Introduction

Q. Please state your name and position.

A. My name is Frank C. Graves. I am a Principal at the economics consulting firm *The Brattle Group*, where I am also the leader of the utility practice group.

Q. Please summarize your qualifications and experience briefly.

A. I specialize in regulatory and financial economics, especially for electric and gas utilities. I have assisted utilities in forecasting, valuation, and risk analysis of many kinds of long range planning and service design decisions, such as generation and network capacity expansion, supply procurement and cost recovery mechanisms, network flow modeling, renewable asset selection and contracting, and hedging strategies. I have testified before the FERC and many state regulatory commissions, as well as in state and federal courts, on such matters as integrated resource planning (IRPs), the prudence of prior investment and contracting decisions, costs and benefits of new services, policy options for industry restructuring, adequacy of market competition, and competitive implications of proposed mergers and acquisitions. I am the author of several publications in risk management. I received an M.S. with a concentration in finance from the M.I.T. Sloan School of Management in 1980, and a B.A. in Mathematics from Indiana University in 1975. A detailed resume is included in the Appendix.

Q. Have you previously testified for Rocky Mountain Power (the Company) in regard to risk management and hedging?

A. Yes. I filed testimony on behalf of the Company before the Public Service Commission of Utah in Docket No. 10-035-124. I also filed testimony in the Company's request for a power cost adjustment mechanism in Utah, Docket No. 09-035-15, some of which addressed risk management and hedging. I participated in the 2011 Utah workshops on risk management goals and approaches between RMP, the Commission Staff, and various customer group representatives. Most recently, I filed rebuttal testimony on behalf of the Company in Utah, Docket No. 11-035-200, and in Wyoming, Docket No. 20000-405-ER-11. The recent testimonies also related to risk management issues.

Q. What is the purpose of your testimony?

A. I have been asked to review the pre-filed direct testimony of Dr. J. Robert Malko on behalf of Utah Industrial Energy Consumers (UIEC) and to comment on his recommendations regarding the disallowance of a portion of the Company's gas hedging costs.

Q. What specifically do you discuss in your testimony?

A. I will respond to Dr. Malko's views on the prudence of RMP's natural gas hedging practices and his proposed disallowance of a portion of the losses incurred on hedges priced above forward prices for natural gas. More specifically, I discuss the following questions:

1. Whether PacifiCorp's hedging policies are consistent with good industry practices;

2. Whether an early position liquidation would have been beneficial to customers;
3. Whether cost minimization should or can be a central part of PacifiCorp's hedging goals;
4. Whether PacifiCorp's hedging instruments were diversified;
5. Whether power companies with generation tend to hedge natural gas and power separately or focus on the net exposure; and,
6. Whether various analogies to other hedging and investment situations proposed by Dr. Malko demonstrate a flaw in PacifiCorp's approach.

Each of these is discussed below, after a brief summary of Dr. Malko's position. I understand that Company witness Mr. Stefan A. Bird is addressing the Company's hedging program, the collaborative workshops referenced by Dr. Malko, market conditions facing the Company and the correlation between natural gas and electric prices.

Q. Please briefly summarize Dr. Malko's critique.

A. Dr. Malko has submitted testimony on behalf of the UIEC in which he criticizes the Company for having incurred losses on its hedging strategy for the time period October 1, 2011 through December 31, 2011 (the EBA period). These hedges were entered from prior to the stipulation onwards and were held through a period of time which, in hindsight, has experienced unprecedented reductions in the spot and forward prices of natural gas. Dr. Malko claims that there were "numerous signs that spoke for action" (p. 15) for PacifiCorp to get out of a "significant portion" of these hedges and (apparently) cause them to cease

hedging natural gas needs – although Dr. Malko is not explicit about when or whether the Company should have later re-hedged any or all of the portions he wishes had been liquidated. Rather, he simply proposes that 100 percent of the Company's natural gas swap losses over the EBA period be disallowed, or about $23.8 million. (p. 28) He alleges that RMP's failure to liquidate a significant portion of the out-of-the-money hedges is a sign of imprudent risk management, perhaps pursued because (he suspects) PacifiCorp may have felt indifferent to declining market trends as a regulated entity with fuel cost recovery mechanisms. (p. 14-16) Dr. Malko alleges that PacifiCorp failed to diversify its hedging portfolio and that had PacifiCorp hedged with options[1] or other financial instruments, hedging losses would have been reduced. Further, he states that there is no need to consider the natural gas and electric power swaps or needs of RMP together.

