



State of Utah  
Department of Commerce  
Division of Public Utilities

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**REDACTED**

## **ACTION REQUEST RESPONSE**

To: Utah Public Service Commission  
From: Utah Division of Public Utilities  
Chris Parker, Director  
Artie Powell, Energy Section Manager  
Doug Wheelwright, Technical Consultant  
Date: March 21, 2019  
Re: **Information Memo**  
Docket No. 19-035-03 - PacifiCorp's Semi-Annual Hedging Report

## **RECOMMENDATION (NO ACTION)**

The Division of Public Utilities (Division) has reviewed PacifiCorp's Semi-Annual Hedging Report along with the information included as Attachments A – F. The information presented is similar in format and content to previous reports and includes both historical information along with a forecast of future hedging activities. The Public Service Commission of Utah (Commission) has not been asked to approve or acknowledge this report and no further action is required. The Division's review has revealed no matters in the report that need Commission attention and recommends no action.

## **ISSUE**

On February 15, 2019, RMP filed the PacifiCorp Semi-Annual Hedging Report with the Commission. On February 15, 2019, the Commission issued an Action Request to review the

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filing for compliance with comments due on or before March 21, 2019. This memo represents the Division’s comments and reply to the Action Request.

## **BACKGROUND**

During a general rate case, Docket No. 10-035-124, it became apparent that parties did not understand the various products, timing, volume, and nature of the PacifiCorp<sup>1</sup> hedging transactions. As part of the settlement stipulation, RMP agreed to participate in a collaborative process to discuss appropriate changes to PacifiCorp’s existing hedging practices. The goal of the collaborative process was to provide a better understanding of the PacifiCorp hedging program and discuss appropriate changes to better reflect customer risk tolerances and preferences.<sup>2</sup> One of the terms outlined in the stipulation requires RMP to provide a semi-annual hedging report to the Commission.<sup>3</sup> A hedging report is to be produced on a semi-annual basis representing periods ending in June and December of each year.

The purpose of the report is to provide insights into PacifiCorp’s hedging activity for the previous six months, report on the current market conditions, and provide an indication of future hedging activities. The current report covers the six month period ending December 31, 2018. The report describes market fundamentals, basis risk, liquidity, energy positions, hedging activity, products, instruments, and physical supply. The hedging guidelines are outlined in the current PacifiCorp risk management policy.<sup>4</sup> Due to the specific content, **the hedging report and portions of this memo are considered confidential.**

## **DISCUSSION**

“The Company hedges and procures [REDACTED] [REDACTED].”<sup>5</sup> The decisions for when and how much to hedge can be influenced by the guidelines established in the Risk Management Policy, the market strategy

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<sup>1</sup> Rocky Mountain Power is a dba of PacifiCorp where the hedging transactions originate.

<sup>2</sup> Collaborative Process to Discuss Appropriate Changes to PacifiCorp’s Hedging Practices, March 30, 2012, p. 2.

<sup>3</sup> Docket No. 10-035-124, Settlement Stipulation, p. 14.

<sup>4</sup> PacifiCorp - Energy Risk Management Policy, approved January 30, 2019.

<sup>5</sup> Semi-Annual Hedging Report, p. 29.

established by the PacifiCorp Energy and Trading function, and by [REDACTED]  
[REDACTED]

The PacifiCorp hedging program involves both power and natural gas used for power generation and the specific hedging strategy [REDACTED]

[REDACTED] The hedging strategy for electricity is somewhat confusing since PacifiCorp is [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

The Risk Management Policy identifies a natural gas hedging program with a [REDACTED]  
[REDACTED]. Within that time period, PacifiCorp is allowed to hedge [REDACTED]  
[REDACTED] Specific transactions may be executed to position the Company  
[REDACTED] depending on the current  
market outlook. If there is no specific direction or change in the market conditions or prices, [REDACTED]  
[REDACTED]

