

BEFORE THE PUBLIC SERVICE COMMISSION OF UTAH

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

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DOCKET NO. 10-035-124

Exhibit No. DPU 7.0D-RR

**Direct Revenue Requirement
Testimony and Exhibits**

Matthew Croft

**FOR THE DIVISION OF PUBLIC UTILITIES
DEPARTMENT OF COMMERCE
STATE OF UTAH**

Direct Revenue Requirement Testimony of

Matthew Croft

PUBLIC

May 26, 2011

1 **Q. Please state your name and occupation?**

2 A. My name is Matthew Allen Croft. I am employed by the Utah Division of Public Utilities
3 (“Division”) as a Utility Analyst.

4 **Q. What is your business address?**

5 A. Heber M. Wells Office Building, 160 East 300 South, Salt Lake City, Utah, 84114.

6 **Q. Are you the same Matthew Croft who provided direct testimony for the Division on the
7 Company’s proposed test year in this case?**

8 A. Yes.

9 **Q. What is the purpose of the testimony that you are now filing?**

10 A. The purpose of this testimony is to explain adjustments to Rocky Mountain Power’s
11 (“Company”) revenue requirement. The main focus of my testimony is concerning
12 adjustments related to electric plant in service (EPIS). I will discuss certain pollution control
13 projects as well as a small adjustment related to allocation factors associated with
14 accumulated deferred income taxes.

15 **Q. Will you please summarize your EPIS related adjustments?**

16 A. Yes. The table below summarizes the adjustments I have made.

Adjustment Summary			
	Total Company Adjustment	UT Adjustment	Approx Revenue Requirement Adjustment
Plant Additions and Retirements	(155,620,223)	(72,385,568)	(6,929,574)
Accumulated Depreciation	93,333,855	54,501,162	5,071,529
Depreciation Expense	(4,594,139)	(1,322,135)	(1,099,148)
Trapper (DPU 7.8) and Bridger (DPU 7.4)	499,387	212,672	23,761
Accumulated Deferred Income Tax Allocation Adjustment			(106,906)
Accumulated Deferred Income Tax Updates			
Reflect IRS Clarification on Bonus Depreciation			TBD by RMP
Reflect Effect of Plant Addition Update above			TBD by RMP
Total Adjustments			(3,040,338)

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18 **Q. Will you please explain the process by which you arrived at the EPIS related**
19 **adjustments?**

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A. Yes. The first step was to develop an Excel template that would “check” the Company’s plant addition and retirement, depreciation expense and accumulated depreciation adjustments that are put into the JAM model. This template used the same inputs and methodologies used by the Company. This check resulted in the same adjustments as were determined by the Company.¹ The second step was to update the Company’s filed plant additions with actual plant additions and actual retirements² through March 2011.³ The third step was to update the depreciation rate based on information as of December 2010. Retirement rates were recalculated based on a four year average as opposed to the

¹ This template has been filed with my testimony and is called “DPU 7.1 to 7.3 EPIS Template.” The as filed template already includes adjustments to the Company’s filing. To see the “check” of the Company’s filing, go to the “Scenarios” tab and change all the switches to “1”. Then refer to the summary on that same tab or go to the “JAM Inputs” tab to see that the DPU check matches the Company’s filing.

² Note: the February 2011 retirements are used for the March 2011 accumulated depreciation and EPIS balances.

³ These actuals include four projects that were not part of the original filing. I have accepted these unforecasted projects but have issued a data request concerning them. Should any issues arise concerning the prudence of these projects, I will remove them in my rebuttal testimony.

