

Application No. 24-08-____
Exhibit No. PAC/200
Witness: Jack Painter

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP 2025 ECAC

Direct Testimony of Jack Painter
Offset and Balancing Rate

[PUBLIC VERSION]

August 2024

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ATTACHED EXHIBITS

Exhibit PAC/201 – California ECAC Offset/Balancing Rate Calculation

Exhibit PAC/202 – Adjusted Actual 2023 Net Power Costs

Confidential Exhibit PAC/203-C – Adjusted Actual/Projected 2024 Net Power Costs

Confidential Exhibit PAC/204-C – Projected 2025 Net Power Costs

Confidential Exhibit PAC/205-C – ARB Administrative Costs

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 Jack Painter, and my business address is 825 NE Multnomah Street, Suite
5 600, Portland, Oregon 97232. My title is Net Power Cost (NPC) Adviser.

6 **Q. Briefly describe your education and business experience.**

7 A. I received a Bachelor of Arts degree in Business Administration with a Finance
8 emphasis from Washington State University in 2007. I have been employed by
9 PacifiCorp since 2008 and have held positions in the regulation and jurisdictional
10 loads departments, joining the regulatory net power costs (NPC) group in 2019. As a
11 Net Power Cost Adviser, my responsibilities include various regulatory functions
12 across PacifiCorp’s jurisdictions including NPC and general rate case filings.

13 **Q. Have you testified in previous regulatory proceedings?**

14 A. Yes. I have previously provided testimony to the Public Utility Commissions in
15 California, Oregon, Washington, Utah, Wyoming, and Idaho.

16 **II. SUMMARY OF TESTIMONY**

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

18 A. I present the Company’s proposed Energy Cost Adjustment Clause (ECAC)
19 Balancing Rate and Offset Rate calculations for calendar year 2025 (2025 ECAC),
20 and I recommend the Commission approve a Balancing Rate of \$7.87 per megawatt
21 hour (MWh), and an Offset Rate of \$45.76/MWh. The calculation of the proposed
22 Offset and Balancing Rates for the 2025 rate effective period can be found in Exhibit
23 PAC/201. Lines 1 through 15 are used to develop the Offset Rate, and lines 16

1 through 61 are used to develop the Balancing Rate.

2 In addition, my testimony:

- 3 • Presents the updated 2023 adjusted actual and 2024 adjusted actual/projected
4 net power costs, which are used to develop the 2025 Balancing Rate, and the
5 2025 Offset Rate, and discusses the Company's request to incorporate new
6 amendments to FERC's Uniform System of Accounts in the Company's
7 ECAC, for recovery of expenses in future ECAC proceedings; and
- 8 • Describes the costs and credits that are included in the Balancing and Offset
9 Rates, including: (1) net metering surplus costs from Schedule NEM-35; (2)
10 renewable energy production tax credits (PTCs); (3) costs for implementation
11 and reporting verification under the California Air Resources Board (ARB)
12 Mandatory Reporting Rule and Cap and Trade Program (ARB administrative
13 costs); (4) treatment of fuel stock carrying charges; (5) purchases of
14 renewable energy certificates (RECs) for renewables portfolio standard (RPS)
15 compliance; (6) start-up fuel costs and mandatory reporting; (7) Qualified
16 Facility (QF) Reasonable Energy Price (REP) costs as described in the 2020
17 Inter-Jurisdictional Allocation Protocol (2020 Protocol).

18 **III. ADJUSTED ACTUAL NET POWER COSTS**

19 **Q. Please explain adjusted actual NPC.**

20 A. NPC are defined as the sum of the Company's fuel expenses, wholesale purchase
21 power expenses, and wheeling expenses, less wholesale sales revenue. Adjusted
22 actual NPC are the sum of total-Company amounts recorded in Federal Energy
23 Regulatory Commission Accounts 501, 503 and 547 (Steam Production Fuel

1 Expense) for the Company's coal, geothermal, and natural gas resources;
2 555 (Purchased Power); and 565 (Wheeling); less Account 447 (Sales for Resale).
3 These amounts are adjusted to: (1) align booked NPC in those accounts with NPC
4 used in the rate setting process, ensuring only comparable costs are used in the
5 deferral calculation; and (2) remove prior-period accounting entries, if any, recorded
6 during the deferral period that are not applicable to the current period.

7 **Q. Why are the 2023 adjusted actual NPC different from what the Company**
8 **included in its 2024 ECAC filing?**

9 A. When the Company filed the 2024 ECAC Application, actual NPC were only
10 available for January through May 2023.¹ As a result, the data used to calculate the
11 2024 Balancing Rate included five months of adjusted actual NPC (January through
12 May 2023) and seven months of projected NPC (June through December 2023). In
13 the current filing, the Company updated its 2023 data to incorporate the actual NPC
14 for the entire 12-month period. The 2023 adjusted actual NPC are shown in Exhibit
15 PAC/202.

16 **Q. Which months in 2024 reflect adjusted actual NPC in the current filing?**

17 A. January through May 2024 reflect adjusted actual NPC while June through
18 December 2024 are a projection of the Company's NPC for the balance of the year.
19 Consistent with the design of the ECAC, these are combined to reflect the overall
20 expected NPC for 2024. The 2024 adjusted actual/projected NPC are shown in
21 Exhibit PAC/203-C.

22 **Q. How will the projected NPC be reconciled to actual NPC?**

¹ Application 22-08-001 (2023 Application).

1 A. In its annual ECAC filings, the Company compares adjusted actual NPC to amounts
2 previously projected. The difference between adjusted actual NPC and the projected
3 amount on a California-allocated basis is tracked in the ECAC balancing account
4 where it accrues interest based on the nonfinancial commercial paper rate. Amounts
5 included in the ECAC balancing account are recovered from or refunded to customers
6 through the Balancing Rate.

7 **Q. Does the Company have any updates to the potential FERC accounting change**
8 **that was noted in your testimony in the 2023 ECAC proceeding?**

9 A. Yes. On June 29, 2023, the FERC issued Order No. 898 (Docket No. RM21-11-000),
10 Accounting and Reporting Treatment of Certain Renewable Energy Assets, to change
11 the accounting required for certain types of costs that have been previously booked to
12 FERC Account 555 to be booked to FERC account 509.²

13 **Q. Does FERC Order No. 898 impact the current ECAC?**

14 A. No. The change from FERC account 555 to FERC account 509 for these costs becomes
15 effective January 1, 2025.

16 **Q. What costs will be affected by FERC's Order No. 898 beginning January 1, 2025?**

17 A. The change in accounting affects the costs associated with greenhouse gas (GHG)
18 allowances that have been booked to FERC account 555 and historically included in
19 the ECAC in the Company's general ledger (GL) accounts. GL account 546516
20 includes GHG costs for wholesale sales into California which have historically been
21 included in the ECAC.

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² *File Rule*, 183 FERC ¶ 61,205, Docket No. RM21-11-000 (Jun. 29, 2023) available at <https://www.ferc.gov/media/order-no-898>.

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IV. 2025 BALANCING RATE

Q. Please describe the components included in the 2025 Balancing Rate.

A. The Balancing Rate is the rate that returns to, or recovers from, customers the actual deferred NPC accumulated in the ECAC balancing account. Table 1 shows the individual Balancing Rate components for 2025.

Table 1

ECAC Balancing Rate		
Balancing Account		
1	Balancing Account Balance 12/31/2023	\$ (3,332,017)
2	2023 NPC Variance	1,712,154
3	2024 NPC Variance	5,349,666
4	Fuel Stock Carrying Charge, ARB Admin Costs, Net Metering Costs, REC Purchases, PTCs, Start-Up Fuel Costs, and QF REP Costs	1,930,983
5	Interest	256,494
	Sum of Lines	
6	Total Balancing Account	\$ 5,917,279
7	California Projected Sales (MWh)	763,375
8	Balancing Rate \$/MWh	Line 6 / Line 7 \$ 7.75
9	Billing Factor (Franchise Fees & Uncollectible Accounts)	101.6%
10	Balancing Rate with Billing Factor \$/MWh	Line 8 x Line 9 \$ 7.87

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Q. Please explain the calculation of the Balancing Rate for 2025.

A. As shown in Table 1, the 2025 Balancing Rate is calculated by:

- (1) Determining the total amount in the ECAC balancing account (Table 1, Line 6) by accumulating the sum of the:
 - unrecovered amount from previous ECAC filings remaining in the ECAC balancing account as of December 31, 2023;

- 1 • variance between 2023 adjusted actual NPC and the amount projected in
2 the 2024 ECAC filing;
- 3 • variance between 2024 adjusted actual/projected NPC and the NPC
4 projected in the 2024 ECAC filing;
- 5 • fuel stock carrying charge, the ARB administrative costs, net metering
6 surplus compensation, REC purchases for RPS compliance, PTCs, Start-
7 Up Fuel costs, and QF REP costs; and
- 8 • interest accumulated on the balance of the ECAC balancing account.
- 9 (2) Dividing the total balance of the ECAC balancing account (Table 1, Line 6)
10 by the California projected retail sales (Table 1, Line 7) included in the
11 Company's 2023 Rate Case.
- 12 (3) Grossing-up the result for the ECAC Billing Factor (Table 1, Line 9) to
13 account for franchise fees and uncollectible accounts expense, as included in
14 the Company's 2023 Rate Case.

15 **Q. What is the Company's proposed Balancing Rate?**

16 A. As shown in Table 1 and in Exhibit PAC/201, Line 61, the proposed Balancing Rate
17 is \$7.87 per MWh.

18 **Q. What is the total dollar amount to be collected through the Balancing Rate in
19 2025?**

20 A. Accumulating the 2023 residual balance and the incremental deferrals for 2023 and
21 2024, plus interest, results in a surcharge of approximately \$5.9 million to be
22 collected from customers through the Balancing Rate. The total includes amounts for
23 the fuel stock carrying charges, net metering surplus compensation, ARB

1 administrative costs, REC purchases for RPS compliance, PTCs, start-up fuel costs,
2 and QF REP costs.