Q. What is your response to Dr. Malko's criticisms?

A. I disagree with Dr. Malko's opinions in several respects. First, he is recommending a disallowance without offering a theory of what the costs would have been under alternative risk management practices he believes PacifiCorp could and should have used. Such an alternative would have to be demonstrably and repeatedly useful under a variety of market conditions that would not all involve the same pattern of gas price evolution as happened to occur in the last few years. Moreover, any such alternative presumably would not have involved having no hedges whatsoever, yet he proposes a disallowance equal to the entirety

[1] Options provide the buyer with the option but not the obligation to purchase natural gas at a predetermine price on or before a certain date. The buyer pays for such an option.

of the difference between the acquisition cost and spot market (unhedged) value of the gas under contract.

Second, he expresses a desire for cost minimization to have been a driving force in PacifiCorp's hedging practices, but cost minimization has nothing to do with risk management -- unless he wanted the Company to begin speculating that the market for natural gas was going to continue to go down further than forward prices were showing. (It happened to do so, but that was not the market signal at any point in time during the relevant period). He also underestimates or does not appreciate the extent of unforeseeability of the amazing recent gas price collapse. Even natural gas exploration and production firms aggressively leading the development of the hydraulic fracturing technology that has caused this price drop have been badly surprised by the rapid price reductions.[2]

Third, while Dr. Malko believes the Company failed to diversity its hedging strategy, he makes no recommendation for an alternative strategy and fails to consider the advantages of the relative liquidity and tenor of the swap market compared to that of other financial hedging instruments such as options.

Fourth, he states that natural gas and power hedges need not be considered together and that losses incurred in natural gas should be penalized regardless of how electric power positions performed. This would be both an inefficient and an inequitable practice. The literature and common practice in hedging is solidly on the side of taking advantage of positions that predictably tend to offset each other,

[2] For example, an August 2009 article in the New York Times cites senior management at exploration and production companies that the continual drop puts the viability of smaller companies at risk. See Clifford Krauss, "Natural Gas Price Plummet to a Seven-Year Low," New York Times, August 21, 2009.

in order to reduce the cost and scope of hedging transactions that are needed. Electric and gas operations fit this model very nicely, in that they naturally tend to be correlated. Dr. Malko's approach of criticizing whatever side of the related transactions that turns out to be "out of the money" would guarantee that any and every possible hedging strategy RMP could pursue would have ex post disallowances.

Fifth, he draws several analogies to other trading situations that he believes show the applicability of his approach in other settings, but these are not comparable to managing PacifiCorp's fuel risk, and in some cases he is not even correct about what transpired.

1. PACIFICORP'S PRACTICES IN RELATION TO INDUSTRY NORMS

Q. Are you familiar with the Company's hedging policy?

A. Yes. On several occasions over the past few years, I have reviewed the Company's risk policy and various monitoring reports that have been provided to me by PacifiCorp. I have also spoken to employees responsible for managing, measuring and monitoring the Company's risks. I am also familiar with risk management practices commonly used in the utility industry, as well as the mathematical tools and financial instruments available for energy market hedging.

Q. What are the main components of the Company's hedging program?

A. The main components of the Company's current risk activities that serve to reduce customer exposure to fuel and power price volatility are To-Expiry Value

at Risk (TEVaR) and Value at Risk (VaR) measurements and TEVaR and VaR limits that are outlined in the Company's risk policy and procedures.[3]

These limits and targets force the Company to closely monitor the open positions it holds in power and natural gas on behalf of its customers (which it does on a daily basis) and to limit the risk exposure resulting from these open positions for prescribed time frames in order to dampen customer exposure to price volatility. Specifically, the TEVaR metric automatically results in a reduced hedge requirement as commodity price volatility decreases, and it requires an increase in hedged volumes as volatility increases or as correlations among commodities diverge. Prior to May 2010, the Company had volume-based hedging targets. These can also be effective, but they are less responsive to shifting market conditions than using TEVaR.

