

Application No. 22-08-____
Exhibit No. PAC/400
Witness: Zepure Shahumyan

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP

REDACTED

Direct Testimony of Zepure Shahumyan
Greenhouse Gas Surcharge Costs and Revenues

August 2022

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ATTACHED EXHIBITS

- Confidential Exhibit PAC/401 – Commission Template C – Weighted Average Cost of Compliance Instruments
- Confidential Exhibit PAC/402 – Commission Template D-2 – Annual GHG Emissions and Associated Compliance Obligation
- Confidential Exhibit PAC/403 – Summary of the GHG Allowance Costs Sub-Balancing Account
- Confidential Exhibit PAC/404 – 2023 Forecast Compliance Obligation and GHG Allowance Costs
- Confidential Exhibit PAC/405 – Commission Template C-2 – GHG Balancing Account Table for Direct GHG Costs in 2021
- Confidential Exhibit PAC/406 – 2021 Recorded GHG Allowance Revenue
- Confidential Exhibit PAC/407 – 2022 Recorded/Forecast GHG Allowance Revenue
- Confidential Exhibit PAC/408 – Summary of the GHG Allowance Revenue Balancing Account
- Confidential Exhibit PAC/409 – 2023 Forecast GHG Allowance Revenue

1 **I. INTRODUCTION AND QUALIFICATIONS**

2 **Q. Please state your name, business address, and present position with PacifiCorp**
3 **d/b/a Pacific Power (PacifiCorp or Company).**

4 A. My name is Zepure Shahumyan. My business address is 825 NE Multnomah Street,
5 Suite 2000, Portland, Oregon 97232. I am employed by PacifiCorp as Director of
6 Energy and Environmental Policy.

7 **Q. Please describe your education and business experience.**

8 A. I have a Bachelor of Science in Biochemistry from Portland State University. I have
9 been employed by PacifiCorp for over five years, initially as a net power cost
10 specialist, and for the last four years in Environmental Policy and Strategy functions.
11 Prior to PacifiCorp, I worked for the Bonneville Power Administration for over six
12 years in various positions including enterprise risk management consulting and utility
13 management strategy.

14 **Q. Please explain your responsibilities as PacifiCorp's Director of Energy and**
15 **Environmental Policy.**

16 A. My current responsibilities include developing PacifiCorp's environmental policy,
17 strategy and programs as well as ensuring compliance for Company-wide renewable
18 portfolio standards (RPS), reporting of greenhouse gas (GHG) emissions for
19 California, Oregon, and Washington, and overseeing environmental commodity
20 transactions. Most relevant to this application, I manage PacifiCorp's compliance
21 with the California Air Resources Board (ARB) Mandatory Reporting Regulation and
22 Cap and Trade Program.

1 **II. PURPOSE OF TESTIMONY**

2 **Q. Please summarize your direct testimony.**

3 A. My direct testimony: (1) reconciles PacifiCorp's forecast GHG allowance costs and
4 revenues set out in the Company's 2022 Energy Cost Adjustment Clause (ECAC) and
5 GHG Application (A.) 21-08-004 (2022 ECAC) with actual GHG allowance costs
6 and revenues through May 31, 2022; and (2) forecasts PacifiCorp's GHG allowance
7 costs and revenues for the remainder of 2022 and 2023. This testimony incorporates
8 template revisions required by Decision (D.) 21-08-026 and D.21-05-004.

9 PacifiCorp's forecast of 2022 GHG allowance costs and revenues will be
10 reconciled next year in the 2024 ECAC. The 2024 Application will also include a
11 final reconciliation of 2021 GHG allowance costs based on ARB's 2021 verified
12 emissions data report.¹

13 **Q. Please describe the exhibits provided in support of your direct testimony.**

14 A. I prepared nine exhibits in support of my direct testimony.

- 15 • Confidential Exhibit PAC/401 – California Public Utilities Commission
16 (Commission) Template C – Weighted Average Cost of Compliance
17 Instruments. This exhibit provides the Company's monthly accrued
18 compliance obligation based on the weighted average cost methodology
19 prescribed by the Commission. This template was developed by the
20 Commission and modified in D.19-04-016 on April 25, 2020. *See*
21 D.14-10-033, D.14-10-055, D.15-01-024, D.15-04-016, and
22 D.21-05-004.
- 23 • Confidential Exhibit PAC/402 – Commission Template D-2 – Annual GHG
24 Emissions and Associated Compliance Obligation. This exhibit provides
25 annual forecast and actual compliance obligation by year in metric tons
26 carbon dioxide equivalent (MTCO_{2e}) and dollars. This template was
27 developed by the Commission. *See* D.14-10-033, D.14-10-055, D.15-01-024,
28 and D.21-08-026.