28 Company's five year average. The Company's five year average used a 9 month period as
29 one of the years. I removed that particular year and then took the average of the remaining
30 four 12 month years. The fourth step was to update the April 2011 to June 2012 forecast
31 based on the actuals through March 2011 and the Company's revised forecast for several
32 projects. The calculations involved with these first four steps are detailed in the electronic
33 excel file "DPU 7.1 to 7.3 EPIS Templates." The fifth step was to update the Bridger and
34 Trapper mines with actuals through February 2011. The sixth step consisted of a general
35 review (checking for approval requisition forms or project change notices) by Division staff
36 to see if there was supporting documentation for each project greater than \$5 million. There
37 are approximately 110 projects that meet this \$5 million criteria. Together, these projects
38 account for approximately 77% of the total forecasted plant additions for the period July
39 2010 through June 2012. Based on this review, the Division did find supporting
40 documentation for each one of these projects. The seventh step consisted of a more detailed
41 review of a sample of those projects. In this more detailed review, and for the specific
42 projects (greater than \$5 million with non "various" inservice dates) the Division staff
43 reviewed documents such as approval requisition forms, contracts, gant charts, recent weekly
44 progress reports, project bid dates, permitting status, engineering status, procurement status,
45 environmental requirements and other analysis. Although a detailed review was conducted
46 for various types of projects, the greatest focus was on the various scrubber and baghouse
47 projects contemplated in this case. This greater focus emerged as a result of the arbitration
48 award regarding the Hunter 2 scrubber project ("Hunter 2")⁴.

49 **Q. Will you please explain in more detail your adjustment to update the depreciation rate?**

⁴ This project is called "302 - Hunter U2 SO2 Project" in SRM-3

50 A. The depreciation rates used in the Company's filing are based on the Commission approved
51 rates as well as June 2010 plant balances. I simply updated the rates based on the plant
52 balances for December 2010. This adjustment as well as the retirement rate adjustments are
53 embedded in the EPIS balance, depreciation expense and accumulated depreciation expense
54 adjustments shown in my adjustment summary table. The details for how this rate adjustment
55 occurred can be seen in the "Scenarios" tab in the "DPU 7.1 to 7.3 EPIS Templates."

56 **Q. Have you made the required adjustments to accumulated deferred income taxes as a**
57 **result of your EPIS related adjustments?**

58 A. No, but I recognize that they should be made and request that the Company calculate this
59 adjustment (assuming that these EPIS adjustments here are accepted) upon filing their
60 rebuttal testimony. I would also recommend that the Company update its accumulated
61 deferred income taxes to reflect the relatively recent clarification by the IRS on how to treat
62 bonus depreciation.

63 **Q. Will you please explain your accumulated deferred income tax allocation adjustment?**

64 A. Yes. There were several accumulated deferred income tax factors that were not properly
65 assigned. In response to OCS 14.1 the Company corrected the misallocation and provided the
66 necessary JAM adjustments as well.

67 **Q. Will you please explain in more detail your adjustments regarding the various scrubber**
68 **projects?**

69 A. Yes. As the scrubber and baghouse projects have been of particular interest due to the lawsuit
70 between PacifiCorp and Deseret Power, the Division focused its attention on flue gas
71 desulfurization (scrubber) projects and baghouse projects.

72 **Q. Do you have extensive experience in dealing with pollution control equipment and the**
73 **applicable regulatory rules and regulations?**

74 A. No, I do not. However, given the magnitude of costs, and the scrutiny they have received in
75 other venues, an investigation was required. I will begin by explaining some the
76 environmental regulations in the state of Wyoming and then I will address the scrubber and
77 baghouse projects as they relate to the Wyoming coal plants. I will then discuss the
78 environmental regulations as they relate to Utah and I will address the scrubber projects that
79 relate to Utah coal plants. These environmental laws and regulations surrounding the
80 proposed projects are complicated and my testimony represents my best understanding of
81 these rules that resulted from my research of various state (Utah and Wyoming) permits,
82 analyses, arbitration documents, the Company's testimony as well as several conversations
83 with members of Utah's Division of Air Quality, Wyoming's Division of Air Quality, and
84 the Company.

85 **Q. Will you please explain, in general, the EPA's Regional Haze Rules as it relates to**
86 **Wyoming?**

87 Y. Yes. Under the EPA's Regional Haze Rules, states have the option of abiding by either Sec.
88 309 or Sec. 308 of the Regional Haze Rules. Sec. 308 requires units "subject to BART
89 (PacifiCorp has 14 units) to install, operate, and maintain additional control technology to
90 meet an established emission limit on a continuous basis."⁵ Under section 308, a five factor
91 analysis⁶ is applied by Wyoming to units subject to BART. Upon completion of this unit

⁵ 309(g) Wyoming State Implementation Plan (SIP) 6.2 (pg 90)

