Collaborative Process To Discuss Appropriate Changes To PacifiCorp's Hedging Practices

Report to the Utah Public Service Commission

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Submitted by
Utah Division of Public Utilities

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EXECUTIVE SUMMARY

As part of the settlement stipulation in Docket No. 10-035-124, parties agreed to convene a collaborative process to discuss appropriate changes to PacifiCorp's (Company) natural gas and electricity hedging practices in order to better reflect customer risk tolerance and preferences. The settlement stipulation identified 12 specific items to be addressed by the parties with a requirement to report on areas of agreement and any remaining areas of disagreement. Where agreement could be reached by the parties, specific changes would be implemented by the Company. If there were remaining unsettled issues they would be resolved by Commission order. The areas of agreement resulting from the collaborative process are summarized as general principles and guidelines and have been included as **Exhibit A**. The items addressed in this document are intended to provide the Company with broad guidelines and a better understanding of customer risk tolerance. The principles and guidelines identified in this document are not intended to dictate specific transactions or to micro-manage the Company.

All parties agree that the Company and not outside parties should determine the specific price, physical delivery, policies and procedures necessary for fuel procurement, however the stakeholders believe the current hedging program extends too far into the future based on current market liquidity indicators and does not allow enough flexibility to adapt to changing requirements and changing market conditions.

The collaborative process has outlined broad principles and guidelines to allow the Company to implement a hedging program that better reflects customer risk tolerance. The proposed guidelines would suggest that the maximum forward hedging contracts be reduced from 48 to 36 months and would not allow the Company to hedge [redacted] of the forecast natural gas requirement. [redacted]

In an effort to monitor and improve the transparency of the hedging program in the future, the Company has agreed to provide semi-annual reporting to the Commission on the hedging activities and current market conditions. **Exhibit C** included with this report is a sample of the proposed semi-annual hedging report.

While the majority of the participants have reached agreement on many of the issues, representatives from "Utah Industrial Energy Consumers" (UIEC) expressed reservation and concerns and do not want the results of this process to be binding. All parties agree that this

report should not be perceived by the Company as pre-approval for future hedging transactions. The "Utah Association of Energy Users" (UAE) expressed concerns about continued reliance on the VaR and TEVaR metrics as primary tools used by the Company to direct hedging decisions, to the extent these statistical metrics override fundamental market analyses.

This Report fulfills the Division requirement to provide a report on the collaborative process within six months of the stipulation order.[1]

BACKGROUND

Issues relating to the Company's hedging program have been a concern for parties in the last two general rate cases (09-035-23 & 10-035-124), the proposed Energy Balancing Account ECAM or EBA (09-035-15) and the Natural Gas Price Risk Management docket (09-035-21). In each of these cases parties have provided testimony and expressed concern with the amount and the methods used to hedge the forecast natural gas requirement. The current program allows for purchases up to [redacted] The current hedging program was designed for price stability and not for cost minimization.

With the increased availability of natural gas due to shale gas production, the price of natural gas has come down from the high levels in 2008 and is projected to remain low for the next several years.[2] Morgan Stanley for example, recently reduced their forecast for 2012 natural gas from $3.85 to $2.70 per MMBtu.[3] This same market perspective is reflected in the forward price curve provided by PacifiCorp.[4] [redacted]

The most recent natural gas and electricity market price changes have, along with more accurate natural gas forecasts, resulted in a significant reduction in the forecast natural gas requirement for 2012. [redacted]

[1] On March 1, 2012 the Commission extended the filing deadline to March 30, 2012. Parties have until April 13, 2012 to file responses to the Division report and provide separate comments.
[2] EIA Annual Energy Outlook 2012 Early Release.
[3] SNL Financial, Morgan Stanley hacks 2012 natural gas price outlook by 30%, February 2, 2012
[4] PacifiCorp Semi-Annual Report for Utah Hedging Collaborative Process, p.1, Figure 1

[redacted][5] In late 2011 and early 2012, natural gas market prices declined in relation to electricity market prices making the natural gas plants more economical for generation and increasing the Company's forecast natural gas requirement. [redacted]

Some parties have suggested that the natural gas and electric contracts should be reviewed as separate hedging programs while the Company and other parties feel strongly that the program should be reviewed as a combination of gas and electric risk exposure to take advantage of naturally offsetting positions. The Company looks at the total relationship and the spark spread to determine their open position. The relationship between the gas and electric contracts has been a source of confusion and misunderstanding by the parties. As part of the stipulation agreement under Docket No. 10-035-124, parties agreed to convene a collaborative process to discuss appropriate changes to the Company's hedging practices.

MEETINGS AND ISSUES

In compliance with the stipulation, the Company assembled a workgroup of the interested parties. The workgroup held nine meetings, September 20, October 18, November 3, November 29, December 13, December 19, January 12, February 10, and February 23, 2012. In the first meeting, the workgroup discussed the scope of items to be discussed, expectations, recommended outcomes and a schedule for the remaining meetings. During this and in subsequent meetings it became apparent that representatives from the Company and interested parties did not have the same level of understanding on these issues. During several discussions on various topics, parties were not able to come to an understanding and were "talking past each other". There was also a lack of understanding relating to how the TEVaR metric is calculated and used by the Company as well as the impact of market volatility and market price changes on the current hedging program.

In an effort to bring parties to a similar level of understanding relating to hedging, prior to the October meeting, the Company invited participants to review a 2010 paper titled "Managing Natural Gas Price Volatility: Principles and Practices Across the Industry."[6] This information provided a reference point for how hedging is used and the various products that are available in the market. The author of the article, Mr. Frank Graves participated by phone in several of the meetings and provided an overview of the article as well as a review of the current

[5] PacifiCorp Hedging report, p.15, Confidential Figure 25 & Confidential Figure 26
[6] "Managing Natural Gas Price Volatility: Principles and Practices Across the Industry", Frank C. Graves & Steven H. Levine, November 2010, The Brattle Group, Inc.

market conditions. Topics discussed also included the use of financial swap contracts compared to options along with the difference in cost and availability of the various products.

In order to help identify and address the various issues, the Company asked parties to complete a position list for the issues identified in the stipulation. Instead of addressing only the issues list, parties elected to take a more holistic look at the total fuel procurement strategy. Prior to the November 3rd meeting, the non-Company parties met to discuss the best way to communicate with the Company, address the issues identified in the Commission order and move the process forward. Instead of continuing the discussion over misunderstood terms and products, the parties decided to provide the Company with broad concepts and guidelines to establish a framework for discussion. The guidelines would allow the Company to operate a hedging program and would allow the flexibility to adapt to changing requirements and market conditions. The guidelines would provide a different perspective and would help avoid the miscommunication between the Company and parties on specific issues. The Office of Consumer Services (OCS) took the responsibility of preparing a draft document for discussion purposes.

Parties presented the first draft of the concepts and guidelines for a natural gas procurement process during the November 3rd meeting. These guidelines included leaving a portion of the total natural gas requirement exposed to market prices and reducing the quantity and the forward duration of the natural gas contracts. While parties were recommending that the term of future hedging activity should be shortened, they also recognized that the current market conditions and the current natural gas price should prompt the Company to explore longer-term natural gas supply arrangements.

One of the key components of the proposed fuel procurement plan would require regular reporting to the Commission and to parties relative to the current market conditions along with the historical and proposed hedging activity. Regular reporting would improve the communication and understanding of parties and would improve the transparency of the hedging program.

Once the groundwork had been established, the remaining meetings were used to discuss changes and modifications to the proposed concepts and guidelines and to review specific items that should be included in the semi-annual hedging report.

AREAS OF UNDERSTANDING AND OPEN ISSUES

The settlement stipulation identified 12 specific issues that were to be addressed in the collaborative process. While the majority of the issues have been addressed and there has been agreement from the Company on suggested changes to the hedging program, there are issues this process did not address. The issues identified in the stipulation have been addressed below with

additional explanation based on the discussions in the collaborative meetings. It may be informative to refer to Exhibit A for a summary of the agreed issues.

a) Moving the hedging program requirement targets that are currently in the Company's Front Office Procedures and Practices to the limits section of the Risk Management Policy, to be subject to the same governance requirements as other Risk Management Policy limits.