¹ ARB is expected to issue its 2021 Verified Emissions Report in August 2022.

- 1 • Confidential Exhibit PAC/403 – Summary of the GHG Allowance Costs
2 Sub- Balancing Account. This exhibit provides a reconciliation of the balance
3 in the GHG Allowance Costs Sub-Balancing Account and shows whether
4 there is an over-collection or under-collection from customers that is included
5 in the calculation of the GHG allowance costs recovered from customers.
- 6 • Confidential Exhibit PAC/404 – 2023 Forecast Compliance Obligation and
7 GHG Allowance Costs. This exhibit calculates the Company’s 2023
8 forecasted monthly GHG compliance cost based on a proxy price.
- 9 • Confidential Exhibit PAC/405 – Commission Template C-2 provides the
10 GHG Balancing Account Table showing direct GHG costs in 2021. This
11 template was developed by the Commission.
12 *See D.21-05-004.*
- 13 • Confidential Exhibit PAC/406 – 2020 Recorded GHG Allowance Revenue.
14 This exhibit summarizes the GHG allowances sold in 2021 at the ARB
15 quarterly auctions.
- 16 • Confidential Exhibit PAC/407 – 2022 Recorded/Forecast GHG Allowance
17 Revenue. This exhibit summarizes the GHG allowances sold at the ARB
18 quarterly auctions through May 31, 2022, and the amount (if any) forecast to
19 be sold during the remainder of the year.
- 20 • Confidential Exhibit PAC/408 – Summary of the GHG Allowance Revenue
21 Balancing Account. This exhibit provides a reconciliation of the balance in
22 the GHG Allowance Revenue Balancing Account and shows the remaining
23 balance to be returned to customers in 2022.
- 24 • Confidential Exhibit PAC/409 – 2023 Forecast GHG Allowance Revenue.
25 This exhibit calculates the Company’s 2023 forecast GHG allowance revenue
26 from the ARB quarterly auctions based on a proxy price.

27 **III. FORECAST AND ACTUAL 2020 AND 2021 GHG ALLOWANCE COSTS**

28 **Q. Please describe the GHG compliance costs that PacifiCorp incurred and**
29 **forecasted to incur.**

30 A. PacifiCorp is subject to regulation as a first jurisdictional deliverer of electricity into
31 California under ARB’s GHG Cap and Trade program. As a first jurisdictional
32 deliverer, PacifiCorp must surrender to ARB one GHG compliance instrument (i.e., a
33 GHG allowance or offset credit) for each metric ton of carbon dioxide emitted or its

1 equivalent. At this time, PacifiCorp only has direct GHG costs (i.e., the costs
2 associated with procuring GHG allowances). PacifiCorp has not incurred, and does
3 not expect to incur, any indirect GHG costs (e.g., the embedded GHG compliance
4 costs associated with electricity procured in the wholesale market) as part of its retail
5 compliance obligation.

6 **Q. What were PacifiCorp’s actual final GHG allowance costs for 2020?**

7 A. On November 4, 2021, ARB issued its 2020 Verified Emissions Report. Based on
8 PacifiCorp’s 2020 Verified Emissions Report, the actual final cost of PacifiCorp’s
9 GHG compliance obligation for 2020 is [Begin Confidential] ██████████ [End
10 Confidential].² The Company’s 2020 actual retail compliance obligation was [Begin
11 Confidential] ██████████ [End Confidential] allowances. *See Confidential Exhibits*
12 *PAC/401 and PAC/402.* The actual final cost for 2020 is included in the
13 reconciliation of the balance in the GHG Allowance Costs Sub-Balancing Account as
14 shown in Confidential Exhibit PAC/403.

