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July 17, 2020

Via Electronic Filing

OREGON PUBLIC UTILITY COMMISSION
ATTENTION: FILING CENTER
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**RE: Docket No. UE 374 – In the Matter of PACIFICORP, dba
PACIFIC POWER, Request for a General Rate Revision.**

Included with this filing are Cover letter, Certificate of Service and Service List

Attached are the following documents for Staff Rebuttal and Cross-
Answering Testimony:

Exhibit 1700 - confidential pages are: 23-28, 31 & 34

Exhibit 1701 - is confidential

Exhibit 1702 - is confidential and filed as electronic spreadsheet.

Exhibit 1703 - 1706

/s/ Kay Barnes

Kay Barnes

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CERTIFICATE OF SERVICE

UE 374

I certify that I have, this day, served the foregoing document upon all parties of record in this proceeding by delivering a copy in person or by mailing a copy properly addressed with first class postage prepaid, or by electronic mail pursuant to OAR 860-001-0180, to the following parties or attorneys of parties.

Dated this 17th day of July, 2020 at Salem, Oregon

A handwritten signature in cursive script, reading "Kay Barnes", is written over a horizontal line.

Kay Barnes
Public Utility Commission
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CASE: UE 374
WITNESS: STEVE STORM

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 1700

**Rebuttal and Cross-Answering
Testimony**

July 17, 2020

1 **Q. Please state your name, occupation, and business address.**

2 A. My name is Steve Storm. I am a Senior Economist employed in the ERFA
3 Division of OPUC. My business address is 201 High Street SE, Suite 100,
4 Salem, Oregon. 97301.

5 **Q. Have you previously provided testimony in this case?**

6 A. Yes, I sponsored Staff Exhibits Staff/800-801.

7 **Q. What is the purpose of your testimony?**

8 A. I provide background on PacifiCorp's (or Company) coal plant
9 decommissioning costs and discuss the Kiewit decommissioning studies,¹
10 Intervening Parties' related topical coverage in Opening Testimony,
11 PacifiCorp's related topical coverage in the Company's Reply Testimony, the
12 Independent Evaluation of the Kiewit studies, and the Commission's use of the
13 studies' results in the proceeding at hand.

14 **Q. Did you prepare any exhibits for this docket?**

15 A. Yes, I prepared confidential Exhibit Staff/1701, consisting of 42 pages;
16 confidential Exhibit Staff/1702, which is an electronic-only exhibit; Staff/1703,
17 consisting of one page; Staff/1704, consisting of two pages; Staff/1705,
18 consisting of two pages, and Staff/1706, consisting of one page.

19 **Q. How is your testimony organized?**

20 A. My testimony is organized as follows:

21 Summary of Staff's Recommendations..... 3

¹ There are two PacifiCorp-sponsored decommissioning cost studies performed by Kiewit. The first was filed, in Docket No. UM 1968, on January 16, 2020. The second, was filed, also in Docket No. UM 1968, on March 16, 2020.

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SUMMARY OF STAFF'S RECOMMENDATIONS

Q. What do you recommend to the Commission?

A. Staff recommends the Commission:

1. Order PacifiCorp to utilize the estimated decommissioning costs included in PacifiCorp's initial filing in UM 1968 for each coal plant and its constituent unit(s) included in Oregon rates.
2. Allow PacifiCorp to make a filing subsequent to the rate-effective date in this proceeding to determine whether the decommissioning costs set in UE 374 should be adjusted.

ISSUE 1. BACKGROUND ON ESTIMATED DECOMMISSIONING COSTS

Q. Why is establishing the appropriate decommissioning costs for PacifiCorp's coal-fueled generating plants perhaps more important than in PacifiCorp's last general rate case proceeding?

A. Establishing appropriate decommissioning costs for Oregon is necessary given Oregon's assured exit from coal-fueled resources, legislatively mandated to be no later than December 31, 2029. Because other states may continue to take costs and benefits from coal-fueled resources after Oregon exits those plants, it is necessary to determine Oregon's allocated share of decommissioning costs. Importantly, the 2020 Protocol addresses Oregon's obligations for decommissioning costs.

Q. Please summarize the 2020 Protocol's treatment of coal plant decommissioning cost obligations.

A. The 2020 Protocol contains provisions that address Oregon's exit from coal-fueled generating plants and obligations related to corresponding decommissioning costs. Specifically, Section 4.3 addresses the allocation of decommissioning costs among PacifiCorp's states. Generally speaking, for plants that Oregon "exits" with the other states (meaning that the generating resources is closed as a "system"), Oregon's obligation for decommissioning costs is determined based on the actual costs incurred. For plants that Oregon "exits" ahead of one or more states, Oregon's obligation for decommissioning costs is determined based on an estimate of those costs, as set forth in the 2020 Protocol. That Agreement does not explicitly dictate the time for

determining such estimates; however, it does contain provisions related to process.

Q. Does the 2020 Protocol address the ability of a state's commission to make a final determination of the "just and reasonable" amount of decommissioning cost for that state?

A. Yes. Section 4.3.1.3 states that such a determination "will remain exclusively with each Commission and will be determined in the depreciation dockets in which the Decommissioning Costs are included."²

Q. Does the 2020 Protocol provide for an individual state review process?

A. Yes. Section 4.3.4 states that "[a]ny Party, at its discretion and cost, may pursue actions it deems necessary or appropriate to review and evaluate the [d]ecommissioning [s]tudies or [d]ecommissioning [c]osts and may take any positions based on its review and findings."³ Additionally, "[i]f a Commission issues an order identifying an independent evaluator for the [d]ecommissioning [s]tudies, and the Commission Order provides for the deferral and later recover in rates of the cost of the independent evaluator, the Company agrees to initially pay for this independent evaluation."⁴

Q. Has Oregon made use of this clause of the 2020 Protocol?

A. Yes. The Commission, at a May 7, 2020, Special Public Meeting, adopted Staff's recommendation that the Commission appoint Dr. Ranajit Sahu as the

² Page 27 of the 2020 Protocol.

³ Page 29 of the 2020 Protocol.

⁴ Ibid.

1 Independent Evaluator for PacifiCorp's Decommissioning Studies and Staff's
2 recommendation that the Commission allow PacifiCorp to file a deferral for the
3 later recovery in rates of the cost of the Independent Evaluator.⁵ The
4 Commission entered into a contract with Dr. Sahu to perform this evaluation
5 and Staff discusses his evaluation later in this testimony.

6 **Q. Are estimated decommissioning costs for PacifiCorp's coal plants**
7 **included in the proceeding at hand?**

8 A. Yes. The Administrative Law Judge for this proceeding granted PacifiCorp's
9 motion to expand the proceeding "to include a determination of the
10 depreciation rates for PacifiCorp's coal-fired resources and allow PacifiCorp
11 to supplement its UE 374 filing with certain materials previously submitted
12 in...UM 1968."⁶

⁵ The Minutes of the May 7, 2020 Special Public Meeting are at https://oregonpuc.granicus.com/DocumentViewer.php?file=oregonpuc_702189b7b9dc77b4703705805c2fddbc.pdf&view=1 (accessed by Staff on July 7, 2020).

