

Docket No. 09-035-23 DPU Exhibit 3.8 Michael J. McGarry, Sr. October 8, 2009

# **Independent Third-Party Evaluation of**

# Net Power Cost Evaluation Rocky Mountain Power 2009 General Rate Case

Prepared for

# **Utah Division of Public Utilities**

Prepared by

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October 7, 2009

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### Preface

This report was prepared based in part on information not within the control of the consultant, Blue Ridge Consulting Services, Inc. Blue Ridge Consulting Services has not made an analysis, verified, or rendered an independent judgment of the validity of the information provided by others. While it is believed that the information contained herein will be reliable under the conditions and subject to the limitations set forth herein, Blue Ridge Consulting Services does not guarantee the accuracy thereof.

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# 1. EXECUTIVE SUMMARY

Volatility of energy prices has been a central issue for utilities, regulators, consumer advocates, and customers. In recent years, energy prices have had pronounced swings, which has resulted in an increased awareness of the importance of strategies to mitigate the impact of those price swings and the burden that they place on all consumers.

Figure 1 below shows a chart of the monthly history of Natural Gas City Gate Prices (as published by the Energy Information Administration). This chart clearly shows that beginning in 2000, monthly prices start a significant upward trend and are highly volatile.



### Figure 1 – Monthly U.S. Natural Gas City Gate Price October 1983 through June 2009

This report was prepared to provide a high-level review of the energy procurement strategy of Rocky Mountain Power<sup>1</sup> (RMP or Company) and, in particular, the hedging strategy the Company uses to mitigate price volatility for the natural gas it procures for generation.

On June 23, 2009, RMP filed a general base rate increase request of \$66.9 million with the Public Service Commission of Utah, using a test year ending June 30, 2010. Total net power costs included in the application total \$999 million of which approximately \$410 million is allocated to Utah.<sup>2</sup> Included in the total net power costs are the costs associated with the Company's hedging and risk management strategy. For natural gas (used in the production of RMP's customer electric demand and energy needs), the Company is including an addition of \$174.2 million<sup>3</sup> to total net power costs associated with the Company's hedging strategy. Also, the Company exercises a hedging strategy associated with its electric supply and is including a reduction to total net power costs of \$187.8 million.<sup>4</sup> The impact that the Company is proposing to include in net power costs

<sup>&</sup>lt;sup>1</sup> Rocky Mountain Power Company is a wholly owned subsidiary of PacifiCorp.

<sup>&</sup>lt;sup>2</sup> Direct testimony of Gregory N. Duvall, Page 2, Line 38.

<sup>&</sup>lt;sup>3</sup> Exhibit RMP\_\_\_(GND-1), page 5 – line labeled Gas Swaps.

<sup>&</sup>lt;sup>4</sup> Exhibit RMP\_\_\_(GND-1), page 4 – line labeled STF Electric Swaps.

is a net decrease of \$13.6 million of which approximately \$5.6 million<sup>5</sup> is included in the net power costs allocated to RMP.

Blue Ridge Consulting Services, Inc. (Blue Ridge) was retained by the State of Utah's Division of Public Utilities (Division) to assist the Division Staff with the evaluation of RMP's net power costs in the Company's current base rate increase request<sup>6</sup> before the State of Utah's Public Service Commission (Commission). Blue Ridge's scope included evaluating the reasonableness of RMP's Net Power Costs and the hedging costs included therein.

This report addresses these issues and includes Blue Ridge's findings, conclusions, and recommendations. Division Staff emphasized that our assessment was intended, to the extent practical, to ensure that the current net power costs baseline included in Docket No. 09-035-23 is appropriate and prudent with respect to forecasted hedging practices in the test year.

Finally, Division Staff requested that we provide an assessment of how the Company's hedging policies compare to those employed in other states or jurisdictions where Blue Ridge has had experience reviewing such policies or where we are aware of the decisions made by other jurisdictions concerning the use of hedging and the impacts on an energy cost recovery mechanism.

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

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

<sup>&</sup>lt;sup>5</sup> RMP's allocation from PacifiCorp is approximately 41%.

<sup>&</sup>lt;sup>6</sup> Docket No. 09-035-23.

### Identification of Risk Tolerance

### Finding

Blue Ridge found that the Company's tolerances for risk are well-documented and appear to be within industry norms.

#### Establishment of Risk Management Goals and Guidelines

### Finding

While the Company's Risk Management Policy appropriately includes the scope, objectives, and segregation of duties, it lacks a specific statement of its goals. Such a statement would clearly delineate, for all who are subject to the specifics of the policy, what the overall objective of the policy is, which is to manage the substantial business risks present through the hedging strategy.

### *Recommendation*

The Company should include a specific statement of the goals of the Risk Management Policy.

### Finding

With respect to Commercial & Trading (C&T) Front Office Procedures and Practices, Exhibit 10 does not include a specific statement in the principles section which excludes "speculative risk," which is a position taken solely to benefit from market price movements in an expected/favorable direction. However, the Company indicated in response to a data request that it does not permit speculative hedging in the natural gas markets.<sup>7</sup>

### Recommendation

Despite this indication, it is widely accepted that utilities should not engage in speculative hedging, and as such its policies and procedures should include a clear and unambiguous statement to that effect.<sup>8</sup>

### Finding

With respect to the length of hedges, recent publications suggest that the length of hedge programs range from less than a year to 36 months or more. Blue Ridge found that PacifiCorp's C&T procedures allow Company traders to execute hedges up to [BEGIN

### **CONFIDENTIAL**]

### [END CONFIDENTIAL].

As shown for several jurisdictions in Current Regulatory & Industry Benchmark Review section below, the length or term of hedging varies considerably from jurisdiction to jurisdiction. Some jurisdictions allow up to 42 months; others request approval for only 1

<sup>&</sup>lt;sup>7</sup> See response to data request UIEC 3.22.

<sup>&</sup>lt;sup>8</sup> Blue Ridge acknowledges that other sections within C&T Front Office Procedures may include such a prohibition. However, at the time of this report, we were unable to confirm this since a physical copy was only viewed on-site.

year. The percentage of volume to be hedged varies as well and may incorporate a range using a sliding scale similar to that used by PacifiCorp.

Based on our research of publically available information, Blue Ridge noted that PacifiCorp's hedging term of [BEGIN CONFIDENTIAL]

**[END CONFIDENTIAL]** appears to be longer than most that we have been able to review. In addition, PacifiCorp's hedging term is longer and the hedged volumes are greater than that which we reviewed in Delaware.<sup>9</sup>

Blue Ridge does not conclude that PacifiCorp's term of permissible hedging and the related sliding scale is inappropriate. However, we do believe that based on what we have seen in the industry it is more aggressive at locking in prices for longer periods of time.

### **Recommendation**

Given the concerns of interested stakeholders and the suggestion that the Company's current policy for length of hedging and volume percentages that can be hedged may have an adverse affect on the Company's ability to take advantage of decreasing prices. PacifiCorp should undertake a study and demonstrate to the Commission and other parties through analysis, benchmarking, or other means what the term length guidelines should be for its hedging transactions.

#### Definition of Risk Metrics

### *Finding*

Blue Ridge found that PacifiCorp's Measurement and Management of Risk section of the Risk Management Policy includes a description of the measures and metrics in use to manage the various risks associated with the Company's commercial and trading operation. These measures and metrics include mark to market, Value at Risk, stress testing, credit, liquidity, and legal.<sup>10</sup> This information is communicated to the Company's risk committee and senior management.

