

January 5, 2021

#### VIA ELECTRONIC FILING

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

Attention: Gary Widerburg

Commission Administrator

RE: **Docket No. 20-035-01** 

Application to Increase the Deferred Rate through the Energy Balancing Account

Mechanism

Rocky Mountain Power Rebuttal Testimony

In accordance with the Scheduling Order and Notice of Hearing issued by the Utah Public Service Commission ("Commission") on March 31, 2020, PacifiCorp, d.b.a. Rocky Mountain Power, hereby submits for electronic filing its rebuttal testimony in the above referenced matter.

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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Utah Public Service Commission January 5, 2021 Page 2

Informal inquiries may be directed to Jana Saba at (801) 220-2823.

Sincerely,

Joelle Steward

Vice President, Regulation

cc: Service List – Docket No. 20-035-01

# **CERTIFICATE OF SERVICE**

Docket No. 20-035-01

I hereby certify that on January 5, 2021, a true and correct copy of the foregoing was served by electronic mail to the following:

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	Rocky Mountain Power
	Docket No. 20-035-01
	Witness: Dana M. Ralston
BEFORE THE PUBLIC SERVICE CO	OMMISSION
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January 2021	

1	Q.	Are you the same Dana M. Ralston who previously filed response testimony in this
2		proceeding on behalf of PacifiCorp, d.b.a. Rocky Mountain Power
3		("the Company")?
4	A.	Yes.
5		PURPOSE OF TESTIMONY
6	Q.	What is the purpose of your testimony in this case?
7	A.	My testimony responds to the response testimony of Mr. Philip Hayet who submitted
8		testimony on behalf of the Office of Consumer Services ("OCS" or "Office") in support
9		of the Division's recommended adjustments for replacement power costs associated
10		with three outages.
11	Q.	For which three outages does Mr. Hayet expressly support the Division's
12		recommended disallowance?
13	A.	Mr. Hayet supports the Division's recommended disallowance of replacement power
14		costs from the energy balancing account related to the outages at Lake Side 2 Unit 3 on
15		August 18, 2019, Dave Johnston 1 on February 18, 2019 and Wyodak on June 6, 2019.
16	Q.	Does the Company agree with any of the adjustments supported by the Office?
17	A.	Yes. In response testimony, the Company agreed to the adjustment proposed by the
18		Division related to the outage at Wyodak. The remainder of my testimony will address
19		Mr. Hayet's testimony related to the Lake Side 2 and Dave Johnston outages.
20	Lake S	Side 2 Unit 3
21	Q.	What did the Commission find with respect to the Lake Side 2 Unit 3 outage in its

23 A. The Commission rejected similar arguments by the Office in support of its

recent order on the general rate case in Docket No. 20-035-04 ("GRC")?

24 recommendation to disallow the repair costs associated with the Lake Side 2 Unit 3 25 outage. On December 30, 2020, the Commission issued an order that found the 26 Company's actions to be prudent. Specifically the order states: 27 We find RMP has provided substantial evidence it has operated and 28 maintained Lake Side 2 Unit 3 prudently. Significantly, RMP followed 29 prudent practices by performing an RCA. There is nothing in the 30 completed RCA that identifies negligent or imprudent actions as a likely cause of this outage. Rather, we see evidence that RMP engaged 31 32 qualified expert companies to develop, perform, and/or recommend 33 procedures to operate this plant.<sup>1</sup> The Office has not offered any new evidence that would justify the Commission 34 35 deviating from its decision in the GRC in this proceeding. 36 Mr. Hayet states: "PacifiCorp failed to identify the cause of a similar Lake Side Q. 37 outage in 2009 and now that another, similar outage has occurred, PacifiCorp is 38 clearly deficient due to its failure of having identified the cause of the first outage. 39 Had PacifiCorp performed a second root cause analysis (RCA) for the 2009 event, 40 the resulting information may have prevented the outage in dispute in the instant 41 proceeding from occurring."<sup>2</sup> Is this accurate? 42 A. No. Mr. Hayet assumes that a second RCA would have found an actual root cause as 43 the RCA performed by the original equipment manufacturer ("OEM") in 2009 was

<sup>1</sup> Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations, Docket No. 20-035-04, Order at 35-36 (Dec. 30, 2020).

inconclusive. This statement also assumes that if a second RCA was performed, the

root cause "may have prevented" the 2019 outage, which is incorrect as the events are

different including initiating conditions.

