Q. Please state your name.

A. Stefan A. Bird

Q. Are you the same Stefan A. Bird that submitted direct testimony in this proceeding?

A. Yes.

Q. What is the purpose of your rebuttal testimony?

A. My rebuttal testimony responds to the testimony of Dr. J. Robert Malko for the Utah Industrial Energy Consumers ("UIEC") on hedging. Specifically, I respond to the UIEC's proposed hedging adjustment, and provide additional background information on the Company's hedging program. I describe how the UIEC's suggestion that the Company should have liquidated some of its hedged positions is flawed and contrary to standard utility practice.

Q. Is the Company also providing independent expert testimony to respond to the UIEC's hedging adjustment?

A. Yes. Mr. Frank C. Graves from The Brattle Group has prepared rebuttal testimony in this case supporting the prudence of the Company's hedging program.

Response to the UIEC's Proposed Hedging Adjustment

Q. What does Dr. Malko suggest with regard to the Company's hedges in this case?

A. He makes only one suggestion: that the Company should have "at some point cut its losses and liquidated at least a portion of its natural gas hedged position." (Malko Dir. at P.16 Line 359). Based on this lone suggestion, he ultimately concludes that the Company's NPC should be adjusted by $16,503,595 on a Utah

basis to require the Company to share the predicted losses from natural gas swaps during the test-period.

Q. Does Dr. Malko point the Commission to any specific hedges that should have been liquidated, or ever describe what "portion" of the Company's positions should have been liquidated?

A. No.

Q. Does Dr. Malko identify for the Commission examples of other large utilities that liquidated natural gas positions during the decline in natural gas prices?

A. No.

Q. Does Dr. Malko say exactly when the Company should have liquidated "a portion" of its portfolio?

A. No. Dr. Malko suggests that several months of historical declining prices should have led the Company to predict that prices would continue to fall. Dr. Malko apparently believes the Company could predict the bottom of the market. He claims this evidence of declining prices was assessable as early as June, 2011.

Q. Does Dr. Malko ever define what he believes constitutes "prudence" in hedging practice?

A. Yes. He cites to an article he wrote himself which adopts the Federal Energy Regulatory Commission's ("FERC's") definition of Good Utility Practice, stating in part:

> Any of the practices, methods and acts engaged in or approved by a significant portion of the electric utility industry during the relevant time period...

(Malko Direct at P.14 Line 309 and n.3).

Q. Do you know whether a significant portion of the utility industry engages in hedging?

A. Yes. Most major utility companies have a hedging program. This point is also discussed in more detail in the rebuttal testimony of Mr. Graves.

Q. Do you know whether it is standard utility practice to liquidate a hedged position once a forward price curve places the hedged position out of the money?

A. Again, as discussed by Mr. Graves, it is actually *contrary* to standard practice to do so and would create increased risk and cost if a utility followed this policy. Therefore, Dr. Malko's suggestion that we should sell hedges when they fall out of the money violates his own definition of good utility practice and prudence, because it would be contrary to standard utility practice.

Q. Does the Company have a policy on hedging that it follows or are hedging decisions made on an ad hoc basis?

A. The Company has a formal policy. The goals of the Company's risk management policy and hedging program are to: (1) ensure that reliable power is available to serve customers; (2) reduce net power cost volatility; and (3) protect customers from significant risks. The Company's risk management policy and hedging

program were designed to follow electric industry best practices and are periodically reviewed and updated as necessary.

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. The current risk management policy also reflects hedging guidelines including natural gas hedge percent ranges that resulted from a collaborative hedging workshop.

Q. Does Dr. Malko claim the Company violated its hedging policy is this case?

A. No.

Q. Please describe the collaborative hedging workshop you referenced above.

A. Consistent with a stipulation order signed by the Utah Commission on September 13, 2011, in Docket No. 10-035-124, 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 going forward hedging program. The most important changes include: (1) 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 12 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 forward twelve months, [redacted] for the second 12 month period

and [redacted] for the third 12 month period. The Company also agreed to provide a new semi-annual confidential hedging report.

In addition, the order approving the stipulation 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.

Q. Did any party at this time, or afterwards through the hedging collaborative workshops and resulting guidelines, indicate the Company should further reduce its natural gas hedge position?

A. No. To the contrary, some parties expressed an interest that the Company also be allowed to increase its natural gas hedge position beyond the 36 month range and potentially in excess of the hedge percentage guidelines given the perceived low nature of forward natural gas prices compared to historical forward prices since 2008. In response, the Company has issued a long term request for proposals for transactions, wherein it has received a robust response of proposals and is currently evaluating those proposals.