### <u>Finding</u>

The Company provided responses to several data requests which showed the various reporting metrics, including the mark to market value of the hedges included in the test year.<sup>11</sup> Blue Ridge reviewed only the mark to market values associated with the hedges (swaps) included in the Net Power Costs in the current case. We confirmed the source of the calculations and prices that form the basis of the costs of the hedged transactions.

<sup>&</sup>lt;sup>9</sup> The information reviewed in Delaware Public Service Commission Case No 06-287 is confidential.

<sup>&</sup>lt;sup>10</sup> Risk Management Policy, Section 7 page 9

<sup>&</sup>lt;sup>11</sup> Response to data request OCS 6.1.

### <u>Finding</u>

The Company provided an explanation of the CV (correlation variable) of **[BEGIN CONFIDENTIAL] [END CONFIDENTIAL]** for electric and gas price movement that was provided to interested stakeholders in a presentation in May 2009.<sup>12</sup> Blue Ridge found that the Company adequately supported its statement that "gas prices and electric prices are reasonably correlated but do not always move together."<sup>13</sup>

#### Establishment of Procedures and Authority for Execution of Hedges

### <u>Finding</u>

Blue Ridge determined that hedging procedures exist and are well-documented, approved, and disseminated to those employees involved in trading and hedging activities.

#### Procedures for Managing Credit Risk

### <u>Findings</u>

Blue Ridge found that the counter party credit limits shown in Appendix C in the Risk Management Policy appear to be reasonable.

# Establishment of Measurement and Reporting Procedures including Accounting and Compliance

### <u>Finding</u>

Although Transaction Valuation and Accounting, Management Reporting, and Compliance sections of the Risk Management Policies and Procedures specify who is responsible for the section, they do not include the actual departmental procedures associated with these activities.

### **Recommendation**

The Risk Management Policies and Procedures should document the departmental procedures associated with Transaction Valuation and Accounting, Management Reporting, and Compliance.

### Additional Issues

### **Energy Trading System**

During discussions with Company personnel, Blue Ridge was informed that PacifiCorp was in the process of developing an online, integrated energy trading system. Through a review of the capital additions portion of rate base, we have estimated that the cost of the project could be \$25 million (\$15 million would be Utah's approximate allocated portion to be included in rate base).

<sup>&</sup>lt;sup>12</sup> Response to data request OCS 2.1

<sup>&</sup>lt;sup>13</sup> Response to data request OCS 2.1

### **Current Regulatory & Industry Benchmark Review**

### **Overall Conclusion**

Blue Ridge found that hedging associated with mitigating the price volatility of natural gas for sale to ultimate customers or for use in production of electricity is widespread throughout the utility industry in the United States.

However, the way the individual state commissions address the issue of hedging and risk management varies significantly from a complete hands-off approach all the way to review and pre-approval of individual utility hedging and risk management plans. One consistent theme that Blue Ridge found was that all of the jurisdictions reviewed have some level of interest and oversight of their utilities' hedging and price volatility mitigation plans.

Through our review, Blue Ridge found that there appears to be a consensus among most in the utility industry (from either the utility or regulatory perspective) that Commission involvement in the issue of hedging is vital to the success of these types of price risk mitigation programs. Assuming that an upward price trend continues (despite recent price levels and short-term price forecasts), consumers are very likely to pay higher prices for energy absent some level of hedging and price volatility mitigation.

### **Highlights of Individual Jurisdictions**

### <u>Colorado</u>

Colorado has a Gas Price Volatility Mitigation Plan established in 2004 as part of the annual Gas Purchase Plans (GPP), which includes detailed confidential plans for volumes and terms. Hedging cost is included in electric commodity adjustment.

### <u>Nevada</u>

Nevada requires an annual supply plan (with a 3 year horizon) that includes strategies to minimize price volatility, including the use of physical and financial instruments to hedge price risk. (See Nevada Commission Annual Report page 16.)

### <u>Florida</u>

Companies file annual plans per terms and conditions of the Commission Hedging Order (see FL PSC 02-1484-FOF-EI). FLPSC conducted a comprehensive management audit of four utilities in 2008. They found that all were in compliance with Commission's rules and guidelines.

### <u>Georgia</u>

Companies submit annual hedging strategies and plans. In 2005 as part of its annual plan approval process, Atmos Energy Company requested that the Commission adopt its plan.

### South Carolina

A 2002 order allowed Piedmont Natural Gas to implement an experimental price volatility mitigation plan, including hedging, using financial instruments. Company could hedge up to 60% of its requirements for up to 24 months out. In a 2009 Order, Piedmont was granted approval to modify that plan to reduce its hedging strategy to 1 year to take advantage of the current low prices.

### <u>New Jersey</u>

A 2001 Order initiated price volatility mitigation plans, including financial hedging.

### <u>Kentucky</u>

Financial and physical hedging allowed. Hedging strategy submitted to Commission for prior approval. Plans cover 3 years.

### <u>Missouri</u>

In Missouri, Rule 4 CSR 240-40.018 Natural Gas Price Volatility Mitigation addresses hedging. Prudent hedging is authorized and considered to be part of a prudently managed gas portfolio.

### <u>Alabama</u>

The Commission encourages all regulated LDCs to hedge to stabilize costs. They use both financial and physical hedging.

### <u>Indiana</u>

The Indiana Utility Regulatory Commission does not dictate or mandate utility portfolio management. However, companies must demonstrate reasonableness of plans.

### <u>Wyoming</u>

Most natural gas utilities rely on hedging to stabilize natural gas prices. Stipulation in Docket No. 20000-315-EP-08 required Rocky Mountain Power and Office of Consumer Advocate (OCA) to meet to review gas purchasing and hedging policies.

### **Conclusions and Recommendations for the Division**

From this research, Blue Ridge recommends that the Division consider recommending to the Commission a proactive policy-setting approach. This would include proceeding with the purpose of the docket in 09-035-21<sup>14</sup> to study RMP's risk management policies and allow a collaborative effort that addresses all interested stakeholder concerns.

The issues to be decided are far beyond the scope of this jurisdictional assessment. However, it is our conclusion that a proactive policy approach to the issue of hedging and price volatility mitigation will provide long-term benefits, if for no other reason, at least to provide an increased awareness and opportunity to comment on the Company's plan.

 $<sup>^{14}\</sup>textsc{Docket}$ 09-035-21 RMP / NATURAL GAS PRICE RISK MANAGEMENT POLICIES AND PROCEDURES

# 2. INTRODUCTION

Volatility of energy prices has been a central issue for utilities, regulators, consumer advocates, and customers. In recent years, energy prices have had pronounced swings, which has resulted in an increased awareness of the importance of strategies to mitigate the impact of those price swings and the burden that they place on all consumers.

For utilities, procurement of energy (both electric and natural gas) for either sale to ultimate customers or for use in generating plants has been under considerable scrutiny by regulators at all levels and by the groups that represent them. In particular the utilities' energy procurement strategies and related implementation receive on-going and detailed review in just about every jurisdiction of competent authority throughout the United States and Canada.

This report was prepared to provide a high-level review of the energy procurement strategy of Rocky Mountain Power<sup>15</sup> and, in particular, the hedging strategy the Company uses to mitigate price volatility for the natural gas it procures for generation.