⁶ The WY SIP on pg 102 states "The five factors considered are 1) cost of compliance 2) the energy and non-air quality environmental impacts of compliance, 3) any pollution equipment in use or in existence at the source, 4) the

92 specific analysis, units are required to install specific pollution control technology that will
93 achieve certain emission limits. As an alternative to this “source-by-source command and
94 control BART implementation, EPA has allowed more flexible alternatives if they achieve
95 greater progress towards the State’s visibility goals than the standard BART approach.”⁷ This
96 alternative is known as Sec 309. Under Sec. 309, regional goals, or milestones, have been
97 established for sulfur dioxide (“SO₂”). The principal caveat is that this alternative “must
98 achieve greater reasonable progress than would be accomplished by installing BART.”⁸ For
99 the pollutants of nitrogen oxide (“NO_x”) and particulate pollution (“PM”), Wyoming chose
100 to follow Sec. 308. For SO₂, Wyoming chose Sec 309. Although Wyoming chose Sec. 309
101 for SO₂, sources subject to BART (as determined by Wyoming) are still required to address
102 SO₂ emissions in a BART analysis.⁹

103 **Q. Based on that understanding of the Regional Haze Rules as they relate to Wyoming,**
104 **what is the general process by which the pollution control equipment are added?**

105 A. The steps below explain the general process by which pollution controls are added to
106 PacifiCorp’s coal units. While steps one and two have specific dates, the dates for the events
107 thereafter vary depending on the plant. The focus in the process below is for projects
108 involving SO₂ and PM reductions. A general understanding of this process is important when
109 determining whether or not the pollution control projects are required or needed.

110 1. Regional Haze Rules issued by EPA in 2005

remaining useful life of the source, and 5) the degree of improvement in visibility (all five statutory factors) from each proposed technology.”

⁷ 309(g) Wyoming State Implementation Plan (SIP) 6.1 (pg 89)

⁸ 309(g) Wyoming State Implementation Plan (SIP) 6.2 (pg 90)

⁹ WDAQ BART Application Analysis: AP-6042 (Naughton), pg 2

- 111 2. In June 2006, Wyoming determines that PacifiCorp plants in Wyoming are subject to
112 BART.
- 113 3. PacifiCorp requests CH2MHILL to perform the BART analysis (using the EPA's five
114 factors) and makes recommendations as to the technology necessary to meet presumptive
115 BART emission limits. (lbs/MMBtu)¹⁰
- 116 4. PacifiCorp submits a Construction Permit Application for the recommended technology
117 and requests certain emission limits (lbs/MMBtu) as well as Plantwide Applicability
118 Limitations or "PALs" (tons/year).
- 119 5. WDAQ issues a construction permit that requires specific emission limits(lbs/MMBtu),
120 including SO₂, and PALs. These limits and commands to install equipment are law and
121 federally enforceable.
- 122 6. WDAQ conducts BART analysis¹¹ based on the EPA's *Guidelines for BART*
123 *Determinations*. In this analysis, WDAQ determines the cost effectiveness of proposed
124 pollution control equipment on a single pollutant basis (PM, NOX, and SO₂). In every
125 instance where PacifiCorp has proposed a baghouse project¹², this analysis (which is
126 done on a one pollutant-to-one control type basis) has determined that, for PM purposes,
127 the PacifiCorp proposed baghouse(s) are NOT cost effective, yet still considered BART
128 (required) due to the fact that PacifiCorp has already committed to the project and that
129 the equipment has already been "permitted" (Step 5 above). In every instance (all

¹⁰ For some units, presumptive BART does not technically apply but is still used as a general goal unless the five factor analysis shows that an alternative control is justified. (CH2MHILL BART Analysis for Naughton Unit 2, pg ES-1)

¹¹ All WDAQ BART Analyses, regardless of the plant are dated May 28, 2009.

¹² Baghouse projects have been proposed for Wyodak, Dave Johnston (Unit 3 and 4) and Naughton (Unit 3 only) plants but NOT the Jim Bridger plant.