[REDACTED] While it is a similar concept, it is different than a “dollar cost averaging” program, which is designed to purchase a fixed dollar amount or quantity on a predetermined or prescribed schedule. The Company may also execute hedging transactions in order to correct an exception (such as a limit exceedance) in order to remain in compliance with the guidelines established in the Risk Management Policy. During the past six months, [REDACTED]  
[REDACTED]<sup>6</sup>

In addition to [REDACTED], PacifiCorp uses the [REDACTED]  
[REDACTED] to analyze the potential impact of [REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED] The Company provides a summary of the [REDACTED] calculations and

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<sup>6</sup> Semi-Annual Hedging Report, p. 23.

the minimum and maximum threshold limits in Confidential Figure 24. Underlying the

maximum [REDACTED] limit is a [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

are designed to control [REDACTED]  
[REDACTED]<sup>7</sup> Because [REDACTED] is an internal model, the assumptions used in the calculations are not readily available and the results cannot be verified or replicated by the Division.

During the last six months, the Year 1 [REDACTED] values were [REDACTED]  
[REDACTED] The Year 2  
[REDACTED] values were [REDACTED]  
[REDACTED]

[REDACTED] precipitated an update to the [REDACTED] limits in the PacifiCorp Risk Management Policy. The maximum [REDACTED] limit for Year 1 was [REDACTED] and the Year 2 limit [REDACTED].<sup>8</sup>

**ELECTRIC HEDGING – HISTORICAL AND FORECAST**

Since June 30, 2018, [REDACTED] forward price curve (FPC) for power [REDACTED] [REDACTED] per megawatt-hour (\$/MWh), [REDACTED] on the east side of the PacifiCorp service territory and [REDACTED] per megawatt-hour (\$/MWh), [REDACTED] on the west side.<sup>9</sup> The electric portion of the hedging program is unique since PacifiCorp [REDACTED]  
[REDACTED]

Confidential Figure 21 provides a summary of the changes that have occurred in the electric hedging program for the total Company since December 31, 2013. Chart 1 below has been

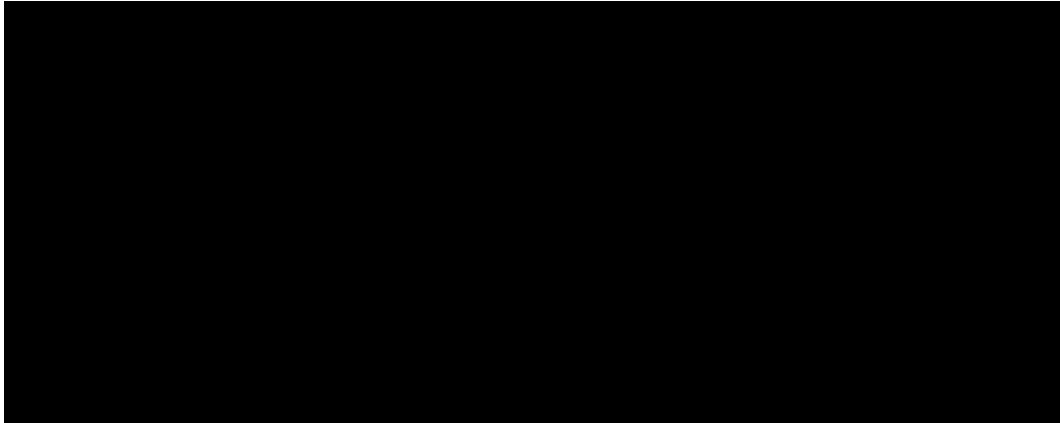
<sup>7</sup> PacifiCorp Hedging Policy Update, January 23, 2019, p. 4.  
<sup>8</sup> PacifiCorp Energy Risk Management Policy, approved January 30, 2019, Appendix G.  
<sup>9</sup> Semi-Annual Hedging Report, p. 1.

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prepared to graphically show how the electric hedging percentages have changed over the last six reporting periods.