# 3. BACKGROUND

On June 23, 2009, Rocky Mountain Power (RMP or Company) filed a general base rate increase request of \$66.9 million with the Public Service Commission of Utah, using a test year ending June 30, 2010. If approved, this request would increase residential rates by 4% and general service/irrigation rates 5-6%, depending on the customers load and usage characteristics.

Total net power costs included in the application total \$999 million of which approximately \$410 million is allocated to Utah.<sup>16</sup> Included in the total net power costs are the costs associated with the Company's hedging and risk management strategy. For natural gas (used in the production of RMP's customer electric demand and energy needs), the Company is including an addition of \$174.2 million<sup>17</sup> to total net power costs associated with swaps related to the Company's hedging strategy. Also, the Company exercises a hedging strategy associated with its electric supply and is including a reduction to total net power costs of \$187.8 million.<sup>18</sup>

In presentations with interested stakeholders, RMP has proposed that as one considers the merits of the Company's hedging strategy, one should consider the net effect of the two hedging processes and offset (or take the net) of the gas swaps with the electric swaps. Without assuming the merits of that position, the impact that the Company is proposing

<sup>&</sup>lt;sup>15</sup> Rocky Mountain Power Company is a wholly owned subsidiary of PacifiCorp.

<sup>&</sup>lt;sup>16</sup> Direct testimony of Gregory N. Duvall, Page 2, Line 38.

<sup>&</sup>lt;sup>17</sup> Exhibit RMP\_\_(GND-1), page 5 – line labeled Gas Swaps.

<sup>&</sup>lt;sup>18</sup> Exhibit RMP\_\_\_(GND-1), page 4 – line labeled STF Electric Swaps.

to include in net power costs is a net decrease of \$13.6 million of which approximately \$5.6 million<sup>19</sup> is included in the net power costs allocated to RMP.

# 4. PURPOSE AND SCOPE

Blue Ridge Consulting Services, Inc. (Blue Ridge) was retained by the State of Utah's Division of Public Utilities (Division) via a competitive bid process to assist the Division's Staff with the evaluation of RMP's net power costs in the Company's current base rate increase request<sup>20</sup> before the State of Utah's Public Service Commission (Commission). Blue Ridge's scope included evaluating the reasonableness of RMP's Net Power Costs and related hedging costs included therein.

As part of that evaluation, Blue Ridge proposed to complete an analysis of the Company's fuel price hedging/risk management policies and practices.<sup>21</sup> Blue Ridge's analysis of the Company's hedging and risk management program focused on an evaluation of the following areas:

- Identification of risk tolerance
- Establishment of risk management goals and guidelines
- Definition of risk metrics
- Establishment of procedures and authority for execution of hedges
- Procedures for managing credit risk
- Establishment of measurement and reporting procedures including accounting and compliance

Division Staff also requested that we provide an assessment of how the Company's hedging policies compare to those employed in other states or jurisdictions where Blue Ridge has had experience reviewing such policies or where we are aware of the decisions made by other jurisdictions concerning the use of hedging and the impacts on an energy cost recovery mechanism.

This report addresses these issues and includes Blue Ridge's findings, conclusions, and recommendations.

# 5. APPROACH

In conducting this review, Blue Ridge relied upon information obtained through the discovery processes of the relevant dockets associated with net power costs, the Company's risk management policies and programs, and risk management. These dockets included:

<sup>&</sup>lt;sup>19</sup> RMP's allocation from PacifiCorp is approximately 41%.

<sup>&</sup>lt;sup>20</sup> Docket No. 09-035-23.

<sup>&</sup>lt;sup>21</sup> Blue Ridge was also retained to determine the reasonableness and technical accuracy of RMP's net power costs included in base rates. The reasonableness of the net power costs is not a subject contained in this report.

- Docket No. 09-035-23 the Application of Rocky Mountain Power for Authority to Increase its Retail Electric Utility Service Rates in Utah and for Approval of its Proposed Electric Service Schedules and Electric Service Regulations
- Docket No. 09-035-21 the Natural Gas Price Risk Management Policies and Procedures of Rocky Mountain Power
- Docket No. 09-035-15 the Application of Rocky Mountain Power for Approval of its Proposed Energy Cost Adjustment Mechanism

In addition, we reviewed and, where appropriate, relied upon information from prior cases and stipulated agreements in previous base rate cases, including Dockets 08-035-38 and 07-035-93. Further, and as a result of the Company protecting certain "highly confidential" and "high sensitive" documents under the conditions set forth in the Commission's protective order,<sup>22</sup> Blue Ridge reviewed these documents on site at the corporate RMP's parent company, PacifiCorp's corporate offices in Portland, Oregon.

The approach to this review was to conduct a high level procedures and documentation review. Blue Ridge understood this review to be such that the Division is interested in the Company's hedging strategy and whether the impact of that strategy was properly reflected in the Company's net power costs as proposed in the current rate case. It should be noted that we did not conduct a transactional review of the Company's trading operation through the Front, Middle or Back Offices. However, as noted in our assessment, Blue Ridge did review internal audit reports and a benchmark study that the Company conducted wherein sample transactional testing was done of the various processes and practices and compared the Company's trading and risk management operations to generally accepted industry standards.

Division Staff emphasized that our assessment was intended, to the extent practical, to ensure that the current net power costs baseline included in Docket No. 09-035-23 is appropriate and prudent with respect to forecasted hedging practices in the test year. Division Staff envisioned that our work in this area would complement the Division's work in the hedging docket, No. 09-035-21.

### Confidential information

Blue Ridge reviewed information and data provided by RMP that the Company invoked its claim of confidentiality under the terms of the Commission's Protective Orders. Blue Ridge acknowledged the protective order and executed the appropriate forms as required by the orders in the respective dockets. As a result, certain information contained herein is subject to those protective orders and will be redacted.

### Principles of Hedging

The question has been asked, "Why hedge?" The answer lies in one fundamental statement: prices and supplies for energy commodities (crude oil, natural gas, electricity,

<sup>&</sup>lt;sup>22</sup> UT PSC Order dated April 22, 2009. Similar orders were issued in all dockets reviewed by Blue Ridge.

etc.) can and have been extremely volatile. Over the past 30 years, the U.S. economy has experience numerous periods of restricted supplies and dramatic price swings (both up and down). The issue for utilities and, in particular, regulated utilities is that prior to the deregulation in their respective industries, the prices paid by the ultimate consumer were held stable by regulators and those same regulators required that utilities have ample supply/capacity to meet customer's needs. It is when the wholesale market is deregulated and the supply of both electricity and natural gas is allowed to be priced at market prices (also known as spot prices) that the issue of volatility comes to forefront. In order to protect the financial interests of the utility and their customers, consideration of hedging (and the use of derivatives such as swaps)<sup>23</sup> arises as a way to provide predictability to cash flows and future costs of energy.

The benefit of hedging is that when prices are rising (either rapidly in the short term or gradually in the long term), a hedged portfolio of supply should mitigate the effect of those increases. However, the opposite is also true. When prices fall suddenly, a hedged portion of the supply can cost the utility and its customers the difference between the prices that were available at the current time versus the hedged prices for that supply. This cost (when netted against any gains), along with the administrative costs associated to operate and manage the trading operations, is considered the insurance premium associated with a hedged portfolio.

# 6. FINDINGS AND RECOMMENDATIONS

Blue Ridge performed a high level review of the Company's commercial trading and risk management hedging procedures and practices. Based on our experience with other utilities and research on commodity hedging and risk management,<sup>24</sup> Blue Ridge has identified and assimilated a framework of risk management best practices. Included as Appendix A is a list of the components of this framework that we have found make up generally accepted risk management procedures and practices.

