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Department of Commerce  
Division of Public Utilities

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## 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: April 5, 2018

Re: **Information Memo**

Docket No. 18-035-04 - PacifiCorp's Semi-Annual Hedging Report

### RECOMMENDATION (NO ACTION)

The Division of Public Utilities (Division) has reviewed the 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 and a forecast of future hedging activities. The Commission does not have 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, 2018, PacifiCorp dba Rocky Mountain Power (Company) filed the PacifiCorp Semi-Annual Hedging Report with the Utah Public Service Commission (Commission). On February 15, 2017, the Commission issued an Action Request to review the filing for compliance with comments due on or before March 19, 2018. On February 22, 2018, the Commission issued a notice of filing and comment period with comments due from any interested party on March 23, 2018. On March 8, 2018, the Company filed corrected versions of the Confidential

Executive Summary and Confidential Hedging Report to replace, in its entirety, the originally filed version. On March 20, 2018, the Commission extended the comment due date to April 6, 2018. These are the Division's comments.

## 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 in that General Rate Case, the Company 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 the Company to provide a semi-annual hedging report to the Commission.<sup>3</sup> A hedging report is to be produced by the Company on a semi-annual basis with 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, 2017. The report describes market fundamentals, basis risk, liquidity, energy positions, hedging activity, products, instruments and physical supply. The Company's hedging guidelines are outlined in the current 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> [REDACTED]

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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 September 8, 2015.

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

[REDACTED]

The PacifiCorp hedging program involves both power and natural gas used for power generation

[REDACTED]

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

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

The Risk Management Policy identifies a natural gas hedging program with a [REDACTED]

[REDACTED]. Within that time period, the Company is allowed to [REDACTED]

[REDACTED] Specific transactions may be executed to position the

Company [REDACTED]

[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. [REDACTED]

[REDACTED]<sup>6</sup>

In addition to [REDACTED], the Company uses the [REDACTED]

[REDACTED] to analyze the potential impact of [REDACTED]

[REDACTED]

[REDACTED]

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<sup>6</sup> Semi-Annual Hedging Report, page 21.

The Company provides a summary of the [REDACTED] calculations and the minimum and maximum threshold limits in Confidential Figure 24. [REDACTED]

[REDACTED]

[REDACTED] calculation includes a number of assumptions and incorporates [REDACTED] [REDACTED] is an internal model and the assumptions used in the calculations are not readily available, the results cannot be verified or replicated by the Division.

### **ELECTRIC HEDGING – HISTORICAL AND FORECAST**

Since June 30, 2017, [REDACTED]

[REDACTED]

[REDACTED]<sup>8</sup> The electric portion of the hedging program is unique since PacifiCorp [REDACTED]

[REDACTED] Confidential Figure 21 of the hedging report provides a summary of the changes that have occurred in the electric hedging program for the total company since 2010. Chart 1 below has been prepared to graphically show how the electric hedging percentages have changed over the last six reporting periods.

<sup>7</sup> Semi-Annual Hedging Report, page 21.

<sup>8</sup> Semi-Annual Hedging Report, page 1.

[REDACTED]

As of December 31, 2017, the total Company has hedged [REDACTED]  
[REDACTED]<sup>9</sup> The electric hedging percentages in the most recent period  
[REDACTED]. In reviewing Confidential Attachment F, it  
appears that the Company [REDACTED]  
[REDACTED]

While the calculated hedging percentage for the entire Company in Chart 1 is correct, the single  
percentage calculation does not provide an accurate understanding of the electric hedging  
activity. [REDACTED] 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 important to look at [REDACTED]  
[REDACTED] Confidential Attachment F provides a breakdown  
of the [REDACTED]  
[REDACTED]

On the [REDACTED] the Company has entered into [REDACTED]  
[REDACTED] transactions for [REDACTED]  
[REDACTED] In contrast, on the [REDACTED] the  
Company has executed [REDACTED]  
[REDACTED] When reviewed separately, the

<sup>9</sup> Semi-Annual Hedging Report, page 18, Confidential Figure 21.

Company has hedged [REDACTED]  
[REDACTED] from Confidential Attachment  
F is summarized below.

