Q. Please state your name, business address, and present position with PacifiCorp dba Rocky Mountain Power ("the Company").

A. My name is Stefan A. Bird. My business address is 825 NE Multnomah Street, Suite 600, Portland, Oregon 97232. I am Senior Vice President, Commercial and Trading, for PacifiCorp Energy, a division of PacifiCorp.

Q. Please describe your education and professional background.

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

In my current position I oversee the Company's Commercial and Trading organization which is responsible for dispatch of the Company's owned and contracted generation resources, procurement of new generation resources, and natural gas and electricity wholesale purchases and sales to balance the Company's load and resources. I am also responsible for PacifiCorp's load and revenue forecast, integrated resource plan ("IRP") and net power costs modeling. Most relevant to this testimony, I oversee PacifiCorp's hedging program.

Q. Have you previously testified for the Company in regard to hedging?

A. Yes. I filed testimony on hedging before the Public Service Commission of Utah in Docket Nos. 09-035-15 ("EBA Approval Docket"), 10-035-124 ("2011 GRC"), 11-035-200 ("2012 GRC") and, most recently, in Docket No. 12-035-67 ("2012 EBA"). I have also filed testimony on hedging in various dockets before the commissions in Oregon and Wyoming.

Q. What is the purpose of your testimony?

A. My testimony demonstrates the prudence of the natural gas and electricity hedging transactions and balancing transactions that settled in 2012 and are included in this case ("2013 EBA"). In addition, Mr. Frank C. Graves from the Brattle Group has prepared direct testimony supporting the prudence of the Company's hedging program. Specifically, my testimony:

- Provides an overview of the Company's risk management policy and hedging program that governed the period during which the natural gas and electricity hedging transactions in the 2013 EBA were executed;
- Demonstrates that the Company's hedging activities associated with the 2013 EBA were consistent with the Company's risk management policy and hedging program and, therefore, that they were prudent and reasonable;
- Discusses prior regulatory and third-party review of the Company's risk management policy and hedging program including the most recent dockets preceding the 2013 EBA, namely the 2011 GRC, the 2012 GRC and the 2012 EBA. I explain that there have been no hedging transaction

disallowances in any of the Company's six state jurisdictions. I describe a favorable 2009 report by Blue Ridge, a consultant retained by the Division of Public Utilities ("Division") to audit the Company's risk management policy and hedging program. Last, I discuss the December 2011 order from the Oregon Public Utility Commission ("Oregon Commission") in Docket UE 227, a case that included nearly all of the same hedging transactions that are being reviewed in this 2013 EBA. The Oregon Commission found all of the hedges at issue in that case to be prudent and, moreover, commended the Company's hedging program;

- Summarizes the natural gas and electricity hedging transactions in the 2013 EBA between transactions executed prior to July 28, 2011, which resulted in a net [redacted] and those executed after July 28, 2011, which resulted in a net [redacted](both on a Utah-allocated basis);
- Summarizes the natural gas and electricity balancing transactions in the 2013 EBA and notes the actual [redacted] unhedged natural gas position in the 2013 EBA period is consistent with the policy that resulted from the Collaborative Process and implemented in May 2012 which requires an unhedged natural gas position between [redacted] for the forward 12-month period;
- Demonstrates that the Company's hedge transactions at issue in the 2013 EBA were prudent based on what the Company knew or should have known at the time they were executed. The Company could not have

known that natural gas prices would fall in the future and, in fact, there was material risk that natural gas prices could escalate given rising forward market prices for natural gas, high natural gas price volatility and third party expert forecasts of natural gas prices; and

- Demonstrates that the Company's risk management policy and hedging program have consistently achieved their purpose to reduce the volatility of the Company's net power costs over a period of many years.

Overview of the Company's Risk Management Policy and Hedging Program

Q. Why does the Company have a risk management policy and hedging program?

A. While the Company focuses every day on minimizing net power costs for customers, the Company also focuses every day on mitigating price risk to customers, which is done through hedging consistent with a robust risk management policy. For years the Company has followed a consistent hedging program that limits risk to customers, has tracked risk metrics assiduously and has diligently documented hedging activities. The Company's risk management policy and hedging program exists to achieve the following goals: (1) to ensure that reliable power is available to serve customers; (2) to reduce net power cost volatility; and (3) to protect customers from significant risk. The purpose is solely to reduce customer exposure to net power cost volatility and adverse price movement. The Company does not speculatively trade commodities. As stated in the Company's most recent IRP: "Hedging is done solely for the purpose of limiting financial losses due to unfavorable wholesale market changes. . . .

Hedging modifies the potential losses and gains in net power costs associated with wholesale market price changes."[1] The purpose of hedging is not to reduce or minimize net power costs. The Company cannot predict the direction or sustainability of changes in forward prices. Therefore, the Company hedges, in the forward market, to reduce the volatility of NPC consistent with good industry practice as documented in the Company's risk management policy.

The Company has a short position in natural gas because of its ownership of gas-fired electric generation that requires it to purchase large quantities of natural gas to generate electricity to serve its customers. The Company may have short or long positions in power depending on the shortfall or excess of the Company's total economic generation relative to customer load requirements at a given point in time.

Q. In general, does the Company attempt to minimize net power costs? If so, what actions does the Company take to achieve that?

A. Yes, it is important for the Company to minimize net power costs. The Company takes many actions to minimize net power costs for customers. First, we engage in integrated resource planning to plan resource acquisitions that are anticipated to provide the lowest cost resources to our customers in the long-run. We then issue competitive requests for proposals to assure that the resources we acquire are the lowest cost resources available on a risk-adjusted basis.

