

**BEFORE THE  
PUBLIC SERVICE COMMISSION OF UTAH**

In the Matter of the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations

Docket No. 13-035-184

**Direct Testimony of  
Jeremy I. Fisher, PhD  
On Behalf of  
Sierra Club**

**REDACTED**

**May 1, 2014**

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1 **2. COAL COST INCREASES AT JIM BRIDGER ARE INCONSISTENT WITH THE 2012**  
2 **PRE-APPROVAL APPLICATION**

3 **Q Please describe your concerns with the Jim Bridger coal cost increases.**

4 **A** In the current rate case application, PacifiCorp requests an increase of [REDACTED]  
5 [REDACTED] at the Bridger Coal Company,<sup>1</sup> or about [REDACTED] of the total coal cost  
6 increases identified in this case. Overall, the cost increase at Bridger coal mine  
7 accounts for nearly [REDACTED] of the total rate increase requested in Utah.<sup>2</sup> In support,  
8 the Company provided a new long-term forecast for coal delivered to the Jim  
9 Bridger coal plant, a trajectory which is significantly higher than the costs  
10 projected in the Company's recently closed voluntary approval docket for SCR  
11 equipment at Jim Bridger units 3 & 4, Utah docket 12-035-92.

12 Critically, the Company's application for pre-approval hinged on a projection of  
13 fuel costs for both coal supplied to the plant, as well as natural gas forecasts for  
14 replacement generation. The proceeding for the Company's SCR application,  
15 formally concluded December 30, 2013, never contemplated coal prices at  
16 Bridger coal mine anywhere close to the prices now forecasted in this docket.

17 The Company's workpapers supporting the 2012 Bridger SCR case showed  
18 significantly lower coal prices than the coal prices now projected for delivery at  
19 Jim Bridger. Substituting the currently disclosed coal prices from this docket into  
20 the SCR analysis from Docket 12-035-92 cuts the projected benefit of the SCRs

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<sup>1</sup> See Direct Testimony of Cindy Crane, Table 4.

<sup>2</sup> Company requests \$76.3 million (see Direct Testimony of Richard Walje, line 35). Utah share represents approximately 43% of Company total. [REDACTED] \* 43% / \$76.3 = [REDACTED].

1 in half. Had the Company disclosed its most up-to-date coal *and* gas price  
2 projections from the 3<sup>rd</sup> quarter of 2013 while the SCR docket was still active, an  
3 analysis would have resulted in a net benefit of approximately zero.

4 Specifically, had the Company provided the Commission with its best and most  
5 up-to-date coal and gas prices prior to the conclusion of the SCR docket, this  
6 Commission's final decision may have been very different. It is unclear whether  
7 the Company's omission was a deliberate or inadvertent withholding of  
8 information. In either case, a reasonable utility would have known of these price  
9 changes and immediately alerted the Commission. Effective regulation is made  
10 with the benefit of full disclosure and correct information. By failing to provide  
11 information to this Commission indicating that circumstances at Bridger coal  
12 mine had changed significantly, the Company denied this Commission the  
13 opportunity to evaluate ratepayer risks effectively and appropriately.

14 **Q Why has the cost of coal increased at Bridger coal mine?**

15 **A** According to Company witness Ms. Cindy Crane, higher than expected ash  
16 content in the next longwall seam of the underground complex at Bridger coal  
17 mine has caused a delay and increased expense to move an extra longwall panel.<sup>3</sup>  
18 Reduced production,<sup>4</sup> "increased [costs for] materials and supplied and outside  
19 services, increased final reclamation expense, and increased royalty and

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<sup>3</sup> Direct Testimony of Cindy Crane, pages 20-21.

<sup>4</sup> Direct Testimony of Cindy Crane, lines 428-431.

1 production tax expense”<sup>5</sup> all contributed to the higher costs of coal delivered to  
2 Jim Bridger.

3 According to Ms. Crane, well over half of the cost increase is attributable to  
4 reduced production during the extended longwall move.<sup>6</sup>

5 **Q What was the estimated benefit of retrofitting Jim Bridger with SCRs in**  
6 **Docket 12-035-92?**

7 **A** In the Company’s initial application (“SCR Application Analysis”), filed August  
8 24, 2012, the Company’s analysis found that in the base case the SCRs were  
9 favorable by [REDACTED].<sup>7</sup> That analysis relied on outdated coal and gas prices  
10 from March 2012.<sup>8</sup>

11 In the analysis filed with rebuttal testimony (“SCR Rebuttal Analysis”), filed  
12 February 11, 2013, PacifiCorp made several adjustments, including using more  
13 contemporary coal and gas price projections from January 2013.<sup>9</sup> This rebuttal  
14 analysis, representing the Company’s best and final analysis contemplated in this  
15 case, found that the SCR benefit had shrunk by 40%, down to [REDACTED] on a  
16 net present value basis.<sup>10</sup>

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<sup>5</sup> Direct Testimony of Cindy Crane, lines 425-427.

