

Application No. 23-09-____
Exhibit No. PAC/300-C
Witness: James Owen

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP 2024 ECAC

Direct Testimony of James Owen

[PUBLIC VERSION]

September 2023

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ATTACHED EXHIBITS

Highly Confidential Exhibit PAC/301 – Wyodak CSA Analysis

Highly Confidential Exhibit PAC/302 – Dave Johnston CSAs Analysis

Highly Confidential Exhibit PAC/303 – Hunter/Gentry CSA Analysis

Highly Confidential Exhibit PAC/304 – Hunter/Gentry CSA First Amendment Analysis

Highly Confidential Exhibit PAC/305 – Hunter/Gentry Spot Agreement Analysis

Highly Confidential Exhibit PAC/306 – Hunter/Bronco CSA Second Amendment Analysis

Highly Confidential Exhibit PAC/307 – Hunter/Bronco CSA Third Amendment Analysis

Highly Confidential Exhibit PAC/308 – Hunter/Wolverine CSA Analysis

Highly Confidential Exhibit PAC/309 – Jim Bridger/Peabody Energy CSA Analysis

Highly Confidential Exhibit PAC/310 – Jim Bridger Long-Term Fuel Plan

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 James Owen. My business address is 1407 West North Temple, Suite
5 210, Salt Lake City, Utah 84116. My title is Vice President of Environmental, Fuels,
6 and Mining.

7 **Q. Briefly describe your education and professional experience.**

8 A. I have a Bachelor of Science Degree in Mining Engineering, a Master of Business
9 Administration Degree, and a Juris Doctor Degree, all from the University of Utah. I
10 joined the Utah Department of Natural Resources – Division of Oil Gas and Mining
11 in November 2008 and held positions of increasing responsibility within the agency,
12 including responsibilities for environmental permitting, enforcement of
13 environmental compliance, engineering design, oversight of mine reclamation
14 bonding, environmental program management, and legislative and policy
15 management. I joined PacifiCorp as Director of Environmental in February 2018, and
16 have assumed positions of increasing responsibility since that time and currently
17 serve as Vice President of Environmental, Fuels, and Mining. My current
18 responsibilities encompass strategic planning, stakeholder engagement, regulatory
19 support, support of major generation resource additions, direct oversight of fueling
20 strategy, management of mining operations, and direct oversight of major
21 environmental compliance projects.

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

23 A. Yes. I have testified in previous proceedings before the Public Utilities Commission

1 of the State of California (Commission), and the public utility commissions of
2 Oregon, Utah, Idaho, and Wyoming.

3 **II. PURPOSE AND SUMMARY OF TESTIMONY**

4 **Q. What is the purpose of your testimony in this proceeding?**

5 A. I provide information related to several coal supply agreements and contracting issues
6 requested by the Commission in previous Energy Cost Adjustment Clause (ECAC)
7 proceedings. Specifically, my testimony: (1) discusses recent changes in coal market
8 conditions that have led to increased coal prices throughout the United States; (2)
9 addresses the prudence of several new coal supply agreements (CSAs) compared to
10 alternative resources (including considerations of system-wide reliability and costs,
11 and without must-run constraints); and (3) provides the most recent Jim Bridger
12 Long-Term Fuel Supply Plan (2023 Fuel Plan), which considers long-term fueling
13 options for the Jim Bridger plan.¹

14 **Q. Can you summarize your testimony?**

15 A. As detailed below, beginning in 2021, coal prices throughout the United States have
16 significantly increased, and materially impacted coal markets and coal availability for
17 PacifiCorp in 2022 and 2023. As a result, PacifiCorp's coal supply costs have
18 increased during the current ECAC recovery periods, while at the same time the
19 Company has entered into several new CSAs that mitigate and offset substantial costs
20 the Company would have incurred without these new agreements. Each of these
21 CSAs include minimum take provisions (except for one), which are standard terms
22 that provide adequate security for coal suppliers to invest in their operations to

¹ Decision (D.) 21-11-001, and 22-11-008.

1 provide coal when PacifiCorp requires. The Company does not believe it is possible
2 to negotiate these CSAs without minimum take obligations, without agreeing to other
3 terms that would not be reasonable or cost-effective for our customers.

4 Additionally, the Company's Jim Bridger Long-Term Fuel Supply Plan
5 considered several scenarios to determine what is the preferred least-risk least-cost
6 strategy for PacifiCorp's Jim Bridger plant. As discussed below, the Company's
7 current analyses indicates how the current coal supply market has been negatively
8 affected by domestic and international factors, and how it has impacted PacifiCorp's
9 economic analysis in executing new and amended CSAs.

10 III. CHANGES IN COAL MARKET CONDITIONS

11 Q. What significant changes have occurred in the coal market since 2021?

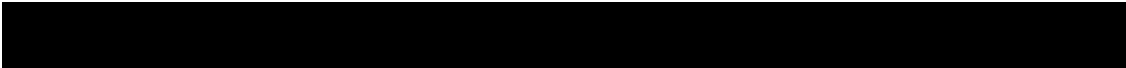
12 A. In the beginning of the third quarter of 2021, there was a significant increase in coal
13 prices throughout the United States. This was caused by multiple factors, including
14 but not limited to: increased coal demand due to high domestic natural gas prices; low
15 inventories at coal-fired power plants; increased demand abroad for coal exports;
16 international and domestic supply chain constraints; labor and material shortages; and
17 general market inflation. The coal market has experienced unprecedented price
18 increases and significant fluctuation from 2021 to 2023.

19 Elevated market rates led to coal suppliers seeking opportunities to sell coal at
20 higher prices on the open market. In addition, several of the Company's coal
21 suppliers are at increased risk of becoming insolvent and would be unable to deliver
22 coal. This is particularly true in cases where coal supplier operating costs have
23 drastically increased (due to inflation and other pressures), and they are subject to

1 fixed pricing under a coal supply contract.

2 **Q. Are there additional factors that impacted coal markets and coal availability for**
3 **PacifiCorp in 2022 and 2023?**

4 A. Yes. The Utah coal market was significantly disrupted and depleted due to a mine fire
5 that ignited at American Consolidated Natural Resources' (ACNR) Lila Canyon mine
6 in September 2022. As a result of the fire, the Lila Canyon mine ceased operations
7 and, as of the date of this filing, has not resumed coal production. PacifiCorp was
8 informed in February 2023 that the extent of the damage from the mine fire is
9 significant. The Lila Canyon mine accounted for more than 25 percent of Utah's total
10 coal production in recent years and was expected to supply **[Begin Confidential]**

11 
12 **[End Confidential]**. In 2022, Utah coal mines produced 10.7 million tons while
13 PacifiCorp's Utah plants consumed 5.8 million tons. PacifiCorp's Utah plants have
14 generally consumed more than 50 percent of the coal produced in the state. The
15 significant production shortfall due to the Lila Canyon mine fire negatively affected
16 all large coal consumers including PacifiCorp.

17 Unfortunately, this negative impact is expected to continue into the
18 foreseeable future. In addition to the mine fire, coal suppliers have experienced issues
19 relating to unfavorable geologic and mining conditions, delays and pressure relating
20 to securing federal mining leases, limited availability of trucking and railway
21 transportation for coal, long lead-times for procurement of necessary mining
22 equipment, and limitations in availability of financing. Taken together, PacifiCorp
23 and other similarly situated large coal consumers have experienced some of the

1 greatest scarcity of, and competition for, existing coal reserves in our service territory
2 in recent years.

3 **IV. NEW COAL SUPPLY AGREEMENTS**

4 **Q. Has PacifiCorp entered into any new CSAs since the record was submitted in the**
5 **2023 ECAC?**

6 A. Yes. The Company has entered into six new CSAs, and four new amendments of
7 previously executed CSAs, since the last ECAC filing. These CSAs are reflected in
8 Table 1 below.

9 **Table 1 – New CSAs since Last ECAC Filing**

Plant	Supplier/Mine	Contract Type	Executed	Term
Wyodak	Wyodak Resources / Wyodak	New	11/30/22	Jan 2023 - Dec 2026
Dave Johnston	Bluegrass Commodities / Eagle Butte	New	12/21/22	Jan 2023 - Dec 2024
Dave Johnston	Peabody / Caballo	1st Amendment	01/05/23	Jan 2023 - Dec 2025
Hunter	Gentry Mountain / Bear Canyon	New	01/20/23	Jan 2023 - Dec 2025
Hunter	Gentry Mountain / Bear Canyon	1st Amendment	02/01/23	Jan 2023 - Dec 2023
Hunter	Gentry Mountain / Bear Canyon	Spot	04/23/23	Apr 2023 - Dec 2023
Hunter	Bronco / Emery	2nd Amendment	08/03/02	Aug 2022 - Dec 2022
Hunter	Bronco / Emery	3rd Amendment	03/16/23	Mar 2023 - Dec 2025
Hunter	Wolverine Fuels / Various	New	06/23/23	Jan 2024 - Dec 2025
10 Jim Bridger	Peabody / NARM	New	04/20/23	Apr 2023 - Dec 2023

11 **Q. Are you providing any additional testimony for these CSAs?**

12 A. Yes. Consistent with D.20-12-004, my testimony and corresponding exhibits provide
13 additional information demonstrating the prudence of these new and amended CSAs.
14 My testimony is organized by plant, and discusses the CSA for Wyodak, the two
15 CSAs for Dave Johnston, six CSAs for Hunter, and one for Jim Bridger.

16 **Q. Do any of these CSAs have a term longer than five years?**

17 A. No. Each of these CSAs length is consistent with PacifiCorp's current practice of
18 limiting long-term CSAs to as short a term as possible to maintain flexibility in its

1 fuel supply options and generation planning strategies. PacifiCorp continually re-
2 evaluates this practice with each new CSA to determine whether a longer or shorter
3 term would benefit its customers.

4 **Q. Do any of these CSAs have minimum-take provisions?**

5 A. Generally yes. Each CSA—except for the Wyodak CSA—has a minimum-take or
6 similar contracting provision. The Company believes these conditions are necessary
7 terms given the reality that coal mining is a capital- and time-intensive industry.
8 Without a commitment by the customer to purchase a minimum amount of coal, the
9 coal supplier does not have an assured market for the output of the mine; the contract
10 is merely an option for the customer to purchase coal if desired while paying no cost
11 for this option. No coal producer could afford to agree to such a contract as it would
12 require a large investment of capital in reserves, development, and equipment to be
13 available to supply coal with no assurance that any coal would be purchased. Further,
14 coal suppliers (and similarly coal transporters) require a commitment to purchase at a
15 regular rate (commonly known as “ratable take”) to employ and maintain a workforce
16 able to meet the customer’s requirements.

17 As a result, while some contracts may provide some flexibility for the
18 customer to vary purchase requirements, every CSA except for Wyodak includes a
19 minimum volume commitment or similar requirement to purchase coal.

20 **Q. Were the Company’s contracting processes supported by independent request
21 for proposals (RFP) processes?**

22 A. Generally yes. In several instances, the Company issued a request for proposals (RFP)
23 to receive bids from coal suppliers to ensure a reasonably competitive bidding

1 process. This includes the Hunter/Gentry CSA, Hunter/Wolverine CSA, Jim Bridger/
2 Peabody Energy CSA and the two Dave Johnston CSAs. In each RFP, the Company
3 was able to select the offer or offers that provided the greatest benefit to customers.
4 The Company then negotiated final CSAs with each successful respondent in these
5 RFPs.

6 The Company did not issue an RFP for coal supply in two instances. First, the
7 Wyodak mine is a captive operation, where coal is mined and shipped by conveyor
8 belt directly to the Wyodak plant. Because this type of operation provides cost
9 efficiencies (and because there is no coal stockpile or rail infrastructure that can
10 deliver coal directly to the plant), it was neither reasonable nor cost-effective to issue
11 an RFP for this facility. Second, the Company entered into two amendments of the
12 existing Hunter/Bronco CSA to avoid potential disruptions to operations of the
13 Hunter plant that could have otherwise resulted from lack of coal supply caused by
14 the coal supplier. In both circumstances, an RFP was not reasonable because it could
15 not be accomplished in a timely manner to avoid material impacts to the Company's
16 operations.

17 **Q. Has the Company provided any analysis that indicates whether each CSA was**
18 **supported by least-cost least-risk principles?**

19 A. Yes. Prior to entering into each CSA, the Company conducted a detailed internal
20 economic analysis to determine whether each CSA was a reasonable and prudent
21 business decision and in best interest of its customers. Generally, these economic
22 analyses include background on each plant, key contracting provisions, discussion of
23 modeling inputs and assumptions, and analyses of various scenarios ran under current

1 and forecasted conditions. These analyses are consistent with the Company's
2 integrated resource procurement planning processes and rely on sophisticated
3 software to estimate the expected cost or benefit of each new CSA compared to
4 relevant alternatives. Each of these CSAs are discussed below.