In operations, we optimize our portfolio of resources on behalf of customers by maintaining and operating a portfolio of assets that diversifies

[1] PacifiCorp 2011 IRP, Docket No. 11-2035-01 (Utah PSC March 31, 2011), Appendix G at 161-162.

customer exposure to fuel, power market and emissions risk and utilize an extensive transmission network that provides access to markets across the western United States. Independent of any natural gas and electric price hedging activity, to provide reliable supply and minimize net power costs for customers we commit generation units daily and dispatch in real time all economic generation resources and all must-take contract resources, serve retail load and then sell any excess generation to generate wholesale revenue to reduce NPC for customers. We also purchase power when it is less expensive to purchase power than to generate power from our owned and contracted resources.

Q. Can hedging be used to minimize net power costs?

A. No. As Mr. Graves explains in his testimony, hedging does not produce a different expected outcome than not hedging and therefore cannot be considered a cost minimization tool. Hedging is solely a tool to mitigate customer exposure to net power cost volatility and the risk of adverse price movement. However, the Company does minimize the cost of hedging by transacting in liquid markets and utilizing robust protections to mitigate the risk of counterparty default. In addition, the Company reduces the amount of hedging required to achieve a given risk tolerance through its portfolio hedge management approach, which takes into account offsetting exposures when these commodities are correlated, as opposed to hedging commodity exposures to natural gas and power in isolation without regard for offsets.

Q. How were the Company's risk management policy and hedging program derived and are they consistent with industry standards?

A. The Company's risk management policy and hedging program were designed to follow electric industry best practices and are periodically reviewed at least annually by the Company's risk oversight committee. The risk oversight committee includes the Company's chief financial officer, treasurer, director of risk management, assistant general counsel, controller, and senior vice president of commercial and trading. The risk oversight committee makes recommendations to the President of PacifiCorp Energy, who ultimately must approve any change to the risk management policy. The Company's current policy is also consistent with the guidelines that resulted from a collaborative hedging workshop with parties in Utah that took place in late 2011 and early 2012.

Q. What are the main components of the Company's risk management policy and hedging program?

A. The main components are natural gas percent hedged volume limits, value-at-risk (VaR) limits and time to expiry VaR (TEVaR) limits. These limits force the Company to monitor the open positions it holds in power and natural gas on behalf of its customers on a daily basis and limit the size of these open positions by prescribed time frames in order to reduce customer exposure to price concentration and price volatility. The hedge program requires purchases of natural gas at fixed prices in gradual stages in advance of when it is required to reduce the size of this short position and associated customer risk. Likewise, on the power side, the Company either purchases or sells power in gradual stages in

advance of anticipated open short or long positions to manage price volatility on behalf of customers.

Q. How is the Company's hedging program structured?

A. Since 2003, the Company's hedge program has employed a portfolio approach of dollar cost averaging to progressively reduce net power cost risk exposure over a defined time horizon while adhering to best practice risk management governance and guidelines. Confidential Figure SAB-1 below provides a graphical and tabular representation of the Company's current portfolio hedging approach defined by progressively increasing risk tolerance levels represented by progressively increasing percentage of net power costs across the forward hedging period. These are total Company values.

Confidential Figure SAB-1

As described later in my testimony, the Company incorporated a time to expiry value at risk (TEVaR) metric in May 2010. In May 2012, as a result of the hedging collaborative, the Company reintroduced natural gas percent hedge

volume limits of forecast requirements into its policy. There has been no conflict to-date between the new volume limits and the Company's VaR and TEVaR limits, although the volume limits would supersede in such conflict, consistent with the guidelines from the hedging collaborative.

Q. Please identify the documents that govern the Company's hedging activities.

A. The primary governance of the Company's hedging activities is in the Company's Risk Management Policy. The most current version of this policy is attached as Confidential Exhibit RMP___(SAB-1). Confidential Exhibit RMP___(SAB-1) includes all of the versions of the risk management policy from 2007 through 2012 that governed the hedge transactions in the 2013 EBA. Prior to the risk management policy update in May 2010, the hedging program was also governed by the Company's Confidential Front Office Procedures and Practices, Exhibit 10, which is also included in Confidential Exhibit RMP___(SAB-1). The documents expressly state that the risk management policy governs in the event of a conflict between it and the front office procedures and practices.

Compliance of Hedges with Company's Risk Management Policy and Hedging Program

Q. Were all of the Company's hedge transactions settled in 2012 executed in compliance with the Company's governing risk management policy and hedge program?

A. Yes.

Q. Is the Company's natural gas percent hedged position for 2012 consistent with the guideline that resulted from the hedging collaborative?

A. Yes. The natural gas percent hedged position of [redacted] for 2012 is within the [redacted] hedged limit that was implemented in the Company's risk management policy in May 2012 as a result of the hedging collaborative.

Q. Please summarize the Company's risk management policy TEVaR metric and forward natural gas percent hedged positions from 2008 to 2012.

A. In May 2010, the Company moved from hedging targets based on volume percentages to targets based on the "to expiry value-at-risk" or TEVaR metric. The primary goal of this change was to increase the transparency of the combined natural gas and power exposure by period. It enhances the progressive approach to hedging that the Company has employed for many years and provides the benefit of a more sophisticated measure of risk that responds to changes in the market and changes in open natural gas and power positions. Importantly, the TEVaR metric automatically reduces hedge requirements as commodity price volatility decreases and increases hedge requirements as correlations among commodities diverge, all the while maintaining the same customer risk exposure. Confidential Figure SAB-2, originally filed in the Company's confidential semi-annual hedging report dated February 15, 2013, demonstrates the Company's historical TEVaR and percent hedge values by year 2008 through 2012. These are total Company values.