3 **Q. Please explain the difference between the amount of NPC that was anticipated to**
4 **be deferred during 2023, and the actual NPC deferred during 2023.**

5 A. In its 2024 ECAC filing, the 2023 deferral was calculated using actual information
6 from January through May 2023 and a projection of NPC and related collections from
7 customers for the remainder of the year. The Company anticipated that during 2023
8 it would accumulate an under-recovery of approximately \$12.3 million from
9 customers. The actual amount deferred for 2023 was an under-recovery of \$14.0
10 million, or a difference of \$1.7 million from projected levels, as shown on Line 48 of
11 Exhibit PAC/201.

12 The \$14.0 million under-recovery consists of two components: (1) actual NPC
13 for 2023 was approximately \$11.3 million higher than projected on a California-
14 allocated basis; and (2) collections from customers through the Offset Rate in effect
15 during 2023 were approximately \$2.7 million lower than projected, causing the
16 deferred balance to increase.

17 **Q. Please describe the changes that caused an increase in NPC during 2023.**

18 A. Table 2 displays the variances between Base NPC from the Offset Rate and Actual
19 NPC on a total-Company basis. Overall, the variance between total Company Actual
20 NPC and the Offset Rate for 2023 was \$776 million, or 44 percent. Wholesale sales
21 revenue was \$222 million lower, coal costs were \$93 million lower, and wheeling and
22 other expenses were \$12 million lower than projected in the 2023 ECAC, while
23 natural gas expense and purchased power expense were higher by \$191 million and

1 \$468 million respectively.

2 **Table 2**

Net Power Cost Reconciliation (\$millions)

	TOTAL
ECAC Offset Rate - Base NPC	\$ 1,752
Increase/(Decrease) to NPC:	
Wholesale Sales Revenue	222
Purchased Power Expense	468
Coal Fuel Expense	(93)
Natural Gas Expense	191
Wheeling, Hydro and Other Expense	(12)
Total Increase/(Decrease)	\$ 776
Adjusted Actual NPC	\$ 2,528

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4 **Q. What are the main drivers of increased NPC in 2023?**

5 A. For 2023, the two main drivers for increased NPC were coal fuel supply constraints
6 and inaccurate modeling for wholesale sales in Base NPC. Both factors drive an
7 increase in natural gas generation, purchased power, and a reduction in wholesale
8 sales. Coal supply constraints which began at the end of calendar year 2022,
9 continued through 2023 and still impact the Company today have an overarching
10 influence on all components of actual system operations. These constraints cause the
11 coal generation in Base NPC to be replaced by natural gas generation and market
12 purchases and at the same time also limit the Company's ability to make profitable
13 wholesale sales transactions.

14 **Q. Please explain the changes in wholesale sales revenue.**

15 A. Wholesale sales volumes declined relative to Base NPC due to coal supply constraints

1 and the overstatement of wholesale volumes in the ECAC forecast modeling. When
2 actual market conditions differ from normalized forecast conditions in the power cost
3 production model, the opportunities for the Company to sell excess generation to the
4 market are limited. Overall, the above market and system dynamics decreased
5 wholesale sales revenue by \$222 million compared to Base NPC. While the average
6 price of actual wholesale market transactions, represented in the power cost
7 production model as short-term firm and system balancing sales, was \$76.59/MWh,
8 or 18 percent higher than the average price in Base NPC, actual wholesale market
9 transaction volumes were 3,780 gigawatt-hours (“GWh”), or 65 percent, lower than
10 Base NPC.

11 **Q. Please explain the changes in purchased power expense.**

12 A. Overall, actual purchased power expense increased \$468 million over Base NPC
13 because actual market purchase volumes, represented in the power cost production
14 model as short-term firm and system balancing purchases, increased, which were
15 primarily a result of decreased coal generation volumes. Actual market purchase
16 volumes increased by 3,309 GWh, or 60 percent compared to Base NPC.

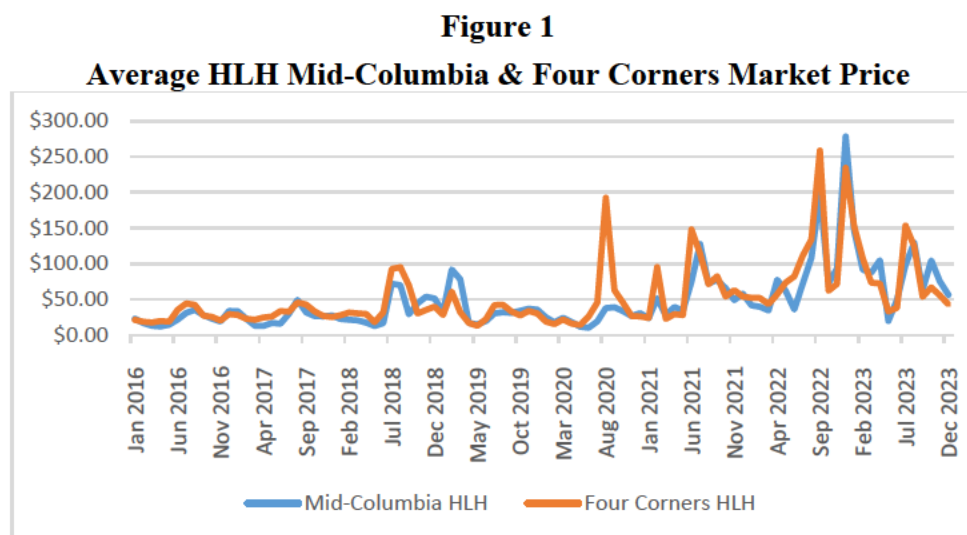
17 It is also important to note contextually that the average monthly price of market
18 transactions at the Mid-Columbia and Four Corners market hubs has risen significantly
19 since 2021. Between 2016 and 2020, the average monthly Heavy Load Hour (“HLH”)
20 market price at the Mid-Columbia market hub was \$29.27/MWh and \$35.11/MWh at
21 the Four Corners market hub while the average monthly HLH market price in 2023 was
22 \$85.51/MWh and \$81.12/MWh respectively. Table 3 and Figure 1 illustrate these
23 significant market price increases impacting 2023 NPC.

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Table 3
Average HLH Mid-Columbia & Four Corners Market Price

Year	Mid-C HLH Average	Four-C HLH Average
2016-2020	\$29.27	\$35.11
2021	\$58.36	\$65.42
2022	\$92.75	\$102.59
2023	\$85.51	\$81.12

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6 **Q. Please explain the changes in coal fuel expense.**

7 A. As discussed in my testimony above, coal supply shortages, primarily at the Hunter and
8 Huntington plants, that began in the fourth quarter of 2022 and extended through 2023,
9 had a significant impact on the Company’s coal generating resources and total system
10 operations. In addition to coal supply constraints in Utah, the Jim Bridger plant also
11 had coal supply constraints in early 2023. Due to overall lower coal fuel availability,
12 the Company had to adjust its overall system operations through increased natural gas
13 resource output, increased purchased power, and reduced wholesale sales. Total coal
14 fuel expense decreased because coal generation volume was 7,744 GWh, or 26 percent
15 lower than Base NPC as presented in Table 4.

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Table 4
Coal Generation

Year	Base GWh	Actual GWh	Variance	Percent
2021	28,492	31,590	3,098	11%
2022	28,408	28,391	(17)	0%
2023	29,695	21,951	(7,744)	-26%

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Q. Please describe the changes in natural gas fuel expense.

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A. With a reduction in coal generating resource output in 2023, the Company increased output at its natural gas generating resources when compared to previous years. Overall, the total natural gas fuel expense in Actual NPC increased by \$191 million compared to Base NPC due to an increase in natural gas generating volumes in the Deferral period of 4,125 GWh, or 42 percent higher than Base NPC, and an increase in the average cost of natural gas generation from \$36.81/MWh in Base NPC to \$39.61/MWh. Table 5 below shows how gas generation volumes have increased since 2020.

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Table 5
Gas Generation

Year	Actual GWh
2020	12,042
2021	13,312
2022	13,686
2023	14,050

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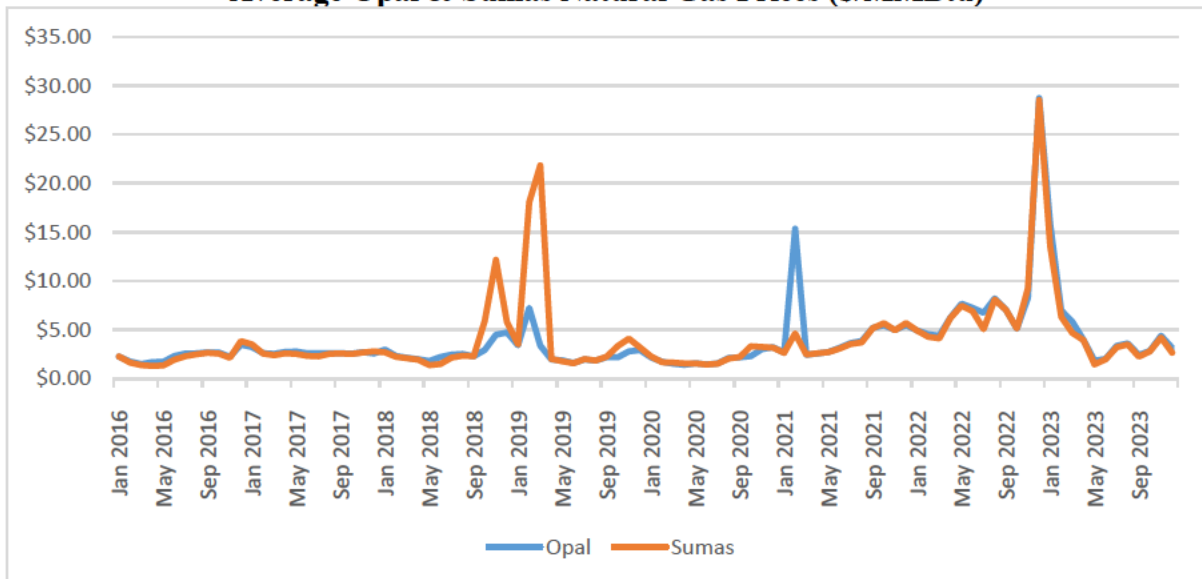
Like the significant increase in the average price of market power purchases

1 discussed above, average natural gas prices have also seen a significant increase as
 2 compared to 2016 through 2020. Table 6 and Figure 2 below illustrate these increases
 3 impacting 2023 NPC.