15 **Q. What were PacifiCorp’s forecast and actual GHG allowance costs for 2021?**

16 A. In its 2022 ECAC, PacifiCorp forecasted that it would incur [Begin Confidential]
17 ██████████ [End Confidential] for 2021 GHG allowance costs. *See Confidential*
18 *Exhibit PAC/202-A in the Company’s 2022 ECAC, and Confidential Exhibit*
19 *PAC/402 in this application.* As of May 31, 2021, PacifiCorp accrued [Begin
20 Confidential] ██████████ [End Confidential] for 2021 GHG allowance costs in the
21 GHG Allowance Costs Sub-Balancing Account. There will be a final true-up to the
22 verified 2021 GHG allowance costs in the Company’s next application filed on

²All references to GHG allowance costs are based on the weighted average cost methodology prescribed by the Commission and calculated as shown in Confidential Exhibit PAC/401.

1 August 1, 2023, based on the 2021 Verified Emissions Report.

2 **IV. FORECAST 2022 AND 2023 GHG ALLOWANCE COSTS**

3 **Q. What did PacifiCorp forecast for 2022 GHG allowance costs in its 2022**
4 **Application?**

5 A. In its 2022 ECAC, PacifiCorp forecasted the Company would incur [Begin
6 Confidential] ██████████ [End Confidential] for GHG Allowance Costs in 2022. *See*
7 Confidential Exhibits PAC/202-A and PAC/204-A in the Company's 2022 ECAC,
8 and Confidential Exhibit PAC/402 in this application.

9 **Q. Has PacifiCorp updated its forecast for 2022 GHG allowance costs in this**
10 **Application?**

11 A. Yes. Through May 31, 2022, PacifiCorp has accrued [Begin Confidential]
12 ██████████ [End Confidential] for its 2022 compliance obligation in the GHG
13 Allowance Costs Sub-Balancing Account. PacifiCorp forecasts that it will incur
14 additional GHG allowance costs of [Begin Confidential] ██████████ End
15 Confidential] from June 1, 2022, through the remainder of the year,
16 December 31, 2022. Based on the amount accrued to date and the forecast for the
17 remainder of the year, the updated forecast GHG allowance costs for 2022 are [Begin
18 Confidential] ██████████ [End Confidential]. *See* Confidential Exhibit PAC/403 in
19 this application.

20 **Q. What proxy price was used to calculate the Company's forecast compliance**
21 **obligation for June 1, 2022, through December 31, 2022?**

22 The Company used the March 31, 2022, forward Intercontinental Exchange (ICE)
23 settlement price of \$31.09 as the GHG allowance proxy price to calculate the

1 Company's forecast compliance costs for June 1, 2022, through
2 December 31, 2022. *See* Confidential Exhibit PAC/401. The process for calculating
3 the Company's 2022 compliance obligation is described in more detail below.

4 **Q. What GHG allowance costs does PacifiCorp forecast for 2023?**

5 A. The 2023 GHG allowance costs are forecast to be [Begin Confidential]
6 [REDACTED] End Confidential]. Refer to Confidential Exhibit PAC/404 for the
7 2023 forecast compliance obligation and GHG allowance costs.

8 **Q. What methodology was used to forecast PacifiCorp's 2023 GHG allowance**
9 **costs?**

10 A. As a multi-jurisdictional retail provider that has a GHG compliance obligation,
11 PacifiCorp must calculate emissions as set out in California Code of Regulations,
12 Section 95111. PacifiCorp's calculation of GHG allowance costs is consistent with
13 D.14-10-033 issued October 16, 2014, and uses the straightforward methodology of
14 multiplying its compliance obligation by the GHG allowance proxy price.
15 PacifiCorp's compliance obligation was developed using data consistent with the
16 Company's system generation mix forecast and California load forecast assumptions.
17 *See* Exhibits PAC/100 through Confidential Exhibit PAC/104. Allowance costs for
18 2022 are based on the Company's accrued compliance obligation through
19 May 31, 2022, plus the forecast compliance obligation from June 2022 through
20 December 2022, multiplied by the GHG allowance proxy price. Allowance costs for
21 2023 are based on a forecast of the Company's compliance obligation for
22 2023 multiplied by the GHG allowance proxy price. *See* Confidential Exhibits
23 PAC/401 and PAC/404.

1 **Q. How was the 2023 proxy price developed?**

2 A. The GHG allowance proxy price forecast of \$32.86 for 2023 was developed in
3 accordance with D.14-10-033. PacifiCorp uses a GHG allowance proxy price based
4 on the forward ICE settlement price for GHG allowances with December delivery of
5 the forecast year 2023, consistent with the methodology used to calculate forward
6 prices for other commodities in its ECAC application. *See* Confidential Exhibit
7 PAC/404 for the 2023 forecast GHG allowance costs.

