

Docket No. 20000-__-ER-11
Witness: Stefan A. Bird

BEFORE THE WYOMING PUBLIC SERVICE
COMMISSION

ROCKY MOUNTAIN POWER

Direct Testimony of Stefan A. Bird

December 2011

1 **Q. Please state your name, business address and present position.**

2 A. My name is Stefan A. Bird. My business address is 825 NE Multnomah, Suite
3 600, Portland, Oregon 97232. I am Senior Vice President, Commercial and
4 Trading, for PacifiCorp Energy, a division of PacifiCorp (“the Company”).

5 **Q. What are your responsibilities in your current position?**

6 A. I oversee the Company’s Commercial and Trading organization which is
7 responsible for dispatch of the Company’s owned and contracted generation
8 resources, procurement of new generation resources, and wholesale purchases and
9 sales of natural gas and electricity to balance the Company’s load and resources. I
10 am also responsible for the Company’s load and revenue forecast, integrated
11 resource plan (“IRP”) and net power costs modeling.

12 **Q. Please describe your educational and business background.**

13 A. I hold a B.S. in mechanical engineering from Kansas State University. I joined
14 PacifiCorp Energy and assumed my current position in January 2007. From 2003
15 to 2006, I served as president of CalEnergy Generation U.S., an owner and
16 operator of Qualifying Facility and merchant generation assets, including
17 geothermal and natural gas-fired cogeneration projects across the United States.
18 From 1999 to 2003, I was vice president of acquisitions and development for
19 MidAmerican Energy Holdings Company (“MEHC”). From 1989 to 1997, I held
20 various positions at Koch Industries, Inc., including energy marketing, financial
21 services, corporate acquisitions, project engineering and maintenance planning in
22 the Americas and Europe.

1 **Q. Please summarize your testimony.**

2 A. My testimony provides an overview of the Company's hedging program and
3 background on the prior review of the hedging program in Wyoming. I update the
4 cumulative hedging gain/loss analysis provided in general rate case Docket No.
5 20000-352-ER-09 ("2009 GRC"), and show that the cumulative hedging gain to
6 Wyoming customers through October 2011 is \$377 million on a total Company
7 basis, excluding the benefits of the long-term Hermiston natural gas hedge
8 contract. I demonstrate the prudence of the Company's hedging costs in this case
9 by explaining that the hedges were executed in accordance with the Company's
10 hedging policy and that the losses are due to factors beyond the Company's
11 control, primarily lower natural gas and electric market prices and changes in the
12 Company's load and resource balance. Finally, I propose to engage the Wyoming
13 stakeholders in ongoing collaborative discussions regarding the Company's
14 hedging program.

15 **Background on Company Hedging Program**

16 **Q. What is the purpose of the Company's risk management policy and hedging**
17 **program?**

18 A. The purpose of the Company's risk management policy and hedging program is to
19 reduce the risk and volatility of net power costs for the Company's customers,
20 thereby stabilizing this cost component in base rates or in the Company's power
21 cost mechanism. As stated in the Company's 2011 IRP, "Hedging is done solely
22 for the purpose of limiting financial losses due to unfavorable wholesale market
23 changes...Hedging modifies the potential losses and gains in net power costs

1 associated with wholesale market price changes.”¹

2 The Company relies on the wholesale markets to purchase and sell natural
3 gas and power to fuel its natural gas fired resources, to serve its retail load
4 obligations and to economically dispatch its resources and make wholesale sales
5 to reduce net power costs. The prices in these wholesale gas and power markets
6 are extremely volatile. While the Company’s hedging program reduces risk and
7 volatility, it does not necessarily reduce net power costs, although the program
8 has had this effect in many years.

9 **Q. Have the Company’s risk management policy and hedging program been**
10 **reviewed in recent Wyoming cases?**

11 A. Yes. In Docket 20000-315-EP-08, the Company’s 2008 Power Cost Adjustment
12 Mechanism filing (“2008 PCAM”), Ms. Denise Parrish from the Wyoming Office
13 of Consumer Advocate (“OCA”) filed testimony suggesting additional review and
14 dialogue on the Company’s natural gas hedging policy, including whether the
15 Company should hedge less than 100 percent of its net open position. The
16 Wyoming Industrial Electric Consumers (“WIEC”) also filed testimony on the
17 Company’s natural gas hedging policy, specifically claiming that the Company
18 should have hedged more of the natural gas supply for its Lake Side power plant.