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

The following is a summary of Blue Ridge's findings related to each of the specific areas included in the request for proposal.

<sup>&</sup>lt;sup>23</sup> Other derivatives include forward contracts, future contracts and options (call or put).

<sup>&</sup>lt;sup>24</sup> A bibliography of authoritative sources is included as Appendix B. These, in combination with Blue Ridge's experience, form the basis of our findings, conclusions and recommendations.

### Specific Issues

The following sections contain the specific issues from the scope in the RFP that Blue Ridge was engaged to assist Staff of the Division of Public Service to review.

### Identification of Risk Tolerance

As it relates to the trading and risk management, risk tolerance is that aspect of a hedging strategy in which the Company's appetite for risk is revealed. The fact that a company has a trading operation and associated risk management protocol suggests that the company is willing to accept some level of risk related to the buying and selling of energy and the prices it pays (and the associated costs) with a hedging strategy.

Blue Ridge reviewed the Company's Commercial Trading and Risk Management Policy. This confidential document clearly identifies the types of business risks the Company is exposed to. These include:



[END CONFIDENTIAL]<sup>25</sup>

Within the context of each of these risks, tolerances (or limits) are set to mitigate the impact that these risks might have on the Company. PacifiCorp's Risk Management Policies and Procedures include a detailed section on the various limits (tolerances) including [BEGIN CONFIDENTIAL

**END CONFIDENTIAL**]. Each of these limits is specifically spelled out in the Risk Management Policy Appendices.<sup>26</sup> The Company's policy clearly states that PacifiCorp's President is responsible for setting these limits. The policy also clearly states that in the event one or more of these limits are exceeded, there is a specified reporting process and timeframe for bringing the exposure back

<sup>&</sup>lt;sup>25</sup> Response to Data Request UIEC 3.1 (Confidential)

<sup>&</sup>lt;sup>26</sup> These appendices were considered "highly confidential" and required that they be reviewed on-site. Specifics of the individual limits were reviewed but cannot be reported per the terms of the Commission's Protective Order.

within limits [BEGIN CONFIDENTIAL] CONFIDENTIAL].

<sup>27</sup> [END

### <u>Finding</u>

Blue Ridge found that the Company's tolerances for risk are well-documented and appear to be within industry norms.

<u>Recommendation</u> None

### Establishment of Risk Management Goals and Guidelines

It is widely held that a hedging and associated risk management program should include as its foundation a clear and definitive statement of the goals and objectives of the hedging strategy. An integral part of that strategy is clear goals and objectives of the hedging strategy and of the related risk management program.

In addition to PacifiCorp's Risk Management Policy,<sup>28</sup> Blue Ridge reviewed the Company's "Commodity Price Exposure Hedge Program" contained in Exhibit 10 of PacifiCorp's Commercial and Trading (C&T) Front Office Procedures and Practices.<sup>29</sup>

Contained in the Risk Management policies are 8 objectives including the following:



### [BEGIN CONFIDENTIAL]

<sup>&</sup>lt;sup>27</sup> PacifiCorp Energy Commercial and Trading Risk Management Policy, Section 9 – Limit Structure (beginning on page 11).

<sup>&</sup>lt;sup>28</sup> Provided in data response UIEC-3.1.

<sup>&</sup>lt;sup>29</sup> Exhibit 10 is a sub-section with PacifiCorp's Front Office Procedures and Practices. While Exhibit 10 was provided under the terms of protective order, the full body of these Procedures is consider "highly sensitive" and was reviewed on-site in Portland, Oregon.

<sup>&</sup>lt;sup>30</sup> PacifiCorp Energy's Risk Management Policy - page 6.

# [END CONFIDENTIAL]

The Company's Risk Management Policy also includes a detailed section on the scope of the policy (to whom and what it applies) and the segregation of duties and organizational independence.

PacifiCorp's C&T Front Office Procedures and Practices and specifically Exhibit 10 – Commodity Price Exposure Hedge Program contains a summary of the goal of Company's hedge program. Specifically, the document states,



The procedure specifically states that its hedge program is for a period of **BEGIN CONFIDENTIAL**] [END CONFIDENTIAL]. A footnote states that hedges longer in duration are not precluded but must be approved on a case by case basis.

Further, the C&T Front Office procedures and practices delineate the Company's hedge program major assumptions and principles. The major assumptions include:



# [BEGIN CONFIDENTIAL]

# [END CONFIDENTIAL]

Within the principles section of Exhibit 10 of the C&T Front Office Procedures and Practices are foundational guidelines that govern overall hedging activity. Several of these principles include:

# [BEGIN CONFIDENTIAL]



### [END CONFIDENTIAL]

### <u>Finding</u>

While the Company's Risk Management Policy appropriately includes the scope, objectives, and segregation of duties, it lacks a specific statement of its goals. Such a statement would clearly delineate for all who are subject to the specifics of the policy what the overall objective of the policy is, which is to manage the substantial business risks present through the hedging strategy.

### **Recommendation**

The Company should include a specific statement of the goals of the risk management policy. The following is an example of what such an overall statement might include:

The purpose of this Risk Policy is to provide the foundation for an effective risk management function through authorities and responsibilities (governance) and rules and guidelines (protocols) that will identify, measure, monitor, and control those risks that impact the company's performance objectives. Accordingly, this policy establishes and communicates guidelines and control parameters governing the Company's commercial and trading activities that give rise to market and credit risk.

### <u>Finding</u>

With respect to C&T Front Office Procedures and Practices, Exhibit 10 does not include a specific statement in the principles section which excludes "speculative risk" which is a position taken solely to benefit from market price movements in an expected/favorable direction. However, the Company indicated in response to a data request that it does not permit speculative hedging in the natural gas markets.<sup>32</sup>

<sup>&</sup>lt;sup>31</sup> These principles are only representative of the 8 principles included in the policy.

<sup>&</sup>lt;sup>32</sup> See response to data request UIEC 3.22.

**[END** 

### Recommendation

Despite this indication, it is widely accepted that utilities should not engage in speculative hedging, and as such its policies and procedures should include a clear and unambiguous statement to that effect.<sup>33</sup>

### Finding

With respect to the length of hedges, recent publications suggest that the length of hedge programs range from less than a year to 36 months or more. Blue Ridge found that PacifiCorp's C&T procedures allow company traders to execute hedges up to [BEGIN **CONFIDENTIAL**]

[END CONFIDENTIAL]. However, Blue Ridge noted that the Company has a sliding scale for the volume (MW or mmbtu's) of its hedges that range from a minimum of [BEGIN CONFIDENTIAL]

**CONFIDENTIAL**].<sup>34</sup> This sliding scale allows PacifiCorp the ability to take advantage of market changes.

As shown for several jurisdictions in the Current Regulatory & Industry Benchmark Review section below, the length or term of hedging varies considerably from jurisdiction to jurisdiction. Some jurisdictions allow up to 42 months, others request approval for only 1 year. The percentage of volume to be hedged varies as well and may incorporate a range using a sliding scale similar to that used by PacifiCorp.

