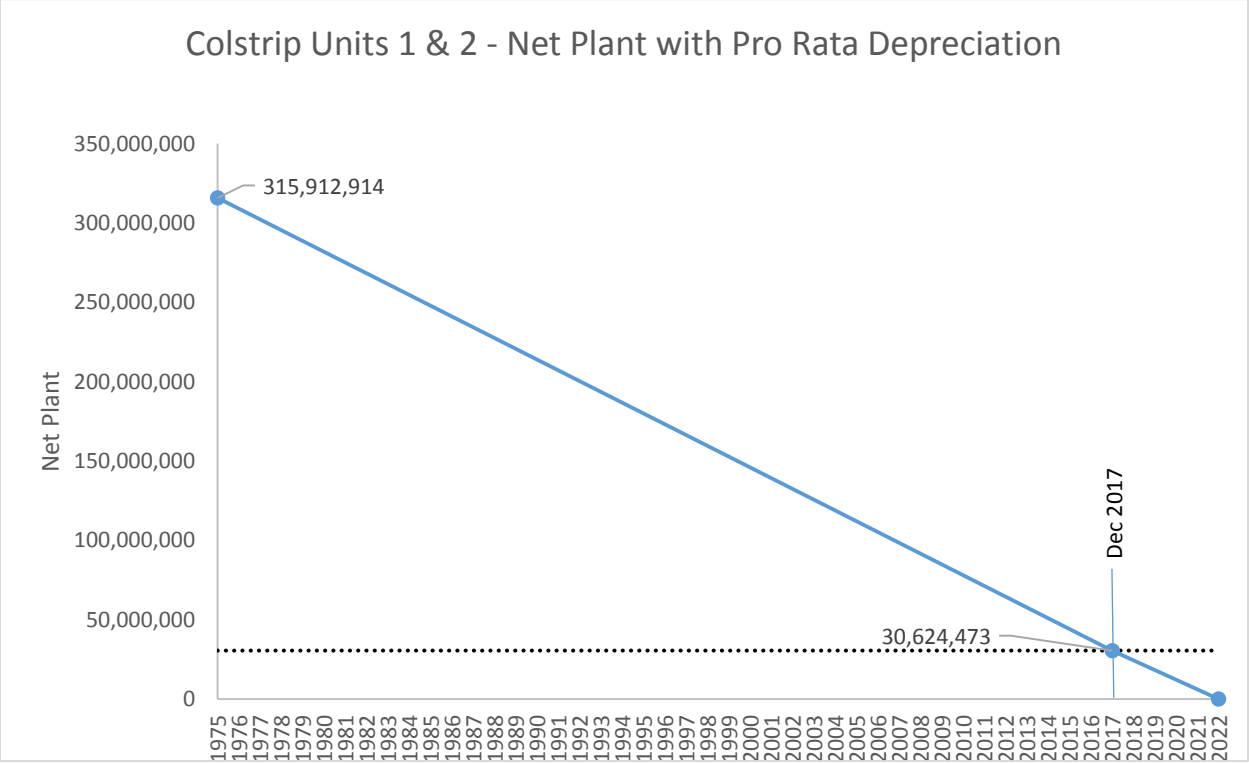
Q. How does Staff calculate a theoretical reserve?

A Consider a hypothetical scenario wherein in 1975, as PSE placed Colstrip Units 1 and 2 in service, we had the benefit of perfect foresight. In this scenario, we knew in 1975 that: (1) PSE would retire Colstrip Units 1 and 2 on July 1, 2022, and (2) the total capital expenditures over the life of the plant would be $315.9 million. Using straight-line depreciation, we could allocate the total capital cost evenly across all generations of ratepayers using the facility, and at July 1, 2022, the net plant balance would reach $0.

Using this approach, we can estimate what the depreciation reserve *would be* if depreciation were allocated evenly, in a pro rata manner, across all generations that used the facility. Figure 2, below, shows the trajectory of net plant under a pro rata allocation of depreciation expense.

[14] *Id.* at 23.

Figure 2. Straight-Line Pro Rata Allocation of Depreciation of the Total Original Cost for Colstrip Units 1 and 2.