Confidential Figure SAB-2

Q. What do you conclude from Confidential Figure SAB-2?

A. The figure shows the Company reduced its exposure to price risk over time. Specifically, the figure shows a greater amount of hedging in the first 12-month period, labeled Year 1, and progressively less hedging in the subsequent 12-month periods, labeled Year 2, 3 and 4. This is shown both in the decreasing percent hedged values from Year 1 to Year 4, and the increasing TEVaR from Year 1 to Year 4.

Q. How do the Company's TEVaR and percent hedged values compare to the Company's risk limits?

A. Confidential Figure SAB-3 below demonstrates the Company's historical net open natural gas position by 12-month periods, historical VaR metrics and historical TEVaR metrics in relation to their applicable limits. These are total

Company values. The figure demonstrates that the Company was in compliance with the VaR and TEVaR risk metrics throughout the period from 2007 to 2012. During this timeframe the company went from a more hedged natural gas position in 2008 in order to mitigate its risk exposure due to higher market prices and volatilities to a lower hedged position in 2012 in response to falling market prices and volatilities.

Confidential Figure SAB-3

Q. Explain the TEVaR values in Confidential Figure SAB-3.

A. The top portion of the figure, labeled TEVaR, shows the TEVaR limits as dashed, and the TEVaR values are points on the graph. Each point indicates the TEVaR value for four rolling 12-month periods. For example, on December 31, 2008, the

TEVaR value for the fourth 12-month rolling period, which was February 2012 – January 2013, was $132.7 million.

Q. What do you conclude from the TEVaR values in Confidential Figure SAB-3?

A. The Company hedged its open natural gas and electricity positions resulting in compliance with its TEVaR limits beginning May 2010 when the TEVaR metric was put in place.

Q. What would the TEVaR have been if the Company had not hedged at all?

A. The TEVaR for the unhedged 2012 position on December 31, 2008, would have been [redacted] on a total Company basis, almost [redacted] the risk exposure of the hedged position.

Q. How does this compare to the hedge losses for the same period?

A. The unhedged TEVaR value was significantly larger than the [redacted] losses on a total Company basis during 2012.

Q. Explain the VaR values in Confidential Figure SAB-3.

A. The dashed line shows the VaR limit and the solid line below shows the maximum quarterly VaR values for each quarter 2007 to 2012.

Q. What do you conclude from the VaR values in Confidential Figure SAB-3?

A. The Company maintained hedged positions resulting in compliance with its VaR limits at all times. Further, the figure shows how price risk to customers changed over time.

Q. Explain the natural gas open positions in Confidential Figure SAB-3.

A. The figure shows the net open natural gas position as of the end of each year 2007

through 2012. Each year is broken out into individual 12-month sections so, for example, the bars ordered left to right in 2008 represent the Company's net open natural gas position for January through December 2012, 2011, 2010 and 2009, respectively. The figure shows that the Company has progressively hedged less of its forward natural gas requirements as its risk metrics have showed less forward risk exposure due to changes in forward net open positions and falling market prices and volatilities.

Q. What do you conclude from the natural gas open positions in Confidential Figure SAB-3?

A. First, the figure shows that the Company hedged less in outer years and more in close in years, consistent with its hedge program. Second, the figure shows the Company hedged less overall in the past year consistent with the outcome of the Collaborative Process.

Q. Did the Company's risk management policy and hedging program employ dollar cost averaging for the hedge transactions that settled in 2012?

A. Yes. Confidential Figure SAB-4 below shows how the Company's natural gas net open position in 2012 was reduced through the Company's hedging activity from 2007 through the end of 2011. It demonstrates a gradual progression of hedging and reduced hedging from 2010 through 2011 when prices and volatility declined substantially thus reducing customer risk exposure. It also shows the Company retained a significant open position going into 2012 which ultimately was met with lower cost spot market purchases.

Confidential Figure SAB-4

Q. What is "dollar cost averaging?"

A. This is the term used to describe gradually hedging over a period of time rather than all at once.

Q. Why does the Company use dollar cost averaging?

A. This method of hedging, which is widely used by many utilities, captures time diversification and eliminates speculative bursts of market timing activity. Its use means that at times the Company buys at relatively higher prices and at other times relatively lower prices, essentially capturing an array of prices at many levels. While doing so, the Company steadily and adaptively meets its hedge goals through the use of this technique while staying within VaR and TEVaR and natural gas percent hedge volume limits.

Q. Please describe the average prices paid for natural gas financial hedges and the average spot price paid in 2012 for the unhedged natural gas requirements.

A. Confidential Figure SAB-5 below summarizes the volume and average prices for natural gas financial hedges, grouped by the year each transaction was executed, and the average spot price paid in 2012. This figure also demonstrates the impact of dollar cost averaging. These are total Company values.

Confidential Figure SAB-5
Natural Gas Hedge and Spot Prices

Q. Does the Company hedge its separate power or natural gas positions in isolation or does it hedge on a portfolio basis?

A. The Company hedges its net energy (combined natural gas and power) position on a portfolio basis to take full advantage of any natural offsets between its long power and short natural gas positions. The Company's 2011 IRP analysis shows that a "hedge only power" or "hedge only natural gas" approach results in higher risk (*i.e.,* a wider distribution of outcomes). There is a natural need for an electric company with natural gas fired electricity generation assets to have a hedge

program that simultaneously manages natural gas and power open positions with appropriate coordinated metrics. The Company's risk management department incorporates daily updates of forward prices for natural gas, power, volatilities and correlations to establish daily changes in open positions and risk metrics which inform the hedging decisions made every day by Company traders.