4 **Table 6**
 5 **Average Opal & Sumas Natural Gas Prices (\$/MMBtu)**

Year	Opal Average	Sumas Average
2016-2020	\$2.51	\$3.19
2021	\$4.80	\$3.91
2022	\$8.27	\$8.09
2023	\$4.70	\$4.22

6 **Figure 3**
 7 **Average Opal & Sumas Natural Gas Prices (\$/MMBtu)**



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 9 **Q. Please describe how extreme weather events have impacted NPC.**

10 A. Ongoing drought in the West, which began in the summer of 2020, has continued to
 11 impact Actual NPC because it reduced the availability of the Company’s hydro
 12 resources. In 2023, actual generation from the Company's hydro resources was 449
 13 GWh (13 percent) lower than forecasted generation in Base NPC as shown in Table 7
 14 below and needed to be replaced to meet customer demand.

1

Table 7
Hydro Generation

Year	Base GWh	Actual GWh	Variance	Percent
2020	3,646	3,037	(609)	-17%
2021	3,627	2,789	(838)	-23%
2022	3,561	2,936	(625)	-18%
2023	3,449	3,000	(449)	-13%

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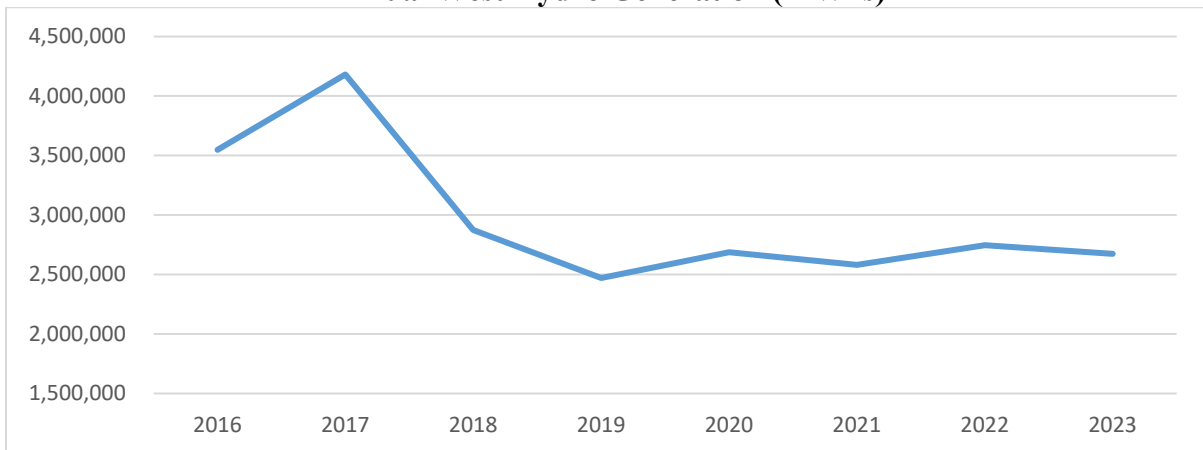
9

The estimated impact on total-Company NPC in 2023 due to decreased hydro MWhs caused by drought is \$48 million. In the four years preceding the drought (2016-2019), average west hydro resource generation was 3.3 million MWhs while the average west hydro resource generation during the drought (2020-2023) was 2.7 million MWhs, a difference of 600 thousand MWhs, on average. Figure 4 below shows the decline over time.

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Figure 4
Annual West Hydro Generation (MWhs)



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Additionally, in December 2022, a historic winter cyclone event occurred across the majority of the United States, which impacted both market prices and natural gas prices, along with an increase in demand. The impacts of this event on both natural gas prices across the Company's delivery points and market power purchase prices

1 were not only significant and elevated, but also carried over into January 2023. Table 8
2 and Table 9 below show the large variance between average January prices and the
3 remaining average for the year prices between February and December at the Opal and
4 Sumas natural gas hubs and Mid-Columbia and Four Corners market purchase power
5 hubs.

6 **Table 8**
7 **Opal and Sumas Average Monthly Price (\$/MMBtu)**

Month	Opal	Sumas
Jan	\$15.85	\$13.58
Feb - Dec	\$3.68	\$3.37

8 **Table 9**
9 **Mid-Columbia and Four Corners Average Monthly Price (\$/MWh)**

Month	Mid-C HLH	Four-C HLH
Jan	\$146.06	\$152.35
Feb - Dec	\$80.01	\$74.64

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11 **Q. Please explain the amount the Company expects to defer to the ECAC balancing**
12 **account during 2024.**

13 A. Based on actual NPC data for five months (January through May 2024) and projected
14 NPC for seven months (June through December 2024), the Company anticipates it
15 will defer an approximate increase of \$5.3 million to the ECAC balancing account
16 during 2024. The residual credit balance of approximately \$3.3 million in the
17 balancing account at the end of 2023 is deducted from the expected 2024 deferral,
18 and the net result is approximately \$2.0 million to be collected from customers as
19 shown on line 48 of Exhibit PAC/201.

20 **V. COAL SUPPLY CONSTRAINTS**

21 **Q. Please describe the many challenges the Company faced fueling its coal generating**

1 **resources in 2023.**

2 A. All of Utah’s operating mines and some Wyoming mines experienced significant
3 production difficulties and challenges in 2023 due to geological, logistical, and
4 financial challenges. The most significant challenge was the mine fire that occurred at
5 American Consolidated Natural Resources’ (“ACNR”) Lila Canyon mine. The mine
6 had produced more than 25 percent of Utah’s coal production in recent years and
7 stopped production in September 2022. ACNR announced the permanent closure of the
8 Lila Canyon mine in November 2023 after determining that it was not possible to safely
9 remediate and operate the mine.

10 In 2023, all of PacifiCorp’s Utah coal suppliers and a major Wyoming coal
11 supplier operated under *force majeure* declarations that resulted in significant delivery
12 shortfalls of PacifiCorp’s contracted coal supply. Consequently, the Utah coal mines
13 experienced a 35 percent decrease in coal production from 10.7 million tons in 2022 to
14 6.9 million tons. Table 10 below highlights recent Utah coal market production data.

15 **Table 10**

Utah Coal Production by Supplier (source MSHA)					
	TONS			Change	
	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2022 v. 2023</u>	<u>%</u>
Bronco Utah Operations, LLC	1,170,988	1,062,707	798,023	(264,684)	-25%
Wolverine Fuels, LLC	6,845,083	6,425,241	5,477,050	(948,191)	-15%
ACNR Holdings, Inc.	3,470,644	2,281,289	159,240	(2,122,049)	-93%
Gentry Mountain Mining, LLC	512,951	599,770	419,592	(180,178)	-30%
Alton Coal Development, LLC	434,165	354,265	66,659	(287,606)	-81%
	12,433,831	10,723,272	6,920,564	(3,802,708)	-35%

16 Additionally, challenges in the U.S. coal market in 2022 due to historically low
17 coal inventories and soaring natural gas prices led many utilities to increase coal

1 purchases for generation and to restock depleted coal inventories. In many coal basins,
2 coal pricing more than doubled in 2022 and remained high into 2023. This effect on
3 coal pricing was exacerbated by the war in Ukraine, when many U.S. mines, including
4 mines in Utah and Colorado, rushed to take advantage of high coal prices by exporting
5 coal to Europe.

6 **Q. What did the Company do to acquire additional coal supply in 2023?**

7 A. The Company explored economic coal from possible sources. PacifiCorp contracted
8 with a new supplier in 2023, Gentry Mountain Mining (Gentry), for additional coal
9 supply for the Hunter plant. The Gentry coal supply agreements were designed to
10 purchase all known economically-available Utah coal for use at the Utah plants.
11 PacifiCorp continued to cooperate with the Hunter plant's co-owners to deliver coal
12 from one of the plant co-owner's mine in Colorado. PacifiCorp even excavated a small
13 amount of coal from the buried coal pile at the Gadsby plant, a converted natural gas
14 plant in Salt Lake City, and delivered the coal to the Hunter plant. PacifiCorp also
15 continued to transport coal from the Rock Garden safety pile to the Huntington plant.
16 This activity continued through September 2023 when the Rock Garden inventory was
17 completely depleted.

