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

3 A. My name is Hui Shu, my business address is 825 NE Multnomah, Suite 600,
4 Portland, Oregon 97232. My present position is Manager of Net Power Costs.

5 **Q. Are you the same Hui Shu that submitted direct testimony in this**
6 **proceeding?**

7 A. Yes.

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

9 A. The purpose of my rebuttal testimony is to respond to the adjustments proposed
10 by intervening parties to the Company’s filed net power costs (“NPC”) in the
11 current proceeding. These adjustments are proposed by Mr. Bryan Lanspery of
12 the Idaho Public Utilities Commission Staff (“Staff”), Mr. Randall J. Falkenberg
13 of the PacifiCorp Idaho Industrial Customers (“PIIC”), and Mr. Mark T. Widmer
14 of Monsanto. In addition to my testimony, Company’s witnesses Mr. Chad A.
15 Teply addresses the adjustments proposed by Mr. Falkenberg and Mr. Widmer
16 regarding the Lake Side outage, Colstrip outage and Naughton outages, and Ms.
17 Cindy A. Crane addresses adjustment proposed by Mr. Falkenberg regarding the
18 Jim Bridger fuel quality.

19 **Recommendation for Company’s Net Power Costs**

20 **Q. Has the Company made changes to its originally filed NPC?**

21 A. Yes. The Company’s system NPC has decreased from \$1.07 billion in the
22 original filing to \$1.063 billion.

1 **Q. What are the reasons why the Company's NPC decreased?**

2 A. This decrease of \$6.5 million reflects corrections and the Company's acceptance
3 of certain adjustments proposed by Staff, PIIC and Monsanto.

4 **Q. Please summarize the changes in NPC from your direct testimony.**

5 A. Exhibit No. 71 summarizes the cost impact of the corrections and adopted
6 adjustments that result in an NPC of approximately \$1.063 billion on a total
7 Company basis, which is \$69.0 million on an Idaho-allocated basis.

8 **Q. Do you have a general comment regarding the level of NPC that the
9 Company has calculated and the adjustments proposed by other parties?**

10 A. Yes. NPC and its components are volatile and inherently difficult to forecast.
11 Actual operation lacks the same certainty and perfect foresight as the optimization
12 model used to forecast NPC in regards to the variables and constraints, such as
13 hourly load and market prices, availability of generation and transmission
14 facilities, and weather conditions that impact the amount of hydro and wind
15 generation. As a result, the actual operation/dispatch of the Company's resources
16 may not necessarily achieve what the optimization model projects. That is, the
17 model optimized NPC tends to understate the actual NPC that would be incurred
18 for the same period. The Company's net power costs have increased significantly
19 in recent years. With known changes in the Company's resource portfolio in the
20 rate effective period, the normalized NPC in a historical test period further
21 understates the costs that the Company prudently incurs to serve its customers. In
22 the last general rate case, Case No. PAC-E-08-07, the Company agreed to NPC of
23 \$982 million, given the design of the test period. However, the actual NPC

1 during 2008, which was the test period in that case, was \$1.121 billion, and the
2 actual NPC during 2009 when the rates were in effect was \$1.022 billion. In the
3 current case, the Company proposed NPC of \$1,070 million that would be in
4 effect during 2011. The Company's recent filing in Oregon Docket No. UE 216
5 has shown that the projected NPC in 2011 would be approximately \$1,289
6 million. The preliminary results indicate that the Company's actual NPC through
7 September are at approximately \$859 million, or \$1.129 billion for the 12-month
8 period ended September 2010. Given the significant differences between what
9 the Company proposed in this case and expected actual NPC in the rate effective
10 period, it is unreasonable to make further adjustments to reduce the modeled NPC
11 that will be used to set base rates beginning January 1, 2011, especially when the
12 adjustments are as significant as the ones proposed by Staff, PIIC and Monsanto.

13 **Q. The Commission has authorized an Energy Cost Adjustment Mechanism**
14 **("ECAM") for the Company. Doesn't the implementation of ECAM resolve**
15 **the under-recovery risks of NPC?**

16 A. No. As noted by Mr. Widmer the "review and determination of the appropriate
17 NPC is very important because it represents one of the Company's single largest
18 revenue requirement components and establishes the ECAM baseline."¹ The
19 amount that the Company is authorized to recover under the ECAM is based on
20 the differences between actual NPC and the base NPC included in rates during
21 that period. Currently the Company's ECAM has a 90/10 sharing band. Because
22 of the sharing band the Company is effectively limited to not recover all of the
23 prudently incurred NPC in the rate effective period when actual NPC are

¹ Direct testimony of Mark T Widmer page 10 lines 14-16.

1 projected to be higher than what the Company proposes in the current case.

2 **Company Responses to Specific Adjustments – Overview**

3 **Q. How have you organized your responses to the parties' modeling adjustments**
4 **to NPC?**

5 A. I have grouped the parties' proposed NPC modeling adjustments into three
6 categories. First, there are adjustments to which the Company has agreed in
7 whole. Second, there are adjustments to which the Company has agreed in part,
8 or in response to which the Company has proposed a different position. Third,
9 there are proposed modeling adjustments that the Company disputes as
10 inaccurate, unsubstantiated, or inconsistent with normalized ratemaking.

11 **Corrections and Adjustments Accepted in Whole**

12 **Q. Has the Company made any corrections since its initial filing?**

13 A. Yes. After the initial filing, the Company has identified and provided in response
14 to a Monsanto data discovery (Monsanto Data Request 2.33) three corrections:

- 15 • Dunlap was modeled without reserve requirements;
- 16 • STF transmission from southeast Idaho to northern Utah was not removed
17 after the inclusion of the Populus to Terminal transmission line addition;
18 and
- 19 • The UAMPS Use of Facilities wheeling expense should have been
20 excluded

21 Correcting these three items increases the Company's system NPC by
22 approximately \$0.1 million.

1 **Q. Has the Company accepted any adjustments proposed by Staff, PIIC or**
2 **Monsanto?**

3 A. Yes. The Company has accepted the following proposed adjustments:

- 4 • Commitment Logic Screens (PIIC Adjustment 1): As proposed by PIIC,
5 the Company agrees to modify its daily screens consistent with the
6 methodology set forth in the parties' stipulation in Oregon Docket UE
7 216. This change results in a decrease to system NPC of approximately
8 \$1.7 million. As discussed later in my testimony, the Company does not
9 agree that this adjustment changes incremental O&M expenses included in
10 the test year, as these expenses were not included in the test year.
- 11 • Inter-hour Wind Integration Costs of Non-Owned Resources (corrected
12 PIIC Adjustment 4, and portion of Staff wind integration costs adjustment
13 and portion of Monsanto Adjustment 2): The Company agrees to remove
14 inter-hour wind integration costs associated with the wind projects that are
15 located in the Company's balancing areas but do not deliver generation to
16 the Company's system. PIIC's inter-hour wind integration adjustment
17 needs to be corrected by removing the wind generation that the Company
18 receives under contract with Seattle City and Light ("SCL"). This
19 adjustment results in a decrease to system NPC of approximately
20 \$1.4 million.
- 21 • Colstrip Planned Outages (Monsanto Adjustment 8). The Company
22 agrees to this adjustment that moves the timing of planned outages of the
23 two Colstrip units from fall to spring. This reduces the system NPC by

1 approximately \$0.2 million.

- 2 • Modeling of Mona Market (Monsanto Adjustment 14). The Company
3 does not agree to the concept and logic of this adjustment. However,
4 given the complexity around modeling all market caps in GRID, rather
5 than selectively making adjustments to only one market for the selected
6 time periods, the Company accepts the amount of adjustment proposed by
7 Monsanto in the current case and will review the overall modeling of
8 market caps in the future. This reduces the system NPC by approximately
9 \$0.4 million.

10 **Adjustments Accepted in Part**

11 **APS Supplemental Adjustment (Staff's APS Supplemental Adjustment, Monsanto**
12 **Adjustment 1)**

13 **Q. Please explain the issue raised by Staff and Monsanto with respect to the**
14 **APS Supplemental contract.**

15 A. Staff and Monsanto state that the Company's modeling of the APS Supplemental
16 contract causes uneconomic dispatch of the contract, and the contract should be
17 removed. The proposed adjustment would reduce system NPC by \$1.9 million.

18 **Q. Does the Company agree with the proposal?**

19 A. No. Contrary to what Staff indicates as an inconsistency, the Company's
20 modeling consistently reflects the fact that the Company has historically
21 purchased energy from APS under the terms of the contract. It is not reasonable
22 to arbitrarily remove this contract simply based on modeling results.