Q. What hedging instruments does the Company's hedging program allow the Company to use in hedging?

A. The Company's hedging program allows the use of financial swaps, fixed price physical and options for these products.

Q. How does the Company decide which instruments to use?

A. The Company uses instruments that generally have greater liquidity and lower transaction costs. The Company also considers, with respect to options, the likelihood of disallowance of the option premium in its six jurisdictions.

Q. Is there a functional difference between financial swaps and fixed price physical transactions?

A. No. Both instruments are equally effective in hedging the Company's fixed price exposure.

Q. Have the Company's risk management policy and hedging program changed in response to the development of shale gas, economic slowdown and the associated lower price and volatility of natural gas?

A. Yes. The Company's risk management policy has been actively reviewed by its internal risk oversight committee and updated every year for several years running to reflect best practices and respond to changing market conditions. As

mentioned above, the hedging program was modified in May 2010 with the institution of the TEVaR metric.

The result of these program changes in combination with changes in the market (such as reduced volatility to which the Company's program automatically responds), has been a significant decrease in the Company's longer-dated hedge activity, *i.e.*, four years forward on a rolling basis.

In addition, as a result of the hedging collaborative in Utah which considered current market fundamentals, the Company made the following material changes to its policy in May 2012: (l) a reduction in the standard hedge horizon from 48 months to 36 months, and (2) a percent hedged range guideline for natural gas for each of the three forward l2-month periods, which includes a minimum natural gas open position in each of the forward 12-month periods. The percent hedged range guideline is [redacted] for the first rolling 12 months, [redacted] percent for the second rolling 12-month period, and [redacted] percent for the third rolling 12-month period. The Company also agreed to provide a new confidential semi-annual hedging report.

Regulatory Review of the Company's Risk Management Policy and Hedging Program

Q. Has the Company's hedging program in effect during the time the swaps at issue in this case were executed been reviewed in a previous rate case before this Commission?

A. Yes. First, in the Company's 2009 General Rate Case, the Division requested that Blue Ridge review the Company's hedging program. The Blue Ridge Report affirmatively concluded that the Company's risk management policy and hedging

program was well-documented, controlled and adhered to generally accepted industry standards as follows:

> Overall, Blue Ridge found that the Company's commercial trading and risk management programs (and the related hedging programs) are well-documented and controlled and adhere to generally accepted standards found elsewhere in the industry. The Company has well-stated goals and strategy that is aimed at mitigating price volatility. In addition, our review of the Company's internal documents showed that the Company is self-monitoring compliance with accepted commercial trading and risk management procedures through its own internal audit function. [2]

While the Company's risk management policy and hedging program have continued to be refined and improved, the fundamentals of the risk management policy and the hedging program have not changed since the time the Division's Blue Ridge Report was published, attached as Exhibit RMP___(SAB-2).

Q. Did the Blue Ridge Report address policy issues related to hedging?

A. Yes. The Blue Ridge Report noted:

> The question has been asked, "Why hedge?" The answer lies in one fundamental statement: prices and supplies for energy commodities (crude oil, natural gas, electricity, etc.) can and have been extremely volatile. The benefit of hedging is that when prices are rising (either rapidly in the short term or gradually in the long term), a hedged portfolio of supply should mitigate the effect of those increases. However, the opposite is also true. When prices fall suddenly, a hedged portion of the supply can cost the utility and its customers the difference between the prices that were available at the current time versus the hedged prices for that supply. This cost (when netted against any gains) along with the administrative costs associated to operate and manage the trading operations is considered the insurance premium associated with a hedged portfolio.

* * * * *

[2] Independent Third-Party Evaluation of Net Power Cost Evaluation Rocky Mountain Power 2009 General Rate Case, Prepared for Utah Division of Public Utilities, Prepared by Blue Ridge Consulting Services, Inc, Docket No. 09-035-23 (Utah PSC October 7, 2009) at 2.

> [H]aving a "no hedge" policy clearly exposes consumers to significant (and likely) price swings. Assuming that an upward price trend continues (despite recent price levels and short-term price forecasts), consumers are very likely to pay higher prices for energy absent some level of hedging and price volatility mitigation.[3]

Q. Has the National Regulatory Research Institute (NRRI) provided guidance related to natural gas hedging by utilities?

A. Yes. The Division also sponsored a presentation by NRRI to the Utah Commission in June 2009. The NRRI Report,[4] attached as Exhibit RMP___(SAB-3), indicates that, for many years, state commissions have suggested that failure to engage in hedging (*i.e.,* buying natural gas in the day-ahead market or spot price) may be imprudent.

Q. Does the NRRI Report provide guidance on standards for determining the prudence of a utility's hedging costs?

A. Yes. The NRRI Report states, "Second-guessing and micromanaging should be avoided." It explains, "Second-guessing is contrary to the traditional prudence standard, and in addition, creates distorted incentives for utility hedging." Instead, it recommends that, "[a]ccording to the prudence standard, a commission should maintain authority to evaluate the reasonableness of (1) a hedging strategy ex ante, and (2) the execution of the strategy."[5] The NRRI Report suggests that a Commission could set an *ex ante* standard by, for example, defining an acceptable level of risk tolerance to price volatility.

[3] *Id.* at 2 and 26.
[4] Ken Costello, National Regulatory Research Institute, Gas Hedging (Technical Conference Presentation) to Public Service Commission of Utah Docket No. 09-035-21 (Utah PSC June 3, 2009).
[5] *Id.* at 25.

Q. Does the Company agree with the NRRI Report's recommended approach to Commission review of the prudence of the Company's risk management policy and hedging program?

