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December 19, 2018

***VIA ELECTRONIC FILING
AND OVERNIGHT DELIVERY***

Utah Public Service Commission
Heber M. Wells Building, 4th Floor
160 East 300 South
Salt Lake City, UT 84114

Attention: Gary Widerburg
Commission Secretary

RE: **Docket No. 18-035-01 - Application of Rocky Mountain Power to Decrease the Deferred EBA Rate through the Energy Balancing Account Mechanism**

Rocky Mountain Power hereby submits its response to the audit report and direct testimony of the Utah Division of Public Utilities filed on November 15, 2018. As requested by the Utah Public Service Commission, Rocky Mountain Power is also providing seven (7) printed copies of the filing via overnight delivery.

Rocky Mountain Power respectfully requests that all formal correspondence and requests for additional information regarding this filing be addressed to the following:

By E-mail (preferred): datarequest@pacificorp.com
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Informal inquiries may be directed to Jana Saba at (801) 220-2823.

Sincerely,

Joelle Steward
Vice President, Regulation

cc: Service List

Rocky Mountain Power
Docket No. 18-035-01
Witness: Michael G. Wilding

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Response Testimony of Michael G. Wilding

December 2018

1 **Q. Please state your name, business address and present position with PacifiCorp,**
2 **dba Rocky Mountain Power (“the Company”).**

3 A. My name is Michael G. Wilding. My business address is 825 NE Multnomah Street,
4 Suite 600, Portland, Oregon 97232. My title is Manager, Net Power Costs.

5 **Q. Are you the same Michael G. Wilding who submitted direct testimony on behalf**
6 **of the Company in this proceeding?**

7 A. Yes.

8 **Q. What is the purpose of your response testimony?**

9 A. My testimony responds to certain issues raised by the Utah Division of Public Utilities
10 (“DPU”) in its energy balancing account (“EBA”) Audit Report and by Daymark
11 Energy Advisors (“Daymark”), on behalf of the DPU. Specifically, I address the
12 replacement power costs calculated by Daymark for the proposed adjustment related to
13 plant outages, the system overhead (“SO”) allocation factor used to determine Utah’s
14 share of the Incremental Non-Fuel FAS 106 Savings, and the proposed changes to the
15 Energy Risk Management (“ERM”) Policy. I also provide a small update to an item
16 addressed in my direct testimony.

17 **Q. Do any other Company witnesses also provide testimony in response to issues**
18 **raised by the DPU and Daymark?**

19 A. Yes. Company witness Mr. Dana M. Ralston provides testimony responding to the
20 proposed adjustments related to plant outages. Mr. Ralston explains that the Company
21 was prudent in its operations and management of its thermal generation plants.

22

REPLACEMENT POWER COSTS

23 **Q. Please describe the proposed adjustment for plant outages.**

24 A. Daymark recommends removing replacement power costs from the EBA for seven
25 plant outages, which it claims were imprudent.

26 **Q. Does the Company agree the replacement power for plant outages should be**
27 **disallowed?**

28 A. No. Company witness Mr. Ralston provides detailed testimony explaining that the
29 Company prudently operates its thermal generation plants and there should be no
30 disallowance for the identified plant outages.

31 **Q. Does the Company agree with Daymark's calculation of the replacement power**
32 **costs?**

33 A. Yes, the methodology used by Daymark to calculate the replacement power costs is
34 reasonable.

35

INCREMENTAL NON-FUEL FAS 106 SAVINGS

36 **Q. Please describe the adjustment to the Incremental Non-Fuel FAS 106 Savings**
37 **proposed by the DPU.**

38 A. The Incremental Non-Fuel FAS 106 Savings is related to the settlement of the Deer
39 Creek Retiree Medical Obligation and the resulting reduced expense. This expense
40 reduction is allocated to Utah using the SO allocation factor. In its initial filing the
41 Company used the SO factor from the 2016 Results of Operations report. The DPU
42 recommends updating the Utah allocation of the cost savings by using the 2017 SO
43 allocation factor.