Q. From the time of the stipulation and throughout the collaborative hedging workshop, looking forward to the test period in this case, did the Company's natural gas percent hedged position rise or fall?

A. It fell.

Q. What is the Company's natural gas percent hedged position for the test period 12 months ending June 2013 as filed in Mr. Gregory N. Duvall's direct testimony on February 15, 2012 and in the NPC update filed May 11, 2012?

A. [redacted].

Q. Did the Company enter into any new natural gas hedges since the date referenced in the stipulation, July 28, 2011?

A. No.

Q. Have market conditions changed since July 28, 2011 and did that affect the Company's hedging decisions and its natural gas percent hedged position for the test period?

A. Yes. The Company's natural gas percent hedged position for the test period has fallen since July 28, 2011 because the Company's forecast natural gas requirements have increased as the spread between forward electricity prices and forward natural gas prices widened, while during the same period the Company did not execute any new hedges. The Company exercised its discretion within the collaborative hedge guideline ranges and in compliance with its risk management policy and allowed customer exposure to natural gas prices to increase. This action increased the opportunity for customers to realize lower net power costs during the test period if spot natural gas prices fall below then current forward market prices, but also increased the risk that customers could realize higher net power costs if spot natural gas prices rise above then current forward market prices.

Q. Do these facts help refute Dr. Malko's claim that the Company failed to actively manage its natural gas exposure?

A. Yes. The decisions and actions described above are a good example of how the Company actively managed its natural gas exposure within the collaborative guidelines as market conditions changed.

Q. Would the UIEC proposed adjustment have required the Company to position customer exposure to natural gas prices outside of the collaborative guideline range?

A. Yes. Dr. Malko's proposed adjustment could only be achieved with a natural gas hedge percentage well below [redacted], which is the minimum end of the collaborative hedging guideline range for the first rolling forward 12-month period.

Q. What, in simple terms, is your understanding of Dr. Malko's suggestion regarding liquidating out-of-the-money positions?

A. He essentially asks us to have liquidated some undisclosed portion of our positions so we could then speculate on when the market would bottom out and (presumably) re-hedge at that point in time.

Q. Is speculating on the bottom of the market good risk management practice?

A. No.

Q. What is good risk management practice?

A. The Company's hedging policy represents best practices in risk management and was modified to be consistent with the guidelines that resulted from the collaborative hedging workshop. One component of the collaborative guidelines is an acceptable range of natural gas hedge percentages described above. These hedge percentages were put in place to ensure that the Company would leave a portion of its forecast natural gas requirements open to market prices, to realize lower costs if prices fall while recognizing the risk that prices could also rise. The guideline ranges belie the fact that the Company's forecast natural gas

requirements are dynamic and also leave some discretion to the Company to manage within such range.

Q. Is Dr. Malko correct that natural gas prices continued to drop from 2008 forward?

A. On a yearly basis, yes.

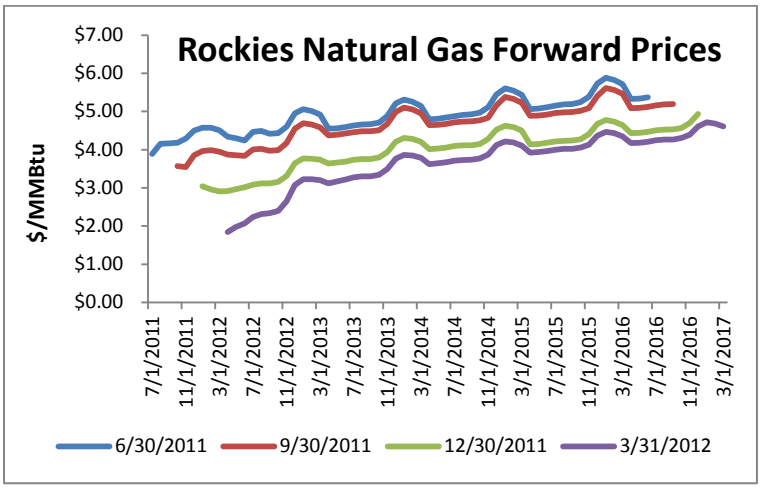
Q. Then why didn't the Company sell hedges in light of the falling natural gas prices Dr. Malko describes?