18 PacifiCorp also procured coal from the North Antelope Rochelle Mine
19 (NARM) in Wyoming's Powder River Basin for the first time for the Jim Bridger plant.
20 Historically, Jim Bridger's coal has been supplied by the captive Bridger Coal
21 Company mine and Lighthouse Resources' local Black Butte mine (Black Butte).
22 PacifiCorp's deliveries from Black Butte were 0.88 million tons or **[Begin**
23 **Confidential]** [REDACTED] **[End Confidential]** less than contracted in 2023. The

1 shortfall occurred due to Black Butte's [Begin Confidential] [REDACTED]
2 [REDACTED] [End
3 Confidential]. Black Butte declared *force majeure* in October 2023 [Begin
4 Confidential] [REDACTED] [End Confidential]. Early in 2023, once the
5 Black Butte delivery shortfall became apparent, PacifiCorp took steps to mitigate the
6 shortfall. First, dispatch of the Jim Bridger plant was adjusted to account for the
7 shortfall. Second, PacifiCorp contracted for the delivery of NARM coal which also
8 required PacifiCorp to lease railcars. PacifiCorp received 0.33 million tons from
9 NARM in 2023 to partially offset the reduction in Black Butte mine deliveries.

10 **Q. How did the Company ensure existing coal suppliers in Utah did not suspend**
11 **operations during 2023?**

12 A. Bronco Utah Operations, LLC (Bronco) operates the Emery mine in Utah. PacifiCorp
13 signed a coal supply agreement with Bronco in 2020 which allowed the Company to
14 purchase [Begin Confidential] [REDACTED] [End
15 Confidential] tons per year for calendar years 2021 - 2024 for coal to the Hunter Plant.
16 Bronco notified PacifiCorp in late 2022 that it was unable to supply coal to the Hunter
17 Plant at the current contract price and needed a commitment longer than the remaining
18 two years of the contract for it to make the necessary capital investment for a reliable
19 supply of coal to the Hunter plant. PacifiCorp evaluated the economic effects of this
20 request and determined to adjust the Bronco contract terms to allow Bronco to obtain
21 the necessary financing.

22 To avoid the unfavorable cost impacts to PacifiCorp's customers resulting from
23 the unexpected loss of Bronco's coal supply, PacifiCorp amended its contract with

1 Bronco in March 2023 to maintain Bronco as a coal supplier to serve Hunter through
2 December 31, 2025. The contract amendment reduced Bronco's deliveries to the
3 Hunter Plant as follows: (2023) [Begin Confidential] [Redacted] [End Confidential]
4 tons, (2024) [Begin Confidential] [Redacted] [End Confidential] tons, and (2025)
5 [Begin Confidential] [Redacted] [End Confidential] tons. Despite PacifiCorp's best
6 efforts to maintain the Emery mine as a reliable coal supplier, Bronco continued to
7 struggle with production and ultimately delivered only 0.51 million tons in 2023, a
8 shortfall of [Begin Confidential] [Redacted] [End Confidential] tons from the
9 contractual tons.

10 **Q. How have the coal supply limitations impacted the Company's dispatch of its coal**
11 **generating resources?**

12 A. As a result of the *force majeure* declarations and resulting coal delivery shortfalls in
13 Utah, the dispatch price of the Hunter and Huntington plants was adjusted to match the
14 coal deliveries and assure system reliability throughout 2023. In other words, the
15 dispatch of these coal resources was adjusted to ensure the Company had sufficient
16 coal to serve load during high-demand periods. Additionally, the dispatch price of the
17 Jim Bridger plant was adjusted for three months in early 2023 due to delivery shortfalls
18 at the Black Butte mine which eventually resulted in a *force majeure* declaration.
19 Ultimately due to these issues, the Company had to reduce its overall coal generating
20 resource output in 2023 as illustrated in Table 5 above.

21 **Q. How has the Company amended its coal contracts for future supply?**

22 A. In February 2024, PacifiCorp amended the Hunter and Huntington coal supply
23 agreements with Wolverine. The amended coal supply agreement with Wolverine for

1 the Hunter plant’s fuel supply [Begin Confidential] [REDACTED]
2 [REDACTED] [End Confidential] for the Hunter plant.
3 Beginning in [Begin Confidential] [REDACTED], [End Confidential] the amendment
4 facilitates additional coal production through renewed operations at the Fossil Rock
5 mine in Emery County, Utah. Deliveries from the Fossil Rock mine will begin in
6 [Begin Confidential] [REDACTED] [End Confidential] When fully operational, the Fossil
7 Rock mine will provide [Begin Confidential] [REDACTED] [End Confidential] tons per
8 year to the Hunter plant. The contract amendment allows the Company to direct this
9 coal to the Huntington plant as needed. This issue is addressed more thoroughly in the
10 Company’s 2025 Transition Adjustment Mechanism proceeding (Docket No. UE 434).

11 VI. COMPLIANCE COSTS

12 **Q. Has there been any additional purchase requirements for NPC in 2023 for the**
13 **Company to operate its system and resources?**

14 A. Yes. The Company had to acquire allowances for the Washington Climate
15 Commitment Act (“CCA”), which caps and reduces greenhouse gas emissions in
16 Washington. Additionally, the Ozone Transport Rule (“OTR”), which is the federal
17 plan for interstate transport of the 2015 ozone National Ambient Air Quality Standards
18 was planned to become effective on August 4, 2023.

19 **Q. Does the Company have to comply with the Washington CCA to operate its**
20 **Chehalis natural gas generating plant?**

21 A. Yes. The Washington CCA requires the Company to purchase allowances for output at
22 its Chehalis natural gas generating facility. In 2023, the Company made \$42 million in
23 purchases, on a total-company basis, to comply with the Washington CCA. These costs

1 were necessary to comply with applicable law for the continued operation of Chehalis,
2 for the benefit of California customers, and were prudently incurred by the Company.

3 **Q. Do these prudently incurred costs benefit California customers?**

4 A. Yes. California customers received the benefit of the generation from the Chehalis
5 natural gas facility which reduced NPC. NPC would have increased by \$23.6 million
6 on a total-Company basis if the generation from Chehalis were removed. Accordingly,
7 as with other taxes and compliance costs imposed on the Company by state and federal
8 governments, customer rates should reflect the full costs for this generation including
9 the costs to comply with Washington CCA.

10 **Q. Please generally describe the Ozone Transport Rule (“OTR”).**

11 A. The OTR is the Environmental Protection Agency’s (EPA) finalized federal plan for
12 interstate transport of the 2015 ozone National Ambient Air Quality Standards, and had
13 an effective date of August 4, 2023. The plan applied to 23 states, including Utah, and
14 includes requirements to eliminate significant contributions of ozone or ozone
15 precursors (specifically, nitrogen oxides (NOx)) to nonattainment or maintenance areas
16 in neighboring states. With respect to fossil fuel-fired electric generating units, the final
17 rule sought to implement an allowance-based trading program where each unit was
18 allocated a portion of the state’s NOx budget during the ozone season (identified in the
19 rule as May 1 – September 30).

20 **Q. What is the current status of the OTR?**

21 A. On July 27, 2023, the U.S. Tenth Circuit Court of Appeals granted petitioners’,
22 including PacifiCorp, motion to stay the EPA’s final disapproval of Utah’s OTR state
23 implementation plan (SIP) on July 27, 2023; and (2) EPA proposed approval of

1 Wyoming's OTR SIP on August 14, 2023. While timelines cannot be predicted
2 precisely, the OTR stay for the state of Utah is still under litigation with the U.S. Tenth
3 Circuit Court of Appeals and is expected to remain in place at least through the 2024
4 ozone season. For Wyoming, the EPA published its final approval of Wyoming's
5 interstate ozone transport plan in the Federal Register on December 19, 2023. The final
6 approval of Wyoming's plan removes cross-state ozone transport requirements from
7 electric generating units in the state, including PacifiCorp's generating units. As a
8 result, Wyoming is not subject to the OTR federal implementation plan.

9 **Q. Did the OTR impact NPC in 2023?**

10 A. The stay was not granted until a week before the OTR was set to become effective, and
11 the Company had to plan as if the OTR was going to be implemented for the Utah
12 thermal generating units. Therefore the Company needed to alter its dispatch through
13 market power purchases and its thermal generating resources as necessary to ensure
14 there were sufficient NOx allowances to cover the generation. In 2023, the Company
15 incurred \$17 million in additional net power costs to comply with the prospective OTR
16 requirements.

17 **Q. Are other environmental compliance costs included in California customer rates?**

18 A. Yes. All the Company's generation resources incur various types of environmental
19 compliance costs and generation taxes, many of which are imposed by the state where
20 the resource is located. These include costs like the Wyoming wind tax, and upgrades
21 at generation facilities that are necessary to comply with environmental requirements
22 like fish passage at hydroelectric plants or avian curtailments at wind facilities. These
23 direct impacts to generation are consistently system allocated. California customers

1 pay these environmental compliance and generation tax costs incurred by resources
2 that are used to serve California customers.

3 **VII. 2025 OFFSET RATE**

4 **Q. Please explain the 2025 Offset Rate.**

5 A. As shown in Exhibit PAC/201, the Offset Rate is the amount of California-allocated
6 2025 NPC, fuel stock carrying charges, ARB administrative costs, net metering
7 surplus compensation, REC purchases for RPS compliance, PTCs, start-up fuel costs,
8 and QF REP costs that will be recovered from customers for the forecast test year
9 (2025). According to the Commission-approved terms of the ECAC mechanism, if
10 the change in the Offset rate exceeds a threshold of five percent, the rate is updated
11 for the upcoming rate effective period.

12 Compared to NPC in the 2024 ECAC, forecast NPC in the 2025 ECAC are
13 higher by 6 percent. Additionally, the inclusion of PTCs in the 2025 ECAC decreases
14 net power cost and thereby decreases the Offset Rate. The proposed Offset Rate is
15 \$45.76 per MWh, which is an increase of 2 percent from the rate of
16 \$44.94 per MWh, which is under consideration in the Company's 2024 ECAC filing.
17 With the change in the Offset Rate less than the five percent threshold, the Company
18 proposes no change to the Offset Rate for 2025.

