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December 30, 2015

***VIA ELECTRONIC FILING  
AND OVERNIGHT DELIVERY***

Public Utility Commission of Oregon  
201 High Street SE, Suite 100  
Salem, OR 97301-1166

Attn: Filing Center

**RE: UE 264 and UE 287—Compliance Filing—PacifiCorp's Confidential Long-Term Fuel Supply Plan for the Jim Bridger Plant**

In compliance with Order No. 13-387 in docket UE 264 and Order No. 14-331 in docket UE 287, PacifiCorp d/b/a Pacific Power encloses for filing the confidential Long-Term Fuel Supply Plan for the Jim Bridger Plant in the above-referenced dockets. The confidential material is provided subject to the protective orders issued in these proceedings.

Please direct informal inquiries with respect to this filing to Erin Apperson, Manager of Regulatory Affairs, at (503) 813-6642.

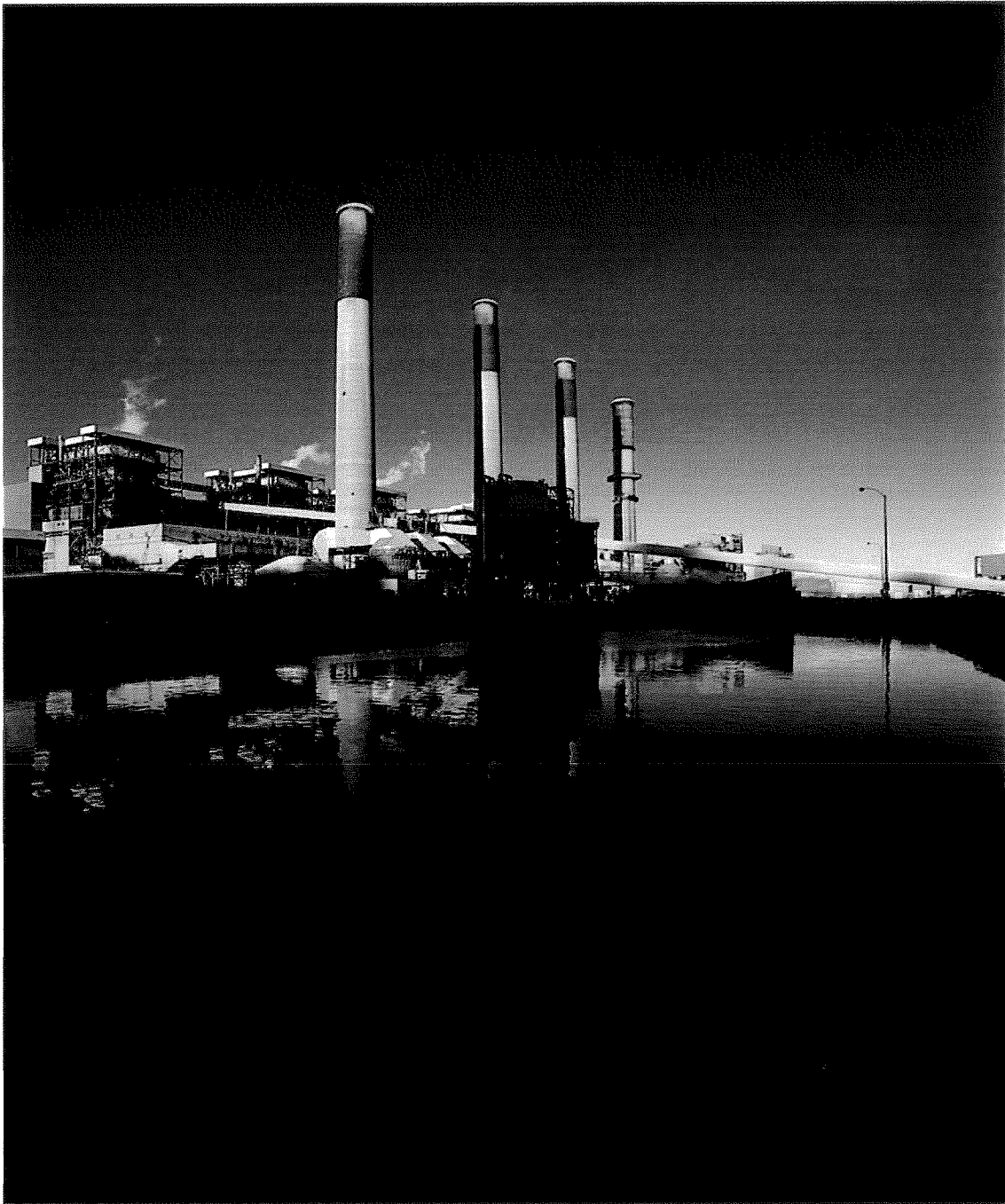
Sincerely,

R. Bryce Dalley  
Vice President, Regulation

Enclosure



**PACIFICORP's CONFIDENTIAL LONG-TERM FUEL  
SUPPLY PLAN FOR THE JIM BRIDGER PLANT**



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## Introduction

In Public Utility Commission of Oregon (Oregon Commission) Order No. 13-387 in docket UE 264, the Oregon Commission adopted the proposal of PacifiCorp dba Pacific Power (PacifiCorp or Company) to prepare periodic fuel supply plans comparing affiliate mine supply to alternative fuel supply options, including market alternatives.<sup>1</sup> In docket UE 287, PacifiCorp filed a compliance proposal for future periodic fuel supply plan filings.<sup>2</sup> No party objected to the proposal, and the case was resolved through Commission approval of stipulation resolving all issues.<sup>3</sup>

As set forth in the Company's docket UE 287 compliance filing, the purpose of long-term fuel supply plans for plants fueled from captive mines is to determine the least-cost, least risk coal supply, viewed on a multi-year basis. The long-term fuel supply 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.

To develop this long-term fuel supply plan for the Jim Bridger plant, the Company has reviewed the fueling options for the plant, reviewed Bridger Coal Company mine plans, reviewed data on market costs for alternative supplies, including transportation costs and costs for plant modifications required to support alternative supplies, and compared the different fuel supply options under different scenarios to determine the least-cost, least-risk approach.