The figure above shows that an equal allocation of depreciation expense among all years of ratepayers would generate a remaining plant balance of $30,624,473 at December 31, 2017. Subtracting this remaining plant balance ($30,624,473) from the original cost of the facility ($315,912,914) provides a theoretical reserve of $285,288,441. Note that the remaining service value, $30,624,473, is precisely the amount Staff recommends be collected through depreciation expense over the next 4.5 years, and is the plant balance Staff recommends be included in rate base for the purposes of setting rates in this proceeding.

Q. If the Commission accepts $30,624,473 as the remaining service value for Colstrip Units 1 and 2, what is the appropriate adjustment to depreciation reserve?

A. As of the end of the test year, PSE recorded the net book value for Colstrip Units 1 and 2 as $158,254,007. A remaining service value of $30,624,473 provides a depreciation reserve imbalance of $127,629,534. Accordingly, the appropriate adjustment to depreciation reserve is an increase of $127,629,534.

Q. Has PSE made accounting entries that support Staff's position that PSE's agreement to close Colstrip Units 1 and 2 early impacted the service value of the facility?

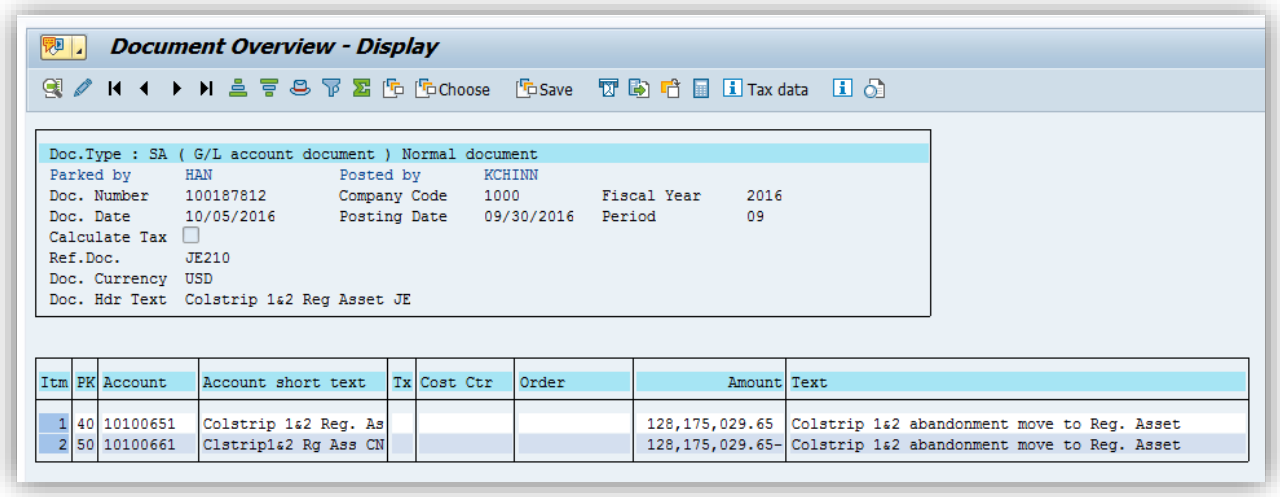
A. Yes. Accounting standards require removal of the cost of an asset from plant in service when it becomes probable that the owner will abandon the asset.[15] In PricewaterhouseCoopers' report to PSE's Audit Committees of the Boards of Directors, PSE's auditor noted that "Management concluded that Colstrip 1 and 2 became probable of abandonment as a result of the settlement, and as a result reclassified the estimated net book value of $176.8 million at the expected retirement date to a regulatory asset, as it will no longer qualify as Plant in Service upon retirement."[16] I provide pages 5 and 6 of this report as Staff Exhibit CRM-4.[17]

In its response to Public Counsel Data Request Number 424, PSE provided narrative regarding the reclassification of plant associated with the abandonment of

[15] FINANCIAL ACCOUNTING STANDARDS BOARD, FASB STATEMENT OF FINANCIAL ACCOUNTING STANDARDS NO. 90, REGULATED ENTERPRISES – ACCOUNTING FOR ABANDONMENTS AND DISALLOWANCES OF PLANT COSTS 5 (December 1986).
[16] PRICEWATERHOUSECOOPERS, LLP, REPORT TO THE AUDIT COMMITTEES OF THE BOARDS OF DIRECTORS OF PUGET ENERGY, INC. AND PUGET SOUND ENERGY, INC. AT 5-6 (February 22, 2017).
[17] PSE provided this report in response to Public Counsel Data Request No. 177.