The Company has moved the hedging program requirement targets to the PacifiCorp Energy Risk Management Policy.[7] The Risk Management Policy is an internal document that has not been reviewed by the Commission and can be modified or changed at the discretion of management. The document is classified as "confidential" and does not include the specific details concerning the amount or duration of the hedging program. The specific details are found in the various appendices to the Risk Management Policy.[8] In contrast to the general guidelines, the appendix items are classified as "highly confidential" and can only be examined at the Company locations. Since this is an internal document, the Company should inform the Commission when the agreed changes have been incorporated into the Risk Management Policy and the attached appendices.

b) A new maximum hedge volume percentage limit or range for forecast natural gas requirement for forward periods.

All parties agree that the forecast total requirement for natural gas should not be fully hedged and a portion should remain open to short-term market price exposure and for operational flexibility. The percentage of the forecast natural gas requirement that should typically be maintained open is identified below:

[redacted]

Because of relative market illiquidity and potential inaccuracy of forecasted demand requirements, hedges should normally be limited to 36 forward months, except to the extent fundamental market analysis, including liquidity, support longer-term purchases and acquisitions. Proposals for long-term natural gas supplies, transportation, storage, and price hedges should be solicited and evaluated as part of an Energy Planning and Procurement process. The 36 month guideline for financial hedges and the suggested annual percentage guidelines should not limit opportunities for longer term hedges in a price environment advantageous to natural gas consumers as determined by fundamental analysis. The revised guidelines will allow

[7] PacifiCorp Energy Commercial and Trading Risk Management Policy, Approved 8/30/2011
[8] PacifiCorp Energy Commercial and Trading Risk Management Policy, Approved 8/30/2011, Appendix C: **Credit Capacity Matrix**, Appendix D: **Clearing Limits**, Appendix E: **Value-at-Risk Limit**, Appendix F: **To-Expiry Value-at-Risk Limits**, Appendix G: **Position Thresholds**, Appendix H: **Cumulative Mark-to-Market Thresholds**

for fluctuations in forecast natural gas requirement and will reduce the possibility of being in an over hedged position.

The Company indicated that the hedging volume percentage guideline would have higher priority than the TEVaR and VaR limits for natural gas hedging. Further, fundamental market analysis would be relied upon to hedge either more or less natural gas and electricity within the volume percentage guideline and TEVaR limit range. Looking forward, if the natural gas hedge volume percentage guidelines ever conflict with TEVaR and VaR limits despite appropriate electricity hedging, the Company indicated it would revisit the limits and guidelines with stakeholders.

c) Exceptions to the hedge volume percentage limit or range and response to changing circumstances.

While this collaborative process has suggested that 36 months should normally be the limit for future natural gas contracts, the parties agree that the Company should follow prudent fuel management strategies and may act outside the percentage and time horizon limits when market conditions warrant. Parties also specifically discussed and agreed that current market conditions and current market prices suggest that the Company should be looking at the possibility of securing long term fixed price contracts. With the relatively short time frame required to negotiate forward contracts, it may be difficult for the Company to receive Commission approval on a timely basis. The Company may but is not required to use the voluntary pre-approval procedures under Utah Code § 54-17-402 to obtain approval for contracts that may extend beyond the 36 month hedging horizon. The Company intends to issue a request for proposal for such an arrangement in 2012 and will seek input from stakeholders in advance of issuance.

d) Risk tolerance bands based on TEVaR or VaR limits or otherwise.

One of the most important outcomes of the collaborative process has been a better understanding of TEVaR and how it is used by the Company. "The TEVaR distribution is a statistically-generated distribution of outcomes that is wider or narrower based upon the aggregate volatility of the combined power and natural gas portfolio."[9] The TEVaR calculation is a tool to measure the possible impact of commodity price changes to the Company's net power cost, favorable and unfavorable. This statistical measurement tool is forward looking and while it measures both future risk of loss and future potential gain, it does not look at the historical benefit or regret that results from a hedging program. The calculation is a measurement of the price risk associated with the open (unhedged) position for both natural gas and electricity and provides a statistical estimate of the potential impact that volatile prices could have on net power

[9] PacifiCorp – 2011 Integrated Resource Plan, Appendix G - Hedging Strategy

cost. Understanding the outcome of the TEVaR calculation is important to understand how the calculation should be used for planning purposes.

In the current market conditions, both natural gas price levels and price volatility are comparatively low suggesting relatively stable prices for the future. In this situation the TEVaR calculation would suggest that the Company has a low risk of volatile prices impacting net power cost and as a result the Company could hedge less and leave more open positions without impacting price stability. If the same circumstances are examined from a perspective of minimizing future prices however, it may be advantageous to hedge or negotiate long term contracts while natural gas prices are at relatively low levels. This perspective based on fundamental analysis, would suggest that the Company should lock in long term prices to take advantage of current relatively low prices. This disparity emphasizes the importance of coordinating fundamental analysis with the Company's hedging program, since the purpose of price hedging and its associated metrics (including TEVaR) is to reduce price volatility rather than to achieve cost minimization.

Similarly, when market conditions are volatile and prices are high as they were in 2008, the TEVaR calculation would indicate that there is a greater risk of adverse price impacts on the Company's net power cost. Volatile price movement could impact the open (unhedged) portion of the portfolio and would prompt the Company to hedge more in order to close the open positions and increase price stability. Although the TEVaR was not a metric used by the Company in 2008, the increased risk factors that would cause TEVaR to be higher were well recognized by the Company in 2008. This may be one of the reasons why [redacted]The calculation of TEVaR has more day-to-day relevance to the Company than it does to outside parties and should be used in combination with fundamental analysis. The use of the TEVaR metric may continue and the results of the TEVaR calculations will be reported in the semi-annual report in order to look for trends and monitor the market volatility. It is understood that if a situation arises where the percentage limit is in opposition to the TEVaR limit the hedging percentage should take precedence.

Parties have raised concerns that the risk tolerance bands used for TEVaR may be too broad. Figure 20 and Figure 21 of the Company's hedging report shows the natural gas percentage hedged and the TEVaR calculations for the same time periods. Using the new guidelines for the percentage of natural gas hedging, the Company is outside the guidelines for most of the periods under review. In contrast, for the same time periods the TEVaR calculation is within the acceptable guidelines for all of the periods under review. The TEVaR measurement responds to changes in electricity and natural gas market prices and price volatilities, as well as the correlation of market prices. Because of the complicated nature of this issue and to avoid unintended consequences, the collaborative process did not specify any changes to the TEVaR guidelines. These guidelines are better understood and used more by the Company than by

outside parties and any changes to the parameters should be made by the Company with the underlying rationale provided to the outside parties.

e) The dollar VaR limit for the hedging horizon.

The VaR – Value at Risk -- is a measurement of the one-day potential change in the cost of the open positions for natural gas and electricity. The use of the VaR and the position limits were not addressed in detail in the collaborative process. These guidelines are better understood and used more by the Company than by outside parties and any changes to the parameters should be made by the Company with an explanation of the underlying rationale provided to the outside parties.

f) The Risk Management Policy position limits.

Position limits was another area that received greater clarification through the collaborative process. In the previous risk management policy, Appendix H was titled Stop-Loss Limits. The Division and other parties assumed by this title that there was a predetermined dollar amount that would create an upper limit for the amount of loss allowed for hedging contracts. Under the current Risk Management Policy[10], Appendix H has been renamed Cumulative Mark-to-Market Thresholds. **Exhibit B** of this report is a more detailed explanation of the current mark-to-market threshold limits provided by the Company. The Company uses a cumulative mark-to-market threshold, which is similar to a stop loss metric, however if the threshold is reached, [redacted] Below is a portion of the Mark-to-Market threshold information included in Exhibit B.