5 **A. WYODAK COAL SUPPLY AGREEMENT**

6 **Q. Can you provide some background on the Wyodak plant and the Wyodak CSA?**

7 A. The Wyodak plant is located in Campbell County, Wyoming, and is jointly owned
8 with Black Hills Energy (Black Hills), which has a 20 percent ownership interest in
9 the plant. There is one coal unit at the Wyodak plant that has an output capacity of
10 335 megawatts (MW). The Wyodak plant is a mine-mouth operation, and receives its
11 coal from the adjacent Wyodak Mine by conveyor. This eliminates the need to store
12 coal inventory at the plant. Wyodak Resources Development Corp. (a subsidiary of
13 Black Hills) owns and operates the mine. PacifiCorp's prior agreement for the
14 Wyodak plant's coal supply was from January 1, 2001 to December 31, 2022.
15 PacifiCorp executed the Wyodak CSA with the Wyodak Mine to supply coal to the
16 plant through 2026.

17 **Q. What are the terms for annual volume and pricing in the Wyodak CSA?**

18 A. The annual volume and pricing terms for the Wyodak CSA are as follows:

1

[Begin Confidential]

Term	January 1, 2023, through December 31, 2026 (4 years)
Price	
Volume	No minimum or maximum volume obligations
Minimum Take	No minimum. Requirements contract with Wyodak Mine as the sole supplier of coal to the Wyodak plant. The coal volume will vary based on future power market conditions.

2

[End Confidential]

3 **Q. Why does the Wyodak CSA not contain a minimum take requirement?**

4 A. The Wyodak CSA is a “requirements” contract, meaning that PacifiCorp agreed to
 5 purchase 100 percent of the coal that PacifiCorp will consume at the Wyodak plant
 6 during the CSA term from the Wyodak Mine. Thus, the Wyodak contract has a
 7 requirement to purchase coal, but the parties did not specify a particular minimum or
 8 maximum volume and acknowledge that it will vary based on future power market
 9 conditions. Essentially, this requirements agreement allows the Company to secure
 10 coal supply for the Wyodak plant from a specific supplier without committing to any
 11 particular volume. In exchange, the coal supplier gets a guarantee that any coal
 12 needed will be purchased from them. In this case, the coal supplier owns 20 percent
 13 of the plant and can estimate PacifiCorp’s future consumption based on nearly 50
 14 years of affiliation with the plant.

15 **Q. Does the Company believe that entering into the Wyodak CSA was a prudent
 16 decision?**

17 A. Yes. Please refer to Highly Confidential Exhibit PAC/301 which contains the
 18 background and economic analysis with generation forecast of the Wyodak CSA.

19 **B. DAVE JOHNSTON COAL SUPPLY AGREEMENTS**

1 Q. **Please provide some background on the Dave Johnston Plant.**

2 A. The Dave Johnston plant is located in Glenrock, Wyoming, approximately 20 miles
3 east of Casper, Wyoming. The plant receives coal from multiple Powder River Basin
4 (PRB) mines, and the coal is delivered by Burlington Northern Santa Fe rail.
5 PacifiCorp owns 100 percent of the plant and operates all four units. The output
6 capacity at the plant is as follows: Unit 1 – 106 MW; Unit 2 – 106 MW; Unit 3 – 220
7 MW; and Unit 4 – 330 MW.

8 Q. **Please provide a summary of the new and amended CSAs for the Dave Johnston
9 Plant.**

10 A. In May 2022, PacifiCorp issued an RFP for Dave Johnston’s fuel supply for coal
11 purchases from 2022 through 2026. PacifiCorp solicited bids and based on the
12 responses to the RFP, PacifiCorp accepted two proposals which were the lowest
13 priced bids on a delivered cost basis. After reviewing Dave Johnston’s generation and
14 fueling needs, PacifiCorp negotiated a new CSA with Eagle Specialty Materials
15 (Dave Johnston/Eagle Butte CSA) and amended an existing CSA with Peabody
16 Energy (Dave Johnston/Caballo CSA).

17 Q. **What are the terms for annual volume and pricing of the Dave Johnston/Eagle
18 Butte CSA?**

19 A. The annual volume and pricing terms for the Dave Johnston/Eagle Butte CSA are as
20 follows:

1

[Begin Confidential]

Term	January 1, 2023 through December 31, 2024 (two years)	
Year	Tons	Price/Ton
2023	██████████	██████████
2024	██████████	██████████
Minimum Take	Fixed volume agreement	

2

3

[End Confidential]

4

Q. What contract terms were changed by the Dave Johnston/Caballo CSA

5

amendment?

6

A. The original term for the Dave Johnston/Caballo CSA was January 1, 2021, through

7

December 31, 2024. The first amendment extended the term for another year, through

8

December 31, 2025. The number of tons delivered for 2024 increased from ██████████

9

██████████ tons to ██████████ tons, and the annual tons to be delivered in 2025 is ██████████

10

██████████ tons. The Dave Johnston/Caballo CSA was amended pursuant to the RFP

11

process.

12

Q. What are the terms for annual volume and pricing of the Dave Johnston/Caballo

13

CSA amendment?

14

A. The annual volume and pricing terms for the Dave Johnston/Caballo amendment are

15

as follows:

16

[Begin Confidential]

Term	The amendment extends the current agreement from December 31, 2024 to December 31, 2025 (one year)	
Year	Additional Tons	Price/Ton
2024	██████████	██████████
2025	██████████	██████████
Minimum Take	Fixed volume agreement	

17

18

[End Confidential]

19

Q. Does the Company believe that entering the two Dave Johnston CSAs was a

20

prudent decision?

1 A. Yes. Please refer to Highly Confidential Exhibit PAC/302 which contains an
2 overview, background, and economic analysis with generation forecast supporting the
3 prudence and reasonableness of executing the two Dave Johnston CSAs.

4 **C. HUNTER COAL SUPPLY AGREEMENTS**

5 **Q. Please provide some background on the Hunter plant.**

6 A. The Hunter plant is located approximately 2.5 miles south of Castle Dale, Utah, in
7 Emery County. The plant is supplied with coal from Wolverine Fuel Sales, LLC
8 (Wolverine), Bronco Utah Operations, LLC (Bronco) and Gentry Mountain Mining,
9 LLC (Gentry). The coal is delivered to the plant by trucks. It has operated three coal
10 units since opening in 1978. The combined rated capacity for the three units is 1,363
11 MW. PacifiCorp owns 93.75% of Unit 1, 60.31% of Unit 2, and 100% of Unit 3, for a
12 combined 84.968% or 1,158 MW. Deseret Generation & Transmission, UAMPS and
13 UMPA are the Hunter plant co-owners. Historically, PacifiCorp has purchased 100
14 percent of Hunter's coal requirements from local mines. The co-owners then purchase
15 their coal requirements from PacifiCorp based on their actual coal consumption.
16 PacifiCorp's 2023 Integrated Resource Plan calls for Hunter Unit 1 to cease burning
17 coal on December 31, 2031, and for Hunter Units 2 & 3 to cease burning coal on
18 December 31, 2032.

19 **Q. Please provide some background on the Hunter 2022 Request for Proposals**
20 **(RFP).**

21 A. Throughout 2022, PacifiCorp did not receive the full expected coal supply under its
22 existing CSAs for the Hunter plant due to force majeure claims, transportation issues,
23 mine geologic difficulties and other challenges in the Utah coal market. Therefore, to

1 acquire additional coal, PacifiCorp issued a Request for Proposals (2022 RFP) for
2 Hunter's future coal supply on August 31, 2022. The 2022 RFP was provided to the
3 logical mine suppliers, a total of seven entities. After analyzing the proposals
4 received, PacifiCorp accepted two proposals and negotiated agreements with Gentry
5 and Wolverine.

6 **Q. Please provide a brief summary of the new CSAs executed for the Hunter Plant.**

7 A. The Company entered into several new CSAs and amendments to supply coal to the
8 Hunter plant between 2023 and 2025; the Hunter/Gentry CSA and first amendment,
9 the Hunter/Gentry spot agreement, the Hunter/Bronco CSA second and third
10 amendments, and the Hunter/Wolverine CSA. Highly Confidential Exhibits PAC/303
11 through PAC/308 contain the overview, background, and economic analysis of the
12 Hunter CSAs.

13 Given continued coal supply challenges in the Utah coal market, as well as
14 Hunter's depleted coal stockpiles, the coal supply for Hunter in 2024 is expected to
15 be **[Begin Confidential]** [REDACTED]

16 [REDACTED]

17 [REDACTED]

18 [REDACTED] **End**

19 **Confidential]**

20 **Q. What are the terms for annual volume and pricing in the Hunter/Gentry CSA?**

21 A. The terms for annual volume and pricing for the Hunter/Gentry CSA are as follows:

1

[Begin Confidential]

Term	January 1, 2023 through December 31, 2025 (3 years)		
Pricing	The CSA has fixed pricing except for a monthly adjustment		
	Total Tons	Total Tons	Estimated
Year	(original CSA)	(after amendment)	Price/Ton
2023	██████████	██████████	██████████
2024	██████████	██████████	██████████
2025	██████████	██████████	██████████
Total:	██████████	██████████	██████████
Minimum Take	Take-or-pay agreement		

2

3

[End Confidential]

4 **Q. Does the Company believe that entering into the Hunter/Gentry CSA was a**
5 **prudent decision?**

6 A. Yes. On January 20, 2023, PacifiCorp executed a new Hunter/Gentry CSA, with
7 Gentry Mountain Mining, to purchase ██████████ for the years 2023, 2024 and
8 2025 from their Bear Canyon #3 mine. This CSA was later amended on February 1,
9 2023, to increase the coal volume for the year 2023 by ██████████. Therefore, after
10 the amendment the coal contract volume for the year 2023 is ██████████. Please
11 refer to Highly Confidential Exhibits PAC/303 and PAC/304 which contains the
12 background and economic analysis conducted by PacifiCorp prior to the execution of
13 the Hunter/Gentry CSA and the first amendment.

14 **Q. Why did PacifiCorp execute a Hunter/Gentry spot agreement?**

15 A. As described above, throughout 2022 and 2023, PacifiCorp did not receive the full
16 expected coal supply under its existing agreements for the Hunter plant. PacifiCorp
17 regularly communicates with Utah coal suppliers in search of additional coal to fulfill
18 the coal requirements. On March 15, 2023, Gentry Mountain **[Begin Confidential]**

19

██

20

[End Confidential] After conducting a detailed economic analysis of Gentry’s

1 proposal, PacifiCorp negotiated a spot agreement for this additional coal.

2 **Q. What are the terms for volume and pricing in the Hunter/Gentry spot**
3 **agreement?**

4 A. The terms for volume and pricing for the Hunter/Gentry spot agreement are as
5 follows:

6 **[Begin Confidential]**

Term	April 19, 2023 through December 31, 2023	
Pricing	[REDACTED]	
Year	Total Tons	Spot Pricing/Ton
2023	[REDACTED]	[REDACTED]
Minimum Take	[REDACTED]	[REDACTED]

7
8 **[End Confidential]**
9

10 **Q. Does the Company believe that entering into the Hunter/Gentry spot agreement**
11 **was a prudent decision?**

12 A. Yes. Please refer to Highly Confidential Exhibit PAC/305 which contains a
13 background and economic analysis conducted by PacifiCorp in its execution of the
14 Hunter/Gentry spot agreement.

15 **Q. Why did PacifiCorp execute a second amendment to the Hunter/Bronco CSA?**

16 A. Bronco, the coal supplier, asserted that events and circumstances supported a
17 declaration of force majeure and a complete suspension of their coal delivery
18 obligations under the existing CSA. PacifiCorp disagreed with Bronco and initiated
19 arbitration processes, but also determined that a suspension of coal deliveries would
20 result in significant disruptions to the Company's planned and expected generation of
21 electricity at the Hunter Plant and lead to higher costs for customers.

22 Because of the potential harmful consequences of a disruption of coal supply
23 to the Hunter Plant, PacifiCorp and Bronco agreed to a second amendment to the

1 Hunter/Bronco CSA, which states that PacifiCorp would issue a new RFP in 2022 to
 2 secure a reliable and suitable coal supply for the Hunter Plant. In the interim, the two
 3 parties agreed to **[Begin Confidential]** [REDACTED]
 4 [REDACTED]
 5 [REDACTED] **End Confidential]**, if no
 6 RFP offer was deemed to provide a more prudent option. On November 29, 2022,
 7 PacifiCorp notified Bronco that it had completed the RFP process, and that the results
 8 of the RFP indicated that it was in the best interest of PacifiCorp and our customers to
 9 **[Begin Confidential]** [REDACTED]
 10 [REDACTED] **[End Confidential]**.