A. Yes. As it has in the past, the Company welcomes direction from the Commission on the Company's risk management policy and hedging program on a going forward basis.

Q. Has the Company received *ex ante* direction from stakeholders that define an acceptable level of risk tolerance to price volatility or other guidance to the Company's hedge program?

A. Yes. As a result of the hedging collaborative that took place in Utah from October 2011 to March 2012, the Company modified its risk management policy in May 2012 to reflect guidance it received from stakeholders. The Company held similar hedging collaborative workshops in other jurisdictions which resulted in no additional changes to its policy. Also as a result of the hedging collaborative workshops, the Company agreed to provide a semi-annual hedging report to further transparency and dialog with interested parties.

Q. Has the prudence of net power costs including projected losses of the natural gas swaps in the 2013 EBA, been previously scrutinized in general rate cases before the Commission?

A. Yes. [redacted] of the swap transactions at issue in this 2013 EBA were included in the NPC approved in the 2011 GRC in Docket No. 10-035-124 or in the 2012 GRC in Docket No. 11-035-200, or both.

Q. Were any of the natural gas swap transactions challenged in the 2011 GRC and, if so, what was the outcome?

A. Yes. The Division, the Office of Consumer Services ("Office"), Utah Association of Energy Users ("UAE") and Utah Industrial Energy Consumers ("UIEC") all contested the prudence of the natural gas swaps in the test period for the 12 months ending July 2012. Consistent with the 2011 GRC Order,[6] the Company and interested parties engaged in a hedging collaborative which included several meetings over several months after which the Company agreed to modify its hedging program going forward. In addition, the 2011 GRC Order approved a stipulation between the parties which stated:

> The Company represents that its current natural gas hedged position as a percent of the Company's forecast gas requirement for the period of August 2012 through July 2013 using instruments comparable to the hedge transactions reviewed in the General Rate Case is the percent disclosed on a highly confidential basis to the Parties during a settlement meeting on July 27, 2011. The Parties agree, based on such representation and in consideration of the Company's compromises reached in this Stipulation, that hedging transactions entered into before July 28, 2011 will not be challenged for prudence on the grounds that they:
>
> a. Do not comply with the policy changes implemented through the Collaborative Process, Commission order or as a result of this Stipulation;
> b. Result in over-hedging of natural gas or power positions;
> c. Were entered into for a period of time beyond a reasonable horizon for hedging transactions; or
> d. Were comprised of too great a portion of financial products relative to fixed price physical transactions.[7]

[6] Report and Order, Docket Nos. 10-035-124, et al. (Utah PSC September 13, 2011).
[7] Settlement Stipulation, Docket Nos. 10-035-124, et al., (Utah PSC July 28, 2011) at ¶ 54.

Q. Has any party challenged the Company's hedging transactions executed before July 28, 2011 since the 2011 GRC Stipulation was approved?

A. Yes, UIEC has challenged them in two proceedings.

Q. Was UIEC a party to the 2011 GRC Stipulation?

A. Yes. UIEC was a strong advocate of the hedging collaborative process agreed to in the 2011 GRC Stipulation and took a principal role in defining the issues to be considered in the collaborative. In addition, UIEC was the primary party who wanted the Company to represent in the stipulation that its natural gas hedge position as of July 28, 2011 for the 12-month period ending July 2013 was [redacted] percent.

Q. Did UIEC participate in the hedging collaborative?

A. Yes. UIEC participated in collaborative meetings. However, as the collaborative progressed, UIEC refused to support any *ex ante* hedge guidelines. In contrast, the Division, UAE, the Office and their expert consultants all acted in good faith to develop *ex ante* hedge guidelines which the Company has incorporated in its risk management policy in accordance with the 2011 GRC Stipulation.

Q. Were any of the natural gas swap transactions challenged in the 2012 GRC and, if so, what was the outcome?

A. Yes. UIEC contested the prudence of the natural gas swaps in the test period for the 12 months ending May 2013, including those executed prior to July 28, 2011. A principal basis of the challenge was that the Company should have liquidated the swaps when the price of gas fell. The case was settled. Base net power costs were set at the level established by the Company's updated net power cost filing

dated May 11, 2012. The net power cost filing reflected the results of a GRID run incorporating all of the Company's hedges that had been executed at that time, including natural gas swaps, for the 12 months ending May 2013. No other party contested the prudence of these natural gas swaps.

Q. Were any of the natural gas swap transactions challenged in the 2012 EBA and, if so, what was the outcome?

A. Yes. UIEC contested the prudence of the natural gas swaps that settled in the fourth quarter of 2011 in the 2012 EBA, including those executed prior to July 28, 2011. Again, a major basis of UIEC's challenge was that the Company should have liquidated natural gas swaps in light of falling natural gas prices. The case was settled and resulted in a finding that there was no evidence to support a finding of imprudence in hedging with respect to the swaps that settled in the fourth quarter of 2011. No other party contested the prudence of these natural gas swaps.

Q. Did UIEC or any other party raise issues regarding liquidation of swaps during the 2011 GRC or the hedging collaborative?

A. No. At no time during the settlement negotiations or during the multi-month hedging collaborative did UIEC or any other party ever suggest the Company should liquidate hedges. For that matter, neither UIEC nor any other party ever suggested the Company should liquidate hedges during the natural gas investigation docket or at any other time until UIEC first made this argument in the 2012 GRC and then again in the 2012 EBA.

Q. Have any other commissions that regulate the Company addressed the vast majority of the hedge transactions included in the 2013 EBA?