[10] PacifiCorp Energy Commercial & Trading Risk Management Policy, 8/30/2011

The specific dollar amount of the Cumulative Mark-to-Market threshold is identified in Appendix H of the Risk Management Policy which is "highly confidential". The Company did not make the specific dollar amount available to the workgroup and it is unclear why the threshold remains suspended even though the new trading system is in place. The Company has indicated that the delay is due to profit and loss portion of the new trading system is not yet in place.

The mark-to-market does not affect the total net power cost since the contract prices associated with the hedged volumes are already in place. The mark-to-market calculation is an accounting entry to reflect the cumulative difference in cost between each hedged contract at the contract price versus at the current market price. PacifiCorp's weighted average purchase price for 2012 delivery of natural gas is represents the average price that the Company will be required to pay for the hedged volume of natural gas in 2012 and has been included in the forecast fuel cost.

If the Company finds itself in an over-hedged position in the future, it should inform the stakeholders and explain the recommended solution.

g) The risk management or hedging time horizon.

The workgroup recommended and the Company agreed that hedging transactions should normally be limited to 36 forward months, except to the extent Fundamental market analyses, including liquidity, support longer-term purchases and acquisitions. Based on current market fundamentals, the Company is encouraged to pursue long term purchase contracts for natural gas that may exceed the hedging horizon guidelines. The Company may seek regulatory approval prior to execution of the longer-term natural gas purchases.

h) A process for review of hedging transactions outside of accepted guidelines, including natural gas reserves or storage.

The November 3rd meeting included a presentation from Magnum Energy dealing with physical high deliverability natural gas storage (HDNGS) as a physical hedge and its application

to electric generation as a "natural gas stockpile". The presentation looked at the possibility of using the proposed Magnum HDNGS facility near Delta to meet some of the unpredictable operational requirements of the power plants. The proposed facility could provide access to stored fuel supplies through rapid injection and withdrawal and could potentially provide load following services for a gas-fired generating facility. Storage could also provide supply reliability in situations where there may be supply constraints due to increased demand or unplanned pipeline maintenance. While an existing natural gas storage facility is not currently available, the Magnum facility is scheduled to be in-service in April 2014. The Company is encouraged to look at cost-effective storage and other alternative hedging transactions that may be available now or in the future. As described earlier, the parties agree that the Company must act prudently with its hedging and fuel management, pursuing hedging transactions outside the guidelines found in Exhibit A when market conditions warrant. The Company also has available the pre-approval process or eligible transactions defined in Utah Code § 54-17-402.

i) Liquidity, transparency and other risks of different hedging tools such as financial swaps, fixed price physical forward contracts, and options.

At the current time, the Company plans to continue to use fixed for floating financial swaps and fixed price physical transactions to hedge future requirements. Fixed price physical and index price physical transactions will be used to balance the open positions.[11] The workgroup discussed the availability and use of various products for both gas and electricity hedging. The Company has resisted the use of options over concerns that some jurisdictions may limit the recovery of the explicit premiums charged for those products. Going forward, the Company has indicated that it will investigate the use of options as part of the hedging program.

The use of natural gas options could potentially create some basis risk since the majority of the option contracts use the NYMEX index pricing while the physical contracts primarily use Rockies Opal, AECO or Sumas index pricing. Option contracts for electricity could have similar basis risk with use of different index pricing compared to the physical delivery location.

j) A Company semi-annual confidential report on hedging status.

A sample of the semi-annual report has been included as **Attachment B**. It is anticipated that this report would be an informational report and would not require approval or acknowledgement from the Commission and should not be perceived by the Company as pre-approval for future hedging transactions. The activities and individual transactions will be evaluated against a "prudency" standard in general rate cases and energy balancing account (EBA) adjustment cases. The principles and guidelines outlined in this report should be used as a general starting point for prudency analysis, but should not relieve PacifiCorp's burden to demonstrate the prudence of all Energy Planning and Procurement activities.

[11] PacifiCorp Semi-Annual Report for Utah Hedging Collaborative Process, p.19

Regular reporting will be a significant improvement and will provide more transparency to the hedging program. In addition to reporting individual transaction level information, the Company will include forward price curves for electricity, gas and coal. The report will be a combination of both fundamental and technical information and will provide insight to help understand the reasoning for a particular course of action. This regular reporting will be beneficial to both the Company and to outside parties. While this will create an additional reporting requirement for the Company it could help to reduce possible second guessing or regret relating to hedging activities. By providing regular information, parties may be able to see why decisions were made based on the forecast information that was available at that time.

k) The implications on stakeholders in the Company's other jurisdictions.

The Company has indicated that a review of the hedging practice is currently being conducted in other jurisdictions. It appears that the review process is further along in Utah than in the other jurisdictions and the Company has indicated that the Utah suggested guidelines are not in conflict with the guidelines proposed by other jurisdictions. Any future conflicts to the guidelines provided by other jurisdictions should be presented to the stakeholders for discussion and review.

l) Coordination and implementation issues relating to the inclusion of financial swap transactions in the EBA, as specified in Paragraph 56 (Rehearing in ECAM Docket).

The rehearing on the Energy Balancing Account (EBA) specified that financial swap transactions were to be included in the EBA calculation. The Division has identified the specific accounts that will be included in the EBA calculation and has identified the accounts related to swaps. The reporting and analysis of the hedging program have been identified to coincide with the filing dates for the EBA reporting. It is not anticipated that the inclusion of financial swaps will change the mechanics of the EBA calculations. However, including the mark-to-market value in the EBA calculation will recognize the total cost of the hedged contractual obligation. The new guidelines and monitoring requirements will help to reduce the possibility of over-hedging in the future and will better reflect customer risk tolerance.

CONCLUSION

The Company and not outside parties should determine the specific price, physical delivery, policies and procedures necessary for fuel procurement. The collaborative process has outlined broad principles and guidelines identified as Exhibit A that will allow the Company to implement a hedging program that better reflects customer preferences and risk tolerance. The new guidelines have been discussed and approved by the Company and will allow for greater flexibility to adapt to changing requirements and market conditions.

These principles and guidelines are not intended to dictate specific transactions or to micro-manage the Company and individual transactions will still be evaluated against a "prudency" standard in general rate cases and energy balancing account (EBA) adjustment cases. The principles and guidelines outlined in this report do not relieve PacifiCorp's burden to demonstrate the prudence of all Energy Planning and Procurement activities.

EXHIBIT A

UTAH HEDGING COLLABORATIVE REPORT

Principles:

1. PacifiCorp has experience in determining the specific price, physical delivery, and operational risk management policies, procedures and strategies (Energy Planning and Procurement) necessary for reliable delivery and price risk management related to natural gas procurement, energy balancing, and hedging.
2. As with other aspects of its business, PacifiCorp's Energy Planning and Procurement activities should be evaluated against a "prudency" standard in general rate cases and energy balancing account (EBA) adjustment cases.
3. These principles and guidelines should be used as a general starting point for prudency analysis, but should not relieve PacifiCorp's burden to demonstrate the prudence of all Energy Planning and Procurement activities.
4. "Value at risk" metrics may provide PacifiCorp with useful risk management information, and can be considered in combination with Fundamental analysis for Energy Planning and Procurement.
5. Energy Planning and Procurement requires constant evaluation, monitoring and updating of all relevant supply, demand, and pricing (Fundamental analysis). The Company should use Fundamental analyses and risk management guidelines in combination with other techniques such as dollar cost averaging to determine timing and volume of hedges. The combined analysis should be used to assist the Company in developing a price view for informed market timing of hedges and opportunistic purchases.
6. Reliability of commodity supplies, delivery risks, and operational issues along with storage and transportation options should be evaluated and may be used as part of the Energy Planning and Procurement plan.
7. Voluntary pre-approval procedures under Utah Code § 54-17-402 may be used for long-term commitments that fall outside of the suggested guidelines.
8. Transparency and regular reporting of PacifiCorp's Energy Planning and Procurement policies, practices and positions are critical to enable regulators and customers to understand and evaluate prudence. Transparency and regular feedback will also help inform all stakeholders of customer risk management tolerances.
9. All commonly used, available and effective physical products and financial instruments may be utilized in Energy Planning and Procurement as appropriate. Costs incurred in prudent Energy Planning (including premiums on options and storage) may be included in the EBA.