Confidential Chart 1



As of December 31, 2018, the total Company has hedged [REDACTED]  
[REDACTED]<sup>10</sup> During the last 18 months, the Company has entered into  
[REDACTED]  
[REDACTED]

While the calculated hedging percentage for PacifiCorp in Chart 1 is correct, the total Company percentage calculation does not provide an accurate understanding of the hedging activity. [REDACTED]  
[REDACTED] can distort the view of the total Company hedging activities. In order to avoid this distortion and gain a better understanding of the hedging activity, it is helpful to look at [REDACTED]  
[REDACTED]  
[REDACTED] Confidential Attachment F provides a breakdown of the electric hedging activities [REDACTED]  
[REDACTED]  
[REDACTED]

The Company reports an overall electric hedge [REDACTED] A closer examination reveals on the east side [REDACTED] the Company has executed [REDACTED]

<sup>10</sup> Semi-Annual Hedging Report, p. 19, Confidential Figure 21.

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[REDACTED]  
[REDACTED] On the west side [REDACTED]  
[REDACTED] the Company has entered into hedging [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] hedging  
activity for Year 1 provided in Confidential Attachment F is summarized below.

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

Reacting to the price movement and hedging decisions for electricity can be challenging [REDACTED]  
[REDACTED]

The Company typically has not executed electric hedging contracts [REDACTED]  
[REDACTED] As of December 31, 2018,  
the Company had [REDACTED] Based on the information provided in  
Attachment F, the Company [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

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As part of its review of the hedging report, the Division has reviewed the weighted average price of the hedging contracts to the spot market price to determine if there is a premium or discount on the hedging contracts. Chart 2 and Chart 3 below have been produced from the information in Confidential Figure 25 and provide a comparison of the spot price and the weighted averaged hedged power price from 2014 through 2018. Chart 2 compares the average high load hedged price at [REDACTED] to the average spot market price in the same location.

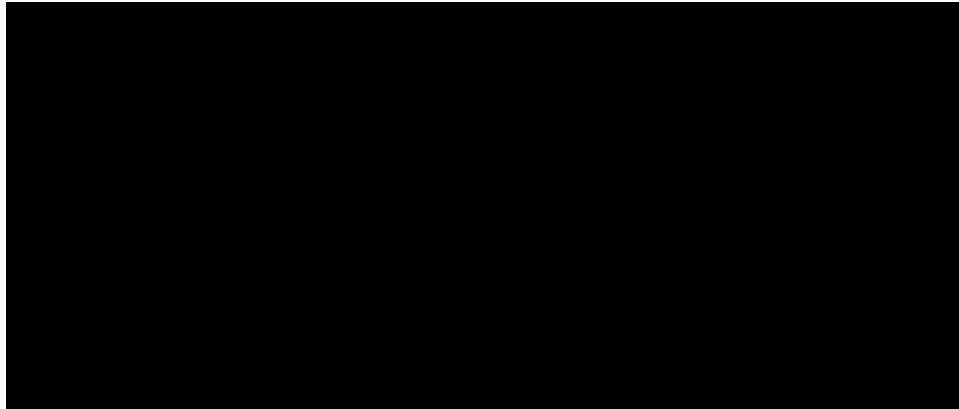
Confidential Chart 2



In prior years the Company has been able to enter into hedging contracts [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

Chart 3 compares the average high load hedged price at [REDACTED] to the average spot market price [REDACTED].

Confidential Chart 3



In prior years the Company has been able to enter into hedging contracts [REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED] While not represented in the charts, a review of the information in Confidential Exhibit 25 indicates a similar price comparison [REDACTED] in the same trading locations.

The PacifiCorp Official Forward Price Curve (OFPC) and the IHS<sup>11</sup> electricity price forecast is provided in the Hedging report as Confidential Figure 5. While these two forecasts are included together, they represent different perspectives of the price forecast. The IHS value represents a forecast of the spot or expected price of the commodity on a date in the future. The spot price forecast cannot be transacted upon and represents the IHS view of the future. The PacifiCorp OFPC is developed [REDACTED] Market forwards represent a view of the market and are derived from contracts that bind counterparties to stipulated prices and delivery schedules. The difference in the calculation of the OFPC and the forecast spot price used by IHS is the primary reason for the difference in these two price forecasts.