130 Wyoming plants), this analysis also explains that the PacifiCorp proposed BART
131 technology, for addressing SO₂¹³ will not be required to meet the corresponding SO₂
132 emission limit but that PacifiCorp should participate in the Regional Milestone and
133 Backstop Trading program.¹⁴

134 7. WDAQ issues a BART permit for each plant. This permit does not set specific
135 technology or limits that are specific just to SO₂. Proposed baghouse projects that affect
136 both SO₂ and PM are specifically mandated.¹⁵

137 8. WDAQ incorporates the results of the analysis and permits above into the 309(g)
138 Wyoming Regional Haze State Implementation Plan (“WY SIP”). The WY SIP states
139 that “sources are not required to install BART controls to meet an SO₂ emission limit.
140 Instead, sources will be required to participate in the Regional SO₂ Milestone and
141 Backstop Trading Program authorized under Chapter 14 of the WAQSR.”¹⁶ The WY SIP
142 also reviews the five factor BART analysis for NOX and PM for each Wyoming coal
143 plant. The WY SIP also requires PacifiCorp to install a new baghouse for Dave Johnston
144 Units 3 and 4, Naughton Unit 3 (not in this case) and on Wyodak Unit 1. In the WY SIP,
145 WDAQ determined that these baghouse projects are cost effective.

146 **Q. The process you have outlined above appears to have several contradictions such as:**

147 **1) SO₂ limits required in one regulation but then not in another.**

148 **2) Certain projects are required in one regulation and not in another.**

¹³ The proposed equipment to address SO₂ have included just a baghouse (Wyodak 1, Naughton 3(not in this case)), new dry flue gas desulfurization (DFGD) equipment and a baghouse (Dave Johnston 3 and Dave Johnston 4), just new flue gas desulfurization projects (Naughton 1 and 2), and upgrades to FGD systems (Jim Bridger 1-3).

¹⁴ Each one of these WDAQ BART analyzes can be found on the WDAQ website:

[http://deq.state.wy.us/aqd/309\(g\)%20Attachment%20A_January%202011%20Submittal.asp](http://deq.state.wy.us/aqd/309(g)%20Attachment%20A_January%202011%20Submittal.asp)

¹⁵ WYDAQ BART Permit MD-6043A pg 4(Wyodak), MD-6041A pg 5 (Dave Johnston 3 and 4) Nauton Unit 3

¹⁶ Section 6.2, pg 91

149 **3) The baghouse projects are not cost effective in one regulation but are cost**
150 **effective in another.**

151 **Please explain.**

152 A. This process has caused considerable confusion and not fully explained by the Company.
153 However, based on discussions with personnel from WDAQ I will explain these apparent
154 contradictions. The first contradiction relates to SO₂. As mentioned in Step 5 of the
155 process above, the permitted limits are law and federally enforceable. PacifiCorp is
156 obligated to meet these emission limits. At the same time, since Wyoming is under Sec.
157 309, the Regional Milestones are in place and as such there are no specific SO₂ limits
158 dictated on a unit or plant basis. The idea of Sec. 309 was to give flexibility to the utilities
159 to help meet the regional milestones.

160 **Q. Would that flexibility provide the option of doing nothing with regards to SO₂**
161 **pollution control equipment?**

162 A. Since a baghouse was ultimately required (which will be elaborated on later in my
163 testimony) for Wyodak 1, Dave Johnston 3 and 4 and Naughton 3, this question revolves
164 principally around the flue gas desulfurization (FGD) projects for Jim Bridger Units 1-3,
165 Dave Johnston 3 and 4, and Naughton 1 and 2. In order for the “do nothing” option to be
166 reasonable, considerations would have to be given to the following:

167 1) The Cost effectiveness or reasonableness of costs of the FGD projects

168 Based on the BART analysis performed by the WDAQ, all of the FGD projects
169 on Wyoming plants are cost effective or have reasonable costs.¹⁷

¹⁷ AP-6041 pg 23, AP-6040 pg 26, AP-6042 pg 28

170 2) If the MEHC commitment to reduce SO2 emissions by more 50% using cost
171 effective equipment would be accomplished.