⁶ Administrative Law Judge Ruling of April 2, 2020 in UE 374. The UM 1968 proceeding is PacifiCorp's most recently filed depreciation study.

ISSUE 2. PRIOR TESTIMONY ON ESTIMATED DECOMMISSIONING COSTS**PacifiCorp's Opening Testimony**

Q. How did PacifiCorp estimate the decommissioning costs of its coal plants that are included in current rates?

A. PacifiCorp states that it used a "decommissioning cost of \$40 per kilowatt for all coal-fueled plants."⁷

Q. How did PacifiCorp estimate the decommissioning costs of its coal plants in its initial UM 1968 Opening Testimony?

A. PacifiCorp states that it performed updated decommissioning cost studies "in the 2014 to 2016 timeframe on a selection of its coal-fueled and natural-gas-fueled generation resources considered reasonable proxy resources for extrapolation across the fleet."⁸ The Company also states that these studies were the primary basis for the decommissioning costs in its initial UM 1968 filing, with "certain updates made to reflect plant specific attributes and updated commodity and scrap market costs."⁹ PacifiCorp's opening testimony in UM 1968 included its estimated future decommissioning costs by individual coal plant as exhibit PAC/402 in UM 1968.

Q. What parties were involved in establishing the estimated decommissioning costs in exhibit PAC/402?

A. PacifiCorp states that it "hired a third-party engineering firm to complete the

⁷ PAC/400, Teply/11 in Docket No. UM 1968, filed on September 13, 2018. Docket No. UM 1968 is the most recently filed PacifiCorp depreciation proceeding.

⁸ Ibid.

⁹ Ibid.

1 baseline decommissioning studies.”¹⁰ Additionally, and as above, PacifiCorp
2 either provided or modified some estimates of line item costs or estimated cost
3 parameters, with the two parties’ collective result summarized in PAC/402.

4 **Q. What did the baseline decommissioning studies include?**

5 A. PacifiCorp states that the values in Exhibit PAC/402 in UM 1968 include “plant
6 demolition, ash pile and ash and abatement and closure, asbestos and other
7 hazardous materials abatement and remediation, and final site cleanup and
8 restoration as applicable to each plant.”¹¹

9 **Q. Does the 2020 Protocol discuss an update to these decommissioning**
10 **studies?**

11 A. Yes. The 2020 Protocol discusses such an update in Section 4.3.1. The
12 Company was to undertake a “contractor-assisted engineering study of
13 decommissioning costs...to estimate appropriate decommissioning cost
14 reserve requirements for the Jim Bridger, Dave Johnston, Hunter, Huntington,
15 Naughton, Wyodak, and Hayden coal plants,”¹² with a separate “contractor-
16 assisted engineering study of decommissioning costs”¹³ to be completed
17 somewhat later for the Company’s Colstrip plant.¹⁴ The Company was to
18 provide the information from these studies as a supplemental filing in all
19 applicable depreciation dockets. The applicable depreciation docket in Oregon

¹⁰ PAC/400, Teply/12 in Docket No. UM 1968.

¹¹ Ibid.

¹² Page 26 of the 2020 Protocol.

¹³ Ibid.

¹⁴ Ibid.

1 is the UM 1968 proceeding.

2 **Q. How many coal plants does PacifiCorp own, on either a wholly- or**
3 **partially-owned basis?**

4 A. PacifiCorp has an ownership stake in 10 coal plants.¹⁵ The two
5 decommissioning cost studies filed by the Company earlier this year in
6 UM 1968 cover eight of PacifiCorp's 10 coal plants.

7 **Q. Which PacifiCorp coal plants did the two studies not cover?**

8 A. PacifiCorp has partial-ownership interests in two plants not included in either
9 study: the Cholla coal plant in Arizona and the Craig coal plant in Colorado.

10 **Q. Were these two studies completed and has PacifiCorp filed these two**
11 **decommissioning studies?**

12 A. Yes. PacifiCorp contracted with Kiewit Engineering Group, Inc. (Kiewit) to
13 conduct the contractor-assisted decommissioning studies and the Company
14 filed the first of the two studies on January 16, 2020,¹⁶ with the second study
15 filed on March 16, 2020.¹⁷ Both filings were in the UM 1968 proceeding. Each
16 study included the estimated decommissioning costs of the respective coal
17 plants mentioned above.

18 **Q. What changed in PacifiCorp's supplemental direct testimony from the**
19 **initially filed direct testimony in UM 1968?**

¹⁵ PacifiCorp's public web page associated with its thermal generation plants, located at <https://www.pacificorp.com/energy/thermal.html#:~:text=PacifiCorp%20operates%2017%20thermal%20electric,%2C%20Colorado%2C%20Oregon%20and%20Montana> and accessed by Staff on July 7, 2020.

¹⁶ Exhibit PAC/1900.

¹⁷ Exhibit PAC/1901.

1 A. PacifiCorp's supplemental direct testimony, filed February 14, 2020, in
2 UM 1968, proposed two categories of changes as related to the depreciation
3 and estimated decommissioning costs of its coal plants. The first category
4 involves different depreciable lives for its coal plants, such that the now
5 proposed depreciable lives are consistent with the Company's 2019 Integrated
6 Resource Plan and with those in the 2020 Protocol. The second category is
7 revised decommissioning costs, to be consistent with the Decommissioning
8 Study.¹⁸

9 **Q. Did the studies distinguish between two cost components included in**
10 **the revised decommissioning costs?**

11 A. Yes. As described in PacifiCorp's supplemental testimony, the first component
12 is the "Base Estimate," which includes revised cost estimates for
13 decommissioning and reclamation. PacifiCorp identifies the second
14 component as "Other Plant Closure Costs," which includes cost items such as
15 "material and supply inventory, rolling stock, coal pile excavation and haul off,
16 coal mine closure and other miscellaneous costs."¹⁹

17 **Q. Are both components reflected in PacifiCorp's revised revenue**
18 **requirement?**

¹⁸ PAC/1800, McDougal/1. The supplemental direct testimony did not include impacts of the decommissioning study filed March 16, 2020, regarding Colstrip Units 3 and 4. While PacifiCorp's supplemental direct testimony proposed changes to depreciation parameters and costs for other Company thermal generation plants, this testimony concerns only those generating plants that are coal-fueled.

¹⁹ PAC/1800, McDougal/3. Staff notes that the decommissioning studies filed on January 16 and March 16, 2020, in UM 1968 identify the second category of costs as "Other Items to Consider." See; e.g., page TOC-2 of the report filed January 16, 2020 and the associated list of cost line items included as "Other Items to Consider."

1 A. Yes.²⁰

2 **Q. Did PacifiCorp's supplemental filing describe how each component is**
3 **included in revenue requirement?**

4 A. Yes. PacifiCorp reflected the impact of the first component (changed
5 depreciable lives and the January 16, 2020 study's "Base Estimate") by
6 revising the depreciation rates for each coal plant.²¹

7 **Q. How did PacifiCorp describe its incorporation of costs of the second**
8 **component?**

9 A. The Company stated that it "layered on the Other Plant Closure Costs
10 identified in the Decommissioning Study as separately included closure
11 costs."²²

12 **Q. How did PacifiCorp reflect the likely future of states' having different**
13 **remaining depreciable lives for some coal plants for these "layered on"**
14 **costs?**

15 A. PacifiCorp stated that these ("Other Costs to Consider") "were spread equally
16 over the remaining life the [sic] last retired unit."²³

17 **Q. What did PacifiCorp say is the incremental annual revenue requirement**
18 **impact of this change?**

19 A. PacifiCorp stated that the incremental annual revenue requirement of this

²⁰ Ibid.