19 **Q. Please explain the calculation of the Offset Rate for 2025.**

20 A. The Offset Rate is calculated by:

21 (1) summing the projected California-allocated 2025 NPC, fuel stock carrying
22 charges, ARB administrative costs, net metering surplus compensation, REC
23 purchases for RPS compliance, PTCs, start-up fuel costs, and QF REP costs;

- 1 (2) dividing by the projected California retail sales; and
2 (3) grossing up the amount by the ECAC Billing Factor to account for franchise
3 fees and uncollectible accounts expense.

4 As shown in Exhibit PAC/201, Line 15, the calculated 2025 Offset Rate is \$45.76 per
5 MWh. The rate is composed of approximately \$38.2 million in California-allocated
6 NPC, \$0.2 million of fuel stock carrying charges, \$0.05 million in ARB
7 administrative costs, \$0.5 million of REC purchases for RPS compliance, a credit of
8 \$4.6 million for PTCs, \$0.07 million of start-up fuel costs, and zero dollars of QF
9 REP costs. Net metering surplus compensation costs are currently not a material
10 charge, so the Company has not included a projection for these costs in 2025. In the
11 future, these costs may increase, and the Company may include a forecast as part of
12 future Offset Rate calculations.

13 VIII. SPECIFIC ECAC COSTS AND CREDITS

14 **Q. What is the purpose of this section?**

15 A. I discuss the specific cost categories that are included in the ECAC, including the
16 Company's actual and forecasts costs relevant to the Offset and Balancing Rates.

17 **A. Fuel Stock Carrying Charge**

18 **Q. Does the 2025 Offset Rate include the forecast carrying charges on fuel stock
19 balances?**

20 A. Yes. The 2025 Offset Rate includes a forecast carrying charge of \$154,523.

21 **Q. Does the 2025 Balancing Rate also include a true up of actual fuel stock carrying
22 charges?**

23 A. Yes. The 2025 Balancing Rate includes a surcharge of \$10,446 (including interest) to

1 true up fuel stock carrying charges to actual costs in 2023 and 2024. Actual carrying
2 charges for 2023 and 2024 were higher than projected due to differences in fuel stock
3 balances and interest rates used to determine the previous carrying charges.

4 **B. ARB Administrative Costs**

5 **Q. Does the 2025 Offset Rate include ARB administrative costs?**

6 A. Yes. The 2025 Offset Rate includes \$46,594 of ARB administrative costs.

7 **Q. Does the 2025 Balancing Rate include ARB administrative costs that were**
8 **booked to the memorandum account authorized in the Company's 2012 ECAC?**

9 A. Yes. The proposed Balancing Rate includes a charge of \$66,983 (including interest)
10 to account for the difference between actual and forecast ARB administrative costs.

11 Confidential Exhibit PAC/205-C provides a summary of the costs booked in 2023 and
12 2024, as well as a projection of 2025 costs.

13 **C. Net Metering Surplus Costs**

14 **Q. Does the 2025 Offset Rate include the forecast net metering surplus costs?**

15 A. No. Net metering surplus compensation is currently an immaterial charge, so the
16 Company has not included a projection for this cost in 2025.

17 **Q. Does the 2025 Balancing Rate also include a true up of actual net metering**
18 **surplus costs?**

19 A. Yes. The 2025 Balancing Rate includes \$67,086 (including interest) to true up net
20 metering surplus costs to actual costs in 2023 and 2024.

21 **D. Renewable Energy Credits**

22 **Q. Does the Company's 2025 ECAC filing include any revenue from the sale of**
23 **RECs?**

1 A. No. The Company has not sold any of its California-allocated RECs; rather, these
2 RECs have been retained for compliance with California's RPS.

3 **Q. Does the 2025 Offset Rate include the forecast of any costs from the purchase of**
4 **RECs?**

5 A. Yes. The 2025 Offset Rate includes a forecast of \$476,851.

6 **Q. Does the 2025 Balancing Rate include a true up of actual REC purchases for**
7 **RPS Compliance?**

8 A. Yes. The 2025 Balancing Rate includes a surcharge of \$268,811 (including interest)
9 to true up REC purchases to actual purchases for RPS Compliance in 2023 and 2024.

10 **E. Production Tax Credits**

11 **Q. Does the 2025 Offset Rate include the forecast of renewable energy PTCs?**

12 A. Yes. The 2025 Offset Rate includes a credit of \$4,582,629 based on the forecasted
13 wind generation attributed to PTCs.

14 **Q. Does the 2025 Balancing Rate include a true up of actual PTCs?**

15 A. Yes. The 2025 Offset Rate includes a surcharge of \$1,278,148 (including interest) to
16 true up forecasted PTCs to actual PTCs in 2023 and 2024.

17 **F. Start-up Fuel Costs**

18 **Q. Does the 2025 Offset Rate include the forecast of any start-up fuel costs?**

19 A. Yes. The 2025 Offset Rate includes a forecast of \$70,291 for start-up fuel costs.

20 **Q. Does the 2025 Balancing Rate include a true up of actual start-up fuel costs?**

21 A. Yes. The 2025 Offset Rate includes a sur-credit of \$20,701 (including interest) to
22 true up start-up fuel costs to actual costs in 2023 and 2024.

1 **G. QF REP Costs**

2 **Q. Does the 2025 Offset Rate include the forecast of QF REP costs?**

3 A. Yes. QF REP costs have been approved in the Company's 2023 general rate case and
4 are included in the ECAC as part of the 2020 Inter-Jurisdictional Allocation Protocol
5 (2020 Protocol). The forecast QF REP costs for the 2025 Offset Rate are zero.

6 **Q. Does the 2025 Balancing Rate also include a true up of QF REP costs?**

7 A. Yes. The 2025 Balancing Rate includes a surcharge of \$351,889 (including interest)
8 to true up QF REP costs to actual costs in 2023.

9 **IX. IMPACT OF PARTICIPATING IN THE WEIM**

10 **Q. What is the CAISO WEIM?**

11 A. The CAISO WEIM is an advanced real-time energy market that automatically finds
12 low-cost energy to serve real-time consumer demand across the west by allowing
13 participants to buy and sell power close to the time electricity is consumed. Since its
14 launch in 2014, the WEIM has enhanced grid reliability, improved the integration of
15 renewable resources, lowered carbon emissions, and generated significant cost
16 savings for its participants.

17 **Q. Are the actual benefits from participating in the WEIM included in the PCAM**
18 **deferral?**

19 A. Yes. Participation in the WEIM provides significant benefits to customers in the
20 form of reduced Actual NPC. The benefits are embedded in Actual NPC through
21 lower fuel costs and lower purchased power costs.

22 **Q. What are the actual WEIM benefits included in the PCAM deferral?**

23 A. CAISO's WEIM benefits report indicates that PacifiCorp received \$154 million in

1 benefits in 2023. Since inception of the WEIM, PacifiCorp has received \$746 million
2 in total benefits.

3 **X. CONCLUSION**

4 **Q. Please summarize your testimony.**

5 A. The 2025 ECAC Offset and Balancing Rates, including relevant interest and billing
6 factors, are accurately calculated and consistent with the Company's ECAC tariff and
7 previous Commission orders. The cost increases in the current Application are driven
8 by coal supply limitations, inaccurate modeling of wholesale sales volumes, and
9 extreme weather events impacting actual system operations. I recommend the
10 Commission approve the Company's request.

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

12 A. Yes.

Application No. 24-08-____
Exhibit No. PAC/201
Witness: Jack Painter

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP 2025 ECAC

California ECAC Offset/Balancing Rate Calculation

August 2024

Exhibit PAC/201
California ECAC Offset / Balancing Rate Calculation

Line	2023			2024			2025		
	Projected			Projected			Projected		
ECAC Implementation									
ECAC Offset Rate									
1	Total Company Projected ECAC NPC	\$	1,752,375,823	\$	2,519,011,577	\$	2,656,307,058		
2	California Allocated Projected NPC		26,731,521		36,194,857		38,221,017		
3	California Allocated Carrying Charge of Fuel Stock		63,420		117,527		154,523		
4	California ARB Administrative Costs		86,625		71,304		46,594		
5	California Net Metering Surplus Costs		-		-		-		
6	California Allocated Renewable Energy Credits Purchases		470,556		1,147,566		476,851		
7	California Allocated Production Tax Credits		(4,467,767)		(4,696,982)		(4,582,629)		
8	California Allocated Start-Up Fuel Costs		59,897		76,781		70,291		
9	California Allocated Reasonable Energy Price QF Costs		-		-		-		
10	California Projected Sales in MWh		747,460		747,460		763,375		
11	Projected ECAC Offset Rate \$/MWh	\$	30.70	\$	44.03	\$	45.05		
12	Offset Rate Percentage Change		24.6%		43.4%		1.8%		
13	ECAC Offset Rate \$/MWh	\$	30.70	\$	44.03	\$	45.05		
14	Billing Factor (Franchise Fees & Uncollectible Accounts)		102.1%		102.1%		101.6%		
15	ECAC Offset Rate with Billing Factor \$/MWh	\$	31.33	\$	44.94	\$	45.76		

Line	2023		2024		
	Actual		Actual/Projected		
ECAC Balancing Rate					
16	Total Company Projected NPC	\$	1,752,375,823	\$	2,519,011,577
17	Total Company Adjusted Actual NPC		2,528,372,877		2,671,962,805
18	Variance (Line 17 - Line 16)	\$	775,997,054	\$	152,951,228