Unfortunately, much of this information is usually considered confidential and not publically available. Based on our research of publically available information, Blue Ridge noted that PacifiCorp's hedging term of [**BEGIN CONFIDENTIAL**]

[END CONFIDENTIAL] appears to be longer than most that we have been able to review. In addition, PacifiCorp's hedging term is longer and the hedged volumes are greater than that which we reviewed in Delaware.<sup>35</sup> While the sliding scale of volume that can be hedged at various intervals decreases as the term lengthens, the effect of this is still to lock in prices for a portion of the Company's needs considerably into the future. While in an increasing and volatile market, this would protect the Company and its customers and provide that "price insurance" that is the purpose of hedging, it also prevents the Company from adjusting that portion that is locked in when markets are declining as we have seen in the recent past.

Blue Ridge does not conclude that PacifiCorp's term of permissible hedging and the related sliding scale is inappropriate. However, we do believe that based on what we have seen in the industry, it is more aggressive at locking in prices for longer periods of time.

<sup>&</sup>lt;sup>33</sup> Blue Ridge acknowledges that other sections within C&T Front Office Procedures may include such a prohibition. However, at the time of this report, we were unable to confirm this since a physical copy was only viewed on-site. <sup>34</sup> Page 61 of 65 - Exhibit 10 of Commercial and Trading Front Office Procedures and Practices

<sup>&</sup>lt;sup>35</sup> The information reviewed in Delaware Public Service Commission Case No 06-287 is confidential.

### **Recommendation**

Given the concerns of interested stakeholders and the suggestion that the Company's current policy for length of hedging and volume percentages that can be hedged may have an adverse affect on the Company's ability to take advantage of decreasing prices. PacifiCorp should undertake a study and demonstrate to the Commission and other parties through analysis, benchmarking, or other means what the term length guidelines should be for its hedging transactions. Blue Ridge recognizes that there will be considerable debate on this issue. However, a robust analysis backed with industry information and data will hopefully satisfy the Commission and interested stakeholders that what is approved balances the needs of the parties and provides the most benefits and protections to the Company and its customers.

### **Definition of Risk Metrics**

Integral to any risk management policy is the definition of the measurements of the exposure of the company's capital assets to the various business risks. These measurements or metrics are quantifiable indicators of the amount of risk to which the company is to expose itself and its customers. A 2006 National Association of Regulatory Utility Commissioners publication identified several risk metrics utilities should consider in managing their portfolios. These include:

- Mark to Market reflects the current value of all forward positions based on the previous day's closing forward market prices
- Value at Risk an estimate, at a given confidence level, the amount of financial loss the Company <u>could</u> sustain over a defined holding period as a result of an adverse movement of prices
- Coefficient of variation (CV) This measure is the ratio of the distribution's standard deviation to its mean. It is one way to measure risk relative to return, or in this case, variation in price relative to mean price, measured over a defined period. Tolerance bands can be established around CV
- Stress testing While value at risk might tell a company how much they could lose under the kind of random market fluctuations that make up the broad history of their industry, stress tests help a company understand the larger risks they may also face
- Credit Value at Risk A firm's potential credit exposure on individual transactions is the cost of complying with changes to the amount of credit security the firm must supply to creditors <sup>36</sup>

### <u>Finding</u>

Blue Ridge found that PacifiCorp's Measurement and Management of Risk section of the Risk Management Policy includes a description of the measures and metrics in use to manage the various risks associated with the Company's commercial and trading operation. These measures and metrics include mark to market, Value at Risk, stress testing, credit, liquidity, and legal.<sup>37</sup> This information is communicated to the Company's risk committee and senior management.

<sup>&</sup>lt;sup>36</sup> Appendix D: NARUC publication titled: Energy Portfolio Management: Tools & Resources for State Public Utility Commissions, prepared by Synapse Energy Economics – October 2006.

<sup>&</sup>lt;sup>37</sup> Risk Management Policy, Section 7 page 9

### <u>Finding</u>

The Company provided responses to several data requests which showed the various reporting metrics, including the mark to market value of the hedges included in the test year.<sup>38</sup> Blue Ridge reviewed only the mark to market values associated with the hedges (swaps) included in the Net Power Costs in the current case. We confirmed the source of the calculations and prices that form the basis of the costs of the hedged transactions. Therefore, we cannot make a judgment of the effectiveness of the Company's reporting of its metrics. However, during our on-site review, we reviewed the Risk Committee meeting minutes in which the Company's portfolio position was reviewed.

<u>Recommendation</u> None

### <u>Finding</u>

The Company provided an explanation of a CV (correlation variable) of **[BEGIN CONFIDENTIAL] [END CONFIDENTIAL]** for electric and gas price movement that was provided to interested stakeholders in a presentation in May 2009.<sup>39</sup> This variable attempts to explain the relationship between the movement of prices of electric and gas. In this case, the value of the CV as it approaches 100% suggests a good correlation that as one price moves, the other price moves with it (either positively or negatively). What the CV does not reflect is the impact of any other explanatory variables and should not be confused with a coefficient of variance of a regression analysis. The CV reflects what happens to one variable when there is a change in another.

Blue Ridge found that the Company adequately supported its statement that "gas prices and electric prices are reasonably correlated but do not always move together."<sup>40</sup>

<u>Recommendation</u> None

### Establishment of Procedures and Authority for Execution of Hedges

Blue Ridge reviewed PacifiCorp's Commercial and Trading Front Office procedures and practices as part of its on-site review. In addition, we reviewed the appendices associated with the Company's risk management specifically identifying what can be hedged and limits or tolerances that traders in the front office can execute.

# <u>Finding</u>

Blue Ridge determined whether the procedures exist and are well-documented, approved, and disseminated to those employees involved in trading and hedging activities. Our onsite review gave us assurances that the procedures are in place. Further, we reviewed the benchmark analysis of the Company's policies and practices to that of the Committee of

<sup>&</sup>lt;sup>38</sup> Response to data request OCS 6.1.

<sup>&</sup>lt;sup>39</sup> Response to data request OCS 2.1

<sup>&</sup>lt;sup>40</sup> Response to data request OCS 2.1

Chief Risk Officers White Paper (November 2002). This benchmark memo appeared to be a candid review of PacifiCorp's front, mid, and back risk management office.

### **Recommendation**

PacifiCorp should update this benchmark analysis and report back to the Commission on implementing any improvements that the Company believes would be beneficial.

### Procedures for Managing Credit Risk

At PacifiCorp, the responsibility for managing credit risk falls under the Director of Credit and Risk Management. The counterparty credit risks are established in the Risk Management Policy and include the maximum credit limits for banks and non-banks. Specific limits are included in Appendix C: Credit Capacity Matrix.

### <u>Findings</u>

The counterparty credit limits shown in Appendix C in the Risk Management Policy appear to be reasonable.

<u>Recommendation</u> None

# Establishment of Measurement and Reporting Procedures including Accounting and Compliance

PacifiCorp's Risk Management Policies and Procedures specify that adherence to measurement and reporting must be maintained. In addition there are sections on Transaction Valuation and Accounting, Management Reporting, and Compliance. These sections specify who is responsible for each section.

### <u>Finding</u>

Although Transaction Valuation and Accounting, Management Reporting, and Compliance sections of the Risk Management Policies and Procedures specify who is responsible for each section, they do not include the actual departmental procedures associated with these activities. However, there are two documents which Blue Ridge did review which indicate that these procedures do exist and that adherence to them is maintained. These include the internal audits and the benchmark of the CCRO "White paper." Our review of these documents indicated that these procedures exist and are in practice.

