

January 22, 2020

VIA ELECTRONIC FILING

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

Attention: Gary Widerburg
Commission Administrator

RE: **Docket No. 19-035-01 – Application of Rocky Mountain Power to Increase the Deferred EBA Rate through the Energy Balancing Account Mechanism**

Rocky Mountain Power hereby submits for filing its surrebuttal 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
utahdockets@pacificorp.com
jana.saba@pacificorp.com
yvonne.hogle@pacificorp.com

By regular mail: Data Request Response Center
PacifiCorp
825 NE Multnomah, Suite 2000
Portland, OR 97232

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

Sincerely,



Joelle Steward
Vice President, Regulation

cc: Service List

REDACTED

Rocky Mountain Power

Docket No. 19-035-01

Witness: Dana M. Ralston

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

REDACTED

Surrebuttal Testimony of Dana M. Ralston

January 2020

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. Are you the same Dana M. Ralston who previously submitted response testimony**
7 **in this proceeding on behalf of the Company?**

8 A. Yes.

9 **Q. What is the purpose of your surrebuttal testimony?**

10 A. My surrebuttal testimony responds to the rebuttal testimony of Mr. Philip DiDomenico
11 and Mr. Dan F. Koehler of Daymark Energy Advisors, Inc. (“Daymark”) and the
12 Technical Report on the Energy Balancing Account (“EBA”) Audit for Rocky
13 Mountain Power for Calendar Year 2018 (“Audit Report”), filed on behalf of the Utah
14 Division of Public Utilities.

15 **SURREBUTTAL TESTIMONY**

16 **Q. Which issues raised in Daymark's rebuttal testimony do you address?**

17 A. Daymark continues to recommend that approximately \$681,889 on a Utah-allocated
18 basis in replacement net power costs related to three outages be removed from the EBA.
19 My surrebuttal testimony objects to Daymark's claims that the Company acted
20 imprudently in any of these instances.

21 *Dave Johnston Unit 1 Outage (April 20, 2018)*

22 **Q. What was the root cause for the outage at Dave Johnston Unit 1 on April 20, 2018?**

23 A. As noted in the Root Cause Analysis (“RCA”) conclusion by N-Tec Services, LLC (“N-

24 Tec”), the root cause of this incident cannot be confirmed. N-Tec performed an in-depth
25 investigation on eight potential failure scenarios, and could not determine the true root
26 cause of the fire.

27 **Q. What does Daymark state is the basis for its recommendation to remove the**
28 **replacement power costs associated with this event?**

29 A. Daymark points to a section in the RCA called Additional Observations and concludes
30 that “in reviewing the N-Tec RCA it is difficult to read through the long list of
31 observations and deficiencies identified and come away with the conclusion that the
32 Company was prudent in its practices leading up to this event”.¹ As I stated in my
33 response testimony, the items listed in this section are opportunities for improvement
34 and not evidence that the Company was imprudent. The Company has requested that
35 N-Tec include such observations in its RCAs even though the observations have
36 nothing to do with the root cause so that it can improve its operations. Daymark ignores
37 the eight potential failure scenarios investigated and the conclusion that identifying the
38 root cause of the incident cannot be confirmed. The author of the RCA, Mr. Neal E.
39 Grabow, a Power System Consultant at N-Tec, provides surrebuttal testimony to clarify
40 the purpose of the Additional Observations section in the RCA and support the
41 Company’s assertion that those items did not contribute to the cause or duration of the
42 outage.

¹ Confidential rebuttal testimony of Philip DiDomenico and Dan F. Koehler, January 8, 2020, lines 37-40.

Lakeside 1 Unit 1 Outage (August 2, 2018)

Q. Do you agree with Daymark’s rebuttal testimony regarding the Lakeside 1 Unit 1 outage that occurred on August 2, 2018?