Colstrip Units 1 and 2, as well as screen shots of its accounting system showing the pertinent book entries. PSE's response to Public Counsel Data Request Number 424 is provided as Staff Exhibit CRM-5. The following screen shot of PSE's accounting system shows the book entries related to the abandonment:

Figure 3. PSE Book Entry for the Probable Abandonment of Colstrip Units 1 and 2.



Q. Does this documentation obligate the Commission to treat Colstrip Units 1 and 2 as abandoned property for ratemaking purposes?

A. No. The accounting entries were performed for GAAP[18] purposes only. If it so chooses, the Commission may continue to include the abandonment within plant in service while the facility continues to operate. I call the abandonment to the Commission's attention to establish that accounting entries for a prospective abandonment have in fact occurred, that PSE has identified a specific dollar amount associated with that abandonment, and

[18] Generally Accepted Accounting Principles.

that PSE has removed that dollar amount from plant in service on the Company's books. Additionally, as I discuss below, the magnitude of PSE's accounting entries provide a useful gut check for the reasonableness of the magnitude of Staff's recommended adjustment to PSE's depreciation reserve.

Q. Is Staff's recommended adjustment to the depreciation reserve consistent with PSE's book entry for abandonment?

A. Yes. The amount PSE reclassified, as shown in the screenshot above, was in the amount of $128,175,030.[19] Thus, Staff's recommended adjustment of $127,629,543 is nearly identical to PSE's accounting entry for prospective abandonment of $128,175,030. Although Staff does not calculate its specific adjustment using PSE's book entries for abandonment, those book entries provide support for Staff's recommended adjustment being a reasonable approximation of the loss of service value associated with PSE's decision to retire the facility early.

ii. Determination of Appropriate Depreciation Expense

Q. Can you please summarize your recommendation regarding the depreciation expense for Colstrip Units 1 and 2?

[19] The total amount PSE reclassified ($176.8 million, as cited in the PricewaterhouseCoopers report) includes asset retirement obligations (AROs) as well as adjustments that occurred beyond the test year (and beyond the completion of the depreciation study) for this case. Because, for Staff's and PSE's presentation in this case, AROs are considered independent from net book value for the purposes of establishing depreciation rates, and because depreciation rates are derived from the depreciation study that concluded in September 2016, the accounting entry that is appropriate for direct comparison to my adjustment is PSE's entry for the estimated net book value as of July of 2022. PSE recorded that value in the third quarter of 2016. That amount is $128.2 million.

A. Yes. Staff recommends the Commission order an annual depreciation expense of $6,805,438. This annual expense is calculated by dividing the total remaining plant in service ($30,624,473 after the adjustment to accumulated reserve) by the total remaining service life (4.5 years).

Q. Does an annual depreciation expense of $6,805,438 represent a fair allocation of costs to ratepayers in 2018?

A. Yes. Recall that there should be a strong relationship between the depreciation expense paid by ratepayers and those ratepayers' consumption of the asset. An understanding of that relationship provides the basis for allocating capital costs in a rational manner to the generations of ratepayers using that equipment. Consistent with this theoretical basis for allocating depreciation expense discussed above, Staff recommends that the Commission allow PSE to charge customers only for their proportional, pro rata share of the depreciation of the facility. Ratepayers' annual, pro rata share of depreciation is $6,805,438.

Q. Please describe in greater detail how you calculated what you are representing as a "fair" depreciation expense.

A. In Exhibit CRM-2, Staff presents a pro rata allocation of depreciation expense that represents each year's customers' relative contribution to the depreciation of the facility over its useful life. The calculation itself is complicated somewhat by the fact that Colstrip Units 1 and 2 will have had slightly different useful lives and that the plant amounts are divided into several FERC accounts. However, the concept is

straightforward and relies on two basic sets of information: (1) the total original cost of the facility as of September 30, 2016, and (2) the total useful life of the facility, using July 1, 2022, as the firm close-by date.

Referring to Exhibit CRM-2, Column F shows the original cost by FERC account of Unit 1, Unit 2, and shared facilities. To calculate the proportional annual allocation of original cost by FERC account, the original cost is divided by the total life of the facility, shown in Column C. For example, the proportional annual allocation of plant cost for FERC account 311 unique to Colstrip Unit 1 (Line No. 2) is simply the original cost ($9,209,468) divided by the total life of the facility (47 years) which gives an annual, pro rata depreciation expense of $195,946 (shown in Column I).