1 **Q. Please describe the APS Supplemental contract.**

2 A. The Company executed the Supplemental contract in 1990 with the Arizona
3 Public Service Company ("APS") and has included it in NPC in Idaho since that
4 time. Under the contract, APS makes available to the Company two categories of
5 supplemental firm energy, coal ("APS Coal") and other ("APS Other"). At
6 present, per the terms of contract, APS is obligated to offer the Company 219,000
7 megawatt-hours of firm energy on an annual basis priced at its incremental cost of
8 coal generation, and 876,000 megawatt-hours of firm energy from other sources
9 that are primarily natural gas-fired resources. The two categories of firm energy
10 cannot be offered at the same time. APS is obligated to offer the energy, but the
11 Company only takes the energy when it is economical to do so.

12 **Q. Has the Company modified the modeling of the APS Supplemental contract**
13 **in the current rebuttal filing?**

14 A. Yes. The new approach to modeling this contract eliminates the increases to NPC
15 when the contract is dispatched. The Company has aligned the timing and pricing
16 of the deliveries with historic experience, rather than aligning the volume of
17 deliveries with historic volumes, GRID now exercises the call option on the
18 available energy when it is economical to do so. This change reduces the
19 Company's filed system NPC by approximately \$2.6 million.

20 **Non-firm Transmission (Staff NF Transmission Adjustment, Monsanto Adjustment 3)**

21 **Q. Please explain Staff's and Monsanto's positions on the modeling of non-firm**
22 **transmission.**

23 A. Staff and Monsanto recommend that the Company should include non-firm

1 transmission in GRID. Staff and Monsanto modeled non-firm transmission using
2 a four-year historical average to adjust the capacity of links in the GRID model
3 topology and using a dollar per megawatt-hour energy charge to calculate
4 expenses. Staff's and Monsanto's proposed adjustments would reduce system
5 NPC by \$2.5 million and \$2.4 million, respectively.

6 **Q. What is the Company's response to Staff's and Monsanto's proposal?**

7 A. The Company agrees to model non-firm transmission in GRID. However, if non-
8 firm transmission is included in the model, it should be included on the same
9 basis as short-term firm transmission. There is no basis for using a different
10 method for non-firm transmission than for short-term transmission. Both types of
11 transmission should be modeled using a four-year average to adjust the capacity
12 links in the GRID model topology and the most current year of expenses.

13 **Q. Please explain why non-firm transmission should be modeled the same as**
14 **short-term firm transmission.**

15 A. In the process of reviewing how the Company has utilized non-firm transmission,
16 it is clear that the Company purchases and uses short-term firm and non-firm
17 transmission in the same way. The transmission providers offer certain amount of
18 transmission capacity as firm products, and the rest as non-firm. The only
19 difference between the two products is that non-firm transmission will be cut first
20 for reliability of the transmission system. For both short-term firm transmission
21 and non-firm transmission, the wheeling expenses are incurred whether the
22 transmission capacity purchased is fully utilized or not. As a result, the Company
23 has modeled the non-firm transmission capability based on a four-year average of

1 the historical purchases of non-firm transmission, and the expenses estimated
2 based on what was incurred in the base period of the current filing.

3 **Q. What is the impact on NPC of including non-firm transmission in GRID?**

4 A. Including non-firm transmission using an approach that is consistent with the
5 modeling of short-term firm transmission decreases system NPC by
6 approximately \$1.2 million.

7 **Top of the World Wind (Monsanto 6)**

8 **Q. Please describe the adjustment proposed by Monsanto for the power
9 purchase contract with Top of the World Wind.**

10 A. Monsanto proposes to reflect the actual in-service date of the contract, which is
11 one month earlier than what the Company has included in its original filing, but
12 exclude the wind integration costs related to the wind generation. This
13 adjustment would increase system NPC by \$1.6 million.

14 **Q. Does the Company agree with this adjustment?**

15 A. Partially. In addition to the impact of additional purchase expenses, the additional
16 wind generation would lead to additional wind integration costs, which is a
17 subject that I will discuss later. Applying the same methodology as the Company
18 applied for all other wind generation, the additional energy purchased from Top
19 of the World Wind increases system NPC by approximate \$1.9 million, including
20 additional wind integration costs.

1 **Company Responses to Contested Adjustments**

2 **Wind Integration Costs (Staff Wind Integration Costs Adjustment, PIIC**
3 **Adjustment 5, Monsanto Adjustment 2, 2a and 2b)**

4 **Q. What have Staff, PIIC and Monsanto proposed with respect to the overall**
5 **wind integration costs and the wind integration costs of the OATT**
6 **customers?**

7 A. Staff's proposal is to remove the entire amount of wind integration costs from the
8 Company's filing, which would reduce the Company's system NPC by
9 approximately \$34.2 million. PIIC proposes to remove the intra-hour wind
10 integration costs associated with integrating non-owned wind projects that are
11 interconnected to the Company's transmission system, which would decrease the
12 Company's system NPC by approximately \$4.3 million. Monsanto proposes
13 various versions of adjustments to the Company's wind integration costs,
14 including the same proposal as the Staff to remove the \$34.2 million of the total
15 wind integration costs, a similar proposal to PIIC is to remove the wind
16 integration costs of the non-owned wind projects that would reduce the
17 Company's system NPC by approximately \$6.4 million, or to include the wind
18 integration costs for the portion of the test period that incorporated the actual
19 wholesale transactions and reduce the Company's system NPC by approximately
20 \$2.6 million.

21 **Q. Do you see any basis to the proposals made by Staff and Monsanto to exclude**
22 **the entire wind integration costs?**

23 A. No. The proposals seem to be made based on three general arguments. First, the

1 wind integration charge that the Company used is for setting avoided costs rates
2 and not for setting retail rates. Second, the wind integration costs “are neither
3 paid under contract or to any other utility.” Third, the costs should be captured in
4 the Company’s ECAM. Their arguments to support their adjustments are
5 contradictory and illogical.

6 **Q. Please explain.**

7 A. In Case No. PAC-E-09-07, after considering the Company’s proposed wind
8 integration costs and parties’ positions on such costs, the Commission adopted a
9 wind integration charge that was lower than what the Company proposed and
10 authorized the Company to use \$6.50 per megawatt-hour charge in determining its
11 avoided costs for wind qualifying facilities in Idaho. Neither Staff nor Monsanto
12 provides any evidence that would explain why this charge is appropriate to apply
13 to wind qualifying facilities, but not appropriate to apply to Company-owned
14 facilities or non-qualifying facility purchased power agreements. It is also unclear
15 whether Staff or Monsanto is suggesting that by applying this charge, the prices
16 for wind qualifying facilities located in Idaho are understated and whether the
17 retail customers should pay more for the two qualifying facility contracts that are
18 listed in Mr. Lanspery’s testimony. While implying that the Company’s wind
19 integration costs are not real (“neither paid under contract or to any other utility”),
20 Staff states that the Company’s wind integration costs are captured in actual test
21 period expenses and reflected in a number of accounts.² In addition, if the
22 proposal of removing the wind integration costs from the Company’s filing is

² Staff’s testimony on page 5, lines 20 through 22 suggest that the reference to 2009 may need to be 2010. Otherwise, the discussion on a 2009 test period would be irrelevant in the current proceeding.

1 based on the fact that the wind integration costs are of significant size, difficult to
2 calculate, and the Company may capture such costs in its ECAM filings, then the
3 same argument may be made to the wholesale sales revenues: the Company's
4 wholesale revenues are large, the actual amount of revenues in a year never
5 matches the amount that has been projected, and as a result, the Company could
6 use the ECAM filings to capture such revenues.

7 **Q. Staff indicates that in the testimony requesting the ECAM, the Company**
8 **stated that the ECAM was designed to capture the volatility, including the**
9 **wind variability. How do you respond?**

10 A. It is correct that the ECAM is designed to capture the volatility in NPC that
11 occurs in relation to a properly set base NPC. However, the wind integration
12 costs are not the same as the variation in NPC that the ECAM is designed to
13 capture. Instead of addressing the variation between normalized and actual wind
14 generation as the ECAM is designed for, wind integration costs are costs incurred
15 due to additional reserve requirements to integrate the intermittent generation
16 from the wind projects into the Company's portfolio of resources. The additional
17 reserve requirements include regulating services that deal with wind variability in
18 ten-minute interval, and load following services that deal with wind variability
19 over hourly time intervals. Both services should respond to the up and down
20 variations inherent in wind facilities. That is, the additional reserve requirements
21 to integrate wind generation into the Company's resource portfolio takes on the
22 forms of regulation up, regulation down, load following up and load following
23 down.

1 In proposing to remove the wind integration costs, Staff never explained
2 why such costs, which are reflected in a number of accounts, simply should not be
3 part of the normalized studies, or at least not “explicitly”. The Company could
4 have modeled the wind integration costs “implicitly” by incorporating the
5 additional reserve requirements in GRID, which would certainly lead to a value
6 that is higher than \$6.50 per megawatt-hour. The Company applied a simplified
7 calculation using a Commission-authorized value that is lower than what the
8 Company believes it to be in an attempt to minimize the controversy. In addition,
9 since the ECAM is designed to capture the differences between actual NPC and
10 the base NPC, the base NPC should reasonably account for all components,
11 including the wind integration costs.