### **Recommendation**

The Risk Management Policies and Procedures should document the departmental procedures associated with Transaction Valuation and Accounting, Management Reporting, and Compliance.

### Additional Issue

### **Energy Trading System**

During discussions with Company personnel, Blue Ridge was informed that PacifiCorp was in the process of developing an online, integrated energy trading system. Through a review of the capital additions portion of rate base, we have estimated that the cost of the project could be \$25 million (\$15 million would be Utah's approximate allocated portion to be included in rate base). Blue Ridge has asked data requests concerning the information technology project scope, applications features, and what business needs the new system addresses as well as when the system will be brought online.

# 7. CURRENT REGULATORY & INDUSTRY BENCHMARK REVIEW

Blue Ridge was requested to assist the Division with an assessment of the hedging policies and practices of other jurisdictions. The fundamental question posed by the Division was what are other jurisdictions doing with respect to hedging practice and risk management.

To answer this question, Blue Ridge undertook a detailed review of a number of industry sources and reviewed case files from many state utility regulatory jurisdictions. A complete list of sources is included in the bibliography in Appendix B.

### **Overall Conclusion**

Blue Ridge found that hedging associated with mitigating the price volatility of natural gas for sale to ultimate customers or for use in production of electricity is widespread throughout the utility industry in the United States. The issue of hedging and risk management has been an issue that regulators have been addressing since the 1990s when physical and financial commodities trading for natural gas were 1<sup>st</sup> introduced.<sup>41</sup> Interest in the subject increased significantly since 2000 when natural gas prices experienced significant price volatility and upward movement.

Figure 2 below shows a chart of the monthly history of Natural Gas City Gate Prices (as published by the Energy Information Administration). This chart clearly shows that beginning in 2000, monthly prices start a significant upward trend and are highly volatile.

<sup>&</sup>lt;sup>41</sup> Ken Costello, Regulatory Questions on Hedging: The Case for Natural Gas, *The Electricity Journal*, May 2002, page 44.





However, the way the individual state commissions address the issue of hedging and risk management varies significantly from a complete hands-off approach all the way to review and pre-approval of individual utility hedging and risk management plans. One consistent theme that Blue Ridge found was that all of the jurisdictions reviewed have some level of interest and oversight of its utilities hedging and price volatility mitigation plans.

As the Division considers its policy determination related to PacifiCorp's hedging strategies, it is important to keep in mind that despite recent price drops, most forecasts do show natural gas prices increasing and that there will be continued volatility in those prices. Figure 3 shows the well-head price forecast for natural gas for 2000 to 2030.



Figure 3 – Natural Gas Prices 2000-2030

Source: Energy Information Administration Figure 64. Lower 48 wellhead and Henry Hub spot market prices for natural gas, 1990-2030

In addition to reviewing a number of regulatory agency rules, regulations, and case files for 27 regulatory commissions, Blue Ridge reviewed a number of industry studies, whitepapers, presentations, and journal articles on the subject. The proposals, ideas, and recommendations are varied and diverse and depend on the authors' perspective (i.e., utility, regulatory, markets, producers and suppliers). Each document we reviewed is included in the bibliography in Appendix B.

Through our review, Blue Ridge found that there appears to be a consensus among most in the utility industry (from either the utility or regulatory perspective) that Commission involvement in the issue of hedging is vital to the success of these types of price risk mitigation programs. This may include pre-approving utility submitted plans to offering guidelines or conducting post plan implementation reviews. In one form or another, most industry analysts and regulators agree that a "hands-off" approach from regulators is not sound policy.<sup>42</sup>

Assuming that an upward price trend continues (despite recent price levels and short-term price forecasts), consumers are very likely to pay higher prices for energy absent some level of hedging and price volatility mitigation.

### **Highlights of Individual Jurisdictions**

To demonstrate the varied ways in which individual jurisdictions address the issue of hedging and price volatility mitigation, the following highlights a sample of what we found in a number of jurisdictions. A detailed summary of all 27 jurisdictions we reviewed is shown below as Figure 4.<sup>43</sup>

### <u>Colorado</u>

Colorado has a Gas Price Volatility Mitigation Plan established in 2004 as part of the annual Gas Purchase Plans (GPP) which includes detailed confidential plans for volumes and terms. Hedging cost is included in electric commodity adjustment (Docket number 02A-267G). Commission does not approve GPP but uses them as part of "after the fact" prudence review – (Details of Decision C04-1112, September 24, 2004. Page 24, Para. 47.)

<sup>&</sup>lt;sup>42</sup> Ken Costello, Regulatory Questions on Hedging: The Case for Natural Gas, *The Electricity Journal*, May 2002, page 51.

<sup>&</sup>lt;sup>43</sup> This information is based in part on a survey conducted by Mr. Ken Zimmerman of the Oregon Public Utility Commission Gas in July 2008 for the NARUC Staff Subcommittee on Gas. The survey asked questions on nine categories relating to how states and local gas distribution companies (LDCs) have responded to high natural gas prices. It specifically asked what current actions state commissions and LCDs are taking or have taken to address the possibility of residential customers facing high and volatile natural gas prices during the winter of 2008-2009 and beyond. Twenty state commissions replied to that survey. Blue Ridge has added to that information from our own research and have added Commission's how did not reply to Mr. Zimmerman's survey. Certain non-relevant comments included in the original survey are excluded.

## <u>Nevada</u>

Nevada requires an annual supply plan (with a 3 year horizon) that includes strategies to minimize price volatility including the use of physical and financial instruments to hedge price risk. (See Nevada Commission Annual Report page 16.)

# <u>Florida</u>

Companies file annual plans per terms and conditions of the Commission Hedging Order (see FL PSC 02-1484-FOF-EI). FLPSC conducted a comprehensive management audit of four utilities in 2008. This audit found that all four programs were in compliance with Commission's rules and guidelines. In discussions with Commission Staff, Blue Ridge was informed that the utilities can use their discretion to hedge up to 100% requirements and utilize financial instruments to hedge price risk out as long as 48 months.

### <u>Georgia</u>

Companies submit annual hedging strategies and plans. In 2005 as part of its annual plan approval process, Atmos Energy Company requested that the Commission adopt its plan. In doing so, it put forth that other jurisdictions had approved similar strategies. The company stated the following:

"The Louisiana Public Service Commission authorized Atmos to implement a hedging program for a period of **three (3) years** with seventy-five percent (75%) of winter gas requirements by Order dated July 2, 2004. The State Corporation Commission of the Commonwealth of Virginia granted Atmos **permanent** authority to continue its hedging program with sixty percent (60%) of the Company's expedited gas purchases by Order dated August 13, 2004."

# South Carolina

A 2002 order allowed Piedmont Natural Gas to implement an experimental price volatility mitigation plan including hedging using financial instruments. Company could hedge up to 60% of its requirements for up to 24 months out. In a 2009 Order, Piedmont was granted approval to modify that plan to reduce its hedging strategy to 1 year to take advantage of the current low prices.

### <u>New Jersey</u>

A 2001 Order initiated price volatility mitigation plans including financial hedging. In 2007, the New Jersey Board of Public Utilities (NJBPU) ordered that its staff conduct comprehensive assessment of NJ gas utilities hedging plans and strategies. This audit found they subject utilities to be in compliance with the NJBPU's policies and guidelines. (See Analysis Of The Gas Purchasing Practices And Hedging Strategies Of The New Jersey Major Gas Distribution Companies Final Report dated January 15, 2009.)