Total Company Component Variance					
Wholesale Sales Revenue					
19	Firm	\$	(221,950,899)	\$	(209,098,118)
20	Non-Firm		-		-
Purchase Power Expense					
21	Seasonal		-		-
22	Existing Demand		1,990,792		26,381,422
23	Existing Energy		(18,624,750)		53,873,953
24	QF		(83,649,054)		(12,837,282)
25	Firm		567,991,422		20,720,380
26	Non-Firm		0		(0)
Wheeling					
27	Firm		(29,732,363)		2,135,602
28	Non-Firm		14,757,130		4,106,705
Generation					
29	Coal		(92,886,950)		90,176,104
30	Seasonal Gas		(10,319,045)		(11,620,290)
31	Gas		201,411,417		(231,307,579)
32	Other		3,107,556		2,224,094
Total		\$	775,997,054	\$	152,951,228

California Allocated Component Variance					
Wholesale Sales Revenue					
33	Firm	\$	(3,256,677)	\$	(3,068,089)
34	Non-Firm		-		-
Purchase Power Expense					
35	Seasonal		-		-
36	Existing Demand		29,211		387,094
37	Existing Energy		(263,218)		761,385
38	QF		(1,227,379)		(188,361)
39	Firm		8,334,116		304,029
40	Non-Firm		0		(0)
Wheeling					
41	Firm		(436,262)		31,336
42	Non-Firm		208,558		58,039
Generation					
43	Coal		(1,312,744)		1,274,433
44	Seasonal Gas		2,846,489		(3,269,002)
45	Gas		(145,836)		(164,226)
46	Other		43,918		31,432
47	Total - California Energy Cost Account	\$	11,333,529	\$	2,294,246

48	Under (Over) Collection of California NPC	\$	1,712,154	\$	2,017,649
49	California Energy Cost Adjustment Account Interest		41,657		123,157
50	California Deferred Fuel Stock Carrying Charges		(5,616)		16,061
51	California ARB Administrative Costs		53,260		13,723
52	California Net Metering Surplus Compensation		36,573		30,513
53	California Renewable Energy Credits Purchases		(119,053)		387,864
54	California Production Tax Credits		689,179		588,969
55	California Start-Up Fuel Costs		(539)		(20,162)
56	California Reasonable Energy Price QF Costs		333,646		18,243
57	Total California Balancing Account	\$	2,741,261	\$	3,176,018

Line	2023		2024		2025		
58	ECAC Balancing Rate \$/MWh	\$	(1.31)	\$	28.26	\$	7.75
59	Billing Factor (Franchise Fees & Uncollectible Accounts)		101.6%		101.6%		101.6%
60	Balancing Rate w Billing Factor \$/MWh	\$	(1.33)	\$	28.71	\$	7.87
61	Balancing Rate Percentage Change						-72.6%

Application No. 24-08-____
Exhibit No. PAC/202
Witness: Jack Painter

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP 2025 ECAC

Adjusted Actual 2023 Net Power Costs

August 2024

2023 Adjusted Actual Net Power Cost

Exhibit PAC/202

	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Total 2023
Special Sales For Resale													
Long Term Firm Sales													
Black Hills	\$ 807,546	\$ 443,835	\$ 431,143	\$ 300,764	\$ 482,568	\$ 309,473	\$ 724,008	\$ 658,913	\$ 676,956	\$ 902,321	\$ 877,780	\$ 722,665	\$ 7,337,972
Hurricane Sale	2,192	2,221	2,504	2,548	2,213	2,191	2,319	2,658	2,297	1,703	-	-	22,846
Leaning Juniper Revenue	28,935	23,346	(161,740)	28,074	5,445	17,631	35,644	27,829	12,029	9,897	8,598	11,452	47,139
PCSO Craig Sale	834,290	719,319	715,854	218,999	191,078	775,266	1,845,174	1,760,028	1,995,297	547,488	613,272	568,837	10,785,901
Total Long Term Firm Sales	\$ 1,672,963	\$ 1,188,720	\$ 987,760	\$ 550,385	\$ 681,303	\$ 1,104,561	\$ 2,607,145	\$ 2,449,428	\$ 2,686,579	\$ 1,461,408	\$ 1,499,650	\$ 1,303,954	\$ 18,193,857
Total Short Term Firm Sales	\$ 37,427,975	\$ 12,221,035	\$ 19,171,189	\$ 11,159,307	\$ 3,447,760	\$ 4,770,745	\$ 6,953,753	\$ 19,630,065	\$ 15,716,008	\$ 9,445,459	\$ 7,611,442	\$ 8,355,747	\$ 155,910,485
Total Secondary Sales	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Special Sales For Resale	\$ 39,100,938	\$ 13,409,756	\$ 20,158,949	\$ 11,709,692	\$ 4,129,063	\$ 5,875,306	\$ 9,560,898	\$ 22,079,493	\$ 18,402,587	\$ 10,906,867	\$ 9,111,091	\$ 9,659,702	\$ 174,104,342
Purchased Power & Net Interchange													
Long Term Firm Purchases	-	-	-	-	-	-	-	-	-	-	-	-	-
Amor IX - Univ of Utah	-	-	-	-	-	-	-	-	-	-	-	-	-
Appaloosa Solar 1A	-	-	-	-	-	-	-	-	-	-	-	(220,800)	(220,800)
Appaloosa Solar 1B	-	-	-	-	-	-	-	-	-	-	-	(147,200)	(147,200)
Castle Solar	-	-	-	-	-	-	-	-	-	-	-	-	-
Cedar Creek Wind	-	-	-	-	-	-	-	-	-	-	-	-	-
Cedar Springs Wind	1,304,709	1,262,175	1,443,659	1,051,160	819,214	634,499	631,052	743,896	857,761	730,513	1,411,947	1,425,988	12,316,573
Cedar Springs III Wind	1,045,935	1,008,936	952,129	809,859	655,932	542,079	523,344	612,691	696,880	579,212	1,173,466	1,167,207	9,767,669
Combine Hills Wind	319,468	440,398	576,150	461,736	344,665	351,463	326,213	311,906	247,094	139,804	199,814	203,697	3,922,407
Cove Mountain Solar	155,137	223,961	267,573	389,492	417,939	437,140	484,876	378,340	350,287	330,213	199,329	180,414	3,814,700
Cove Mountain Solar 2 - FaceBook	-	-	-	-	-	-	-	-	-	-	-	-	-
Deseret Purchase	3,975,188	3,728,602	3,858,520	3,688,464	2,552,338	3,323,608	3,829,540	3,515,799	3,050,805	3,886,699	3,573,087	3,636,393	42,619,044
Elektron Solar	-	-	-	-	-	-	-	-	-	-	-	-	-
Gemstate	174,899	174,899	174,899	174,899	174,899	174,899	174,899	174,899	174,899	150,059	150,059	150,059	2,024,268
Graphite Solar	-	-	-	-	-	-	-	-	-	-	-	-	-
Horseshoe Solar	-	-	-	-	-	-	-	-	-	-	-	-	-
Hunter Solar	356,548	495,991	548,002	683,323	704,587	698,456	793,640	649,752	604,303	582,894	409,019	334,523	6,861,039
Hurricane Purchase	47,925	66,821	59,455	38,409	38,058	46,301	80,325	60,683	46,301	32,446	(653)	-	516,071
MagCorp Reserves	32,835	32,222	30,347	27,273	25,398	25,346	25,018	23,857	22,881	24,466	25,146	21,461	316,250
Milford Solar - FaceBook Oregon	270,828	419,178	403,606	756,053	752,875	784,833	803,793	698,276	653,972	588,005	350,164	316,997	6,798,580
Millican Solar	101,769	139,686	172,105	251,722	341,460	380,865	431,480	301,902	239,101	191,148	97,217	66,759	2,715,213
P4 Production	1,716,667	1,716,667	1,716,667	1,716,667	1,716,667	1,716,667	1,716,667	1,716,667	1,716,667	1,716,667	1,716,667	1,716,667	20,600,000
Nuoor	680,000	680,000	680,000	680,000	680,000	680,000	680,000	680,000	680,000	680,000	680,000	680,000	8,160,000
Old Mill Solar	20,570	33,461	46,076	58,856	58,835	68,645	84,581	68,604	52,664	46,373	26,213	17,212	583,092
Pavant III Solar	-	-	-	-	-	-	-	-	-	-	-	-	-
PGE Cove	57,650	13,180	13,180	13,180	13,180	13,180	13,180	13,180	13,180	13,180	13,180	13,180	202,625
Prineville Solar	68,561	94,390	118,439	170,341	223,697	252,756	284,006	195,910	160,969	129,793	72,538	44,774	1,816,172
Rocket Solar	-	-	-	-	-	-	-	-	-	-	-	-	-
Sigurd Solar	224,031	370,545	389,523	573,071	528,545	522,021	662,861	517,237	527,746	477,489	308,629	280,518	5,382,215
Small Purchases east	2,363	2,449	2,079	2,563	1,541	1,170	1,533	1,763	1,564	1,551	1,942	2,336	22,854
Small Purchases west	-	-	-	-	-	-	-	-	-	-	-	-	-
Three Buttes Wind	2,356,078	2,767,805	1,867,120	1,814,115	917,809	955,194	887,582	931,951	964,483	916,009	2,404,341	2,106,061	18,888,547
Top of the World Wind	4,614,327	5,532,111	3,723,204	3,549,802	2,319,075	2,035,764	1,561,529	1,958,282	2,083,829	2,101,021	4,727,908	4,643,603	38,850,454
Wolverine Creek Wind	584,108	867,052	1,312,199	862,519	551,173	417,867	656,606	697,234	558,774	604,629	753,954	690,216	8,556,332
Long Term Firm Purchases Total	\$ 18,109,596	\$ 20,070,525	\$ 18,354,931	\$ 17,774,504	\$ 13,837,884	\$ 14,062,753	\$ 14,652,725	\$ 14,252,828	\$ 13,704,158	\$ 13,922,171	\$ 18,293,965	\$ 17,330,064	\$ 194,366,105