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<sup>&</sup>lt;sup>2</sup> Response Testimony of Philip Hayet for the Office of Consumer Services (December 10, 2020) ("Hayet Testimony") at 5, lines 110-114.

- Q. Please describe the 2019 and 2009 Lake Side events and explain how they are different.
- As described in my response testimony, on August 18, 2019, the Lake Side Block 2

  Steam Turbine Generator ("STG") experienced an electrical fault that melted a portion

  of the generator stator core beyond repair.<sup>3</sup>

To contrast with the 2009 Lake Side outage event, in 2009 the Lake Side STG10 was operating at approximately 220 megawatts ("MW") for over an hour and load was being reduced to a target setpoint of 165 MW when the unit tripped offline due to 87U differential relay operation. The differences between the two outages is highlighted in Figures 1 and 2 provided in Confidential Exhibit RMP\_(DMR-1R). The failure originated in the series connections, which are exterior to the core of the generator, unlike the 2019 outage that originated approximately 85 millimeters beneath the surface of the core as seen in Figure 2. The series connections were not implicated in the 2019 failure. The 2009 fault started with a coil-to-coil arcing of phase C which then evolved into a three-phase fault, as shown in Figure 1 of Confidential Exhibit RMP\_(DMR-1R). This was different from the phase-to-core fault originating in phase B that occurred in 2019.

# Q. Was an RCA completed in 2019 and what were the findings?

A. Yes. As described in my Response Testimony, Siemens, the OEM, conducted an RCA,
 which was inconclusive.<sup>4</sup>

# Q. Was an official RCA completed in 2009 and what were the findings?

68 A. Yes. As with the 2019 outage, the Company hired the OEM, Siemens to conduct an

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<sup>&</sup>lt;sup>3</sup> Response Testimony of Dana Ralston (December 10, 2020) ("Ralston Response") Page 7, lines 140-152.

<sup>&</sup>lt;sup>4</sup> Ralston Response at page 8, lines 153-167.

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		RCA, which was also inconclusive. The 2009 RCA evaluated 33 possible causes, of
70		which the most likely causes fell into four categories: 1 – General Overall or System
71		Issues, 2 – Potential Issues with the Magnetic Core, 3 – Potential Issues with the Stator
72		Winding, and 4 – Possible Foreign Object Scenarios.
73	Q.	Do you agree with Mr. Hayet's testimony in which he asserts that "this type of
74		problem occurred before at one of the Lake Side Generating units" <sup>5</sup> in reference
75		to the 2009 event?
76	A	No. As I described above, even though the 2009 and 2019 outages both related to the
77		generators and the respective RCAs were inconclusive, the failure types and locations
78		within the generator are very different.
79	Q.	Is Mr. Hayet's statement regarding the 2019 event's "cause was most likely due to
79 80	Q.	Is Mr. Hayet's statement regarding the 2019 event's "cause was most likely due to a foreign object having been left in the winding area of the generator" of the
	Q.	·
80	Q.	a foreign object having been left in the winding area of the generator" of the
80 81		a foreign object having been left in the winding area of the generator" of the failure correct?
80 81 82		a foreign object having been left in the winding area of the generator" of the failure correct?  No. The 2019 RCA, provided as Confidential Exhibit RMP_(DMR-2R), specifically
80 81 82 83		a foreign object having been left in the winding area of the generator" of the failure correct?  No. The 2019 RCA, provided as Confidential Exhibit RMP_(DMR-2R), specifically states that "No conclusive root cause was identified." All potential failure
80 81 82 83		a foreign object having been left in the winding area of the generator" of the failure correct?  No. The 2019 RCA, provided as Confidential Exhibit RMP_(DMR-2R), specifically states that "No conclusive root cause was identified." All potential failure scenarios were either "eliminated" or considered a "low probability." There is no
80 81 82 83 84		a foreign object having been left in the winding area of the generator" of the failure correct?  No. The 2019 RCA, provided as Confidential Exhibit RMP_(DMR-2R), specifically states that "No conclusive root cause was identified." All potential failure scenarios were either "eliminated" or considered a "low probability." There is no supporting evidence that something was left inside the machine, as Mr. Hayet implies.