44 **Q. Does the Company accept the DPU's adjustment to the Incremental Non-Fuel FAS**
45 **106 Savings to use the 2017 SO allocation factor?**

46 A. Yes. Additionally, the Company will ensure that the current SO allocation factor is used
47 in future filings where applicable.

48 **ENERGY RISK MANAGEMENT POLICY CHANGES**

49 **Q. Please summarize the changes Daymark proposes to make to the ERM Policy.**

50 A. As part of Daymark's review of a sample of PacifiCorp's front office transactions a
51 trade was discovered where a clerical error resulted in the trade being entered under a
52 trader who did not have the appropriate authority limits. Daymark agreed with the
53 Company that this situation was a clerical error and not a breach of the ERM Policy. In
54 response to this error, the Company implemented a new detective control to review a
55 weekly exception report that identifies any trades that exceed a trader's authorized
56 limits and to investigate any such trades. Daymark proposes the newly implemented
57 control be formally adopted in the ERM Policy and that the results of any investigations
58 including any resulting actions be reported to the Risk Oversight Committee.

59 **Q. Does the Company agree with the proposed changes?**

60 A. Yes. The Company will work with the DPU and Daymark to adopt in the ERM Policy
61 language similar to what Daymark proposed in its audit report. Additionally, the
62 Company will report to the Risk Oversight Committee, when necessary, the results of
63 the investigations including any actions taken as a result of the investigations.

64 **Q. Do you have any other items you would like to address in your response testimony?**

65 A. Yes. My direct testimony described an adjustment to the EBA for a non-generation
66 agreement with a special contract customer. Specifically, lines 180 – 182 of my direct

67 testimony state, “Due to the time sensitive nature of the non-generation agreement, a
68 formal agreement between parties has not yet been filed with the Commission, but
69 parties are planning to file one soon.”

70 **Q. Has a formal agreement been filed with the Commission?**

71 A. Yes. The formal agreement was finalized and filed with the Commission in Docket No.
72 16-035-33 on August 7, 2018, which was approved September 26, 2018.

73 **Q. Does this conclude your response testimony?**

74 A. Yes.

REDACTED

Rocky Mountain Power

Docket No. 18-035-01

Witness: Dana M. Ralston

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

REDACTED

Response Testimony of Dana M. Ralston

December 2018

1 **Q. Please state your name, business address, and present position with PacifiCorp**
2 **d/b/a Rocky Mountain Power (“the Company”).**

3 A. My name is Dana M. Ralston. My business address is 1407 West North Temple, Suite
4 210, Salt Lake City, Utah 84116. My title is Senior Vice President of Thermal
5 Generation and Mining.

6 **Q. Mr. Ralston, have you previously submitted direct testimony on behalf of Rocky**
7 **Mountain Power in this proceeding?**

8 A. No.

9 **Q. What is the purpose of your response testimony in this proceeding?**

10 A. I respond to the direct testimony of Mr. Philip DiDomenico and Mr. Dan F. Koehler of
11 Daymark Energy Advisors, Inc. (“Daymark”) and the Technical Report on the Energy
12 Balancing Account Audit for Rocky Mountain Power for Calendar Year 2017 (“Audit
13 Report”), filed on behalf of the Utah Division of Public Utilities. Specifically, I explain
14 and support the actions taken by the Company that demonstrate its prudence with
15 respect to the proposed generation plant outages identified in the Audit Report.

16 **QUALIFICATIONS**

17 **Q. Briefly describe your education and professional experience.**

18 A. I have a Bachelor of Science Degree in Electrical Engineering from South Dakota State
19 University. I am currently PacifiCorp’s Senior Vice President of Thermal Generation
20 and Mining. Prior to November 2017, I was the Vice President of Coal Generation and
21 Mining since March 2015, and Vice President of Generation from January 2010 to
22 March 2015. For 29 years before that, I held a number of positions of increasing
23 responsibility within Berkshire Hathaway Energy’s Generation organization, including

24 the plant manager position at the Neal Energy Center, a 1,600 megawatt generating
25 complex. In my current role, I am responsible for operating and maintaining
26 PacifiCorp's coal- and gas-fired generation fleet, coal fuel supply, and mining.