The sum of annual, pro rata depreciation expense across all FERC accounts for Colstrip Units 1 and 2 provides for an annual depreciation expense of $6,805,438 (Column I, Line No. 22). Note that that amount precisely matches the annual depreciation expense calculated after adjustment for the depreciation reserve imbalance. The two approaches produce the same end result as they are based on the same underlying principle: each yearly class of ratepayers should be allocated an equal share of the use of the facility over its service life.

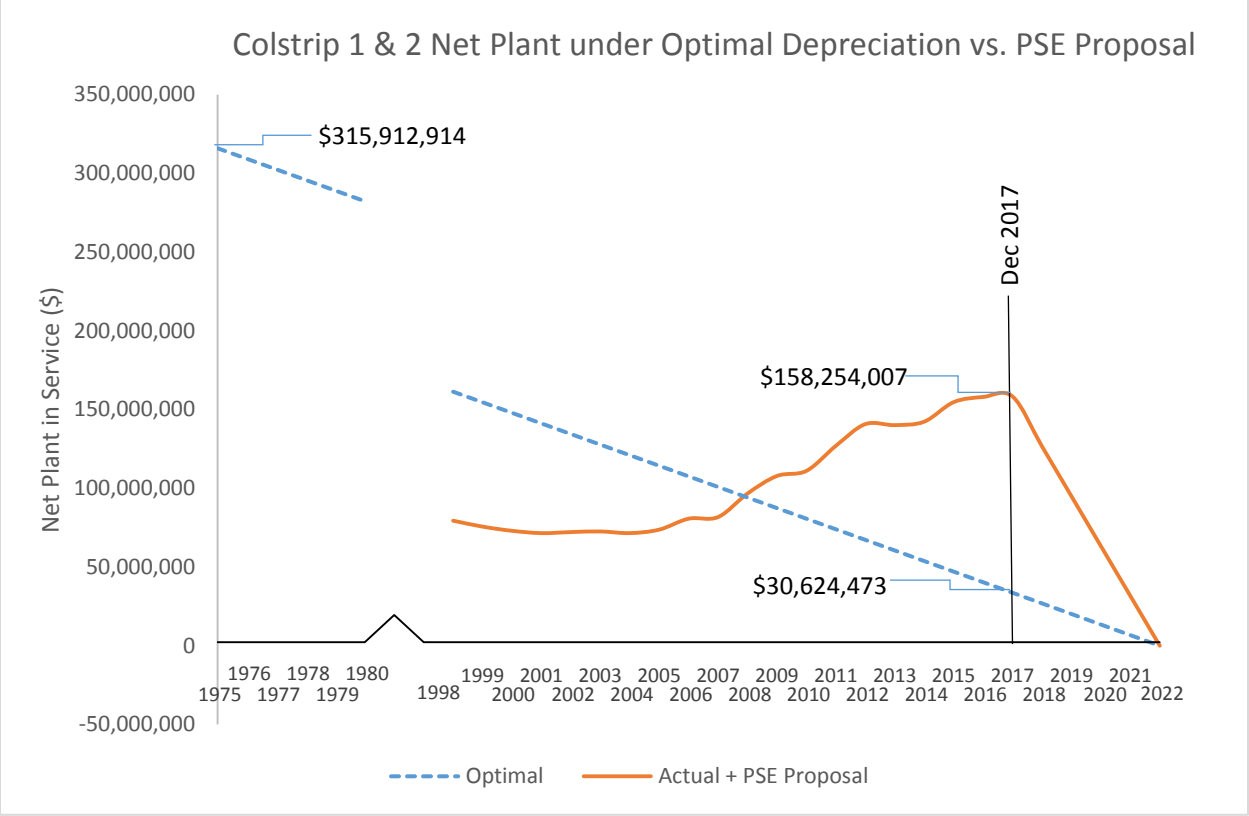
Q. Over the remaining life of the facility, what is the total depreciation expense PSE would collect from ratepayers under Staff's proposal?

A. Over the remaining 4.5 years of life for Colstrip Units 1 and 2, ratepayers, under Staff's proposal, would contribute $30,624,473 in accumulated depreciation expense, as indicated in Exhibit CRM-2 at Column J, Line No. 22.