## Background

The Jim Bridger plant is a four unit coal-fired plant in Sweetwater County, Wyoming. The facility is located approximately eight miles north of Point of Rocks, Wyoming, and approximately 24 miles east of the city of Rock Springs, Wyoming. The Union Pacific railroad provides rail access to the plant.

The Jim Bridger plant is the largest plant on the PacifiCorp system (2,120 megawatts) and is jointly owned by PacifiCorp (66.7 percent) and Idaho Power Company (Idaho Power) (33.3 percent). The depreciable life of PacifiCorp's share of the Jim Bridger plant extends through 2025 in Oregon and through 2037 in all other states, based on PacifiCorp's 2012 depreciation study. The Jim Bridger plant consists of four almost identical units, each with a nominal 530 net megawatt capacity. The Jim Bridger plant typically consumes 7.5 million to 8.5 million tons of coal per year, and is designed to burn local southwest Wyoming coal with heat content in the range of 9,000 Btu/lb to 10,000 Btu/lb.

Bridger Coal Company is located adjacent to the Jim Bridger plant. Bridger Coal Company includes both surface and underground mining operations and, similar to the Jim Bridger plant, is jointly owned by PacifiCorp (66.7 percent) and Idaho Power (33.3 percent). The surface operation consists of a combination dragline and truck/loader operation that produces approximately 2.0 to 2.5 million tons of coal per year. The underground operation uses continuous miner and longwall mining equipment to produce coal. The coal is transported from the underground operation to the surface

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<sup>1</sup> *In the Matter of PacifiCorp, dba Pacific Power, 2014 Transition Adjustment Mechanism*, Docket UE 264, Order No. 13-387 at 7 (Oct. 28, 2013).

<sup>2</sup> *In the Matter of PacifiCorp, dba Pacific Power, 2015 Transition Adjustment Mechanism*, Docket UE 287, Direct Testimony of Cindy Crane, Exhibit PAC/201 (April 2014).

<sup>3</sup> *In the Matter of PacifiCorp, dba Pacific Power, 2015 Transition Adjustment Mechanism*, Docket UE 287, Order No. 14-331 (Oct. 1, 2014).

stockpile or directly to the Jim Bridger plant via a nine mile overland conveyor belt. The underground mine produces approximately 3.5 to 4.0 million tons of coal per year.