27 **Q. Have you testified in previous regulatory proceedings?**

28 A. Yes. I have testified in proceedings before the utility commissions in Utah, Oregon,
29 Washington, California, and Wyoming.

30 **SUMMARY OF TESTIMONY**

31 **Q. Please summarize your testimony.**

32 A. My testimony demonstrates that the Company was prudent in managing its plant
33 resources, and that the adjustment for the outages identified in the Audit Report are
34 unwarranted.

35 **GENERATION PLANT OUTAGES**

36 **Craig Unit 2 Outage**

37 **Q. What did Daymark conclude based on its review of the May 23, 2017 outage at**
38 **Craig Unit 2?**

39 A. Daymark states that the outage occurred after a hydrogen leak was discovered near the
40 #5 and #6 bearings, caused by a missing ¼ inch plug near the South side of the collector
41 bell end. It claims that the fact that the plug was missing shows a procedural failure and
42 general lack of concern by Tri-State Generation and Transmission ("Tri-State"), the
43 plant operator, and is cause for a disallowance. The calculated replacement power cost
44 associated with this outage is \$21,384.

45 **Q. Do you agree with the Daymark review and recommendation related to the Craig**
46 **Unit 2 Outage that the missed plug in question indicates a procedural failure that**
47 **could have been corrected?**

48 A. No. Daymark's claims are unreasonable. There are approximately 50 plugs around the
49 perimeter of the channel seal on the collector end of the generator. These plugs were
50 used to put a Dow Corning Sealant Compound into the channel which essentially makes
51 a flexible O-ring. Tri-State hired General Electric ("GE") as the contractor who in-turn
52 hired sub-contractor APM (millwrights) to remove/install the plugs. The process starts
53 by removing the first two plugs for installation of the applicator and applying Dow
54 Corning Sealant Compound. The first plug is then re-installed and the next plug in
55 sequence is pulled until all plugs around the seal have been removed, sealant compound
56 applied, and re-installed. The plugs are then tightened (torque not required) and
57 pressure-tested to verify the seal integrity. Following this maintenance, Craig Unit 2
58 generator was pressurized to 48 psi which maintained pressure for 24 hours with no
59 indication of leaks. The generator was put into service where it ran for 24 hours before
60 any indication of a hydrogen leak. During inspection to identify the cause of the
61 hydrogen leak, it was discovered that one of the plugs was missing and is believed to
62 have vibrated out after the unit was returned to service. GE admitted fault and paid for
63 all the labor to tear apart the hydrogen seal/collector end brushes, identify the leak, fix
64 the leak, and re-assembly to get Craig Unit 2 generator back online.

65 **Q. What is your recommendation to the Commission with respect to the adjustment**
66 **proposed by Daymark?**

67 A. The Craig Unit 2 outage was the direct result of GE's sub-contractor's (APM) failure

68 to correctly tighten all of the plugs and not the lack of established procedures and
69 practices as Daymark claims. GE has taken responsibility for the incident, corrected
70 known deficiencies in a timely manner, and paid for costs associated with its sub-
71 contractor's mistake. Therefore, I respectfully recommend that the Commission reject
72 the adjustment proposed by Daymark.