### <u>Kentucky</u>

Financial and physical hedging allowed. Hedging strategy submitted to Commission for prior approval. Plans cover 3 years (see Duke-KT Case No. 2008-175).

### <u>Missouri</u>

In Missouri, Rule 4 CSR 240-40.018 Natural Gas Price Volatility Mitigation addresses hedging. Prudent hedging is authorized and considered to be part of a prudently managed gas portfolio. Commission instituted 2006 Task Force which issued a report titled: Natural Gas Market Conditions, PGA Rates, Customer Bills & Hedging Efforts of Missouri's Natural Gas Local Distribution Companies (Task Force Report - February 24, 2006.). Task recommended Commission open a proceeding to amend the then existing rule on price volatility mitigation. Envisioned establishing minimum timeframes for hedging on physical (3 years) and financial (5 years).<sup>44</sup>

### <u>Alabama</u>

The Commission encourages all regulated LDCs to hedge to stabilize costs. They use both financial and physical hedging. Commission ordered Alabama Power Company could hedge up to a maximum of 75% of its gas purchases for up to a period of 42 months. Prudently incurred costs can be recovered in ECR (Energy cost recovery rate rider).

### <u>Indiana</u>

The Indiana Utility Regulatory Commission does not dictate or mandate utility portfolio management. With the volatile nature of the natural gas market, however, a diversified portfolio consisting of fixed financial purchases, physical and storage gas use is strongly encouraged and recommended to mitigate gas price fluctuations. The commission does retain the ability to "disallow" expenditures that are considered imprudent based on evidence submitted in a Gas Cost Adjustment ("GCA") proceeding.

### <u>Wyoming</u>

Most natural gas utilities rely on hedging to stabilize natural gas prices. Stipulation in Docket No. 20000-315-EP-08 required Rocky Mountain Power and Office of Consumer Advocate (OCA) to meet to review gas purchasing and hedging policies.

<sup>&</sup>lt;sup>44</sup> Task force report – Executive Summary Page 5 – recommendation no. 1. Blue Ridge was unable to determine the status of this recommendation due to login requirements of Commission's EFIS system.

### **Conclusions and Recommendations for the Division**

Based on the volumes of information that Blue Ridge has reviewed, we have come to the conclusion that several issues remain for the Division as it evaluates its policy decision for recommendation to the Utah Public Service Commission. As industry analysts have stated in numerous articles and white papers, Commissions who take a "hand-off" approach run the risk of having a utility's price volatility plan be non-effective or even second guessed to the point that the utility has a significant disincentive to hedge at all. In contrast, having a "no hedge" policy clearly exposes consumers to significant (and likely) price swings. Assuming that an upward price trend continues (despite recent price levels and short-term price forecasts), consumers are very likely to pay higher prices for energy absent some level of hedging and price volatility mitigation.

From this research, Blue Ridge recommends that the Division consider recommending to the Commission a proactive policy setting approach. This would include proceeding with the purpose of the docket in 09-035-21<sup>45</sup> to study Rocky Mountain Power's risk management policies and allow a collaborative effort that addresses all interested stakeholder concerns.

The issues to be decided are far beyond the scope of this jurisdictional assessment. However, it is our conclusion that a proactive policy approach to the issue of hedging and price volatility mitigation will provide long-term benefits to provide, if for no other reason, an increased awareness and opportunity to comment on the Company's plan.

 $<sup>^{45}</sup>$ Docket 09-035-21 RMP / NATURAL GAS PRICE RISK MANAGEMENT POLICIES AND PROCEDURES.

	Hedging activities in Select Jurisdictions $\overline{}$								
Line No.	State	Allows Hedging	Review Process (Pre or Post)	Approves Max Term Length and Volume	Recovery Mechanism	Comment			
1	AL	Yes	Pre	Yes	Yes	The commission encourages all regulated LDCs to hedge to stabilize costs. They use both financial and physical hedging. Max 75%, 42 months (informal Docket U-4373			
2	AZ	Yes	Post	No	Yes	The ACC has formally recognized price stability as one of the goals of the gas procurement process and has encouraged Arizona LDCs to hedge at least a portion of their gas supplies. Arizona LDCs typically hedge a significant portion of their natural gas supplies via fixed price physical contracts.			
3	CA	Yes	Pre	Yes	Yes	LDC financial hedging programs already exist Physical hedging in the form of mandates for firm interstate capacity and storage already exist. Furthermore, supply diversity is encouraged; LNG imports from Baja California are now possible. Hedging plan part of incentive mechanism (R.08-06-025)			
4	со	Yes	Pre	Yes	Yes	Colorado has Gas Price Volatility Mitigation Plan . Hedging cost including in electric commodity adjustment (Docket number 02A-267G			
5	DE	Yes	Pre	No	Yes	The two regulated natural gas utilities in the state use physical and financial hedging as part of their procurement process.			

**Figure 4 Hedging activities in Select Jurisdictions**<sup>46</sup>

<sup>&</sup>lt;sup>46</sup> This Table is based on a survey conducted by Ken Zimmerman of the Oregon Public Utility Commission Gas in July 2008 for the NARUC Staff Subcommittee on Gas. The survey asked questions on nine categories relating to how states and local gas distribution companies (LDCs) have responded to high natural gas prices. It specifically asked what current actions state commissions and LCDs are taking or have taken to address the possibility of residential customers facing high and volatile natural gas prices during the winter of 2008-2009 and beyond. Twenty state commissions replied to that survey. Blue Ridge has modified the table to update it for those states it reviewed in addition to the information developed by Mr. Zimmerman and submitted to National Regulatory Research Institute. Certain no-relevant comments included in the original were excluded from this table.

Line No.	State	Allows Hedging	Review Process (Pre or Post)	Approves Max Term Length and Volume	Recovery Mechanism	Comment
6	FL	Yes	Pre and Post	Yes	Yes	Companies file annual plans per terms and conditions of Commission Hedging Order. FL PSC 02-1484-FOF-EI FLPSC conducted comprehensive management audit of 4 utilities in 2008. Found all were incompliance with Commission's rules and guidelines. Can hedge up to 100% requirements. Financial Instruments out as long as 48 months. <sup>47</sup>
7	GA	Yes	Pre and Post	Yes	Yes	Companies submit annual hedging strategies and plans. In 2005 Atmos request, company stated following: "The Louisiana Public Service Commission authorized Atmos to implement a hedging program for a period of <b>three (3) years</b> with seventy-five percent (75%) of winter gas requirements by Order dated July 2, 2004. The State Corporation Commission of the Commonwealth of Virginia granted Atmos <b>permanent</b> authority to continue its hedging program with sixty percent (60%) of the Company's expedited gas purchases by Order dated August 13, 2004."
8	ID	Yes	Pre and Post	Yes	Yes	Commission order approved hedging strategy that included Avista plans hedging approximately 70% of forecasted loads with a combination of fixed-price gas purchases/hedges executed throughout the year and scheduled withdrawals from available storage.