General Guidelines:

1. The forecast total requirement for natural gas and electricity should not be fully hedged. A reasonable percentage of the natural gas requirements should remain open to short-term market price exposure and allow for operational flexibility. The percentage of

natural gas requirement that should typically be maintained open to short term market price exposure and for operational flexibility is as follows:

In the event of a conflict, these guidelines take precedence over the Company's value at risk metrics.

2. PacifiCorp should use Fundamental and technical analyses with consideration of the Company's risk management metrics, to determine timing and volume of electricity hedges.
3. Interactions between natural gas and electricity open positions, inclusive of hedges, may be identified and accounted for in analyzing value at risk metrics.
4. Because of relative market illiquidity and potential inaccuracy of forecasted requirements, hedges should normally be limited to 36 forward months, except to the extent Fundamental market analyses, including liquidity, support longer-term purchases and acquisitions.
5. Proposals for long-term natural gas supplies, transportation, storage and price hedges should be solicited and evaluated as part of an Energy Planning and Procurement process, particularly in an environment of favorable Fundamentals. The 36 month guideline for financial hedges and the suggested annual percentage guidelines should not limit opportunities for longer term hedges, supply commitments or storage contracts in a price environment advantageous to natural gas consumers as determined by Fundamentals analyses.
6. Energy Planning and Procurement should be constantly reviewed and updated to reflect current conditions and should include solicitation of stakeholder input.
7. PacifiCorp should prepare a comprehensive Energy Plan at least biannually, and more often upon the occurrence of any significant market event or condition that can reasonably be expected to have a long-term or significant impact on any Fundamental analysis.
8. Reports related to Energy Planning and Procurement should be filed in March and September and should be developed in the context of the EBA tariff. The reports should explain why PacifiCorp executed hedges in the prior six month period with specific volumes, price and timing (and why it did not hedge more volume or different timing), and should include at a minimum:
    a. Current and planned natural gas and electricity requirements, storage and hedged positions
    b. Description of electric transmission and natural gas transportation arrangements as well as existing and emerging related risks
    c. Update on Fundamentals evaluation as described above
    d. Description of deliverability, operational, financial and other risks

e. Explanation of changes/deviations from Energy Plan and prior filings
f. Summary graphs depicting key internally used value at risk metrics and how they are changing over time
g. Description and explanation of and changes to PacifiCorp’s current risk management policies

EXHIBIT B
Utah Collaborative Process
Cumulative Mark-to-Market Threshold

[redacted]

One. [redacted].

EXHIBIT C

PacifiCorp Semi-Annual Report of Utah Hedging Collaborative Process

Purpose

This report is provided in response to the Rocky Mountain Power 2011 General Rate Case settlement stipulation approved by the Utah Public Service Commission September 13, 2011. This report describes market fundamentals, basis risk, liquidity, energy positions, hedge activity, products and instruments, and physical supply. Confidential items are highlighted yellow. There are three attachments; Attachment A is confidential.

Market Fundamentals

Figures 1 through 3 show natural gas prices, power prices, and market implied heat rates as of June 30, 2011 and December 31, 2011. The five-year forward prices for power and natural gas have decreased significantly from June to December 2011; however, significant contango remains. Market implied heat rates have increased for all but the spring season. Figure 4 shows WTI crude oil prices from AEO as of Spring 2011 and January 2012. Figure 5 shows Powder River Basin coal prices as of June 2011 and January 2012.