73 **Q. Do you have any other concerns with Daymark's characterizations of "Third**
74 **Party Operators," in Section 3 of the Audit Report?**

75 A. I agree that PacifiCorp's policy of using significant event reporting at its plants, and
76 documenting root cause analysis soon after an event, is useful for learning from
77 mistakes and avoiding repeat occurrences, as suggested in the Audit Report. This is
78 why PacifiCorp uses these tools. I disagree, however, with the implied conclusion in
79 Section 3, that PacifiCorp could require Tri-State to use the exact same documentation
80 tools as used by PacifiCorp. Tri-State is not a "contractor" in the manner suggested by
81 Daymark. Instead, PacifiCorp and Tri-State are co-owners of Craig Unit 1 and Unit 2
82 (with three other entities as co-owners also). Under the controlling Participation
83 Agreement between all of the co-owners, Tri-State is the operating agent for Craig
84 Units 1 and 2, making it responsible for daily operations. PacifiCorp diligently
85 participates with all of the co-owners to coordinate Tri-State's actions as operating
86 agent, especially through regular involvement in the committees established by the
87 Participation Agreement. As a co-owner and a member of governing committees,
88 PacifiCorp, as a minority owner (19.28 percent ownership in both Unit 1 & Unit 2,
89 12.86 percent ownership in the common facilities), does not have unilateral authority
90 to force Tri-State to use any particular type of documentation for event reporting.

91 Tri-State has agreed to implement an outage reporting procedure by January 31, 2019.
92 They also started creating reports for 2018 which includes events requested by
93 PacifiCorp.

94 PacifiCorp has certain rights under the Participation Agreement to obtain
95 information from Tri-State regarding operations at the Craig plant, and PacifiCorp
96 exercises such rights as necessary and appropriate. PacifiCorp diligently manages its
97 relationship with Tri-State with respect to the Craig plant and the actions by the
98 Company were prudent with the best interests of customers in mind. Daymark's view
99 that the Company can dictate to Tri-State how to perform the work is incorrect and
100 shows a lack of understanding of joint owned contractual agreements of plants. As
101 stated above, Tri-State has agreed to implement an outage reporting procedure by
102 January 31, 2019.

103 **Dave Johnston Unit 3 (April 25, 2017) Outage**

104 **Q. What did Daymark conclude based on their review of the April 25, 2017 outage at**
105 **Dave Johnston Unit 3?**

106 A. The April 25, 2017 outage at Dave Johnston Unit 3 occurred due to several failures
107 along the leading edge of the reheat superheater. Daymark points to Metallurgical
108 reports, which indicate that the failure was caused by use of incorrect tubing material,
109 SE-213 T11 as opposed to SA-209 T1a. Daymark concluded that this was unacceptable
110 and recommends a disallowance associated with this outage of \$265,673 in
111 replacement power costs.

112 **Q. Do you agree with the Daymark review and recommendation related to the Dave**
113 **Johnston (Dave Johnston) Unit 3 Outage on April 25, 2017?**

114 A. I agree that the non-conforming material replacement in question could have been a
115 contributor to the failure. However, the use of the specific non-conforming SA-209 T1a
116 tubing in the U3 Reheat (“RH”) outlet pendant was an anomaly that was installed over
117 20 years ago. The SA-209 T1a tubing material that was installed lasted for a minimum
118 of 20 years which is well within acceptable operation expectations for the material. The
119 Company recognizes that non-conforming material was installed due to significantly
120 different standards and processes that were in place over 20 years ago. As these
121 standards, codes, and records have improved, PacifiCorp plants have and will continue
122 to adopt these best practices to ensure our plant equipment life is maximized.

123 To demonstrate that the performance of the Dave Johnston plant has improved,
124 a review of repairs of the Unit 3 RH outlet pendants over the past 15 years showed that
125 the standard of like/kind materials has and will continue to be used maximizing plant
126 equipment life. Additionally, the 2019 scheduled overhaul has significant work planned
127 so the potential for more tube failures will be minimized.

128 Daymark references a statement from the Intercontinental Exchange
129 Corporation (“IEC”) that recommends the Company limit the use of explosive
130 deslagging, consider the use of a less aggressive (slower) detonation cord, or allow for
131 a greater standoff between tubes and the detonation cord. Daymark implies that IEC’s
132 recommendation refers to the April 25, 2017 outage. However, the tube discussed by
133 IEC in this recommendation relates to a different outage, but was evaluated in the same
134 report. Furthermore, the primary reason the Company uses explosive deslagging is for

135 the safety of our personnel who enter the boiler by using explosives to knock down
136 potential falling slag deposits.

