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**BEFORE THE PUBLIC SERVICE
COMMISSION OF UTAH**

In the Matter of the Voluntary Request of
Rocky Mountain Power for Approval of
Resource Decision to Construct Selective
Catalytic Reduction Systems on Jim Bridger
Units 3 and 4

Docket No. 12-035-92

PREFILED

SURREBUTTAL TESTIMONY OF NANCY L. KELLY

ON BEHALF OF

WESTERN RESOURCE ADVOCATES

REDACTED

February 28, 2013

1 **I INTRODUCTION AND SUMMARY**

2 **Q: Please state your name, employer, and present position.**

3 A: My name is Nancy L. Kelly. I am employed by Western Resource Advocates (WRA) in
4 its Energy and Lands Programs as a Senior Policy Advisor.

5 **Q: Are you the same Nancy Kelly who filed direct testimony in this case?**

6 A: Yes. I submitted direct testimony on November 30, 2012on behalf of WRA.

7 **Q: What is the purpose of your current testimony?**

8 A: The purpose of my testimony is to provide WRA's response to the rebuttal testimony that
9 addresses the revised economic analysis and the associated uncertainties filed by
10 PacifiCorp witnesses Mr. Chad A. Teply, Ms. Cindy A. Crane, and Mr. Rick T. Link on
11 February 11, 2013.

12 **Q: What issues do you address?**

13 A: I address whether the Company's February 11 testimony effectively responds to the
14 essential elements I provided the Commission in my direct testimony. In so doing I
15 address the revised economic analysis discussed in Mr. Link's rebuttal testimony,
16 elements of Ms. Crane's rebuttal testimony, and elements of Mr. Teply's testimony.

17 **Q: Please recount the essential elements of your direct testimony.**

18 A: My direct testimony made the following points:

- 19 • The economic case for installing SCR is not clear-cut. The modeling outcomes are
20 sensitive to the modeling assumptions and inputs.
- 21 • PacifiCorp's modeling appears to overstate the economic case for SCR.

- 22 • PacifiCorp’s analysis has not included an evaluation of the possible benefits of
23 avoided or delayed transmission additions and as discussed in the testimony of WRA
24 witness Stacy Tellinghuisen, reduced water use.

25 I concluded the Commission did not have the information it would need to determine that
26 SCR is the least-cost outcome, adjusted for risk and uncertainty.

27 **Q: Has the Company’s rebuttal testimony caused you to change your opinion on these**
28 **points?**

29 A: No. Furthermore, recent actions by EPA and testimony provided by Mr. Teply at the
30 February 6, 2013 prehearing conference indicate that the uncertainty of the cost of
31 continuing down the retrofit path has increased.

32 **Q: What do you recommend?**

33 I recommend the Commission not approve Rocky Mountain Power’s voluntary request
34 for the preapproval of the costs of installing selective catalytic reduction systems on
35 Bridger Units 3 and 4.

36 **II. UPDATED MODELING RESULTS UNDERScore SENSITIVITY OF RESULTS**
37 **TO MODELING ASSUMPTIONS AND DO NOT CAPTURE THE RANGE OF**
38 **POTENTIAL OUTCOMES**

39 **Q: Which witness presents the results of the Company’s updated economic analysis?**

40 A: Mr. Rick Link presents this analysis.

41 **Q: Please describe the revisions the Company undertook.**

42 A: Revisions are of two kinds, modeling corrections and assumption updates. The Company
43 revised the modeling of certain generation resource in System Optimizer and corrected a
44 mismatch in the treatment of mine reclamation costs beyond 2030. It also updated the
45 Official Forward Price Curves(OFPC) from December 2011 to September 2012; updated
46 the load forecast; and modified cash coal cost, Bridger coal mine capital and mine
47 reclamation assumptions. The revisions to the coal costs were particularly extensive.

48 **Q: Please characterize the updates to the analysis.**

49 A: PacifiCorp's September 2012 OFPC is generally lower than its December 2011 OFPC.
50 Levelized natural gas prices are roughly 6% lower; the levelized base CO2 price declined
51 roughly 4%, and the levelized high CO2 price declined by close to 30%.¹ The peak load
52 forecast declined; the energy forecast was not discussed. Cash coal costs and mine
53 capital projections increased.