²¹ Ibid.

²² Ibid.

²³ Ibid.

change, on an Oregon-allocated basis, is \$14.2 million.²⁴

Q. What did PacifiCorp say is the incremental annual revenue requirement impact of 1) changing the depreciable lives, 2) increasing the Net Salvage cost for the “Base Estimate” decommissioning costs, and 3) increasing the Net Salvage cost for the “Other Items to Consider” costs?

A. PacifiCorp stated that the incremental annual revenue requirement of these changes is collectively \$22.6 million on an Oregon-allocated basis.²⁵

Q. Did PacifiCorp identify the increased decommissioning costs by coal plant?

A. Yes. PacifiCorp’s Exhibit PAC/1704, Teply/1 identifies the January 16, 2020, Base Cost individually for the seven coal plants included in the decommissioning study filed January 16, 2020. PacifiCorp’s Exhibit PAC/1705, Teply/1 identifies the January 16, 2020 Other Cost to Consider individually for the seven coal plants included in the decommissioning study filed January 16, 2020, each of which is incorporated into annual depreciation expense over the coal plants’ respective remaining depreciable lives. PacifiCorp’s Exhibit PAC/1801, McDougal/1 identifies the change in annual depreciation by individual plant, but does not include a decomposition of this amount.

Q. What did PacifiCorp, in the Company’s supplemental direct testimony, recommend to the Commission?

²⁴ Ibid.

²⁵ Ibid.

1 A. PacifiCorp recommended that the Commission “find that the depreciation
2 rates sponsored by Mr. Spanos in the 2018 Depreciation Study based on
3 projected December 31, 2020 balances are fair and reasonable
4 depreciation rates for the Company.”²⁶ The Company also recommended
5 “that the Commission order the Company to implement the changes in
6 depreciation expense in its accounts and records effective January 1,
7 2021.”²⁷

8 Intervenors’ Opening Testimony

9 **Q. Did Intervenors discuss the two coal plant decommissioning costs**
10 **PacifiCorp filed this year in Opening Testimony?**

11 A. Yes. Both the Citizens’ Utility Board of Oregon (CUB) and the Alliance of
12 Western Energy Consumers (AWEC) discussed the studies in their respective
13 Opening Testimonies.

14 **Q. What were the key points in CUB’s Opening Testimony regarding coal**
15 **plant decommissioning cost estimates?**

16 A. CUB did not take a substantive position on coal decommissioning costs, stating
17 that it “will wait until after the Independent Evaluator’s report to address level of
18 additional decommissioning that should be placed into Oregon rates.”²⁸

19 CUB did raise the issue that any change in coal plant decommissioning

²⁶ PAC/1800, McDougal/6.

²⁷ Ibid.

²⁸ Exhibit CUB/100, Jenks/10.

costs should be non-bypassable.²⁹ Staff will address this issue in its July 24, 2020 Rebuttal Testimony.³⁰

Q. What were the key points in AWEC's Opening Testimony regarding coal plant decommissioning cost estimates?

A. AWEC noted that the decommissioning study prepared by Kiewit includes numerous assumptions and calculations that "were not provided to PacifiCorp or other parties."³¹ AWEC also asserts that, due to the non-transparency of these assumptions and calculations, "parties and the Commission cannot fairly evaluate the Kiewit Report."³²

Q. What did AWEC recommend to the Commission regarding coal plant decommissioning costs?

A. AWEC recommended the Commission rely upon the decommissioning costs included in PacifiCorp's initial Opening Testimony for establishing rates in the current proceeding, and recommended that—if the Commission chooses to rely upon the decommissioning costs included in PacifiCorp supplemental Opening Testimony, it "make adjustments to several cost categories."³³

Q. What other observations did AWEC make regarding the decommissioning study filed on January 16, 2020?

A. AWEC noted that, for coal plants with common closure dates, there exists an

²⁹ Exhibit CUB/100, Jenks/27.

³⁰ ALJ Lackey's July 9, 2020 Ruling.

³¹ Exhibit AWEC/300 Kaufman/21. The decommissioning study AWEC referred to here is the one filed by PacifiCorp in UM 1968 on January 16, 2020.

³² Exhibit AWEC/300 Kaufman/23.

³³ Ibid. Both PacifiCorp filings were in UM 1968.

1 opportunity for a “true-up” of the balances of the depreciation reserve to
2 account for any differences between estimated and actual decommissioning
3 costs. AWEC added that the same situation does not hold for those coal plants
4 not having common closure dates, and because of this, Oregon will not receive
5 any credit for over-payment of decommissioning costs and will not be liable for
6 any under-payment. The result is either harm to PacifiCorp’s Oregon
7 customers or to the Company.³⁴

8 AWEC states that, while the base estimate of decommissioning costs are
9 included in PacifiCorp witness Mr. Spanos’ calculation of depreciation rates,
10 the “Other Items to Consider” amounts “appear to be integrated elsewhere in
11 PacifiCorp’s testimony.” AWEC also noted the decommissioning study included
12 “Asset Retirement Obligations (“ARO”), grading and topsoil, and owner project
13 costs.”³⁵

14 **Q. Did AWEC explain its recommendation that the Commission disregard**
15 **the cost estimates in the decommissioning study?**

16 A. Yes. AWEC noted that some values in the study appear to be generated by a
17 model using specific assumptions due to their “un-rounded” amounts. AWEC
18 states that “PacifiCorp, however, did not require that Kiewit provide the bases
19 for its calculations or assumptions, and Kiewit has not provided this
20 information.”³⁶

³⁴ Exhibit AWEC/300 Kaufman/22.

³⁵ Exhibit AWEC/300 Kaufman/22-23.

³⁶ AWEC includes, as Exhibit AWEC/302, PacifiCorp’s response to AWEC Data Request 0123, in which the Company states that it “does not have possession or control of work papers prepared by

1 **Q. What did AWEC say regarding decommissioning costs and incentives?**

2 A. AWEC's testimony distinguishes between PacifiCorp's incentives vis-à-vis the

3 earlier decommissioning studies and those filed this year in UM 1968.

4 According to AWEC, as the earlier decommissioning studies were in a context

5 in which PacifiCorp's Multi-State Protocol (MSP) inter-jurisdictional cost

6 allocation in effect at the time did not incorporate provisions for states exiting

7 prior to closure of a coal plant, the Company had no incentive to have

8 overstated estimated decommissioning costs in rates.³⁷

9 Conversely, AWEC concluded that PacifiCorp's incentive under the 2020

10 Protocol is to have over-stated estimates of decommissioning costs in

11 customer rates, "because that will limit investor risk, at the expense of

12 ratepayers."³⁸

13 **Q. Did AWEC contrast how PacifiCorp performed its earlier**
14 **decommissioning cost studies versus those in the Company's original**
15 **filing versus those in the decommissioning studies filed this year?**

16 A. AWEC noted that PacifiCorp's practice in earlier decommissioning cost

17 studies, such as those included in depreciation expense in current customer

18 rates, were based on a uniform decommissioning cost study of \$40/kW of

19 capacity for each of the Company's coal plants. This contrasts with

20 PacifiCorp's practice in both the decommissioning cost studies included in its

Kiewit Engineering Group or its subcontractors supporting the cost estimates identified in the report submitted by Kiewit."