137 The Company has prudently implemented best practices in a timely manner as
138 they have been developed. For example, prior to the utilization of contractors for
139 deslagging, Dave Johnston utilized a Company blasting crew. At that time, explosives
140 with higher power and velocity were used for deslagging the boilers. As information
141 became available that these methods could have a detrimental effect on boiler tubing,
142 the use of a less aggressive detonation cord was mandated. The Dave Johnston plant
143 implemented best practices by hiring Rocky Mountain Specialty Services as a
144 contractor in order to confirm that the Dyno Nobel detonation cord used at the Dave
145 Johnston plant has the slowest pressure transient development in the industry. The Dave
146 Johnston Plant has utilized the same blasting contractor and the scope of work since
147 2011 which requires the use of low velocity detonation cord and cast boosters.

148 **Q. What is your recommendation to the Commission with respect to the adjustment**
149 **proposed by Daymark?**

150 A. The plant outage was the result of a Unit 3 RH outlet pendant leak likely caused by
151 non-conforming material that was used over 20 years ago. Processes, standards, and
152 codes have significantly changed and the Company has prudently implemented the
153 changes. A 15-year review of the Dave Johnston Unit 3 demonstrates conformance for
154 the RH outlet pendants. The Dave Johnston plant has also incorporated solutions based
155 on IEC's feedback by implementing the use of low velocity detonation cord and cast
156 boosters, all while ensuring the focus on safety is maintained. I respectfully recommend
157 that the Commission reject the adjustment proposed by Daymark.

158 **Dave Johnston Unit 3 (September 19, 2017) Outage**

159 **Q. What did Daymark conclude based on their review of the September 19, 2017**
160 **outage at Dave Johnston Unit 3?**

161 A. The outage at Dave Johnston Unit 3 occurred due to several failures in the reheat
162 superheater. Daymark points to Metallurgical reports, which indicated a similar cause
163 to the April 25, 2017 outage related to blasting. Daymark claims that this outage was a
164 repetitive event caused by the Company's lack of attention to changing its deslagging
165 practices, as recommended by IEC. The calculated replacement power cost associated
166 with this outage is \$705,475.

167 **Q. Do you agree with the Daymark review and recommendation related to the Dave**
168 **Johnston Unit 3 Outage on September 19, 2017? If not, why not?**

169 A. No. Once again, the Company disagrees with Daymark's claims that the Dave Johnston
170 plant event was essentially a repeat of the April 25, 2017 event due to the Company's
171 lack of attention regarding its deslagging practices. Daymark's statements lack the
172 understanding of explosive deslagging practices and impacts to the Units. The degree
173 of damage from explosive deslagging will be dependent on the high strain rate loading
174 to the tube material, as generated by the explosive, and the degree of temper
175 embrittlement (occurs in the 700 F to 1000 F range) of the tube material. Since neither
176 of these characteristics can be fully defined at the time the event occurs, the degree of
177 damage cannot be quantified. Therefore it is not possible to attribute the failure that
178 occurred on September 19, 2017, to any specific explosive deslagging event. The
179 blasting procedures currently in place will have little to no impact on remaining tube
180 life.

181 As discussed above, PacifiCorp prudently implemented new best practices in a
182 timely manner. The Dave Johnston Plant has utilized the same blasting contractor and
183 the scope of work since 2011, which utilizes low velocity detonation cord and cast
184 boosters.

185 **Q. What is your recommendation to the Commission with respect to the adjustment**
186 **proposed by Daymark?**

187 A. Daymark's claims that the lost generation is due to the Company not considering the
188 use of less aggressive (slower) detonation practices is unfounded. The Company has
189 demonstrated prudence in modifying its practices to require the use of Dyno Nobel
190 detonation cords for deslagging operations while maintaining safety. I respectfully
191 recommend that the Commission reject the adjustment proposed by Daymark.