12 **Q. Staff stated that the Commission has never expressly approved wind**
13 **integration costs in any utility’s general rate case. Do you believe that this is**
14 **a precedent to follow?**

15 A. No. The fact that the Commission has never expressly approved such costs does
16 not mean that the costs do not exist or are not prudently incurred. The Company’s
17 wind resources have increased significantly in recent years. The subject of wind
18 integration costs has received more and more attention in recent years. The
19 Company is not the only utility that has recognized the cost impact of integrating
20 wind generation into its resource portfolio. By allowing the wind integration
21 costs charged by the Bonneville Power Administration (“BPA”), Staff and
22 Monsanto agree that the Company prudently incurred wind integration costs in
23 serving its customers at approximately \$5.89 per megawatt-hour.

1 **Q. One of Monsanto's arguments for removing wind integration costs seems to**
2 **be the fact that the Company is unable to calculate its actual wind**
3 **integration costs, and without knowing the actual costs "it is very difficult to**
4 **determine the reasonableness of Company's requested recovery." How do**
5 **you respond?**

6 A. First of all, as Mr. Widmer is aware, the Company operates its resource portfolio
7 to serve all its obligations, and does not differentiate what resources are used for
8 serving which obligations. As such, the Company can only estimate the impact of
9 wind integration costs. Second, if Mr. Widmer is looking for references to check
10 if the Company's wind integration costs are within reasonableness, he only needs
11 to look at the wind integration charge that BPA imposes, the wind integration
12 study that the Company used in proposing wind integration costs for avoided
13 costs, wind integration costs that he quoted in his testimony from the Company's
14 last Integrated Resource Plan ("IRP"), and the wind integration costs of \$6.63 per
15 megawatt-hour that were approved by the Public Service Commission of Utah in
16 the Company's last general rate case Docket No. 09-035-23.

17 **Q. Why do PIIC and Monsanto propose disallowing intra-hour wind integration**
18 **charges associated with non-owned wind facilities in the Company's**
19 **balancing areas?**

20 A. PIIC argues that the Company should not include the wind integration costs
21 incurred by providing wind integration services to the non-owned wind projects
22 because the Company does not have a transmission tariff to recover the costs from
23 those customers. The proposal would reduce system NPC by \$4.3 million. As a

1 secondary proposal, Monsanto also proposed the same adjustment, which would
2 reduce system NPC by \$6.4 million.

3 **Q. Are there any errors in the adjustments by PIIC and Monsanto?**

4 A. Yes. The adjustments proposed by PIIC and Monsanto are both incorrectly
5 calculated because, in addition to generation from the non-owned wind projects,
6 their adjustments exclude the generation under the contract between the Company
7 and SCL. Per the terms of the contract, the Company receives wind generation
8 from the portion of the Stateline wind project owned by SCL and then returns
9 firm and shaped energy to SCL. In addition, Monsanto's adjustment also includes
10 an adjustment for inter-hour wind integration for the wind projects that are located
11 in the Company's balancing areas that the Company has interconnected.

12 **Q. Why doesn't the Company charge wind generators for wind integration costs
13 that are located in the Company's balancing areas but do not provide
14 generation to the Company?**

15 A. The Company could not charge wholesale transmission customers for this type of
16 service without FERC approval of a rate application proposing a new wind
17 integration charge. The Company is required by federal law to interconnect with
18 new facilities under the terms of its Open Access Transmission Tariff ("OATT").
19 Once the Company interconnects a new facility to its transmission system, it is
20 responsible for integrating it into the system.

21 **Q. Are there barriers to charging non-owned wind facilities for wind integration
22 costs?**

23 A. Yes. Modifying the Company's OATT to impose wind integration charges on

1 only non-owned wind facilities would violate the federal statutory mandate that
2 the Company treat all transmission customers, affiliated and non-affiliated, on a
3 not unduly discriminatory basis. In addition, there is little regulatory guidance
4 from FERC in this area with respect to what FERC will ultimately consider to be
5 an adequate proposal for a wind integration charge. Although FERC
6 conditionally accepted a proposal by Westar to add a new Schedule 3A charge,
7 whereby all variable generators located within Westar's balancing area pay a
8 regulatory service fee for power exported outside of the balancing area, recently,
9 FERC rejected Puget Sound Energy's proposed revision to its OATT to add a new
10 charge applicable to all wind generators for wind integration within-hour
11 generation following service. In each case, wind industry advocates vigorously
12 protested the proposed tariff revisions because, among other issues, the proposed
13 charges constituted significantly higher regulatory service fees to intermittent
14 resources than for dispatchable resources.

15 **Q. Does the Company plan to raise this issue in its next FERC rate case?**

16 A. Yes. The Company plans to file a rate case with FERC no later than June 1, 2011,
17 in which the Company will include a proposed wind integration charge in its
18 transmission tariff rates pending any FERC guidance on the issue. The Company
19 completed a wind integration study in conjunction with its 2010 Integrated
20 Resource Plan and is in the process of reviewing comments from parties regarding
21 the study. It is hoped that the study can be used in the development of a wind
22 integration charge proposed to be added to the OATT, however, no determination
23 has yet been made. The Company is closely tracking all developments at FERC

1 related to wind integration and is bound to follow any guidance FERC may issue
2 in this regard.

3 **Q. Are the costs associated with wind integration a prudent expense?**

4 A. Yes. As a balancing area authority, the Company must operate its balancing areas
5 by matching system resources to actual load and generation fluctuations on a
6 moment-to-moment basis through automatic generation control. Maintaining
7 system balance is one of the key functions of a balancing area authority who is
8 required to maintain system reliability, including maintaining system frequency.
9 Load fluctuations, outages, and generation output fluctuations all contribute to the
10 need for balancing resources. The addition of renewable resources such as wind
11 has the tendency to increase the need for balancing resources.

12 **Q. What are the benefits to the Company's retail customers of providing such
13 services to the non-owned generation?**

14 A. As a balancing area authority, the Company owns and operates an extensive
15 transmission network that it is required to operate safely and reliably for all of its
16 customers, keeping all resources and loads in balance on a moment-to-moment
17 basis. By providing wind integration services in addition to other transmission
18 related services as a balancing area authority, the Company ensures that its
19 customers are served by a reliable system with diverse resources. Moreover, any
20 transmission revenues received from non-owned generation, which pays wheeling
21 to the Company, are credited against retail rates and therefore have the effect of
22 lowering retail rates.

1 **Q. What adjustment does Monsanto propose to the Company's inter-hour wind**
2 **integration costs?**

3 A. If the Commission does not agree with Monsanto's proposal to remove the entire
4 wind integration costs from the Company's filing then Monsanto proposes a
5 secondary adjustment. Monsanto claims that the inter-hour wind integration costs
6 for balancing purposes have already been included in the Company's filing
7 through the inclusion of actual short term firm transactions, and by calculating the
8 inter-hour wind integration costs for the period from January 1 to May 4, 2010,
9 the Company double counted the wind integration costs. The adjustment would
10 reduce Company's system NPC by \$2.6 million for inter-hour wind integration
11 costs from January to April.

12 **Q. What is your response to the proposal?**

13 A. I don't agree with the proposal. Monsanto's own arguments present
14 contradictions. On one hand, Mr. Widmer claims that the inter-hour wind
15 integration costs have been included for the first four months of the test period
16 because the Company has included actual short term firm transactions through
17 that period. Then on the other hand, Mr. Widmer also agrees that "[t]he Company
18 has a variety of options for balancing," and these options include redispatch of all
19 flexible resources, firm and non-firm wholesale contracts, generation and wind
20 curtailment. The Company has included actual short term firm transactions in its
21 filing. However, those transactions are only a small portion, if any, of the
22 resources that the Company utilizes to integrate generation from wind facilities
23 into its system. In its filing, the Company has included wind generation at the

1 expected level that lacks the significant variability as in actual generation. As
2 such, the generation from all other flexible resources is also at the level that does
3 not reflect the impact of the significant variability in actual wind generation and
4 the costs of integrating such generation into its system.

5 **Q. Are there other problems with Monsanto's proposal?**

6 A. Yes. While not accepting the Company's wind integration costs at \$6.50 per
7 megawatt-hour, Mr. Widmer uses the Company's wind integration at \$6.92 per
8 megawatt-hour as a reasonable approximation to split the intra-hour and inter-
9 hour wind integration costs. In addition, it is unclear what Mr. Widmer implies
10 by stating that further adjustment could be made to what he has proposed in
11 relation to various other means. If the reference were to the flexible resource
12 indicated above, the Company's NPC in the proceeding has not considered the
13 impact of significant fluctuation in wind generation on other resources because
14 they are all modeled on a normalized basis. If the reference were to the additional
15 sales transactions that the Company could make, Mr. Widmer would be double
16 counting the presumed impact that he calculated based on short term firm
17 transactions, which would have included both sales and purchases.