A. No. Daymark claims that, because the failure was due to cyclical fatigue, the predictability of this failure was foreseeable. The Company has not experienced similar failures on valve casings (weld point) at any of its other units with similar design. This includes units that are older than Lakeside Unit 1, so there was no reason to expect a failure at this weld location. In addition, discussions with the Original Equipment Manufacturer (“OEM”) revealed that they did not have any knowledge of a similar failure. Neither the Company nor the OEM could identify any documented cases of similar failures within the industry. The Company’s actions to repair failed welds and evaluations of possible impending weld failures are based on its historical operating experience, OEM communications addressing specific areas of concern (of which there were none in this case) and actual weld failures. Since there is no history of similar failures, the Company acted prudently and Daymark’s position that this event should have been somewhat predictable is incorrect.

Blundell Unit 2 Outage (December 26, 2018)

Q. Do you agree with Daymark’s rebuttal testimony regarding the Blundell Unit 2 outage that occurred on December 26, 2018?

A. No. The Company’s Blundell Unit 2 geothermal plant uses a turbine with isopentane as the primary drive medium. This is not a steam-driven or gas-fired turbine, which is typical to the Company’s other installations. While this technology has been around for several years, it was new to the Company when the plant was commissioned in 2007.

To mitigate risks, the Company entered into an engineering, procurement and construction (EPC) contract with CEntry which had significant experience with this type of equipment. CEntry subcontracted Ormat which was the OEM and considered a leader in the technology. Experts from both of these companies were involved with the testing and commissioning of this unit. The commissioning protocol, which was conducted in October 2007, included an overspeed trip test, which is the standard that Ormat follows for isopentane installations. This test was considered to be successful by both Ormat and CEntry since the turbine and generator did trip at the correct RPM setpoint as expected. The protocol also includes a regular trip test and restart. This is relevant because unit trips will use the same control logic for tripping the generator breaker. This regular trip test was also conducted in October 2007 with successful results.

The details of the trip logic have been presented in the RCA documentation from Veizades & Associates. As described in the RCA, it was determined that the installed control logic was configured in a manner that did not use the close signals from the main turbine valves. This allowed the trip signal to activate the generator breaker after the 3-second time delay. The intent was for the main turbine valves to close before the generator breaker disconnecting from the grid. As stated in the RCA “

.”² This was the case during

commissioning and up until the point of failure.

² See Blundell Unit 2 Generator Root Cause, Confidential DPU Data Request 6.1, 1st Supplemental, p.7.

88 Discussions with Ormat have confirmed that the commissioning protocol for
89 Ormat designed and built geothermal sites has remained the same. Ormat has not
90 experienced the type of failure that occurred at the Blundell plant. The Company acted
91 in a prudent and responsible manner when constructing and commissioning Blundell
92 Unit 2 in 2007 by involving experts that had significant knowledge and experience with
93 the type of equipment installed. The commissioning plan tested the overspeed function
94 and it operated as expected. The validation and testing of the specific trip scenario that
95 occurred at Blundell was not contemplated by the experienced EPC contractor or Ormat
96 – which were the best qualified to develop the commissioning plan. Daymark’s
97 argument that the commissioning process did not thoroughly test the logic functionality
98 implies actions taken by the Company must cover every possible scenario, no matter
99 how obscure. Through the EPC contract, the Company acted prudently by hiring the
100 expertise of CEntry and Ormat to ensure logic functionality was thoroughly tested
101 during the commissioning process. Daymark’s position is unrealistic, unreasonable and
102 requires the Company be held to a perfection standard.

103 **Q. How do you respond to Daymark’s rebuttal testimony regarding the timeliness of**
104 **RCA production?**

105 A. There are events in which the Company must spend the time and effort to accurately
106 identify the root cause, and it would be imprudent for it to do otherwise. While the vast
107 majority of RCAs are done in a timely manner, there are situations additional time is
108 warranted. As previously stated in my response testimony, the initial Blundell RCA
109 report completed by a third party was inconclusive. As a result of the Company’s
110 perseverance to identify the actual root cause, a new third party, Veizades & Associates

111 Inc., was retained to investigate the failure, The final RCA analysis, by Veizades &
112 Associates Inc., was able to determine the root cause, and was performed and
113 completed prior to the replacement equipment being delivered and installed. Therefore,
114 there has been no delay in returning this unit to service as a result of the comprehensive
115 RCA efforts that were able to determine the root cause of the event.