192 **Huntington Unit 1 Outage**

193 **Q. What did Daymark conclude based on its review of the May 3, 2017 outage at**
194 **Huntington Unit 1?**

195 A. Huntington Unit 1 was taken offline due to a boiler tube leak. Daymark states that the
196 failure was the fourth failure since 2008, and that the Company's plan to address the
197 issue in the major overhaul scheduled for 2022 is not acceptable. The calculated
198 replacement power cost associated with this outage is \$80,391.

199 **Q. Do you agree with the Daymark review and recommendation relating to the**
200 **Huntington Unit 1 outage?**

201 A. No. The Company does not dispute Daymark's claims that this is a known potential
202 issue. However, Daymark's claims that waiting fourteen years and multiple overhaul
203 cycles to address a known industry problem warrants a disallowance is not reasonable.

204 There are over 600 of these welds in the outlet of the reheater and the costs to review
205 each to check for this issue would largely outweigh the benefits. The four failures, noted
206 by Daymark, represent a less than 1 percent failure rate. The Company strongly
207 believes it is not prudent to make an expensive full replacement decision with less than
208 1 percent failure rate. Even though the dissimilar metal weld is a potential issue, the
209 Company must balance the need to remedy the issue with its fiduciary responsibility to
210 customers to optimize the utilization of its assets, which includes scheduling
211 replacements appropriately. In scheduled overhauls, inspection data and tube samples
212 are taken to conduct examination of the welds. The Company documents the condition
213 of the dissimilar metal welds and conducts analysis for predicted remaining life. With
214 this information, the Company can more confidently plan for the component
215 replacements in the future. The decision by the Company to gather this data during
216 planned unit overhauls is prudent and in the best interests of our customers.

217 **Q. Do you believe that the duration of the outage was excessive?**

218 A. No. The Company initiated a plan immediately with a contractor to cool the boiler for
219 safe entry. The Company worked diligently to expedite the cooling by placing
220 temporary fans in the area. Even with these extra measures it took 36 hours to cool
221 down the penthouse for safe entry. This is a typical time allotment for that area of the
222 boiler in order to complete the tube weld repair in a safe and timely manner.

223 **Q. What is your recommendation to the Commission with respect to the adjustment**
224 **proposed by Daymark?**

225 A. The lost generation was a result of a boiler tube leak due to a component failure and
226 not a procedural failure on the part of the Company or its contractors. I respectfully

227 recommend that the Commission reject the adjustment proposed by Daymark.

228 **Jim Bridger Unit 2 Outage**

229 **Q. What did Daymark conclude based on its review of the January 17, 2017 outage**
230 **at Jim Bridger Unit 2?**

231 A. The Jim Bridger Unit 2 outage occurred due to water freezing in the water-cooled
232 spacer tubing during a shutdown to repair the Submerged Drag Chain Conveyor. When
233 the unit was restarted after the drag chain shutdown, the water-cooled spacer tubing
234 failed in various places due to a flow blockage caused by ice. Additionally, the heat
235 tracing on the supply line on the water-cooled spacer appeared to be inoperable. To fix
236 the issue, two failed sections of the spacer at the front Reheater assemblies and one
237 failed section at the Superheater platen assemblies were replaced. The spacer tubes
238 were cut and the ice blockage was melted. To ensure no further blockage remained, the
239 spacer tubes were flow-checked. Daymark points to the heat tracing equipment,
240 claiming the Company should have known the equipment was inoperable. The
241 calculated replacement power cost associated with this outage is \$132,375.

242 **Q. Do you agree with Daymark’s review and recommendation relating to the Jim**
243 **Bridger Unit 2 outage?**

244 A. No. The Company had processes in place to inspect heat tracing to verify operation,
245 but the process had a void in it that resulted in this failure to not be identified so repair
246 work could be completed. Changes have been made to the process to avoid a
247 reoccurrence. The changes are listed below.