[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]

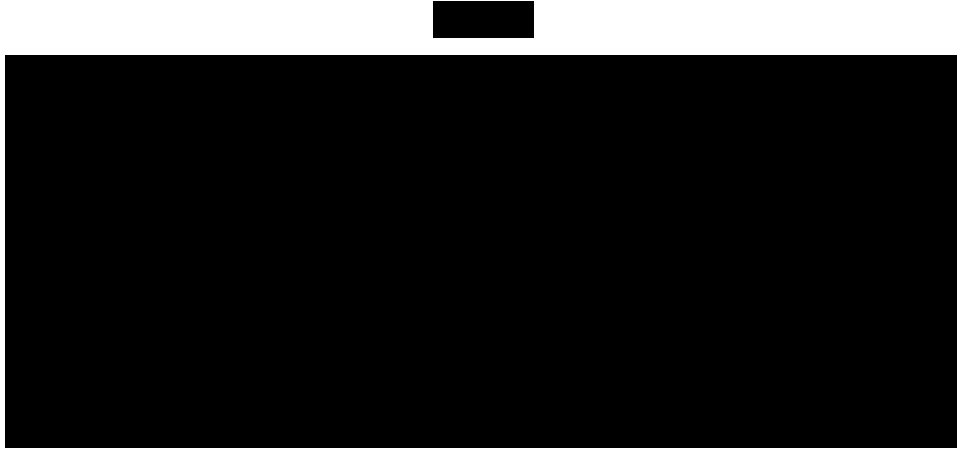
[REDACTED]

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

The Company typically has not executed [REDACTED]  
[REDACTED] As of December 31,  
2017, the Company had [REDACTED] compared to June 30, 2017  
where the Company had [REDACTED] Based on the  
information provided in Attachment F, the Company [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

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 2013 through 2017. Chart 2 compares the average high load hedged price at [REDACTED] to the average spot market price in the same location.



[REDACTED]

[REDACTED]

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



[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]<sup>10</sup> While not represented in the charts, a review of the information in Confidential Exhibit 25 indicates [REDACTED].

For the next six months, the Company's view of the power market is [REDACTED]

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

[REDACTED]

[REDACTED]

[REDACTED] The Company intends to [REDACTED]

[REDACTED]<sup>11</sup> In dealing with the [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]<sup>12</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.

The Company's Official Forward Price Curve (OFPC) and the IHS 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 OFPC is developed [REDACTED]

[REDACTED]

[REDACTED] 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. 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.

<sup>10</sup> Semi-Annual Hedging Report, page 23, Confidential Figure 25.

<sup>11</sup> Semi-Annual Hedging Report, page 32.

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



[REDACTED]

[REDACTED]

**NATURAL GAS HEDGING – HISTORICAL AND FORECAST**

The Company 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] per MMBtu or [REDACTED]<sup>13</sup>

Confidential Figure 39 provides a summary of the day-ahead and intra-day balancing transactions that were executed during the previous six month period. In reviewing the report, the Division noted [REDACTED]

[REDACTED]

<sup>13</sup> Semi-Annual Hedging Report, page 1.

[REDACTED]  
[REDACTED] In response to previous inquiries the Company has stated that;

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED] <sup>14</sup>

[REDACTED] in Attachment A of the current report. Changes in the [REDACTED] is included as Chart 9 below. [REDACTED]

[REDACTED] The Division will continue to monitor [REDACTED] [REDACTED] in future reporting periods.

Confidential Figure 39 also shows [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

For the forecast [REDACTED] hedging period, [REDACTED] have been established and are included in Appendix E of the Company’s Risk Management Policy. [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]

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<sup>14</sup> Docket No. 17-035-12, Response to DPU Data Request 2.5

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

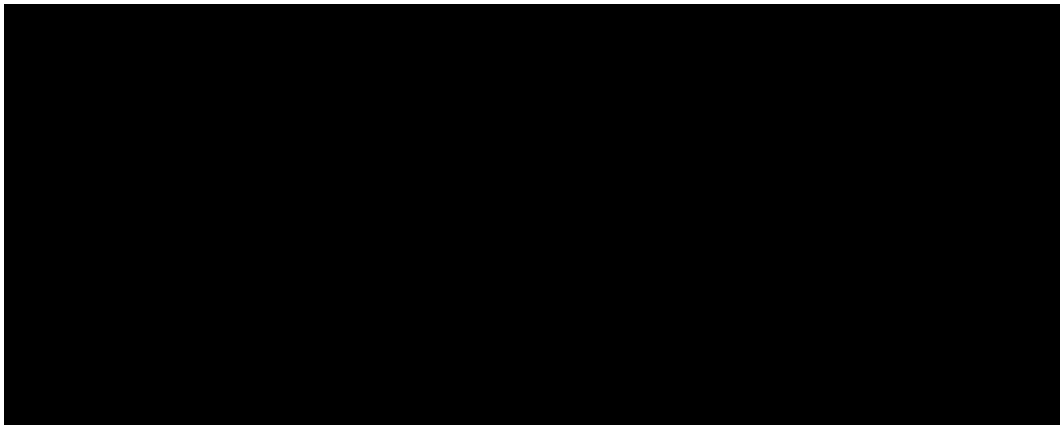
As of December 31, 2017, the Company had hedged [REDACTED] natural gas requirement,  
[REDACTED].<sup>15</sup> During the past six months, the [REDACTED]

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

[REDACTED]<sup>16</sup> The natural gas hedging position [REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED] This 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.