172 As shown in the first point above the costs are reasonable. Based on the
173 Company's compliance filing for the period April 2009 through March 31, 2010
174 all of the SO2 related projects (including scrubber (FGD)) listed by the Company
175 under general commitment 43 will result in a 62% reduction to SO2. I do not find
176 the additional 12% to be unreasonable for three reasons. First, these costs are
177 reasonable. Second, the MEHC commitment does say "more than 50%." Third, I
178 would assume that the nature of the existing equipment, new equipment being
179 installed, and the complexities of managing a whole system of 14 units subject to
180 BART, does not lend kindly to achieving a percentage reduction that is say
181 50.1%. Even if such were to happen, I would imagine it would be more a matter
182 of coincidence than anything else.

183 3) If there are any end-of-life issues regarding the current equipment.

184 At this time, I am not aware of any specific end-of-life issues related to the
185 Wyoming plants. However, based on the end-of-life issues identified for the Utah
186 plants in the Company's response to DPU 36 (received May 25th), there is the
187 possibility that similar issues exist for Wyoming plants. I will continue to explore
188 this issue and will address it in rebuttal testimony.

189 3) If the equipment is needed to meet permitted emissions limits.

190 Although specific FGD projects are not specifically required through the emission
191 permits,¹⁸ the Company's own applications for construction permits demonstrate
192 the specific technology that will be needed to meet those permitted emission
193 limits that are required. Additionally, condition number 2 of the permits for the
194 various projects states, "That all substantive commitments and descriptions set
195 forth in the application for this permit, unless superseded by a specific condition
196 of this permit, are incorporate herein by this reference and are enforceable as
197 conditions of this permit."¹⁹

198 4) If the regional milestones are being met.

199 Based on the 2011 WY SIP, "Each year, states have been able to demonstrate that
200 actual SO2 milestones are well below the milestones." The years represented in
201 the 2011 WY SIP are 2003 though 2007. On average, it appears that the states'
202 reported emissions have been under the milestones by an average of 131,468 tons
203 per year. I am not sure however, how the Company's forecast of SO2 emissions in
204 future years without pollution control would have compared to future SO2
205 milestone limits. The Company's response to OCS 14.7 provides estimated SO2
206 reductions in tons per year for eight pollution control projects. The combined
207 amount of SO2 reductions from all the projects, which include three Utah plants,
208 is estimated to be 32,600 tons per year. All of these projects have been placed into
209 service or are expected to be placed into service after December 2010. My

¹⁸ Also, Permit MD-5098 (Dave Johnston 3 and 4) does use the following language at page 4: "Limits shall become effective upon startup of the unit after FGD/baghouse installation and completion of the initial performance tests required by Condition 7 of this permit."

¹⁹ Permit MD-1552 as an example.

210 understanding however, is that the assumptions used in the future regional
211 milestones and OCS 14.7 are different. The current Utah SIP indicates the SO₂
212 regional milestones in 2008 were 269,083 tons per year and are required to be
213 reduced to 141,849 tons by 2018. The DPU recently received a response to DPU
214 data request 36.3 which does show forecasted emissions in tons per year for
215 various but not all Utah and Wyoming coal units. The analyses shows emissions
216 in tons per year with and without pollution control technology but not in relation
217 to the regional milestones. The response to this data request was just recently
218 received on May 25th and as such, the Division will continue to analyze its merits.
219 What we do know is that over the years, various states have dropped out of the
220 regional milestone program and as a result, PacifiCorp's assumed share of the
221 total regional milestone has increased. We also know that regardless of how
222 forecasted emissions would have compared to future milestones, pollution control
223 equipment was needed to meet the Company's MEHC commitment to reduce
224 emissions by more than 50%²⁰. We also know, based on the Company's response
225 to DPU 36.3 that the sulfur content is expected to go up significantly in the future
226 for the Utah coal plants. This would obviously add to the difficulty of units
227 contributing to the regional milestones.

228 Although there are still some issues that need to be explored like end-of-life issues for the
229 Wyoming units and the total Company's contribution to the regional milestones, it does not
230 appear based on the other factors analyzed above that the "do nothing" option could be
231 considered reasonable.