- 248 • The heat trace preventative maintenance (“PM”) now instructs the Control and
249 Electrical Technician to write a work order to correct any deficiencies found during

250 the PM. The completed PM is routed to the Electrical Supervisor or Planner for
251 review before the work order is closed out.

252 • Capital projects have been established to replace the heat trace on all four Jim
253 Bridger units. The heat trace on the spacer tube supply line was replaced as part of
254 a capital project on Unit 1 in 2018.

255 • To mitigate the risk of line freezing, plant personnel have evaluated if there is
256 positive slope in the horizontal sections of the spacer tube supply lines. Where the
257 positive slope did not exist, modifications have/will be made to ensure water will
258 not pool when the boiler is drained (eliminate freezing concerns). This work has
259 been completed on Units 1 and 2. Work orders have been created to complete the
260 work on Units 3 and 4 (requires Unit to be offline).

261 • Plant personnel have modified the boiler shut down procedure to drain the boiler
262 when the water temperature reaches 180 degrees rather than waiting until blasting
263 and deslagging efforts are complete.

264 **Q. What is your recommendation to the Commission with respect to the adjustment**
265 **proposed by Daymark?**

266 A. The Company was prudent in that processes were in place to verify heat tracing
267 operation but a gap in the process was discovered. Gaps are an on-going risk within
268 any organization and the Company's management was prudent by implementing
269 adequate corrective actions when the gap was investigated. This event was not a lack
270 of prudence but the discovery of a gap in a procedure. I respectfully recommend that
271 the Commission reject the adjustment proposed by Daymark.

272 **Jim Bridger Unit 3 Outage**

273 **Q. What did Daymark conclude based on its review of the October 13, 2017 outage**
274 **at Jim Bridger Unit 3?**

275 A. The Jim Bridger Unit 3 outage occurred due to water from a broken flange at the Central
276 Deluge House of the Unit 1 Cooling Tower, which flooded the underground wire vault.
277 The cable faults were located in the conduit between manhole #7 at the Unit 1 Cooling
278 Tower and manhole #8 at the Unit 2 Cooling Tower. The cables may have failed due to
279 age and damage received during an initial pull in the 1970s. Daymark claims that the
280 cable damage that might have occurred over 40 years ago is avoidable and therefore
281 recommends a disallowance of \$21,505 in replacement power cost associated with this
282 outage.

283 **Q. Do you agree with the Daymark review and recommendation relating to the Jim**
284 **Bridger Unit 3 Outage?**

285 A. No. Daymark claims that, irrespective of when the damage to the conductors occurred,
286 it was avoidable. The cables in question have been in place for approximately 40 years
287 and have functioned correctly over that period. To say that although a cable which
288 functioned for 40 years until an aggravating event brought to light the damage that
289 occurred during the initial construction of the unit 40 years ago warrants a disallowance
290 is unreasonable and unrealistic. There was no indication during the course of normal
291 operation of the plant that the cable had been damaged prompting the need for any
292 corrective action. Only when the cable vault and conduit that housed the damaged cable
293 became flooded was an electrical path to ground established.

294 **Q. What is your recommendation to the Commission with respect to the adjustment**
295 **proposed by Daymark?**

296 A. While subsequent removal of the original 40 year old cable revealed the damage to the
297 cabling to be the root cause, there was nothing that previously warranted any
298 investigative need to evaluate the condition of the cabling before the October 13, 2017
299 event and thus should not be considered avoidable and disallowed.

300 **Dave Johnston Unit 4 Outage**

301 **Q. What did Daymark conclude based on their review of the March 17, 2017 outage**
302 **at Dave Johnston Unit 4?**

303 A. During a planned outage at Dave Johnston Unit 4 to replace a Control Rotor Main Oil
304 Pump Impeller, it was discovered that the wrong impeller had been installed and the
305 control rotor had to be sent back to be corrected, causing an extension of the planned
306 outage. Daymark claims this procedural failure warrants a disallowance of replacement
307 costs of \$728,023.