116 **Q. Does this conclude your surrebuttal testimony?**

117 A. Yes.

Rocky Mountain Power
Docket No. 19-035-01
Witness: Neal E. Grabow

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Surrebuttal Testimony of Neal E. Grabow

January 2020

21 **Q. Through your employment with N-Tec, did you prepare or cause to be prepared**
22 **the Root Cause Analysis (“RCA”) for the outage at Dave Johnston Unit 1 on**
23 **April 20, 2018?**

24 A. Yes. I prepared the Dave Johnston Unit 1 Bearing No. 2 Investigation Report, which is
25 attached to my testimony as Confidential Exhibit RMP____(NEG-2).

26 **PURPOSE OF TESTIMONY**

27 **Q. What is the purpose of your surrebuttal testimony in this proceeding?**

28 A. The Company hired N-Tec to investigate the April 20, 2018 event that occurred at its
29 Dave Johnston power plant (the “DJ Outage”). As the author of the RCA, I was asked
30 to review and respond to the statements related to the DJ Outage that were made by
31 witnesses Philip DiDomenico and Dan F. Koehler, consultants for Daymark Energy
32 Advisors, Inc. (“Daymark”), on behalf of the Division of Public Utilities, in their direct
33 and rebuttal testimonies filed on November 15, 2019 and January 8, 2020, respectively,
34 in this proceeding.

35 **DAVE JOHNSTON UNIT 1 OUTAGE (APRIL 20, 2018)**

36 **Q. What were the statements that Messrs. DiDomenico and Koehler made in their**
37 **direct and rebuttal testimonies filed in this proceeding?**

38 A. They asserted that the six Additional Observations that I listed in Section 8.0 of the
39 RCA “are fundamental deficiencies that if not directly attributable to the root cause of
40 the outage event most likely play a potentially significant role in both the initial cause
41 and ultimate duration of the outage.”¹

¹ Confidential rebuttal testimony of Philip DiDomenico and Dan F. Koehler, January 8, 2020, lines 50-52.

42 **Q. Do you agree with their assertions?**

43 A. No. I disagree that the observations directly attributed to the root cause or to the
44 duration of the outage.

45 **Q. As the author of the RCA, please explain why you included the Additional**
46 **Observations in the report.**

47 A. The Additional Observations Section of the report is intended to list items noted during
48 the investigation process that are not related to the root cause of the event but which, if
49 addressed, could enhance plant operations and practices.

50 **Q. Are these types of observations typically included in an RCA?**

51 A. It is my (N-Tec's) practice to list these types of items when RCA's are performed for
52 utilities within the Berkshire Hathaway Energy platforms to notify plant management
53 for areas of improvement.

54 **Q. Do you have any other comments about Daymark's assertions that the six items**
55 **are deficiencies that led to the DJ Outage?**

56 A. Daymark's assertion, "these are not 'opportunities for improvement' – these are
57 fundamental deficiencies that if not directly attributable to the root cause of the outage
58 event most likely played a potentially significant role in both the initial cause and
59 ultimate duration of the outage,"² is incorrect. Three of these items have existed since
60 the original construction of the plant and the observations listed would enhance plant
61 operations. The other three are not uncommon in the industry and often considered
62 minor maintenance issues which have been noted in other non-Berkshire Hathaway

² Confidential rebuttal testimony of Philip DiDomenico and Dan F. Koehler, January 8, 2020, lines 50-52.

63 Energy power generating facilities, and did not cause or impact the duration of the
64 failure.

65 **Q. If the six items did not contribute to the cause or duration of the DJ Outage, what**
66 **did N-Tec conclude was the root cause of the outage?**

67 A. The true root cause of the fire at the Unit 1 No. 2 was not confirmed, since there was
68 significant damage to the bearing as a result of the event. It was concluded that the most
69 plausible cause was due to a bearing modification performed by the manufacturer
70 which may have changed the oil flow within the bearing, combined with a possible
71 change in the venting of the lube oil tank and potential wear of the bearing seals and
72 oil deflectors over time.