³⁷ AWEC/300, Kaufman/24.

³⁸ Ibid.

1 initial filing in UM 1968 and with those in the decommissioning cost studies
2 filed this year. AWEC notes that the two latter decommissioning cost studies
3 were performed by a third-party contractor and asserts that, as the 2020
4 Protocol was not yet in effect at the time of PacifiCorp's initial filing in
5 UM 1968, while it was in effect at the time the Company filed the
6 decommissioning cost studies this year in UM 1968, PacifiCorp was then
7 incented to include over-estimated decommissioning cost estimates in the
8 studies filed earlier this year.³⁹

9 **Q. Staff noted AWEC's recommended alternative, should the Commission**
10 **choose to rely upon PacifiCorp's supplemental filing, involved**
11 **adjustments to the estimated decommissioning costs in that filing. What**
12 **were these contingent recommendations?**

13 A. AWEC recommended the Commission exclude some or all of the costs related
14 to what AWEC considered to be over-stated estimates of different types of
15 cost in the decommissioning cost studies filed this year, and provided a list of
16 these at AWEC/300, Kaufman/24-25, and discusses them on the subsequent
17 pages. Staff will comment on some of these adjustments later in this
18 testimony.

19 **Q. How does Staff summarize AWEC's Opening Testimony regarding the**
20 **estimates of decommissioning costs to be included in rates as a result of**
21 **the proceeding at hand?**

³⁹ AWEC/300, Kaufman/23-24.

1 A. AWEC states that the evidentiary basis for the estimated decommissioning
2 costs in PacifiCorp's initial filing in UM 1968 are stronger than for those filed
3 this year and should therefore be the estimates of decommissioning costs
4 relied upon by the Commission.⁴⁰ Additionally, "[b]ecause PacifiCorp bears the
5 burden of proof in this case, it must demonstrate the just and reasonable
6 nature of the costs it proposes to include in customers rates. Without the
7 underlying data and assumptions from the Kiewit report, PacifiCorp cannot
8 satisfy this burden with respect to its D&R costs."⁴¹

9 **Q. What was the focus of PacifiCorp's Reply Testimony regarding the**
10 **estimates of coal plant decommissioning?**

11 A. The entire focus of PacifiCorp's Reply Testimony was disputing AWEC's
12 Opening Testimony regarding this issue. The Company discussed this in
13 approximately six pages.⁴²

14 **Q. What were PacifiCorp's major points in Reply Testimony regarding**
15 **estimated coal plant decommissioning costs?**

16 A. Staff identifies PacifiCorp's major points in the Company's Reply Testimony
17 as:

- 18 1. The decommissioning studies filed by PacifiCorp on January 16, 2020,
19 were developed under the 2020 Protocol, which was adopted by the
20 Commission, including its approval of a stipulation to which AWEC was a

⁴⁰ AWEC/300, Kaufman/24.

⁴¹ AWEC/300, Kaufman/23. AWEC's "D&R costs" are costs for decommissioning and remediation; i.e., those costs that are the topic of this testimony.

⁴² See PAC/2400, Van Engelenhoven/9-16.

1 signatory.

- 2 2. As a signatory of a stipulation in support of the 2020 Protocol, AWEC
3 agreed that a “thorough site-specific decommissioning and site restoration
4 study was necessary to more accurately estimate the costs of
5 decommissioning and site restoration.”⁴³
- 6 3. Acknowledgement of “the fact that Oregon customers will only pay
7 estimated decommissioning costs for certain coal-fired resources could
8 potentially create an incentive to over-estimate by the Company but also to
9 under-estimate by Oregon customers.”⁴⁴
- 10 4. The 2020 Protocol includes two mechanisms to ensure that PacifiCorp’s
11 decommissioning studies are “accurate and impartial.” The mechanisms
12 are:
- 13 a. PacifiCorp’s commissioning of “an independent third-party to develop
14 the updated decommissioning studies,” and Kiewit provided this.⁴⁵
- 15 b. The Commission can issue an order identifying an independent
16 evaluator to examine the decommissioning studies, and—based on
17 Staff’s recommendation—it has done so.
- 18 5. AWEC’s recommendation that the Commission should adhere to
19 PacifiCorp’s initially filed depreciation studies because their evidentiary
20 basis is stronger than that for the decommissioning studies filed in 2020

⁴³ PAC/.2400, Van Engelenhoven/10.

⁴⁴ PAC/.2400, Van Engelenhoven/11.

⁴⁵ Ibid.

1 “improperly conflates ‘evidentiary basis’ with impartiality.”⁴⁶

2 a. As AWEC does not consider that Kiewit, not PacifiCorp performed the

3 studies; and

4 b. The decommissioning studies performed by Kiewit “constitute an

5 Association for the Advancement of Cost Engineering Class 3 estimates

6 which have an accuracy range of minus 20 percent to plus 30.”⁴⁷

7 6. AWEC’s reasoning that PacifiCorp “failed to meet its evidentiary burden to

8 support the Kiewit Decommissioning Studies because the Company has

9 not provided Kiewit’s workpapers“ is erroneous, as:

10 a. “Kiewit approached these studies at arm’s length from PacifiCorp and

11 other parties and is understandably unwilling to share its proprietary

12 information because of competitive concerns;” and

13 b. Parties to the 2020 Protocol anticipated this issue “by developing a

14 process for an independent audit of the independent decommissioning

15 studies.”⁴⁸

16 7. The Commission’s hypothetical acceptance of AWEC’s proposal to use the

17 Company’s initially filed estimates of decommissioning costs, which are

18 Class 5 estimates, did not include site reclamation, and are “far less

19 detailed and accurate than the Class 3 studies Kiewit prepared.” Due to this

20 omission of site reclamation costs, use of the initially filed depreciation

⁴⁶ PAC/.2400, Van Engelenhoven/12.

⁴⁷ Ibid. Staff omits PacifiCorp’s footnote citing its earlier testimony.

⁴⁸ PAC/.2400, Van Engelenhoven/12-13. Staff omits PacifiCorp’s footnote here.