11 **Q. What are the terms for volume and pricing in the Hunter/Bronco CSA second**
 12 **amendment?**

13 A. The terms for volume and pricing for the Hunter/Bronco CSA second amendment are
 14 as follows:

15 **[Begin Confidential]**

Term	August 3, 2022 through December 31, 2022		
Volume	No changes from original CSA		
	2022 (Base Price/Ton)		
	[REDACTED]	[REDACTED]	[REDACTED]
Original CSA	[REDACTED]	[REDACTED]	[REDACTED]
2nd Amendment	[REDACTED]	[REDACTED]	[REDACTED]
Minimum Take	Take-or-pay agreement		

16 **[End Confidential]**

17
 18 **Q. Why did PacifiCorp execute a third amendment to the Hunter/Bronco CSA?**

19 A. After PacifiCorp notified the coal supplier of its intent to **[Begin Confidential]**

20 [REDACTED] **[End**

21 **Confidential]** of the original Hunter/Bronco CSA through the end of 2024, the coal

1 supplier notified the Company that due to ongoing labor, market, and financial
2 pressures, it was unable to supply the Hunter Plant at the price offered and expressed
3 its intent to cease coal deliveries to the Company. PacifiCorp again evaluated the
4 potential unfavorable cost impacts to the Company and its customers that would
5 result from the immediate loss of coal supply from the Hunter/Bronco CSA. As a
6 result of those analyses, PacifiCorp re-engaged in negotiations with the supplier and
7 ultimately agreed to a price increase under the third amendment, which ensured
8 continued coal deliveries and was determined to be beneficial for the Company and
9 its customers.

10 **Q. What are the annual volume and pricing of the Hunter/Bronco CSA third**
11 **amendment?**

12 A. The terms for annual volume and pricing for the Hunter/Bronco CSA third
13 amendment are as follows:

14 **[Begin Confidential]**

Term	March 16, 2023 through December 31, 2025. This is a one-year extension of the original CSA	
Pricing	[REDACTED]	
Year	Total Tons	Price/Ton
2023	[REDACTED]	[REDACTED]
2024	[REDACTED]	[REDACTED]
2025	[REDACTED]	[REDACTED]
Minimum Take	Take-or-pay agreement	

15
16 **[End Confidential]**

17 **Q. Does the Company believe that entering into the Hunter/Bronco CSA second**
18 **and third amendments was a prudent decision?**

19 A. Yes, please refer to Highly Confidential Exhibits PAC/306 and PAC/307 which
20 contain the overview and background of the Hunter/Bronco CSA second and third

1 amendments and the economic analysis supporting these agreements.

2 **Q. Please provide some background on the Hunter/Wolverine CSA?**

3 A. The Company has previously entered into CSAs with Wolverine Fuels, LLC to
4 supply coal for the Hunter and Huntington plants. On September 22, 2022, Wolverine
5 asserted force majeure claims for its CSAs at the Hunter and Huntington plants.

6 **[Begin Confidential]** [REDACTED]

7 [REDACTED]

8 [REDACTED]

9 [REDACTED]

10 [REDACTED] **[End Confidential]**

11 As a result, the Company needed to procure more coal to meet the needs of
12 the Hunter and Huntington plants. To begin to mitigate this situation, PacifiCorp
13 issued the Hunter 2022 RFP as described above and subsequently entered into the
14 Hunter/Wolverine CSA on June 23, 2023. The term of the Hunter/Wolverine CSA is
15 two years, from January 1, 2024, through December 31, 2025.

16 **Q. What are the terms for annual volume and pricing in the Hunter/Wolverine
17 CSA?**

18 A. The terms for annual volume and pricing for the Hunter/Wolverine CSA are as
19 follows:

1

[Begin Confidential]

Term	January 1, 2024 through December 31, 2025 (2 years)	
Pricing	The CSA has fixed pricing	
Year	Total Tons	Price/Ton
2024	[REDACTED]	[REDACTED]
2025	[REDACTED]	[REDACTED]
Total:	[REDACTED]	[REDACTED]
Minimum Take	Take-or-pay agreement	

2

3

[End Confidential]

4 **Q. Does the Company believe that entering into the Hunter/Wolverine CSA was a**
5 **prudent decision?**

6 A. Yes. Please refer to Highly Confidential Exhibit PAC/308 which contains an
7 overview and background of the Hunter/Wolverine CSA and the economic analysis
8 supporting this CSA.

9 **Q. Please summarize the fuel supply for the Hunter plant for 2024-2025.**

10 A. The Company now has three CSAs in place to supply coal to the Hunter plant in
11 2024-2025; the Hunter/Wolverine CSA, the Hunter/Bronco CSA, and the
12 Hunter/Gentry CSA. The total amount under contract for 2024 is [Begin
13 Confidential] [REDACTED]
14 [REDACTED]
15 [REDACTED] [End Confidential]). These volumes
16 are less than the actual coal consumed at Hunter in 2022, which was [Begin
17 Confidential] [REDACTED] [End Confidential] tons which included a significant
18 portion of the available stockpiled inventory.

19 **D. JIM BRIDGER COAL SUPPLY AGREEMENT**

20 **Q. Can you provide background on the Jim Bridger Plant?**

21 A. Yes. The Jim Bridger plant is a coal-fired plant located near Rock Springs, Wyoming.

1 The Jim Bridger plant is the largest power plant on the PacifiCorp system (2,120
2 megawatts) and is jointly owned by PacifiCorp (66.67 percent) and Idaho Power
3 Company (Idaho Power) (33.33 percent). The Jim Bridger plant consists of four
4 almost identical units, each with a capacity of approximately 530 net megawatts.
5 Consistent with the findings of the 2023 Integrated Resource Plan (IRP), Jim Bridger
6 Units 1 and 2 will stop consuming coal by December 31, 2023, and convert to natural
7 gas-fired operation in 2024. Jim Bridger Units 3 and 4 will continue to operate on
8 coal until December 31, 2029 and convert to natural gas in 2030.

9 **Q. Can you provide some background on the Jim Bridger/ Peabody Energy CSA?**

10 A. Yes. Historically, the majority of the coal to the Jim Bridger plant has been supplied
11 from the Bridger Coal Company (BCC) (jointly owned by PacifiCorp and Idaho
12 Power) and the Black Butte mine. Due to the increased generation demand in 2022
13 and 2023, PacifiCorp determined that there was a need for additional coal and issued
14 an RFP for November-December 2022 and 2023.

15 Because of the nationwide shortage of railcars, the RFP process was delayed
16 for a short period of time. Once railcars became available again, PacifiCorp re-started
17 and the RFP process, and subsequently accepted the lowest bid from Peabody Energy
18 for coal to be delivered from North Antelope Rochelle Mine (NARM). The term of
19 the Jim Bridger/Peabody Energy CSA is from April 2023 through December 2023.

20 **Q. What are the terms for annual volume and pricing in the Jim Bridger/ Peabody**
21 **Energy CSA?**

22 A. The terms for volume and pricing for the Jim Bridger/Peabody Energy CSA are as
23 follows:

1

[Begin Confidential]

Term	April 20, 2023, through December 31, 2023		
Pricing	The CSA price is fixed		
Volume	[REDACTED]		
Year	Minimum Tons	Maximum Tons	Price/Ton
2023	[REDACTED]	[REDACTED]	[REDACTED]
Minimum take	Take-or-pay agreement		

2
3

[End Confidential]

4 **Q. Does the Company believe that entering into the Jim Bridger/Peabody Energy**
5 **CSA was a prudent decision?**

6 A. Yes, please refer to Highly Confidential Exhibit PAC/309 which contains an
7 overview and background of the CSA and the economic analysis supporting this
8 CSA.

9 **E. JIM BRIDGER LONG-TERM FUEL SUPPLY PLAN**

10 **Q. Please provide a brief overview of the Company's Jim Bridger Long-Term Fuel**
11 **Supply Plan (2023 Fuel Plan).**

12 A. The 2023 Fuel Plan evaluates how PacifiCorp can best meet the fueling needs of the
13 Jim Bridger plant throughout the operational life of the plant, given the natural gas
14 conversion of Units 1 and 2 in 2024 and Units 3 and 4 in 2030, reductions to coal
15 generation as a result of increased renewable generation in the Company's portfolio,
16 the Ozone Transport Rule (OTR), and other changing circumstances affecting the
17 plant over the next several years. A copy of the 2023 Fuel Plan is included as Highly
18 Confidential Exhibit PAC/310.

19 PacifiCorp followed its past practice and studied, reviewed, and evaluated
20 different possible, reasonable, and practical fueling options for the Jim Bridger plant.

1 This includes review of various mines and mining companies, transportation options,
2 and coal quality evaluations. The Company also considers its own mining operations
3 and various mine plans.

4 The 2023 Fuel Plan indicates that Scenario 5 and 6 referred to as the
5 “Preferred Scenario” provides [Begin Highly Confidential] [REDACTED]

6 [REDACTED]
7 [REDACTED] [End Highly Confidential]

8 **Q. What specific fueling options did the Company evaluate in the 2023 Fuel Plan?**

9 **A.** The fueling options PacifiCorp considered feature varying delivery schedules sourced
10 from the Company’s Bridger mine, operated by BCC, the Black Butte mine, and
11 mines located in Wyoming’s Southern Powder River Basin (SPRB). Additionally, the
12 different coal delivery options for the Bridger mine contain various mine plan
13 scenarios outlining specified delivery schedules. Included in these different mine
14 scenarios are estimated dates for the Bridger mine to cease production. The Company
15 developed and evaluated six primary Jim Bridger plant coal fueling options: **[Begin**
16 **Highly Confidential]**

17 [REDACTED] **Scenario 1** [REDACTED]

18 [REDACTED]

19 • **Scenario 2** [REDACTED]

20 [REDACTED]

21 [REDACTED]

22 [REDACTED] **Scenario 3** [REDACTED]

23 [REDACTED]

1 • Scenario 4 [Redacted]

2 [Redacted]

3 [Redacted] Scenario 5 [Redacted]

4 [Redacted]

5 • Scenario 6 [Redacted]

6 [Redacted]

7 [Redacted] [End Highly Confidential]

8 Q. Why do each of the six scenarios assume PacifiCorp [Begin Highly Confidential]

9 [Redacted] [End Highly

10 Confidential]?

11 A. PacifiCorp will operate all four Jim Bridger units on coal until the end of 2023, when

12 Units 1 and 2 will cease operating on coal and will be converted to natural gas

13 operation. Use of coal from Black Butte is necessary to ensure adequate coal supply

14 while all four units are operating. [Begin Highly Confidential] [Redacted]

15 [Redacted]

16 [Redacted]

17 [Redacted]

18 [Redacted] [End Highly Confidential].

19 Q. How did the Company evaluate each of the six fueling scenarios?

20 A. The Company completed a Present Value Revenue Requirement (PVRR) calculation,

21 comparing major components of PacifiCorp's NPC resulting from the various fueling

22 options, including a composite ranking considering both financial and risk weighting.

23 The costs modeled include coal purchases, natural gas purchases, and system power

1 purchases offset by wholesale power sales. The analysis is based on the Company's
2 forward price curve for power and natural gas, which does not include greenhouse gas
3 costs, but does account for the impacts of certain EPA emissions requirements, such
4 as the OTR.

5 **Q. What were the results of the Company's evaluation of the six fueling scenarios?**

6 A. The results of the PVRR analysis and risk evaluation indicate that Scenario 5 and
7 Scenario 6 are the current least-cost, risk-adjusted options. Scenario 6 was modeled
8 assuming no minimum take-or-pay obligations for the Bridger mine or Black Butte.
9 Based on PacifiCorp's evaluation using the PLEXOS model, all of the available
10 incremental coal from the Bridger mine would be cost-effective. As a result, the
11 fueling plans in Scenario 5 and Scenario 6 are essentially the same. Therefore, these
12 scenarios are collectively referred to as the "Preferred Scenario" in the 2023 Fuel
13 Plan.

14 **Q. What are the benefits of pursuing the Preferred Scenario as the long-term
15 fueling strategy for the Jim Bridger plant?**

16 A. The Preferred Scenario provides the least-cost, risk-adjusted fuel supply for the Jim
17 Bridger plant, allows for coal quantity flexibility from Bridger mine, continues to
18 allow moderate quantities of SPRB coal deliveries to the plant, and avoids large plant
19 capital modifications required for a complete SPRB fuel switch. The Preferred
20 Scenario reflects the flexibility and low incremental costs associated with Bridger
21 mine ownership, factors that are particularly beneficial to customers now given the
22 volatility in the electric, natural gas, and coal markets.