18 **Q. What do you recommend the Commission do regarding various proposals to**
19 **remove all or portion of the wind integration costs that the Company has**
20 **included in the case?**

21 A. With the exception of inter-hour wind integration costs discussed earlier in my
22 testimony that the Company agrees to remove, the Commission should reject all
23 other adjustments proposed by Staff, PIIC and Monsanto.

1 **Bear River Hydro Normalization (Staff Bear River Hydro Generation Adjustment,**
2 **Monsanto Adjustment 12)**

3 **Q. What was the issue on the Bear River normalization?**

4 A. The Company modeled the normalized generation from the Bear River system
5 based on history, excluding the flood control years. Staff and Monsanto argued
6 that the Company should not have reduced hydro generation from the Bear River
7 system based on long-term drought conditions on the Bear River, and recommend
8 using the historical average generation from the Bear River system. The
9 adjustments would reduce the Company's system NPC by \$2.2 million.

10 **Q. Does the Company agree with Staff and Monsanto's argument?**

11 A. No. The water available for generation at the Bear River facilities is dependent
12 on contractually specified irrigation and flood control releases from Bear Lake.
13 Flood control on the Bear River is an operational constraint and releases of water
14 for flood control have not been available to the Company since 2001. The usual
15 manner of normalizing hydro requires adjustments for operating constraints.

16 **Q. Please explain the contractual controls over discharges of water from Bear**
17 **Lake.**

18 A. Those contractual controls include: (1) The 1958 Bear River Compact approved
19 by the United States Congress which prohibits the release of water from Bear
20 Lake solely for power generation below the irrigation reserve level of elevation
21 5,914.61 feet; (2) the 2000 "Operations Agreement for PacifiCorp's Bear River
22 System," which requires that the Company operate Bear Lake primarily for
23 irrigation and flood control. This agreement was required by Idaho, Wyoming,

1 and Utah as a condition for approving MidAmerican Energy Holdings Company's
2 acquisition of PacifiCorp; and (3) recently, the Company began modeling the
3 impact of the new operating constraints required by the 2003 license for FERC
4 Project #20, including the Grace Plant on the Bear River system, which mandates
5 increased bypass flows below Grace dam for ameliorating fisheries and aquatic
6 issues and to provide recreation opportunities (e.g., white water boating). Water
7 released into the river channel below the dam bypasses the turbine and cannot be
8 used for generation. This alone reduces total generation available from the Bear
9 River by an estimated 19,000 megawatt-hours.

10 **Q. Please provide background on how the Company modeled Bear River**
11 **generation in the last case.**

12 A. The dams on the Bear River have three potential sources of water for generation:
13 natural inflow, water withdrawn from Bear Lake to supply downstream irrigators,
14 and water withdrawn from Bear Lake for flood control purposes. The Company's
15 operating agreements for the Bear River system referred to above prohibit the
16 Company from withdrawing water from Bear Lake for generation and flood
17 control purposes unless the lake elevation exceeds a certain level. For the past 10
18 years, and for the foreseeable future assuming median streamflow into Bear Lake,
19 this operational constraint has and will prevent the Company from operating the
20 Bear River system with flood control releases. The lake elevation is projected to
21 drop to about 5,910 feet at present, which is 11 feet below the 5,921 feet elevation
22 level that allows the Company to release flood control storage.

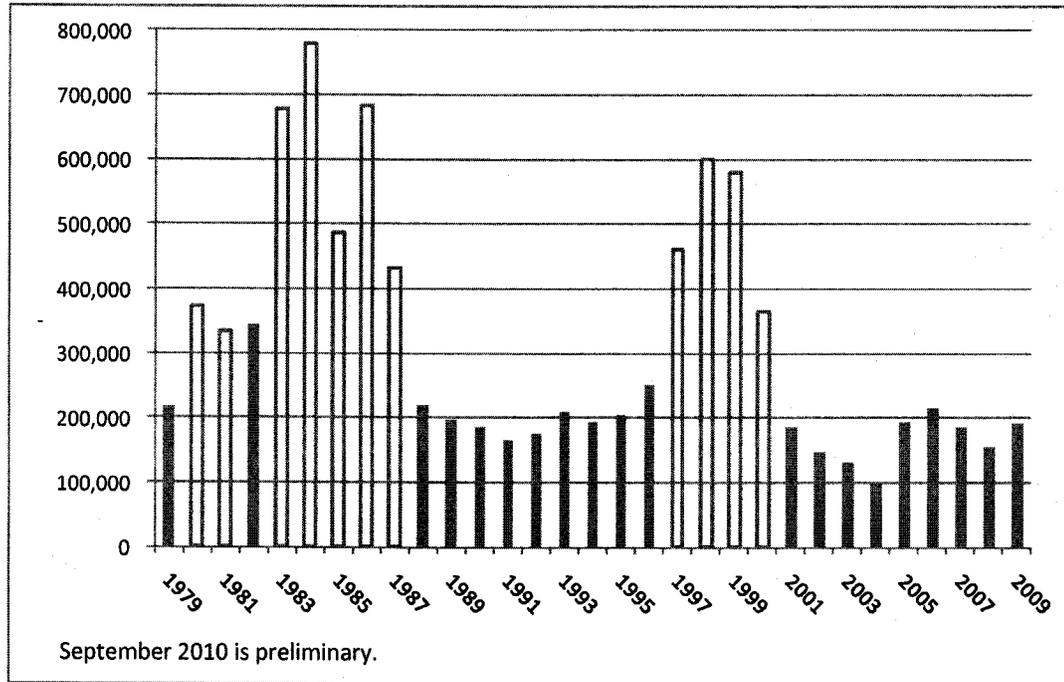
23 The Company previously modeled the Bear River system using historical

1 normalized hydro generation for all three operational modes that included water
2 supply from natural run-off, irrigation deliveries, and flood control releases,
3 without considering the operational constraints around flood control operations.
4 After a careful review, the Company concluded that the flood control mode of
5 operation has now effectively become unavailable, and the Company has begun
6 accounting for this operational constraint in its rate filings and operations
7 planning by excluding the generation using the flood control water in its
8 normalized hydro generation.

9 **Q. What has been the generation from the Bear River system in the recent**
10 **history?**

11 A. Figure 1 below shows the actual generation from the Bear River system from
12 1979 to 2009 water year (October of the previous calendar year to September of
13 the current year), which is the base period applied in the current proceeding. The
14 unshaded bars identify the flood control years. It is clear that the generation
15 during the flood control years is significantly higher than the non-flood control
16 years. The actual generation through 2010 is also added to the Figure.

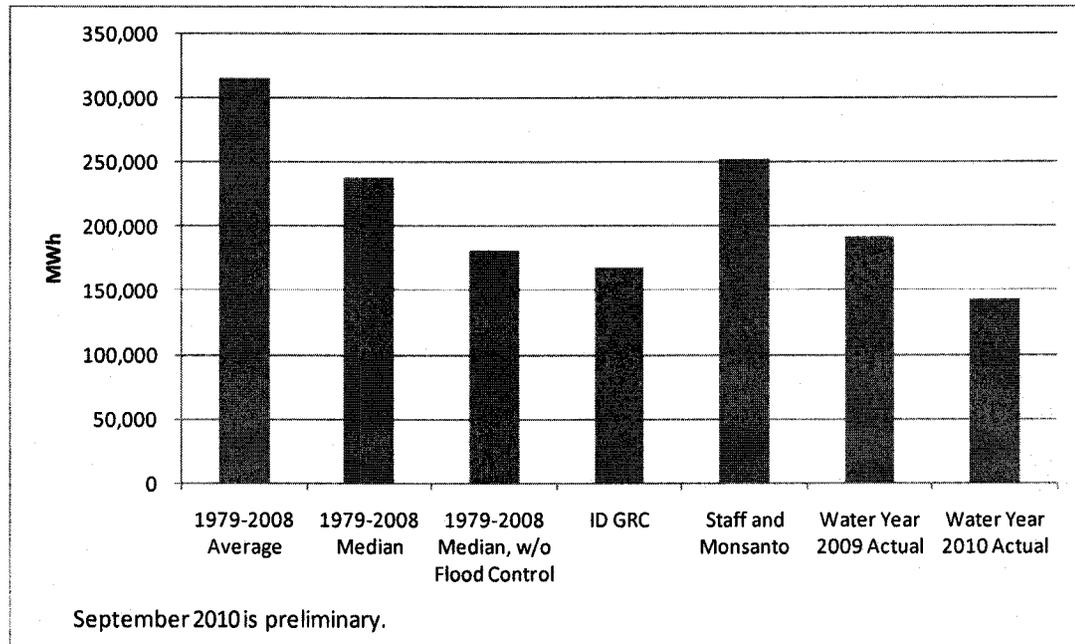
1 **Figure 1 Actual Generation from Bear River**



2 **Q. How does the normalized hydro generation from the Bear River system**
3 **compare with actual generation?**

4 **A.** Figure 2 below shows the comparison of historical generation that is unadjusted
5 for any known and measurable changes, such as rules and regulations, over the
6 years, normalized generation in the current proceeding as proposed by the
7 Company and by Staff and Monsanto, and the most recent actual generation. It is
8 clear that the normalized generation in the Company's filing is more
9 representative of the expected generation from the Bear River system.

