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August 13, 2012

Via Electronic Filing and U.S. Mail

OREGON PUBLIC UTILITY COMMISSION

ATTENTION: FILING CENTER

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**RE: Docket No. UE 233 Phase II – In the Matter of IDAHO POWER
COMPANY Request for General Rate Revision.**

Enclosed for electronic filing in the above-captioned docket is the Public
Utility Commission Staff's Rebuttal Testimony (redacted).

/s/ Kay Barnes

Kay Barnes

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c: UE 233 Service List (parties)

CERTIFICATE OF SERVICE

UE 233

I certify that I have, this day, served the foregoing document upon all parties of record in this proceeding by delivering a copy in person or by mailing a copy properly addressed with first class postage prepaid, or by electronic mail pursuant to OAR 860-001-0180, to the following parties or attorneys of parties.

Dated this 13th day of August, 2012 at Salem, Oregon

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UE 233
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**PUBLIC UTILITY COMMISSION
OF OREGON**

UE 233 – Phase II

**STAFF REBUTTAL TESTIMONY OF
ERIK COLVILLE**

**In the Matter of
IDAHO POWER COMPANY
Request for General Rate Revision.**

**REDACTED
August 13, 2012**

CASE: UE 233
WITNESS: ERIK COLVILLE

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 1200

Rebuttal Testimony

August 13, 2012

1 **Q. ARE YOU THE SAME ERIK COLVILLE WHO PREVIOUSLY TESTIFIED IN**
2 **THIS PROCEEDING?**

3 A. Yes.

4 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

5 A. My rebuttal testimony is intended to address and respond to issues raised in
6 Citizens' Utility Board of Oregon testimony (CUB/300), and Idaho Power
7 Company's reply testimony (Idaho Power/1500 and Idaho Power/1600).

8 **Q. DID YOU PREPARE EXHIBITS FOR THIS DOCKET?**

9 A. Yes. I prepared Staff/1201 "Response to CUB Testimony" (consisting of four
10 pages), and Staff/1202 "Capital Cost Comparison" (consisting of one page).

11 **Q. HOW DOES THE COMMISSION DETERMINE PRUDENCE?**

12 A. "Prudence is determined by the reasonableness of the actions 'based on
13 information that was available (or could reasonably have been available) at
14 the time.'" (*In re PGE*, UE 102, Order No. 99-033 at 36-37.)¹

15 **Q. IS IT POSSIBLE TO CONCLUDE THAT THE ENVIRONMENTAL**
16 **COMPLIANCE INVESTMENTS WERE PRUDENT NOTWITHSTANDING**
17 **DECISION MAKING PROCESS INFIRMITIES?**

18 A. Yes. The Commission has clarified that "if the record demonstrates that a
19 challenged business decision was reasonable, taking into account
20 established historical facts and circumstances, the utility's decision must be
21 upheld as prudent even if the record lacks detail on the utility's actual

¹ See also *In re Northwest Natural Gas*, UG 132, Order No. 99-697 at 52 ("In this review, therefore, we must determine whether the NW Natural's actions and decisions, based on what it knew or should have known at the time, were prudent in light of existing circumstances.").

1 subjective decision making process.” (See Order No. 02-469 p. 5; *In re*
2 *PacifiCorp* (Commission adopting PacifiCorp’s description of the legal
3 standard for determining prudence.)) Under this standard, a utility’s action
4 can be prudent even if the process leading up to the decision has infirmities.
5 A utility’s decision process is probative on whether the action itself is prudent,
6 but under the Commission’s prudence standard, the primary focus of the
7 inquiry is on the reasonableness of the action, not on the process leading to
8 it.

9 **Q. PLEASE RESTATE WHAT ACTIONS ARE AT ISSUE IN THIS DOCKET.**

10 A. In 2008, Idaho Power, along with the coal plant unit co-owner PacifiCorp,
11 decided to upgrade the existing scrubbers for the Jim Bridger Unit 3 to
12 improve the removal of sulfur dioxide (SO₂) from the plant emissions. In
13 2008, PacifiCorp issued a Request for Proposals to complete the project and
14 in December 2008, entered into an engineering, procurement and
15 construction (EPC) contract for the upgrade. The work was completed in the
16 spring of 2011, during a planned outage. Idaho Power’s share of the capital
17 investment in the project is claimed to be \$8.2 million.