54 **Q: What are the results of these revisions?**

55 A: The revisions weaken the economic case for retrofitting Bridger Units 3 & 4 and
56 underscore the sensitivity of the results to the underlying assumptions. The estimated
57 benefit in the case PacifiCorp identified as its base case declined by the equivalent of
58 ■■■ million from ■■■ million to ■■■ million. The decline is larger than the remaining
59 benefit.

¹Some of the increase in the base case is a result of being truncated by a year. If calculated over a consistent forecast period, the change in the base CO2 price is insignificant. However, the reduction in the high price case remains substantial

60 **Q: Please reconcile your reference to a benefit of [REDACTED] million in the original base case**
61 **with the [REDACTED] million figure presented in the Company's August 24, 2012 filing.**

62 A: During the discovery process that preceded the filing of direct testimony by intervenors
63 in late November, Mr. Randy Falkenberg, on behalf of the Office of Consumer Services,
64 identified an [REDACTED] million error. The Company had understated mine capital costs and
65 incorrectly included SCR system costs in the gas conversion case. The combined effect
66 of the two errors improved the economic case for installing SCR over the gas conversion
67 case by [REDACTED] million. The Company had previously acknowledged this error and
68 corrected the estimated benefit.

69 **Q: Please explain how the three modeling updates contribute to the [REDACTED] million decline**
70 **in the estimated benefit of the SCR project in the base case.**

71 A: Confidential Table 1R on page 19 of Mr. Link's rebuttal testimony displays the
72 incremental effect of the major modeling revisions on the estimated outcome. Two of the
73 three assumption updates are primarily responsible for the reduction in the estimated
74 benefit of the SCR retrofit, and demonstrate just how sensitive the results are to changes
75 in modeling assumptions.

76 The update to OFPC and the update to coal cash cost and mine capital costs are the
77 primary sources of the decline in the estimated benefit. The updated cash coal costs and
78 coal mine capital costs reduce the benefit by [REDACTED] million, or roughly 80% of the
79 remaining estimated benefit. The reduction in the Official Forward Price Curve reduces
80 the estimated benefit by [REDACTED] million or roughly 60% of the remaining estimated benefit.
81 Together these two updates reduce the estimated benefit by [REDACTED] million.

82 The case for the SCR retrofit project was enhanced by the updated load growth
83 assumption. PacifiCorp assumes lower peak load growth through 2030 resulting in an
84 incremental improvement in the SCR case of ■■■ million.

85 **Q: Please explain how the individual components of the OFPC impact the results.**

86 A: A decline in natural gas prices and wholesale electricity prices improves the case for
87 natural gas conversion and worsens the case for coal-fired operation. As natural gas
88 prices decline, the cost of operating a converted facility declines improving the case for
89 gas conversion. As wholesale electricity prices declines, the benefit of off-system
90 sales from surplus coal-fired power declines, also improving the case for natural gas
91 conversion.

92 Declining CO2 price forecasts have the opposite effect. Since the production of a
93 megawatt hour of electric power using coal-fired generation emits roughly twice the
94 carbon dioxide as the production of a megawatt hour of power burning natural gas, low or
95 declining CO2 price forecasts favor coal-fired operation. Conversely, high or increasing
96 CO2 costs favor gas conversion.

97 **Q: How do changes in load growth influence the results?**

98 A: That would depend on the system resource mix and load and resource balance. However,
99 in the current case, it appears that lower load growth favors continued coal-fired
100 operation by generating revenue through increased sales into the wholesale electricity.
101 Higher load growth reverses this effect.

102 **Q: Did PacifiCorp update its sensitivity analysis?**

103 A: Yes. PacifiCorp provides results for a total of nine cases. The results are summarized in
104 the matrix below. The values presented in Confidential Table 1 reflect the difference in
105 two modeling simulations. Negative numbers support the SCR project. Positive numbers
106 indicate natural gas conversion is the better bet.