[REDACTED]



<sup>15</sup> Semi-Annual Hedging Report, page 20, Confidential Figure 23.

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

[REDACTED]

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

[REDACTED]  
[REDACTED] For the

physical natural gas supply and balancing, the Company's plan [REDACTED]

[REDACTED]

[REDACTED] In order to [REDACTED], the

Company [REDACTED]

[REDACTED]<sup>17</sup>

As part of the review of the hedging practices, the Company has provided a comparison of the weighted average price for the hedged contracts with the weighted average spot market index price in Confidential Figure 26. The hedge price and spot market price comparison has been provided to calculate [REDACTED]

[REDACTED] This information is also useful to compare the [REDACTED]  
[REDACTED]

[REDACTED] Chart 6 provides a summary of the average price for hedged contracts [REDACTED] from year-end 2014 through 2017 compared to [REDACTED]

[REDACTED]

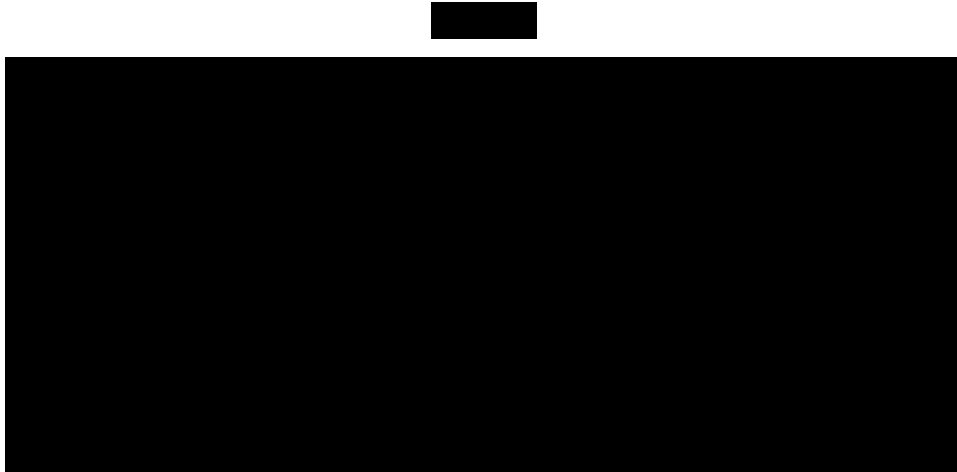
[REDACTED] The chart illustrates how the [REDACTED]

[REDACTED]

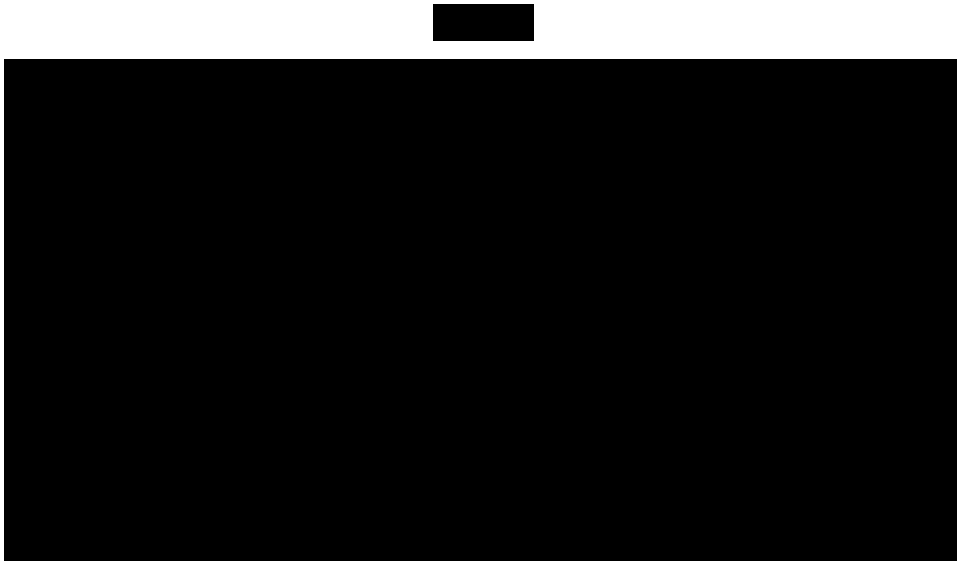
[REDACTED]

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<sup>17</sup> Semi-Annual Hedging Report, page 32.



Confidential Figure 4 provides a comparison of the Company’s Official Forward Price Curve (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 from the last four reporting periods.