1 studies would not reflect all relevant costs.⁴⁹

2 8. AWEC's argument that, if the Commission adopts the decommissioning
3 studies filed January 16, 2020, then "costs should be substantially reduced"
4 is contrary to the stipulation in support of the 2020 Protocol, and AWEC's
5 downward adjustment to the studies' costs "attempts an improper end run
6 around" the process to which AWEC agreed, "whereby an independent
7 evaluator examines the accuracy and fairness of the Kiewit
8 Decommissioning Studies."⁵⁰

9 9. AWEC's recommendation that, if the Commission adopts the
10 decommissioning studies filed January 16, 2020, it should make
11 adjustments in a number of different cost categories should be rejected for
12 multiple reasons, including:

- 13 a. AWEC's recommendations, as pertaining to the different cost
14 categories, are unspecific and unsupported.
15 b. AWEC's recommendations are, at times, inconsistent.
16 c. AWEC's adjustments "are contrary to the decision to provide a
17 consistent approach across all facilities so that no one party picks and
18 chooses what to include or based on that interested party's sole
19 judgement."⁵¹

⁴⁹ PAC/.2400, Van Engelenhoven/13. While Staff believes PacifiCorp's footnotes are not aligned at this point, its Footnote 18 cites the 2020 Protocol's Appendix A as defining "decommissioning costs" as including remediation costs.

⁵⁰ PAC/.2400, Van Engelenhoven/14.

⁵¹ PAC/.2400, Van Engelenhoven/14-15.

1 10. AWEC's assertion that the removal of pumping assets may not be
2 necessary is dependent upon its "related argument that the Company's
3 water rights could be readily sold," and PacifiCorp's Reply Testimony at
4 asserts that "this assumption is misplaced."⁵²

5 **Q. What was PacifiCorp's explanation on this last point?**

6 A. PacifiCorp's explanation is that:

- 7 1. AWEC's assertion regarding the value of water for oil and gas uses is
8 unreasonable as applied to the entirety of PacifiCorp's transferable water
9 rights.⁵³
- 10 2. AWEC's argument that PacifiCorp should have considered the value of
11 water rights when analyzing the emissions control investments at Hunter
12 Unit 1 mischaracterizes Hunter's water rights, and the Company does not
13 own any "actual water rights associated with the Hunter plant."⁵⁴
- 14 3. AWEC's assumption that "there is a reliable market for the water used by
15 the Hunter plant if it were moved south to Lake Powell" is inaccurate.⁵⁵

⁵² PAC/2400, Van Engelenhoven/16.

⁵³ PAC/2600, Ralston/25.

⁵⁴ PAC/2600, Ralston/26.

⁵⁵ PAC/2600, Ralston/27.

ISSUE 3. OPUC'S INDEPENDENT EVALUATION REPORT

Q. Was Dr. Sahu's confidential independent evaluation of the contents and costs of PacifiCorp's two studies of coal plant decommissioning cost estimates independent?

A. Yes. Dr. Sahu lists the documents and materials available to him on pages 7 – 8 of his narrative report.⁵⁶

Q. What were Dr. Sahu's primary observations and conclusions regarding the decommissioning studies filed by PacifiCorp on January 16, 2020, and on March 16, 2020?

A. Staff identifies Dr. Sahu's primary observations and conclusions as:

[begin confidential]

1. [REDACTED]
[REDACTED]
[REDACTED]⁵⁷
2. [REDACTED]
[REDACTED]⁵⁸
3. [REDACTED]
[REDACTED]
[REDACTED]

⁵⁶ Staff includes Dr. Sahu's Independent Evaluation Report ("Sahu Report") as confidential Exhibit Staff/1701 and his accompanying confidential Excel file ("Sahu Report Appendix A") as confidential Exhibit Staff/1702.

⁵⁷ Page 4 of the Sahu Report.

⁵⁸ Ibid, page 5.

- 1 [REDACTED] 59
- 2 4. [REDACTED]
- 3 [REDACTED]
- 4 [REDACTED]
- 5 [REDACTED]
- 6 [REDACTED] 60
- 7 5. [REDACTED]
- 8 [REDACTED]
- 9 [REDACTED]
- 10 [REDACTED] 61
- 11 6. [REDACTED]
- 12 [REDACTED]
- 13 [REDACTED] 62
- 14 7. [REDACTED]
- 15 [REDACTED]
- 16 [REDACTED] 63
- 17 8. [REDACTED]
- 18 [REDACTED]
- 19 [REDACTED] XX

⁵⁹ Ibid, page 5.

⁶⁰ Ibid, page 5.

⁶¹ Ibid, page 4.

⁶² Ibid, page 5.

⁶³ Ibid, page 5.

1 [REDACTED]
2 [REDACTED]
3 [REDACTED] 64
4 9. [REDACTED]
5 [REDACTED]
6 [REDACTED]
7 [REDACTED]
8 [REDACTED] 65
9 10. [REDACTED]
10 [REDACTED] 66
11 11. [REDACTED]
12 [REDACTED]
13 [REDACTED] 67
14 12. [REDACTED]
15 [REDACTED]
16 [REDACTED] 68
17 13. [REDACTED]
18 [REDACTED]
19 [REDACTED] 69

⁶⁴ Page 5.

⁶⁵ Page 5.

⁶⁶ Ibid, page 6.

⁶⁷ Ibid.

⁶⁸ Ibid.

⁶⁹ Ibid.

- 1 [REDACTED]
- 2 [REDACTED]
- 3 [REDACTED]
- 4 [REDACTED]
- 5 [REDACTED] [end confidential]⁷⁰

⁷⁰ Ibid.

ISSUE 4. STAFF'S RECOMMENDATIONS REGARDING ESTIMATED**DECOMMISSIONING COSTS**

Q. What was the estimated decommissioning cost for the seven plants in PacifiCorp's initial filing in UM 1968?

A. The total in the Company's initial filing in the UM 1968 depreciation proceeding was \$474 million⁷¹ on a PacifiCorp system basis.⁷²

Q. What was the estimated decommissioning cost for the seven plants in the decommissioning study PacifiCorp filed January 16, 2020?

A. The total in the Kiewit study filed January 16, 2020, was [begin confidential] [REDACTED] [end confidential],⁷³ on a PacifiCorp system-basis.

Q. How do estimated decommissioning costs in PacifiCorp's supplemental Opening Testimony for these seven coal plants compare with the total estimated decommissioning costs for those plants in its initial Opening Testimony?

A. PacifiCorp's supplemental Opening Testimony proposes total estimated decommissioning costs that are [begin confidential] [REDACTED] [end confidential] percent higher than they were in the Company's initial Opening Testimony.

⁷¹ PAC/402 in UM 1968. PacifiCorp's response to Staff data request 729 indicated the Company had not intended entering the value for the Wyodak twice. Therefore, Staff's value differs from that which would result from aggregating the values in PAC/1702 by the amount entered (twice) in PAC/1702 for Wyodak. Staff includes PacifiCorp's response to Staff data request 729 as Exhibit Staff/1703.

⁷² By "PacifiCorp system-basis" Staff means PacifiCorp's share of ownership is reflected in both total plan costs (and total plant capacity), and that this share represents the collective system and not any one state.

⁷³ This value is the summation of "Net Cost PacifiCorp Ownership" on page 16 of the decommissioning study filed on January 16, 2020, in UM 1968.

1 Q. Citing it as PacifiCorp's value earlier, you indicated the estimated
2 decommissioning costs in current rates are based on \$40/kW. What were
3 the comparable values for these seven coal plants in both PacifiCorp's
4 initial and supplemental Opening Testimony?