Confidential
Table 1.

| | Low Gas | Base Gas | High Gas |
|----------|---------|----------|----------|
| Zero CO2 | ■ | ■ | ■ |
| Base CO2 | ■ | ■ | ■ |
| High CO2 | ■ | ■ | ■ |

107 **Q: How would you characterize the results?**

108 A: As presented, the results appear to favor the SCR retrofit project. If the matrix above
109 encompassed the reasonable and currently expected range of outcomes, then proceeding
110 with the installation of the SCR systems might appear sensible. From a simple counting
111 perspective, the results appear to be two to one in favor of SCR installation. From a
112 magnitude of risk in making the wrong choice, the results also appear to favor SCR.

113 **Q: In your opinion, do the results summarized in the matrix above encompass the**
114 **reasonable range of outcomes?**

115 A: No. Issues tending to bias the results in favor of SCR that I identified in my direct
116 testimony have not been resolved. In addition recent actions by EPA and testimony
117 provided by Mr. Teply at the February 8, 2013 prehearing conference indicate that the

118 uncertainty and magnitude of the ultimate cost of continuing down the retrofit path has
119 increased. Therefore, the matrix is misleading as a guide to wise action.

120 **Q: Please identify the issues you believe overstate the case for SCR.**

121 A: The capacity of Bridger Units 3 & 4 are still overstated and forecast unit availability has
122 not been adjusted to conform with history. Mine reclamation is assumed to begin in the
123 gas conversion case prior to the installation of SCR. The potential for avoided or delayed
124 transmission is not incorporated into the analysis. PacifiCorp's CO2 price forecasts don't
125 provide a reasonable range and are inconsistent with past modeling efforts. Finally, if
126 EPA requires higher reductions of nitrogen oxide than included in PacifiCorp's retrofit
127 plans, capacity could be further reduced and operation and maintenance costs over the
128 life of the facility increased.

129 *Unit Capacity and Availability*

130 **Q: Did any witness dispute your contention that the net capacity of the two units is**
131 **approximately 23 megawatts lower than was modeled?**

132 A: No.

133 **Q: Was net capacity adjusted in the revision?**

134 A: Not to my knowledge.

135 **Q: Did any witness respond to the issue you raised regarding Bridger’s forecast**
136 **availability?**

137 A: Yes. Mr. Link noted my concern that “the Company’s unit availability assumptions are
138 optimistic.”²

139 **Q: How did Mr. Link respond?**

140 A: He declined to change the modeling of unit availability in system optimizer. His
141 response was primarily directed at Mr. Falkenberg and was a defense of using unit
142 availability assumptions in System Optimizer rather than equivalent forced outage rates.
143 With respect to unit availability, he stated “[t]he availability forecasts generated by plant
144 staff are informed by prior operating history and experience, recognized industry best
145 practices, and original equipment manufacturer recommendations, where applicable.”³

146 **Q: Have you calculated the average availability of the units over the planning horizon?**

147 A: Yes. The coal availability tab in the Company’s Master Assumptions file contains the
148 forecast availability by year from 2012-2030. The average for Bridger Unit 3 is [REDACTED].
149 The average for Bridger Unit 4 is [REDACTED]. As discussed in Mr. Link’s testimony these
150 forecast availability rates reflect planned as well as unplanned outages.

151 **Q: How would lowering the net capacity and reducing the availability of the units to**
152 **reflect historical availability affect the modeling outcomes?**

153 A: Across all cases it would weaken the financial analysis supporting SCR and improve the
154 case for natural gas conversion.

²Rebuttal Testimony of Rick T. Link lines 289-290.

³Ibid., lines 329-330.

155 ***Bridger Mine Reclamation Timing***

156 **Q: What is the issue with respect to the timing of mine reclamation costs?**

157 A: PacifiCorp has assumed that if Bridger Units 3 & 4 were converted to natural gas, the
158 Company would close the Bridger surface mine and begin reclamation immediately.
159 Mine reclamation costs are included in the cash coal costs for Bridger units 1 and 2 and
160 therefore burden the natural gas conversion gas with these higher fuel costs for Bridger 1
161 & 2. The reclamation costs begin the first year of the analysis. I questioned whether it
162 was reasonable to assume these reclamation costs would advance in time, even before the
163 retrofit work on units 3 and 4 had begun.