Q. Are you able to provide a chart showing a net plant in service trajectory under both Staff's and PSE's proposals?

A. Yes. The following chart shows the net plant in service if depreciation had been allocated perfectly (blue dashed line) and against the actual plant in service, including PSE's proposal to collect the remaining $158,254,007 through depreciation expense over the next 4.5 years (red solid line).

Figure 4. Colstrip Units 1 and 2 – Net Plant Balance under Optimal Pro Rata Allocation of Depreciation in Comparison to Actual Plant Balance and PSE's Proposal.



This chart shows that under a perfectly allocated, pro rata depreciation expense, the net plant in service would be $30,624,473. As indicated by the red solid line, net plant in service has been growing in recent years, indicating that new transfers to plant have outpaced depreciation expense. The remaining plant balance PSE proposes for ratemaking purposes in this case is $158,254,007. The difference in the two points shown at December 2017 ($158,254,007 and $30,624,473), equals Staff's recommended adjustment to the reserve for accumulated depreciation of $127,629,534. By making this adjustment, depreciation and net plant in service would follow the blue dashed line beginning January 1, 2018.

iii. Colstrip Units 1 and 2 Rate Base

Q. Please summarize Staff's recommendation regarding the rate base for Colstrip Units 1 and 2.

A. As discussed above, Staff recommends that the Commission order an increase to the reserve for accumulated depreciation, which effectively decreases the net plant in service by $127,629,543. That order would, consequently, reduce total rate base by $127,629,543.

As I discuss below, Staff also recommends that the Commission allow PSE to convert a corresponding amount into a regulatory asset and amortize that amount over the next 18 years. This would make the Company whole for its investment in Colstrip Units 1 and 2 in a fair manner.

Q. Why is it important to adjust rate base to reflect a diminished service value of Colstrip Units 1 and 2?

A. If the Commission does not order an adjustment to the value of plant in service, resulting rates will allocate an unfair level of depreciation expense to current ratepayers. If the Commission sets rates using the full net plant amount for Colstrip Units 1 and 2, it will not only base depreciation rates on an unfair level of costs, but it will calculate the rate of return using an artificially inflated rate base.

Q. What do you mean by "an artificially inflated rate base?"

A. In referencing an artificially high rate base, I am referring to the fact that had depreciation expense been allocated in a pro rata manner across the facility's useful life, the facility currently would be 90 percent depreciated, not 50 percent depreciated. In other words, the remaining service value (10 percent of the original cost) is grossly out of step with the net plant in service (50 percent of the original cost) upon which PSE askes the Commission to base the Company's return.

Q. Are you saying PSE erred in agreeing to the low depreciation rates currently in effect?

Q. Not at all. The depreciation rates presently in effect reflect the previous expectation that Colstrip Units 1 and 2 would operate through 2035. That expectation was reasonable at the time the Commission established the current rates. Only with the benefit of hindsight, and the knowledge that new circumstances necessitate a closure by 2022, can we adjudge depreciation rates insufficient to cover the loss in service value associated with the

decision to close the facility in 2022. The fact that depreciation expense was insufficient to cover that unexpected loss in service value is not indicative of fault, but neither should the resulting inflated rate base – owing to an artificially low depreciation reserve – unduly burden current ratepayers in light of today's changed circumstances.

Q. Does Staff's recommendation amount to a re-valuation of utility plant?

A. Yes. Staff specifically recommends the Commission correct the depreciation reserve imbalance that arises from the evaluation of the adequacy of the depreciation reserve through a depreciation study. Adjusting the depreciation reserve upward results in a reduction to net plant in service for Colstrip Units 1 and 2, effectively re-valuing the facility.

Q. Does the Commission have the authority to make re-valuations of utility plant?

A. Yes. RCW 80.04.250 grants the Commission explicit authority to re-value utility plant. Specifically, RCW 80.04.250(1) provides:

> The commission has the power … to ascertain and determine the fair value for rate making purposes of the property of any public service company used and useful for service in this state and shall exercise such power whenever it deems such valuation or determination necessary or proper under any of the provisions of this title.

RCW 80.04.250(2) further provides:

> The commission has the power to make revaluations of the property of any public service company from time to time.

Staff recommends the Commission exercise its express authority to re-value PSE's utility plant, here.