2023 Adjusted Actual Net Power Cost

Exhibit PAC/202

	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Total 2023
Coal Fuel Burn Expense													
Colstrip	1,684,123	1,955,511	2,145,801	1,580,323	1,253,996	1,569,093	2,130,322	2,045,421	1,899,089	1,442,567	1,810,080	1,836,138	21,352,463
Craig	2,424,643	1,182,907	1,901,991	1,441,040	841,877	2,895,536	2,920,033	1,985,463	2,836,582	2,927,030	2,118,802	1,815,508	25,291,410
Dave Johnston	3,818,011	3,142,599	3,010,098	3,183,205	3,426,924	4,716,090	5,004,627	4,771,586	4,707,852	4,751,198	3,742,408	4,166,717	48,441,314
Hayden	844,559	854,975	976,628	756,373	957,761	923,988	1,232,193	1,068,988	1,054,043	884,331	1,001,713	1,016,226	11,571,779
Hunter	10,265,918	10,467,648	8,171,534	5,894,255	3,082,469	5,214,712	11,995,637	11,566,611	6,847,171	10,899,098	6,278,518	4,948,471	96,632,041
Huntington	12,534,132	8,298,369	6,969,831	4,602,140	4,393,074	4,431,657	7,493,707	11,769,268	7,010,488	4,725,929	4,960,662	3,746,288	80,937,545
Jim Bridger	15,754,947	7,780,875	7,274,126	4,550,634	10,143,804	18,335,237	24,045,575	24,932,824	33,695,501	23,639,843	15,284,774	16,104,756	201,542,896
Naughton 1 & 2	5,943,445	3,394,168	3,999,563	2,096,236	1,516,800	2,956,659	5,839,317	4,882,100	4,519,807	5,254,991	4,572,508	5,884,729	50,860,322
Wyodak	2,169,621	1,112,252	2,132,628	1,982,058	1,134,831	1,799,055	2,088,729	2,012,927	1,489,330	1,573,206	2,187,681	2,127,542	21,809,859
Total Coal Fuel Burn Expense	\$ 55,439,398	\$ 38,189,302	\$ 36,582,199	\$ 26,086,264	\$ 26,751,536	\$ 42,842,026	\$ 62,750,139	\$ 65,035,188	\$ 64,059,861	\$ 56,098,193	\$ 41,957,148	\$ 41,648,375	\$ 557,439,629
Gas Fuel Burn Expense													
Chehalis	\$ 23,196,877	\$ 17,905,476	\$ 16,853,183	\$ 5,627,940	\$ 6,607,529	\$ 5,264,726	\$ 5,888,948	\$ 7,699,933	\$ 7,807,830	\$ 8,965,254	\$ 8,752,467	\$ 9,296,421	\$ 123,866,584
Current Creek	17,590,486	10,982,221	8,614,541	5,196,816	6,173,522	6,226,066	7,534,099	7,840,546	7,588,521	7,916,154	7,195,770	7,045,235	99,903,977
Gadsby	855,096	819,298	456,684	435	423,921	1,045,828	2,212,601	2,136,835	2,155,601	3,171,351	2,086,823	2,489,522	17,853,995
Gadsby CT	77,684	24,010	25,850	131,726	14,999	14,362	23,995	63,026	68,586	56,976	52,387	29,533	583,133
Hermiston	9,251,115	4,263,095	4,101,600	3,148,137	1,703,608	2,074,671	2,931,916	3,241,897	2,470,001	2,718,075	(926,691)	(22,033)	34,955,391
Jim Bridger 1 & 2	-	-	-	-	-	-	-	-	-	-	-	-	158,133
Jim Bridger 1	19,561,762	12,423,616	9,951,804	7,088,426	7,094,213	5,862,110	6,213,685	6,857,454	7,686,171	10,118,015	8,945,334	9,613,544	111,416,135
Lake Side 2	22,058,843	12,526,072	11,447,455	7,700,691	7,730,806	7,747,390	10,157,041	9,458,141	8,949,956	476,880	6,672,637	10,854,246	115,780,157
Naughton 3	8,976,362	4,482,612	2,699,926	2,916,968	2,989,595	3,255,727	4,523,419	4,252,899	2,714,630	4,184,949	5,456,700	5,483,383	51,937,171
Total Gas Fuel Burn Expense	\$ 101,588,227	\$ 63,426,400	\$ 54,151,043	\$ 31,811,140	\$ 32,738,193	\$ 31,490,881	\$ 39,485,705	\$ 41,550,729	\$ 39,441,296	\$ 37,607,653	\$ 38,235,426	\$ 44,947,983	\$ 556,454,677
Other Generation													
Black Cap Solar	\$ 16,291	\$ 20,479	\$ 22,563	\$ 37,610	\$ 7,796	\$ 21,889	\$ 45,480	\$ 59,854	\$ 20,910	\$ 26,534	\$ 12,888	\$ 6,486	\$ 298,779
Blundell	429,883	246,638	442,334	482,685	2,464,500	786,492	426,572	514,107	522,062	458,376	455,751	88,284	7,317,685
Total Other Generation	\$ 446,173	\$ 267,117	\$ 464,897	\$ 520,296	\$ 2,472,297	\$ 808,381	\$ 472,052	\$ 573,961	\$ 542,971	\$ 484,910	\$ 468,639	\$ 94,770	\$ 7,616,464
Net Power Cost	\$ 197,251,081	\$ 214,890,250	\$ 214,170,149	\$ 162,085,830	\$ 160,495,809	\$ 178,795,711	\$ 296,819,506	\$ 297,191,399	\$ 233,832,184	\$ 176,643,130	\$ 199,091,621	\$ 197,106,207	\$ 2,528,372,877
Net Power Cost/Net System Load	\$35.19	\$42.75	\$41.48	\$34.78	\$33.71	\$36.56	\$48.87	\$51.67	\$48.91	\$37.13	\$39.94	\$36.04	\$40.83

2023 Adjusted Actual Net Power Cost

Exhibit PAC/202

	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Total 2023
Net System Load	5,604,670	5,026,151	5,162,694	4,660,002	4,761,590	4,890,420	6,073,786	5,751,960	4,781,306	4,757,366	4,984,964	5,468,961	61,923,870
Special Sales For Resale													
Long Term Firm Sales													
Black Hills	27,542	13,644	13,159	8,177	17,278	8,533	23,651	21,277	21,935	30,154	29,259	23,602	238,211
Hurricane Sale	18	16	17	17	18	18	20	19	18	15	-	-	175
PSCO Craig Sale	30,596	25,813	25,492	9,221	8,538	33,941	32,770	30,734	35,087	23,877	26,852	25,056	307,977
Total Long Term Firm Sales	58,155	39,473	38,668	17,415	25,833	42,493	56,441	52,030	57,040	54,047	56,111	48,658	546,363
Total Short Term Firm Sales	296,518	134,127	217,596	149,236	117,593	108,113	105,116	203,964	314,422	129,505	125,816	133,606	2,035,613
Total Secondary Sales	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Special Sales For Resale	354,673	173,600	256,264	166,650	143,426	150,605	161,557	255,994	371,462	183,552	181,926	182,264	2,581,975
Total Requirements	5,959,343	5,199,750	5,418,958	4,826,653	4,905,017	5,041,025	6,235,343	6,007,954	5,152,768	4,940,918	5,166,890	5,651,226	64,505,845
Purchased Power & Net Interchange													
Long Term Firm Purchases													
Amor IX	12,782	9,548	13,147	9,390	9,126	8,090	7,535	6,179	7,048	8,169	9,165	10,744	110,923
Appaloosa Solar 1A	-	-	-	-	-	-	-	-	-	-	-	-	4,099
Appaloosa Solar 1B	-	-	-	-	-	-	-	-	-	-	-	-	2,323
Castle Solar	-	-	-	-	-	-	-	-	-	-	-	-	-
Cedar Creek Wind	-	-	-	-	-	-	-	-	-	-	-	-	-
Cedar Springs Wind	84,175	81,431	62,082	67,817	52,853	40,935	40,713	47,993	55,339	47,130	91,093	91,999	763,561
Cedar Springs III Wind	59,092	57,002	43,164	45,755	37,058	30,626	29,567	34,615	39,372	32,724	66,297	65,944	541,217
Combine Hills Wind	6,082	8,384	10,968	8,790	6,561	6,691	6,210	5,938	4,704	2,661	3,804	3,878	74,670
Cove Mountain Solar	6,424	9,274	11,080	16,128	17,306	18,101	20,078	15,666	14,505	13,673	8,254	7,471	157,959
Cove Mountain Solar 2	13,270	19,253	23,833	35,525	36,043	37,314	41,145	32,770	29,821	28,138	17,201	15,536	329,850
Deseret Purchase	71,877	62,330	67,360	60,776	16,789	46,650	66,238	54,091	36,088	68,451	56,309	58,760	665,719
Elektron Solar	-	-	-	-	-	-	-	-	-	-	-	-	-
Gemstate	-	-	-	-	3,110	15,205	11,966	11,163	-	-	-	-	41,444
Graphite Solar	10,003	15,535	15,897	21,404	21,485	18,106	25,471	15,409	15,763	16,491	10,865	10,755	197,185
Horseshoe Solar	-	-	-	-	-	-	-	-	-	-	-	-	-
Hunter Solar	14,149	19,682	21,746	27,116	27,960	27,717	31,494	25,784	23,980	23,131	16,231	13,275	272,263
Hurricane Purchase	383	343	305	197	195	238	412	311	238	167	-	-	2,789
MagCorp Reserves	-	-	-	-	-	-	-	-	-	-	-	-	-
Milford Solar	10,389	16,079	15,482	29,001	28,879	30,105	30,832	26,785	25,085	22,555	13,432	12,159	260,782
Millican Solar	5,208	7,149	8,808	12,882	17,475	19,492	22,082	15,450	12,236	9,782	4,975	3,417	138,957
P4 Production	-	-	-	-	-	-	-	-	-	-	-	-	-
Nucor	-	-	-	-	-	-	-	-	-	-	-	-	-
Old Mill Solar	274	446	614	798	784	915	1,128	915	702	618	350	229	7,775
Pavant III Solar	1,419	2,722	3,177	4,421	4,489	4,806	5,132	3,848	3,645	3,226	1,975	1,798	40,759
PGE Cove	944	929	1,012	1,001	1,013	989	1,013	1,013	989	1,061	991	1,013	11,968
Prineville Solar	3,509	4,831	6,061	8,718	11,448	12,935	14,535	10,026	8,238	6,642	3,712	2,291	92,946
Rocket Solar	-	-	-	-	-	-	-	-	-	-	-	-	5,506
Sigurd Solar	8,291	13,714	14,416	21,209	19,561	19,320	24,532	19,143	19,532	17,672	11,422	10,382	199,194
Small Purchases east	18	19	15	17	11	8	11	13	12	11	16	18	170
Small Purchases west	-	-	-	-	-	-	-	-	-	-	-	-	-
Three Buttes Wind	36,929	43,383	29,265	28,434	14,386	14,972	13,912	14,607	15,117	14,358	37,686	33,010	296,059
Top of the World Wind	24,122	14,180	17,339	21,810	26,457	24,544	19,582	20,271	19,392	18,343	21,275	27,535	254,849
Wolverine Creek Wind	9,191	13,644	20,648	13,572	8,673	6,575	10,332	10,971	8,793	9,514	11,864	10,861	134,639
Long Term Firm Purchases Total	378,532	399,875	386,420	434,762	361,664	384,335	423,919	373,063	340,599	344,516	386,917	393,003	4,607,605