23 **Q. Will the Company enter into a new CSA with Black Butte?**

1 A. **[Begin Highly Confidential]** [REDACTED]
2 [REDACTED]
3 [REDACTED]
4 [REDACTED] **[End Highly**
5 **Confidential]**

6 **Q. In D.22-11-008 the Commission directed the Company to include an**
7 **informational average cost scenario when updating the Jim Bridger Long-Term**
8 **Fuel Supply Plan. How did the Company comply with this order?**

9 A. The 2023 Fuel Plan modeling was performed using the PLEXOS modeling tool,
10 where previous fuel plans were performed using the now retired GRID modeling tool.
11 Because of the increased capabilities of PLEXOS, this software has greater ability to
12 handle tiered pricing and volume inputs. Accordingly, while Scenario 6 uses tiered
13 pricing instead of average cost pricing, the Scenario has no minimum quantity
14 requirements. As a result, the PLEXOS modeling based on tiered pricing provides a
15 more accurate and granular representation of what would result from operating the
16 Jim Bridger plant without a minimum quantity requirement, compared to GRID
17 modeling of the assumptions based on a simple average cost scenario.

18 **V. CONCLUSION**

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

20 A. Yes.

Application No. 23-09-____
Exhibit No. PAC/301-C
Witness: James Owen

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP 2024 ECAC

Wyodak CSA Analysis

[HIGHLY CONFIDENTIAL]

September 2023

Application No. 23-09-____
Exhibit No. PAC/302-C
Witness: James Owen

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP 2024 ECAC

Dave Johnston CSAs Analysis

[HIGHLY CONFIDENTIAL]

September 2023

Application No. 23-09-____
Exhibit No. PAC/303-C
Witness: James Owen

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP 2024 ECAC

Hunter/Gentry CSA Analysis

[HIGHLY CONFIDENTIAL]

September 2023

Application No. 23-09-____
Exhibit No. PAC/304-C
Witness: James Owen

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP 2024 ECAC

Hunter/Gentry CSA First Amendment Analysis

[HIGHLY CONFIDENTIAL]

September 2023

Application No. 23-09-____
Exhibit No. PAC/305-C
Witness: James Owen

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP 2024 ECAC

Hunter/Gentry Spot Agreement Analysis

[HIGHLY CONFIDENTIAL]

September 2023

Application No. 23-09-____
Exhibit No. PAC/306-C
Witness: James Owen

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP 2024 ECAC

Hunter/Bronco CSA Second Amendment Analysis

[HIGHLY CONFIDENTIAL]

September 2023

Application No. 23-09-____
Exhibit No. PAC/307-C
Witness: James Owen

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP 2024 ECAC

Hunter/Bronco CSA Third Amendment Analysis

[HIGHLY CONFIDENTIAL]

September 2023

Application No. 23-09-____
Exhibit No. PAC/308-C
Witness: James Owen

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP 2024 ECAC

Hunter/Wolverine CSA Analysis

[HIGHLY CONFIDENTIAL]

September 2023

Application No. 23-09-____
Exhibit No. PAC/309-C
Witness: James Owen

BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP 2024 ECAC

Jim Bridger/Peabody Energy CSA Analysis

[HIGHLY CONFIDENTIAL]

September 2023

Application No. 23-09-____
Exhibit No. PAC/310-C
Witness: James Owen

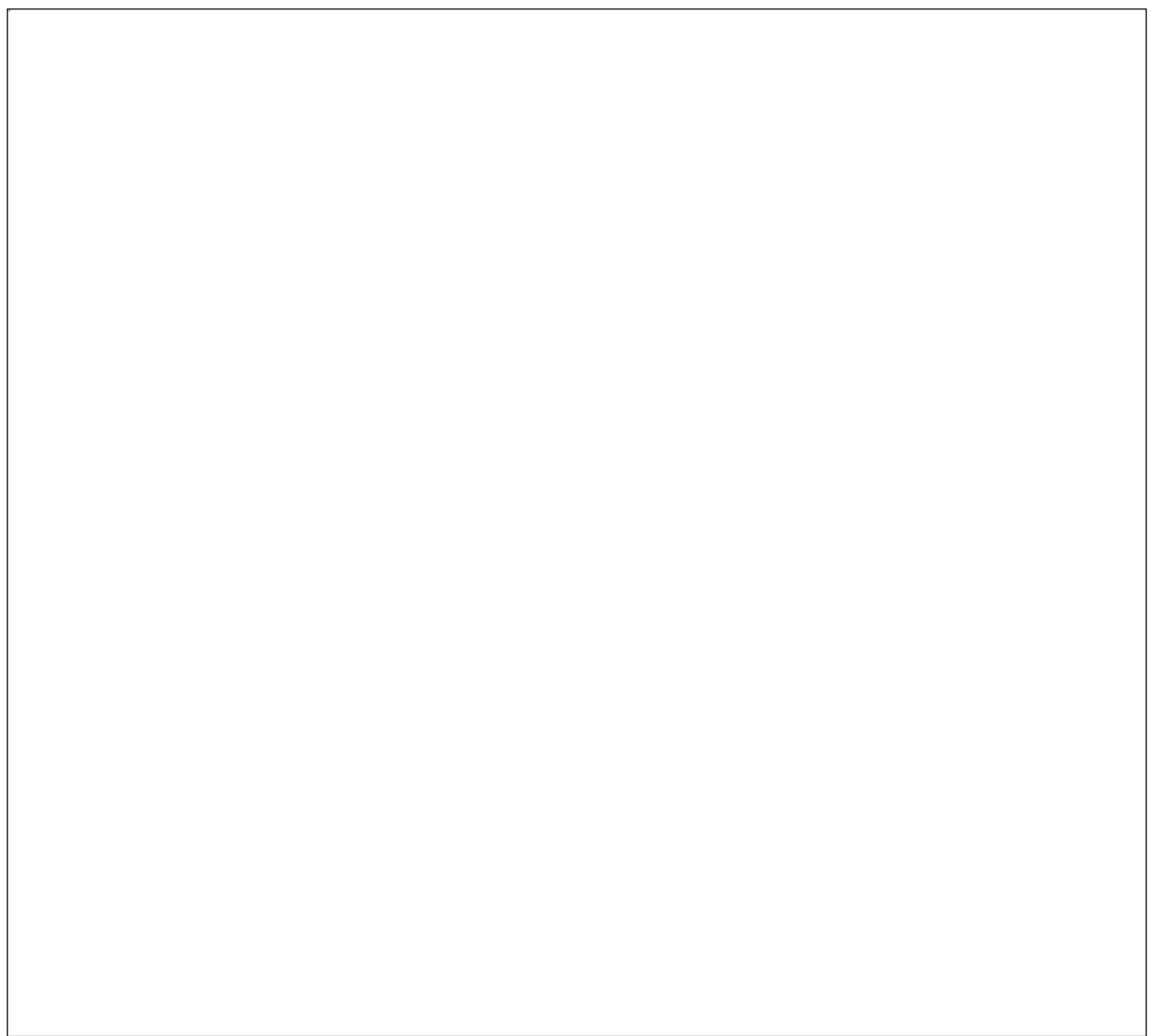
BEFORE THE PUBLIC UTILITIES COMMISSION
OF THE STATE OF CALIFORNIA

PACIFICORP 2024 ECAC

Jim Bridger Long-Term Fuel Plan

[PUBLIC VERSION]

September 2023



**PACIFICORP HIGHLY CONFIDENTIAL
LONG-TERM FUEL SUPPLY PLAN FOR
THE JIM BRIDGER PLANT - (CORRECTED)**

May 31, 2023



HIGHLY CONFIDENTIAL

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1 INTRODUCTION AND EXECUTIVE SUMMARY

In PacifiCorp’s 2014 Transition Adjustment Mechanism (TAM) filing, the Public Utility Commission of Oregon (Oregon Commission) adopted PacifiCorp’s proposal to prepare periodic fuel supply plans comparing affiliate mine supply to alternative fuel supply options, including market alternatives for the Jim Bridger Power Plant.¹ As set forth in PacifiCorp’s compliance filing in the 2015 TAM, Docket UE 287, the purpose of long-term fuel supply plans for plants fueled from captive mines is to determine the least-cost, risk-adjusted coal supply evaluated on a multi-year basis. The long-term fuel plan is designed to ensure that fuel supplies are fair, just, and reasonable, and that they satisfy the Oregon Commission’s prudence and affiliate interest standards.

PacifiCorp has previously filed long-term fuel plans in December 2015, March 2018, and April 2022. After the Company filed the 2018 Fuel Plan, the Oregon Commission directed PacifiCorp to develop an alternative analysis using a shortened plant life of January 1, 2030, instead of December 31, 2037, to comply with Oregon Senate Bill (SB) 1547 signed in 2016. PacifiCorp refreshed the 2018 Fuel Plan in March 2019 to evaluate the reasonableness of the Company’s fueling strategy for the Jim Bridger plant using the shortened plant life. The 2023 Fuel Plan is consistent with Oregon SB 1547 as it contemplates consuming coal through 2029, in conformity with PacifiCorp’s 2023 Integrated Resource Plan (IRP).

In the October 2021 final order in PacifiCorp’s 2022 TAM, the Oregon Commission required PacifiCorp to provide an updated long-term fuel plan in 2022 and submit it with the 2023 TAM. In February of 2022, PacifiCorp sought to delay this filing because several events had created significant uncertainty which prevented the Company from definitively determining the least-cost, risk-adjusted coal supply for the Jim Bridger plant at that time.² Specifically, those events included actions by the United States Environmental Protection Agency (EPA) around Jim Bridger’s regional haze obligations, revised dates for Idaho Power Company’s exit from the Jim Bridger plant, and PacifiCorp’s commitment to evaluate carbon capture, utilization and sequestration (CCUS) at the Jim Bridger plant.

Recognizing the uncertainties and difficulties, the Oregon Commission required PacifiCorp to file the 2022 Fuel Plan in April 2022 and clarified that the plan did not need to be a final strategy. While the 2022 Fuel Plan was preliminary, it considered the options available to PacifiCorp based on the best information available at the time. The 2023 Fuel Plan has confirmed the findings of the 2022 Fuel Plan and is likewise based on the best available information. Some uncertainties have been resolved in the last year, however uncertainty still exists surrounding many issues including the EPA’s establishment of new nitrogen oxides (NOx) emissions budgets under Ozone National Ambient Air Quality Standards (Ozone Transport Rule) in the state of Wyoming, CCUS requirements, and coordination with Idaho Power Company on exit or gas conversion dates.

In the May 2022 final order in PacifiCorp’s 2021 IRP Filing, the Oregon Commission directed PacifiCorp “to file an updated long-term fuel plan for Jim Bridger with its 2023 IRP... PacifiCorp agreed with that

¹ *In the Matter of PacifiCorp d/b/a Pacific Power, 2014 Transition Adjustment Mechanism*, Docket No. UE 264, Net Power Costs Approved Subject to Adjustments, Order No. 13-387 (Oct. 28, 2013).

² *In the Matter of PacifiCorp d/b/a Pacific Power, 2022 Transition Adjustment Mechanism*, Docket No. UE 390, Motion to Amend Order No. 21-379 (Feb. 11, 2019).

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assessment and consented to provide the updated plan with the 2023 IRP³ which was released on March 31, 2023. In April 2023, the Oregon Commission extended the deadline to May 31, 2023.⁴

In the October 2022 final order of PacifiCorp's 2023 TAM, the Oregon Commission approved a stipulation where PacifiCorp agreed that "[m]odeling for the Long-Term Fuel Supply Plan will be conducted in a platform able to accept multiple fuel price tiers such as Aurora or PLEXOS. PacifiCorp will include the following scenarios:

- i. Scenario that does not assume a minimum take at either the Black Butte or Bridger Mine; (*Refer to Scenario 6 below*)
- ii. Scenario evaluating an alternative to the minimum take requirement in the Black Butte coal supply agreement signed in 2022; (*Refer to Scenario 1 below*)
- iii. Scenario evaluating early closure of the Bridger mine (before 2028) and fueling Jim Bridger through end of life with stockpiled coal supplies. (*Refer to Scenario 3 below*)⁵

To develop the 2023 Fuel Plan, PacifiCorp studied, reviewed, and evaluated different fueling options for the Jim Bridger plant. The evaluation of these fueling options provides valuable insight into [REDACTED]

[REDACTED] As part of its 2023 IRP, PacifiCorp assessed various long-term coal supply options as well as alternative options for Jim Bridger Units 3 and 4, including retrofit for CCUS, conversion to natural gas and/or other alternative fuels, and early retirement. The 2023 IRP preferred portfolio selected the conversion of Units 3 and 4 to natural gas in 2030 which requires the ending of coal consumption by December 31, 2029.

Within the 2023 Fuel Plan, the Company has presented several different fueling options. The fueling options consider varying delivery schedules sourced from Bridger Coal Company (Bridger mine), the Black Butte mine, and mines located in Wyoming's Southern Powder River Basin (SPRB). Additionally, the different coal delivery options for the Bridger mine contain various mine plan scenarios outlining specified delivery schedules. Included in these different mine scenarios are estimated shutdown dates for the Bridger mine.