<sup>&</sup>lt;sup>5</sup> Response Testimony of Philip Hayet for the Office of Consumer Services (December 10, 2020) ("Hayet Testimony") at 4, lines 92-93.

<sup>6</sup> Hayet Testimony at 2, lines 39-40.

<sup>&</sup>lt;sup>7</sup> 2019 RCA at 22-27.

89	Q.	What does Siemens consider a "foreign material / object" as it relates to the
90		analysis performed?
91	A.	Siemens' description of a foreign object is defined as 'material or an object located in
92		a space it does not belong.' It does not identify the object as being introduced by
93		workers; rather, it could be a bolt or another item inside the generator that broke off
94		and went through the machine. A foreign object is something that is not where it is
95		supposed to be according to the design.
96	Q.	In events where a foreign object / material failure is identified as the root cause, is
97		the originating foreign material typically found?
98	A.	Yes. Of the six major winding and core failures that Siemens identified in its RCA, four
99		of the failures did have conclusive root causes with three of them positively identifying
100		foreign material as shown in Figure 3 of Confidential Exhibit RMP_(DMR-1R).8 The
101		likelihood that an outage was due to foreign object damage which did not leave any
102		signs or evidence is unlikely.
103	Q.	Do you believe that the Company was negligent with regards to the 2019 outage
104		as Mr. Hayet states?
105	A.	No. The Company has demonstrated it has operated, maintained, and acted prudently
106		with respect to Lake Side 2 by: 1) operating the unit within design; 2) following OEM

with respect to Lake Side 2 by: 1) operating the unit within design; 2) following OEM recommendations; 3) providing oversight and being engaged with Siemens during maintenance activities; 4) using the OEM experts on this equipment to perform maintenance; and 5) following foreign material exclusion policies and procedures for both the Company and the OEM. All these actions demonstrate a concerted effort to

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<sup>&</sup>lt;sup>8</sup> 2019 RCA at 4.

111		ensure that the Company acted and continues to act prudently and in the best interest
112		of customers.
113	Q.	Has the Company taken additional steps to determine the cause of the Lake Side
114		2 outage?
115	A.	Yes. Due to the significance of the event and the fact the Company owns other
116		generators of the same model, the Company hired and is working with a neutral third-
117		party contractor to perform an additional RCA investigation in pursuit of a root cause.
118		This report is expected to be completed by middle of January 2021, though preliminary
119		results indicate no additional conclusions from that of the Siemens RCA.
120	Q.	Should the Company always be required to perform a second RCA if the first is
121		inconclusive?
122	A.	No. The Commission has previously stated that it does not "expect a utility to conduct
123		an RCA for every unplanned outage." It follows that if the Company does not have to
124		perform an RCA for every unplanned outage, it also does not have to conduct a second
125		RCA unless warranted by the facts and circumstances of a specific outage.
126	Q.	What is your recommendation to the Commission?
127	A.	I recommend that the Commission reject the disallowances for the Lake Side 2 outage
128		addressed above. My testimony demonstrates the Company was prudent in its actions.
129	Dave .	Johnston Unit 1
130	Q.	Please describe the outage at Dave Johnston Unit 1.
131	A.	On February 18, Dave Johnston Unit 1 was removed from service due to boiler draft
132		issues. The draft issue was corrected, but the unit remained offline while personnel

<sup>9</sup> Application of Rocky Mountain Power to Increase the Deferred EBA Rate through the Energy Balancing Account Mechanism, Docket No. 18-035-01, Order at 6 (March 12, 2019) ("2018 EBA Order").

investigated and worked to repair leaking seals on the 1B boiler feed pump ("BFP"). Inspection of the failed 1B BFP revealed that the internal volutes (the casing that receives the fluid being pumped by the impeller) had been installed backwards by a contractor in 2018, while the BFP was offsite at the contractor's facility.

Mr. Hayet testifies that the Dave Johnston Unit 1 outage should be disallowed Q. because the Company should be held responsible for its contractor's errors. 10 How do you respond?