<sup>6</sup> Direct Testimony of Cindy Crane, lines 428-431.

<sup>7</sup> See Direct Testimony of Rick Link in Docket 12-035-92, page 2, line 28.

<sup>8</sup> See Response to Sierra Club 9.1, referencing Response to OCS 1.17 1<sup>st</sup> Supp CONF in 12-035-92. Bridger Coal Company files are titled “CPCN – BCC – March 7 2012.” Attached as Exhibit SC \_\_\_ JIF-2.

<sup>9</sup> See workpapers of Cindy Crane in 12-035-92 rebuttal. Bridger workbook titled “BRIDGER Rev 1-18-13.”

<sup>10</sup> See Rebuttal Testimony of Rick Link in Docket 12-035-92, page 2, line 23.

1 On May 10, 2013, the Utah Commission ruled on the Company's application,<sup>11</sup>  
2 approving the SCRs and requesting to review the Company's final EPC budget.  
3 The EPC contract was provided on October 10, 2013, and was approved by this  
4 Commission on December 30, 2013.<sup>12</sup>

5 I will refer to the period between the May 10 conditional approval of the SCR  
6 retrofit<sup>13</sup> and the Commission's final Engineering, Procurement and Construction  
7 (EPC) approval<sup>14</sup> on December 30, 2013 as the "due diligence period." During  
8 this timeframe, the Company had a clear, continuing obligation to evaluate its  
9 own resource decisions and investments, and a responsibility to this Commission  
10 to ensure that the best possible information was available to decision-makers.

11 **Q When were the coal costs in this instant case (Utah GRC 13-035-184)**  
12 **projected for Jim Bridger?**

13 **A** The workpapers associated with Ms. Crane's testimony indicate that the forecast  
14 was generated October 4, 2013,<sup>15</sup> a week prior to the date upon which this

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<sup>11</sup> Rocky Mountain Power Resource Decision Jim Bridger Units 3 and 4. Issued May 10, 2013. Utah Docket 12-035-92. Attached as Confidential Exhibit SC\_\_\_JIF-3.

<sup>12</sup> Notice of Final Approved Projected Cost of Resource Decision. Issued December 30, 2013. Utah Docket 12-035-92. Attached as Confidential Exhibit SC\_\_\_JIF-4.

<sup>13</sup> Rocky Mountain Power Resource Decision Jim Bridger Units 3 and 4. Issued May 10, 2013. Utah Docket 12-035-92. Attached as Confidential Exhibit SC\_\_\_JIF-3.

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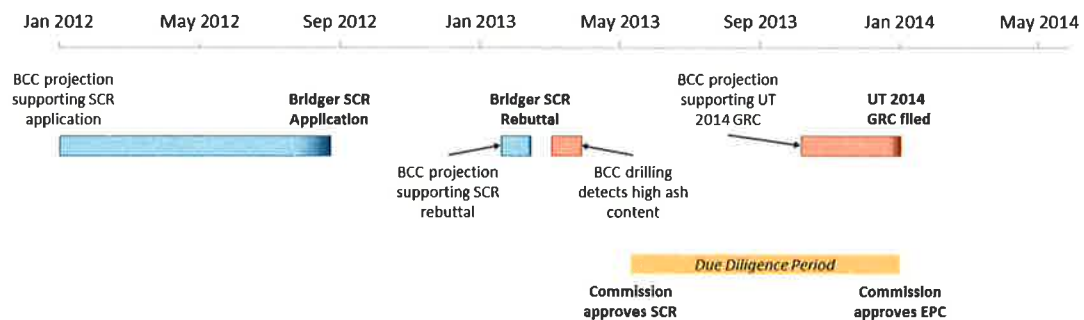
<sup>15</sup> See workpapers of Cindy Crane in 12-035-92 rebuttal. Bridger workbook titled "BRIDGER Rev 1-18-13."

1 Commission had received the EPC contract for Jim Bridger’s SCRs, and nearly  
2 three months before the Commission issued its approval of the EPC contract.