19 **Q. What was the resolution of the hedging issues in the 2008 PCAM?**

20 A. The case was resolved by a Stipulation approved by the Wyoming Public Service
21 Commission (the “Commission”).² Paragraph 3 of the Stipulation provides that:
22 “After discovery and examination of the Company’s gas hedging policies, the

¹ Docket 20000-394-EA-11, PacifiCorp 2011 IRP, Appendix F at 161-162.

² Docket 20000-315-EP-08, Record No. 11618 (Nov. 13, 2008).

1 Settling Parties agreed that there shall be no adjustment to the PCAM deferral
2 amount based on allegations of imprudence with respect to PacifiCorp's gas
3 hedging policies." In addition, the OCA and WIEC agreed not to further pursue
4 WIEC's claim relating to the natural gas supply for the Lake Side power plant,
5 and the Company agreed to provide the OCA and WIEC with additional
6 information on the Company's natural gas hedging policies.

7 **Q. Did the Company file its hedging policy as part of Docket 20000-341-EP-09,**
8 **the Company's 2009 PCAM filing ("2009 PCAM")?**

9 A. Yes, the policy was filed as an exhibit to Mr. Gregory N. Duvall's direct
10 testimony. The OCA's responsive testimony raised additional questions and
11 sought additional information relating to the Company's hedging program. In the
12 Stipulation resolving the 2009 PCAM, the Company agreed to provide specific
13 analysis of its hedging program, including four years of historical hedge costs or
14 benefits and one year of forecast hedge cost or benefit for all natural gas hedges,
15 power hedges and combined natural gas and power hedges. The Commission's
16 order approving the 2009 PCAM Stipulation stated that the settlement addressed
17 OCA's concerns by "requiring the company to provide specifically identified data
18 regarding its current hedging and acquisition practices."³

19 **Q. Please describe the hedging data the Company filed in its 2009 GRC.**

20 A. In the 2009 general rate case, I provided a more in-depth discussion of the
21 Company's hedging policy. My testimony presented the cumulative power and
22 natural gas hedge benefit for the historical period January 1, 2004, through
23 August 31, 2009, of \$150 million on a total Company basis. I also presented the

³ Docket 20000-341-EP-09, Record No. 12045 (Nov. 24, 2009).

1 value of the power and natural gas hedges in the other periods designated in the
2 2009 PCAM Stipulation, which in both cases showed large natural gas hedge
3 losses offset by even larger power hedge gains.

4 The OCA responded with testimony continuing to urge the Commission
5 review the reasonableness of the Company's hedging policy. But the OCA also
6 noted that it was "comforting that PacifiCorp has committed its risk management
7 and hedging policies to writing" and has "monitored compliance with those
8 policies." The Stipulation in the 2009 general rate case does not reference
9 hedging, nor does the Commission's order approving the Stipulation.⁴

10 **Q. Did any party file testimony challenging the Company's hedging policy in the**
11 **Company's subsequent PCAM filings or in its 2010 general rate case filing?**

12 A. No.

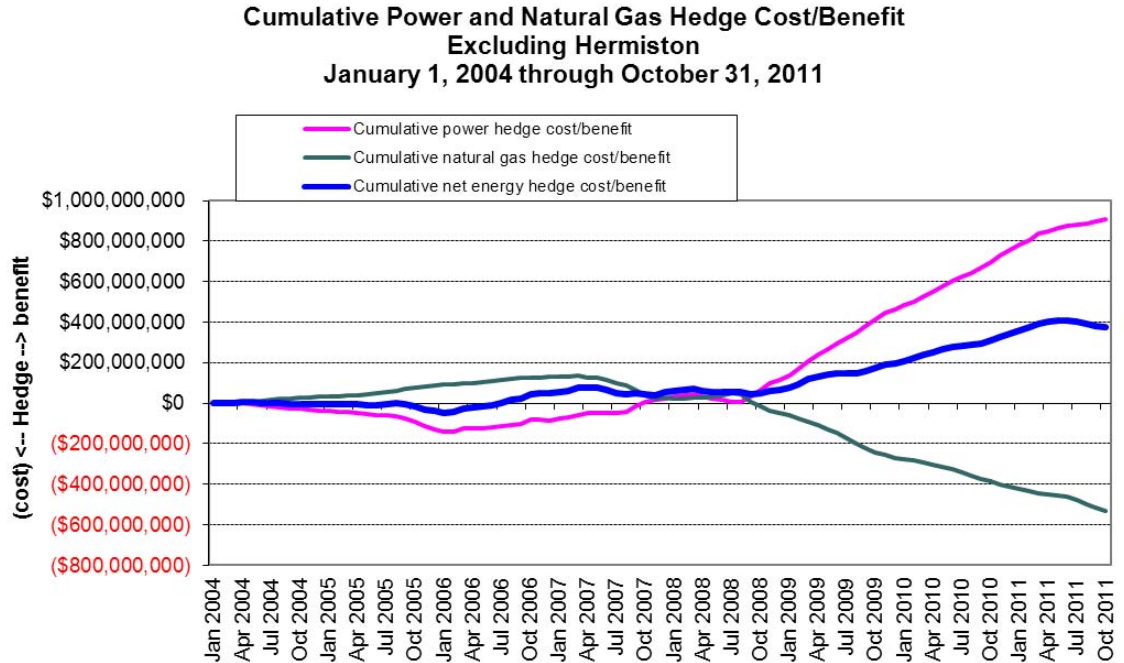
13 **Q. Has the Company updated the cumulative hedging gain/loss analysis**
14 **provided in the 2009 general rate case?**