A. The Company's actions were based on knowledge it had *at the time* it made hedging decisions. The knowledge it based its decisions on were the *current* natural gas forward price curves as well as spot price forecasts provided by well-known and respected third party services. The Company did not and does not have the prescient ability to forecast future wholesale natural gas market settlement prices. As noted earlier, the Company had already allowed customer risk exposure to increase to capture the potential opportunity of falling natural gas prices by not executing incremental hedges as its forecast natural gas requirements increased. Selling hedges as recommended by Dr. Malko would have resulted in locking in a loss for customers, increasing transaction costs, and increasing customer exposure well outside of the collaborative guideline range.

Q. What did the then-current natural gas forward price curves indicate during the hedging decision period at issue in this case?

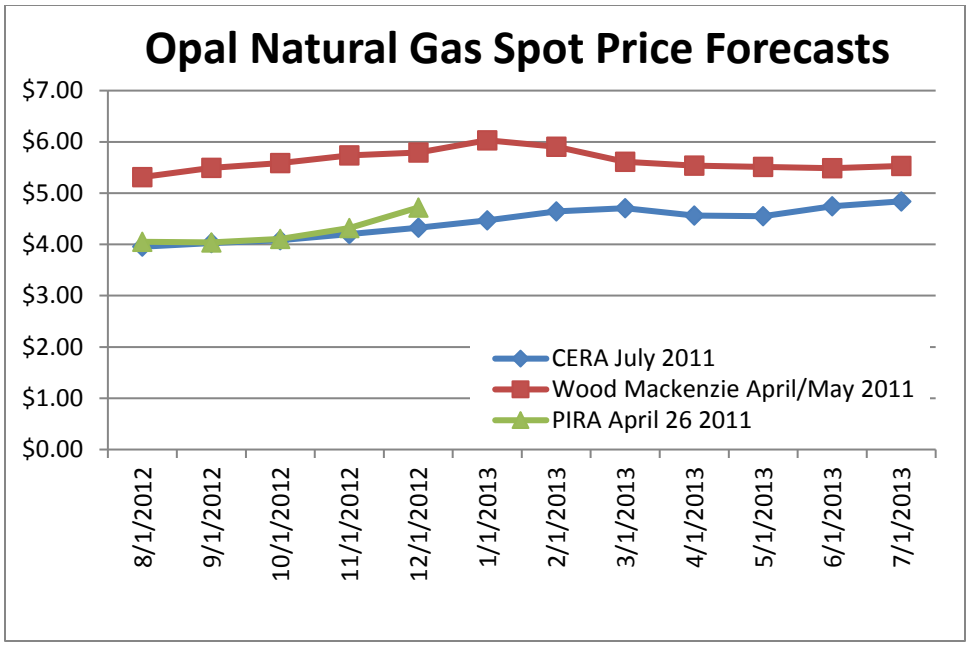
A. The June 2011, September 2011, December 2011, and March 2012 natural gas forward price curves shown below represent the forward market prices the Company could have purchased or sold natural gas forward. The chart

demonstrates that at each point in time, forward prices were always increasing, while as time progressed from June 2011 to March 2012 the forward price curve continued to fall.



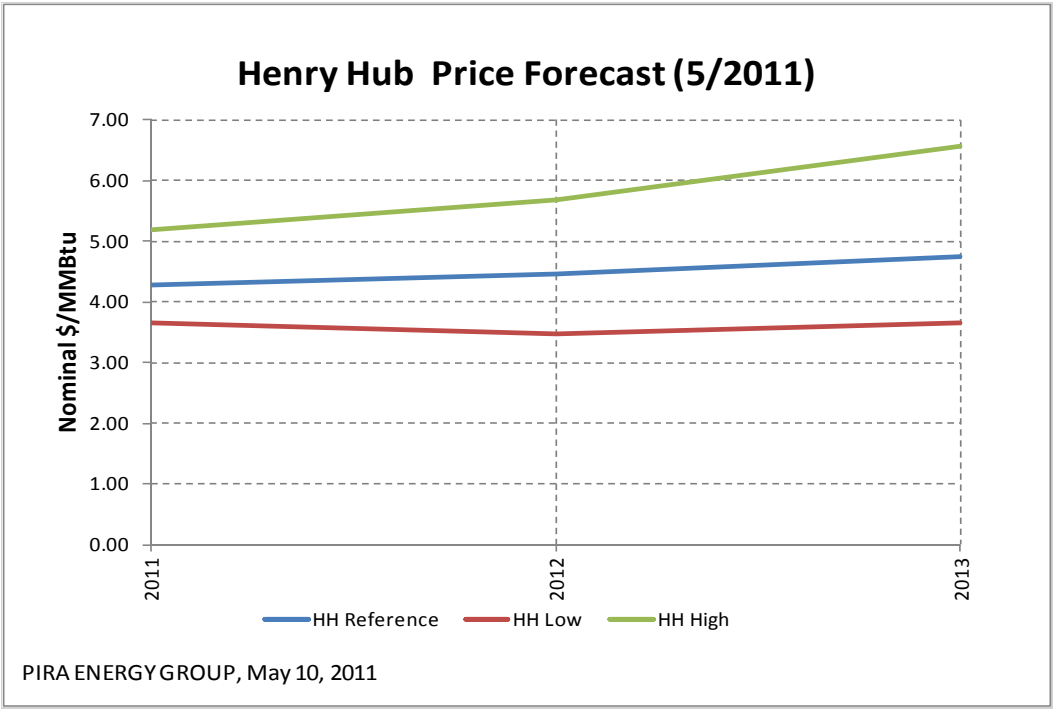
Q. What did the spot price forecasts indicate?