8 **Q. Has the Company prepared an exhibit summarizing the balance in the GHG**
9 **Allowance Costs Sub-Balancing Account?**

10 A. Yes. A summary of the balance in the GHG Allowance Costs Sub-Balancing
11 Account is shown in Confidential Exhibit PAC/403. The summary shows a projected
12 [Begin Confidential] ██████████ End Confidential] of GHG
13 allowance costs at the end of 2022.

14 **Q. Will the balance in the GHG Allowance Costs Sub-Balancing Account be**
15 **considered in the calculation of the GHG allowance costs to be recovered in rates**
16 **in 2023?**

17 A. Yes. See the testimony of Company witness Judith M. Ridenour, Exhibit PAC/700,
18 and accompanying Exhibit PAC/703.

19 **V. FORECAST AND ACTUAL 2021 GHG ALLOWANCE REVENUE**

20 **Q. What were PacifiCorp's forecast GHG allowance revenues for 2021?**

21 A. In its 2022 ECAC, PacifiCorp forecasted \$10,116,732 in GHG allowance revenues
22 for 2021. *See* 2022 ECAC, Confidential Exhibit PAC/207.

1 **Q. What were PacifiCorp’s actual GHG allowance revenues in 2021?**

2 A. PacifiCorp’s total actual GHG allowance revenues in 2021 were \$12,114,799. *See*
3 Confidential Exhibit PAC/406. The actual 2022 GHG allowance revenue has been
4 included in the reconciliation of the balance in the GHG Allowance Revenue
5 Balancing Account as shown on Confidential Exhibit PAC/407, and Confidential
6 Exhibit PAC/705 to the direct testimony of Company witness Judith M. Ridenour.

7 **VI. 2022 AND 2023 FORECAST GHG ALLOWANCE REVENUE**

8 **Q. What are the total 2022 and 2023 forecast GHG allowance revenue?**

9 A. Forecast 2022 GHG allowance revenue is \$ 16,709,184. Forecast 2023 GHG
10 allowance revenue is \$17,902,917. *See* Confidential Exhibits PAC/407 and
11 PAC/409, respectively.

12 **Q. What methodology was used to forecast 2022 and 2023 GHG allowance revenue?**

13 A. PacifiCorp calculated its forecast GHG allowance revenue by multiplying its annual
14 allowance allocation from ARB by the GHG allowance proxy price. PacifiCorp’s
15 2022 forecast GHG allowance revenue is based on actual GHG allowance revenue
16 received from the 2022 quarterly allowance auctions as of May 31, 2022, and the
17 expected revenue from the sale of GHG allowances PacifiCorp expects to consign to
18 the remaining 2022 ARB auctions, multiplied by the GHG allowance proxy price.
19 The Company has assumed that it will submit and sell 100 percent of its
20 2022 allowance allocation from ARB at auctions in 2022, less allowances
21 administratively retired by ARB to account for Energy Imbalance Market (EIM)
22 Purchaser Emissions.³ For calendar year 2023, the forecast is based on the expected

³ PacifiCorp does not currently have a way to forecast EIM Purchaser Emissions; however, the amount is expected to be relatively small.

1 revenue from the sale of the GHG allowances PacifiCorp expects to consign to the
2 2023 ARB auctions multiplied by forecasted GHG allowance proxy price for 2023.
3 *See Confidential Exhibits PAC/407 and PAC/409.*

4 **Q. What GHG allowance proxy price was used to determine forecast GHG**
5 **allowance revenues in 2022 and 2023?**

6 A. The GHG allowance proxy prices for 2022 and 2023 are \$31.09 and \$32.86,
7 respectively. Please refer to Section IV of my testimony for a more detailed
8 discussion about the methodology used to develop the proxy prices for each year.
9 The Company used the same proxy prices for determining both forecast GHG
10 allowance costs and GHG allowance revenue in 2022 and 2023.