In addition to the estimated 5.5 to 6.0 million tons of coal delivered annually from Bridger Coal Company to the Jim Bridger plant, the Jim Bridger plant has historically received the remaining portion of its coal supply requirements, approximately 2.0 to 2.5 million tons per year, from the nearby Black Butte mine, which is located approximately 20 miles from the Jim Bridger plant.

For regulatory purposes, Bridger Coal Company is consolidated with PacifiCorp's regulated operations, including the Jim Bridger plant.<sup>4</sup> PacifiCorp's share of Bridger Coal Company is included in the Company's rate base and its share of mining costs, including depreciation and depletion, is included in net power costs. This is a cost-based approach, limiting the price of Bridger Coal Company coal in rates to operating expenses, plus PacifiCorp's authorized rate of return on the investment in the mine.<sup>5</sup>

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<sup>4</sup> *In re Pacific Power & Light Co.*, Docket UE 21, Order No. 84-898 (Nov. 14, 1984).

<sup>5</sup> *In re Pacific Power & Light Co.*, Docket UF 3779, Order No. 82-606 (Aug. 18, 1982).

## Available Fuel Supply Alternatives

Based on the location of the Jim Bridger plant, economic fuel supply alternatives are limited to the mines located in southwest Wyoming and the Powder River Basin mines of Campbell County, Wyoming.

In addition to Bridger Coal Company, there are three other coal mines in southwest Wyoming: Kemmerer, Haystack and Black Butte. Two of these mines, the Kemmerer and Haystack mines, are not viable fuel sources for the Jim Bridger plant. The Kemmerer mine currently supplies PacifiCorp's Naughton plant and southwest Wyoming's trona (soda ash) industry. The Kemmerer mine is an older operation, PacifiCorp having first purchased coal from the Kemmerer mine under a Coal Purchase Agreement dated December 30, 1957. The Kemmerer mine coal is delivered to customers via overland conveyor, truck transportation and limited rail operations. Presently, the Kemmerer mine's rail loading infrastructure is incapable of loading a full unit train efficiently. In addition, the grade elevation surrounding the mine requires additional locomotives to power a full unit train. As a result, the mine rarely loads full unit trains. Given the Kemmerer mine's current rail loading infrastructure, any sizable volume of Kemmerer coal would require truck transportation to the Jim Bridger plant. The mine's production costs, required truck transportation for a distance of approximately 120 miles, and the lack of significant excess capacity, result in the Kemmerer mine not being a viable fuel source on a delivered costs basis for the Jim Bridger plant.

The Haystack mine, located 30 miles south of PacifiCorp's Naughton plant, is owned by Kiewit Mining. Designed to operate as a small surface truck/loader operation, Kiewit Mining began construction of the mine in 2012. Due to a lack of demand for coal, Kiewit Mining made a decision to idle this mine in April 2013. All coal sold from the Haystack mine will be delivered with truck transportation. Similar to the Kemmerer mine, the Haystack mine's location, lack of transportation infrastructure, and limited capacity negate its viability as a fuel source on a delivered cost basis for the Jim Bridger plant.

In addition to Bridger Coal Company, this leaves two possible coal supply alternatives for the Jim Bridger plant. These alternatives are the Black Butte mine and the Powder River Basin mines of Campbell County, Wyoming.

The Black Butte mine, located 20 miles southeast of the Jim Bridger plant, is jointly owned by Lighthouse Resources and Anadarko Petroleum. Operated by Lighthouse Resources, the mine is a multiple seam, multiple pit operation with the overburden removed by draglines and a truck and shovel fleet. Historically, Black Butte has mined approximately 3.5 million to 4.0 million tons per year, a significant portion of which has supplied the Jim Bridger plant. One of the Black Butte mine's significant contracts will expire December 31, 2015. Starting in 2016, the mine is expected to produce between [REDACTED]. Currently, the Jim Bridger plant receives approximately 25 percent of its fuel supplies from the Black Butte mine, under a contract that began earlier this year and terminates in 2017. Coal from the Black Butte mine is delivered to the plant under an agreement with the Union Pacific Railroad.