A. The April to July 2011 natural gas spot price forecasts from third party experts indicated relatively steady or increasing prices. There was a wide range in opinions by the three providers of spot price forecasts indicating significant uncertainty in the levels prices were expected to settle, as shown on the chart below.



Q. What reasons did the spot price forecasters provide to support their views?

A. While an inventory of uncompleted natural gas wells and increased drilling efficiencies were exerting a downward pressure on price expectations it was more than offset by upward price pressure expectations. On the supply side, by June 2011 the number of natural gas drilling rigs was already in decline as drillers targeted the more price-lucrative wet gas and crude oil plays. While the wet gas and crude oil plays also liberate dry natural gas, amounts were not expected to equal that of pure dry plays. On the demand side, forecasters expected significant coal-to-gas switching in response to price and environmental pressures coupled with a likely resurgence in US manufacturing demand. As a result, third-party vendors forecast natural gas prices to increase during the August 2012 through July 2013 test period. Only in the low case scenario were prices forecast to be essentially flat over the test period. See chart below.



222 **Q. Does Dr. Malko address the inability of a utility to predict future markets?**

223 A. Yes. Dr. Malko's description of prudence goes on to state that:

224 practices, methods and acts which, in the exercise of
225 reasonable judgment in light of the facts known at the time
226 the decision was made, could have been expected to
227 accomplish the desired result at a reasonable cost
228 consistent with good business practices...

229 constitutes "Good Utility Practice." (Malko Ex. 14a at p. 89) (emphasis added).

230 Looking at the time the Company's hedges were made, in light of facts
231 "known at the time," no one, including Dr. Malko, can say they were imprudent
232 decisions.

233 Then, looking at the Company's portfolio as it was maintained "in light of
234 facts known at the time" there was never a time when the Company knew

presciently that natural gas prices would *continue* to drop to such a point that the Company *must* sell positions and lock in the certainty of loss while at the same time exposing the Company's customers to the volatility of future spot pricing. It is only now, with 20/20 hindsight, that Dr. Malko opines that customers would have been better off if we had done something different. Yet this after-the-fact analysis contradicts his own definition of prudence.

Q. Has the Company ever executed natural gas sale hedges to reduce its natural gas hedge position?

A. Yes.

Q. Under what circumstances has the Company executed natural gas sale hedges in the past?

A. The Company has only executed natural gas sale hedges when its updated forecast natural gas requirements fell to a degree that it resulted in being overhedged, meaning, we had contracted more natural gas purchase hedges than our latest update of forecast natural gas requirements. The Company has not sold natural gas hedges based on a speculative view of changes to forward *prices*, as opposed to *requirements*.

Q. Did the Company act prudently when it chose not to execute natural gas sale hedges as recommended by Dr. Malko in this case?

A. Yes. By not procuring incremental natural gas purchase hedges while its forecast natural gas requirements were increasing, the Company had already allowed customer exposure to increase to the potential opportunity of falling natural gas prices while also remaining compliant with the collaborative hedge guidelines and

its risk management policy. As discussed by Mr. Graves, liquidating hedges would be contrary to standard utility practice and would have resulted in locking in a loss, increasing customer risk exposure and incurring additional transaction costs.