Q. What are your opinions about the Company's hedging practices and policies compared to industry norms?

A. The Company's risk policies, analytic methods, and controls are sophisticated, well-developed, and aptly suited to monitoring and managing natural gas and power cost risks over time. The Company has in place an advanced platform for estimating and reporting the mark-to-market value of, and risk metrics pertaining to, its electric and natural gas portfolios. These metrics are reported and reviewed on a routine, timely basis, and the Company is required to resolve movements in its portfolio beyond established risk limits. The hedging policies have been

[3] The VaR and TEVaR are widely used risk measures that quantify the financial risk within the Company's supply portfolio. The TEVaR measures the statistical exposure of net combined natural gas and power open positions to expiry.

carefully and repeatedly explained to interveners and the Commission Staff, and there are substantial documents reporting on hedging activities and results that are informative and consistent. Dr. Malko himself has commented elsewhere that prudence is defined in large part by comparability to best practices in the industry.[4] In my judgment, the Company's policies stand up well under such comparisons.

2. LIQUIDATING THE PORTFOLIO

Q. Dr. Malko believes that the Company was imprudent for not liquidating a significant portion of its' out-of-the-money hedges. Do you agree?

A. No. Dr. Malko asserts that the Company should at some point have "… cut its losses and liquidated at least a significant portion of its natural gas hedged positions." (p. 24) He then encourages the Commission to "… consider whether the Company took adequate steps to avoid losses that have now fallen to ratepayers." (p. 24) This argument implicitly assumes that liquidating hedges would serve some normal goal of risk management, or would reduce expected costs. Neither of these is correct, and I am not aware of any utility that liquidates hedges absent changes in volumes needed.

Q. Why don't utilities liquidate out of the money hedges?

A. Once a utility has set its hedging goals based on risk metrics and begins covering those needs, it rarely if ever reverses prior positions. This is not a matter of neglect or disinterest, but an appropriate policy because there is no expected economic benefit from liquidating. The only way to get out of a contract is to sell

[4] Pre-filed Direct Testimony of J. Robert Malko on Revenue Requirement on behalf of Utah Industrial customers in Docket No. 10-035-124, p. 9-10.

it at prevailing market forward prices -- which are the same set of prices the utility then expects to face for replacing that supply of fuel or power going forward. Assuming there is still a future need for just as much fuel or power, there is no expected savings from marking to market and then buying at market thereafter. For PacifiCorp (and many utilities with gas-fired generation in their supply mix), a reduction in forward gas prices tends to cause its future demand for gas supply to increase, because its gas-fired generation becomes more likely to be in the money. Thus there is no reason to unwind hedges. Replacing them would simply involve incurring the bid-ask spread needlessly.

Of course, it is possible that realized, spot commodity prices could end up below forward prices that were available in the contracting periods (as has happened here), but that cannot be the market expectation. Indeed, it has never been the case that the market even expected future spot prices to trend downwards during most of the time over the past few years, despite the fact that it kept experiencing declining recent past spot prices. To demonstrate this, Figure FCG-1 below shows the forward prices of gas at several illustrative dates from 2007 to today, which is the time frame when the swaps in question were acquired. The figure also shows the realized spot prices (for delivery month) over the same time horizon. Every forward curve starts at the then-current spot price and rises thereafter. In effect, after every spot price decline, market traders believed that the decline was over and that the future would have higher prices. Thus, there was no market indication or sentiment remotely confirming Dr. Malko's view that there were "signs" of a likely decline of the experienced magnitude.