1 **Figure 2 Bear River Generation Comparison**



2 **Q. What then is the consequence of adopting Staff and Monsanto's proposed**
3 **adjustment for Bear River normalization?**

4 **A.** Adopting Staff and Monsanto's proposal would lead to overstating hydro
5 generation, and understating NPC as a result of not incorporating this operational
6 constraint in normalizing historical generation. I recommend the Commission
7 reject the adjustment proposed by Staff and Monsanto.

8 **Start Up Energy (PIIC Adjustment 2)**

9 **Q. Please explain PIIC's proposal for the value of start-up energy.**

10 **A.** PIIC proposed that the Company include the energy associated with starting up
11 Carrant Creek, Lake Side, and Chehalis in NPC because the fuel costs of start-ups
12 are included in NPC. The adjustment would decrease the Company's system
13 NPC by \$1.7 million.

1 **Q. What other costs are incurred when starting up the gas-fired plants?**

2 A. Start-up costs are not limited to fuel. In order to accommodate the start-ups of a
3 500 to 600-megawatt gas unit, the Company must re-dispatch the system. In
4 doing so, the Company incurs costs beyond what it would have incurred had the
5 start-ups not occurred. These costs could result from ramping down the lower-
6 costs hydro and thermal units to lower efficiency levels, and increasing generation
7 from higher-cost units prior to when they are needed. None of these costs are
8 included in GRID.

9 **Q. Did PIIC's proposal contain technical errors?**

10 A. Yes. In calculating the value for the start-up energy, PIIC violated the
11 requirement of the minimum down time required for units to stay offline before
12 returning to service. This is due to the fact that GRID allows units to start
13 instantaneously. However, if start-up energy is to be considered, the multi-hour
14 start-up sequence must also be considered. The end result is that the units would
15 need to stay offline and be unavailable for a longer time in order for PIIC's
16 adjustment to be even applicable. The prolonged downtime would lead to
17 increases in NPC by approximately \$4.7 million from what the Company included
18 in its original filing on a total Company basis, which offsets the \$1.7 million
19 assumed value of the start-up energy. As a result, I recommend the Commission
20 reject PIIC's adjustment.

1 **Normalization of Call Option Contracts (PIIC Adjustment 3, Monsanto Adjustment**
2 **13)**

3 **Q. What were the adjustments that PIIC proposes to the modeling of the SMUD**
4 **sales contract and Monsanto proposes to the modeling of the Black Hills sales**
5 **contract?**

6 A. PIIC proposes to substitute actual data for normalized data for the sales contract
7 with the Sacramento Municipal Utility District ("SMUD"), and Monsanto
8 proposes similar adjustment for the sales contract with Black Hills Power ("Black
9 Hills"). The adjustments would reduce the Company's system NPC by \$1.6
10 million and \$1.3 million, respectively.

11 **Q. Do you have any general comments about the two proposals?**

12 A. Yes. For normalized purposes, the GRID assumes that the counterparties – who
13 control the call options on these two contracts - will maximize the value of the
14 contracts and take power at the most economical time. GRID assumes
15 optimization of all flexible resources, while PIIC's and Monsanto's proposals
16 embody an approach of optimizing flexible resources when it lowers NPC and not
17 optimizing flexible resources when it raises NPC. It was based on the assumption
18 that the Company acts rationally and other companies act irrationally. PIIC's and
19 Monsanto's proposals violate any reasonable principles of consistency and
20 fairness. If NPC are to be set using an optimization model, then all resources and
21 contracts that are subject to being optimized should be optimized. This is the same
22 argument used by Staff and Monsanto in their proposed treatment of the APS
23 Supplemental contract where they propose that actual historic energy take under

1 the contract should be rejected in favor of optimizing the contract in GRID.

2 **Q. Please explain.**

3 A. The proposed adjustments depart from modeling power costs on a normalized
4 basis. If this type of modeling adjustments were adopted, then consistency and
5 fairness require its application to all other flexible purchase or sale contracts that
6 are modeled in a similar fashion to the SMUD and Black Hills contracts. For that
7 matter, it should also be applied to flexible generating resources. Optimization of
8 the Company's system operations decreases NPC on a net basis. PIIC and
9 Monsanto have not proposed "de-optimization" across the board, which would
10 increase NPC. Nor have PIIC and Monsanto provided any justification for
11 selective "de-optimization" of only two call option sales contracts, rather than all
12 purchase and sale contracts and flexible generating units.

13 **Q. Why is it important to treat third party contracts the same whether the
14 Company is selling or purchasing energy?**

15 A. Use of any delivery patterns other than the optimized delivery patterns will
16 always lower net power costs for wholesale sales contracts with flexibility such as
17 the SMUD and Black Hills contracts. The opposite is true for purchased power
18 contracts that give the Company flexibility in how the power is taken. It is not
19 fair or consistent to normalize different contracts using different rules.

1 **Q. How do you respond to the arguments made by PIIC and Monsanto that**
2 **flexible wholesale sales contracts should not be optimized because the**
3 **Company has not modeled any of the loads, constraints, or forward price**
4 **curves used by the counterparties?**

5 A. It is correct that the Company does not model the counterparties' systems due to
6 the impossibility of obtaining the data that are proprietary to those counterparties.
7 However, given that the Company is only one of the many participants in the
8 market, the only assumption is to assume that all the participants in the same
9 market are rational and will exercise their rights to the flexible contract to lower
10 their costs. This is confirmed by Black Hills as presented on page 2 of Exhibit
11 No. 72, which was an exhibit to Mr. Falkenberg's testimony in the Company's
12 2009 Wyoming general rate case, Docket No. 20000-352-ER-09³, where it states:
13 "BHP will capture the maximum contract value by taking delivery of the contract
14 energy to serve load or facilitate market sales." This is exactly what the
15 Company's method of optimization captures, and what is demonstrated in Exhibit
16 Nos. 73-75. Exhibit No. 73 shows the actual delivery taken as a whole, and that
17 the pattern of this energy delivery may appear to be flat. However, looking at the
18 same data, but by HLH and LLH and by location where the energy was delivered
19 in Exhibit Nos. 74 and 75, it is clear that Black Hills exercised their rights based
20 on price signals from the market, taking more energy when and where market
21 prices were relatively higher.

³ Both Mr. Falkenberg and Mr. Widmer were consultants to Wyoming Industrial Energy Consumers ("WIEC") in that proceeding.

1 **Q. How is the SMUD contract structured?**

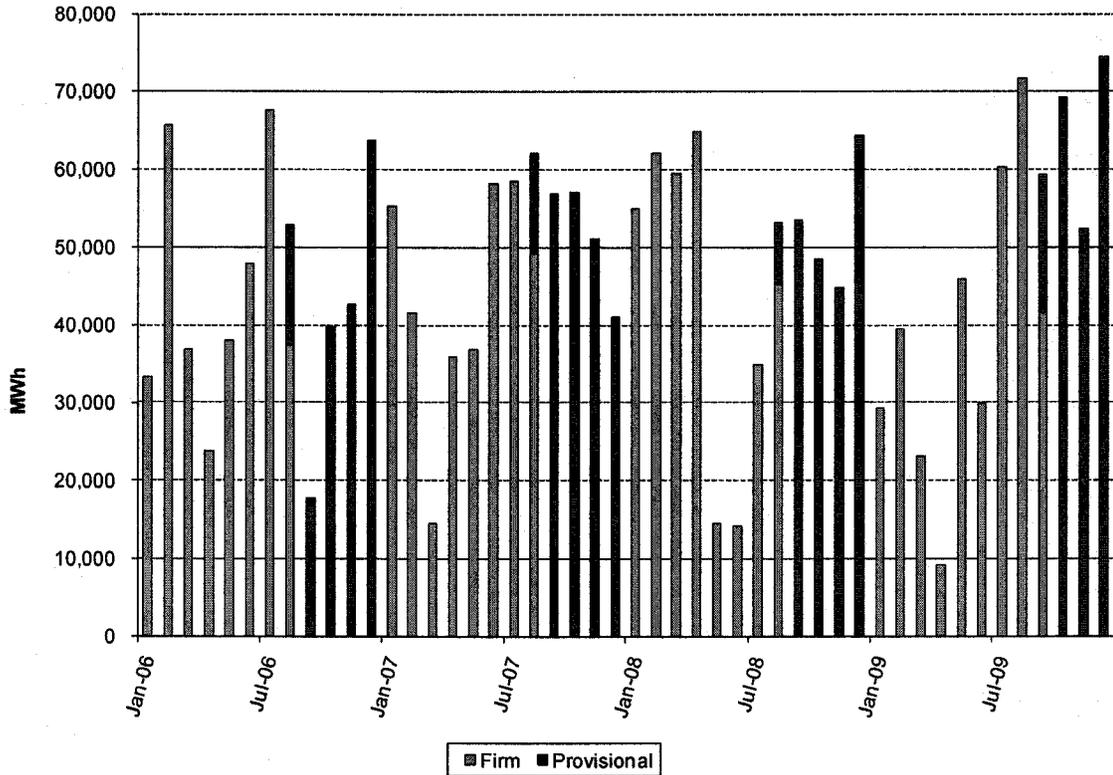
2 A. In addition to the firm energy component that is modeled in GRID explicitly,
3 SMUD also has the right to take provisional power from the Company under the
4 terms of the same contract, which will be returned in full to the Company next
5 year. For the normalized calculation, the Company assumes the take and return of
6 the provisional power are equal and matching in the test period.