Q. What is the purpose of hedging?

A. The purpose is to reduce net power cost volatility to the Company's customers. The purpose 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 net power costs consistent with best practice risk management policy and hedge guidelines that resulted from a collaborative process.

Q. Were any natural gas hedges transacted since the new collaborative hedge guidelines were put in place?

A. No. The natural gas percent hedged volume guidelines were put in place May 2012. No hedges were transacted from March 2011 through May 2012. Moreover, the collaborative hedge guidelines do not mandate a reduction in hedge levels, and throughout this period the Company's natural gas hedges were within the collaborative guideline ranges and risk management policy requirements.

Q. Dr. Malko claims that the Company had nearly $1 billion in losses due to hedging over time. Is this true?

A. No. His figure excludes electricity hedges which have realized gains in excess of natural gas hedge losses, thus resulting in an overall portfolio net gain. The Company does not hedge its natural gas and electricity exposures in isolation.

Rather, consistent with industry best practices, it hedges its portfolio exposure in recognition of the correlation of these two commodities. This approach has the effect of reducing the amount of natural gas hedging the Company would otherwise need to maintain to achieve the same level of net power cost customer risk. Therefore, it is incorrect to say the Company has incurred $1 billion in hedging losses. Moreover, Dr. Malko's claim is not relevant to the test period in this case.

Q. Dr. Malko notes that the company has had substantial losses from natural gas swaps for 44 months as of March 2012, and predicts another 21 months of losses looking forward. Is this unexpected?

A. Natural gas forward prices and spot prices have fallen dramatically since June 2008. With hindsight, it would therefore be expected that any forward natural gas purchase hedges executed during that time will show realized losses as settled spot prices were lower and will show forecast mark-to-market losses as current forward market prices are lower than forward prices in that prior period. The only way the Company could not have incurred these historical hedge losses or not incur these forecast hedge losses would be to have (A) had perfect foresight that spot and forward prices would fall and then (B) disregarded the collaborative hedging guidelines and the Company's risk management program and not hedged any of the natural gas needed for forward periods so that the Company's customers could benefit from the Company's perfect foresight of natural gas markets that the rest of the market did not have. Again, Dr. Malko's note is not relevant to the test period in this case.

Q. Have natural gas prices declined steadily from July 28, 2011 to date?

A. No. While natural gas prices have declined significantly—a 33 percent drop in the Rockies from July 28, 2011 to July 3, 2012, prices have recently raised significantly—a 15 percent increase in the Rockies from June 11, 2012 to July 3, 2012. This forward price change is not reflected in the value of hedges in the updated net power cost filing in this case, which is based on a March 30, 2011 official forward price curve as described in Mr. Duvall's rebuttal testimony.

Q. What do you conclude regarding this price volatility?

A. Contrary to Dr. Malko's inference, it is not possible for the Company to "beat the market" by timing its hedges to coincide with market highs and lows.

Q. Dr. Malko attempts to separate natural gas hedges from electricity hedges. He claims that if an investor has one stock performing well in a portfolio that has no impact on a decision to sell a poor-performing stock. Does his analogy apply to the Company's natural gas-electricity hedge dynamic?

A. No. Dr. Malko's analogy would only apply in the hypothetical case of a stock portfolio where the well-performing stocks and poor-performing stocks are not correlated. That analogy is not applicable to the net power cost exposure that the Company manages on behalf of its customers. Natural gas and electricity show strong correlation in wholesale prices. This is intuitive recognizing natural gas generation continues to occupy an increasingly greater share of U.S. electricity supply and is often the generation resource on the margin, thereby directly influencing the wholesale market price for electricity. Consistent with current best practices, the Company's robust risk management process incorporates daily

updates from third party sources for natural gas and electricity correlations and volatility as well as updates to forward market prices and produces daily updates of forecast requirements, hedge positions and risk metrics.

Q. Dr. Malko also claims that the Company's decision to convert Naughton 3 to a natural gas fired unit demonstrates the Company's certainty that natural gas prices will remain low for the indefinite future. Was the decision to convert Naughton 3 to natural gas based on the Company's view of indefinitely low natural gas prices?

A. Natural gas price forecasts are one of *many* factors that went into the Naughton 3 decision. The decision was based on a robust risk assessment of the forward natural gas and wholesale electricity markets including then current forward price curves for natural gas and electricity, long-term third party forecasts of a range of potential future natural gas prices, potential carbon prices, the useful life of the asset, the cost of the environmental retrofit versus cost of conversion to burning natural gas, and the cost of replacement energy among other items. Therefore, Dr. Malko's comments are incomplete, at best.