3 In testimony for this case, Ms. Crane explains that the immediate coal shortfall  
4 and price increase is due to an extended longwall move in the underground coal  
5 mine, bypassing a problematic area that was detected “this last summer.”<sup>16</sup>

6 In response to a data request, Ms. Crane further explained that the problem was  
7 detected “as a result of additional drilling in March/April of 2013.”<sup>17</sup> This  
8 indicates that Company officials were aware of the problems in Jim Bridger’s coal  
9 supply even prior to the Commission’s initial decision in this case, even if the  
10 Company had not yet determined the monetary impact of the discovery.

11 The key events are charted in Figure 1, below.



12  
13 **Figure 1. Timeline of Bridger SCR analyses and Bridger Coal Company (BCC)**  
14 **costs**

<sup>16</sup> See Direct Testimony of Ms. Cindy Crane, pages 21 and 22, lines 408-411, specifically.

<sup>17</sup> See response to Sierra Club data request 4.9b. Attached as Exhibit SC \_\_\_ JIF-5.

1 **Q What is your evidence that the higher cost of Bridger coal contemplated here**  
2 **was not incorporated into the SCR application?**

3 **A** I compared the long-term forecast of Bridger coal prices from Ms. Crane’s  
4 workpapers in this docket<sup>18</sup> to Ms. Crane’s base-case workpapers from the SCR  
5 docket.<sup>19</sup> In the SCR docket, these prices are provided as the annual composite  
6 price of coal produced at the surface mine, the underground mine, and from Black  
7 Butte and Kemmerer mines through 2034.<sup>20</sup> In the present case, this composite  
8 price is not provided, and long term forecasts from Black Butte and Kemmerer are  
9 also not provided. I have assumed that both of these sources have a [REDACTED]  
10 [REDACTED] Company’s projected coal price over the long run.<sup>21</sup>

11 The Company does provide long-term forecasts for the operating and capital  
12 expense of Bridger coal mine, the same source data that is used to inform the  
13 short-term forecast provided for this rate case. I used the same data for dollars per

<sup>18</sup> See file “BRIDGER.xlsx” in workpaper filing 700-23 CONF\C.8.f Conf.

<sup>19</sup> See workpapers of Cindy Crane in 12-035-92 rebuttal. Bridger workbook titled “BRIDGER Rev 1-18-13.”

<sup>20</sup> Long term forecasts were provided through 2030 in the workpapers supporting the initial filing, and 2034 in the rebuttal analysis.

<sup>21</sup> Black Butte:

[REDACTED]

Kemmerer:

[REDACTED]

1 ton received and heat content (in btu/lb)<sup>22</sup> as used by Ms. Crane for the short term  
2 projection,<sup>23</sup> but included the annual estimates through 2037.<sup>24</sup>

3 Comparing the cost of coal delivered to Jim Bridger projected in this case against  
4 the prices presented in the SCR Rebuttal Analysis indicate prices in 2014-2034 as  
5 projected in October 2013 [REDACTED]

6 [REDACTED] above prices projected in January 2013 (see **Error!**  
7 **Reference source not found.**).

8 Reviewing historic data, as reported to the US Energy Information Administration  
9 (EIA), the average cost of coal delivered to Bridger actually spiked in 2011 and  
10 has maintained well above the projections provided in the Bridger SCR case (see  
11 **Error! Reference source not found.**)<sup>25</sup>

[REDACTED]

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<sup>22</sup> Heat content projections only provided through 2016; 2017-2037 are average heat contents.

<sup>23</sup> Price from 700-23 CONF\C.8.f Conf.\BCC Budget 10-4-2013\OPEX-CAPEX\01  
OpsCostSchedules.xlsx, tab OPEX (dollars/ton received); Heat content from 700-23 CONF\C.8.f  
Conf.\BCC Budget 10-4-2013\OPEX-CAPEX\Coal Quality Royalty 10-2013.xlsx, tab sep"13 mp-  
[2014,2015,2016] fcst-cq-4x4

<sup>24</sup> For heat content, I simply took the average heat content 2014-2016 and extended it from 2017-2034.

<sup>25</sup> Data from EIA Form 923, 2008-2013. Data represents all sources.



1 [END HIGHLY CONFIDENTIAL TESTIMONY]

2 Q Did any other factors affect your analysis of Jim Bridger?

3 A Yes. Changing coal prices were not the only substantial shift during the due  
4 diligence period – the Company’s projected natural gas prices also fell from the  
5 prices used in the SCR rebuttal analysis, as shown in **Error! Reference source**  
6 **not found.**, below.