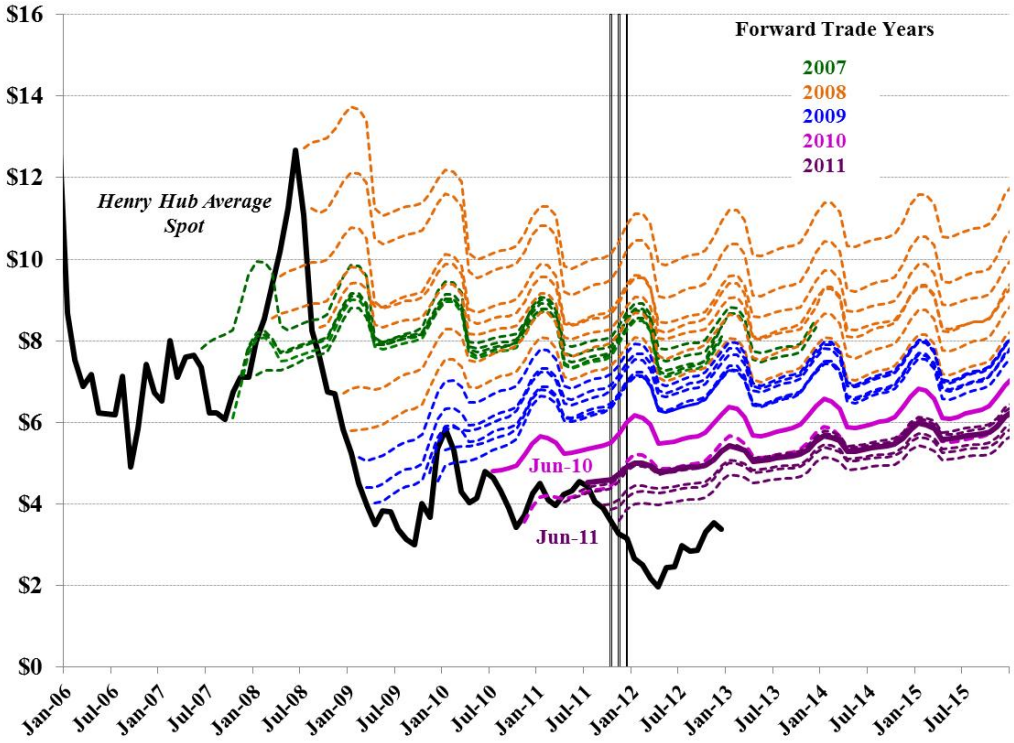


Figure FCG-1

Q. Dr. Malko does not suggest that the company should have just swapped out of older forward contracts for newer ones. He implies that the company should have simply sold off its hedges and "gone naked" thereafter. Does this change your view of what the Company might have done?

A. No. Even if the Company had considered going without hedges at some point in the past, it would and should have then expected that this strategy would thereafter cost what the forward curve was saying the future gas commodity was worth. There is no difference in the expected future supply costs regardless of how the liquidated contracts are replaced. Moreover, if the Company had chosen to abandon hedging because it believed prices would be below the forward curve,

this would have been speculative – betting against the market. This would have violated the Company's strict and appropriate risk policies in two ways which would have been genuinely imprudent: First, it would have involved decisions against its own risk metrics, likely driving the probability of significant losses to levels that were much higher than what the Company's policy and prudence would dictate as a maximum.[5] Second, it would have been speculation, which is disallowed in every utility hedging policy in the country.

Q. Is Dr. Malko's notion that the Company should have liquidated some of its hedges, at some time, consistent with his disallowance theory or calculations?

A. No. Dr. Malko is proposing that all of the difference between the Company's hedge acquisition costs and realized (delivery period) spot market prices be deemed imprudent and be disallowed. This effectively implies that the only prudent strategy would have been never to hedge at all (since he is only allowing the unhedged, realized spot prices). However, his implicit counter-proposal for what an acceptably prudent strategy would have been is not this severe --though it is vague. Instead, he implies that there must have been some time after acquisition but prior to delivery when it would have become prudent to liquidate some hedges. That is, it would have to have been prudent initially to have hedged but it became imprudent to stay hedged at some point.

If so, and had an intermediate liquidation occurred, the buy-out or buy-down of those contracts would have involved losses from marking them to market – but those adjustment costs would have to be deemed prudent had the exit

[5] Technically, the Company's Value at Risk (VaR) or To-Expiration Value at Risk (TEVaR) metrics likely would have been too high to be acceptable.

occurred in a timely manner. Under this theory, the difference between (a) the cost incurred and (b) the costs resulting from a strategy that involved liquidating and then buying in the spot market is **not** the difference between the price at which the Company originally acquired the natural gas and the delivery spot prices but a much smaller figure. This smaller figure takes into account the loss associated with liquidating the portfolio at some prior point in time. Therefore, Dr. Malko's calculation of the $23.8 million that he believes should be disallowed is incorrect even under his own theory.

In essence, he is arguing for disallowances equal to the gross losses on the Company's positions, when his own strategy would call for only the net losses to be deemed imprudent. Unfortunately, he provides no insight as to when or what contracts should have been liquidated, so we cannot infer that he actually does know of a more prudent, more robust strategy than the Company followed (just that he can observe in hindsight that the Company's positions involved losses).