7 **Q. Does the historical data display SMUD's preference on when to take energy**
8 **under the contract?**

9 A. Yes. When both of these are taken together, it is clear that SMUD intends to take
10 energy with preferences by season. Figure 3 below shows the monthly pattern of
11 the total firm and provisional sales in a four-year period. Based on the historical
12 pattern, it would be reasonable to assume that without the flexibility of the
13 provisional portion of the contract, SMUD would shape their take of the firm
14 portion with a similar seasonal pattern. PIIC's proposal only considers the firm
15 portion of the contract, and suggests that SMUD would take more energy in
16 spring than in fall as if SMUD would not have considered their rights to the
17 provisional energy.

1

Figure 3 Historical Shape of Energy Take by SMUD



2 Q.

Does the Company model any contracts based on actual historical data?

3 A.

Yes. The Company models non-flexible contracts, such as the ones with GP Camas, Biomass, and small purchases, based on historical information because none of these contracts provide the Company the kind of flexibilities that are provided for under the terms of the call option sales contracts. Based on the principle of known and measurable information, the only information known to the Company is the history of those contracts. I recommend the Commission reject the adjustments proposed by PIIC and Monsanto on the basis that the adjustments violate the fairness in the optimization of all flexible resources to reduce NPC.

11

1 **Heat Rate Deration (PIIC Adjustment 10)**

2 **Q. What does PIIC's propose in this adjustment?**

3 A. PIIC claims that the Company's application of outages biases the availability and
4 average heat rates of the units. The adjustment proposed by PIIC would reduce
5 Company's system NPC by \$1.8 million.

6 **Q. How does the Company apply the deration method?**

7 A. The Company's approach derates the maximum capacity of the unit in every hour
8 of the year by an equal percent based on historic forced outage rates, which
9 constitutes a "haircut" in unit availability.

10 **Q. How would PIIC's discussion change this method?**

11 A. The discussion presented by PIIC would alter thermal units' heat rate curves to
12 artificially increase their efficiency as compared with the heat rate curves that are
13 developed from actual plant operating data. The discussion on the "other aspect"
14 of the problem that PIIC presents is to reduce thermal plant minimum generation
15 levels so GRID can run thermal units at levels they are physically incapable of
16 reaching.

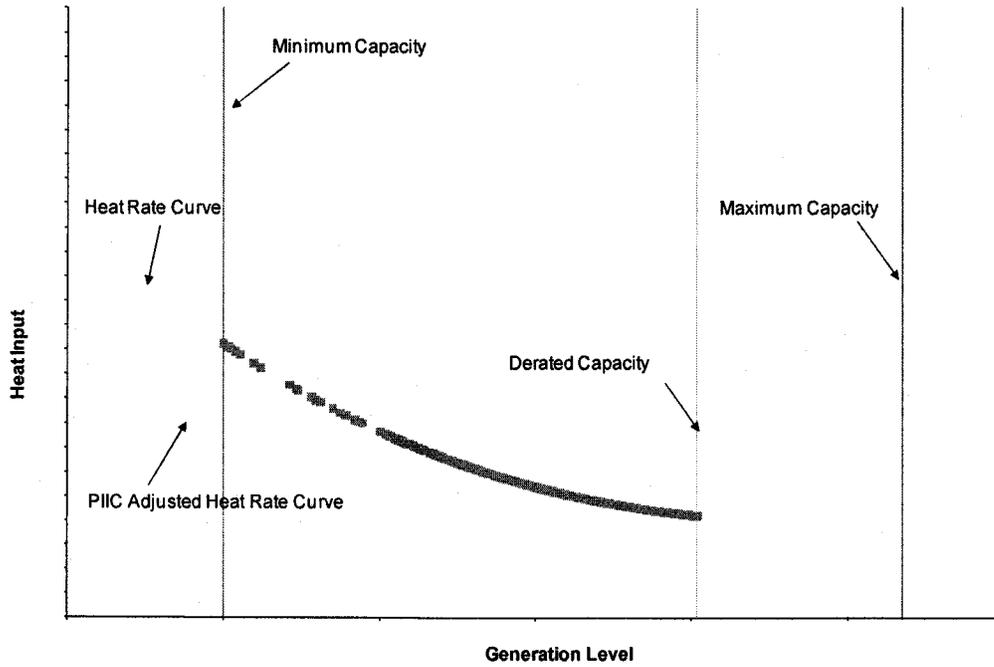
17 **Q. Would PIIC's method significantly understate the heat rates?**

18 A. Yes. The only time when the derate adjustment to the heat rate may be applicable
19 is when the unit is dispatched at one particular level of generation – its derated
20 maximum capacity, with the assumption that the unit may be dispatched at its
21 stated maximum capacity in GRID if there were not the availability "haircut".
22 When the unit is dispatched at any level below its derated maximum capacity,
23 GRID has made the optimal decision to dispatch that unit at a lower and less

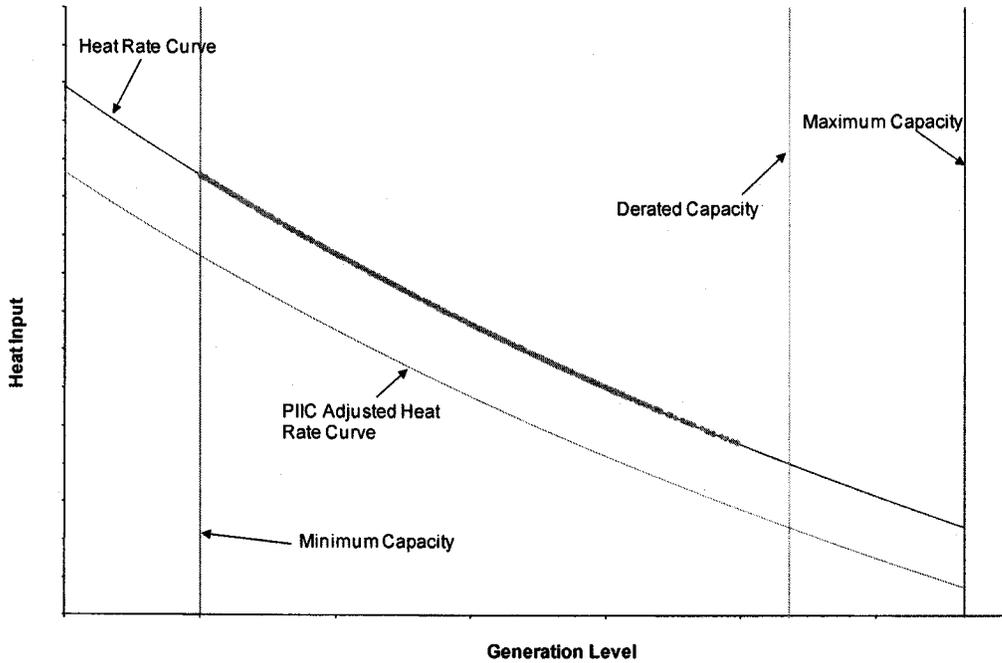
1 efficient generation level, whether it has been derated or not. Therefore, derating
2 the entire heat rate curve overstates the efficiency of the unit and understates the
3 heat inputs.

4 Figure 4 and Figure 5 below show the heat rate curves that would be under
5 the methods modeled by the Company and modeled by Mr. Falkenberg in the
6 Company's previous cases in other jurisdictions for a coal-fired unit and gas-fired
7 unit, from minimum to maximum generation level, with the assumed generation
8 levels superimposed on the heat rate curves that would be dispatched under the
9 Company's methods. The graphs clearly demonstrate that heat input required for
10 various levels of generation is understated using the derate-adjusted heat rate. In
11 both cases, there are many hours of dispatch below the derated maximum
12 capacity, which are the generating levels at which PIIC's proposal would
13 understate the heat rate, and subsequently understate NPC.