5 A. These were, on a weighted average basis, based on PacifiCorp's ownership
6 share for both costs and capacity, \$78/kW in the Company's initial Opening
7 Testimony filing and [begin confidential] [REDACTED] [end confidential] in its
8 supplemental Opening Testimony. The increase in this metric between the
9 initial and supplemental filings in UM 1968 is also an increase of [begin
10 confidential] [REDACTED] [end confidential] percent.

11 Q. An estimated cost of [begin confidential] [REDACTED] [end confidential] on
12 a PacifiCorp system basis to decommission seven of PacifiCorp's coal-
13 fueled generating plants represents a large increase. Does Oregon's
14 share of all of this incremental, and—on a plant by plant, unit-by-unit
15 basis— need to be recovered between the rate effective date in this
16 proceeding and the time Oregon exits these coal plants?

17 A. No and no. Some portion of the existing depreciation reserve, previously paid
18 by Oregon ratepayers over many years, is to be applied to the
19 decommissioning of PacifiCorp's coal plants at the time the plants, or their
20 constituent units, are decommissioned.⁷⁴

21 Q. Does Staff concur with Dr. Sahu's conclusion that "[t]here is no basis to

⁷⁴ Staff's recommendation regarding estimated decommissioning costs pertains to all of PacifiCorp's coal-fueled generating plants and their constituent units.

1 **conclude” that the results of PacifiCorp’s most recent decommissioning**
2 **analyses of coal plants are consistent with AACE Class 3 level of**
3 **accuracy?”⁷⁵**

4 A. Yes. PacifiCorp did not negotiate inclusions of Kiewit’s methods and
5 parameters in its report and, even with results reviewed by two third-party
6 demolition companies, Staff is concerned with this degree of opacity regarding
7 support for Kiewit’s results.⁷⁶

8 **Q. AWEC raised the same concern,⁷⁷ and PacifiCorp’s Reply Testimony**
9 **asserted that “Kiewit...is understandably unwilling to share its**
10 **proprietary information because of competitive concerns.”⁷⁸ How do you**
11 **react to this?**

12 A. PacifiCorp, with whom the burden of proof resides, has provided no support
13 indicating it requested that Kiewit provide such information nor any support
14 indicating Kiewit objected to such a request. It was outside the scope of work
15 for PacifiCorp’s RFP, and—as a result—PacifiCorp did not obtain such support
16 for methods.⁷⁹ Importantly, Section 4.3.1.1. of the 2020 Protocol provides that
17 “The study results will be used to inform the Company’s recommendation on

⁷⁵ Page 5 of Dr. Sahu’s Independent Evaluation Report.

⁷⁶ See PacifiCorp’s responses to AWEC’s data requests 57 and 123, which Staff includes as Exhibit Staff/1704.

⁷⁷ AWEC/300, Kaufman/24.

⁷⁸ PAC/2400, Van Engelenhoven/12-13.

⁷⁹ Staff acknowledges that, while a less than perfect analogy, Staff did request in its scope of work for Dr. Sahu, that he include such materials. See especially pages 12-13 of Attachment A to Staff’s Report dated May 6, 2020, and prepared for the May 7, 2020, Public Meeting. This is available at https://oregonpuc.granicus.com/DocumentViewer.php?file=oregonpuc_702189b7b9dc77b4703705805c2fddbc.pdf&view=1 (accessed by Staff July 9, 2020).

1 the amount of Decommissioning Cost responsibility to be allocated to States
2 for coal-fueled Interim Period Resources that States exit at different times.” It is
3 not prudent to rely on the unverified basis of a study, rather than ensure the
4 underlying analysis has been reviewed and found to be sound.

5 **Q. PacifiCorp asserts that “...Kiewit, not PacifiCorp performed the**
6 **Decommissioning Studies.”⁸⁰ How does Staff react to this assertion by**
7 **the Company?**

8 A. While Kiewit compiled the reports, PacifiCorp supplied a sizable portion of the
9 total estimated costs. Table 1 (below) shows which amounts by category Staff
10 understands⁸¹ to have been provided by PacifiCorp. Table 1 includes the
11 estimated decommissioning costs of the Bridger Coal Mine, while Table 2
12 removes this value. Either way, the source of between 41 and 48 percent of the
13 total estimated decommissioning costs in PacifiCorp’s supplemental Opening
14 Testimony were supplied by PacifiCorp.

15 Staff appreciates that some values provided by PacifiCorp may be accounting
16 values, and taken from the Company’s accounting records. Staff believes it
17 unlikely that this is the case for any majority of the costs provided by
18 PacifiCorp.

⁸⁰ PAC/2400, Van Engelenhoven/12.

⁸¹ See PacifiCorp’s response to Staff data request 726, which Staff includes as exhibit Staff/1705.

Table 1 – Total Decommissioning Cost Estimates and Amounts Supplied by PacifiCorp –and on PacifiCorp System Basis

[begin confidential]

Cost Category	Total Estimated Cost	Cost provided by PacifiCorp	Percent Provided by PacifiCorp
Base	██████████	██████████	39%
Other Items to Consider	██████████	██████████	62%
Total	██████████	██████████	48%

Table 2 – Total Decommissioning Cost Estimates and Amounts Supplied by PacifiCorp – Without Bridger Coal Mine and on PacifiCorp System Basis

Cost Category	Total Estimated Cost	Cost provided by PacifiCorp	Percent Provided by PacifiCorp
Base	██████████	██████████	24%
Other Items to Consider	██████████	██████████	62%
Total	██████████	██████████	41%

[end confidential]

Q. Both AWEC's testimony and PacifiCorp's Reply Testimony discussed decommissioning costs and incentives. What is Staff's view on this question?

A. AWEC's testimony argued that PacifiCorp has an incentive to see Oregon rates resulting from this proceeding reflect a higher—rather than lower—estimate of future decommissioning costs for its coal plants.⁸² Staff agrees with AWEC that reflecting higher estimates of future decommissioning costs

⁸² AWEC/300, Kaufman/23.

1 in rates resulting from this proceeding do reduce investor risk versus the
2 alternative, and that PacifiCorp may be incented towards such an outcome.

3 **Q. PacifiCorp, in Reply Testimony, asserts that there is also an incentive**
4 **“by Oregon customers” to under-estimate decommissioning costs.⁸³**

5 **How do you react this this assertion by PacifiCorp?**

6 A. Staff assumes PacifiCorp’s assertion is based on the Company’s perception
7 that an objective of “Oregon customers” is to minimize near-term rates.
8 However, Staff, on behalf of PacifiCorp’s Oregon customers, sees risk
9 associated with Oregon’s early exit in that Oregon customers may have—at
10 the time of exit—have either paid too much or paid too little.⁸⁴ The challenge is
11 that, other than for those coal plants having a common closure date, in which
12 case Oregon pays its “fair share” of actual costs, whether Oregon paid too
13 much or too little may never be known.

14 **Q. Please summarize AWEC’s Opening Testimony regarding its concerns**
15 **with coal pile excavation costs.**

16 A. AWEC states the Kiewit report assumed an excavation depth of 10 feet.
17 AWEC noted that PacifiCorp’s testimony included that it intended to drill test
18 holes to establish appropriate depth for excavation,⁸⁵ and—presumably
19 assuming the costs to excavate between a depth of five and 10 feet is linear,
20 reduced the assumed depth to five feet and reduced the estimated cost by

⁸³ PAC/11, Van Engelenhoven/11.