18 **Q. WAS IDAHO POWER’S ACTION TO INVEST IN THE SCRUBBER**
19 **UPGRADE PROJECT REASONABLE GIVEN WHAT THE COMPANY**
20 **KNEW, OR SHOULD HAVE KNOWN?**

21 A. The Company’s action to proceed with the environmental compliance
22 investments in the Jim Bridger Unit 3 coal fired plant was reasonable. In
23 accordance with the prudence standard, since the action was reasonable, the

1 action was prudent.

2 **Q. WHAT IS THE BASIS FOR YOUR CONCLUSION REGARDING THE**
3 **PRUDENCE OF THE COMPANY'S ACTION?**

4 A. As noted in my Staff/1100 testimony there are infirmities in the process Idaho
5 Power used to inform its decision to proceed with the Jim Bridger Unit 3
6 scrubber upgrade project. However, based on information that was available
7 (or could reasonably have been available) to Idaho Power at the time of its
8 decision, the present value revenue requirement differential (PVR(d))
9 benefit to customers from the environmental compliance investments for Jim
10 Bridger Unit 3 would have been a [REDACTED]. This benefit is so
11 large that correcting all the decision-process infirmities identified by CUB and
12 me would not have led Idaho Power to choose to not make the investments at
13 issue.

14 **Q. PLEASE EXPLAIN HOW YOU CAME TO THIS CONCLUSION.**

15 A. An updated PVR(d) analysis was provided in PacifiCorp Docket No. UE 246
16 reply testimony PAC/1500, incorporated into this docket by reference in Idaho
17 Power/1500. PacifiCorp performed a PVR(d) analysis prior to the time
18 Idaho Power and PacifiCorp made the decision to proceed with the upgrade
19 to Bridger Unit 3, but that analysis assumed the alternative to the upgrade
20 would be idling the plant in 2008 (See Staff/1100, Colville/12 (Discussing
21 2008 CAI Capital Projects Study for Jim Bridger U3-Dec. 2008)). The
22 updated PVR(d) analysis revises the assumed coal plant unit idling date to a
23 more appropriate date.

1 **Q. DISCUSS THE ISSUE OF THE DATE PACIFICORP ASSUMED IN ITS**
 2 **DECISION MAKING ANALYSES FOR IDLING THE JIM BRIDGER UNIT 3**
 3 **COAL PLANT UNIT.**

4 A. The PacifiCorp PVR(d) analyses performed for decision making assumed
 5 the coal plant unit would be idled in the year of decision making. The result of
 6 the assumed idling date is to overstate the PVR(d) benefit for the coal plant
 7 unit from making the environmental compliance investments. While the CUB
 8 testimony advocates for using a 2015 idling date as the basis for PVR(d)
 9 analyses, I see the first compliance date in the state permit as a reasonable
 10 idling date for use in analysis. The table below presents the state permit
 11 compliance date I identified.

Coal Plant Unit	State Permit Compliance Date	State Permit
Jim Bridger Unit 3	June 2011	MD-1552A

13
 14 **Q. DESCRIBE WHAT WAS UPDATED IN AND THE RESULTS OF THE**
 15 **UPDATED PVR(d) ANALYSES.**

16 A. PacifiCorp updated its PVR(d) analysis considering a 2014 idling date for
 17 the Jim Bridger Unit 3. The selection of a 2014 idling date is later in time than
 18 I suggest above but not as late as CUB advocates for. The reason behind
 19 selecting 2014 is discussed in PacifiCorp reply testimony (PAC/1500 Teply/4-
 20 5). The 2014 idling date appears to be a reasonable analysis compromise.

1 The updated PVRR(d) analysis provided by PacifiCorp shows a [REDACTED]
2 benefit of [REDACTED] for the Jim Bridger Unit 3. This is a reduction of
3 approximately [REDACTED] compared to its decision making analyses
4 (which is based on the 2008 idling date).