The 2023 Fuel Plan provides third-party coal supply volume and pricing estimates based upon the current contract and ongoing discussions with the Black Butte mine, as well as recent coal pricing forecasts from Energy Ventures Analysis (EVA). The 2023 Fuel Plan provides estimated volumes and rail rates for transportation services based on agreements with the Union Pacific Railroad (UPR) for the transport of coal from third-party coal supply sources. The estimated plant modifications and capital requirements, defined by equipment category, as well as total costs needed to support large volumes of SPRB coal are derived from a detailed third-party study completed in 2017 by the engineering and consulting firm Burns & McDonnell, adjusted for inflation and to account for volumes associated with operating two coal units instead of four coal units.

After considering factors influencing the long-term fueling strategy and information available to PacifiCorp at this time, the Company developed and evaluated six Jim Bridger plant coal fueling options:

³ *In the Matter of PacifiCorp d/b/a Pacific Power, 2021 Integrated Resource Plan*, Docket No. LC 77, 2021 IRP Acknowledged with Modifications and Exceptions, Order No. 22-178 (May 23, 2022).

⁴ *In the Matter of PacifiCorp d/b/a Pacific Power, 2023 Integrated Resource Plan*, Docket No. LC 82, Order No. 23-131 (Apr. 6, 2023).

⁵ *In the Matter of PacifiCorp d/b/a Pacific Power, 2023 Transition Adjustment Mechanism*, Docket No. UE 400, Comprehensive Stipulation Adopted: Directives for Future Filings, Order No. 22-389 (Oct. 25, 2022).

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- **Scenario 1** [REDACTED]
- **Scenario 2** [REDACTED]
- **Scenario 3** [REDACTED]
- **Scenario 4** [REDACTED]
- **Scenario 5** [REDACTED]
- **Scenario 6** [REDACTED]

As a preliminary indication of the cost-effectiveness of the proposed scenarios using recent assumptions, the Company completed a Present Value Revenue Requirement (PVRR) calculation, comparing major components of PacifiCorp’s system costs resulting from the various fueling options, including a composite ranking considering both financial and risk weighting. These costs include coal purchases, natural gas purchases, and system power purchases offset by wholesale power sales (System Costs). Other components not considered in the analysis include costs associated with qualifying facilities, power purchase agreements, geothermal and wheeling. These items do not vary with system dispatch in the PLEXOS model and would not vary between scenarios. This analysis is based on the Company’s forward price curve for power and natural gas, which does not include greenhouse gas costs, but does account for the impacts of certain recently proposed EPA emissions requirements, such as the Ozone Transport Rule. The results of the PVRR analysis and risk evaluation indicate that Scenario 5 and Scenario 6 are the current least-cost, risk-adjusted options. Option 6 was modeled assuming no minimum take-or-pay obligations for the Bridger mine or Black Butte Coal Company. Based on PacifiCorp’s evaluation using the PLEXOS model, all of the available incremental coal from the Bridger mine would be cost-effective. As a result, the fueling plans in Scenario 5 and Scenario 6 are essentially the same. Therefore, Scenarios 5 and 6 will be referred to as the “Preferred Scenario” in this report going forward.

The benefits of pursuing the Preferred Scenario as the long-term fueling strategy for the Jim Bridger plant include the following:

- Provides the least-cost, risk-adjusted fuel supply for the Jim Bridger plant
- [REDACTED]
- [REDACTED]
- [REDACTED]

Although the Preferred Scenario is the current least-cost, risk-adjusted fueling option for the Jim Bridger plant, PacifiCorp will continue to evaluate the best fueling option for the Jim Bridger plant, taking into consideration both cost and risk, and will update the long-term fuel supply plan after each IRP is released to reflect changing assumptions and expectations.

2 EVALUATION METHODOLOGY

In the 2023 Fuel Plan, PacifiCorp evaluated several different fueling options for the Jim Bridger plant. The methodology used to evaluate the fueling options is similar to the methodology used in the April 2022 long-term fuel plan. As noted above, the 2023 Fuel Plan considers the variable components of PacifiCorp's System Costs. The same production software used in the 2023 Integrated Resource Plan (IRP), PLEXOS, was used for the 2023 Fuel Plan. Prior plans used PacifiCorp's Generation and Regulation Initiative Decision Tools model (GRID) and costs for the consumed tons required to support the generation forecast under each fueling option were then calculated. The cost of coal for the Jim Bridger plant under each fueling option was then compared to the system benefits of incremental coal-fired generation from the PLEXOS model on a PVRR basis.

3 BACKGROUND

The Jim Bridger plant is a coal-fired plant located in Sweetwater County, Wyoming. The facility is located approximately eight miles north of Point of Rocks, Wyoming, and approximately 24 miles east of Rock Springs, Wyoming.

The Jim Bridger plant is the largest power plant on the PacifiCorp system (2,120 megawatts) and is jointly owned by PacifiCorp (66.7%) and Idaho Power Company (Idaho Power) (33.3%). The Jim Bridger plant consists of four almost identical units, each with a nominal 530 net megawatt capacity. Over the four-year period of 2019-2022, the Jim Bridger plant consumed approximately 24 million tons of coal, an average of six million tons per year. The plant is designed to consume coal sourced from southwest Wyoming with heat content in the range of 9,000 Btu/lb. to 10,000 Btu/lb.

The Bridger mine is located adjacent to the Jim Bridger plant. Having ceased underground mining operations in December 2021, the Bridger mine currently consists solely of surface mining operations. Like the Jim Bridger plant, the Bridger mine is jointly owned by PacifiCorp (66.7%) and Idaho Power (33.3%). The surface mine is a combination dragline and truck/loader operation that produces approximately [REDACTED] million tons of coal per year.

For regulatory purposes, the Bridger mine is consolidated with PacifiCorp's operations. PacifiCorp's share of the Bridger mine is included in the PacifiCorp rate base and its share of mining costs, including depreciation and depletion, is included in System Costs.

In addition to the Bridger mine deliveries, the Jim Bridger plant has historically received the remaining portion of its coal supply requirements from the nearby Black Butte mine. The UPR provides rail access for all the coal delivered from the Black Butte mine to the plant.

4 ASSUMPTIONS

Currently, the Jim Bridger plant has three potential sources for coal supply:

- The Bridger mine
- The Black Butte mine

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- Wyoming’s SPRB mines

As demand for generation from the Jim Bridger plant is expected to decline significantly after Units 1 and 2 convert to natural gas in 2024, the 2023 Fuel Plan examines scenarios ranging from [REDACTED]

To assist with the characterization of the potential supply changes over time, the fueling options have been separated into “near-term” and “long-term” periods for discussion purposes. For purposes of the 2023 Fuel Plan, the near-term period has been defined as 2023 and corresponds to the time that Units 1 and 2 are consuming coal before the conversion of those units to gas operation. The key assumptions in the 2023 Fuel Plan are explained below:

4.1.1 Generation

As mentioned above, generation forecast assumptions are provided by PacifiCorp’s PLEXOS model for each fueling option studied. To ensure compliance with the Regional Haze Consent Decree with the State of Wyoming, the 2023 Fuel Plan assumes Jim Bridger Units 1 and 2 will stop consuming coal December 31, 2023 and convert to natural gas in 2024. Consistent with the outcome of the 2023 IRP, Jim Bridger Units 3 and 4 will continue to consume coal until December 31, 2029, and then also convert to natural gas in 2030.

On a total plant basis (i.e., including Idaho Power’s expected consumption), coal consumption is forecast to be in the range of [REDACTED] million to [REDACTED] million tons for 2023.

4.1.2 Plant Depreciable Life

The assumed depreciable life in Oregon of PacifiCorp’s share of the Jim Bridger plant extends through 2029 for Units 1 and 2 and through 2025 for Units 3 and 4. Other states in PacifiCorp’s service territory use differing depreciable lives for different units ranging from 2023 to 2037, based upon PacifiCorp’s 2018 depreciation study and other regulatory agreements.

4.1.3 Bridger Mine Plans

In early 2023, the Bridger mine prepared three operating mine plans: [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

4.1.4 Third Party Coal

Due to the geographic location of the Jim Bridger plant, economic fuel supply alternatives other than the Bridger mine are limited to one additional operating mine located in southwest Wyoming and the SPRB mines of Campbell County, Wyoming.

The Black Butte mine, located 20 miles southeast of the Jim Bridger plant, is operated by Lighthouse Resources Inc. (Lighthouse). Lighthouse emerged from bankruptcy in 2020. The mine is a multiple seam, multiple pit operation with the overburden removed by draglines and a truck/loader fleet. In recent years, the mine has produced less than [REDACTED] tons per year and the Jim Bridger plant has been the mine's primary customer. Between 2019 and 2022 the Jim Bridger plant received approximately [REDACTED] tons, an average of [REDACTED] tons per year, from the Black Butte mine. Coal from the Black Butte mine is delivered by rail to the Jim Bridger plant under an agreement with UPR.⁶

The Powder River Basin is the largest coal mining region in the United States. Coal from the SPRB is classified as sub-bituminous coal. SPRB coal contains an average heat content of approximately 8,800 Btu/lb. The coal mined in the SPRB is low sulfur and low ash. Due to its unique quality characteristics, SPRB coal has been consumed by energy markets in multiple states across the country. In 2022, there were seven mining companies operating twelve active mines in Wyoming's Powder River Basin, producing roughly 238 million tons. SPRB mines contain the highest heat content coal in the basin ranging between 8,600 Btu/lb. and 8,950 Btu/lb. These mines are located about 550 miles from the Jim Bridger plant. SPRB mines and the Jim Bridger plant are served by UPR. Consumption of SPRB coal requires UPR delivery.

4.1.5 Black Butte Pricing

As of May 2023, coal from the Black Butte mine is purchased under a Coal Supply Agreement (CSA) signed June 19, 2022 that ends December 31, 2023. [REDACTED]

[REDACTED]

⁶ Due to limited coal reserves, estimated production costs, transportation difficulties, and the planned closure of the Naughton plant in 2025, Kemmerer Operations, LLC's Kemmerer mine is not considered a viable fuel source for the Bridger plant.

4.1.6 Black Butte Mine Volume

PacifiCorp conducted a high-level review of the Black Butte mine coal resource and reserve estimates in 2015. The study consisted of reviewing available third-party Black Butte reserve and geology documents, along with Black Butte's geology information and permitting status. At the time, based on the information reviewed, the conclusion of the review was that the Black Butte mine had [REDACTED] tons that could be considered economic coal reserves under the terms and conditions of the then-current contract.

PacifiCorp and Idaho Power purchased 14 million tons between 2016 and 2022. The scenario that consumes the highest volume of Black Butte coal, assumes purchases of [REDACTED] tons by PacifiCorp and Idaho Power between 2023 and 2029. Therefore, this study assumes that Black Butte has sufficient coal reserves to satisfy the Jim Bridger plant. Note that the reserve estimate includes the expansion of Black Butte mine into the Pit 15 area. As of May 2023, the permitting process for this area is still pending with federal government agencies. If Pit 15 is not permitted, the risk exists that sufficient reserves may not be available from the Black Butte mine under [REDACTED]

4.1.7 Assumed SPRB Coal Pricing

Coal pricing for 2023 comes from a coal supply agreement with [REDACTED]. Volumes purchased by PacifiCorp range from [REDACTED]. SPRB coal pricing in the 2023 Fuel Plan beyond 2023 is based on a long-term coal forecast published by EVA in spring 2023.

4.1.8 Powder River Basin Coal in the Near-Term

Powder River Basin coal has a high propensity to spontaneously combust and is the most friable coal type consumed in the power industry. While major plant modifications would be required to receive and consume large volumes of SPRB coal safely and reliably at the Jim Bridger plant, currently the plant is likely capable of consuming SPRB coal on a limited scale without major modification to the plant's coal unloading or coal consuming infrastructure. For example, in a test during 2015, the plant handled and consumed 10 trains totaling 140,540 tons of SPRB coal. Based on knowledge gained from that test and PacifiCorp's professional judgment, PacifiCorp believes that up to a total of 800,000 tons of SPRB coal per year can be safely and reliably consumed without major modifications to the plant infrastructure. This estimate is considered aggressive, as issues with scheduling or handling coal could result in lower maximum annual SPRB volumes using the existing infrastructure. The current 800,000-ton assumption could be adjusted based upon the results of actual coal deliveries in 2023 from the [REDACTED]

4.1.9 Transportation

Coal from the Bridger mine is delivered to the Jim Bridger plant via conveyor belt, and the cost of conveying the coal is included in the delivered coal cost. The Jim Bridger plant is also connected by a rail spur to the UPR mainline track. UPR has the trackage rights to the mainline and spur to the Jim Bridger plant and, as a result, the Jim Bridger plant is captive to UPR for deliveries by rail. Deliveries from all sources other than the Bridger mine are assumed to be delivered by the UPR. As mentioned above, the

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transportation rates for delivery of Black Butte and SPRB coal are based upon the current rail transportation agreement with UPR and escalated beyond 2023.