The Powder River Basin of Wyoming and Montana is the largest coal mining region in the United States. Coal from the Powder River Basin is classified as sub-bituminous coal. Wyoming Powder River Basin coal contains average heat content of approximately 8,500 Btu/lb. The majority of the coal mined in the Wyoming Powder River Basin is low sulfur and low ash coal, making coal from the Wyoming Powder River Basin very desirable. Due to its unique quality characteristics, in 2014

Wyoming Powder River Basin coal was consumed by energy markets in 30 states across the country. In 2014, there were seven different mining companies operating eleven active mines in the region, producing more than 345 million tons.

Powder River Basin mines are served by two railroads, the Union Pacific and Burlington Northern Santa Fe. Both of these railroads have joint access to all of the mines located in the Powder River Basin which are south of Gillette, Wyoming. Only the Burlington Northern Santa Fe Railway serves the mines located north of Gillette, Wyoming.

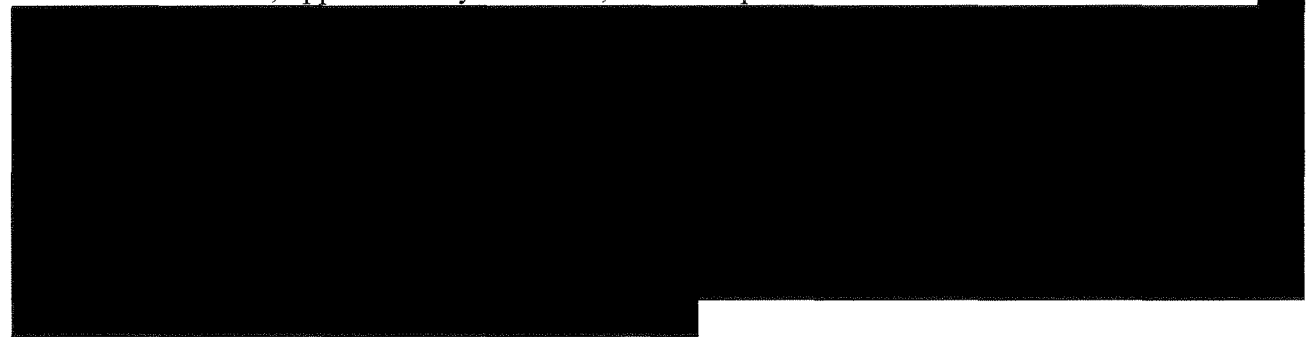
The Powder River Basin mines that would be considered to supply coal to the Jim Bridger plant are those located in the southern portion of the Powder River Basin. Mines located in this region contain the highest heat content ranging between 8,600 Btu/lb. and 9,000 Btu/lb. These mines are located approximately 550 to 600 miles from the Jim Bridger plant.

### **Alternative Fuel Supply Plans Evaluated**

Considering the limited coal supply alternatives available to the Jim Bridger plant, the Company evaluated two fuel supply alternatives only, the Base Operating Plan and the Market Alternative Plan. Both plans assume decreasing reliance on fuel supply from the Bridger Coal Company and from the Black Butte mine and increasing reliance on fuel supply from the Powder River Basin; the plans differ in whether the Company continues to source fuel from the Bridger Coal Company surface mine or moves entirely to a market-based supply. Because this is a long-term planning document, the Company's evaluation of alternative fuel supply plans was conducted on a total company basis, utilizing the longest depreciable life now recognized in PacifiCorp's jurisdictions, 2037.

#### *Base Operating Plan*

Historically, the Jim Bridger plant has consumed about 7.5 million to 8.5 million tons of coal on an annual basis. Approximately two-thirds of the coal has been sourced from Bridger Coal Company while the remainder, approximately one-third, has been purchased from the Black Butte mine.



As the largest plant in PacifiCorp's portfolio, on average the Jim Bridger plant consumes the equivalent of roughly 1 1/2 unit trains of coal daily. The Jim Bridger plant's existing unloading facilities consist of three ladder tracks and an unloading hopper designed to unload rapid discharge railcars with a payload of up to 118 tons per railcar. The existing design necessitates that trains longer than 72 railcars be broken into sections for unloading which significantly increases train unloading time. The current plant infrastructure does not include additional sidings to allow for the staging of large unit trains. This configuration essentially limits the plant's ability to place more

than one Powder River Basin unit train in service at any one time. Given the Jim Bridger plant's existing rail unloading facility constraints, the Jim Bridger plant's capacity for unloading Powder River Basin coal trains is estimated at [REDACTED] tons per year at a rate of approximately one train every [REDACTED] days.