11 **Q. Was there a material difference between proxy prices used to determine the**
12 **GHG allowance cost and revenue forecasts for 2021 and 2022 in the 2022 ECAC**
13 **as compared to actual GHG allowance prices?**

14 A. Yes. In the 2022 ECAC, PacifiCorp used the ICE proxy price as required by
15 D.14-10-033. However, the ICE proxy prices for 2021 and 2022 were below the
16 2021 and 2022 auction settlement price. The proxy prices used to project the
17 2021 and 2022 forecasts were \$18.51 and \$19.36, respectively. The auctions for
18 2021 and 2022 have settled approximately 35 percent higher on average for those
19 years, resulting in a misalignment in ICE proxy prices and actual recorded allowance
20 prices.

1 **Q. Did the difference between the proxy price and the actual GHG price contribute**
2 **to understated GHG costs and revenue forecasts in the 2022 Application?**

3 A. Yes. The GHG allowance costs were [Begin Confidential] [REDACTED]
4 [REDACTED] [End Confidential] and revenues [Begin Confidential] [REDACTED]
5 [REDACTED] [End Confidential]. This deviation was largely driven by the proxy price
6 misalignment. *See* Confidential Exhibits PAC/403 and PAC/407. The
7 understatement of revenues is solely driven by the proxy price misalignment, because
8 the number of allowances directly allocated to PacifiCorp is known in advance. For
9 the under collection of costs, approximately \$1.3 million is due to the difference
10 between the forecast and actual obligation with the balance attributable to the proxy
11 price misalignment.

12 **Q. Were all of PacifiCorp's consigned allowances sold in the February 2022 and**
13 **May 2022 auctions?**

14 A. Yes.

15 **Q. Has the Company prepared an exhibit summarizing the balance in the GHG**
16 **Allowance Revenue Balancing Account?**

17 A. Yes. A summary of the GHG Allowance Revenue Balancing Account is shown in
18 Confidential Exhibit PAC/408. The summary shows a projected balance of [Begin
19 Confidential] [REDACTED] [End Confidential] at the end of 2022
20 which represents less GHG allowance revenue returned to eligible customers than
21 what was available to return to customers.

1 **Q. Will the balance in the GHG Allowance Revenue Balancing Account be included**
2 **in the GHG allowance revenue to be distributed through the California Climate**
3 **Credit in 2023?**

4 A. Yes. See the testimony of Company witness Judith M. Ridenour, Exhibit PAC/700,
5 and accompanying Exhibit PAC/706.

6 **Q. Does this conclude your direct testimony?**

7 A. Yes.

Application No. 22-08-____
Exhibit No. PAC/401
Witness: Zepure Shahumyan

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP

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Exhibit Accompanying Direct Testimony of

Zepure Shahumyan

Commission Template C Weighted Average Cost of Compliance Instruments

August 2022

CONFIDENTIAL
 Exhibit PAC/401
 PacificCorp
 Commission Template C
 Weighted Average Cost of Compliance Instruments
 August 1, 2022

Month	Transaction/Activity Details						Inventory Emissions and \$		WAC Pricing (\$/MT)		Direct GHG Costs		True-Ups	Monthly BA Entry
	Transaction Date	Transaction Type	Quantity Purchased (MT)	Purchase Price (\$/MT)	Total Purchase (\$)	Quantity Surrendered (MT)	Surrender Price (\$/MT)	Total Surrender (\$)	Inventory Balance (\$)	Total Qty in Inventory (MT)	WAC (\$/MT)	Direct Monthly Emissions (MT)		
Jan-13														
Feb-13														
Mar-13														
Apr-13														
May-13														
Jun-13														
Jul-13														
Aug-13														
Sep-13														
Oct-13														
Nov-13														
Dec-13														
Jan-14														
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Mar-17														
Apr-17														
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Jun-17														
Jul-17														
Aug-17														
Sep-17														
Oct-17														
Nov-17														
Dec-17														

CONFIDENTIAL INFORMATION IS SHADED

Month	Transaction/Activity Details								Inventory Emissions and \$		WAC Pricing (\$/MT)		Direct GHG Costs		True-Ups True Up Value +/- (\$)	Monthly BA Entry Monthly Balancing Account Entries (\$)
	Transaction Date	Transaction Type	Quantity Purchased (MT)	Purchase Price (\$/MT)	Total Purchase (\$)	Quantity Surrendered (MT)	Surrender Price (\$/MT)	Total Surrender (\$)	Inventory Balance (\$)	Total Qty in Inventory (MT)	WAC (\$/MT)	WAC (\$/MT)	Direct Monthly Emissions (MT)	WAC x Direct Emissions Qty (\$)		
Jan-18																
Feb-18																
Mar-18																
Apr-18																
May-18																
Jun-18																
Jul-18																
Aug-18																
Sep-18																
Oct-18																
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Oct-22																
Nov-22																
Dec-22																