5 **Q. IS THE UPDATED PVRR(d) ANALYSIS PERTINENT IF IDAHO POWER**
6 **DID NOT RELY ON THIS ANALYSIS WHEN IT MADE ITS DECISION IN**
7 **2008?**

8 A. The updated PVRR(d) analysis shows what information was reasonably
9 available to Idaho Power at the time it made its decision. Given that
10 prudence is determined by the reasonableness of the Company's actions
11 based on information that could reasonably have been available at the time, it
12 is pertinent to show what information was reasonably available to inform the
13 Company's decision in 2008. As discussed above, it is not necessary for
14 Idaho Power to show that it relied on this information when making its
15 decision to proceed with the upgrade in order to show its action was prudent.
16 The question is whether Idaho Power, relying on this information, would have
17 decided to proceed with the upgrade. I conclude that the answer to this
18 question is yes.

19 **Q. DOES THE UPDATED PVRR(d) ANALYSIS CORRECT FOR ALL**
20 **DECISION MAKING PROCESS INFIRMITIES IDENTIFIED IN THIS**
21 **DOCKET?**

22 A. No. However, as already discussed, the PVRR(d) result from proceeding with
23 the investment is so large that that correcting for the remaining infirmities

1 would not have changed the Company decision to proceed with the
2 investment.

3 **Q. ARE THE DECISION MAKING PROCESS INFIRMITIES THAT YOU AND**
4 **CUB HAVE IDENTIFIED IRRELEVANT IN THIS DOCKET?**

5 A. Even though I conclude that correcting for the decision making process
6 infirmities would not have led Idaho Power to a different decision, I think these
7 infirmities are concerning and should be considered by the Commission in
8 this proceeding. As explained below, this docket presents an opportunity for
9 the Commission to clarify its expectations for utilities with respect to
10 environmental compliance investments.

11 **Q. ARE THERE UPDATES TO YOUR STAFF/1100 TESTIMONY REGARDING**
12 **IDAHO POWER'S DECISION MAKING PROCESS THAT YOU WISH TO**
13 **HIGHLIGHT?**

14 A. Yes. I would like to highlight the following updates to my Staff/1100 testimony.
15 The effect of these updates is addressed and incorporated into the remainder
16 of my rebuttal testimony.

- 17 • Contrary to my statements on Staff/1100 page 20 line 14, the Company
18 did do sensitivity analysis for variations in the market price of power. As a
19 result, I remove that observation from my list of decision making process
20 infirmities.
- 21 • On Staff/1100 page 15 line 23, and page 16 line 1 I note that the
22 Company analyses considered only one alternative to making
23 environmental compliance investments – idling a coal plant unit and

1 replacing it with market power purchases. My Staff/1100 testimony and
2 this rebuttal testimony do not conclude that considering only one
3 alternative to making the investments is a decision making process
4 infirmity. Given that the market price of electricity does not generally
5 include all the fixed and variable costs of generating electricity, had the
6 Company considered a replacement resource such as a combined cycle
7 combustion turbine (CCCT) or refueling the coal plant unit with natural
8 gas, it is likely the PVR(d) benefit may well have been significantly
9 higher than the Company presented in its testimony. While I have not
10 performed an analysis using replacement resources to verify this
11 possibility, if it is true, then the Company erred on the conservative side in
12 its choice of analyses which used only market power purchases.

- 13 • In Staff/1100 testimony I did not consider the impact of the assumed idling
14 date on the PVR(d) analyses. I conclude the assumed idling date of
15 2008, rather than the State permit compliance date, is a decision making
16 process infirmity.
- 17 • Sensitivity cases for analysis of Best Available Retrofit Technology
18 (BART) compliance costs were not analyzed. I consider lack of sensitivity
19 analyses to be a decision making process infirmity. Since I did not note
20 this specific infirmity in Staff/1100 testimony, I add it to the list of decision
21 making process infirmities on Staff/1100 page 20 line 14.