Figure 1

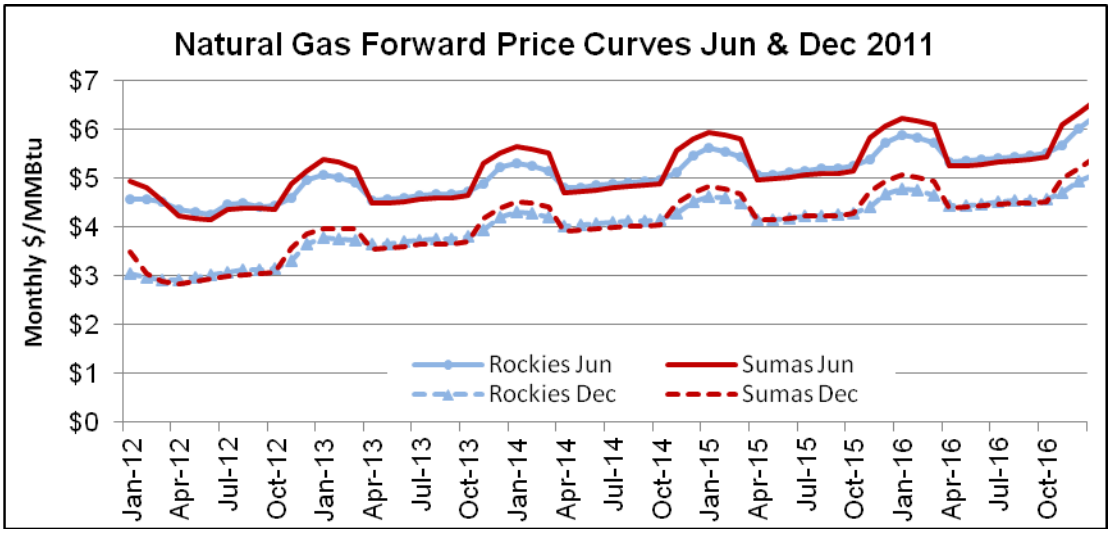


Figure 2

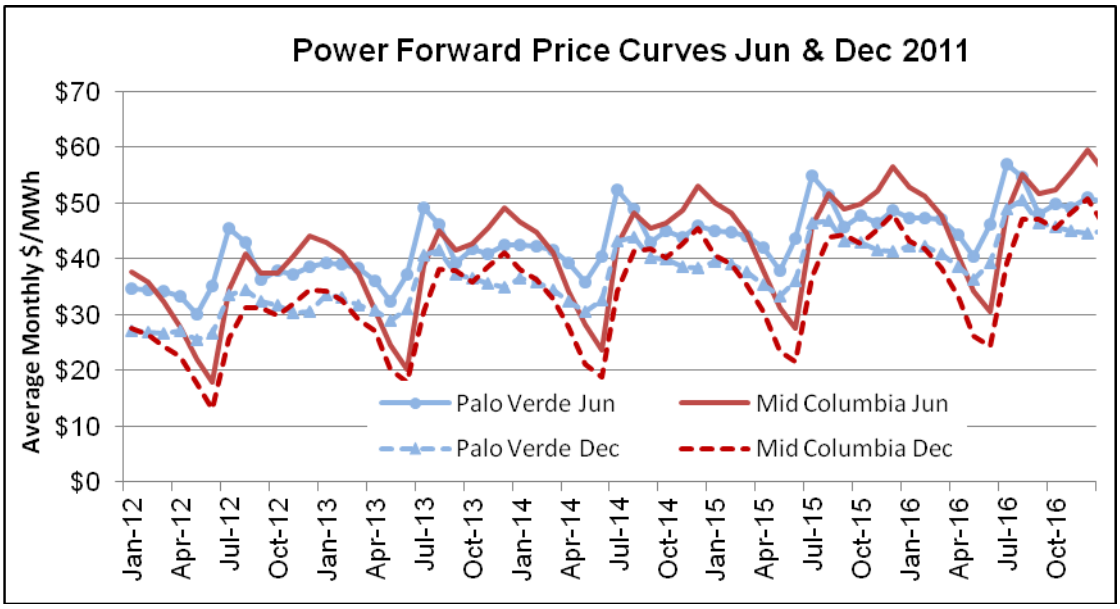


Figure 3

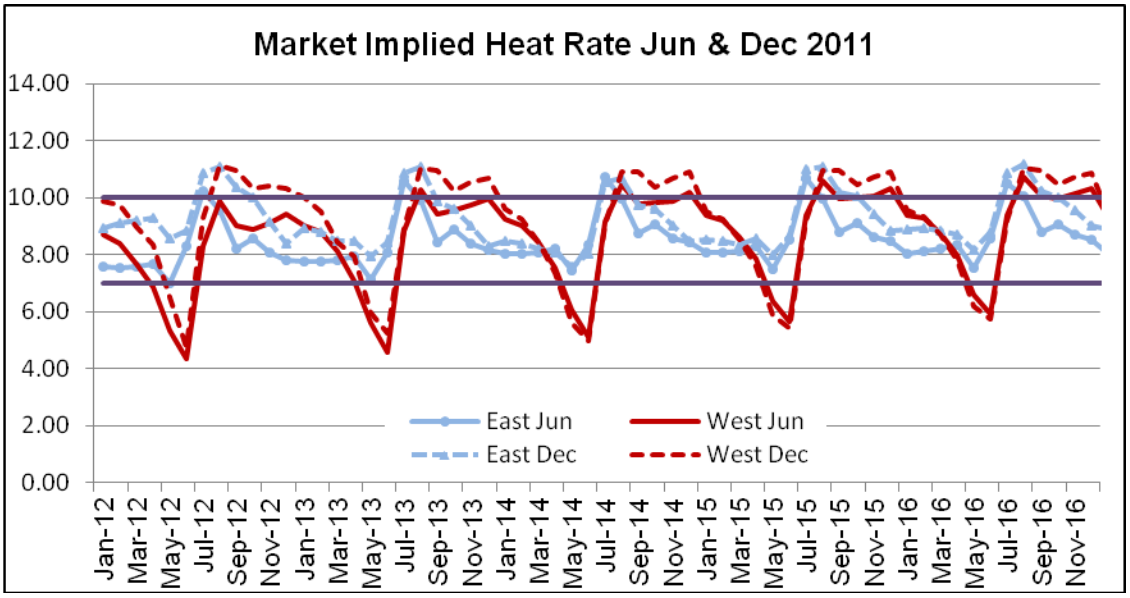


Figure 4

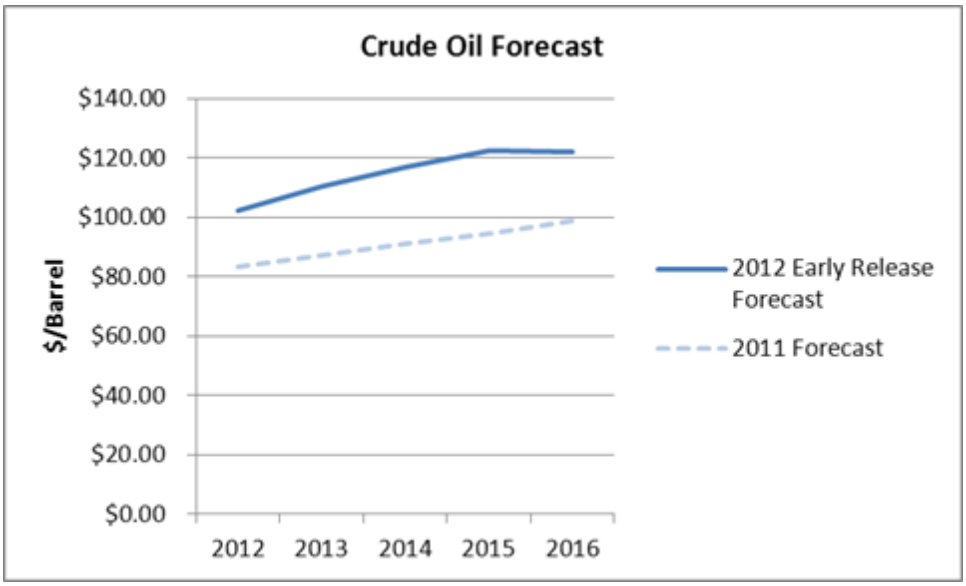
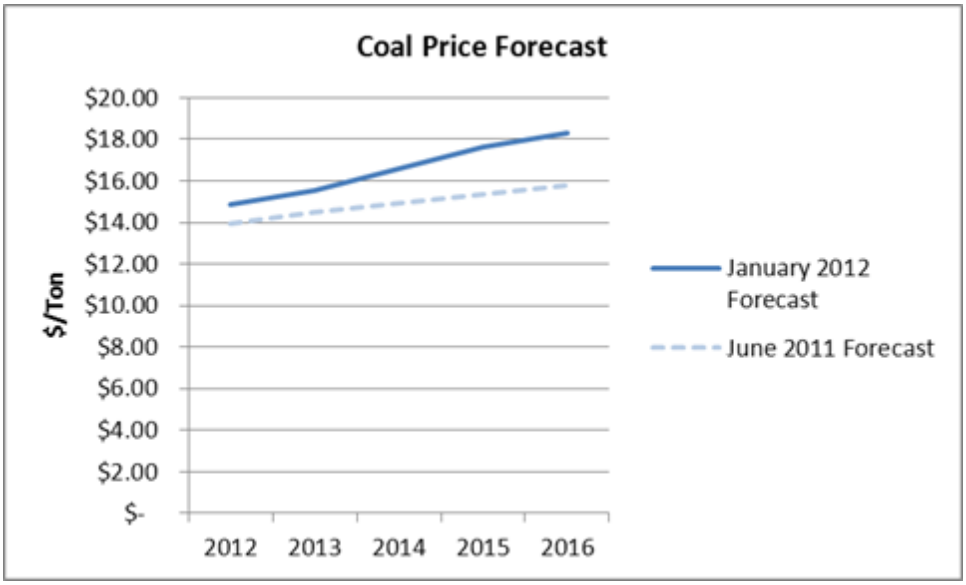


Figure 5



October 2011 PIRA spot price forecasts compared to June and December 2011 forward price curves for Opal natural gas and Palo Verde power, respectively, are shown in Figures 6 and 7.

[redacted]

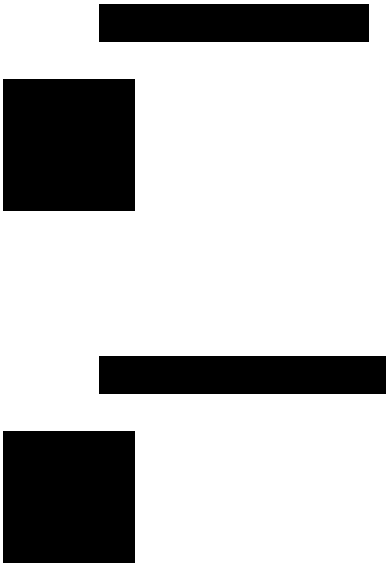


Figure 8 shows the historical two year natural gas storage compared to the five-year range. Source is the EIA Annual Energy Outlook 2012 early release. Current storage surpasses the five year maximum.