CONFIDENTIAL INFORMATION IS SHADED

Application No. 22-08-____
Exhibit No. PAC/402
Witness: Zepure Shahumyan

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

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Exhibit Accompanying Direct Testimony of
Zepure Shahumyan
Commission Template D-2 Annual GHG Emissions and Associated Compliance
Obligation

August 2022

CONFIDENTIAL
 Exhibit PAC/402
 PacifiCorp
 Commission Template D-2
 Annual GHG Emissions and Associated Compliance Obligation
 August 1, 2022

Line Description	2013		2014		2015		2016		2017		2018		2019		2020		2021		2022		2023		
	Forecast	Recorded (Note 1)	Forecast	Recorded (Note 1)	Forecast	Recorded (Note 1)	Forecast	Recorded (Note 1)	Forecast	Recorded (Note 1)	Forecast	Recorded (Note 1)	Forecast	Recorded	Forecast	Recorded	Forecast	Recorded	Forecast	Recorded	Forecast	Recorded	
1 Direct GHG Emissions (MTCO2e)																							
2 Utility Contract Compliance (UCC)																							
3 Trading Agreements																							
4 Energy Imports (Specified)																							
5 Energy Imports (Unspecified)																							
6 Qualifying Facility (QF) Contracts																							
7 MRPP Compliance Obligation (Note 2)																							
8 Subtotal																							
9 Total Emissions (MTCO2e) (Note 3)																							
10 Proxy GHG Price (\$/MT)																							
11 GHG Costs (\$)																							
12 Direct GHG Costs																							
13 Indirect GHG Costs																							
14 Previous Year's Forecast Reconciliation (Line 16)																							
15 Total Costs (\$)																							
16 Forecast Variance (\$)																							

Notes:

- 1/ Recorded costs in years between 2013 to 2021 represent the accrued total emissions at the weighted average cost on Exhibit PAC/401. The actual Multi-Jurisdictional Retail Provider (MRPP) Compliance Obligation for each year is not known until September of the following year.
- 2/ Under the Mandatory Reporting Rule Regulation, PacifiCorp reports emissions associated with using its retail load based on a unique formula. As such, PacifiCorp has revised the table to include a new section under "Direct GHG Emissions" for PacifiCorp to report its MRPP Compliance Obligation on Line 7.
- 3/ PacifiCorp only has direct emissions and therefore this information is considered confidential.

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Exhibit Accompanying Direct Testimony of

Zepure Shahumyan

Summary of the GHG Allowance Costs Sub-Balancing Account

August 2022

CONFIDENTIAL
Exhibit PAC/403
PacifiCorp
Summary of the GHG Allowance Costs Sub-Balancing Account
August 1, 2022

		GHG Allowance Costs Sub-Balancing Account		
Line No.	Description	Recorded-to- Date (as of 5/31/2022)	Estimated 6/1/22 - 12/31/22	Estimated 12/31/2022 Balance
1	GHG Allowance Costs			
2	2013			
3	Accrued Interest			
4	2014			
5	Accrued Interest			
6	2015			
7	Accrued Interest			
8	2016			
9	Accrued Interest			
10	2017			
11	Accrued Interest			
12	2018			
13	Accrued Interest			
14	2019			
15	Accrued Interest			
16	2020			
17	Accrued Interest			
18	2021			
19	Accrued Interest			
20	2022			
21	Accrued Interest			
22	Gross up for Franchise Taxes and Bad Debt Expense ⁽¹⁾			
23	Subtotal Recorded/Forecast Costs			\$ 81,650,840
24	GHG Surcharge Collected from Customers			
25	GHG Allowance Costs Sub-Balancing Account Under / (Over) Collection			

⁽¹⁾Authorized factor of 98.1867565% applies from 2013 - 2018, and 97.977602% from 2019 forward

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2023 Forecast Compliance Obligation and GHG Allowance Costs

August 2022

CONFIDENTIAL
Exhibit PAC/404
PacifiCorp
2023 Forecast Compliance Obligation and GHG Allowance Costs
August 1, 2022

Line No.	Description	Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec	Total
1	Compliance Obligation (1)													
2	Allowance Price (2)	\$32.86	\$32.86	\$32.86	\$32.86	\$32.86	\$32.86	\$32.86	\$32.86	\$32.86	\$32.86	\$32.86	\$32.86	\$32.86
3	Compliance Costs													

- (1) Volumes are in Metric Tons CO₂e. The compliance obligation was developed using data consistent with the system generation mix forecast and California load forecast assumptions in the 2022 ECAC filed as part of this application.
- (2) The Company used March 31, 2022 forward ICE settlement price for forecasted GHG allowances with December delivery of the forecast year consistent with forward prices for other commodities in its respective 2022 ECAC filed as part of this application.