22 **Q. WHAT IS YOUR RESPONSE TO THE ISSUES RAISED IN THE CUB**
23 **TESTIMONY?**

1 A. I considered each of the issues raised in the CUB testimony. I note that the
2 issues raised are largely the same as those I raised as decision making
3 process infirmities in Staff/1100. Attached to this rebuttal testimony is a
4 summary of the issues CUB raises as well as my responses to those issues
5 that are found in Staff/1100 or this rebuttal testimony (See Staff/1201).

6 **Q. WHY DO YOU NOT INCLUDE THE POSSIBILITY OF A DISALLOWANCE**
7 **IN YOUR RECOMMENDATIONS?**

8 A. I do not think the circumstances in this case warrant a disallowance of Idaho
9 Power's investment or some other financial penalty related to Idaho Power's
10 decision making process. Idaho Power's investment was prudent. And,
11 although Idaho Power's decision making process had infirmities, I do not think
12 those infirmities warrant a financial penalty.

13 **Q. DOES THIS CONCLUDE YOUR TESTIMONY?**

14 A. Yes.

CASE: UE 233
WITNESS: ERIK COLVILLE

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 1201

**Exhibits in Support
Of Rebuttal Testimony**

August 13, 2012

A list summarizing the issues raised in the Citizens' Utility Board of Oregon (CUB) testimony (CUB/300) is presented below. My responses follow each issue.

General

1. The analyses should have considered idling the coal plant unit in 2015 (CUB/300 page 12).

Response: This issue is addressed in the body of my rebuttal testimony.

2. The "Boardman" Best Available Retrofit Technology (BART) analysis approach should have been used (CUB/300 pages 8 and 14).

Response: The Boardman approach to BART analysis was not recognized as being beneficial until late 2010, so I do not consider it a precedent for the environmental compliance investment decisions in this docket. I do conclude the decision making process could be better informed by considering the remaining useful life to be a variable, as was done in the Boardman approach to BART analysis. I also recognize that the ability to meaningfully consider alternatives to compliance derived from varying the remaining useful life is likely dependent upon the regulatory environment where the coal plant unit is located. Going forward, I suggest it is the Company's responsibility to prove it is not reasonable to consider the remaining life as a variable in BART analyses.

3. The environmental compliance investments should have been included in on-going analyses rather than being considered sunk and in a piecemeal fashion (CUB/300 pages 3-4 and 10).

Response: The concern is that environmental compliance investments in each coal plant unit are being considered in a "piecemeal" fashion rather than one large project spread over several phases. I am convinced the concern about "piecemeal" consideration of environmental compliance investments extends to all types of serial capital projects and could exist for every resource type – be it a hydroelectric resource, natural gas fired resource, or a coal fired resource that must comply with increasingly stringent regulations. I can also imagine the possibility the concern may apply in the future to a wind, biomass, geothermal, or solar resource.

I do not support piecemeal consideration of capital projects. In fact, the process I identified in Staff/1100 testimony as what a company would use to inform a reasonable business decision (Staff/1100 page 10) includes a “life-cycle” economic analysis. If the process were conducted without infirmities, the life-cycle economic analysis would include every cost reasonably foreseeable. A problem arises because no one has perfect foresight, and concluding what is reasonably foreseeable is a matter of opinion. I find the Idaho Power decision making analyses to have infirmities but not to be a “piecemeal” approach.

4. Environmental compliance investments should have been postponed till the Regional Haze Rule (RHR) is finalized (CUB/300 page 4-5), and the regulatory path was clear (CUB/300 page 13).

Response: With state permit compliance deadlines and impending federal compliance deadlines, I would not consider postponing action while awaiting a clear regulatory path to be reasonable given what information the Company had or reasonably could have had. As a result, such a postponement would not be prudent.