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<sup>11</sup> IHS Markit, *North American Power Market Outlook data tables: Nov 2018 (Rivalry Scenario) with PacifiCorp Inflation*

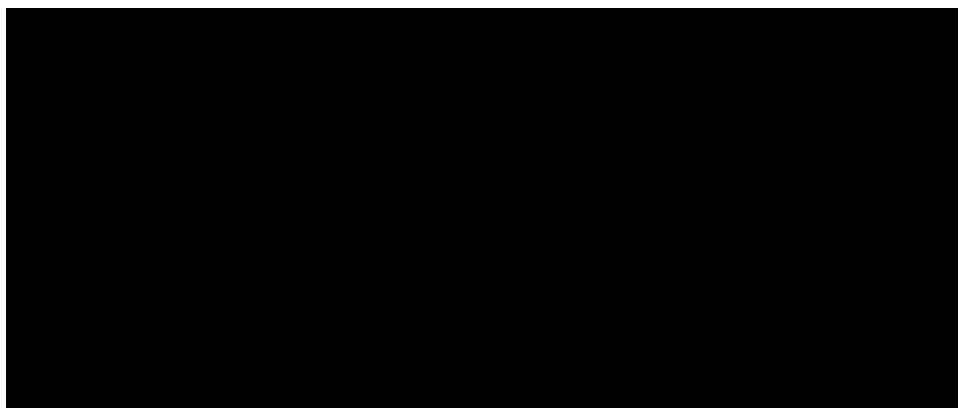


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In order to provide some points for comparison, Chart 4 has been prepared to look at the changes in the Company's OFPC over the last four reporting periods with specific emphasis on how the price outlook has changed since the last hedging report six months ago.

Confidential Chart 4



As of December 2018, the OFPC is [REDACTED]  
[REDACTED] For the next six months, the Company's view of the power market is [REDACTED] and has not changed from the last reporting period.

The plan for power is to [REDACTED]  
[REDACTED]  
[REDACTED]

The Company intends to [REDACTED]  
[REDACTED]

[REDACTED]<sup>12</sup> In dealing with the [REDACTED] and in general practice, the Company will continue [REDACTED]  
[REDACTED]

[REDACTED]<sup>13</sup> This is consistent with what the Company has executed in the past as seen in the historical information provided as Attachment A of the filing.

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<sup>12</sup> Semi-Annual Hedging Report, p. 33.

<sup>13</sup> Semi-Annual Hedging Report, p. 34.

## NATURAL GAS HEDGING – HISTORICAL AND FORECAST

PacifiCorp is exposed to natural gas price risk due to its natural gas-fired generating fleet.

Natural gas hedging guidelines have been established to address the exposure to changes in market conditions. During the previous six months, the market price of natural gas has [REDACTED] on the east side of the PacifiCorp service territory by [REDACTED] per million British thermal units (MMBtu) [REDACTED]. On the west side of the service territory, natural gas prices have [REDACTED] [REDACTED] per MMBtu or [REDACTED]<sup>14</sup>

For the forecast [REDACTED] natural gas hedging limits have been established and are included in Appendix E of the PacifiCorp Risk Management Policy. Hedging and hedging limits are designed to [REDACTED] [REDACTED]. The established ranges for hedging the forecast natural gas requirement are as follows:

[REDACTED]  
[REDACTED]  
[REDACTED]

Transactions extending [REDACTED] but must comply with transaction limit approval guidelines. [REDACTED] [REDACTED] which were previously approved by the Commission.

[REDACTED] The natural gas requirement and hedging contracts for [REDACTED] have not been addressed in this report; however the portion of the [REDACTED] [REDACTED] hedging horizon has been included.

As of December 31, 2018, the Company had hedged [REDACTED] natural gas requirement, [REDACTED].<sup>15</sup> The [REDACTED] [REDACTED]<sup>16</sup> The natural

<sup>14</sup> Semi-Annual Hedging Report, p. 1.