A. Yes. Five out of six commissions that regulate the Company have approved net power costs for at least some portion of the 2012 calendar year period without any hedging disallowances. The sixth commission, Idaho, is currently reviewing the Company's energy cost adjustment mechanism December 2011 through November 2012, including hedging transactions. Most recently, the Oregon Commission in the 2011 Transition Adjustment Mechanism, Docket UE 227, in the face of significant hindsight challenges from certain parties, found all of the Company's hedge transactions to be prudent and praised the Company's risk management policy and hedge program. Specifically, the Oregon Commission stated in the order:

> The company's Risk Management Policy includes sound hedging goals, methodologies, and targets. Its policies and procedures were well articulated, and its specific hedging targets were made clear in advance to the company and its traders. Moreover, the company's hedging program appears to be robustly designed and well documented. The company provided ample contemporaneous documentation of the policies and procedures in effect at the time the hedges were executed, including its method of identifying, measuring, and managing risk, its hedging targets, its credit policies and procedures, and its approved portfolio structures, as well as detailed procedures governing company enforcement of these policies.[8]

Summary of Hedging and Balancing Transactions that Settled in 2012

Q. What hedging and balancing transactions are addressed in your testimony?

A. All wholesale transactions executed by the Company, regardless of execution date, that settled in 2012, with the exception of legacy transactions, are addressed

[8] Order No. 11 435, Docket No. UE-227 (Ore. PUC November 4, 2011) at 11.

in my testimony. Transactional data supporting the following summary tables is provided in the testimony of Mr. Brian S. Dickman.

Q. Describe the hedging transactions executed after July 28, 2011 that settled in 2012.

A. The Company executed a total of [redacted] which are a combination of natural gas and electricity financial and fixed price physical transactions. These total hedges settled for a net [redacted] on a Utah-allocated basis in 2012. The Utah-allocated hedge gain/loss is summarized in Confidential Figure SAB-6 below.

Confidential Figure SAB-6
Utah-Allocated Hedge Gain/Loss Post July 28, 2011 Transactions ($)

[redacted]

Q. Describe the hedging transactions executed on or before July 28, 2011 that settled in 2012.

A. The Company executed a total of [redacted], which are a combination of natural gas and electricity financial and fixed price physical transactions. These total hedges settled for a net [redacted] on a Utah-allocated basis during 2012. The hedge gain/loss is summarized in Confidential Figure SAB-7 below.

Confidential Figure SAB-7
Utah-Allocated Hedge Gain/Loss Pre July 28, 2011 Transactions ($)

Q. Did the Company sell natural any gas swaps? If so, why?

A. The Company sold a total of [redacted]. The sales were a direct result of a change in the Company's forecast needs for natural gas to fuel its generating plants. These requirements were reduced resulting in the Company being hedged more than 100 percent. Therefore, the Company sold these natural gas swaps.

Q. Describe the balancing transactions that settled in 2012.

A. The Company executed a total of [redacted] balancing transactions, which consist of natural gas and electricity forward index price physical transactions, day-ahead natural gas and electricity transactions, and real time electricity transactions. The balancing transaction volumes are summarized in Confidential Figure SAB-8 below.

Confidential Figure SAB-8
Balancing Transaction Summary

Q. What is the purpose of physical balancing transactions?

A. Physical purchases and sales were transacted to match the Company's physical requirements to the physical supply. This was done for both natural gas and electricity.

Prudence of the Company's Hedges

Q. Did the Company act prudently in executing the hedges in 2008 and 2009 that settled for losses during the 2013 EBA deferral period?

A. Yes. The Company's hedges were consistent with its risk management and hedging program and were reasonable based on the information available to the Company at the time they were executed.

Q. During the period when the Company was executing hedges three to four years in advance for the 2013 EBA deferral period, shouldn't the Company have foreseen the decrease in natural gas prices for the deferral period in this case?

A. No. Spot natural gas prices were very high during this time period. Neither the *forward price curves* at the time the hedges were transacted, nor *third party spot price forecasts* indicated an expected significant future drop in natural gas prices. If natural gas prices had remained high as then reflected in forward market prices, or potentially even higher as forecast by third party experts such as PIRA, the Company's hedges in the test period, especially those in the 36- to 48-month category, would have been deep in the money.