5. The analyses should have considered alternatives beyond market purchases (CUB/300 page 13-14).

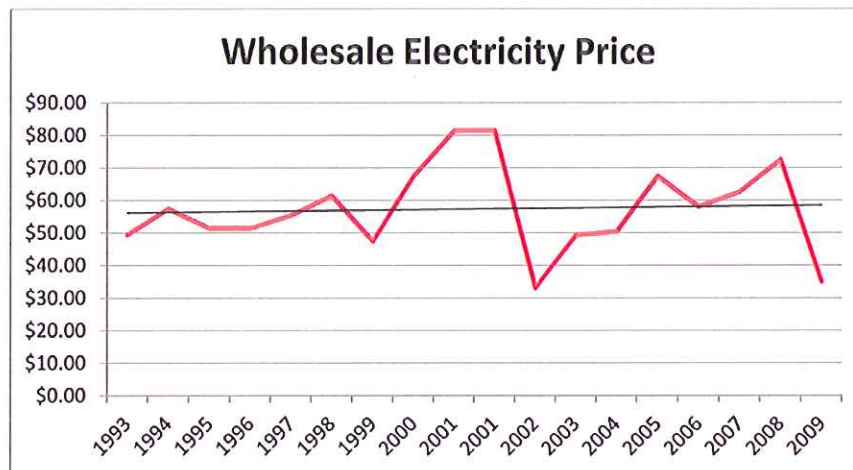
Response: I would prefer that more than one alternative be analyzed. However, analysis of one alternative is reasonable. I would like to note that the cost of market power may not represent the full cost of a replacement generating resource. As a result, had the Company considered a replacement resource such as a combined cycle combustion turbine (CCCT) or refueling the coal plant unit with natural gas, the present value revenue requirement differential (PVRR(d)) benefit may have been significantly higher than it was. Thus the Company likely erred on the conservative side in its choice of replacement with market power purchases.

6. The Company failed to revisit analyses as conditions changed (CUB/300 page 13).

Response: As stated in my Staff/1100 and this rebuttal testimony, I consider it a decision process infirmity to not re-evaluate decisions at significant milestones, such as beginning physical construction activities. While I advocate for thorough analyses and revisiting decision making at project milestones, CUB advocates for what could result in decision making paralysis in response to unpredictable electricity markets and a fluid environmental

regulatory situation. Paralyzed decision making would not be prudent.

Specifically related to the market electricity price, looking at the market price of electricity at the time of decision making, I am not convinced Idaho Power or PacifiCorp had a clear picture that prices were on a long term decline as CUB asserts. The market electricity price figure below represents the picture available for decision making in 2009. The 2008 down turn in prices looks similar to the temporary downturn in 2001.



7. Capital cost estimates in the analyses were incomplete:

- o Selective Catalytic Reduction (SCR) (CUB/300 page 13).

Response: Based on the PacifiCorp's response to Staff DR No. 138 in Docket No. UE 246, the cost for SCR was included in the decision making analyses.

- o Capital costs were not updated (CUB/300 page 13).

Response: My comparison of the capital cost estimates used in decision making (response to Docket No. UE 246, Staff DR No. 138) with the capital cost estimates derived by adding the decision making capital cost to the post-2011 capital cost stream included in the coal screening model¹ is reflected on Staff/1202. Based on this comparison, capital cost estimates for Jim Bridger Unit 3 have risen [REDACTED] since decision making. The [REDACTED] updated PVRR(d) benefit presented in PacifiCorp's Docket No. UE 246 reply

¹ The coal screening model and associated capital cost stream was provided in Docket No. LC 52 as support for and part of the Company's March 30, 2012 Coal Replacement Study Update.

testimony is larger than the alleged missing capital cost so including it would not have changed the business decision.

8. Idaho Power's actions were not prudent (CUB/300 page 15).

Response: This issue is addressed in the body of my rebuttal testimony.

CASE: UE 233
WITNESS: ERIK COLVILLE

**PUBLIC UTILITY COMMISSION
OF
OREGON**

STAFF EXHIBIT 1202

**Exhibits in Support
Of Rebuttal Testimony**

August 13, 2012

Nominal Dollars																							
Jim Bridger U3	NPV @ 7.17%	Total	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	
JB U3 SO2 & PM Em Cntrl Upgrades Dev																							
U3 Clean Air - SCR																							
U3 JB NOX																							
U3 Mercury CEMS																							
U3 Mercury Controls																							
U3 CEM Equipment Replacement																							
U3 SO2 & PM Emission Controls Upgrades																							
Totals																							
Coal Screening Upfront Coal Capital + Rate Case Capital						17,000,000																	

Authors
in rate case