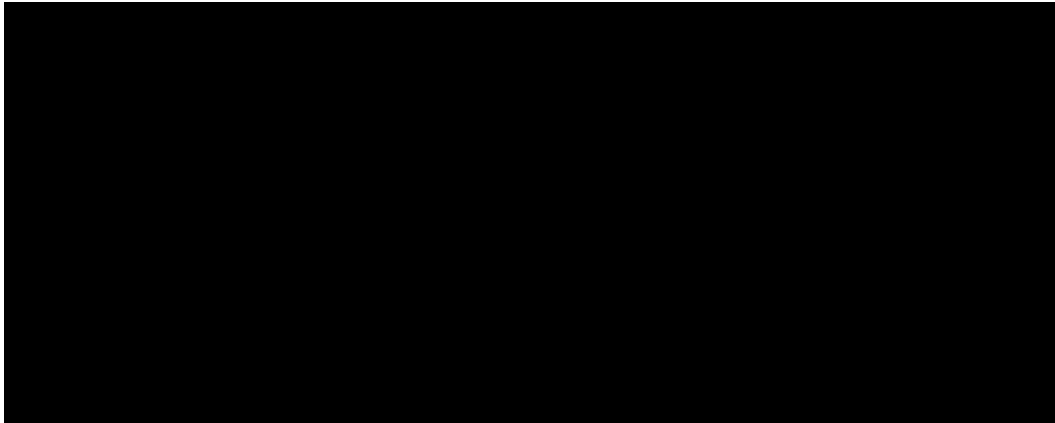
<sup>15</sup> Semi-Annual Hedging Report, p. 21, Confidential Figure 23.

<sup>16</sup> Semi-Annual Hedging Report, p. 20.

gas hedging position [REDACTED]  
[REDACTED] as of December 31, 2018.

The December 2018 hedging position is consistent with the strategy that was outlined in the previous hedging report. Chart 5 has been prepared to graphically show the change in the hedging percentages of natural gas for the last 6 reporting periods.

Confidential Chart 5



As represented in Chart 5, PacifiCorp has maintained a fairly consistent natural gas hedging strategy for some time.

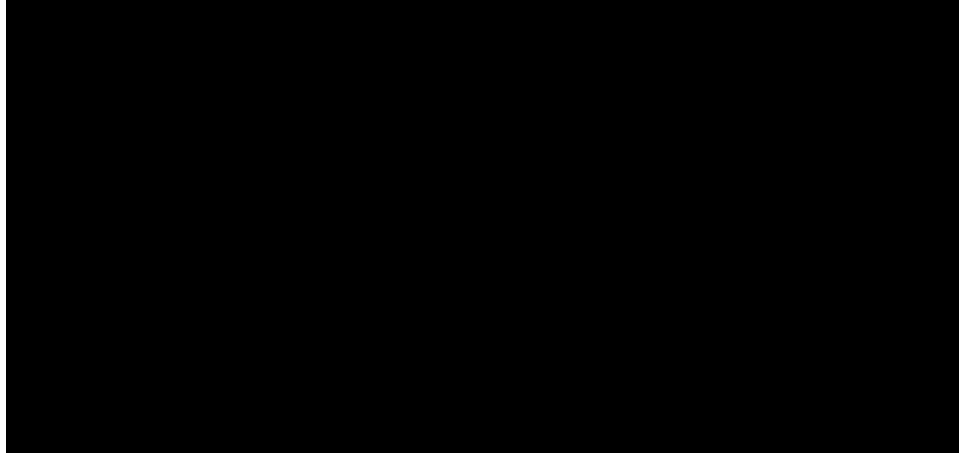
As part of the review of the hedging practices, Confidential Figure 26 provides a comparison of the weighted average price for the hedged natural gas contracts with the weighted average spot market index price. The hedge price and spot market price comparison has been provided to calculate [REDACTED]. This information is also useful to compare the price of the hedged contracts to the market price in order to evaluate if the prices paid for hedging contracts have been significantly higher or lower than the spot market price. Chart 6 provides a summary of the average price for hedged contracts [REDACTED] from year-end 2014 through 2018 compared to the average spot market price.