Figure 8

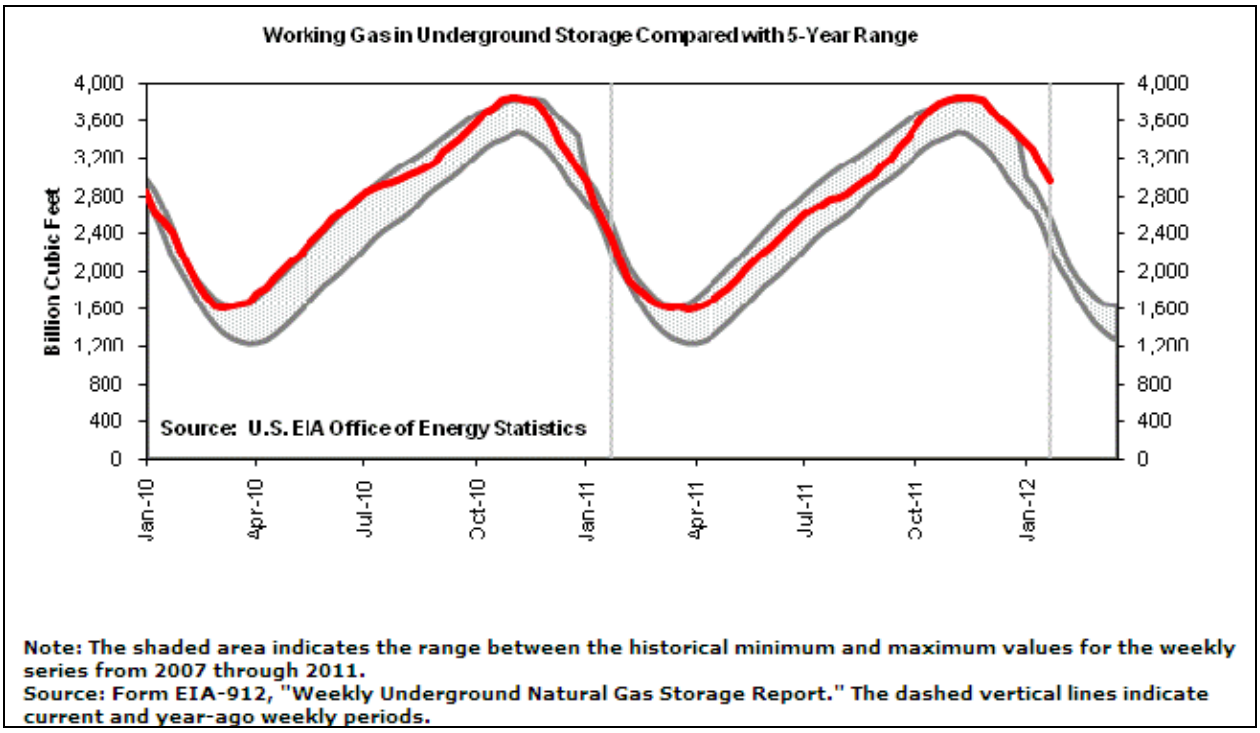


Figure 9 shows the historical and projected U.S. natural gas production by production type. Source is the EIA Annual Energy Outlook 2012 early release. This shows the dramatic increase in shale gas production in the last few years extending for the long term.

Figure 9

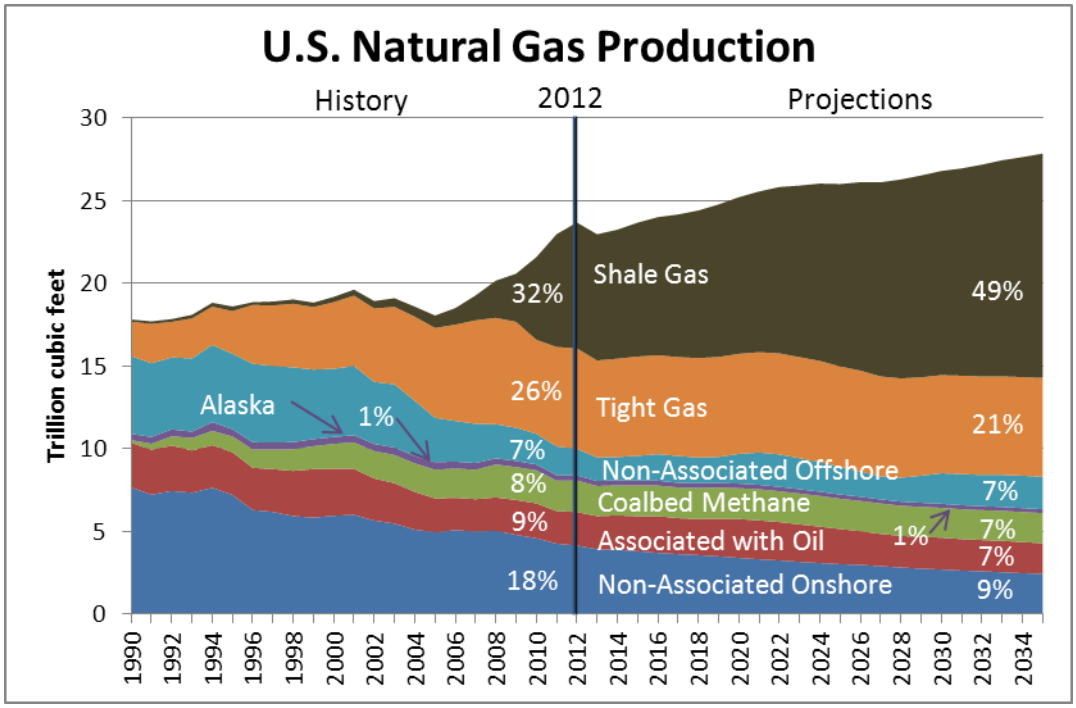


Figure 10 is a price chart of the rolling historical prompt 12-month NYMEX natural gas price strip. The chart data goes back to the early 1990's. There are a number of technical indicators on this chart that suggest NYMEX natural gas prices are nearing longer term support and that a sustained long term rally may be forthcoming. The lower red trendline indicates price support in the low to mid-$3.30s. The upper trendline is parallel to the lower and helps confirm the validity of a price channel, though not necessarily an expected rallying point for prices above $13.00 per MMBtu. The lower section shows a historic view of a technical indicator called Slow Stochastic (SSTO). Key points to focus on with respect to the SSTO are (1) divergence – when SSTO and price extremes vary directionally, a price reversal is indicated (SSTO values have been trending lower since the low price labeled 1 while price have been trending higher), (2) lower SSTO values indicate a tendency for prices to reverse to the upside while higher values indicate a tendency for price to reverse to the downside, (3) when the higher frequency red line crosses the lower frequency blue line, prices tend to trend in the direction of the crossing. All three aspects of the SSTO appear to be pointing to an impending price rally. Prices tend to be cyclical. There is historic indication that natural gas follows a 33-week cycle low. A cycle low is not necessarily an extreme low price, but a point of time at which price tend to rally from this time period forward. Natural gas, as indicated by the 12-month strip chart above and many other natural gas price charts, appears to be headed toward a cycle low in mid-2012 at which point, cycle theory

suggests a price rally. This cycle low appears to be coinciding with the support indication by the trendlines and the SSTO.

Figure 10

After reviewing both fundamental analysis and technical overviews, the company's outlook for 2012 continues to point to energy prices trending lower until bottoming sometime during the summer of 2012. Reasons for a bearish view include continued gas drilling in spite of depressed gas prices, strong gas storage levels for winter of 2011-12, and delayed US economic recovery. Bullish indicators that warrant attention include US gas production stalls, quicker economic recovery, and relatively strong alternative energy costs (particularly oil). Technical analysis provides a different perspective on market prices by extrapolating a view of future price movements based on historical price behavior. Currently, various technical indicators (trendlines, momentum indicators, and cycles analysis) point to lower trending prices into summer of 2012.

Location Basis Risk

When the Company hedges natural gas price risk with financial instruments, basis risk can be created. Basis risk results from the potential changes in the difference between the value of physical gas requirements and the value of the pricing index being hedged by a swap transaction. Specifically, the Company hedges price indexes in the Rocky Mountains that are based on natural gas transactions at the Opal Plant in southwest Wyoming, various receipt locations on Questar Pipeline's northern system, or various receipt locations on Questar Pipeline's southern system. On the west side of the Company's system, the Company hedges Sumas (at the Washington/British Columbia border) price indexes for its Chehalis plant requirements and AECO (Alberta) price indexes for its Hermiston plant requirements. The value differentials between hedge indexes and physical requirement locations are predominately based on transportation differentials, either based to the Company's transportation holdings or based on transportation rates published in pipelines' tariffs. Therefore this risk is minimal.

The Company hedges power with financial or fixed price physical instruments typically at Palo Verde for the east side of the Company's system and at Mid-Columbia for the west side of the Company's system as they are two of the more liquid points in western power market. This introduces location basis risk between these locations and the locations where physical positions exist, such as Four Corners, Mona, Wyoming, and PacifiCorp load centers. The location basis risk between these points is generally capped by the cost of the transmission. Therefore this risk is minimal.