²⁰ 05-035-54 Compliance Filing to Commitment 49 of Stipulation Appendix A

232 **Q. Will you please address the issue of projects being required in one regulation but not in**
233 **another?**

234 A. Yes. This has in part already been discussed. As mentioned previously, the FGD projects
235 were not specifically required to meet the regional milestones but were required to meet
236 permitted emission limits. With regards to the baghouse projects, the WDAQ determined that
237 that the projects were BART and were mandated to be installed.²¹ The important concept to
238 understand with the baghouse projects is that it affects both SO₂ and PM. Since SO₂ falls
239 under the regional milestones the baghouse would not be specifically required. PM however,
240 does fall under Sec. 308 and so a specific determination was made to require the baghouse.

241 **Q. Will you please address the issue of the baghouse costs being effective in one regulation**
242 **but not another?**

243 A. Yes. As mentioned in the sixth step above, the BART analysis performed by WDAQ found
244 that the costs associated with each baghouse project were not reasonable. This analysis
245 however is done on a one pollutant to one control type basis. From just a PM standpoint the
246 costs were not reasonable. However, the baghouses affect SO₂ and Mercury as well as PM.
247 The WY SIP specifically addresses this issue through the following statements:

248 Dave Johnston (WY SIP Sec 6.5.5 Pg 104-105)

249 For control of PM/PM₁₀ emissions, the State of Wyoming requires that PacifiCorp install
250 and operate new full-scale fabric filters on Units 3 and 4 to meet corresponding BART
251 emission limits on a continuous basis. When considering all the factors above and beyond
252 the benefits associated with regional haze which include the existing precipitator's
253 current condition and performance and end of life issues, the ability of the current
254 electrostatic precipitator to meet an ESP BART rate of 0.23 lb/MMBtu on a continuous
255 basis and the enhanced mercury removal co-benefits the baghouse provides, the
256 Wyoming Air Quality Division has determined that the costs associated with the
257 installation of a new full-scale fabric filter are reasonable. A full-scale fabric.

²¹ MD-6043A(Wyodak) pg 4, MD-6041A (Dave Johnston Units 3 and 4)

258 filter is the most stringent PM/PM₁₀ control technology and therefore the Division
259 accepts it as BART. The Division considers the installation and operation of the BART-
260 determined PM/PM₁₀ controls of a new full-scale fabric filter on Unit 3 at Dave Johnston,
261 as recently permitted in Air Quality Permit MD-5098, to meet the requirements of
262 BART.

263 When considering all the factors above and beyond the benefits associated with regional
264 haze which include the existing venturi scrubber's current condition and performance and
265 end of life issues, the ability of the current venturi scrubber to meet a venturi scrubber
266 BART rate of 0.21 lb/MMBtu on a continuous basis and the enhanced mercury removal
267 co-benefits the baghouse provides, the Wyoming Air Quality Division has determined
268 that the costs associated with the installation of a new full-scale fabric filter are
269 reasonable. A full-scale fabric filter is the most stringent PM/PM₁₀ control technology
270 and therefore the Division accepts it as BART. The Division considers the installation
271 and operation of the BART-determined PM/PM₁₀ controls of a new full-scale fabric
272 filter on Unit 4 at Dave Johnston, as recently permitted in Air Quality Permit MD-5098,
273 to meet the requirements of BART.

274
275 Naughton Unit 3 (WY SIP Sec 6.5.6 Pg 106)
276 For control of PM/PM₁₀ emissions from Unit 3, the State of Wyoming requires that
277 PacifiCorp install and operate a new, full-scale fabric filter to meet a corresponding
278 BART emission limit on a continuous basis. When considering all the factors above and
279 beyond the benefits associated with regional haze which include the existing
280 precipitator's current condition and performance and end-of-life issues, the ability of the
281 current electrostatic precipitator to meet an ESP BART rate of 0.04 lb/MMBtu on a
282 continuous basis, the enhanced mercury removal co-benefits the baghouse provides, and
283 the reduced ash loading on the SO₂ scrubber which will enhance the scrubber
284 performance, the Wyoming Air Quality Division has determined that the costs associated
285 with the installation of a new full-scale fabric filter are reasonable. A full-scale fabric
286 filter is the most stringent PM/PM₁₀ control technology and therefore the Division
287 accepts it as BART. The Division considers the installation and operation of the BART-
288 determined PM/PM₁₀ controls of a new full-scale fabric filter on Unit 3 to meet the
289 statutory requirements of BART.