Q. Please summarize the inconsistencies and flaws in Dr. Malko's position.

A. Dr. Malko's proposition that PacifiCorp should have liquidated and never re-hedged, and that this would have reduced its Company-wide gas supply losses by approximately $54.6 million over the EBA period is simply wrong. There can only be a savings from unwinding and not replacing hedges if the market falls in the future to an extent not already anticipated at the time the liquidation occurs. Sometimes this may happen (as here), but it cannot happen on average, nor be expected to occur, or else the forward prices are inefficient. In fact, it would be speculative to assume it would occur. Pursuing his strategy would have required a

finding that either the Company's risk goals should have been change radically (to tolerate the greatly increased risk of going unhedged) or a finding that the market risk had at some point fallen so much that replacement hedges were not needed in order to keep the Company's expected costs within target bounds. He does not make either demonstration, and indeed neither is plausible. He also would need to provide a theory of market timing that could be beneficially used in general, not just opportunistically in hindsight. Importantly, Dr. Malko offers neither such assessments nor recommendations.

Second, the benchmark against which Dr. Malko measures the $54.6 million is simply wrong even on his own terms. Even if the Company had been able to time the market and liquidated its positions at an optimal or near-optimal time to liquidate, it would have done so at a price that would force the Company to incur a prudent loss. Therefore, the difference between the Company's hedging strategy and Dr. Malko's proposal to liquidate is not $54.6 million but a much smaller number.

3. COST MINIMIZATION IS NOT A PROPER GOAL OF RISK MANAGEMENT

Q. Please explain what risk management is and is not expected to control.

A. Dr. Malko repeatedly criticizes the Company for failing to formalize criteria for cost minimization in its risk policies, and for failing to adopt what he regards as cost minimizing practices (here, of unwinding hedges that move out of the money). For example, on p. 12, Dr. Malko states, "The Company clearly has not engaged in a strategy of balancing price stability with cost minimization". Properly understood and practiced, risk management is about controlling the

potential width (and shape) but NOT about improving (reducing) the mean of the distribution of future costs (or increasing revenues). Fairly and competitively priced hedges will only trade if both sides regard the amount paid for the risk transfer to be worth the value gained (or cost incurred). This means there can be no improvement in the expected cost for one side of the deal, or else the other side is facing an expected degradation. If so, they would be better off not trading. For the same reason, you cannot expect to reduce your future costs by NOT hedging. The hedges you forego have a fair price that reflects what you would be likely to pay on an unhedged basis as well (albeit with a different, more certain pattern over time).

Q. Does hedging change expected costs?

A. No, hedging does not change the expected costs of the commodity being hedged. The only costs that are eligible for minimization under hedging are transactions costs and potential costs of non-performance of the other side. Both of these are generally small in relation to the traded price at delivery. Ironically, these are the very costs that Dr. Malko's approach would increase, because he would have had PacifiCorp move out of hedges (at a small bid-ask placement loss), thereby incurring unnecessary transactions costs for no expected benefit. I am not aware of any theory or practice of energy risk management that includes a dimension for "cost minimization", beyond the de minimus consideration of transactions costs. [6]

[6] Sometimes, there is rhetorical confusion in regulatory hearings and workshops over whether options premiums should be limited or budgeted narrowly for cost minimization, but this is an illusion of net cost reductions, since restrictions on the allowable size of the premiums taken will be exactly matched by a corresponding change in how much of the price distribution is left open.

4. DIVERSIFICATION OF THE COMPANY'S HEDGING PORTFOLIO

Q. Dr. Malko claims that the Company could have reduced its losses had it not failed to diversify its hedging portfolio. Do you agree?