Liquidity Review

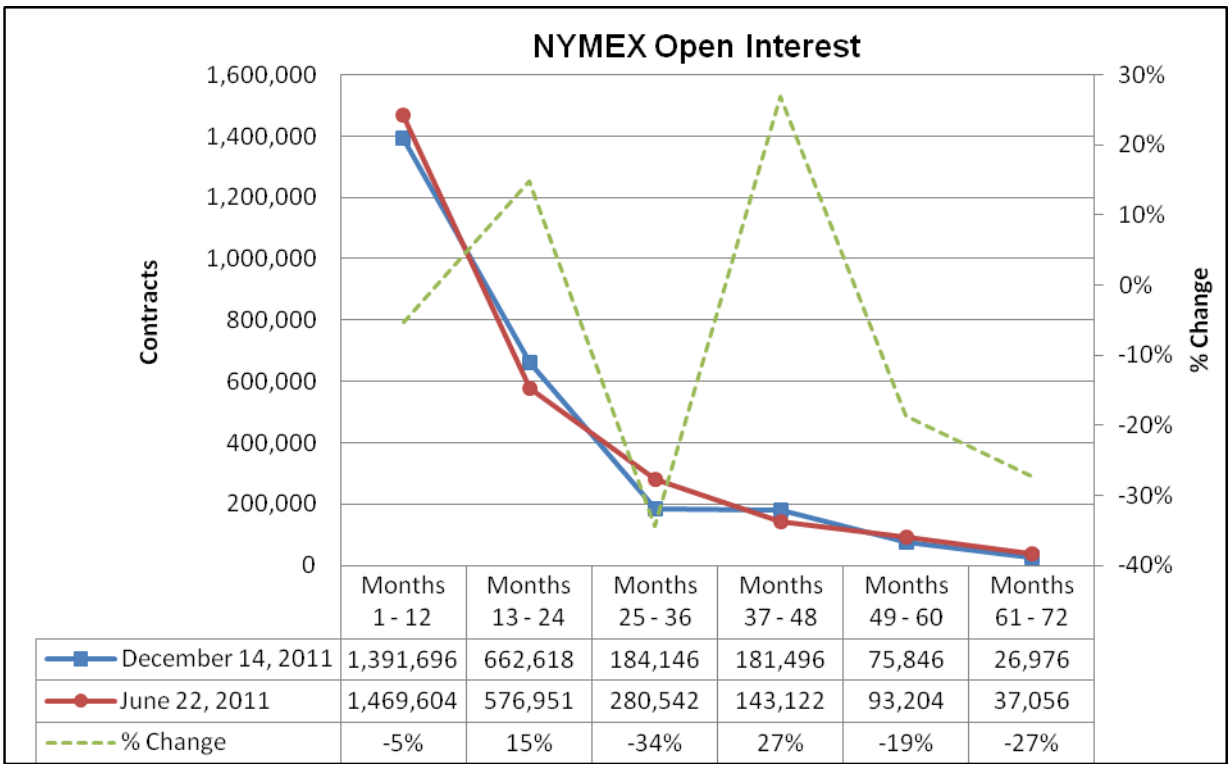
Liquidity in the natural gas and power markets are adequate to effectively hedge throughout a 36 month hedging horizon. This is evidenced by open interest in the futures market and supported through consultation with brokers and traders. However, the Company ultimately assesses liquidity by considering the difference between bids and offers when evaluating a hedge. If liquidity forces the Company to execute significantly far away from a mid-market assessment, then this is weighed against the value of the risk being hedged. A general rule of thumb for natural gas is [redacted] and for power is [redacted]. As an additional assessment, market liquidity for both power and natural gas are reviewed by the Company's Risk Management, Finance, Fundamentals, and Front Office groups each quarter to assess market depth. Based on these assessments, there was not a significant change in liquidity over the past six months.

Also affecting liquidity for the Company is the number of credit worthy counterparties. Figure 11 indicates the Company's credit worthy counterparties with which the Company could trade with for a rolling 36 months or longer as of December 31, 2011 and June 30, 2011. There was not a significant change.

[redacted]

Figure 12 indicates the change in NYMEX natural gas open interest, in percent, from June 22, 2011 to December 14, 2011. There was not a significant change in the aggregate front 36 months.

Figure 12

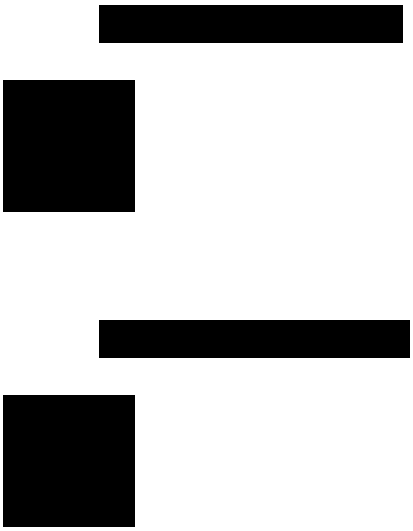


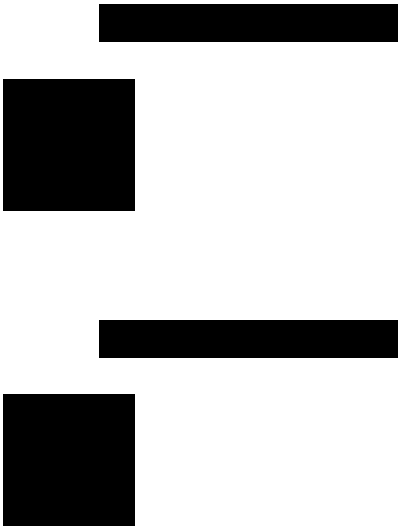
	Months 1 - 12	Months 13 - 24	Months 25 - 36	Months 37 - 48	Months 49 - 60	Months 61 - 72
December 14, 2011	1,391,696	662,618	184,146	181,496	75,846	26,976
June 22, 2011	1,469,604	576,951	280,542	143,122	93,204	37,056
% Change	-5%	15%	-34%	27%	-19%	-27%

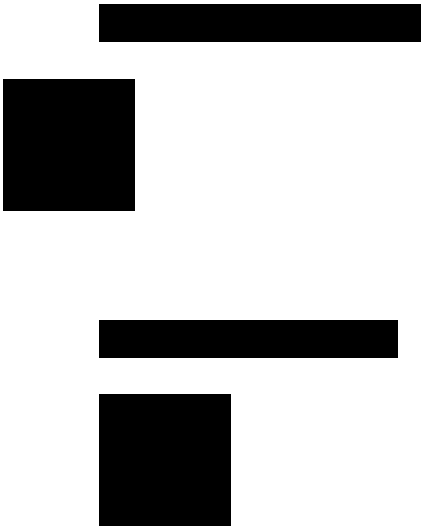
Current and Recent Open Positions

The Company's open natural gas and power positions as of January 6, 2012 and June 30, 2011 are shown in Figures 13 through 16. These figures show the monthly hedge volume declining over time, the requirements varying seasonally, and the net open position as the net of the hedges and requirements. Figure 17 shows the change in requirements for natural gas and power from June 30, 2011 to January 6, 2012. The values used to create Figures 13 through 17 are in Attachment D. Natural gas requirements became shorter due to the addition of Lake Side 2 and wider spark spreads causing natural gas fired units to be more in the money and operating more.

Power requirements became longer due to wider spark spreads, a load forecast update decreasing loads, and the addition of Lake Side 2. Length from coal fired units was largely unchanged due to lower power prices offset by lower coal prices. Figures 18 and 19 show the natural gas and power requirements and hedges as of the end of the past four years, each covering the forward four years.







[redacted]

Current and six-month historical natural gas volume percent hedged values are shown in Figure 20. Current natural gas volume percent hedged values for the four forward rolling 12-month periods are close to the proposed guidelines.

[redacted]

Current and historical to-expiry value-at-risk (TEVaR) values over the past six months are shown in Figure 21. TEVaR values for the four forward rolling 12-month periods are within limits.