4.2 JIM BRIDGER PLANT CAPITAL

PacifiCorp selected the consulting firm Burns & McDonnell (B&M) to perform an independent capital evaluation of the plant modifications and capital expenditures required at the Jim Bridger plant to consume volumes, up to 100%, of SPRB coal. B&M completed a comprehensive study in June 2017. The study outlined high priority plant modifications and the estimated costs in converting the Jim Bridger plant's main fuel source to SPRB coal. The study focused on required modifications to several systems including coal handling and storage, rail delivery, mechanical process/power island, electrical, substation and overhead distribution and air permitting.

The required coal handling system modifications identified engineering controls that would be needed and relied upon to reduce and mitigate coal dust throughout the coal handling system. The study emphasized the importance of having adequate wash down capability by installing and utilizing fixed pipe wash down systems in existing coal reclaim and conveyor tunnels, crusher houses, tripper bays and in the rail unloading hopper facilities. The study also assumed a loop track and thaw shed would be required. Recommendations were made on how to safely and reliably handle SPRB coal: keep areas clean, eliminate ignition sources and detect spontaneous combustion with accumulated SPRB coal dust. These safety steps are designed to protect people, equipment, and enclosures from explosions due to the dangerous spontaneous combustion tendencies of SPRB coal.

Required modifications to the rail delivery system outlined in the 2017 study indicate that the current unloading configuration is [REDACTED]

In the 2023 Fuel Plan, the capital modifications for [REDACTED]

[REDACTED] The 2023 Fuel Plan assumes that Idaho Power will participate in the capital modifications. PacifiCorp's estimated cost of the capital modifications based on B&M's June 2017 study is approximately [REDACTED] as provided in Table 1.

TABLE 1
Jim Bridger Plant Capital Costs

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5 FUEL SUPPLY MIX

PacifiCorp evaluated six fueling scenarios for the Jim Bridger plant for the 2023 Fuel Plan. Those scenarios are described below. Please refer to Appendices 1-13 for detailed fueling mix and pricing information for each fueling option considered. Summaries of the fuel supply mix, including average volumes for the near-term and long-term, for each fueling option evaluated are provided below. Note that Scenarios 5 and 6 result in the same solution but were run in PLEXOS with different assumptions as seen below.

5.1 SCENARIO 1

Scenario 1 considers

5.2 SCENARIO 2 [REDACTED]

Scenario 2 considers [REDACTED]

5.3 SCENARIO 3 [REDACTED]

Scenario 3 considers [REDACTED]

5.4 SCENARIO 4 [REDACTED]

Scenario 4 considers [REDACTED]

5.5 SCENARIO 5 [REDACTED]

Scenario 5 considers [REDACTED]

5.6 SCENARIO 6 [REDACTED]

Scenario 6 considers [REDACTED]

6 PVRR ANALYSIS AND RESULTS

6.1 JIM BRIDGER COAL FUELING COST ANALYSIS

The PVRR analysis represents a present value revenue requirement using major NPC components for the PacifiCorp system. The fuel costs for all coal and gas plants are included along with power purchase costs offset by power sales revenues. Scenario 2 [REDACTED]

[REDACTED] The PVRR results have been discounted using PacifiCorp's weighted average cost of capital. A total PVRR

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differential has been calculated for each of the six fueling scenarios comparing the total PVRR for each option against the Preferred Scenario, the fueling option with the lowest PVRR dollar amount.

Table 2 below shows the results of the PVRR analysis for each fueling option in the 2023 Fuel Plan supplying the Jim Bridger plant with coal through December 2029. Also included in Table 2 is a financial ranking from 1 to 6 for each of the fueling options. Table 2 also shows the Preferred [REDACTED] [REDACTED] options. Additional discussion on risk assessment for each fueling option is presented in the next section below.

**TABLE 2
PVRR Analysis Through December 2029**

[REDACTED]

6.2 RISK ANALYSIS

The following table provides a risk assessment for each scenario and outline the specific categories that have been considered in the risk evaluation analysis. Table 3 illustrates a risk assessment of Scenarios 1 through 6 through December 2029.

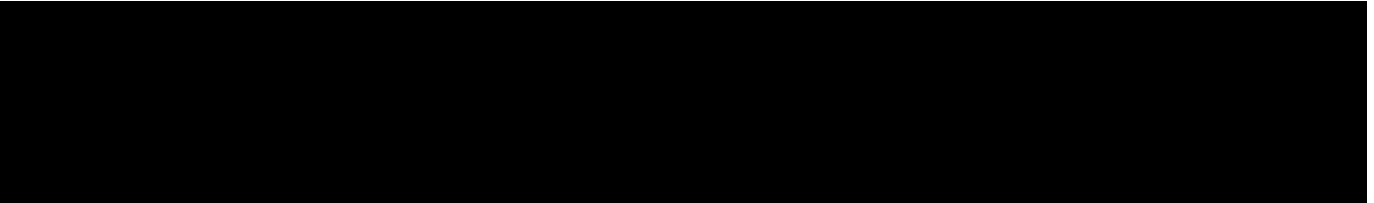
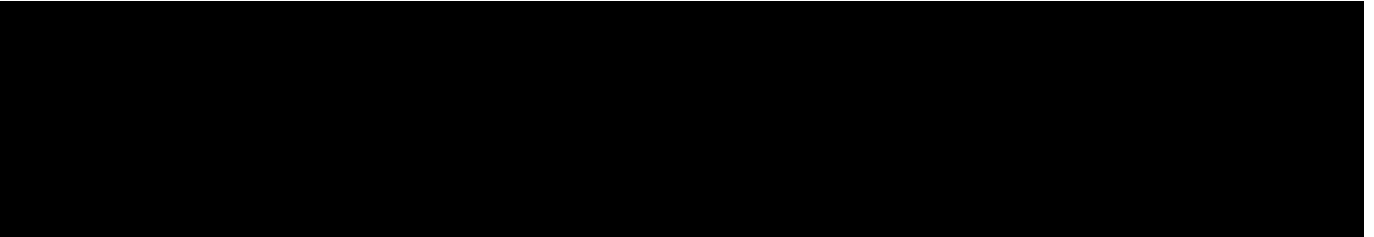
**TABLE 3
Risk Evaluation Through 2029**

[REDACTED]

The defined risk profile categories include (1) Incremental Capital – the risks associated with the total costs of incremental capital expenditures related to each fueling scenario, (2) Coal Market – risks associated with adequate coal supplies, as well as coal and transportation price, (3) Power and Natural Gas Market Volatility – risks associated with power market price volatility driven by changing natural gas prices, availability of hydro generation, impacts of renewable energy sources, load demand, and (4) Jim Bridger Plant Environmental Compliance – risks associated with new environmental regulations that could change generation at the Jim Bridger plant.

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For each fueling scenario under each risk category, a number ranging between 1 and 4 has been assigned. Number 1 is designated as “favorable and low risk.” Number 2 is “favorable and moderate risk,” and number 3 is “less favorable and high risk.” Number 4 is designated as “least favorable and highest risk.” The sum of the risk numbers for each category for each scenario, results in an overall “composite project risk” score.



7 REMAINING UNCERTAINTIES

Recent and ongoing events have increased uncertainty around the future of Jim Bridger plant’s fuel plans in a way that make definitive Jim Bridger long-term coal supply decisions or commitments high risk at

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this time. The following is a short summary of some of the major uncertainties that impact the 2023 Fuel Plan and an explanation of how the plan may change depending on the resolution of the uncertainties.

7.1 JIM BRIDGER GAS CONVERSIONS

Jim Bridger Units 1 and 2 are scheduled to be converted to natural gas in 2024 as required by a Regional Haze Consent Decree with the State of Wyoming. Based on the Company's 2023 IRP, Units 3 and 4 are scheduled to be converted to natural gas in 2030. The 2023 IRP analyzed a scenario where Jim Bridger Units 3 and 4 were not converted to natural gas, which resulted in significantly higher costs to PacifiCorp customers.⁷ The natural gas conversion of Jim Bridger Units 1 and 2 is an enforceable environmental compliance requirement (Regional Haze requirements under the Clean Air Act (CAA)) under a consent decree entered into by the state of Wyoming and the Company⁸ and an administrative consent order with EPA. The state of Wyoming issued an air permit for the natural gas conversion of Jim Bridger Units 1 and 2 in December 2022, as well as submitted a state-approved revised regional haze state implementation plan to EPA requiring the natural gas conversion. EPA is reviewing the submission and is expected to conduct a separate federal public comment process on the plan in summer of 2023. PacifiCorp submitted a notice of compliance and request for termination of the EPA order in March of 2023, which is currently under EPA review. While some of these processes have not yet been finalized, and uncertainty remains, the gas conversion process is underway and any alternative compliance scenarios will be based on Units 1 and 2 converting to gas. The conversion of Units 3 and 4 is further out in time and thus subject to more uncertainty. Due to these uncertainties, [REDACTED]

7.2 PACIFICORP'S COMMITMENT AND REQUIREMENT TO EVALUATE CCUS AT JIM BRIDGER

Pursuant to Wyoming Statute §§ 37-18-101 and -102 and the Wyoming Public Service Commission Administrative Rules, PacifiCorp is required to analyze the suitability of CCUS at coal fired electric generation facilities, owned in whole or in part with another utility or utilities subject to the provisions of Wyo. Stat. § 37-18-102(a). The Company has determined that Jim Bridger Units 3 and 4 are potentially suitable candidates for CCUS. Additionally, the consent decree entered into by the state of Wyoming and the Company required the Company to issue request(s) for proposals (RFP) for the installation of CCUS at Jim Bridger Units 3 and 4 no later than January 1, 2023. PacifiCorp released the CCUS RFP to qualified bidders in November of 2022 for the Jim Bridger facility. [REDACTED]

CCUS installation at Jim Bridger Units 3 and/or 4 has the potential to significantly impact coal burn and dispatch. The generation forecast and coal requirement at the Jim Bridger plant will likely increase if PacifiCorp elects to, or is required to, install CCUS at Bridger Units 3 and/or 4. Proceeding with the Preferred Scenario in the near-term would not preclude the future installation of CCUS at the Jim Bridger plant while PacifiCorp continues to evaluate options and work to comply with Wyoming's CCUS regulations. Fueling strategies for CCUS scenarios would focus on availability and reliability of coal supply.

⁷ PacifiCorp's 2023 IRP, Chapter 9 – Modeling and Portfolio Selection Results, pages 266-267.

⁸ Wyoming Consent Decree, Docket No. 2022-CV-200-333 (February 14, 2022).

7.3 PROPOSED EPA RULES

Ozone Transport Rule

The EPA proposed a federal implementation plan for 26 states, including Wyoming, in April of 2022, to eliminate significant contributions to nonattainment of the 2015 ozone National Ambient Air Quality Standard (NAAQS) in neighboring states, known as the Ozone Transport Rule, “good neighbor rule,” or “interstate transport” provision of the CAA.⁹ However, on January 31, 2023, EPA delayed final action on Wyoming’s ozone interstate transport state implementation plan to December of 2023. Wyoming cannot be included in the federal plan until EPA disapproves the state plan. EPA finalized its federal ozone plan on March 15, 2023, but deferred action on Wyoming, meaning the state is currently not subject to the federal plan but could be once EPA finalizes its determination on the state plan. EPA’s deferral of Wyoming is currently under litigation. EPA’s federal plan is focused on reducing NO_x, a precursor to ozone formation, and requires fossil-fuel-fired power plants to participate in an allowance-based ozone season trading program beginning in 2023. The federal rule includes SCR-like NO_x budgets for each generating unit and will impact the Company and its operations. The final rule has been released by EPA but has not yet been published in the Federal Register, meaning compliance timelines are not yet established.

Jim Bridger Units 3 and 4 are currently equipped with SCR. Given the impacts of the federal plan on PacifiCorp’s Utah coal plants, and depending on EPA’s determination on Wyoming’s state plan, these units may take on a more critical role in the compliance and reliability strategy for PacifiCorp’s fleet and may operate at higher levels than previously forecasted during the ozone season (May – September). Proceeding with the Preferred Scenario, as explained above when discussing the possibility of CCUS at the Jim Bridger plant, keeps all the fueling alternatives on the table as PacifiCorp determines the most effective course of action for compliance with the rule and preserving reliability. Litigation of Utah and other state plan disapprovals is currently underway, and the final rule is also expected to be heavily litigated.