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Gas price projections from Opal hub fell by over [REDACTED] from September 2012 to

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September 2013.<sup>31</sup> The impact of this price drop was to effectively eliminate any

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<sup>31</sup> Nominal, levelized from 2016-2030.

1 benefit of the SCR retrofit at Jim Bridger 3 & 4, taking into account the  
2 contemporaneous coal cost increase projected by Ms. Crane.

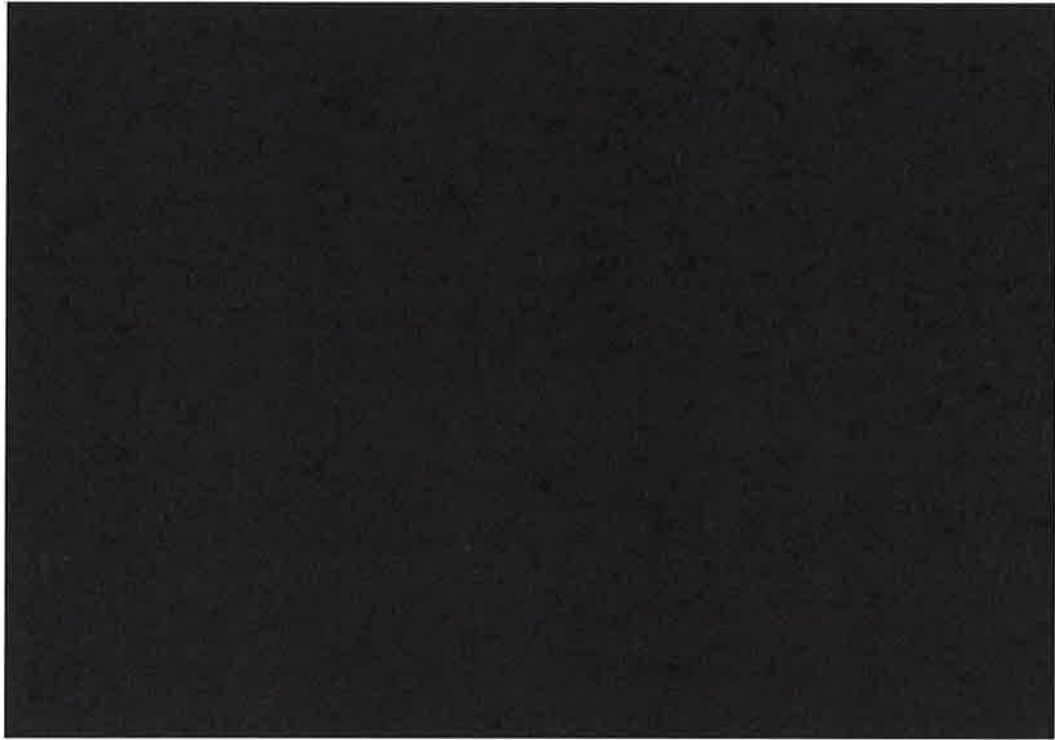
3 **Q Did you re-run the Company's System Optimizer model with the coal and**  
4 **gas prices available to the Company during the due diligence period?**

5 **A** No. I did not have access to the Company's model. However, I used a process  
6 similar to that presented by Mr. Rick Link, Director of Structuring and Pricing at  
7 PacifiCorp, in the Bridger SCR proceeding. For coal prices, I created a manual  
8 *post-hoc* adjustment to prices paid for coal at Jim Bridger, assuming the same  
9 dispatch and consumption as determined by the System Optimizer model. For the  
10 case in which Jim Bridger 3 & 4 were retired in 2015/2016, I included the coal  
11 price increase propounded by the Company for advanced recovery of coal  
12 remediation funds. I performed this *post-hoc* adjustment for the low, mid and high  
13 gas price scenarios, and re-produced the breakeven gas price analysis presented  
14 by the Company in that proceeding.

