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IDAHO PUBLIC
UTILITIES COMMISSION

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE)	
APPLICATION OF ROCKY)	CASE NO. PAC-E-10-07
MOUNTAIN POWER FOR)	
APPROVAL OF CHANGES TO ITS)	Rebuttal Testimony of Chad A. Teply
ELECTRIC SERVICE SCHEDULES)	
AND A PRICE INCREASE OF \$27.7)	
MILLION, OR APPROXIMATELY)	
13.7 PERCENT)	

ROCKY MOUNTAIN POWER

CASE NO. PAC-E-10-07

November 2010

1 **Introduction**

2 **Q. Please state your name and business address.**

3 A. My name is Chad A. Teply. My business address is 1407 West North Temple,
4 Suite 210, Salt Lake City, Utah.

5 **Q. Are you the same Chad A. Teply who submitted pre-filed direct testimony in**
6 **this proceeding?**

7 A. Yes.

8 **Purpose of Testimony**

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

10 A. My testimony will respond to the direct testimony of Mr. Randall J. Falkenberg
11 on behalf of the PacifiCorp Idaho Industrial Customers ("PIIC") regarding the
12 Company's management and financial modeling of unplanned thermal unit
13 outages and will also respond to the direct testimony of Mr. Don Reading on
14 behalf of the Idaho Conservation League ("ICL") regarding prudence of the
15 Company's pollution control expenditures for coal-fired power generation plants.

16 **Q. Please summarize Mr. Falkenberg's concerns regarding the Company's**
17 **management and financial treatment of planned and unplanned thermal unit**
18 **outages and his recommended adjustments 6 and 7.**

19 A. Mr. Falkenberg's concerns are primarily two-fold. First, Mr. Falkenberg is
20 concerned with the Company's prudence regarding management of two outage
21 events. Second, Mr. Falkenberg is concerned with the Company's utilization of
22 the calculated four-year average outage rate for the thermal units in question. Mr.

1 Falkenberg's recommendation is to cap the allowable outage durations for the two
2 outage events to 28 days in outage rate calculations.

3 **Q. Does the Company believe that the planned and unplanned thermal unit**
4 **outages in question were prudently managed?**

5 A. Yes.

6 **Q. Are the costs for the extended planned and unplanned outage durations in**
7 **the four-year averaging period representative of the costs expected in the**
8 **prescribed test period?**

9 A. Yes. The Company has appropriately applied the accepted outage rate averaging
10 methodology to the specific units referenced. When reviewed in isolation, the
11 Company recognizes that the individual outage rates referenced are, on average,
12 higher than those units that did not experience extended planned or unplanned
13 outages during the four-year averaging period; however, considering the size and
14 age of the Company's generation fleet, individual units do experience significant
15 events that result in extended outages during prescribed test periods. If significant
16 events are not calculated into the Company's outage rates, due to their anomalous
17 characteristics, said omission artificially affects the historical, and therefore,
18 forecasted availability of the fleet. As such, the outage rate averaging
19 methodology applied by the Company for individual units, when reviewed in
20 context with the Company's aggregated outage rates, accurately represents costs
21 incurred by the Company associated with unit outages in the prescribed test
22 period and provides an accurate forecast for expected outage costs for the
23 Company's generation fleet on a forward-looking basis.

1 Q. **Are the Company's calculated four-year average outage rates for the thermal**
2 **units in question reasonable?**

3 A. Yes. Using the four-year average outage rate for the Company's thermal units is
4 reasonable and should be included in rates.

5 Q. **Why should the Commission reject Mr. Falkenberg's proposal to cap**
6 **extended outages at 28 days in the outage rate calculations utilized as the**
7 **basis for this case?**

8 A. The cap approach proposed by the Company in OPUC docket, UM 1355, and
9 referenced by Mr. Falkenberg in his testimony beginning on line 23, was part of a
10 larger proposal that has not been accepted by regulators. As noted in Mr.
11 Falkenberg's testimony, there are several competing alternatives in the docket
12 referenced and a decision is pending. The Company has submitted extensive
13 testimony and exhibits in OPUC docket, UM 1355, which can be referenced but
14 will not be re-presented herein.