EPA’s deferred action on Wyoming’s state plan creates a great deal of uncertainty about how the Ozone Transport Rule will impact PacifiCorp’s coal fleet. While this is pending, the Preferred Scenario is the most economical in the interim and will provide PacifiCorp time to better understand this potential regulation and its impacts on the generation fleet.

Greenhouse Gas Rule

EPA issued proposed regulations under section 111 of the CAA on May 23, 2023, to address greenhouse gas emissions from fossil-fuel fired electric generating units (the “Greenhouse Gas Rule”). The standards proposed in the rule would regulate new gas-fired combustion turbines and set standards for states to regulate existing coal plants, converted natural gas plants and certain large and frequently used existing gas turbine plants. The standards vary significantly based on facility-specific factors – including whether the unit is new or existing, whether it is fueled by coal or natural gas, how frequently it operates, and whether it is scheduled to retire in the coming years. Coal units operating beyond 2032 face increasingly stringent emission limits, and those operating beyond 2040 must comply with emission limits consistent with carbon capture and sequestration starting in 2030. PacifiCorp is evaluating the specific impacts of the proposal and how they impact the Bridger Units and the fueling plan. The impacts from the Greenhouse Gas Rule create some uncertainty due to changing future requirements for coal and gas units and because these requirements could be adjusted when the rule is finalized. The Preferred Scenario allows PacifiCorp

⁹ See 42 U.S.C. 7410(a)(2)(D)(i)(I); 87 Fed. Reg. 20036 (April 6, 2022).

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to maintain options to address the impacts and system-wide adjustments that may result from the proposed rule.

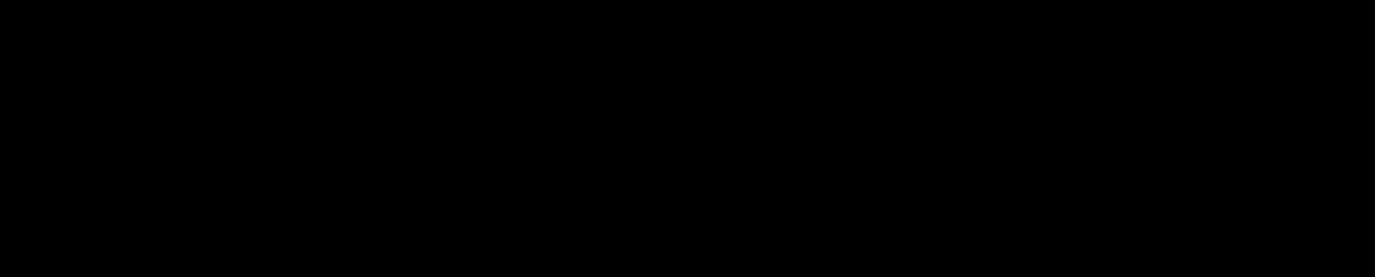


7.4 IDAHO POWER COMPANY'S PLANNED EXIT DATES

PacifiCorp's 2023 IRP Preferred Portfolio plans for Jim Bridger plant Units 1 and 2 to cease consuming coal on December 31, 2023 and convert to natural gas consumption. PacifiCorp's IRP also anticipates that Units 3 and 4 will cease consuming coal on December 31, 2029 and convert to natural gas. The IRP also provides December 31, 2037, as the closure date for all units. PacifiCorp and Idaho Power Company (Idaho Power) are aligned in the decision to consume coal in Units 1 and 2 through 2023, since Idaho Power's 2021 IRP calls for the conversion of two units to natural gas consumption in 2024. However, PacifiCorp and Idaho Power currently differ on the operation of Jim Bridger plant Units 3 and 4. Idaho Power's 2021 IRP provides December 31, 2025, as the closure date for a third Jim Bridger plant unit and December 31, 2028, as the closure date for a fourth Jim Bridger plant unit. Currently, these differences make modeling the Jim Bridger plant's future fueling needs difficult. Idaho Power is preparing an updated IRP which is scheduled to be released later in 2023. For purposes of the 2023 Fuel Plan, PacifiCorp has assumed the information in Idaho Power's 2021 IRP will remain the same. Ultimately, as co-owners of Jim Bridger plant and Bridger mine, PacifiCorp and Idaho Power will need to align their plans to best accommodate the unique needs of their respective customers. The solutions will impact each owner's access to and usage of the Jim Bridger plant and Bridger mine in the future.

8 CONCLUSION

In this 2023 Fuel Plan, PacifiCorp has identified a long-term fueling plan for the Jim Bridger plant that aligns with the Company's 2023 IRP, responds to changing fuel requirements, and allows flexibility to deal with uncertainty. This plan is PacifiCorp management's current strategy and lays out the various considerations and options available to PacifiCorp based on the best information available at this time. Alternative mine plans have been developed, evaluated, and reviewed for the Bridger mine which provided information and direction in determining the optimal volume at the Bridger mine.

After considering factors influencing this long-term fueling strategy and information available to the Company at this time, six different fueling options have been developed and evaluated. Based upon the results of the detailed PVRP analysis, which was further enhanced by utilizing a risk profile, the Preferred Scenario (Scenarios 5 and 6) provides the least-cost, risk-adjusted option and informs PacifiCorp's 2023 Jim Bridger plant fueling strategy. The Preferred Scenario assumes BCC operates two draglines. This plan would allow PacifiCorp



Although the Preferred Scenario is the current least-cost, risk-adjusted fueling option for the Jim Bridger plant, energy market volatility and changing environmental legislation continues to create uncertainty around the future of Jim Bridger. PacifiCorp will continue to evaluate the best fueling options for the Jim Bridger plant as conditions change and as decision points for various supply options approach. PacifiCorp will update the long-term fuel supply plan after the 2025 IRP is finalized.

APPENDIX 1 – SCENARIO 1 –



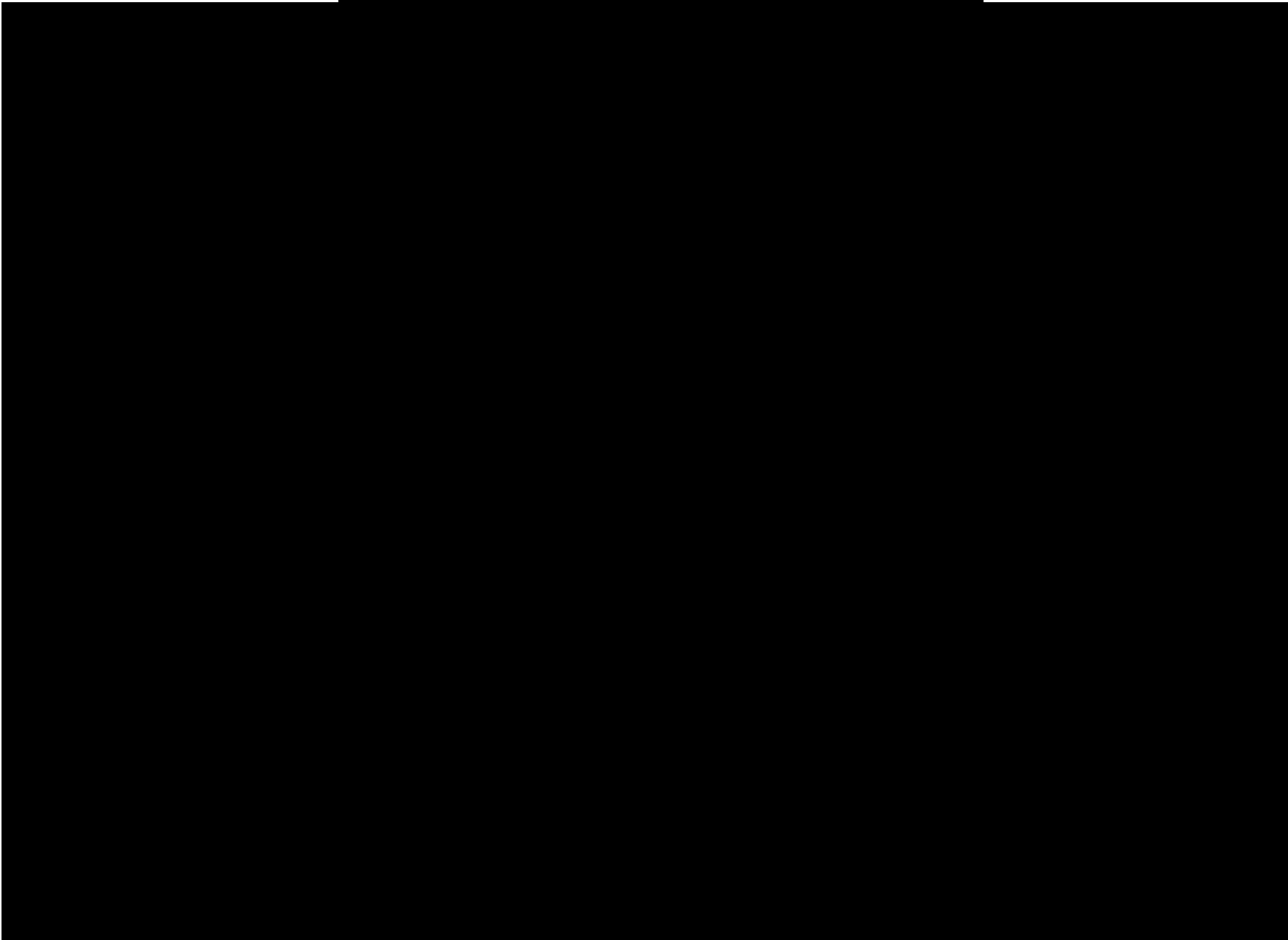
APPENDIX 2 – SCENARIO 2 – [REDACTED]