2023 Adjusted Actual Net Power Cost

Exhibit PAC/202

	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Jul-23	Aug-23	Sep-23	Oct-23	Nov-23	Dec-23	Total 2023
Coal Generation													
Colstrip	88,407	98,539	107,023	72,257	60,559	67,683	101,659	90,497	88,358	70,875	98,262	104,870	1,048,989
Craig	46,792	43,266	45,157	33,179	24,325	73,283	93,906	85,262	95,707	85,043	75,988	95,927	797,835
Dave Johnston	285,114	209,826	222,298	222,636	247,213	357,585	374,624	348,014	338,456	348,720	274,581	308,330	3,537,397
Hayden	34,133	38,556	42,255	30,569	40,857	51,308	54,587	46,920	44,599	41,258	39,658	45,213	509,913
Hunter	487,618	454,025	320,110	194,836	99,807	157,133	419,208	390,415	238,029	378,544	169,061	102,544	3,411,330
Huntington	565,040	351,624	290,195	171,996	163,474	161,963	330,429	532,346	327,614	186,801	201,049	118,350	3,400,881
Jim Bridger	615,272	205,005	189,833	104,068	231,925	511,933	763,377	828,358	665,565	824,213	533,529	602,280	6,075,456
Naughton 1 & 2	230,995	128,172	152,468	78,742	48,438	100,765	213,620	187,430	156,866	192,177	177,145	220,284	1,887,102
Wyodak	114,936	71,773	115,802	118,579	58,508	109,731	123,450	120,248	90,034	95,704	124,397	138,955	1,282,117
Total Coal Generation	2,468,307	1,600,786	1,485,241	1,026,862	975,106	1,591,384	2,474,860	2,629,490	2,045,228	2,223,335	1,693,670	1,736,753	21,951,022
Gas Generation													
Chehalis	280,663	179,475	309,825	142,124	140,248	81,063	136,455	206,383	217,426	274,630	131,763	139,952	2,239,007
Current Creek	267,745	238,738	239,392	181,388	220,790	229,857	259,008	296,804	278,941	258,311	202,687	206,284	2,879,945
Gadsby	4,078	6,615	4,023	(328)	4,594	14,575	32,138	33,855	31,914	43,097	28,666	31,930	235,157
Gadsby CT	146	(86)	(45)	35	(96)	(94)	(39)	614	976	264	280	(167)	1,788
Hermiston	140,135	130,519	125,576	130,952	118,329	130,714	139,339	137,102	139,205	142,085	(66)	24,025	1,357,915
Jim Bridger 1 & 2	-	-	-	-	-	-	-	-	-	-	-	-	-
Lake Side 1	300,210	276,856	281,151	245,836	252,358	207,004	192,601	238,261	271,780	296,880	263,122	279,964	3,106,023
Lake Side 2	363,669	290,568	340,530	279,067	271,261	274,326	346,617	353,832	318,361	(908)	188,313	324,840	3,350,476
Naughton 3	78,529	55,139	41,887	58,795	56,473	68,967	91,990	96,866	56,154	79,332	98,965	98,504	879,601
Total Gas Generation	1,435,175	1,177,824	1,342,339	1,037,869	1,063,957	1,006,412	1,197,109	1,363,717	1,314,757	1,093,691	913,730	1,103,332	14,049,912
Hydro Generation													
West Hydro	360,994	176,108	172,659	308,336	382,152	201,481	138,147	89,844	141,390	123,285	230,362	348,285	2,673,043
East Hydro	9,467	10,031	18,391	43,992	69,644	45,357	32,859	24,518	22,519	15,757	17,134	17,687	327,356
Total Hydro Generation	370,461	186,139	191,050	352,328	451,796	246,838	171,006	114,362	163,909	139,042	247,496	365,972	3,000,399
Other Generation													
Black Cap Solar	112	231	261	376	451	464	500	499	355	270	176	118	3,812
Blundell	23,063	18,012	21,935	20,102	20,113	18,548	18,516	20,583	16,958	23,166	23,039	24,166	248,201
Cedar Springs II Wind	60,985	54,174	43,396	46,732	49,556	37,950	32,368	41,508	47,923	36,914	60,253	69,157	580,916
Dunlap I Wind	53,487	56,143	47,587	39,486	22,920	20,760	21,294	22,967	21,222	28,566	51,335	46,252	432,029
Ekola Flats Wind	97,511	94,635	80,329	71,448	39,789	36,943	33,773	39,597	39,835	47,603	89,210	82,881	753,554
Footee Creek I Wind	21,480	21,870	20,819	19,817	12,839	11,232	14,160	14,316	14,186	19,631	23,349	21,831	215,530
Footee Creek III Wind	-	-	-	-	-	-	-	-	-	-	3,794	10,766	14,560
Footee Creek IV Wind	-	-	-	-	-	-	-	-	-	-	2,650	8,975	11,625
Glenrock Wind	24,438	18,168	15,000	21,138	25,009	18,172	14,516	17,246	17,728	13,219	20,794	23,947	229,375
Glenrock III Wind	9,436	6,765	5,468	7,966	8,983	6,783	5,333	6,336	6,100	4,853	7,616	9,051	84,690
Goodnoe Wind	17,447	23,026	23,964	22,221	6,442	23,890	24,437	21,973	21,192	12,822	13,800	12,695	223,909
High Plains Wind	37,741	37,084	40,583	37,508	19,871	17,899	19,472	20,779	18,929	25,245	38,254	28,774	342,139
Leaning Juniper 1	14,669	25,838	23,147	23,429	30,719	29,805	31,446	25,716	17,367	11,467	10,548	10,507	254,658
Marengo I Wind	39,047	43,495	45,462	41,397	29,807	25,649	14,489	28,246	29,240	19,104	26,944	27,045	369,925
Marengo II Wind	19,431	21,524	21,999	20,378	15,460	13,018	11,563	14,866	15,092	9,477	14,023	13,812	190,643
McFadden Ridge Wind	10,998	10,963	12,034	11,523	5,971	5,795	6,253	6,601	6,195	7,840	11,458	8,715	104,346
Pryor Mountain Wind	81,949	93,689	72,024	68,409	37,764	39,359	34,787	43,973	38,613	53,137	75,528	84,536	723,768
Rolling Hills Wind	20,034	14,109	12,000	18,364	20,707	14,909	11,452	14,161	13,913	10,302	17,211	20,624	187,786
Seven Mile Wind	47,290	49,115	40,983	33,881	20,034	17,793	19,039	22,474	22,255	26,410	44,516	37,809	381,599
Seven Mile II Wind	10,327	9,623	8,610	6,959	4,332	3,928	4,219	4,849	4,831	5,764	10,007	8,112	81,561
TB Flats Wind	151,082	144,760	126,643	129,048	81,060	70,709	64,374	73,547	73,811	86,982	170,857	143,895	1,316,768
Total Other Generation	740,527	743,224	662,244	640,192	451,827	413,606	381,991	440,237	425,745	442,772	715,362	693,668	6,751,394
Total Resources	5,959,343	5,199,750	5,418,958	4,826,653	4,905,017	5,041,025	6,235,343	6,007,954	5,152,768	4,940,918	5,166,890	5,651,226	64,505,845

Application No. 24-08-____
Exhibit No. PAC/203
Witness: Jack Painter

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP 2025 ECAC

Adjusted Actual/Projected 2024 Net Power Costs

[PUBLIC VERSION]

August 2024

THIS DOCUMENT IS CONFIDENTIAL IN ITS ENTIRETY

Application No. 24-08-____
Exhibit No. PAC/204
Witness: Jack Painter

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP 2025 ECAC

Projected 2025 Net Power Costs

[PUBLIC VERSION]

August 2024

THIS DOCUMENT IS CONFIDENTIAL IN ITS ENTIRETY

Application No. 24-08-____
Exhibit No. PAC/205
Witness: Jack Painter

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP 2025 ECAC

ARB Administrative Costs

[PUBLIC VERSION]

August 2024

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