[REDACTED]  
[REDACTED] The chart illustrates how the spread between the contract price of the hedged transactions and the spot price [REDACTED]  
[REDACTED]

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Confidential Chart 6

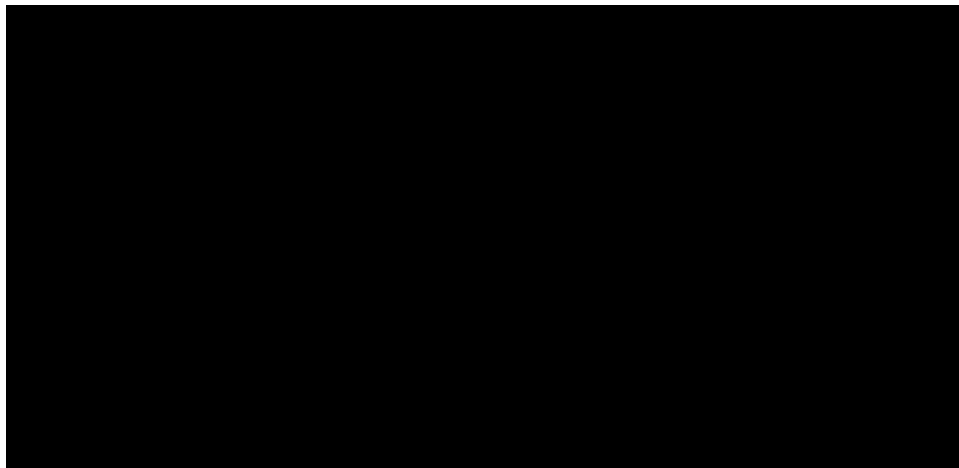


[REDACTED]

[REDACTED] By hedging only a portion of the total natural gas requirement, the Company can purchase the remaining unhedged portion of the gas requirement at the spot market price, [REDACTED].

Confidential Figure 4 provides a comparison of the PacifiCorp OFPC with the IHS national price forecast. In order to provide a comparison of how the OFPC for natural gas changes over time, Chart 7 has been prepared to show the Company's OFPC as reflected in the last four reporting periods.

Confidential Chart 7



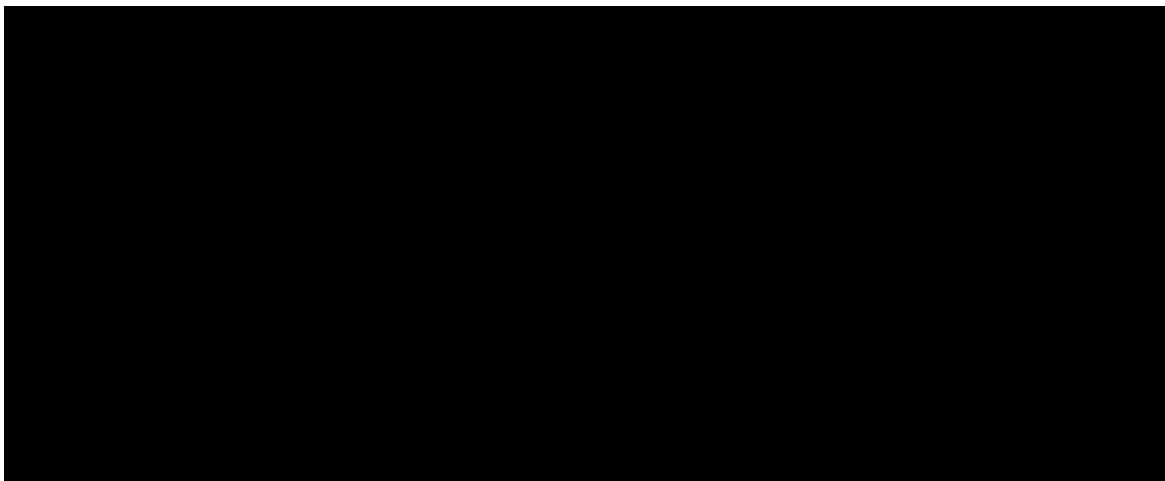
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The December 2018 OFPC included in the current report is showing [REDACTED] [REDACTED] compared to the June 2018 forecast. [REDACTED] [REDACTED] per MMBtu for the next 5 years. The longer range forecast in the OFPC is projecting an average natural gas price of \$4.02 or a 15.2% increase [REDACTED] [REDACTED]