The Company effectively manages its contractors as can been seen from the fleet's overall excellent performance. Requiring additional oversight of qualified contractors in an attempt to ensure zero issues would increase expense without generally providing a commensurate benefit. As the Commission recognized in the 2018 EBA Order, such a standard "might require expenses and personnel across a multitude of contractual relationships, potentially increasing costs in ways that are impossible for us to predict or calculate in this docket."11

What standard has the Commission used in the past to evaluate whether PacifiCorp acted imprudently when mistakes were made by contractors?

In the 2018 EBA, the Commission provided "relevant factors" for evaluating whether PacifiCorp acted prudently when a contractor made a mistake in performing work including: 1) the reasonableness and due diligence of PacifiCorp in entering the contractual relationship, including PacifiCorp's procurement process; 2) the level and effectiveness of PacifiCorp's ongoing management of the relationship, including administration, monitoring, and any necessary oversight; and 3) the propriety of the

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<sup>11</sup> 2018 EBA Order at 16.

<sup>&</sup>lt;sup>10</sup> Hayet Testimony at 8, Lines 156-175.

155 contractor's actions. 12

- 156 Q. How did PacifiCorp act reasonably when it hired a contractor to install the 157 internal volutes in the Dave Johnston Unit 1 boiler feed pump?
- 158 A. The Company selected the OEM to install the internal volutes because of their technical
  159 expertise with the equipment, which was beyond the technical expertise of plant
  160 maintenance personnel. The OEM had previously supported the maintenance
  161 requirements of the boiler feed pump with no issues. When the Company realized the
  162 OEM had not installed the volutes properly, it sought corrective measures from the
  163 contractor. It also has changed maintenance contractors as a result of this error.
  - Q. Why did the Company fail to negotiate with the contractor to reimburse it for replacement power costs that resulted from the contractor's mistake?
  - A. A provision requiring a contractor to reimburse the company for replacement power costs resulting from contractor error would result in a dramatic escalation in the contracted price of all work performed by contractors and could make the use of contractors cost prohibitive, even when it is the most efficient and prudent way to maintain a generating unit.
- 171 Q. Was the Company's monitoring and oversight of the OEM's work reasonable?
- 172 A. Yes. The company is actively engaged with contractors (in this case the OEM) from
  173 initial discussions on equipment challenges, best practice recommendations, what
  174 needs to be fixed, (scope) description of work to be completed, schedules for minimal
  175 impact to plant operations, procurement, and ultimately the repair of the equipment at
  176 the contractor's facilities. In the Dave Johnston Unit 1 outage, the internal volutes were

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<sup>&</sup>lt;sup>12</sup> *Id.* at 3.

177		installed backwards at the OEM's facility, and the boiler feed pump provided back to
178		the company for operation. Because these components are internal (pump must be taken
179		apart to view them) and the fact that the OEM is the expert, the company not only could
180		not see the volutes but also does not have the expertise to recognize they were installed
181		backwards.
182	Q.	What is your recommendation to the Commission?
183	A.	I recommend that the Commission reject the disallowances for the Dave Johnston Unit
184		1 outage addressed above. My testimony demonstrates the Company was prudent in its
185		actions.
186	Q.	Does this conclude your rebuttal testimony?
187	A.	Yes.

# REDACTED Rocky Mountain Power Exhibit RMP\_\_(DMR-1R) Docket No. 20-035-01 Witness: Dana M. Ralston BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF UTAH ROCKY MOUNTAIN POWER REDACTED Exhibit Accompanying Rebuttal Testimony of Dana M. Ralston 2009 & 2019 Lake Side Outage Comparison January 2021

# THIS EXHIBIT IS CONFIDENTIAL IN ITS ENTIRETY AND IS PROVIDED UNDER SEPARATE COVER

# REDACTED Rocky Mountain Power Exhibit RMP (DMR-2R) Docket No. 20-035-01 Witness: Dana M. Ralston BEFORE THE PUBLIC SERVICE COMMISSION OF THE STATE OF UTAH ROCKY MOUNTAIN POWER REDACTED Exhibit Accompanying Rebuttal Testimony of Dana M. Ralston 2019 Lake Side Outage Siemens Root Cause Analysis January 2021

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