A major plant capital investment will be required to accommodate the [REDACTED]. The capital investment is required primarily to upgrade the Jim Bridger plant's rail unloading capabilities. The cost of this conversion is estimated at [REDACTED] (PacifiCorp share)<sup>6</sup> and would include a rail loop track and other major expenditures to accommodate the unloading of more than 300 trains per year. With the addition of the rail unloading infrastructure, [REDACTED]

[REDACTED] Key components of the Base Operating Plan are summarized below:

- Base Operating Plan

[REDACTED]

*Market Alternative Plan*

Similar to the Base Operating Plan, the Market Alternative Plan assumes the same major capital expenditures to upgrade the Jim Bridger plant's rail unloading facility. As this expenditure is sufficient to accommodate unloading 100 percent of the Jim Bridger plant's requirements, the Market Alternative Plan contemplates [REDACTED]

[REDACTED]. Key components of the Market Alternative Plan are summarized below:

- Market Alternative Plan

[REDACTED]

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<sup>6</sup> The capital investments and present value revenue requirement costs referenced in this plan are stated on a total company basis.



[REDACTED]

The Base Operating Plan assumptions were derived from PacifiCorp's 2015 Integrated Resource Plan (IRP), submitted March 31, 2015. For comparison purposes, the key assumptions used in preparation of the IRP, including coal consumption (MMBtus), were also used in the preparation of the Market Alternative Plan.

The volume assumptions used in the two plans are provided in Confidential Table 1 below:

**Confidential Table 1**

[REDACTED]

The key pricing assumptions used in the two plans are summarized in Confidential Table 2 below:

**Confidential Table 2**

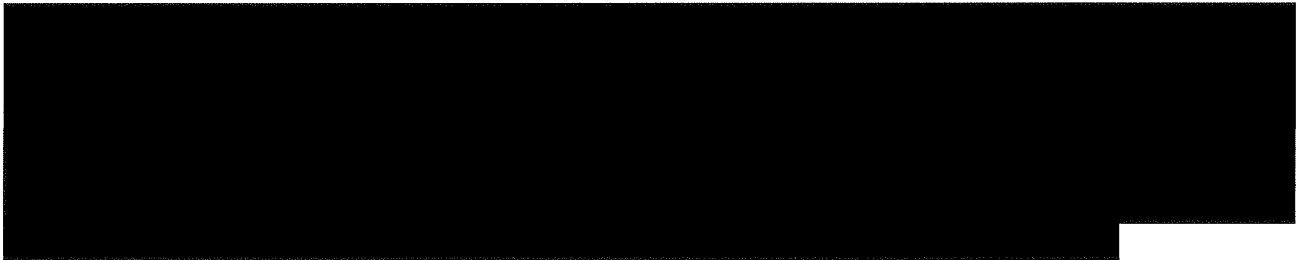
[REDACTED]

[REDACTED]

## Results

Confidential Table 3 below compares the Present Value Revenue Requirement (PVRR) for the two fueling options. The Company estimates that the Base Operating Plan is [REDACTED] less costly than the Market Alternative Plan.

**Confidential Table 3**

A single line of text is completely redacted with a solid black box.A large rectangular area of the document is completely redacted with a solid black box, covering what appears to be the main body of Confidential Table 3.

## Conclusion

PacifiCorp has evaluated the Base Operating Plan and Market Alternative Plan for the Jim Bridger plant. The PVRR analysis of the Base Operating Plan for the Jim Bridger plant yields a PVRR of [REDACTED]. The PVRR analysis of the Market Alternative Plan yields a result of [REDACTED]. The evaluation demonstrates that the Base Operating Plan is [REDACTED] favorable to the Market Alternative Plan fuel plan. As a part of its regular planning process, PacifiCorp will continue to evaluate all available options for the long-term fueling of the Jim Bridger plant.