Q. Does the Company's hedge program rely on a long electricity 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 electricity prices and thereby takes advantage of offsetting natural gas and electricity 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.

Q. With reference to the firm JP Morgan, Dr. Malko mentions that "when a company without the luxury of having ratepayers to pay its losses does experience such losses, that company's management acts, it acts decisively, and it acts quickly." Is this a relevant comparison to PacifiCorp?

A. No. Through a series of admitted failures in JP Morgan Chase's risk management controls, JP Morgan Chase amassed an enormous position that its CEO testified "morphed into something that, rather than protect the Firm, created new and potentially larger risks". JP Morgan Chase's trading strategy was to create a portfolio that would "generate modest returns in a benign credit environment and more substantial returns in a stressed environment" in order to boost profits should a credit crisis affect its loan portfolio. PacifiCorp's hedges, in contrast, are not intended to generate an investment return but rather reflect compliance with its risk management policy and control structure and provide direct hedges to PacifiCorp's underlying short physical position in natural gas. JP Morgan Chase's trades increased shareholders' exposure to market price risk. PacifiCorp's hedges reduced customers' exposure to market price risk. JP Morgan Chase unwinding its transactions removed exposure to market price risk. If PacifiCorp unwound its hedge transactions, it would increase customers' exposure to market price risk.

Q. Dr. Malko also claims that an approximate $1 billion write down by Berkshire Hathaway is evidence that "others took action" during the time he claims the Company should have liquidated a "portion" of its hedges. Is his analogy applicable?

A. No. The example Dr. Malko provides is in reference to a Berkshire Hathaway bond purchase, which is not relevant to compare to the hedging activity the Company pursues on behalf of its customers. The Company's hedges do not represent an investment decision for profit. Speculative commodity trading would be an investment decision, but the Company does not engage in speculative commodity trading. The Company's hedges sole purpose is to provide pricing stability and protect against wildly fluctuating rates. Furthermore, the fact that a company like Berkshire took an accounting write-down in its books but did not liquidate that position is hardly relevant to the suggestion that a utility should liquidate a portion of its hedges. Dr. Malko has not provided any relevant examples to support his recommendation to liquidate hedges in his testimony.

Q. How do you respond to Dr. Malko's comment "At least one would hope that the Company's practice of trading in electric swaps is limited to the disposition of surplus owned-capacity and does not reflect trading in electricity; especially given the fact that with the advent of the EBA, customers have assumed a much greater share of this risk."?

A. As noted above, the Company does not engage in speculative commodity trading, commonly referred to as proprietary trading. In other words, the Company does not buy or sell natural gas or electricity speculatively as a means of making a

profit. The Company only transacts to hedge its forecast requirements to mitigate net power cost volatility to customers.

Q. In summary, does Dr. Malko's suggestion that the Company should be penalized for 50 percent of predicted losses on natural gas hedges have merit?

A. No. For one, he doesn't suggest the Company should keep 50 percent of gains on successful hedges. He offers no explanation as to why the Company should be penalized for losses but pass all the benefits for gains to customers. Second, he also fails to understand that the purpose of hedging is to provide our customers with a more stable price point. It is not intended to be an investment strategy. Third, he fails to understand the link between natural gas and electricity hedges and omits from his analysis the benefits derived from those hedges. Fourth, he does not address the risk our customers would face if we liquidated firm positions and became more dependent on spot market purchases. Fifth, he provides no specific instances of imprudence because he cannot say (as no one could) exactly what the Company should have liquidated, when it should have done so, and to whom it could have sold these positions and for what price. His opinion is simply after-the-fact analysis that was not available at the time any decisions were made. And perhaps most importantly, sixth, these "losses" are only estimates at this point. As discussed above, natural gas prices in the Rockies actually rose by 15 percent in a three week period this past month. Neither Dr. Malko, nor I, nor anyone else can say with certainty whether the gas positions in question will turn out to be actual losses in the future, and if so, the actual amount of loss. What we

do know is that these hedges, whether they ultimately result in gains or losses and to what degree, *will be fully offset* by the change in the value of the Company's physical position. In other words, we know these hedges will perform their purpose to stabilize net power costs through the EBA and only the unhedged portion of the Company's positions will result in net power cost changes in the EBA.

Q. Have any of the other intervenors challenged hedging in this docket?

A. No. Only the UIEC has recommended this adjustment.

Q. Does this conclude your testimony?

A. Yes.