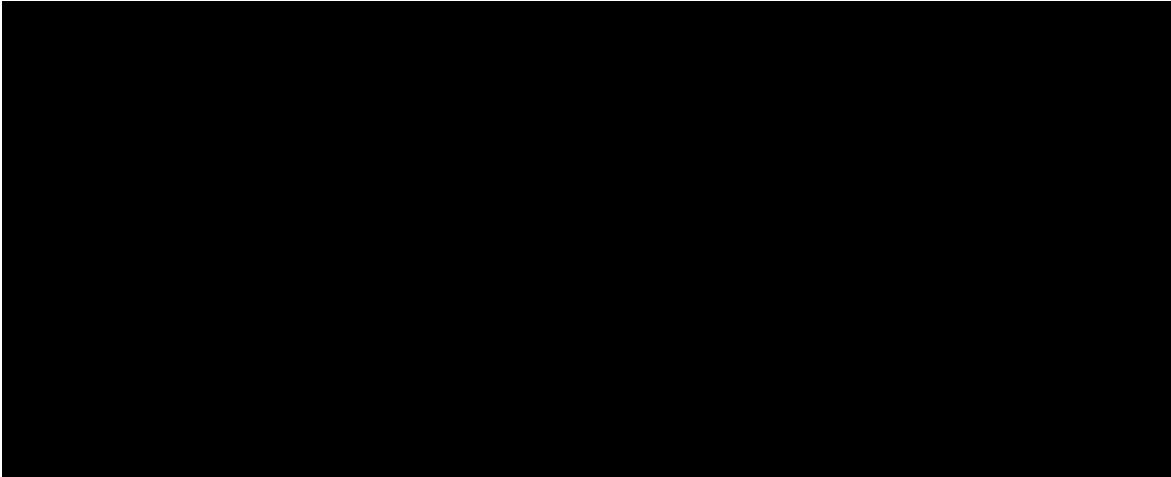


The OFPC included in the current report anticipates [REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]<sup>18</sup>

As economic conditions and market prices change, the forecast requirement for natural gas used for electric generation will change. Chart 8 has been prepared to show how the forecast natural gas requirement for 2018 and 2019 has changed in the current report compared to the forecast requirement in the last two hedging reports. [REDACTED]

[REDACTED]

[REDACTED]

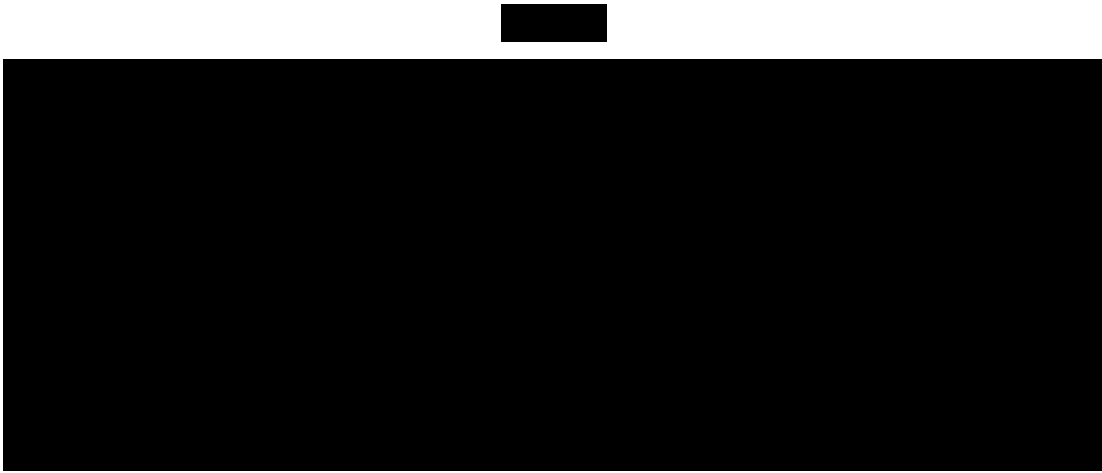


As part of the review of the natural gas forecast requirement, it is useful to compare the historical usage and actual volume of natural gas consumed to the amount that was projected. A comparison of the actual natural gas consumption with the previous forecast is important since [REDACTED]

<sup>18</sup> Semi-Annual Hedging Report, page 7, Confidential Figure 4.

[REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED] In response to data requests, the Company has provided the actual MMBtu consumed in each of the natural gas generating units. Chart 9 has been prepared to provide a visual comparison of the actual volume of natural gas used in 2017 compared to the two previous years.



The actual usage of natural gas generation facilities was [REDACTED]  
[REDACTED]  
[REDACTED]

[REDACTED] The Division will continue to monitor the actual usage in 2018 compared to the forecast requirement [REDACTED].

## 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. [REDACTED]

[REDACTED]  
[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