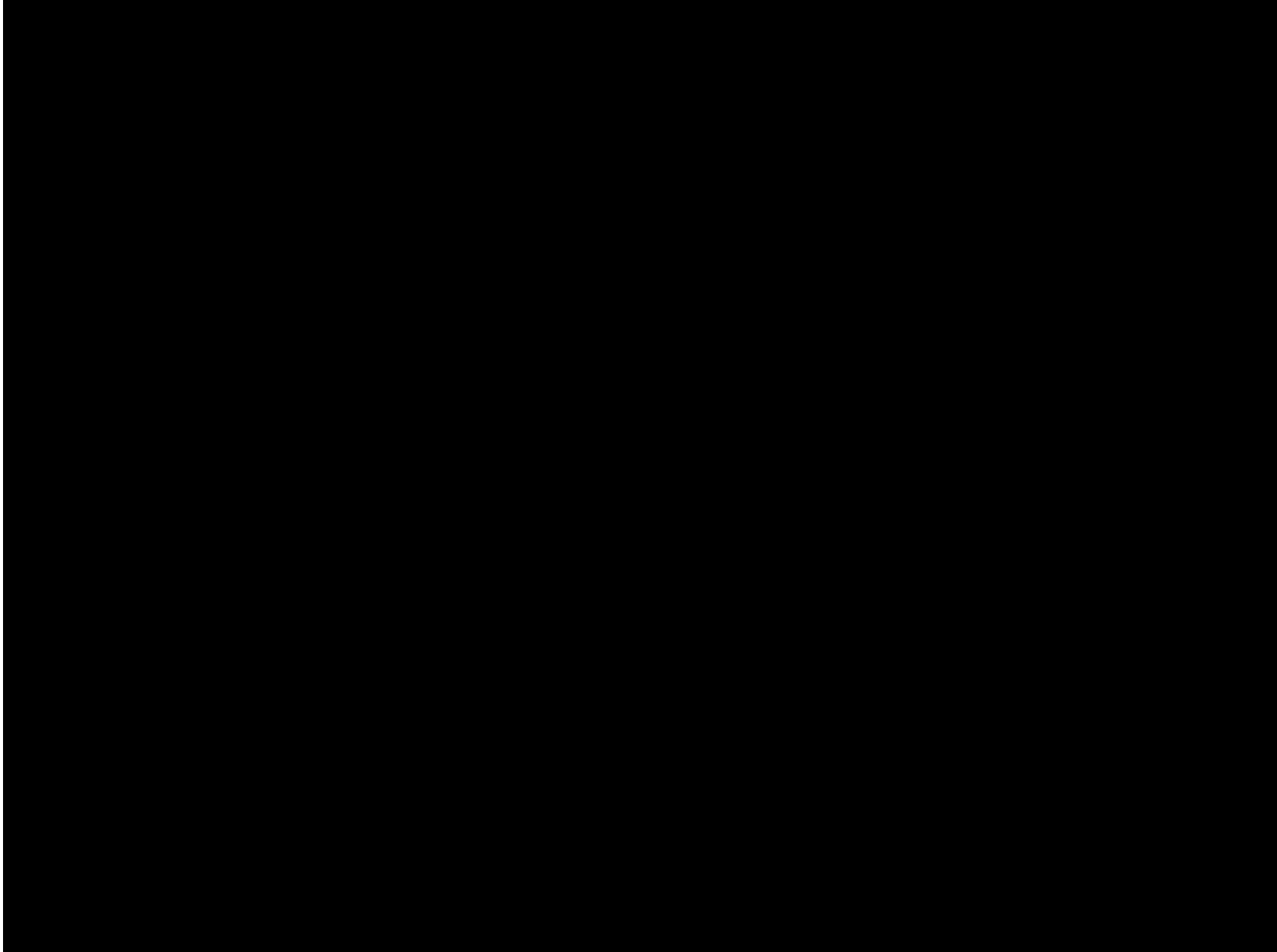
APPENDIX 3 – SCENARIO 3 –



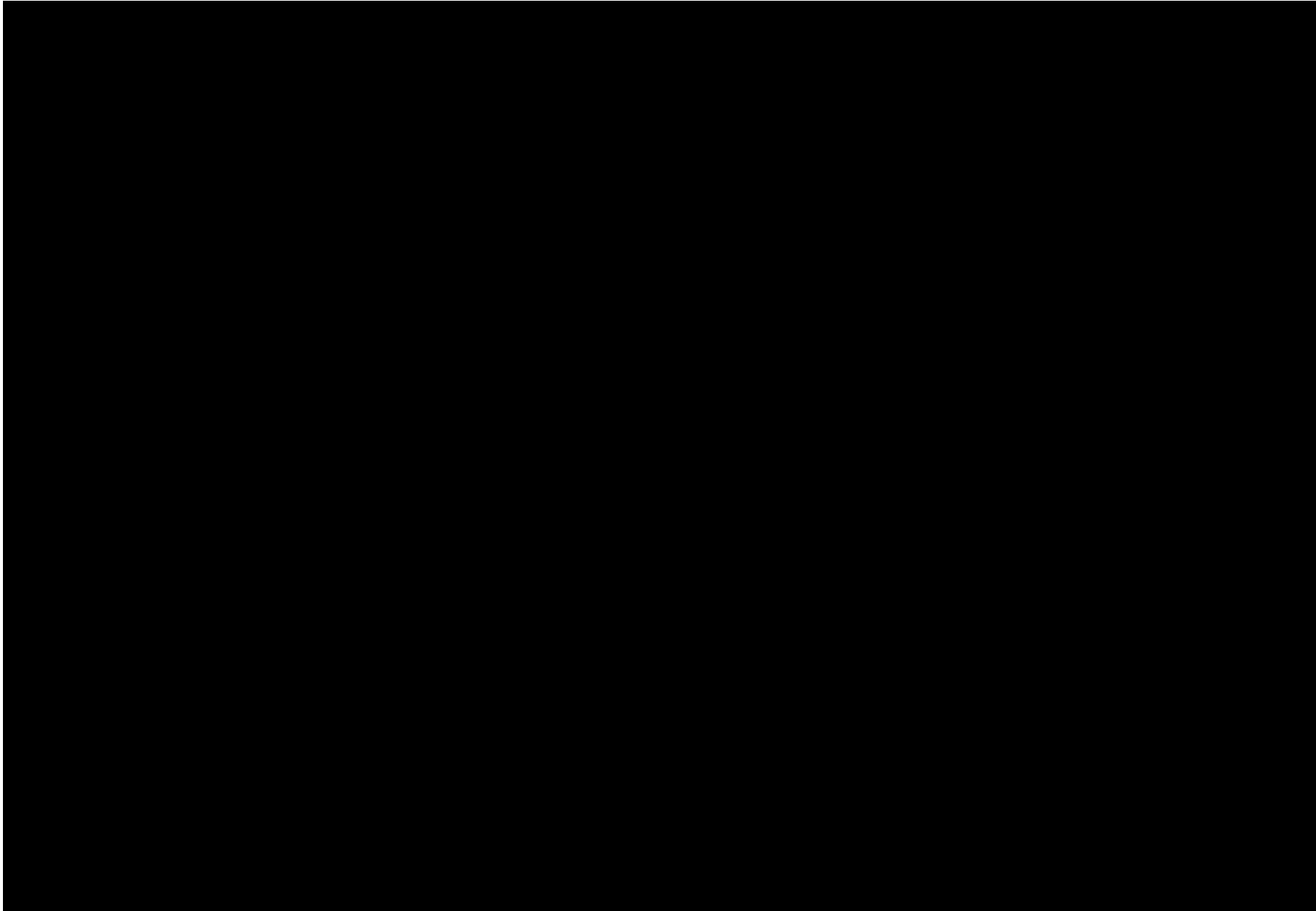
APPENDIX 4 – SCENARIO 4 –



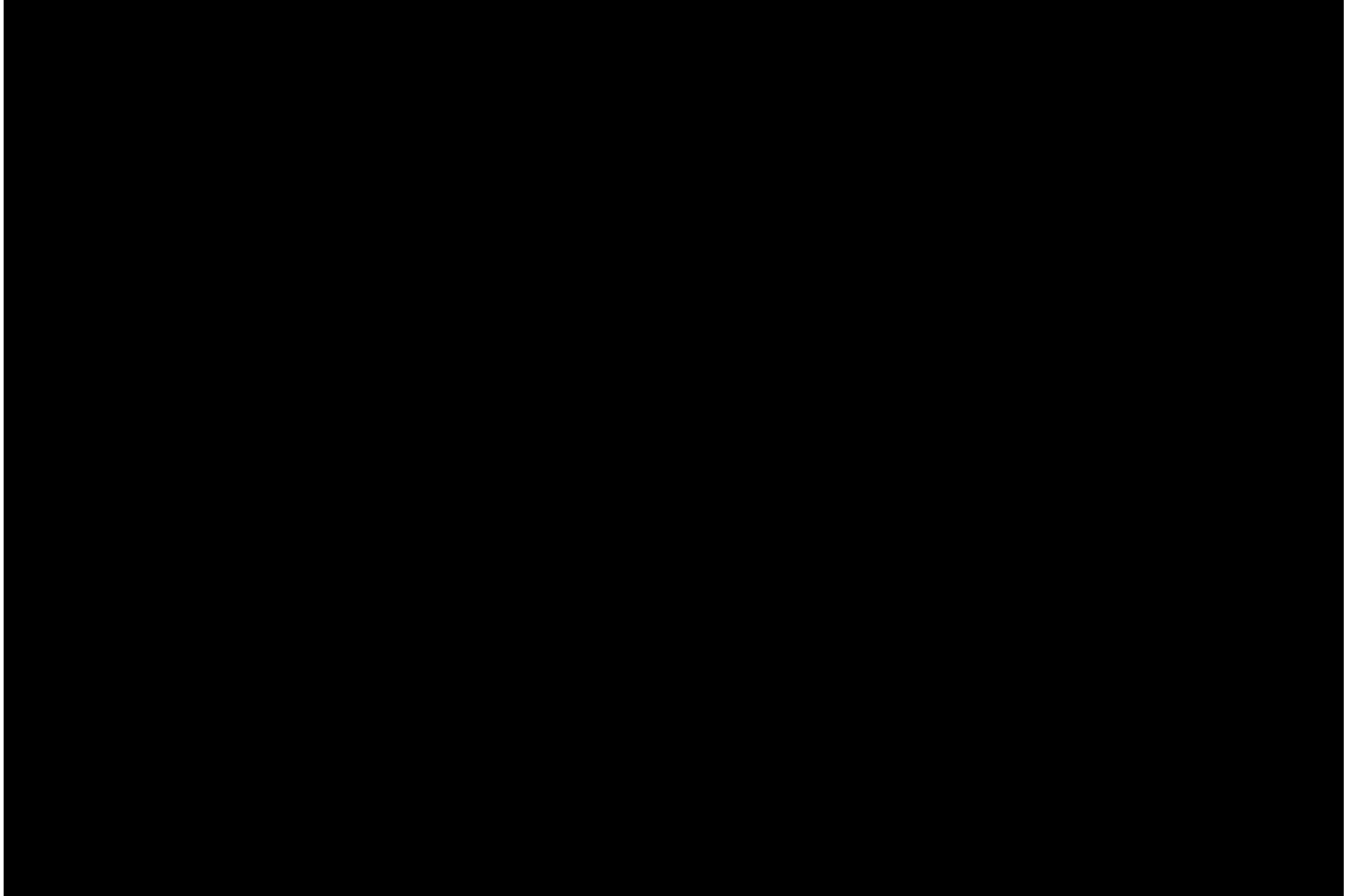
APPENDIX 5 – SCENARIO 5 –



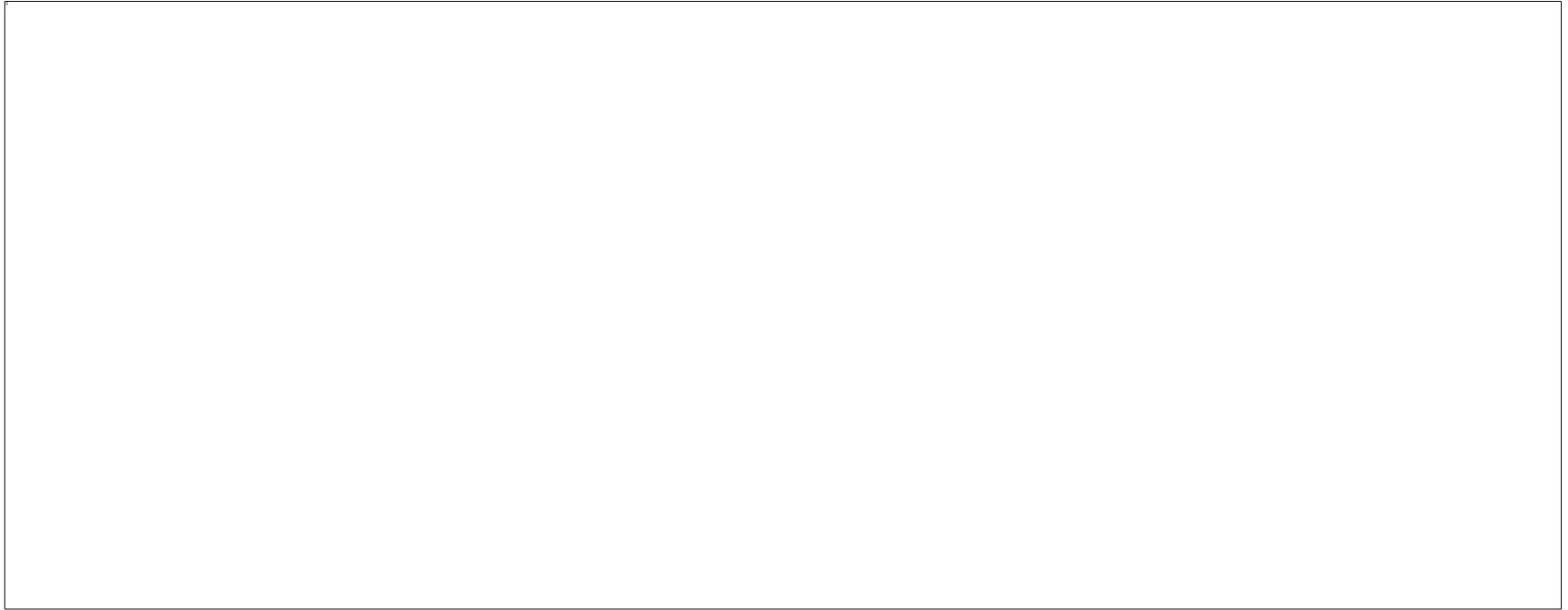
APPENDIX 6 – SCENARIO 6 –



APPENDIX 7 – JIM BRIDGER PLANT CONSUMED FUEL SUMMARY



APPENDIX 7 – JIM BRIDGER PLANT CONSUMED FUEL SUMMARY (CONT'D.)



APPENDIX 8 – SCENARIO 1 – JIM BRIDGER PLANT



APPENDIX 8 – SCENARIO 1 – JIM BRIDGER PLANT (CONT'D.)



APPENDIX 9 – SCENARIO 2 – JIM BRIDGER PLANT



APPENDIX 9 – SCENARIO 2 – JIM BRIDGER PLANT (CONT'D.)



APPENDIX 10 – SCENARIO 3 – JIM BRIDGER PLANT



APPENDIX 10 – SCENARIO 3 – JIM BRIDGER PLANT (CONT'D)



APPENDIX 11 – SCENARIO 4 – JIM BRIDGER PLANT



APPENDIX 11 – SCENARIO 4 – JIM BRIDGER PLANT (CONT'D.)



APPENDIX 12 – SCENARIO 5 – JIM BRIDGER PLANT



APPENDIX 12 – SCENARIO 5 – JIM BRIDGER PLANT (CONT'D.)



APPENDIX 13 – SCENARIO 6 – JIM BRIDGER PLANT



APPENDIX 13 – SCENARIO 6 – JIM BRIDGER PLANT (CONT'D.)