15 Q. **Was the Company's management of the Lake Side unplanned outage**
16 **referenced in Mr. Falkenberg's testimony prudent and reasonable?**

17 A. Yes. On August 16, 2009, the Lake Side steam turbine generator tripped
18 following a three phase electrical fault which resulted in catastrophic damage to
19 the stator windings. There were no operational or other monitoring equipment
20 indications of a problem prior to the trip and no history of problems on the unit.
21 Following the fault, the generator field was removed allowing access for visual
22 examination and testing. Inspections by Siemens (the original equipment
23 manufacturer), the Company and an independent generator expert revealed the

1 stator core was beyond repair, and that stator replacement was the only option to
2 return the unit to service. A suitable replacement stator was located, purchased
3 and delivered. Contamination from the stator fault necessitated field
4 refurbishment. Work to ship the replacement stator, remove the failed stator, and
5 refurbishment of the field occurred simultaneously. With a new stator and
6 refurbished rotor installed, the manufacturers' recommend tests were performed
7 prior to returning the unit to service on November 15, 2009. Considering the
8 nature of the catastrophic damage incurred and the typical lead time to specify,
9 procure and manufacture replacement equipment of the type needed in this
10 instance, the schedule achieved to locate, purchase, and install a replacement
11 stator at Lake Side and return the unit to service for the benefit of customers was
12 commendable.

13 **Q. Was the Company's management of the Colstrip Unit 4 planned outage**
14 **referenced in Mr. Falkenberg's testimony prudent and reasonable?**

15 **A.** Yes. Prior to 2009, Colstrip Unit 4 experienced a sudden, massive condenser tube
16 leak that caused cracks in the L-0 stages of the main turbine's low-pressure
17 rotors. These cracks were discovered during a scheduled spring 2009 inspection.
18 The turbine manufacturer determined that the rotors could not be returned to
19 service in their as-found condition. The rotors were sent to the turbine
20 manufacturer's facilities for removal of the damaged rotor wheels and weld-repair
21 and machining of new wheels. During the initial repair sequence, non-destructive
22 examination completed by the manufacturer as part of its quality assurance
23 process found significant defects in the weld material which had been utilized for

1 repair of the new wheels. This material had to be removed and the wheels re-
2 welded. Final quality assurance testing showed that the second batch of weld
3 material was sound. The wheels were machined, blades installed, and the unit
4 was returned to service in late 2009. Although the required rotor repairs and need
5 for re-work resulted in extended outage duration, adherence to manufacturer
6 recommendations for turbine rotor repairs and utilization of its repair facilities
7 was the prudent and reasonable approach to management of that outage critical
8 path.

9 **Q. Please summarize Mr. Falkenberg's concerns regarding the Company's**
10 **management and financial treatment of the Naughton Unit 3 outage and his**
11 **recommended adjustment 9.**

12 A. Mr. Falkenberg's concerns are primarily two-fold. First, Mr. Falkenberg is
13 concerned with the Company's prudence regarding management of the referenced
14 outage event. Second, Mr. Falkenberg is concerned with the Company's
15 calculation of the outage rate for the thermal unit in question. Mr. Falkenberg's
16 recommendation is to adjust the planned and forced outage rates calculated for the
17 thermal unit in question in this case.

18 **Q. Does the Company believe that the Naughton Unit 3 outage in question was**
19 **prudently managed?**

20 A. Yes. The Company prudently negotiated a liquidated damages clause with the
21 contractor before the start of repairs. The Company prudently exercised that
22 clause when poor subcontractor performance negatively impacted outage
23 completion. The liquidated damage payment was credited to customers.

1 The collection of liquidated damages from the outage repair does not
2 displace the need to recover appropriate outage costs and reflect appropriate
3 outage durations in the four-year average outage rate for the thermal unit in
4 question. As noted in Mr. Falkenberg's testimony, the liquidated damages
5 collected did not result in full compensation for costs associated with this event.

6 **Q. Does including extended planned and unplanned outage durations in the**
7 **four-year averaging period for cost recovery for specific units appropriately**
8 **represent costs incurred by the Company associated with outages in the**
9 **prescribed period?**

10 A. Yes. Please refer to my testimony beginning on line 31 above.

11 **Q. Is it your opinion that the calculated four-year average outage rate for the**
12 **thermal unit in question should be included in rates?**

13 A. Yes. In my opinion, the Company has appropriately applied the accepted outage
14 rate averaging methodology to the specific units referenced, and therefore that
15 rate should be included in rates.

16 **Q. Please summarize Mr. Reading's concerns regarding prudence of the**
17 **Company's pollution control expenditures contemplated in this case.**

18 A. Mr. Reading's concerns regarding prudence of the pollution control expenditures
19 for which the Company is seeking recovery in this case are primarily three-fold.
20 First, Mr. Reading is concerned that the Company is installing certain pollution
21 control equipment to meet "a presumptive BART emission limit". Mr. Reading is
22 concerned that the Company is making these investments before it receives a final
23 decision on whether the equipment is sufficient to meet federal pollution control

1 standards.