164 **Q: Which witness addresses the timing of mine reclamation?**

165 A: Ms. Crane. She states “consistent with the Company’s direct testimony, the two-unit coal
166 operations scenario still reflects the closure of the Bridger Coal surface mine in
167 connection with conversion to gas Jim Bridger Units 3 and 4.”

168 **Q: What is the effect on the analysis of assuming the costs for mine reclamation begin
169 to be recovered even before Units 3 and 4 can be retrofitted?**

170 A: The correct timing of the incurrence of costs is essential, since as a result of discounting,
171 future costs that occur earlier in time have a disproportionate impact on the analysis.
172 Attributing costs against the natural gas conversion case before the costs are incurred will
173 artificially burden the natural gas conversion scenario, thereby, artificially strengthening
174 the case for retrofit.

175 Indeed, whether burdening the natural gas conversion case with higher cash coal costs for
176 Units 1 & 2 is appropriate at all remains an issue.

177 I found myself puzzled by Ms. Crane's discussion of WRA Confidential Exhibit (NLK-
178 2)⁴ filed with my direct testimony. Her purpose was to rebut my statement that the
179 Bridger surface mine appears cost competitive. However, given her response, I question
180 whether it would be more cost-effective to close the mine in both the gas conversion case
181 (2-unit scenario) and the SCR retrofit case (4-unit scenario) and purchase coal locally.

182 **Q: Please describe Confidential Exhibit NLK-2 and discuss Ms. Crane's response to**
183 **this exhibit.**

184 A: Confidential Exhibit NLK-2 compares the cash coal costs of the Bridger surface mine,
185 Bridger underground mine, and Black Butte coal contract over the period 2007 through
186 2021. Beginning in 2015, the Black Butte coal contract becomes relatively more
187 expensive than the Bridger mines and remains more expensive through 2021. The cash
188 coal cost of the Bridger surface mine is less than the Black Butte coal contract but greater
189 than the Bridger underground mine.

190 Ms. Crane indicates that the cause of the higher cost of the Black Butte coal contract is
191 the opening of the Bridger surface mine. She says, "with an increase in Bridger's surface
192 production, the Company's requirements for coal purchases from Black Butte
193 dramatically decrease. The shift in the Black Butte price reflects a projection of the
194 impact on Black Butte costs of reduced coal production"⁵In addition, she indicates that
195 capital costs are reflected in the Black Butte contract. According to Ms. Crane, "all of

⁴ Attachment OCS 4.7a

⁵Rebuttal Testimony of Cindy A. Crane, lines 358-359.

196 Black Butte's capital expenditures would have been amortized as part of the purchase
197 price; therefore, the Company would not incur any mine capital expenses under a
198 purchase contract with Black Butte."⁶These statements taken together seem to indicate
199 that were it not for the expansion of the Bridger surface mine, Black Butte coal could be a
200 low-cost option.

201 Given the increased cash and mine capital cost projections included in the updated case,
202 the Company's statements regarding a surplus of coal in the region, and Ms. Crane's
203 statements regarding the source of the increase in Black Butte price projections, it is not
204 clear to me why the Company is developing the surface mine rather than pursuing other
205 options in the region that might be more cost effective.

206 If the surface mine should be closed regardless of conversions or retrofits, mine
207 reclamation costs would burden both cases equally.

208 **Q: Do you have any new evidence that the mine is not cost effective and should be**
209 **closed?**

210 A: No. I am simply reflecting on the information provided in testimony.

211 **Q: Please summarize the mine reclamation issues.**

212 A: I believe there are two issues. First, if it is appropriate to assume the mine is closed in the
213 case of gas conversion but not in the case of retrofit, there is an issue as to when
214 reclamation costs should begin burdening the natural gas conversion case. I question

⁶Ibid, lines 337-339.