290
291 Wyodak (WY SIP Sec 6.5.7 Pg 108)
292 For control of PM/PM₁₀ emissions from Unit 1, the State of Wyoming requires that
293 PacifiCorp install and operate a new, full-scale fabric filter to meet a corresponding BART
294 emission limit on a continuous basis. When considering all the factors above and beyond the
295 benefits associated with regional haze which include the existing precipitator's current
296 condition and performance and end of life issues, the ability of the current electrostatic
297 precipitator to meet an ESP BART rate of 0.10 lb/MMBtu on a continuous basis, and the
298 enhanced mercury removal co-benefits the baghouse provides, the Wyoming Air Quality
299 Division has determined that the costs associated with the installation of a new full-scale
300 fabric filter are reasonable. A full-scale fabric filter is the most stringent PM/PM₁₀ control
301 technology and therefore the Division accepts it as BART. The Division considers the
302 installation and operation of the BART-determined PM/PM₁₀ controls of a new full-scale

303 fabric filter at Wyodak, as recently permitted under Air Quality Permit MD-7487, to meet the
304 requirements of BART.

305
306 **Q. Will you please summarize your position regarding the Wyoming FGD (scrubber) and**
307 **baghouse projects?**

308 A. Yes. Through construction permits issued by WDAQ, certain SO₂ limits were established on
309 a unit and plantwide basis for PacifiCorp's Wyoming coal plants. These limits are law,
310 federally enforceable and therefore the Company was required to incorporate technology that
311 would meet those limits. In addition, PacifiCorp committed to install pollution control
312 technology to reduce SO₂ emissions by more than 50% as long as the projects were cost
313 effective. This commitment was part of the MEHC transaction. As has been discussed above,
314 both the baghouse and FGD projects were determined by WDAQ to be cost effective or have
315 reasonable costs. Although the Division will continue to explore these issues, it appears at
316 this time that there is sufficient evidence to allow the costs associated with the Wyoming
317 pollution control projects into rates.

318 **Q. Will you please explain the regional haze rules as they relate to Utah?**

319 A. Yes. Utah's regional haze rules are similar to Wyoming in that Utah is under Sec. 309. The
320 two states are different however in the fact that Wyoming requires submission of a BART
321 analysis while Utah does not. Also, Wyoming is required to show a reasonable progress
322 demonstration that regional haze was on a path to natural conditions by 2064. Utah looks at
323 BART by itself, in the context of a SIP. That BART analysis is based on EPA's BART
324 analysis which is where the presumptive BART limits come from. The emission reductions
325 in the UT SIP then role into the approval orders (construction permits) which detail specific

326 emission limits on a lb/MMBtu and PAL basis. The approval orders also specify the
327 equipment that will be required to be installed to meet those limits.

328 **Q. Will you please explain the issues regarding the Utah scrubber and baghouse projects**
329 **associated with Hunter 1, Hunter 2 and Huntington 1?**

330 **A. Yes. I will start by describing, in general, the issues regarding the arbitration award²².** [REDACTED]

331 [REDACTED]

332 [REDACTED]

333 [REDACTED]

334 [REDACTED]

335 [REDACTED]

336 [REDACTED]

337 [REDACTED]

338 [REDACTED]

339 [REDACTED]

340 [REDACTED]

341 [REDACTED]

342 [REDACTED]

343 [REDACTED]

344 [REDACTED]

345 [REDACTED]

346 [REDACTED]

347 [REDACTED]

348 [REDACTED]

349 [REDACTED]

²² See Confidential DPU Exhibit 7.5
²³ See DPU Exhibit 7.5 (Arbitration Award) pg 3

350 [REDACTED]
351 [REDACTED]
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²⁴ See Confidential DPU Exhibit 7.5 (Arbitration Award), pg 18

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378 [Redacted]

379 [Redacted]

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387 [Redacted]

388 [Redacted]

389 [Redacted]

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²⁵ See Confidential DPU Exhibit 7.5 (Arbitration Award), bottom pg 15

[Redacted]

[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]

[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]
[Redacted]	[Redacted]	[Redacted]	[Redacted]

[Redacted]

395 [Redacted]

396 [Redacted]

397 [Redacted]

398 [Redacted]

399 [Redacted]

400 [Redacted]

401 [Redacted]

402 [Redacted]

403 [Redacted]

404 [Redacted]

405 [Redacted]

²⁶ See Confidential DPU Exhibit 7.5 (Arbitration Award), pg 15

²⁷ The Company used the construction permit applications as proxy for “commitment” to install pollution control equipment. This is stated in DPU 36.7.