<sup>&</sup>lt;sup>47</sup> Conversation with W. Coston – Audit Project Manager September 29, 2009

Line No.	State	Allows Hedging	Review Process (Pre or Post)	Approves Max Term Length and Volume	Recovery Mechanism	Comment
9	IN	Yes	Post	No	Yes	The commission does not dictate or mandate utility portfolio management. With the volatile nature of the natural gas market, however, a diversified portfolio consisting of fixed financial purchases, physical and storage gas use is strongly encouraged and recommended to mitigate gas price fluctuations. The commission does retain the ability to "disallow" expenditures that are considered imprudent based on evidence submitted in a Gas Cost Adjustment ("GCA") proceeding.
10	KY	Yes	Pre	Yes	Yes	Financial and physical hedging allowed. Plans submitted have been for 3 years (See Duke-KT Case No. 2008-175)
11	MI	Yes	Pre and Post	Yes	Yes	The commission requires utilities to meet specific fixed price levels at 4 different deadlines, intended to layer in fixed price gas throughout the year to mitigate volatility. During winter, about 50% of a utility's requirements are to come from storage, 25% of remaining winter supply has to have a fixed price. The commission encourages the use of purchase indicators, such as historical price quartiles, to aid utilities in making fixed priced purchases.
12	MN	Yes	Pre and Post	Yes	Yes	Financial hedging allowed but the recovery of costs associated with the use of financial instruments requires variance to the automatic adjustment of charges rule. Physical hedging allowed. Hedging programs are reviewed annually at the same time as the commission's annual review of gas costs. Hedging programs also are reviewed when the utilities request extensions or renewals of their rule variances. The commission promotes Dollar Cost Averaging whereby fixed price purchases are spread throughout the summer months when gas prices are typically lower
13	MO	Yes	Yes	No	Yes	4 CSR 240-40.018 – Natural Gas Price Volatility Mitigation rule addresses hedging. Prudent hedging is authorized and considered to be part of a prudently managed gas portfolio. See 2006 Task Force report

Line No.	State	Allows Hedging	Review Process (Pre or Post)	Approves Max Term Length and Volume	Recovery Mechanism	Comment
14	NE	Yes	Unknown	Unknown	Yes	Hedging is permitted, but the commission has no official policy. (Limited information on Commission web-site)
15	NC	Yes	Pre	No	Yes	In several dockets, including Docket No. G-100, Sub 85, the commissions required the LDCs to discuss hedging efforts in their Annual Review of Gas Costs. The LDCs were also assured that, if they hedged, the commission would judge their efforts based on what was known at the time and not the outcomes.
16	NJ	Yes	Yes	Assume Yes	Yes	2001 Order initiated price volatility mitigation plans. 2007 BPU ordered a conducted comprehensive assessment of NJ gas utilities hedging plans and strategies. (see Analysis Of The Gas Purchasing Practices And Hedging Strategies Of The New Jersey Major Gas Distribution Companies Final Report dated January 15, 2009) – e-docket system login required
17	NY	Yes	Pre and Post	No	Yes	LDCs develop an acquisition strategy to include a mix of purchase options with a view toward fostering price stability. Strategies should include guidelines and limits to support the mix of options and include an assessment of risk for each option. Volatility of customer bills as well as See also Case No 06-M-1017 for electric hedging guidelines
18	NV	Yes	Pre and Post	Yes	Yes	Utilities required to file 3year energy supply plan. Filing on web include only redacted information.
19	ОН	Yes	Pre and Post	No	Yes	Physical hedging allowed. Companies set own targets. Review included in annual gas cost assessments
20	PA	Yes	unknown	Unknown	Yes	1307(f) gas utilities (sales exceeding \$40 million) engage in financial hedging to mitigate price spikes. Limited information through web-site
21	SC	Yes	Pre and post	Yes	Yes	2002 SC order for Piedmont Natural Gas approved experimental plan. Company could hedge up to 60% up to 24 months. 2009 Order requests that be reduce to 1 year

Line No.	State	Allows Hedging	Review Process (Pre or Post)	Approves Max Term Length and Volume	Recovery Mechanism	Comment
22	SD	Yes	Pre	No	Yes	All utilities hedge in one way or another (storage, futures, options, swaps, etc.) See Order EL99-021
23	TN		Unknown		Yes	PGAs are filed based on NYMEX index. There is no deferral of gas costs. Limited information through web-site
24	UT	Yes	TBD	TBD	TBD	Questar Gas currently uses physical fixed price hedges for one third of winter supply requirement. The utility also has physical storage capacity available for 10% winter supply requirement.
25	WI	Yes	Pre	Yes	Yes	<ul><li>Five of the 11 Wisconsin LDCs have hedging programs in place that are reviewed in their annual gas supply plan filings.</li><li>All LDCs hedge with physicals and some use financial contracts.</li><li>Hedging costs and benefits flow through the monthly purchased gas adjustment clause (PGA).</li></ul>
26	WV	Yes	Pre	Yes	Yes	Both physical and financial hedges are allowed with upper limits. See WV Order 04-1 188-G-30C
27	WY	Yes	TBD	TBD	TBD	Most natural gas utilities rely on hedging to stabilize natural gas prices. Stipulation in Docket No. 20000-315-EP-08 required company and OCA to meet to review gas hedging strategy.

# APPENDICES

Appendix A - Framework for Risk Management Appendix B – Bibliography

# Appendix A – Framework for Risk Management

### Key Components of a Comprehensive Risk Management Program

Based on our experience with other utilities and research on commodity hedging and risk management, Blue Ridge has identified and assimilated a framework of risk management best practices. A generally accepted risk management framework includes the following critical components:

### Written Policy

- a. Establish a written policy approved by the board of directors.
- b. Management should review and update policy at regular intervals.

### Goals and Guidelines

- a. Establish goals and guidelines for the risk management program
- b. Identify risk tolerance. Identify and understand risk exposure.
- c. Identify commodities to be hedged.
- d. Define risk metrics.
- e. Determine percentage of commodity purchases to be hedged.
- f. Determine types of hedging instruments authorized for use.
- g. Determine if and how basis risk will be hedged.
- h. Establish guidelines for prohibiting speculative risk.

### **Execution of Hedges**

- a. Identify personnel authorized to execute transactions.
- b. Establish signing authority, controls for trades and approval procedures for entering into contracts.
- c. Ensure proper signatures are received and documented.
- d. Establish transactions limits, term, notional limits, value-at-risk (VAR).
- e. Ensure contracts are priced competitively. Shop around among brokers to get competitive pricing.

# Credit Risk

- a. Establish guidelines for evaluating credit risk.
- b. Establish procedures for managing credit risk.
- c. Identify and define relevant measure of credit exposure.
- d. Establish credit limits, both aggregate and for individual counterparties.
- e. Determine criteria for approval of counterparties.
- f. Set requirements for counterparties and establish counterparty credit risk limits.

### Accounting

- a. Establish system for tracking hedges from start to finish.
- b. Establish methodology for determining the change in fair value of derivative instruments.

- c. Establish company procedures for recording the change in fair value of derivative instruments.
- d. Verify that pricing models used to price contracts are based on market pricing.
- e. Identify non-financial benefits or costs of the hedging program.
- f. Ensure hedges are properly recorded in the company's financial reports.
- g. Ensure compliance with GAAP and changes to GAAP.
- h. Monitor and track hedging costs.
- i. Update guidelines on a regular basis to ensure compliance with accounting changes.

### 6. Compliance

- a. Establish risk management committee.
- b. Establish reporting system. Issue reports on a regular basis.
- c. Establish front, mid, and back office functions, if required, to ensure compliance.
- d. Establish procedures for compliance with SFAS 133, relating to hedge accounting.
- e. Track hedge effectiveness, as required by SFAS 133.
- f. Review and update policy on a regular basis.

### Appendix B – Bibliography

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