Q. What is the legal test for establishing that re-valuation of plant is warranted?

A. The legal test looks to whether a change in condition has occurred. The re-valuation, then, recognizes only that change in condition. As the Washington State Supreme Court observed:

> It is, perhaps, needless to add that the statute contemplates but one valuation proceeding. All subsequent proceedings are rate-making proceedings, in which the department takes the valuations made in the rate-making proceeding as established, recognizing only changes in condition. This is not to say, of course, that conditions may not arise where an entire revaluation may be necessary. But the question under what conditions the necessity may arise is not presented here, and we do not decide it.[20] [Emphasis Added]

Q. What change in condition necessitates a revaluation of Colstrip Units 1 and 2?

A. The change in condition necessitating a revaluation is the Consent Decree and its substantial reduction to the expected service life of the facility, from 18 years to 4.5 years, and the corresponding reduction in the service value of the plant.

Q. Is there Commission precedent for the ordering of an adjustment to correct an imbalance in the reserve for accumulated depreciation?

A. Yes. In one general rate case, the Commission reduced Pacific Power and Light Company's rate base by adjusting its depreciation reserve.[21] In that case, the Commission ordered an adjustment to accumulated reserve to account for the understating of past depreciation on the company's books.

[20] *State ex rel. Pac. Power & Light Co. v. Dep't of Pub. Works*, 143 Wash. 67, 86, 254 P. 839 (1927).
[21] *WUTC v. Pacific Power and Light Co.*, Docket No. U-86-02, 78 PUR.4th 84, 94-95, Second Supplemental Order at 15 (September 19, 1986).

Q. Is Staff's recommendation punitive in your view?

A. No. As discussed more thoroughly below, Staff recommends amortizing the adjustment to the reserve in accumulated depreciation via a regulatory asset, thus making the Company whole for its investment in Colstrip Units 1 and 2.

Further, the Commission should remain mindful of the fact that shareholders, not ratepayers, bear the risk of obsolescence of utility plant. As the Commission has previously observed:

> "One of the inherent risks of the company's business which is borne by investors in utility securities and which enters into the risk element allowed for in the rate of return, is the risk of obsolescence of utility plant in advance of full recovery through depreciation."[22]

Accordingly, the returns the Company has been afforded include a risk premium, reflecting the reality that there is always the chance that one of its investments will suffer the fate of obsolescence.

Further still, it is worth considering not only that the Company's allowed rate of return considers the riskiness of investments, but also that those risk-adjusted returns were applied to an artificially high rate base at least since the decision to close Colstrip Units 1 and 2 and possibly for much longer. Because rate base has remained artificially high, ratepayers, in turn, have provided inflated returns to shareholders.[23]

[22] *Pub. Serv. Comm. v. Nw. Nat. Gas Co.*, Docket No. U-9117, 32 PUR.3d 355, First Suppl. Order, at 4 (Feb. 11, 1960).
[23] This second point could be considered cause for denying PSE a return of the depreciation reserve imbalance altogether. Indeed, the Rhode Island Supreme Court affirmed a determination by that State's Public Utilities Commission that a utility could not amortize a depreciation deficiency because the utility's investors had already received just compensation due to an inflated level of plant having been included in rate base. *Valley Gas Co. v. Burke*, 406 A2d 366, 379 (R.I. Oct. 1, 1979).

iv. Amortization of Colstrip Regulatory Asset

Q. Does Staff recommend that the Commission allow recovery of the adjustment to accumulated reserve for Colstrip Units 1 and 2?

A. Yes. However, if the Commission were so inclined it could make an adjustment to accumulated depreciation without providing for recovery of the unrecovered balance.

Q. Why does Staff recommend that the Commission authorize recovery of the reserve deficiency in this case?

A. Staff recommends that the Commission authorize amortization of the adjustment to the depreciation reserve because it believes the Company should be made whole for its investment in Colstrip Units 1 and 2. The deficiency in the depreciation reserve is largely, and directly, the direct result of the sudden change in useful life of the facility, a situation that could not have been known when establishing current depreciation rates. Staff's recommendations on Colstrip Units 1 and 2 represent an honest attempt to balance the impacts of early closure among ratepayers (both this generation and beyond) and the Company's shareholders. Advocating for a full disallowance would shift the balance of burden toward the Company's shareholders, and without just cause.