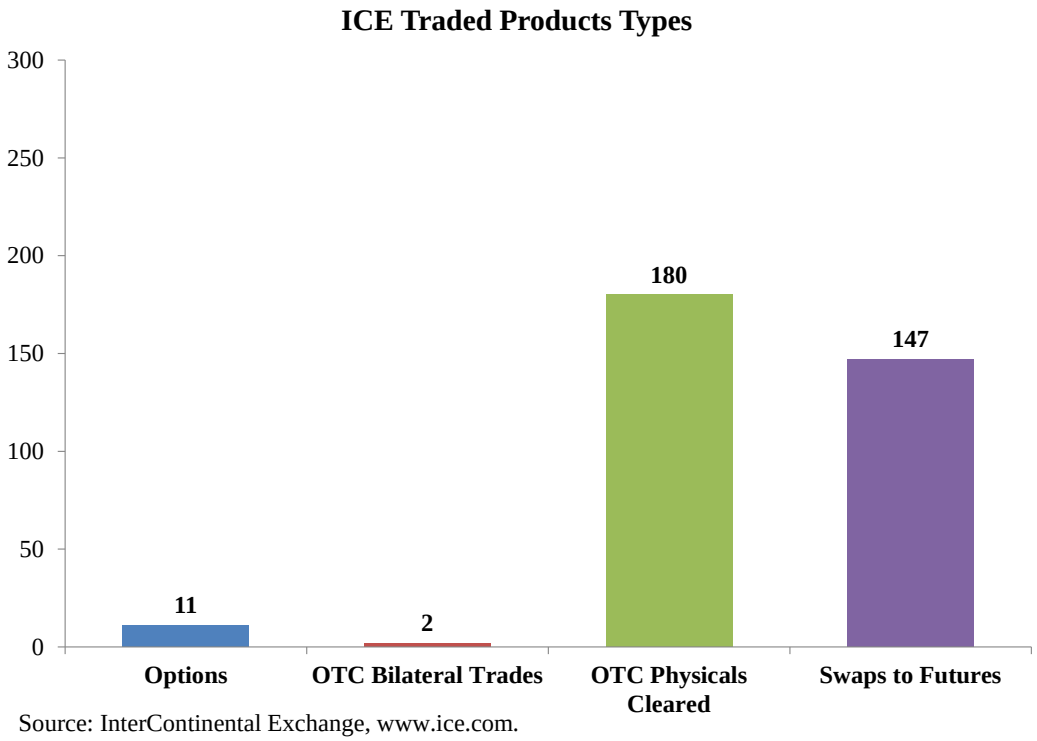
A. No. Dr. Malko's view that hedging with options or other financial products would have reduced losses (p. 26) is at odds with the reality of the hedging options faced by utilities such as RMP and based on hindsight.

Hedging is of utmost importance to electric utilities because, (i) they face volatile prices and uncertainty in demanded volumes and (ii) unlike many other businesses, they have an obligation to serve. Because of the obligation to serve, *a utility cannot withdraw from purchasing power when it becomes very expensive or risky (volatile)*. Therefore, hedging becomes an integral part of managing the risk exposure caused by volatile fuel and power prices. Compared to options or fixed price physicals, swaps are often more heavily traded (more liquid) and are available over longer horizons (tenor), making them the most useful means of insuring against price fluctuations. In other words, swaps are often the least-cost and most powerful method (in the sense of minimizing transactions' costs, not delivered energy costs) that can reduce customers' exposure to price volatility. At least as important is the fact that swaps are available at more locations and for a longer time horizon.

Q. Do you have any information about the magnitude of utilities' use of swaps?

A. Yes. ICE (InterContinental Exchange) provides data on 147 different swaps and on 11 options, so clearly the swap market is much more liquid than the option

market. Also, the only hedging instrument for which volumetric data is available for the natural gas basis from Henry Hub to Rock Opal is swaps.



Source: InterContinental Exchange, www.ice.com.

Figure FCG-2

Q. Why do you say that Dr. Malko's position is based on hindsight?

A. Dr. Malko states that the Company could have reduced its losses by hedging with options or other financial products (p. 26), but this is only true *ex post facto*. The success of such a strategy could not have been foreseen or reasonably expected at any time he might have wanted the Company to buy options in the past (instead of swaps). If the Company had relied on options instead of swaps, we now know that it turns out it would not have exercised those options to buy natural gas, and so the *ex post* losses would have consisted of only the option fees. That is why Dr.

Malko claims that options could have reduced costs. However, if prices had gone up, those options would have been struck at exercise prices perhaps above what the forward prices had been at the time the options were purchased (because it is fairly common to buy out of the money calls), and with the added cost of the option premium being borne as well. This would have cost more than just using forward swaps. The option premium is set to fairly reflect the tradeoffs for how much the associated price insurance is expected to be worth. It does not provide an expected savings.