⁸⁴ Please note that Staff very much sees risk for PacifiCorp’s Oregon customers in not exiting early, but this is not the issue at hand.

⁸⁵ AWEC/300, Kaufman/28.

1 50 percent. PacifiCorp countered that, “not only does it [AWEC] not explain
2 why a reduced excavation depth is appropriate, but it improperly concludes
3 that reducing the depth by half also reduces the cost by half, without providing
4 support for that conclusion.”⁸⁶

5 **Q. What is Staff’s take on this?**

6 A. Staff finds that if the surface area remains fixed—as it more-or-less would
7 given that the coal pile does not change its footprint, the volume excavated is
8 linear with the depth of excavation. Staff’s intuition is that, if 50 percent less
9 material is excavated and hauled away, that activity likely would cost about
10 50 percent less at an excavation depth of five feet versus one to 10 feet.⁸⁷

11 **Q. Which party provided the assumption of 10 foot excavations?**

12 A. PacifiCorp’s response to Staff data request 724 included that “[t]he assumed
13 excavation below grade of the coal pile areas was provided by PacifiCorp.”⁸⁸

14 **Q. Did PacifiCorp’s response to Staff data request 724 indicate how the 10-
15 foot assumption was reached by the Company?**

16 A. PacifiCorp’s response included in part “b” that “[t]he assumption came from the
17 excavation below grade of the coal pile area for the Carbon generating facility.
18 PacifiCorp is currently working to improve the estimated excavation depth
19 required for the generating facilities.”

⁸⁶ PAC/2400 Van Engelenhoven/14.

⁸⁷ Staff also intuitively that, if a sufficiently large decrease in excavation depth is contemplated, such as from 100 feet to five feet, the cost to remove material to a considerably lesser depth may decrease by more than implied by a linear relationship. That is not the case here.

⁸⁸ Staff includes PacifiCorp’s response to Staff data request 724 as Exhibit Staff/1706.

1 **Q. What does Staff think about PacifiCorp's response to Staff data request**
2 **724?**

3 A. Staff has several thoughts. First, this is an example of the level of support that
4 could have accompanied PacifiCorp's decommissioning studies filed earlier
5 this year, but—for the most part and as far as Staff can determine—did not.

6 Staff's second thought is that, if PacifiCorp is currently working to improve this
7 assumption, why did the Company not complete its "improvement" some time
8 ago, such that it could make a more informed assumption regarding the
9 appropriate excavation depth(s) below the coal pile area of its coal plants?

10 Staff's third thought is that there is a considerable cost associated with the
11 excavation below grade of the coal pile areas. Using the estimated
12 decommissioning costs for PacifiCorp's Huntington coal plant, the estimated
13 cost of coal pile excavation and haul-off is 18 percent of the total estimated
14 cost of decommissioning in the study filed January 16, 2020. If Huntington is
15 typical (or average), 18 percent of the estimated [begin confidential]

16 [redacted] [end confidential] total decommissioning cost for coal pile
17 excavation and haul-off for the seven coal plants in this study equates to
18 [begin confidential] [redacted] [end confidential].

19 **Q. Are estimated costs for site remediation included in PacifiCorp's**
20 **decommissioning study underlying the depreciation rates included in the**
21 **Company's initial filing in UE 1968, or is this a cost line item that has**
22 **been added to the decommissioning studies PacifiCorp filed earlier this**
23 **year in UM 1968?**

1 A. Staff concludes estimated costs for site remediation are included in
2 PacifiCorp's initial filing in UM 1968, as well as in its decommissioning studies
3 filed this year. PacifiCorp cites the 2020 Protocol as defining
4 "decommissioning costs" as including remediation in footnote 26 of its Reply
5 Testimony.⁸⁹ PacifiCorp states in its Reply Testimony that "[u]nlike the Kiewit
6 Decommissioning Studies, the Company's previous estimates did not include
7 site reclamation."⁹⁰ Staff takes this to mean that decommissioning studies
8 performed prior to the study filed on January 16, 2020, in UM 1968, did not
9 include the estimated costs of site reclamation. However, PacifiCorp states at
10 PAC/400, Teply/12 in UM 1968 that "[t]he decommissioning costs in exhibit
11 PAC/402 include plant demolition, ash pile and ash pond abatement and
12 closure, asbestos and other hazardous materials abatement and remediation
13 and final site cleanup and restoration as applicable to each plant."⁹¹
14 Exhibit 402 is the decommissioning cost estimates in PacifiCorp's Direct
15 Testimony in UM 1968, filed September 13, 2018. Based on this explanation,
16 Staff concludes that—as asserted by Mr. Teply—PacifiCorp's
17 decommissioning costs in its initial UM 1968 filing *did* include the estimated
18 costs of site remediation.

⁸⁹ PAC/2400 Van Engelenhoven/15. See; e.g., Page 2 of Appendix A to the 2020 Protocol at PAC/101 Lockey/70 in UM 1050.

⁹⁰ PAC/2400 Van Engelenhoven/13, citing in footnote 19 PAC/1700, Teply/7. Teply/7, at Line 11, states that "[t]he previous estimates did not include site reclamation."

⁹¹ Emphasis added by Staff. Staff notes that Mr. Teply's testimony at PAC/400 in UM 1968 was filed on September 13, 2018, and Mr. Van Engelenhoven's testimony at PAC/2400 was filed on June 25, 2020. Mr. Van Engelenhoven's "previous studies must mean not only prior to the study filed January 16, 2020, but also prior to the study filed on September 13, 2018, in UM 1968.

1 **Q. PacifiCorp, in Reply Testimony, alleges that AWEC's contingent**
2 **recommendation of adjustments to estimated decommissioning costs**
3 **"attempts an improper end run around this process."⁹² What does Staff**
4 **think?**

5 A. Staff disagrees that AWEC's position is contrary to the stipulation in support of
6 the 2020 Protocol. Staff also disagrees with PacifiCorp's interpretation of the
7 role of Oregon's Independent Evaluator. Section 4.3.1.3 of the 2020 Protocol
8 states that "[n]o Party will be bound by the Decommissioning Cost estimates in
9 the Decommissioning Studies..." Section 4.3.4 of the 2020 Protocol states that
10 "[a]ny Party, at its discretion and cost, may pursue actions it deems necessary
11 or appropriate to review and evaluate the Decommissioning Studies or
12 Decommissioning Costs and may take any positions based on its review and
13 findings." Additionally, nothing in the 2020 Protocol absolves PacifiCorp of
14 carrying its burden of proof relative to its recommendations in state-specific
15 contested case proceedings in which the Company requests recovery of
16 estimated future decommissioning costs.

17 **Q. What does Staff recommend to the Commission regarding the dollar**
18 **amount for the future decommissioning costs of those coal plants and**
19 **their constituent units included in the decommissioning study filed**
20 **January 16, 2020?**

⁹² PAC/2400 Van Engelenhoven/14.