308 **Q. Do you agree with the Daymark review and recommendation relating to the**
309 **Naughton Unit 2 outage on May 28, 2016? If not, why not?**

310 A. No. The Root Cause Analysis (“RCA”) performed by MD&A confirms this event was
311 not a procedural failure. Along with the RCA, effective corrective actions have been
312 implemented to ensure these type of events are eliminated.

313 The Dave Johnston Unit 4 turbine control rotor assembly was incorrectly
314 installed by the MD&A shop before shipping back to the Dave Johnston Plant site.
315 Once the equipment was on Dave Johnston plant site, this mistake was identified by
316 MD&A’s on-site manager who noticed the error and informed the Dave Johnston plant

317 staff. MD&A immediately scheduled priority shipping to return the turbine control
318 rotor assembly back to their shop to address the error (the turbine control rotor had to
319 be returned to the repair shop because the impeller is press fitted onto a stub shaft and
320 the Dave Johnston plant does not have this capability). When the control rotor impeller
321 and shaft assembly was fixed, MD&A again used priority shipping to get the assembly
322 back to Dave Johnston for installation.

323 Following the event, a RCA was done to determine what happened and what
324 could be done to prevent future occurrences. MD&A explained that the error was due
325 to their repair shop having an increased amount of work from several other utilities at
326 the same time. MD&A determined the root cause was that MD&A had recently
327 increased the repair shop's capacity for work, however, they had not yet caught up with
328 fully staffing appropriately. Corrective actions implemented included MD&A
329 increasing their repair shop staff and a process was implemented to review and improve
330 their quality control program.

331 The Company diligently managed MD&A and the processes in place. This
332 incident was the result of a human error and not due to imprudence. As stated above
333 this error was discovered during a secondary check, a prudent control to avoid
334 potentially greater loss, before the machine was assembled and was worked on an
335 expedited basis by MD&A. The Company acted prudently when managing this work.

336 **Q. What is your recommendation to the Commission with respect to the Dave**
337 **Johnston plant proposed by Daymark?**

338 A. This incident was the result of a human error and not due to imprudence. As stated
339 above this error was discovered during a secondary check before the machine was

340 assembled and was worked on an expedited basis by MD&A. The Company acted
341 prudently when managing this work and avoided the potential of greater loss. MD&A
342 has taken responsibility for the incident, corrected known deficiencies in a timely
343 manner, and paid for costs associated with shipping and restoration of the incorrectly
344 installed turbine control rotor assembly. I respectfully recommend that the Commission
345 reject the Dave Johnston adjustment proposed by Daymark.

346 CONCLUSION

347 **Q. Do you have any closing remarks with respect to Daymark's recommended**
348 **changes?**

349 A. PacifiCorp's generating fleet availability is significantly better than the industry
350 average which has benefited our customers. In 2017 PacifiCorp's coal fleet had an
351 equivalent availability of [REDACTED] percent compared to a North American Electric
352 Reliability Corporation average for a similar sized fleet of [REDACTED] percent. This is value
353 our customer receive. Daymark's recommendations are based on 20/20 hindsight and
354 assumes an unrealistic standard of perfection and not a standard of prudence.
355 PacifiCorp operates its fleet in a prudent manner and the fleet availability and cost
356 history shows that this provides significant value for our customers. Daymark's
357 recommendations should be rejected by the Commission.

358 **Q. Does this conclude your response testimony?**

359 A. Yes.

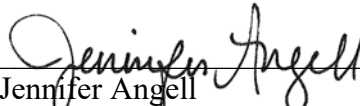
CERTIFICATE OF SERVICE

Docket No. 18-035-01

I hereby certify that on December 19, 2018, a true and correct copy of the foregoing was served by electronic mail and overnight delivery to the following:

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