73 **Q. In your opinion, was the outage caused or was its duration extended by imprudent**
74 **conduct on the part of the Company?**

75 A. No.

76 **Q. Does this conclude your surrebuttal testimony?**

77 A. Yes.

Rocky Mountain Power
Exhibit RMP___(NEG-1)
Docket No. 19-035-01
Witness: Neal E. Grabow

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

Exhibit Accompanying Surrebuttal Testimony of Neal E. Grabow

Grabow Qualifications

January 2020

Neal Grabow

N_Tec Services, LLC

RESUME January 17, 2020

52298 27th Street
Silver City, IA
51571

PH (402) 682-2496

e-mail:nealgrabow.n-tec@hotmail.com

Education

1980 Graduate of Canby High School, Canby MN

1984 Western Vocational Technical Institute Graduate in Heating and Heating systems.

USAF Level 5 HVAC / Boiler Operator / Burner Mechanic / Equipment Maintenance

National Board of Boiler and Pressure Vessel Inspector Commission
Code Prep IX Home Study Course

Hartford Steam Boiler Inspection and Insurance Company Utility
Inspection Qualification Program

Practical English and The Command of Word Course

International Institute for Learning Inc, - The Project
Management Certification Program - PMP

Graduate of the ICS Home Inspector Program

International Gas Turbine Institute (Basic Gas Turbine Engine
Technology Course and Advance Gas Turbine Engine Technology
Course)

Transformer Failure and Analysis Seminar (Ohio Transformer)

National Board Fabrication, Nondestructive Examination and Inspection
of Welded Pressure Vessels ASME Code Section III Course

National Board Authorized Nuclear In-service Inspection XI Course

Bentley-Nevada Machinery Diagnostic Training

P. O. Box 45
Mineola, Iowa 51554

Ph (712)516-2459
Cell (402)681-2496
E-mail:nealgrabow.n-tec@hotmail.com

Neal Grabow

EXPERIENCE

2011 to Present

Loss Investigation Services- Mike Thomas & Associates, Inc/MGTA Group LLC

- **Conduct investigations of power plant equipment failure (including, gas turbines, steam turbines, wind turbines, hydro unit, generators, boilers, transformers, electrical equipment and high energy piping) failures to identify root cause and failure modes**
- **Provide repair cost estimates**

2007 to Present

- **Review claim files to provided cost analysis**

Loss Control Consultant - N-Tec Services, LLC

- **Provide loss control consulting to Utilities** (Including MidAmerican Energy, PacifiCorp, Cal Energy, City of Dover Delaware, Calpine Energy and Connecticut Resource Recovery Authorities on coal fired plants, gas turbine combined cycle units, wind farms, geothermal facilities, hydro-electric plants and waste to energy facilities.
- **Conduct turbine water induction protection surveys**
- **Provide risk consulting services to insurance companies including XL GAPs, Nuclear Electric Insurance Limited (NEIL) and Inter-Hanover**
- **Provide risk consulting service to Petroleum Authority of Thailand**
- **Provide loss prevention services to The Power Gen & Construction Practice, LLC**

1995 to 2007

Senior Technical Risk Consultant AIG Global Risk Consultants - Senior Industry Specialist, Hartford Steam Boiler Inspection and Insurance Company

- Manage service plans for utility clients in Nebraska, Kansas, Iowa, Missouri and Minnesota.
- Managed Turbine Outage Optimization programs for three Large Utilities
- Responsible for the Transformer Oil-Gas analysis program in Nebraska, Iowa and Kansas clients.
- Project manager for the American Nuclear Insures Inspection project in the Midwest Region
- Team Member of the Performance Enhancement reporting project.
- Team Member responsible for investigating the replacement of the Gerald Gentleman Station Unit #2 reheater.
- Responsible for the jurisdictional inspection requirements during the feed water heater replacement project at the Callaway Nuclear Plant
- Project manager for Navy Public Works Center Profiles study of the Steam distribution system and the benchmarking against commercial

52298 275th Street
Silver City, IA 51571

Ph (712)516-2459
Cell (402)681-2496
E-mail:nealgrabow.n-tec@hotmail.com

Neal Grabow

industry.