215 whether it is appropriate to count these costs against gas conversion even before SCR
216 could be installed in the retrofit scenario.

217 The second issue is whether the differential treatment for the gas conversion and SCR
218 cases is appropriate at all. If the coal from the surface mine can be sold regardless, it is
219 not. If the mine should be closed in either case because more cost effective sources of
220 fuel are available, it is also not appropriate.

221 *Avoided or Delayed Transmission Not Evaluated*

222 **Q: Please describe how the issue of avoided transmission cost is pertinent to an**
223 **examination of the alternatives available to comply with the Regional Haze Rule.**

224 A: PacifiCorp is currently planning to expand the capacity of its transmission system in the
225 Jim Bridger area to carry power west and south. However, if Bridger units 3 and 4 were
226 neither retrofitted nor converted to natural gas but retired and new capacity located closer
227 to load, more than 1000 MW of capacity on its existing transmission system would be
228 made available, potentially avoiding or delaying the need for new transmission capacity.
229 In my direct testimony, I noted that this evaluation had not been done.

230 My direct testimony responded to the concept put forward by Mr. Teply that the SCR
231 retrofits had been developed in accordance with the principles of least-cost planning. I
232 explained that the principles of least-cost planning require an evaluation of all reasonable
233 alternatives and an understanding of the full cost exposure of pursuing one alternative
234 over another. I stated that an evaluation of avoided transmission should be undertaken
235 and the cost compared to SCR retrofit and natural gas conversion as means of complying
236 with the Regional Haze Rule.

237 **Q: Which witness addresses this issue?**

238 A: Mr. Link. He describes a scenario in which retirement of Units 3 and 4 were forced. The
239 model selected a gas plant in southern Utah at a higher cost than either the SCR retrofit or
240 the natural gas conversion.⁷

241 **Q: Is this scenario responsive to your issue?**

242 No. To meaningfully analyze this alternative, transmission should be avoided or delayed
243 and the avoided cost credited against the planning alternative. This was not done. Mr.
244 Link indicates that “the base case and scenario analyses performed by the Company
245 assume that all segments of the Energy Gateway project will be implemented, including
246 Gateway West, which connects Windstar to Populus and Populus to Hemmingway.”⁸
247 Thus, the Company did not consider the opportunity to avoid or delay new transmission,
248 and these potentially avoided costs were not credited against the cost of the gas plant
249 addition in southern Utah. As I stated in my direct testimony, “the Company cannot
250 claim the SCR project is least-cost if it has not meaningfully evaluated all reasonable
251 alternatives.”⁹

252 *Range of Uncertainty Not Addressed in CO2 Price Projections*

253 **Q: Have you prepared an exhibit comparing the CO2 price forecasts used in this case**
254 **with CO2 price forecasts PacifiCorp has used for past planning?**

255 A: Yes. WRA Exhibit (NLK-1SR) is comprised of two pages and shows levelized CO2
256 price forecasts for 15 different CO2 cost estimates used in the current case as well as for

⁷Link Rebuttal, lines 758-767.

⁸Link Rebuttal, lines 706-708.

⁹Direct Testimony of Nancy Kelly for WRA, lines 352-353.

257 planning purposes over the past two IRP cycles. The levelized prices on page 1 were
258 calculated using a 20-year planning period in all cases to provide a consistent evaluation.
259 Page 2 shows the effect of truncating the CO2 price forecasts in 2030 as has been done in
260 this case. The levelized prices in the truncated cases are slightly lower since the later-
261 year costs are not incorporated.

262 **Q: How do CO2 prices used for this case compare with the last IRP cycle?**

263 A: As can be seen from page 2 of NLK-1SR, the levelized medium CO2 price used in the
264 2011 IRP was \$9.19 over the 20-year planning period. The levelized base CO2 price
265 used in the August 24, 2012 filing in this docket is \$3.83. This is a decline in the medium
266 case of close to 60%. The high showed little change from the 2011 IRP; it was slightly
267 higher than the high used for the 2011 IRP.