1 **Figure 4 Heat Rate Curve (Coal Unit)**



2 **Figure 5 Heat Rate Curve (Gas Unit)**



1 **Q. Hasn't the Company agreed to adjust the heat rates at least to the derated**
2 **maximum capacities of the units as claimed by PIIC?**

3 A. No. The Company believes that the only adjustment that may be valid is at units'
4 derated maximum, assuming that the unit could generate at a slightly more
5 efficient level, but the Company does not believe such adjustment should be
6 made. After the Company's application of the "haircut," the units' capacities are
7 still at relatively efficient levels. In actual operations, a unit can be derated to any
8 level between its minimum and maximum capacities, and from Figure 4 and
9 Figure 5, the heat rate at lower levels are significantly less efficient than at the
10 derated maximum.

11 **Q. Do you agree with PIIC's discussion that the minimum generation level**
12 **should be derated because the maximum generating level is derated?**

13 A. No. The purpose of the "haircut" to the maximum generating capability is to
14 reflect the amount of generation no longer available due to outages. That is fully
15 accomplished through the "haircut" to the maximum generating capacity.

16 **Q. PIIC relates the proposal of making duration adjustment to the Company's**
17 **modeling of fractionally owned units. Do you have comments on that?**

18 A. Yes. PIIC seems to suggest that the portion of the units that would not be
19 available due to outages may be considered to be owned by other entities. Such
20 concept would require the modeling of all aspects of the units in the same manner,
21 including the reserve capabilities of the units. In addition, in the case of outages,
22 it is not correct to assume that another entity owns the portion of the units that are
23 forced out. When GRID determines certain amount of generation from a unit, it

1 does not make the decision based on whether or how much the unit has been
2 derated. That is, for a unit with a capacity of 100 megawatts, when GRID
3 dispatches the unit at 70 megawatts, it does not matter whether the unit has been
4 derated by 20 percent or not. The Commission should reject PIIC's adjustment.

5 **Existing Long Term Contracts (PIIC Adjustments 11 and 13 regarding DC Intertie**
6 **Costs, and Idaho Power PTP Contract)**

7 **Q. Please explain PIIC's proposed adjustment to costs associated with the DC**
8 **Intertie.**

9 A. PIIC argues that costs associated with the DC Intertie and Network Transmission
10 Agreement between BPA and the Company should be removed from NPC on the
11 basis that no purchases are modeled at the Nevada-Oregon Border ("NOB"), the
12 point from which the agreement provides wheeling. The two adjustments
13 proposed by PIIC would result in a \$4.8 million decrease to system NPC.

14 **Q. Please provide some background on the DC Intertie contract.**

15 A. The DC Intertie contract was executed 16 years ago on May 26, 1994, to provide
16 deliveries of 200 megawatts of power from Southern California Edison at NOB
17 under Amendment 1 to the Winter Power Sales Agreement ("WPSA"). The
18 WPSA was executed on December 14, 1993 and provided up to 422 MW of
19 power to be delivered to the Company's west control area. At the time the WPSA
20 was executed, the Company had sufficient transmission rights to import 222
21 megawatts of power into the west control area. The agreement provided that if the
22 Company procured additional transmission rights by June 1, 1993, then it could
23 import the remaining 200 megawatts to its system. The Company secured the

1 remaining 200 megawatts of transmission rights by acquiring 200 megawatts of
2 transmission capacity on the DC intertie. The Company terminated the WPSA
3 effective January 1, 2002, but kept its 200 megawatts of DC Intertie import rights.

4 **Q. How does the DC Intertie contract benefit the Company's customers today?**

5 A. The agreement takes advantage of the load diversity between summer-peaking
6 California and the winter-peaking Pacific Northwest. The contract provides a
7 valuable means of securing capacity and energy from California entities to meet
8 retail loads. Loads in California are relatively low in the winter when loads in the
9 Company's west control area and the rest of the Pacific Northwest are at their
10 highest.

11 **Existing Long Term Contracts (PIIC Adjustments 11 and 13 regarding DC Intertie**
12 **Costs, and Idaho Power PTP Contract)**

13 **Q. Please explain PIIC's proposed adjustment to costs associated with the DC**
14 **Intertie.**

15 A. PIIC argues that costs associated with the DC Intertie and Network Transmission
16 Agreement between BPA and the Company should be removed from NPC on the
17 basis that no purchases are modeled at the NOB, the point from which the
18 agreement provides wheeling. The two adjustments proposed by PIIC would
19 result in a \$4.8 million decrease to NPC.

20 **Q. How should the Commission judge the prudence of this contract?**

21 A. Prudence should always be judged based on the information that was known at
22 the time the contract was executed. It would not be reasonable to judge a 16-year
23 old contract based on information that is available today that was not available 16

1 years ago.

2 **Q. But there are no transactions modeled at NOB in the test period in this**
3 **proceeding. Why is it appropriate to include costs related to the DC Intertie**
4 **agreement in this proceeding?**

5 A. In making their proposal, PIIC focuses on energy deliveries under the contract
6 rather than the capacity and diversity benefits of the contract. It would be
7 inappropriate to penalize the Company for prudently acquiring transmission rights
8 16 years ago by disallowing costs today based on hindsight and only looking at
9 the energy value of a resource that can facilitate the delivery of both capacity and
10 energy. By purchasing these transmission rights, the Company has purchased
11 assurance that it can reliability serve its load obligations. PIIC's proposals based
12 on the limited energy-only view of this contract is similar to arguing that the
13 Company should only be able to recover insurance premiums when it receives
14 proceeds under an insurance policy. The costs associated with this contract are
15 modest in light of the benefit to the Company's overall transmission strategy and
16 hedge against changes in the market.

17 **Q. What does PIIC propose to adjust for the expenses of the contract between**
18 **the Company and the Idaho Power Company ("IPC")?**

19 A. PIIC claims that the contract that the Company has with IPC would no longer be
20 needed after the Populus to Terminal section of transmission line goes into
21 service. As a result, the expenses related to the contract should be removed,
22 which would reduce the Company's system NPC by \$0.8 million.

1 **Q. Why does the Company disagree with this adjustment?**

2 A. The notion that an existing contract should be terminated simply because a new
3 resource may replace the function of that contract is unfounded. The referenced
4 contract is a two-year contract that the Company entered into in 2009 to serve
5 retail load, given the information at the time about the resources available to the
6 Company to meet its obligation in the next two years. This contract is not the
7 same as the short term firm contracts that the Company enters into from time to
8 time and for a short duration, such as the ones listed as a correction earlier in my
9 testimony. The capability of those short term firm transmission is modeled in
10 GRID at the assumed level based on what the Company has experienced
11 historically, and the assumption should be modified when the Populus to Terminal
12 line can provide the needed transmission capacity. The Company entered into
13 that particular contract based on expected in-service date of the Populus to
14 Terminal line and with the option of annual contracts only. As the result, the
15 terms of the contract could not perfectly match the in-service date of the new
16 transmission line, and the Company should not be required to time the contract
17 terms precisely with resources that become available subsequently. Had the
18 Company entered into a shorter contract, there would have been a potential gap
19 prior to the new transmission line being in service to the detriment of customers.
20 I recommend the Commission reject PIIC's adjustment.

21 **Reserve Shutdown (Monsanto Adjustment 5)**

22 **Q. Please describe Monsanto's adjustment for reserve shutdowns.**

23 A. Monsanto claims that the Company's forced outage rates and the rates used in

1 GRID are calculated inconsistently and proposes that reserve shutdown hours
2 should be added to the denominator of the forced outage rate calculations. The
3 proposed adjustment would reduce the Company's system NPC about \$0.8
4 million.

5 **Q. Do you agree with this adjustment?**

6 A. No. This adjustment has the effect of artificially lowering the forced outage rates
7 by stating that the units would be available 100 percent of the time if they were to
8 be called upon to run during the hours when they were on reserve shutdown for
9 economic reasons.

10 **Q. Please explain.**

11 A. Contrary to what Monsanto claims, the Company's calculation of forced outage
12 rates is consistent with how GRID applies them. Monsanto agrees that the
13 planned outage hours should be excluded from the denominator in the calculation
14 of forced outages. Removing the reserve shutdown hours are based on the same
15 fact that no forced outage events are collected during either the planned outage
16 hours or the reserve shutdown hours. Monsanto's proposal is the same as stating
17 that if the units were to run during the hours when they were shutdown for
18 economic reason, the units would not encounter any forced outage events. The
19 proposal is not supported by logical or analytical reasoning. In addition, given the
20 fact that GRID models reserve shutdowns, the rates are only applied to the hours
21 when they are scheduled to run, which is a fact even supported by Mr. Widmer in
22 his testimony stating that "[t]he Company's daily screen modeling in GRID
23 specifically identifies when CCCTs are available but are not economic to run and

1 essentially placed them on reserve shutdown so they cannot run.” I recommend
2 the Commission reject Monsanto’s proposal.

3 **Cal ISO (Monsanto Adjustment 7)**

4 **Q. Please describe Monsanto’s adjustment to the Cal ISO Fees.**

5 A. Monsanto recommends removal of the Cal ISO fees that are based on 2009 actual
6 costs incurred by the Company, and replace them with a lower amount.