5. NATURAL GAS AND ELECTRIC HEDGE POSITIONS SHOULD NOT BE EVALUATED SEPARATELY

Q. Do you share Dr. Malko view that natural gas and electrical hedging should be considered separately?

A. No, the two activities are intrinsically and predictably related to each other, and their unit prices are reliably positively correlated. This makes it far more efficient to evaluate them (and manage their risks) jointly. Power and gas prices are closely related because natural gas is often the fuel on the margin in efficient dispatch, as is practiced throughout the WECC. This means power sales tend to be more valuable in high cost gas periods, producing revenues that are a credit or offset to the high cost fuel. If spot gas prices depart from prior forward prices, electric prices will tend to do so in the same direction, thereby naturally hedging some of the unexpected cost variance. The costs and benefits of natural gas and power hedges tend to move in opposite directions, so the net cost of the two has always been in between and much less volatile than either component. The actual pattern

of PacifiCorp's natural gas and power hedges over the last several years is shown in the rebuttal testimony of Company witness, Mr. Bird.

Q. What is wrong with separating two related cash flows and hedging or managing them separately?

A. The simplest answer is that it would involve needless and costly administration for no net benefit. Imagine that you were managing a company with risky revenues, e.g., sales denominated in a foreign currency that you would have to repatriate, but that your costs were also denominated in that same currency and were highly correlated with the sales. Hypothetically, assume that the net margin between them is fixed. Each flow could be hedged separately, e.g., selling your expected revenues forward at the foreign exchange (FX) future prices, and buying your expected costs forward at the same FX rates (though this might be difficult if the size of each was highly uncertain). Then each would be fixed and the difference between them would be a fixed amount as well … but that is already the situation before the hedging begins, due to the assumed perfect correlation between the two. Under the philosophy of managing the two risks separately, you would have hedged many times the needed volume, with associated accounting and credit risks, when only the net amount (already quite safe and much easier to predict) needed repatriation hedging.

Q. Dr. Malko offers an example of why he believes the gas and electric streams can be considered independently, wherein one stock in a 401k plan performs poorly while another performs well and he states that "you would not just hold on and accept those losses because you happened to have another stock in your 401K that performed well." (p. 19) Does that support his conclusion that natural gas and electrical hedges should be treated separately?

A. No. It is not even a sensible view of stock portfolio management, unless he feels he is able to predict winners and losers in the market (in which case, he should be a wealthy investor or broker). In efficient financial markets, even protracted periods of recent past downward price movement cannot be used to conclude or predict that future stock prices will continue to fall and so one should liquidate those holdings. Indeed, it can only be the case that investors setting the market prices expect all stocks will go up in the future, regardless of past performance. If investors did not expect this, they could not justify holding the stocks instead of safer bonds, and it would be inexplicable as to why the stock prices did not fall to reflect their pessimistic outlook. The normative advice to investors who are not inclined to speculate is that you simply hold a diversified portfolio and do not trade in and out of winners and losers. Many people do make such trades on hunches or broker advice, but they are actually speculating that the market is wrong about the current stock price, not investing in an efficient manner.

Q. Do electric and gas positions in the PacifiCorp NPC behave like common stocks?

A. No. In a stock investment portfolio, it is often (but not always) true that individual stocks will perform independently, such that some move up while others go down. They share some degree of common exposure to the macro-economy and investor sentiment, but they have substantial, usually much larger, idiosyncratic (company-specific) risks and price movements. This is very different from the fact that the Company typically experiences a strong and predictable offsetting benefit to its gas purchase losses from gains in its electric sales' position (or vice versa). This is not a coincidental result. Rather, it intrinsically occurs in power markets for companies with a mix of generation assets like PacifiCorp's. PacifiCorp tends to be "long" on electricity and "short" on gas, as well as somewhat long on energy and short on capacity. That is, it has low cost, base load capacity that is more than it needs in off-peak periods, so it can sell some slack output profitably into the wholesale market. If gas prices fall after it has already sold electricity forward and covered the needed supply with forward gas, it tends to lose money on the gas supply but make money on the power sale.

The potential gains vs. losses on power and gas are not one for one, because they depend on whether forward prices for power fall more or less than the corresponding gas prices (as well as on how similarly the positions were hedged in timing and duration, what other types of power plants are supporting the offsystem sales, and other factors). Moreover, this effect is predictable, so it can be (and is) incorporated explicitly into the risk management practices of the

Company. If market conditions change (e.g., the net long electric vs. net short gas needs, or the correlations or volatilities of the two commodities), the Company changes its incremental hedging practices. Thus, these are more like two sides of the same coin for utility operations, while having one bad stock and one unrelated good stock whose performances are relatively independent is more like two separate coins. It is not meaningful to criticize gas performance by itself, as the electric performance would not be feasible (or the same) without the gas situation, and vice versa.