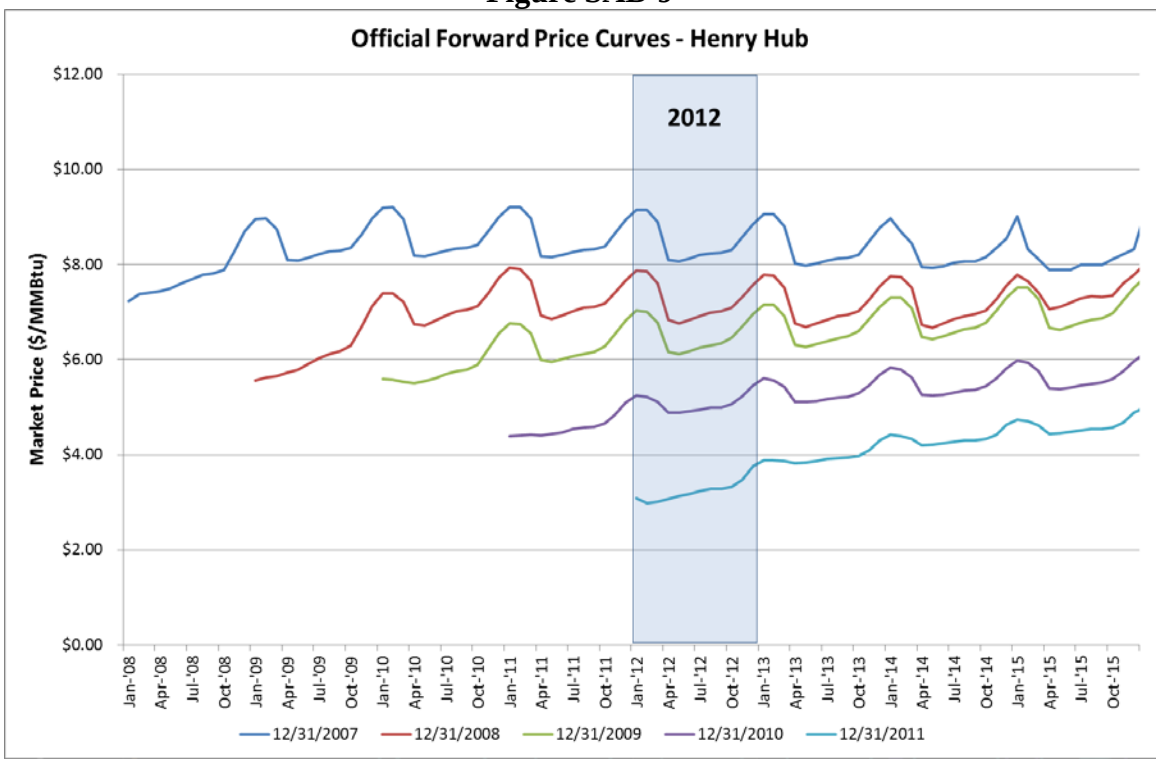
Q. Please explain the distinction between a forward price curve and a spot price forecast.

A. A forward price curve indicates the price at which a market participant can enter into a transaction today for natural gas that will be delivered (if physical) or settled (if financial) and paid for at a specified date in the future. These are fair market prices in that they are arrived at between willing buyers and willing sellers. Therefore, these prices reflect the views of the buyers and sellers of the true value of the deal. In contrast, a spot price forecast is an opinion, or speculation, of the level prices will settle at the time of delivery. For example, a forward price curve that indicates a $5.00 per MMBtu price for August 2014 may differ from an energy expert's spot price forecast for August 2014 published today of $5.50 per MMBtu. The forward price curve reflects the price the Company can lock in today for that future date, whereas the spot price forecast represents the price an energy expert believes will be the prevailing market price in August 2012 for natural gas deliveries or settlements in August 2012.

Q. At the time the 36- to 48-month natural gas hedges in this case were transacted, what did the forward price curves show with respect to natural gas prices in the test period?

A. Figure SAB-9 below shows the Company's official forward price curve as of each quarter in 2007 and 2008 for natural gas delivered in 2012. These prices are consistent with the prices paid by the Company for the natural gas hedges in this case.

Figure SAB-9



602 **Q. Is it apparent that the market in general, as reflected in the forward price**
603 **curves shown in Figure SAB-10, anticipated the precipitous drop in natural**
604 **gas prices?**

605 A. No. The forward price curves shown in the figure did not indicate the drop in
606 natural gas prices that occurred in the subsequent months and years. If the market
607 in general had known or anticipated such a drop in prices, the forward price
608 curves would have instead reflected that knowledge or anticipation in the form of
609 lower prices in the future.

610 Particularly during 2007-2009, there was an elevated risk of future price
611 escalation reflected by then-current high market volatility. Third party expert
612 forecasters at the time also projected the risk of even higher prices consistent with
613 then-current views of continued economic growth, likely carbon legislation and

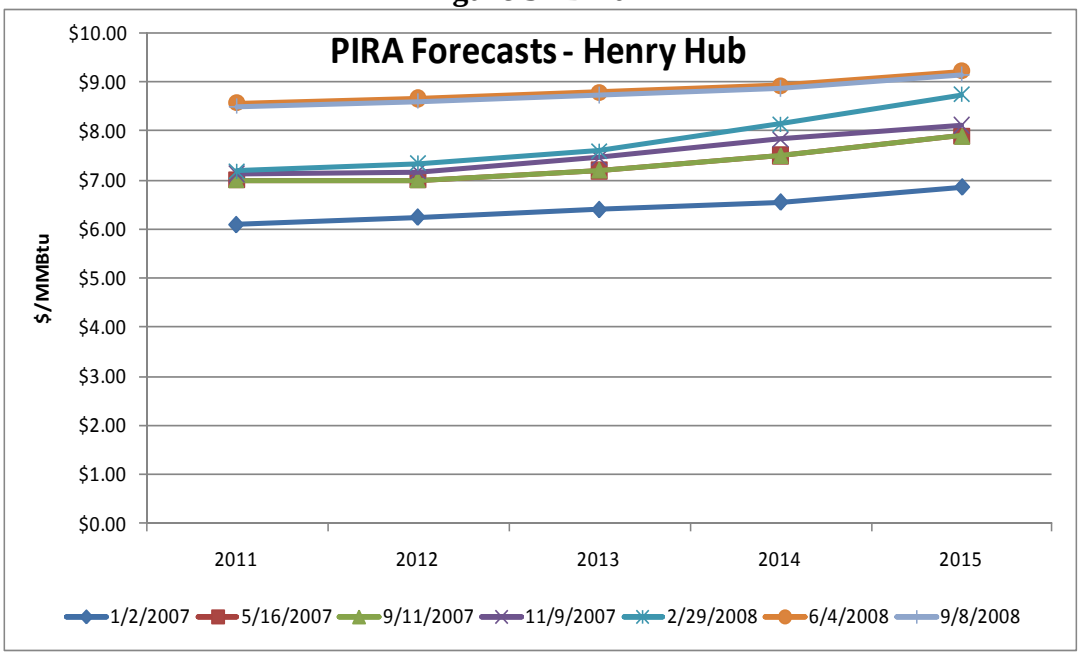
the need for more expensive LNG imports to replace declining conventional natural gas supply to satisfy growing demand. The global economic crisis and shale gas revolution that subsequently developed were not anticipated by the market and most third party experts. Moreover, even after these impacts were well recognized and forward natural gas prices for 2012 and beyond had fallen from 2008 to 2011 levels, forward market prices and third party forecasts of natural gas prices in 2012 still reflected higher prices than ultimately settled in 2012.