7 Monsanto’s recommendation is based on the assumption that a significant portion
8 of the fees are not matched by electricity transactions that the Company included
9 in the case and could incur the fees. This adjustment results in a \$4.0 million
10 decrease to the Company’s system NPC.

11 **Q. How do you respond to this adjustment?**

12 A. I urge the Commission to reject this adjustment. Cal ISO fees are incurred for
13 transactions at market points of SP15, NP15, and when the Cal ISO is the
14 counterparty.⁴ The bulk of these transactions are short term transactions made
15 close to the time of delivery. Cal ISO is a major counterparty in the Company’s
16 activities to balance its system, which is a fact that Monsanto doesn’t dispute
17 according to Mr. Widmer’s testimony stating “[h]istorical records reveal that most
18 of the transactions with the Cal ISO as a counter party are incurred shortly before
19 or on the actual day of delivery.” Such activities are reflected in GRID as part of
20 the system balancing sales and purchases, which are transactions computed by

⁴ Mr. Widmer quoted an excerpt presumably from the testimony by Company’s witness Mr. Duvall from the Wyoming Docket No. 20000-352-ER-09. Mr. Duvall’s testimony in that case did not contain the quoted excerpt. However, Mr. Duvall did testify to content similar to the excerpt as the Second Supplemental testimony in the Company’s Utah general rate case Docket No. 08-035-38, where the discussion was about the reason why the Company entered into transactions that had delivery points in SP15 when it did not have firm transmission rights.

1 GRID representing the types of transactions that would be consummated shortly
2 before or on the actual day of delivery. The Company continues to do business
3 with the Cal ISO and continues to incur Cal ISO fees. There is no reason to
4 arbitrarily eliminate expenses that are required to be incurred when doing
5 business with the Cal ISO simply because the data in the Company's filing does
6 not explicitly include those applicable transactions.

7 **Q. Would removing the Cal ISO as a counterparty affect the operations of the**
8 **Company's power system?**

9 A. Yes. The Company enters into transactions with the Cal ISO in order to
10 economically balance the system. In doing so, the Company incurs Cal ISO fees.
11 Not allowing the Cal ISO fees is the same as making the assumption that the
12 Company would not do business with the Cal ISO. Removing Cal ISO as
13 counterparty would limit the options that the Company may use to balance its
14 system economically. As a result, NPC would go up due to those limitations and
15 constraints.

16 **Q. Does the Company expect that it will continue to do business with the Cal**
17 **ISO in 2010?**

18 A. Yes. The Company expects to do business with the Cal ISO in 2010 and the
19 future and incur various fees in the markets governed by the Cal ISO. Costs such
20 as wheeling costs are typically quantified for ratemaking purposes by using the
21 most recent historic data, absent any known and measurable changes. This is
22 exactly how the Company has normalized Cal ISO costs in this proceeding.

1 **Q. Do you see other problems in Monsanto's proposal?**

2 A. Yes. Despite the fact that the Company requested Monsanto to provide all
3 workpapers supporting their adjustments, the workpapers for this adjustment is
4 among the ones that do not support the amount of the adjustments. Given the
5 magnitude of the adjustment, it seems that Monsanto proposes to remove the
6 entire amount of the Cal ISO fees that the Company included in the case,
7 replacing it with only a fraction of the actual Cal ISO fees that the Company has
8 incurred during the period that is claimed to match the actual short term firm
9 transactions that the Company included in the case. However, through September
10 2010, the Company has incurred approximately \$3.2 million of Cal ISO fees, both
11 wheeling fees and service fees, which are only \$66,265, lower than what the
12 Company included in the filing for the corresponding period. Accordingly, the
13 Commission should reject Monsanto's argument that the Company would not
14 incur Cal ISO fees in the test period, as well as rejecting the proposed adjustment,
15 which would replace what the Company has included in the case with a fraction
16 of the actual fees.

17 **Cholla 4 Capacity (Monsanto Adjustment 10)**

18 **Q. What was the issue regarding the capacity of Cholla unit 4?**

19 A. As the result of a major overhaul in 2008 the capacity at Cholla Unit 4 was
20 upgraded. However, due to transmission constraints, the generation from the
21 Cholla unit 4 to the Company's system has remained at the previous level.
22 Monsanto argues that the upgrade should be reflected in GRID. The adjustment
23 would reduce the Company's system NPC by \$1.1 million.

1 **Q. Do you agree with Monsanto's argument?**

2 A. No. First, the argument ignores the physical transmission constraints on delivery
3 of power from Cholla. Second, Monsanto has increased transmission capacity to
4 accommodate the increased generation from Cholla unit 4 without increasing any
5 other costs related to that capacity. Third, the purpose of derating the units for
6 forced outages is to capture the lost generation due to such outages, while
7 Monsanto's proposal would suggest the lost generation due to outages could be
8 supplemented by the possible generation from the unit that cannot be delivered to
9 the system.

10 **Morgan Stanley Call Premiums (Monsanto Adjustment 11)**

11 **Q. Please explain the Monsanto's proposed adjustment.**

12 A. Monsanto proposes to remove the capacity payments related to two of the
13 Company's call option contracts because those contracts are not dispatched during
14 the test period. The adjustment would reduce the Company's system NPC by
15 \$3.1 million.

16 **Q. Do you agree with Monsanto's proposed adjustment?**

17 A. No. Monsanto is seeking to disallow the capacity payments that the Company
18 pays on call option contracts without demonstrating the imprudence of these
19 costs. The Company executed these call option contracts to meet demand and
20 ensure reliable service by providing physical delivery of energy during periods of
21 increased demand and/or transmission constraints when prices are higher. So
22 even if the contracts are not dispatched in GRID, they can provide customers a
23 real benefit in the event of a change in the Company's system.

1 **Q. What would you recommend the Commission do in the current case?**

2 A. The Commission should reject Monsanto's proposal to remove the capacity
3 payment of the call option contracts. As stated above, the contracts were entered
4 into to meet demand and ensure reliable service by providing physical delivery of
5 energy during periods of increased demand and/or transmission constraints when
6 prices are higher. Monsanto's adjustment is similar to requesting a refund of your
7 auto insurance payment every year when you have not been involved in an
8 accident.

9 **Other Proposals**

10 **Combined Cycle O&M Adjustment (PIIC Adjustment 14)**

11 **Q. Please explain PIIC's adjustment to O&M costs of combined cycle plants.**

12 A. PIIC states that the proposed daily screening adjustment reduces the O&M costs
13 associated with combined cycle plants.

14 **Q. What is the basis for PIIC's adjustment?**

15 A. Based on Mr. Falkenberg's testimony on this issue in prior cases and the reference
16 to Mr. Steven R. McDougal's exhibit, PIIC seems to be referring to the O&M that
17 the Company might have added to fixed O&M for each start-up of a combined
18 cycle plant.

19 **Q. Is PIIC's adjustment reasonable?**

20 A. No. The Company has not included any incremental O&M to reflect the
21 additional costs of combined cycle plant start-ups. Therefore, there are no costs
22 to remove.

1 **Q. Do both Staff and Monsanto oppose updates to the Company's filed NPC?**

2 A. Yes. The Company believes that updated information would provide the
3 Commission with the most recent and more accurate information for the test
4 period. While opposing updates to the Company's NPC, Monsanto proposes to
5 selectively update components of the NPC, such as the recommendation to
6 replace the Cal ISO fees that the Company included in the filing with actual Cal
7 ISO fees that the Company has incurred for period prior to May 4, 2010. If the
8 Company were to update the NPC to reflect all actual information that is available
9 for the test period through September, the NPC for the twelve-month period
10 ending December 2010 would be approximately \$53.7 million higher than what
11 was contained in the Company's original filing. If the Company were to update
12 all NPC for actual information through May 4, 2010, as Monsanto recommended
13 for the Cal ISO fees, the test period NPC would be \$25.0 million higher than
14 filed.

15 **Q. Has the Company updated its NPC in this rebuttal?**

16 A. No. However the Company believes updates improve the accuracy of NPC
17 forecasts and reserves the right to propose updates in future filings Staff, PIIC and
18 Monsanto proposed and the Company accepts adjustments to NPC, which total to
19 an approximate \$6.5 million reduction from what the Company originally filed.

20 **Q. Please summarize your testimony.**

21 A. In its direct filing, the Company proposed NPC of \$1.07 billion on a total
22 Company basis for the 12-month test period ending December 2010. In this
23 current filing, the Company has revised its projected NPC to \$1.063 billion on a

1 total Company basis. The revised NPC incorporate corrections and positions that
2 Staff, PIIC and Monsanto proposed and the Company accepts, which total to an
3 approximate \$6.5 million reduction from what the Company originally filed. For
4 the adjustments that the Company does not agree with, I have provided
5 explanations and evidence to support the Company's positions. I believe the
6 revised NPC has reflected more accurate information and presented a reasonable
7 compromise to positions proposed by Staff, PIIC and Monsanto.

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

9 **A. Yes, it does.**