2 Second, Mr. Reading is concerned that the Company is installing certain
3 pollution control equipment in accordance with state issued permit requirements,
4 but without final U.S. Environmental Protection Agency (“EPA”) review and
5 approval of the respective state implementation plans. Mr. Reading’s concern is
6 that the EPA may ultimately require more stringent controls and more expensive
7 equipment to be installed on the generating units contemplated in this case.

8 Third, Mr. Reading testifies that if future stricter regulations are enacted,
9 the projects contemplated in this case may not be sufficient to achieve
10 compliance. Mr. Reading has asked that the Company justify any future pollution
11 expenditures in two ways. First, expenditures would be analyzed not only based
12 on the effectiveness of the control equipment, but also with respect to compliance
13 with existing federal pollution control laws. Second, a risk assessment of meeting
14 realistic assumptions for future stricter environmental requirements would be
15 completed.

16 **Company Response to Concerns**

17 **Q. Please clarify the definition of “a presumptive Best Available Retrofit**
18 **Technology (“BART”) emission limit” as it pertains to established federal**
19 **pollution control standards.**

20 **A.** The use of the term “presumptive” in the instance cited refers to presumptive
21 emission rates that are discussed in the Regional Haze Rule, Code of Federal
22 Regulations (CFR), Title 40, Sections 51.300 through 51.309, and Appendix Y.

1 Electronic copies of the referenced Code of Federal Regulations can be found at
2 the following link:

3 http://www.access.gpo.gov/nara/cfr/waisidx_09/40cfr51_09.html

4 The term “presumptive” comes from Appendix Y cited above, and the
5 presumptive rates are defined by the EPA. States use the presumptive rates
6 defined by the EPA to assist in determining if a BART-eligible facility has met
7 the requirement to install best available retrofit technology. For example, if the
8 installation of low-NOx burners on a BART-eligible facility with cell-burners
9 firing sub-bituminous coal achieves an emission rate of 0.28 lb/MMBtu, which is
10 below the EPA presumptive BART rate of 0.45 lb/mmBtu (the presumptive rate
11 for a cell-burner unit burning sub-bituminous coal), it can be presumed that the
12 installation of low-NOx burners on this unit meets federal best available retrofit
13 requirements with respect to NOx control, and no additional controls would be
14 required. With respect to SO2 control, the EPA had defined the presumptive SO2
15 emissions rate as 0.15 lb/mmBtu or 90% removal. Here again, if the installation of
16 pollution control equipment on a BART-eligible facility achieves an emission rate
17 less than that presumptive limit, it can be presumed that the installation meets
18 federal best available retrofit requirements and no additional controls will be
19 required.

1 Q. **Is the Company obligated to install pollution controls required by state**
2 **permits, regardless of whether final U.S. Environmental Protection Agency**
3 **review and approval of the respective state implementation plans remains**
4 **pending?**

5 A. Yes. The BART permits and construction permits issued by the respective state
6 agencies for the pollution control investments contemplated in this case include
7 stand-alone requirements enforceable by the laws of the respective states. These
8 requirements are enforceable independent of whether EPA has approved the
9 respective state implementation plans.

10 Q. **Does the Company anticipate that final U.S. EPA approval of the respective**
11 **state implementation plans will require alternate pollution control equipment**
12 **to be installed, making the equipment contemplated in this case obsolete?**

13 A. No. The pollution control technology selections completed to date apply best
14 available retrofit technology, comply with existing state and federal regulations,
15 and support Regional Haze Rule objectives. The Company also incorporates into
16 its pollution control equipment contract specifications design considerations
17 intended to provide appropriate levels of operating margin, equipment
18 redundancy, and system maintainability and reliability provisions to support an
19 expected range of process inputs, operating conditions, and system performance.
20 Although the Company cannot predict future pollution control regulations and
21 associated emissions limits, the Company does take steps to procure a prudent
22 level of design flexibility to accommodate potential changes in system
23 performance requirements, where practical.

1 Q. Does the Company anticipate that final U.S. EPA approval of the respective
2 state implementation plans will require additional pollution control
3 equipment to be installed on the facilities contemplated in this case?

4 A. That is a possibility; however, should final EPA approval of state implementation
5 plans prescribe additional emissions reductions across the Company's generation
6 fleet, the Company anticipates that said reductions would likely be accomplished
7 via additional projects that build on the capabilities of installed pollution control
8 projects, otherwise act independently of installed pollution control projects, or via
9 facility operations changes. The Company includes the following considerations
10 in its planning efforts in order to best meet the Company's future emissions
11 reductions obligations: facility operations compliance options, available control
12 technologies, cost of compliance; proposed compliance deadlines, and emerging
13 environmental regulations and rulemaking.