406 [REDACTED]
407 [REDACTED]
408 [REDACTED]
409 [REDACTED]
410 [REDACTED]
411 [REDACTED]
412 [REDACTED]
413 [REDACTED]
414 [REDACTED]
415 [REDACTED]
416 [REDACTED]
417 [REDACTED]
418 [REDACTED]
419 [REDACTED]
420 [REDACTED]
421 [REDACTED]
422 [REDACTED]
423 [REDACTED]
424 [REDACTED]
425 [REDACTED]
426 [REDACTED]
427 [REDACTED]
428 [REDACTED]
429 [REDACTED]
430 [REDACTED]
431 [REDACTED]
432 [REDACTED]
433 [REDACTED]
434 [REDACTED]
435 [REDACTED]

²⁸ See Confidential DPU Exhibit 7.5 (Arbitration Award), end of first paragraph pg 16

436 [REDACTED]

437 [REDACTED]

438 [REDACTED]

439 [REDACTED]

440 [REDACTED]

441 [REDACTED]

442 [REDACTED]

443 [REDACTED]

444 [REDACTED]

445 [REDACTED]

446 [REDACTED]

447 [REDACTED]

448 [REDACTED]

449 [REDACTED]

450 [REDACTED]

451 [REDACTED]

452 [REDACTED]

453 [REDACTED]

454 [REDACTED]

455 [REDACTED]

456 [REDACTED]

457 [REDACTED]

²⁹ See Confidential DPU Exhibit 7.5 (Arbitration Award), second paragraph pg 16

458 [REDACTED]

459 [REDACTED]

460 [REDACTED]

461 [REDACTED]

462 [REDACTED]

463 [REDACTED]

464 [REDACTED]

465 [REDACTED]

466 [REDACTED]

467 [REDACTED]

468 [REDACTED]

469 [REDACTED]

470 [REDACTED]

471 [REDACTED]

472 [REDACTED]

473 [REDACTED]

474 [REDACTED]

475 [REDACTED]

476 [REDACTED]

477 [REDACTED]

478 [REDACTED]

479 [REDACTED]

480 [REDACTED]

481 [REDACTED]

³⁰ WY SIP 6.5.4 pg 102

³¹ See Confidential DPU Exhibit 7.5 (Arbitration Award), first paragraph pg 17

³² See Confidential DPU Exhibit 7.5 (Arbitration Award), first paragraph pg 17

482 [REDACTED]
483 [REDACTED]
484 [REDACTED]
485 [REDACTED]
486 [REDACTED]
487 [REDACTED]
488 [REDACTED]
489 [REDACTED]
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492 [REDACTED]
493 [REDACTED]
494 [REDACTED]
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496 [REDACTED]
497 [REDACTED]
498 [REDACTED]
499 [REDACTED]
500 [REDACTED]
501 [REDACTED]
502 [REDACTED]
503 [REDACTED]
504 [REDACTED]

505 **Q. Will you please summarize your position regarding the scrubber and baghouse**
506 **projects?**

³³ See Confidential DPU Exhibit 7.5 (Arbitration Award), second paragraph pg 17

507 A. Yes. While it appears that reported emissions are well under regional milestones for SO₂, the
508 scrubber and baghouse projects in this case are needed to meet future or current SO₂
509 emission limits, were committed to in the MEHC transaction and have reasonable costs. In
510 addition, the Utah plants have several end-of-life issues that would have had to be resolved in
511 the next few years regardless of the rest of the scrubber project. This conclusion is based
512 principally on my research of Wyoming's regional haze rules and the Company's response to
513 the arbitrator's issues regarding the Hunter 2 scrubber. As noted previously, the Division will
514 continue to analyze the Company's response to DPU 36 since there has been only about a
515 day for review.

516 **Q. Does this conclude your testimony?**

517 A. Yes