[redacted]

[redacted]

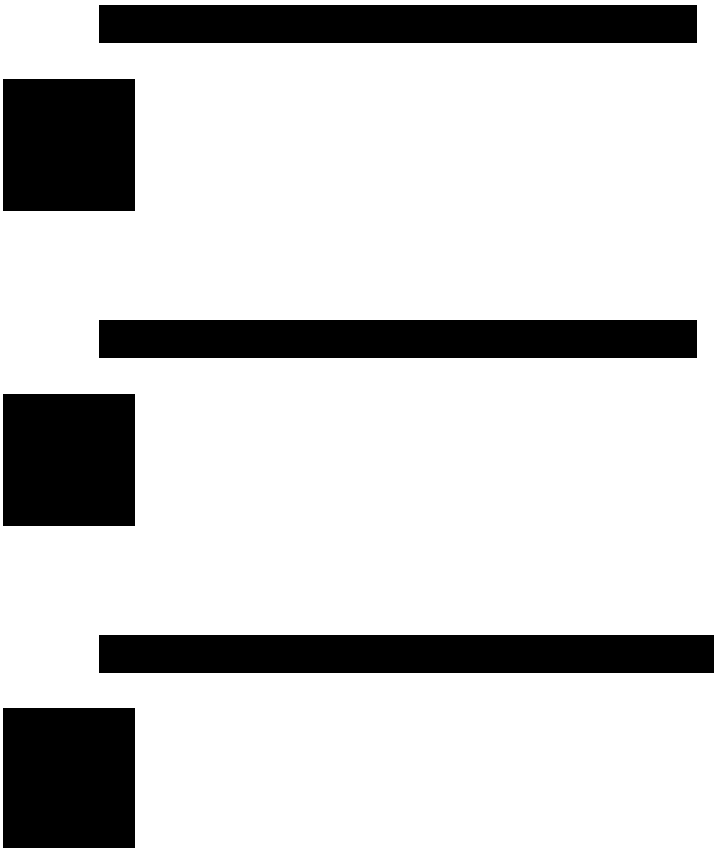
Currently Active Natural Gas and Power Hedges

Attachment A contains all currently active natural gas and power hedges as of December 31, 2011, for all forward periods, excluding balance of month, day-ahead and intra-day transactions. Figure 22 summarizes the volumes and hedge gain/loss of the currently active hedges in Attachment A.

[redacted]

[redacted]			
[redacted]			
[redacted]			
[redacted]			
[redacted]			
[redacted]			
[redacted]			

Currently active hedge positions, hedge gain/loss, and contract prices versus forward price curve, by quarter, for all natural gas and power hedges are shown in Figures 23 through 30.



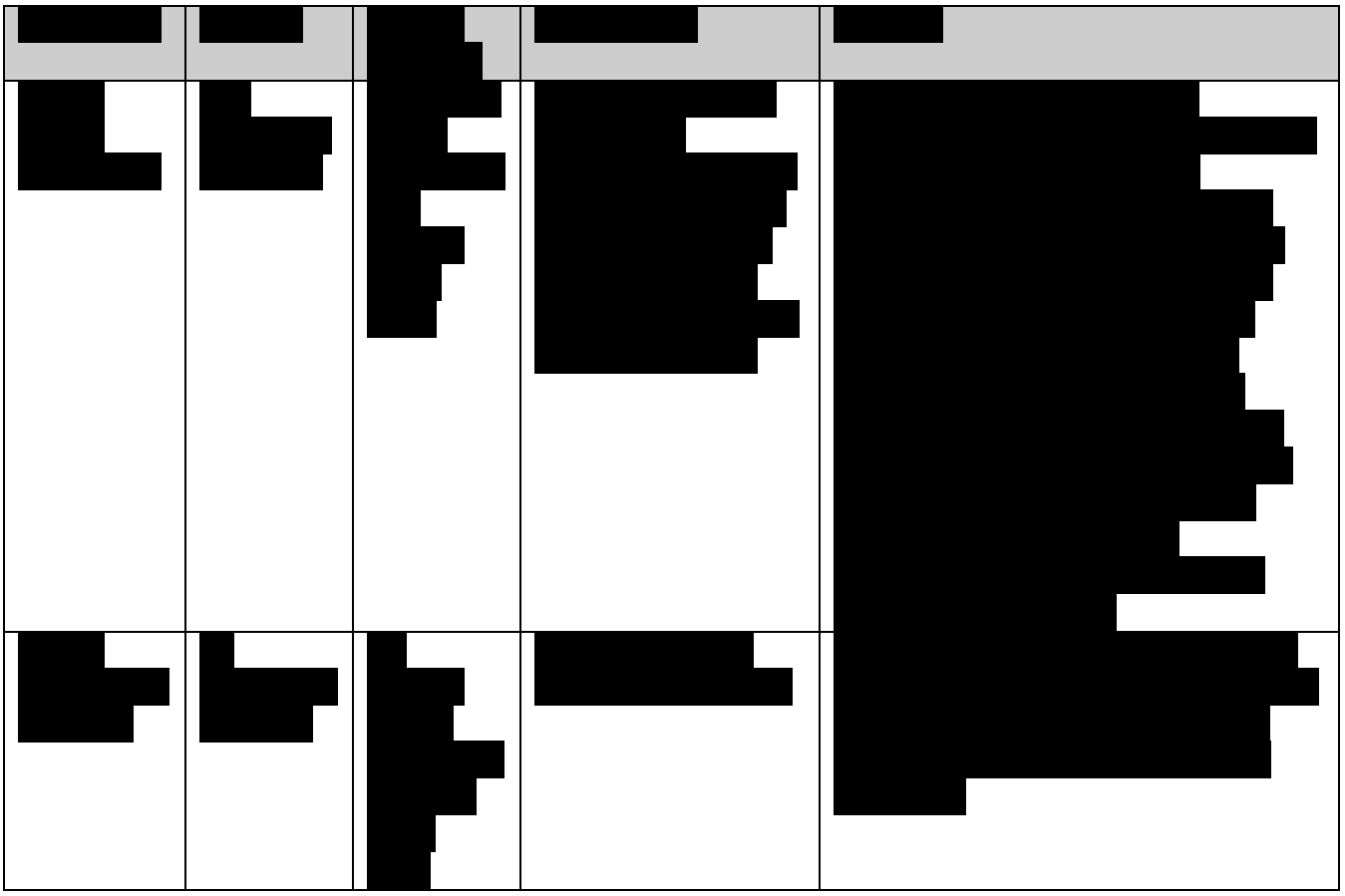
[redacted]

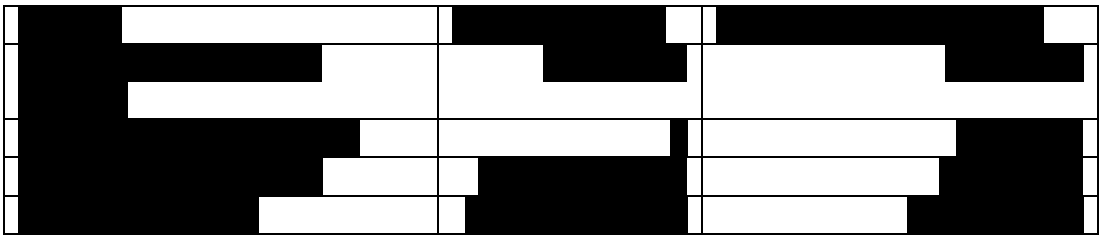
[redacted]

Recent Natural Gas and Power Hedging and Balancing

The Company hedges and procures natural gas supply and hedges power in such a way as to balance risk management with low cost. Prudent risk management practices include dollar cost averaging, maximizing reliability of fuel and power supply, and adhering to Company risk limits and stakeholders guidelines. No transactions were necessary to avoid risk limit excursions for the period July 1, 2011 through December 31, 2011. Attachment A contains natural gas and power transactions executed for this period, excluding balance of month, day-ahead and intra-day transactions, and is summarized in Figure 31. A portion of these hedges are currently active and a portion has expired under their own terms.

[redacted]





[redacted]

Physical Supply

Physical supply is described in Attachment B.

Definition of Hedge Terms

Attachment C contains the Company's definition of terms related to hedging.