268 **Q: How would a 60% decline in the CO2 price used as the base case for this filing affect**
269 **the analysis?**

270 A: Use of this significantly reduced CO2 price would favor SCR retrofit over natural gas
271 conversion. Furthermore, labeling this low estimate as the “base” makes it appear
272 reasonable.

273 **Q: How did CO2 prices change between the August filing and the current update**
274 **contained in the Company’s Rebuttal filing?**

275 A: As I indicated previously when I discussed the September OFPC, the levelized base CO2
276 price declined roughly 4%, and the levelized high CO2 price declined roughly 30%.

277 **Q: How would a 30% decline in the CO2 price used as the high estimate in rebuttal**
278 **affect the analysis?**

279 A: Again, the reduction in the CO2 price would favor the SCR retrofit. Estimates of the
280 magnitude of the cost exposure of making a wrong choice are understated, potentially
281 significantly.

282 **Q: Do you believe the carbon price forecasts used in the rebuttal filing effectively**
283 **capture the potential risk of complying with environmental regulations pertaining to**
284 **CO2 emissions?**

285 A: No. A levelized base CO2 price of \$3.69 appears unreasonably low. As can be seen in
286 WRA Exhibit (NLK-1SR) the current base is significantly below any of PacifiCorp's past
287 CO2 cost estimates. The high estimate used in this case appears to be more in line with
288 the medium CO2 price estimate from the past IRP. It certainly does not capture the
289 potential risk of carbon regulation should it come earlier than PacifiCorp is currently
290 assuming.

291 Much of the analysis provided in the current case hinges on the assumed timing of costs.
292 Costs that are pushed back in time are effectively diminished, and costs that are brought
293 forward in time are magnified. The treatment of carbon costs is no exception.

294 In past IRP cycles, PacifiCorp assumed federal action would begin within five years of
295 the analysis period. However, in the rebuttal filing, PacifiCorp is assuming no federal
296 action for ten years in the base case and eight years in the case of the high. This approach
297 seems short-sighted and fails to capture the real risk that federal action could occur earlier
298 than modeled.

299 WRA Exhibit (NLK-2SR) contains a series of news articles from the past year linking the
300 extreme weather events of the past two years to climate change and to changing
301 perceptions of the reality of climate change and its increasing costs.

302 WRA Exhibit (NLK-3SR) is a copy of a February 22, 2013 news release that China “is
303 taking the lead on carbon legislation.” The article quotes Nancy Pfund, Managing
304 Partner of DBL Ventures as saying “China’s leadership in pricing carbon will have ripple
305 effects across the world and raise the bar for U.S. energy policies and those of other
306 nations. When a country as large as China and as economically important as China makes
307 a move like this, the global momentum on climate change suddenly gets a lot more
308 inexorable.”

309 In the February 12, 2013 State of the Union, President Obama addressed the topic of
310 climate change and threatened executive action if Congress did not act. He said, “if
311 Congress won’t act soon to protect future generations, I will.”

312 Given the mounting evidence that the intensifying, deadly, costly, extreme weather
313 events are directly related to climate change, thereby shifting public opinion; the potential
314 action by China to enact carbon legislation; and the President’s statements in the State of
315 the Union address that he will take action if Congress won’t, I see cause to believe
316 federal action will not be delayed another ten years.

317 Furthermore, mounting evidence indicates that delayed action will simply cost more to
318 achieve if catastrophic climate disaster is to be avoided. WRA Exhibit (NLK-4SR)
319 contains an amicus brief and a supporting paper filed by James Hansen, a climatologist,
320 in a law suit filed in federal court. Hanson argues that as emission reductions are delayed,

321 the rate of annual emissions reductions required (and therefore the cost of compliance)
322 goes up. If begun in 2005, annual emission reductions would have been 3.5% per year, if
323 begun in 2013 would be 6%, and if delayed until 2020 will be 15% per year. The longer
324 action is delayed, the greater the annual cost to avoid climate crisis.