1 A. Staff concurs with Dr. Sahu's conclusion that "[t]here is no basis to conclude
2 that the estimated costs in the study reports are consistent with AACE Class 3
3 level of accuracy."⁹³ Staff recommends the Commission:

4 1. Order PacifiCorp to utilize the estimated decommissioning costs
5 included in PacifiCorp's initial filing in UM 1968 for each coal plant and
6 its constituent unit(s) included in Oregon rates.

7 2. Allow PacifiCorp to make a filing subsequent to the rate-effective date
8 in this proceeding to determine whether the decommissioning costs set
9 in UE 374 should be adjusted.

10 **Q. Does this conclude your testimony?**

11 A. Yes.

⁹³ Page 5 of Dr. Sahu's report.

CASE: UE 374
WITNESS: STEVE STORM

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 1701

**Exhibits in Support
Of Rebuttal and Cross-Answering Testimony**

July 17, 2020

Staff Exhibit 1701 is confidential

Subject to

Protective Order No. 20-040

CASE: UE 374
WITNESS: STEVE STORM

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 1702

**Exhibits in Support
Of Rebuttal and Cross-Answering Testimony**

July 17, 2020

Staff Exhibit 1702

is confidential and filed as an electronic spreadsheet

Subject to

Protective Order No. 20-040

CASE: UE 374
WITNESS: STEVE STORM

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 1703

**Exhibits in Support
Of Rebuttal and Cross-Answering Testimony**

July 17, 2020

OPUC Data Request 729

Coal Plant Decommissioning Studies' Cost Estimates

Are the two entries and associated values for Wyodak in PAC/1702, Teply/1 intended? If "yes," please describe each of the two entries and its respective value.

Response to OPUC Data Request 729

The duplicate Wyodak decommissioning entries are not intended.

CASE: UE 374
WITNESS: STEVE STORM

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 1704

**Exhibits in Support
Of Rebuttal and Cross-Answering Testimony**

July 17, 2020

AWEC Data Request 0057

Please provide all assumed values for costs and quantities for each input and calculation underlying the dollars reported in the Kiewit report. Please include all underlying spreadsheets with formulae intact. Please include all externally referenced spreadsheets.

Response to AWEC Data Request 0057

Please refer to Confidential Attachment AWEC 0057. Assumptions used in preparing the report are described in the report prepared by Kiewit.

Confidential information is designated as Protected Information under the protective order in this proceeding and may only be disclosed to qualified persons as defined in that order.

AWEC Data Request 0123

Referring to PacifiCorp's response to AWEC Data Request 0057, please confirm that PacifiCorp does not have work papers in its possession supporting the costs identified in the Kiewit report.

Response to AWEC Data Request 0123

PacifiCorp does not have possession or control of work papers prepared by Kiewit Engineering Group or its subcontractors supporting the cost estimates identified in the report submitted by Kiewit. The scope of work for the study did not include work papers as a deliverable. PacifiCorp has not received work papers supporting the cost estimates from Kiewit.

CASE: UE 374
WITNESS: STEVE STORM

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 1705

**Exhibits in Support
Of Rebuttal and Cross-Answering Testimony**

July 17, 2020

OPUC Data Request 726

Coal Plant Decommissioning Studies' Cost Estimates

Regarding PacifiCorp's characterization of the two Kiewit Decommissioning Studies as being both "independent" and "impartial" at PAC/2400, Van Engelenhoven/11, please provide, for each of the eight plants included in the Studies:

- a. The dollar amount included in the "Base Estimate" that was provided by PacifiCorp.
- b. The dollar amount included in the "Base Estimate" that was provided by Kiewit, another contractor, or a subcontractor, identifying the total provided by such sources as well as the amount provided by each specific source.
- c. The dollar amount included in the "Other Items to Consider" estimate that was provided by PacifiCorp.
- d. The dollar amount included in the "Other Items to Consider" estimate that was provided by Kiewit, another contractor, or a subcontractor, identifying total provided by such sources as well as the amount provided by each specific source.

Response to OPUC Data Request 726

- a. PacifiCorp provided the values as shown in the columns labeled "Responsible Party" in the confidential workpapers supporting Exhibits PAC/1900 and PAC/1901 provided with the Company's May 28, 2020 supplemental filing in this docket (specifically the files named "Exhibit PAC 1900 Decommissioning Study Workpapers CONF.xlsx" and "Exhibit PAC 1901 Colstrip Decommissioning Workpapers CONF.xlsx"), with the following clarifications:

PacifiCorp provided the Owner's total costs shown in the report and spreadsheets as the Category 2 subtotal. The PacifiCorp provided Owner's total costs were estimated as described in the response to OPUC Data Request 725. Kiewit provided the value for Category 2a, "Owner's Engineer – ENTIRE Project."

PacifiCorp provided the value of 8.5 percent for "Owner AROs Indirects" shown below the Category 7 subtotal.

PacifiCorp asked Kiewit to set the Contingency in Category 11 to 0 percent.

- b. Kiewit provided the values as shown in the columns labeled "Responsible Party" in the confidential workpapers supporting Exhibit PAC/1900 and Exhibit PAC/1901.

- c. PacifiCorp provided the values as shown in the columns labeled “Responsible Party” in the confidential workpapers supporting Exhibit PAC/1900 and Exhibit PAC/1901, including the following:

PacifiCorp provided the materials and supply inventory balances for each generating facility as of November, 2019, as shown in Category 2c.

PacifiCorp provided the make, model, acquisition cost and book values of rolling stock shown in Category 4i. PacifiCorp provided type, acquisition cost and book values of rail cars shown in Category 4j. Kiewit provided the demolition costs and the scrap values shown in the report.

PacifiCorp provided an Internet link to the publicly available site regarding PacifiCorp landfills and Coal Combustion Residual bonds. The link address is <https://www.brkenenergy.com/ccr/ppw.html>

PacifiCorp provided the value for General Liabilities as shown in Category 8a.

PacifiCorp provided the value of Coal Mine Closure as shown in Category 8b.

- d. Kiewit provided the values as shown in the columns labeled “Responsible Party” in the confidential workpapers supporting Exhibit PAC/1900 and Exhibit PAC/1901.

Confidential information is designated as Protected Information under the protective order in this proceeding and may only be disclosed to qualified persons as defined in that order.

CASE: UE 374
WITNESS: STEVE STORM

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 1706

**Exhibits in Support
Of Rebuttal and Cross-Answering Testimony**

July 17, 2020

UE 374/PacifiCorp
July 8, 2020
OPUC Data Request 724

OPUC Data Request 724

Coal Plant Decommissioning Studies' Cost Estimates

Regarding the assumed “10 feet below grade, on average” excavation below grade of coal pile areas (e.g., as at page 25 of the “Thermal Power Plant Demolition Estimates Report”), please:

- a. Specify whether this assumption came from PacifiCorp or from Kiewit.
- b. If this assumption came from PacifiCorp, please provide all documentation used by the Company to support this specification as applied to the eight plants in Kiewit’s reports.

Response to OPUC Data Request 724

- a. The assumed excavation below grade of the coal pile areas was provided by PacifiCorp.
- b. The assumption came from the excavation below grade of the coal pile area for the Carbon generating facility. PacifiCorp is currently working to improve the estimated excavation depth required for the generating facilities.