15 A. Yes. Chart 1 below includes the previously reported cumulative natural gas and
16 power hedging benefit of \$150 million from January 1, 2004, through August 31,
17 2009, and continues the analysis through October 31, 2011. This demonstrates a
18 total cumulative actual realized hedge benefit of \$377 million total Company,
19 excluding long-term Hermiston natural gas hedge benefits.⁵

⁴ Docket 20000-352-ER-09, Record No. 12310; Docket 20000-363-EP-10, Record No. 12433 (July 29, 2010).

⁵ Including the Hermiston natural gas hedge for the same period in this analysis would almost double the hedging benefit by adding another \$357 million in savings on a total company basis. It would be appropriate to include the long-term Hermiston hedge for a complete picture of the Company's natural gas hedging activity cost or benefit. The Hermiston hedge benefit was excluded in the results of Chart 1 to focus on the gains and losses of hedges that were entered within the Company's shorter term risk management horizon.

Chart 1



1 Q. Has the Company changed the fundamentals of its hedging policy since the
2 Company filed this policy in the 2009 PCAM?

3 A. No, the basic guidelines of the Company’s hedging policy have remained
4 constant, although the Company periodically reviews and updates the policy to
5 make improvements and incorporate best practices.

6 Q. Please identify the major change to the Company’s hedging program since
7 the 2009 PCAM.

8 A. The primary hedging program change is the addition of a new time to expiry
9 value at risk metric (TEVaR), which ultimately replaced the prior volume-based
10 hedge targets. Although the metric changed, the TEVaR limits for each of the four
11 rolling forward 12 month periods through month 48 remain fundamentally
12 consistent with the previous volume based hedge targets. Both the TEVaR limits

1 and the prior volume based targets result in progressively increasing hedging
2 requirements as open positions become closer to delivery within the 48 month risk
3 management horizon. The TEVaR metric, however, is a more sophisticated tool
4 for measuring financial exposure and allows the Company's hedging program to
5 respond more flexibly to volatile market conditions. A detailed explanation of the
6 TEVaR metric is attached in Confidential Exhibit RMP____(SAB-1).

7 **Test Period Hedging Results**

8 **Q. What are the combined natural gas and power forecast hedge results in the**
9 **test period?**

10 A. As reported by Mr. Duvall, the test period forecasts a combined natural gas and
11 power hedging loss of \$121 million, which results from forecast natural gas hedge
12 losses of \$144 million partially offset by forecast electricity hedge gains of \$23
13 million.

14 **Q. Did the Company fully adhere to its risk management policy and hedge**
15 **program for the hedge transactions in this case?**

16 A. Yes.

17 **Q. Please explain the underlying changes in the market and the Company's load**
18 **and resource balance impacting the Company's hedge results.**

19 A. The fundamental market change since 2008 has been the dramatic drop in natural
20 gas and electric prices, and the drop in natural gas price volatility, which resulted
21 from the recessionary impact on electricity demand and industrial natural gas
22 demand at the same time the United States witnessed an unprecedented increase
23 in the supply of shale gas.