Q. At the time the hedges at issue in this case were transacted, what did spot price forecasts show with respect to natural gas prices in the test period?

A. The Company subscribes to a forecasting service provided by PIRA, a well-known and respected company that provides forecasts of many commodities, including natural gas. PIRA's 2007 and 2008 forecasts of 2011 and 2012 Henry Hub natural gas spot prices, shown in Figure SAB-10 below, increased from approximately $6 per MMBtu in early 2007 to approximately $9 per MMBtu in mid-2008 before decreasing to approximately $8 per MMBtu in late 2008. These spot price forecasts were slightly but not significantly lower than the forward market price curves for each of the contemporaneous time periods. However, spot price forecasts only represent a speculative view of expected prices; there is no legal recourse if forecasted prices fail to materialize. Spot price forecasts only serve as price indicators and carry a high degree of price uncertainty that often has more upward than downward price risk due to the asymmetrical nature of commodity prices. Contracts, however, are based on forward prices that bind

counterparties to stipulated prices and delivery schedules with payments made at time of delivery.

Figure SAB-10



Q. Is it apparent that PIRA, as reflected in its spot price forecast shown in Figure SAB-10, anticipated the precipitous drop in natural gas prices?

A. No. Notably, PIRA's spot price forecast continued to climb for the delivery period 2011 through 2015.

Q. Why didn't the Company liquidate hedges after forward natural gas prices fell?

A. It is not standard industry practice to liquidate hedges and increase customer risk exposure because of a speculative view that forward prices will be more favorable. It would be speculative to liquidate hedges, lock in a loss for customers, and then hope to transact at a lower price in the future while incurring the risk that prices might actually escalate further, not to mention incur additional transaction costs. As discussed above, the Company cannot predict whether future

prices will be higher or lower than current forward market prices.

Effectiveness of the Company's Hedging Program

Q. Should the Commission judge the effectiveness of the hedging program on the basis of whether it has made or lost money for customers?

A. No. The goal of the hedging program is to reduce volatility in the Company's net power costs primarily due to changes in market prices. This reduction in volatility is calculated and reported in the Company's confidential semi-annual hedging report which it began providing as a result of the hedging collaborative. The most recent semi-annual hedging report, dated February 15, 2013 and attached as Confidential Exhibit RMP___(SAB-4), notes the volatility reduction as a result of the Company's hedge activity settled in 2012 ranged from [redacted] for natural gas, and ranged from [redacted] for electricity, depending on the location.

In addition, the Company's risk management policy and hedging program has been thoroughly reviewed and validated by an independent third party expert retained by the DPU, which concluded that it was well-documented and controlled, and adhered to generally accepted industry standards.

Q. Earlier you testified that the Company hedges its net energy (combined natural gas and power) position on a portfolio basis to take full advantage of any natural offsets between its long power and short natural gas positions. Have the Company's customers benefited from offsetting power and natural gas positions?

A. Yes. The Company has a short natural gas position and on average a long electric

power position. As I just mentioned, power and natural gas prices are closely related because natural gas is often the fuel on the margin in efficient dispatch, as is practiced throughout the western U.S. This means power sales tend to be more valuable in periods when natural gas is high cost, producing revenues that are a credit or offset to the high cost fuel. If spot natural gas prices depart from prior forward prices, power prices will tend to do so in the same direction, thereby naturally hedging some of the unexpected cost variance.

Confidential Figure SAB-11 below is a graph of the net value of PacifiCorp's hedge losses and gains for natural gas and power by month over the past few years. These are total Company values. There is an obvious and strong pattern of the two moving opposite to each other, whether natural gas costs are high or low. As a result, the net hedge losses and gains of the two commodities has been lower than and is less volatile than the loss or gain in either individual commodity.

Confidential Figure SAB-11

The same pattern is evident from a chart of the cumulative net value of PacifiCorp's hedge gains and losses for natural gas and power, where it becomes clear that the cumulative net energy hedge loss/gain is much less than the isolated natural gas or power losses and gains. This is shown in Confidential Figure SAB-12 below. These are total Company values.

Confidential Figure SAB-12

Q. Does the Company's hedge program rely on a long power position?

A. No. However, the Company's hedge program takes into account the Company's full portfolio and utilizes continuously updated correlations of natural gas and power prices and thereby takes advantage of offsetting natural gas and power positions in circumstances when prices are correlated and a forecast long power position offsets a forecast short natural gas position. This has the effect of reducing the amount of natural gas hedging that the Company would otherwise pursue. Ignoring this correlation would instead result in the need for more natural gas hedges to achieve the same level of customer risk reduction.

Q. Although the Commission should not judge the effectiveness of the hedging program on the basis of whether it has made or lost money for customers, can you nonetheless demonstrate that the Company's hedging program has reduced net powers costs for customers over the last several years?

A. Yes. Confidential Figure SAB-12 above demonstrates that the Company's hedging activity since 2004 has reduced net power costs by approximately [redacted].

Q. Does this conclude your direct testimony?

A. Yes.