Q. Over what time period do you recommend amortizing this regulatory asset?

A. Staff recommends amortizing the regulatory asset over the 18-year period from January 1, 2018, to December 31, 2035. This time frame for amortization aligns cost recovery of the remaining balance of Units 1 and 2 with the expected remaining life of Units 3 and 4.

The practical basis for this alignment is that only the generations using the Colstrip facility as a whole (i.e. Colstrip Units 1-4) will contribute to costs associated with Colstrip. On January 1, 2036, at which time Units 3 and 4 are expected to be closed, the full original cost balance of all Colstrip units will have been cleared.

Q. Do you provide an exhibit showing Staff's adjustment to accumulated depreciation and the recommended amortization expense?

A. Yes. Exhibit CRM-3 shows the effect of the increase of $127,629,534 to accumulated depreciation at Line No. 4. The resulting amortization expense of $7,090,530 reflecting an 18-year amortization of the adjustment is shown at Line No. 9. These adjustments are reflected in Staff Adjustment 13.06A.

v. Alternative Recommendation

Q. Does Staff have an alternative recommendation for the Commission to consider?

A. Yes. In the event that the Commission determines an adjustment to the depreciation reserve (i.e., a reduction to rate base) is unwarranted, Staff recommends that the Commission, at a minimum, reject PSE's proposed depreciation rates for Colstrip Units 1 and 2. The Company's proposal to recover the remaining plant balance – 50 percent of the original cost of the facility – over the next 4.5 years of ratepayers is not only unfair to current ratepayers, it is inconsistent with the goal of matching costs to the value of plant consumed in rendering service over that period.

Staff recommends that the Commission, regardless of its decision regarding proper net plant in service amounts, authorize a depreciation expense for Colstrip Units 1 and 2 that is substantially less than what PSE has proposed.

Staff recommends that the annual depreciation expense be set at $6,805,438 which, as discussed above, represents ratepayers' pro rata consumption of the facility in 2018. However, Staff also recommends that the reserve imbalance be amortized immediately and so the total annual expense Staff recommends includes depreciation *and* amortization of costs associated with Colstrip Units 1 and 2. The total annual depreciation plus amortization expense under Staff's recommendation is $13,895,968. Therefore, in Staff's view, $13,895,968 is the fair level of expense for ratepayers in 2018.

In summary, if the Commission concludes no adjustment to accumulated reserve is warranted, there will be no amortization required. Under that scenario, the "fair" depreciation expense would include both (a) the annual pro rata allocation of depreciation ($6,805,438) and (b) the fair allocation of the reserve imbalance as matched to the remaining life of the broader Colstrip facility, including Units 3 and 4 ($7,090,530). The fair annual expense, whether it be called "depreciation and amortization" or simply "depreciation," is $13,895,968.

Under this alternative recommendation, or indeed any scenario in which the Commission authorizes a depreciation rate that is less than PSE's proposal of $27.2 million, it should be clear that there will be net plant remaining on PSE's books when Colstrip Units 1 and 2 are retired. Thus, at the time of retirement, it will be appropriate to consider creation of a regulatory asset and amortization period to clear that uncollected plant balance.

If the Commission decides to accept Staff's depreciation expense of $6,805,438 but without amortization of the reserve imbalance, and the plant closes as expected on July 1, 2022, the unrecovered plant balance (and amount appropriate for consideration for amortization) would be $127,629,534.[24] Note that this is the precise amount Staff (in its primary recommendation) recommends be added to accumulated depreciation reserve. Thus, it is important to recognize that a regulatory asset will likely be necessary regardless of the depreciation rate deemed appropriate by the Commission. The only difference is the point in time at which that regulatory asset begins amortization.

Q. What happens if Colstrip Units 1 and 2 close prior to July 1, 2022?

A. Under all scenarios, if Colstrip Units 1 and 2 close prior to July 1, 2022, there will be an unrecovered plant balance.[25] At the time of closure, it will be appropriate to consider transferring the remaining plant balance to a regulatory asset, or added to the existing regulatory asset (if such a regulatory asset is created through this proceeding). There is no need at this time to account for the possibility that Colstrip Units 1 and 2 will close prior to the settled-upon closure date of July 1, 2022.

Q. Does this conclude your testimony?

A. Yes, it does.

[24] Net plant in service ($158,254,007) less 4.5 years of depreciation at $6,805,438 equals $127,629,534.
[25] This is so, even if the Commission were to authorize depreciation rates as proposed by PSE.