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Zepure Shahumyan

Commission Template C-2 GHG Balancing Account Table for Direct GHG Costs in

2021

August 2022

CONFIDENTIAL
Exhibit PAC/405
Commission Template C-2
PacifiCorp
Direct GHG Costs in 2021 (Millions)
August 1, 2022

GHG Cost Category	CA GHG Retail Obligation (\$)	Account (NA) (\$) (Note 2)	Total (\$)
Utility-Owned Generation (UOG)		\$ -	
Imported (out-of-state) UOG		\$ -	
Tolling Contracts		\$ -	
MJRP Direct Cost (Note 1)		\$ -	
Total		\$ -	

Notes:

- (1) PacifiCorp is a Multi-Jurisdictional Retail Provider (MJRP). Under the Mandatory Reporting Rule Regulation, PacifiCorp reports emissions associated with its retail load based on a unique formula which does not allow GHG costs to be itemized. Template is modified to add MJRP line.
- (2) PacifiCorp only maintains a single GHG balancing account for its direct GHG costs

CONFIDENTIAL INFORMATION IS SHADED

Application No. 22-08-____
Exhibit No. PAC/406
Witness: Zepure Shahumyan

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP

REDACTED

Exhibit Accompanying Direct Testimony of

Zepure Shahumyan

2021 Recorded GHG Allowance Revenue

August 2022

Exhibit PAC/406

**PacifiCorp
 2021 Recorded GHG Allowance Revenue
 August 1, 2022**

Line No.	Description	Volume ⁽¹⁾	Price ⁽²⁾	Dollars
1	Auction Date:			
2	February 2021		\$17.80	
3	May 2021		\$18.80	
4	August 2021		\$23.30	
5	November 2021		\$28.26	
6	Total 2021			\$ (12,114,799)

⁽¹⁾ Volumes are in Metric Tons CO2e

⁽²⁾ Settled Price for the Auction

⁽³⁾ Volume is set by California Cap and Trade Regulation Section § 95892. Allocation to Electrical Distribution Utilities for Protection of Electricity Ratepayers. Table 9-4: Annual Allowances Allocated to Each Electrical Distribution Utility from 2021 through 2030. Annual allowance allocation is adjusted with a reduction by CARB to account for EIM Purchaser Emissions.

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Application No. 22-08-____
Exhibit No. PAC/407
Witness: Zepure Shahumyan

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP

REDACTED

Exhibit Accompanying Direct Testimony of

Zepure Shahumyan

2022 Recorded/Forecast GHG Allowance Revenue

August 2022

Exhibit PAC/407
PacifiCorp
2022 Recorded/Forecast GHG Allowance Revenue
August 1, 2022

Line No.	Description	Volume ⁽¹⁾	Price ⁽²⁾	Dollars
1	Auction Date:			
2	February 2022		\$29.15	
3	May 2022		\$30.85	
4	2022 Recorded			
5	August 2022		\$31.09	
6	November 2022		\$31.09	
7	2022 Forecast			
8	Total 2022 ⁽³⁾			\$ (16,709,184)

⁽¹⁾ Volumes are in Metric Tons CO₂e

⁽²⁾ The Company used March 31, 2022 forward ICE settlement price for forecasted GHG allowances with December delivery of the forecast year consistent with forward prices for other commodities in its respective 2023 ECAC filed as part of this application.

⁽³⁾ Volume is set by California Cap and Trade Regulation Section § 95892. Allocation to Electrical Distribution Utilities for Protection of Electricity Ratepayers. Table 9-4: Annual Allowances Allocated to Each Electrical Distribution Utility from 2021 through 2030. Annual allowance allocation is adjusted with a reduction by CARB to account for EIM Purchaser Emissions.

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