Q. Please comment on Dr. Malko's statement that "in the future, power swaps and natural gas swaps will likely not offset each other …" (p. 21)

A. This is very implausible to me. The electric industry is moving rapidly towards increased reliance on natural gas fired generation, which is likely to increase the correlation between these two markets, not decrease it.

Q. Is there an adverse incentive issue associated with Dr. Malko's proposed separation of gas and electric performance?

A. Yes, there is a very serious regulatory economics problem which would arise under his approach: Because the gas and electric positions of PacifiCorp intrinsically move opposite to each other, it is inevitable that one or the other will be yielding savings while the other is incurring a cost. This means that it will always be possible for Dr. Malko or other intervenors to come into <u>any and every</u> RMP rate case and say that we should just focus on disallowing some of the "badly performing" side of the business and ignore the savings or offsets from the other half. This opportunity would present itself all the time, regardless of

whether PacifiCorp hedged either side of its gas or electric operation! His approach would put PacifiCorp in an untenable situation of having no possible strategy that would not have purportedly unreasonable costs. This is clearly untenable, inefficient and unfair. The Commission should ignore his separation theory.

6. MISGUIDED ANALOGIES

Q. Does the comparison that Dr. Malko makes between PacifiCorp's parent company practices and PacifiCorp's NPC hedging reveal a contradiction in company policies?

A. Dr. Malko cites the actions of PacifiCorp's parent company, Berkshire Hathaway, in disclosing that the fair (market) value of certain fixed maturity securities had declined, so that Berkshire Hathaway recognized an accounting loss on these assets. In Dr. Malko's view this is a sign that "Berkshire was willing to take some action and write-down $1 billion." (p. 18)

The action that Berkshire Hathaway took was to disclose to its investors that certain fixed maturity securities had a lower fair value than previously. This is equivalent to the Company recognizing that the market value of its commodity portfolio has changed - - nothing more.

Put differently, Dr. Malko's Berkshire Hathaway analogy is taken out of context to such an extent that it overlooks a completely opposite motivation and effect to Dr. Malko's claim. The annual report cited by Dr. Malko (Berkshire Hathaway 2010 10-K) specifically states that Berkshire Hathaway recorded "impairment charges" (not a loss), so that clearly the securities in question were

not liquidated. This is further confirmed by a letter from Warren Buffet to shareholders that accompanied the annual report. In this letter Mr. Buffet refutes Dr. Malko's perception of Berkshire Hathaway's practices. On page 12 of that letter, Mr. Buffet stated[7]

> A few [investments], however, have very poor returns, a result of some serious mistakes I made in my job of capital allocation. These errors came about because I misjudged either the competitive strength of the business being purchased or the future economics of the industry in which it operated. I try to look out ten or twenty years when making an acquisition, but sometimes my eyesight has been poor. Charlie's has been better; he voted no more than "present" on several of my errant purchases. *Berkshire's newer shareholders may be puzzled over our decision to hold on to my mistakes*. After all, their earnings can never be consequential to Berkshire's valuation, and problem companies require more managerial time than winners. *Any management consultant or Wall Street advisor would look at our laggards and say "dump them." That won't happen*. For 29 years, we have regularly laid out Berkshire's economic principles in these reports (pages 93-98) and Number 11 describes our general reluctance to sell poor performers (which, in most cases, lag because of industry factors rather than managerial shortcomings). Our approach is far from Darwinian, and many of you may disapprove of it. I can understand your position. However, we have made – and continue to make – a commitment to the sellers of businesses we buy that we will retain those businesses through thick and thin. *[emphasis added]*

The language in the 10-K and Mr. Buffett's explanation shows that Berkshire Hathaway and the Company did exactly the same – recognized a loss in market value, but did not liquidate the underlying assets.

Q. Does this conclude your rebuttal testimony?

A. Yes.

[7] Warren E. Buffett, Chairman of the Board, Letter to the Shareholders of Berkshire Hathaway Inc., February 25, 2012.