1 The Company's load and resource balance is changing primarily due to
2 the progressive reduction in wholesale sales that occur as customer load increases
3 and legacy purchased power contracts expire. The Company's natural gas
4 requirements are dynamic and fluctuate with market changes in the difference
5 between wholesale electricity prices and the variable cost of generation from its
6 natural gas generation resources, which in turn is driven by natural gas prices and
7 each power plant's heat rate. If the Company can purchase power for a lower cost
8 than it can generate from its own resources, it will purchase power from the
9 market. On the other hand, if the Company can generate power at a lower cost
10 than wholesale electricity prices, it will purchase natural gas and generate power
11 and make wholesale sales to reduce net power costs. Natural gas requirements
12 will also continue to increase as the Company expands its natural gas fired
13 generation resource portfolio.

14 **Q. Are these variables responsible for the unfavorable hedge results in the test**
15 **period in contrast to favorable hedge results in past periods?**

16 A. Yes. The Company's hedging policy has not changed, nor has its adherence to the
17 policy. What has changed are future market prices relative to hedge contract
18 prices and the Company's load and resource balance, specifically the relationship
19 between the Company's wholesale electricity position and its natural gas position.
20 Until recently, the Company's long wholesale electricity position has exceeded its
21 short natural gas position; however, for the reasons described above, this
22 relationship has progressively declined to where the Company's short natural gas
23 position now exceeds its long wholesale electricity position.

1 Since the middle of 2008, forward market prices for natural gas and
2 electricity have generally steadily fallen. When market prices fall, given the
3 Company's generally short natural gas position and long wholesale electricity
4 position, it results in natural gas hedge losses and wholesale electricity hedge
5 gains. Conversely, when market prices rise, it results in natural gas hedge gains
6 and wholesale electricity hedge losses. Accordingly, the Company's historical
7 realized hedging gains shown previously in Chart 1 are primarily driven by
8 market price reductions that have occurred since the middle of 2008 and a load
9 and resource balance that resulted in electricity hedge gains that more than offset
10 natural gas hedge losses.

11 In the current test period, forecast gains in electricity hedges do not offset
12 forecast losses in natural gas hedges because of the change in the Company's load
13 and resource balance and changes in forward market versus hedge contract prices.
14 The natural gas hedging losses in this case are less than the comparable losses in
15 the Company's 2010 general rate case. In the prior case, however, large gains
16 from power hedges offset all of the natural gas hedging losses. In this case, the
17 offset is only partial.

18 **Q. Is the change from hedging gains in the recent past to hedging losses in the**
19 **test period reflective of a problem with the Company's hedging program?**

20 A. No, hedging is designed to minimize volatility and will always be accompanied
21 by both gains and losses. The hedging losses in this case remain far less than the
22 cumulative hedging gains demonstrated in Chart 1.

23

1 **Q. Is the Company currently considering forward-looking changes to its**
2 **hedging policy?**

3 A. Yes. In response to the challenging dynamics discussed above (and emerging
4 from its most recent rate case filings in Utah, Idaho and Oregon), the Company
5 has begun collaborative discussions to review customer risk preferences and
6 associated potential changes to the Company's hedging policies going forward.
7 The primary policy items being discussed include potentially changing the 48
8 month hedge horizon to a 36 month horizon, and potentially instituting a
9 maximum percent hedged natural gas level to maintain some minimum level of
10 exposure to potentially favorable spot market prices. At the same time, some
11 parties have expressed potential interest in hedging natural gas longer term near
12 current forward price levels, so discussions are also ensuing regarding regulatory
13 approval processes that may support longer term hedge transactions.

14 **Q. Does the Company welcome input and direction on its hedging program**
15 **from Wyoming stakeholders as a part of these on-going collaborative**
16 **discussions?**

17 A. Yes. The OCA and other Wyoming parties have provided constructive feedback
18 to the Company on its hedging program in the past. The Company proposes to
19 engage in continuing collaborative discussions with Wyoming stakeholders
20 regarding prospective policy changes to best reflect customer risk preferences.
21 The Company also welcomes direction from the Commission on the Company's
22 policy on a going forward basis.

1 **Q. In this case, how should the Commission determine if the Company's**
2 **hedging costs are prudent?**

3 A. To make this determination, the Commission should consider whether or not the
4 Company had a robust and well documented risk management and hedge program
5 in place which reduces risk, and whether or not the Company adhered to its
6 policy. My testimony and Mr. Duvall's testimony support this determination.

7 **Q. Does this conclude your testimony?**

8 A. Yes.