325 *Potential Impact of Stricter EPA Requirements*

326 **Q: Since the filing of this case in August 2012, have the costs of retrofitting Bridger**
327 **Units 3 &4 become more or less certain?**

328 A: Less certain. When the Company filed its application, EPA had issued a proposed BART
329 determination, and a final determination was expected in October 2012. However, in
330 mid-December 2012, EPA requested and was granted an extension to a court-ordered
331 deadline. EPA will now issue a newly proposed BART determination in March 2013.

332 **Q: Is the new rule expected to more or less stringent?**

333 A: If EPA proposes a change, it appears likely that they will propose a more stringent NOx
334 requirement.

335 **Q: How would a more stringent requirement affect the costs of the project?**

336 A: This is not fully understood at this time, but it appears that the ongoing operation and
337 maintenance costs could be impacted, perhaps significantly.

338 A prehearing conference was held February 6 to consider a motion by the Sierra Club to
339 stay this proceeding until after EPA had issued its final rule expected in September 2013.
340 During that conference Mr. Teply provided oral testimony regarding the potential impact
341 on costs. He identified three categories of costs that could be affected by more stringent

342 requirements: construction costs if construction is delayed; capital costs from design
343 changes; and operating and maintenance costs. Of the three categories of costs Mr. Teply
344 expressed particular concern with the effect of an emissions limit reduction on ongoing
345 run rate costs. He indicated that the Company would immediately appeal an EPA ruling
346 that raised the limit out of concern for the impact the run rate cost would have on
347 customers.

348 **Q: Has any other witness addressed these costs in this case?**

349 A: Yes. Mr. Mark W. Crisp, a witness for the Division of Public Utilities, addressed these
350 costs in his direct testimony. He said that “Capital and O&M” costs are “extremely
351 volatile, dependent on SCR operating efficiency, escalation of costs for reagent, catalysis
352 and annual O&M. This variable ... is extremely sensitive and could present issues if the
353 Company’s estimate is not proven to be accurate.”¹⁰

354 **Q: Could a higher emissions limit reduce the net capacity of the units?**

355 A: I don’t have the answer to that question, but I believe it is a valid concern.

356 **Q: Has the potential of higher O&M been factored into the analysis?**

357 A: It has not.

358 **Q: What would be the effect on the modeling results if a higher NOx emission rate was
359 required?**

360 A: It would weaken the case for undertaking the SCR retrofit and strengthen the case for
361 natural gas conversion.

¹⁰DPU Exhibit 3.0 Direct, Mark W. Crisp, PE, lines 170-174.

362 **Q: When will the NOx emissions limit requirement be known?**

363 A: EPA's newly proposed rule will likely become available March 31, 2013. However,
364 given what has occurred in other regions, modifications to the rule before a final
365 determination are likely. Thus, if the current process remains on track, September of
366 2013 is the earliest a final determination will become available.

367 **Q: When will the cost impact of EPA action be known?**

368 A: When the final rule is published.

369 **III. CONCLUSION AND RECOMMENDATION**

370 **Q: Please provide your conclusion and recommendation.**

371 A: PacifiCorp has requested preapproval of the costs of the SCR systems for Bridger Units 3
372 and 4 under Utah Statute 54-17-402. The statute allows a utility company to seek
373 preapproval of a resource acquisition decision before expending the funds. However, the
374 request is voluntary and denial of the voluntary request by the Commission does not
375 restrain the Company's future actions.

376 WRA agrees with the Office of Consumer Services that for this statute to be used
377 appropriately, "preapproval must be based on a clear demonstration of benefits."¹¹

378 Otherwise the regulatory bargain is strained. The Company is in effect requesting the
379 Commission to make determinations that it is not best suited to make.

380 Given the uncertainty in this case; given that the analysis provided is not clear-cut, has
381 undergone extensive revisions, and is extremely sensitive to modeling assumptions; and

¹¹OCS-2D Murray, 59-60.

382 given that certain critical pieces of information are still in flux, it appears that customer
383 interests are best protected by denying the current voluntary request for preapproval.

384 For the foregoing reasons I recommend the Commission deny the request.

385 **Q: Does this conclude your testimony?**

386 **A:** It does.