15 In the SCR Rebuttal Analysis, Mr. Link presented an exhibit suggesting it would  
16 require a nominal levelized gas price of [REDACTED]/MMBtu to reach a zero benefit for  
17 the SCRs at Jim Bridger 3 & 4, [REDACTED]/MMBtu less than the Company's  
18 September 2012 gas prices (see **Error! Reference source not found.**, below).<sup>32</sup>

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<sup>32</sup> Rebuttal Testimony of Rick Link in 12-035-92, Exhibit RMP \_\_\_(RTL-6R)



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In my re-analysis, I find a breakeven gas price of [REDACTED]/MMBtu. The nominal

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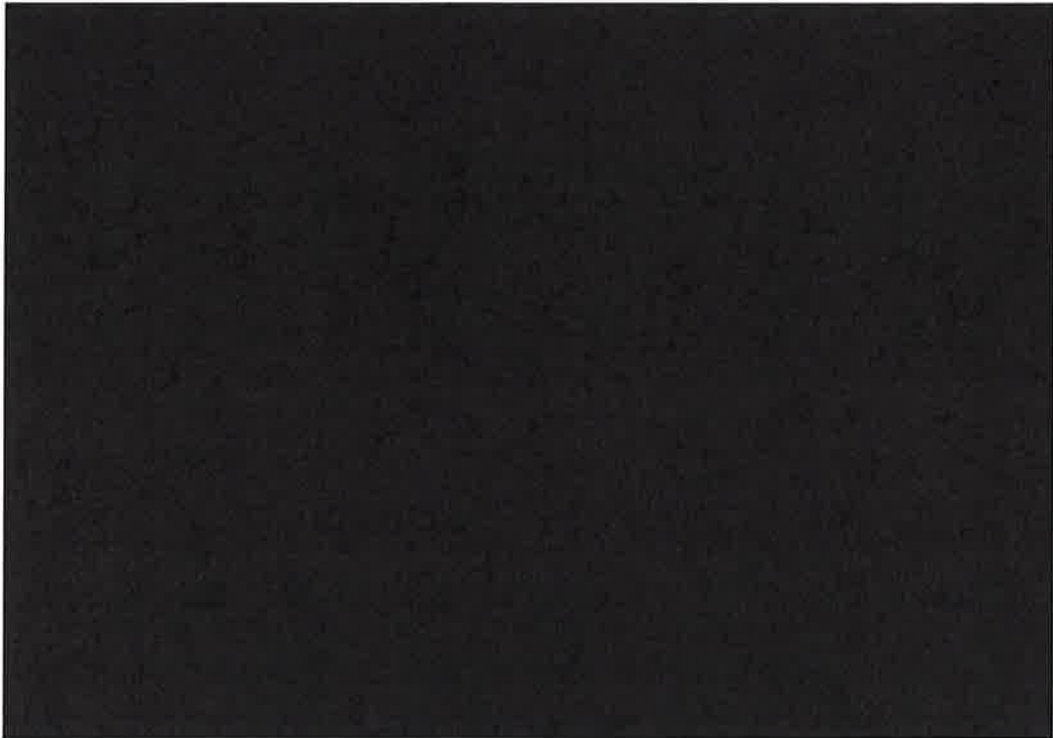
levelized gas price projected by the Company in September 2013 was

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\$5.35/MMbtu, extremely close to the breakeven price.<sup>33</sup>

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<sup>33</sup> September 2013 Official Forward Price Curves for gas provided in Oregon 2013 IRP docket LC-57, OPUC 279. Not marked confidential. Attached as Exhibit SC \_\_\_ JIF-6.



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In short, the linear trend, identical to the process used by Mr. Link in the Bridger

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SCR approval docket, predicts that at the coal and gas prices available to the

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Company in late 2013, the Jim Bridger SCRs would have had a net benefit of just

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, well within any reasonable margin of error.

1 **Q The Company's final EPC contract indicates that the cost of this project will**  
2 **be [REDACTED] less than projected in the SCR approval docket. Does this**  
3 **reduced cost change the outcome of your assessment?**

4 No. Even after adjusting for this reduced cost, the benefit as of late 2013 would  
5 have been [REDACTED] – or just 16% of the capital costs of implementing the SCR  
6 retrofit. This marginal benefit is a different story than the [REDACTED], and then  
7 [REDACTED] benefit touted by the Company in their analyses. As described  
8 earlier, this minimal benefit is well within the noise of the System Optimizer  
9 model.

10 **Q Have you made any other changes to the Company's analysis aside from the**  
11 **coal price adjustment you described above, and a review of the breakeven**  
12 **analysis with lower gas prices?**

13 **A** No.

14 **Q Was all of the information you used fully available to the Company during**  
15 **the due diligence period?**

16 **A** Yes.

17 **Q Was all of the information you used made available to this Commission**  
18 **during the due diligence period?**

19 **A** No. The Company did not provide its new coal or gas price projections to this  
20 Commission after the SCR Rebuttal Analysis.