14 Q. On page 44 lines 17 and 18 of Mr. Reading's testimony he expresses concern
15 that current pollution control projects may not be sufficient to meet future
16 stricter regulations. How do you respond?

17 A. PacifiCorp and its parent, MidAmerican Energy Holdings Company, are very
18 active in the current Congressional, state legislative, and EPA activities regarding
19 environmental controls affecting virtually every emission from coal and natural
20 gas generating units. The Company is very cognizant that some potential
21 restrictions on greenhouse gas emissions ("GHGs") could require coal (and
22 potentially natural gas) units to adjust the depreciation lives for ratemaking
23 purposes. The Company considers this possibility when determining whether to

1 proceed with investments to control emissions other than GHGs. As stated on
2 page 10 of my direct testimony, the Company's plans regarding these investments
3 would not change due to carbon-emission restrictions. The units have
4 depreciation lives for ratemaking purposes that provide sufficient remaining time
5 to depreciate the investments in the pollution controls.

6 **Q. Starting at line 20 on page 45 of his testimony, Mr. Reading refers to other**
7 **states that are evaluating whether to invest in environmental control**
8 **equipment or retire existing coal units. How do you respond?**

9 A. PacifiCorp and its parent closely monitor environmental activities in other states,
10 including nearly all Western states. PacifiCorp is a participant in the Oregon
11 proceedings regarding Portland General Electric's Boardman plant. I would
12 correct Mr. Reading's statement regarding that proceeding, in that no decision has
13 yet been made to retire that plant before the end of the depreciation life used for
14 ratemaking. That is merely one of several options under consideration.

15 PacifiCorp and its parent are also closely following proceedings in
16 Colorado. As Mr. Reading correctly notes, the current activity in Colorado relates
17 to the implementation of a statute enacted in 2010. That statute primarily focused
18 on reductions in nitrogen oxides and facilitated the conversion of 1000 MW of
19 coal-fired generation to natural gas generation. The regulatory proceeding is still
20 pending.

1 Q. Is the Company undertaking reasonable efforts to ensure that environmental
2 regulators consider the uncertainty created by requiring investments in
3 certain emissions controls prior to knowing the nature and extent of controls
4 on other emissions?

5 A. Yes. The Company appealed Regional Haze requirements in Wyoming for this
6 exact reason. Wyoming was the first state to make the determination that best
7 available retrofit technology (BART) required the installation of selective
8 catalytic reduction (“SCR”) controls for nitrogen oxides. The Company disagreed
9 with that determination and asserted that Appendix Y of 40 CFR Part 51 did not
10 contemplate the installation of post-combustion controls. Additionally, the
11 Company was concerned that other environmental laws and/or regulations could
12 impact the Company’s facilities affected by Wyoming’s BART determinations.
13 These requirements not only include greenhouse gas reduction requirements, but
14 also a host of regulatory initiatives underway by the EPA, including the outcome
15 of pending coal combustion residual regulations and maximum achievable control
16 technology standards for mercury and non-mercury hazardous air pollutants. Due
17 to the uncertainty associated with the potential impact of these rules on the
18 Company’s facilities, the Company appealed the BART permits issued by the
19 Wyoming Department of Environmental Quality to ensure that these and other
20 issues were considered in the agency’s decision and, to the extent these issues had
21 an impact on long-term viability of the facilities, the economic analysis of adding
22 emission reduction equipment was properly reflected. The Company’s appeal is
23 still pending before the Wyoming Environmental Quality Council. Since the time

1 that the Company filed its appeal, the EPA has issued a BART determination for
2 the Four Corners Power Plant, requiring the installation of SCR at all five units
3 operated by Arizona Public Service within a five-year period, without regard to
4 other environmental requirements or their associated uncertainties.

5 **Q. In this rate case, the investments in environmental controls have already**
6 **occurred. What process is in place by which Mr. Reading's concerns are**
7 **explored prior to investments being made?**

8 A. The integrated resource planning (IRP) proceedings conducted in all six of the
9 states served by the Company provides the process to address Mr. Reading's
10 concerns. Future IRP proceedings will more and more focus upon the increasing
11 complexity in balancing factors such as (1) pending environmental regulations
12 and requirements to reduce emissions, (2) avoidance of excessive reliance on any
13 one technology, (3) cost of energy efficiency and demand response programs, (4)
14 cost of supporting reasonable state economic development efforts, (5) cost of
15 additional transmission investment to increase efficiency and reliability of the
16 integrated transmission system, (6) all while trying to maintain rates as affordable
17 as possible.

18 **Q. Does this conclude your rebuttal testimony?**

19 A. Yes.