1990 to 1995

Inspection Specialist, Hartford Steam Boiler Inspection and Insurance Company

- Manage service projects for American Nuclear Insurers in Iowa and Nebraska
- Project Manager for American Society of Mechanical Engineers (ASME), Section XI Inservice Inspections at Cooper Nuclear Station, Ft Calhoun Nuclear Station and Duane Arnold Energy Center
- Responsible for Planning, Executing, controlling and closing of service project events

1986 to 1995

Boiler and Machinery Inspector, Hartford Steam Boiler Inspection and Insurance Company

- Project team member, responsible for the inspection activities at commercial client locations.
- Project team member responsible for ASME, Section I inspections at Nebraska Boiler Company
- Project team member responsible for ASME, Section VIII inspections at Hoover Industries.
- Project team member responsible for procurement inspections of Rocket Booster Fuel Storage tanks for Hercules Inc.

1983 to 1986

Staff Sergeant, United States Air Force

- Responsible for operations and maintenance in central utility plants.
- Directed maintenance activities on facility equipment
- Responsible for scheduling of personnel

1980 to 1983

Airman, United States Air Force

- Special Security, responsible for the investigation of alarms at the nuclear missile sites.
- Troubleshoot, repair and operate steam plant systems and equipment at central steam plants and base facilities.

PROFESSIONAL AFFILIATIONS

- Project Management Institute Member
- Certified Project Manager Professional (PMP)
- National Board of Boilers and Pressure Vessel Previous Commission NB10352 "A", "I", "N"
- ICS Certified House Inspector
- North American Technician Excellence Certified
- Universal EPA Certified 40CFR Part82, Subpart, F

52298 275th Street
Silver City, IA 51571

Ph (712)516-2459
Cell (402)681-2496
E-mail:nealgrabow.n-tec@hotmail.com

Neal Grabow

Community

Boy Scouts of America

1995 to 1998 Cub Scout Den Leader

1998 to 2002 Cub Master for Pack 432

1999 to 2005 Assistant Scout Master for Troop 243

1999 to 2010 Merit Badge Counselor for the BSA Trailblazer District

Program Director for 1999 and 2000 Glenwood Cub Scout Day Camp

Iowa Foundation for North America Sheep Foundation

Member Pheasants Forever

Pottawattamie Landlord's Association Member

REDACTED

Rocky Mountain Power
Exhibit RMP____(NEG-2)
Docket No. 19-035-01
Witness: Neal E. Grabow

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF UTAH

ROCKY MOUNTAIN POWER

REDACTED

Exhibit Accompanying Surrebuttal Testimony of Neal E. Grabow

Dave Johnston Investigation Report

January 2020

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

CERTIFICATE OF SERVICE

Docket No. 19-035-01

I hereby certify that on January 22, 2020, a true and correct copy of the foregoing was served by electronic mail to the following:

Utah Office of Consumer Services

Cheryl Murray cmurray@utah.gov

Michele Beck mbeck@utah.gov

Division of Public Utilities

dpudatarequest@utah.gov

Consultants:

dkoehler@daymarkea.com

pdidomenico@daymarkea.com

sgautam@daymarkea.com

Assistant Attorney General

Patricia Schmid pschmid@agutah.gov

Justin Jetter jjetter@agutah.gov

Robert Moore rmoore@agutah.gov

Steven Snarr stevensnarr@agutah.gov

Rocky Mountain Power

Data Request Response Center datarequest@pacificorp.com

Jana Saba jana.saba@pacificorp.com;
utahdockets@pacificorp.com

Yvonne Hogle yvonne.hogle@pacificorp.com



Katie Savarin
Coordinator, Regulatory Operations