As economic conditions and market prices change, the forecast requirement for natural gas used for electric generation will also change. Chart 8 has been prepared to show how the forecast natural gas requirement for the next 24 months has changed in the current report compared to the forecast requirement in the last two hedging reports. The current natural gas requirement for [REDACTED].

Confidential Chart 8



As part of the review of the forecast natural gas requirement, it is useful to compare the historical usage and actual volume of natural gas consumed to the volume that was forecast. A comparison of the actual natural gas consumption with the previous forecast is important since [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] In response to data requests, the Company has

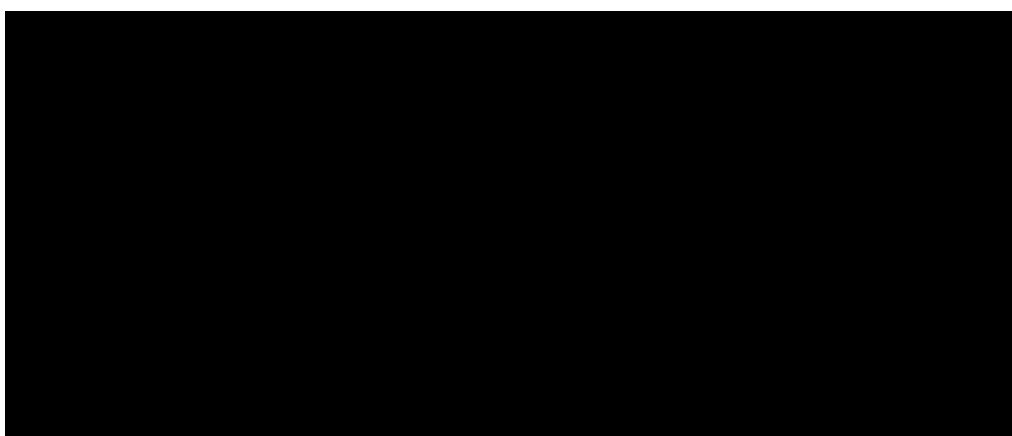
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provided the actual MMBtu consumed by each of the natural gas generating units over the last three years.

The historical gas consumption is also helpful to see how the Company's natural gas generation resources are being used in comparison to previous years. Chart 9 has been prepared to provide a visual comparison of the actual volume of natural gas used through December 2018 compared to the two previous years.

Confidential Chart 9



The actual usage of natural gas generation facilities in 2018 [REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED] The Division will continue to monitor the actual usage in 2019 compared to the forecast requirement and will also monitor any [REDACTED].

For the next six months, current technical indicators show that [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED] For the physical natural gas supply and balancing, the Company's plan will remain consistent with the past practices [REDACTED]  
[REDACTED]

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[REDACTED], the Company [REDACTED]

[REDACTED]<sup>17</sup>

## **CONCLUSION**

The Division has reviewed the Semi-Annual Hedging Report and responses to data requests. The information presented in the current report is similar in format and content to previous reports and includes both historical information and a forecast of future hedging activities. As of December 31, 2018, the natural gas and electric hedging activities [REDACTED]  
[REDACTED] No further action by the Commission is required.

cc: Joelle R. Steward, Rocky Mountain Power  
Jana Saba, Rocky Mountain Power  
Yvonne Hogle, Rocky Mountain Power  
Michele Beck, Office of Consumer Services  
Cheryl Murray, Office of Consumer Services

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<sup>17</sup> Semi-Annual Hedging Report, page 33.