REVIEW OF
GRU FUEL/COAL CONTRACTS

JANUARY 2009

CITY AUDITOR'S OFFICE
CITY OF GAINESVILLE, FLORIDA

City of Gainesville — *Inter-Office Communication*

January 5, 2009

TO: Audit, Finance and Legislative Committee
Mayor Pegeen Hanrahan, Chair
Mayor-Commissioner Pro Tem Jack Donovan, Member

FROM: Brent Godshalk, City Auditor

SUBJECT: Review of GRU Fuel/Coal Contracts

Recommendation

The Audit, Finance and Legislative Committee recommend the City Commission:

1) Accept the City Auditor's report and response from the General Manager for Utilities, and

2) Instruct the City Auditor to conduct a follow-up review on recommendations made and report the results to the Audit, Finance and Legislative Committee.

Explanation

In accordance with our Annual Audit Plan, we have completed a Review of GRU Fuel/Coal Contracts. Our report, which includes a response from the General Manager for Utilities, is attached for your review.

We request that the Committee recommend the City Commission accept our report and the General Manager's response. Also, in accordance with City Commission Resolution 970187, Section 10, Responsibilities for Follow-up on Audits, we request that the Committee recommend the City Commission instruct the City Auditor to conduct a follow-up review on recommendations made and report the results to the Audit, Finance and Legislative Committee.

City of Gainesville ***Inter-Office Communication***

October 30, 2008

TO: Robert Hunzinger, General Manager for Utilities

FROM: Brent Godshalk, City Auditor

SUBJECT: Review of GRU Fuel/Coal Contracts

In accordance with our Annual Audit Plan, we have completed a Review of GRU Fuel/Coal Contracts. During our review, we interviewed key personnel, analyzed financial and operating information, and tested management controls. The primary objective of this audit was to evaluate the adequacy of management controls over Energy Supply fuel expenditures and to test vendor billings for compliance with contract provisions, rules and regulations.

Based on our review, we believe that GRU Fuels Management has strong internal controls in place and uses sound approaches to coal purchasing and contract administration. They also have well-developed and documented Fuel Procurement Policies and Procedures, which help to ensure that a consistent approach is used by staff regarding:

- procurement of coal supplies and selection of suppliers
- scheduling of train loadings and deliveries
- volumetric accounting and quality control of coal delivered
- invoice processing, coal supply and transportation contract administration controls
- tracking coal inventories and costs

The attached draft report provides two recommendations we believe will assist management in continuing to control fuel expenses. Our recommendations have been reviewed with John Stanton, Assistant General Manager - Energy Supply and Karen Alford, Administrative & Fuels Operations Director. We would like to acknowledge their professional courtesy and cooperation during our review and we look forward to continuing to work together with them to finalize this report and management's response.

In accordance with Commission Resolution 970187, Section 9, please submit your written response to the recommendations presented in the attached report and indicate an actual or expected date of implementation for each recommendation. Our final report, which will include your written response, will then become public record and be submitted to the City Commission's Audit, Finance and Legislative Committee for review and approval. The next meeting is scheduled for November 24, 2008. If your response can be completed prior to that date, we will place this item on that agenda. Otherwise, the report will go on the January 5, 2008 meeting.

As always, please feel free to contact me or my staff to discuss any questions or concerns regarding this draft report.

cc: John Stanton, Assistant General Manager - Energy Supply
Karen Alford, Administrative & Fuels Operations Director

OBJECTIVES, SCOPE AND METHODOLOGY

In accordance with our Annual Audit Plan, the City Auditor's Office completed a Review of GRU Fuel/Coal Contracts. The primary focus of this review was to evaluate the adequacy of management controls over Energy Supply fuel expenditures and to test vendor billings for compliance with contract provisions, rules and regulations. Management controls include the processes for planning, organizing, directing and controlling program operations, including systems for measuring, reporting and monitoring program performance. Management is responsible for establishing and maintaining effective controls that, in general, include the plan of organization, methods and procedures adopted to ensure goals are met. Specific audit objectives included evaluating the policies, procedures and internal controls related to the fuels contract process.

Our review was conducted in accordance with *Government Auditing Standards* issued by the Comptroller General of the United States and accordingly included such tests of records and other auditing procedures as we considered necessary under the circumstances. Our procedures included reviewing contracts, laboratory test results, vendor and shipping invoices, interviewing staff, reviewing professional literature and interviewing other utilities for common practices. The scope of our review was generally for coal purchased by GRU during 2007.

Based on the results of our review, we found no significant weakness in management controls in effect over the GRU fuel/coal contracts process. We believe the Fuels Management Division has strong management controls in place to ensure that coal contracts are properly administered. We have prepared two recommendations for improvement that were discussed with management. These recommendations, as well as management's written response, can be found in the following sections of this report.

BACKGROUND INFORMATION

GRU currently uses three primary fuel sources for energy. Coal typically comprises approximately 75 percent of the total fuel purchases volume, with natural gas accounting for approximately 20 to 25 percent and fuel oil ranging from one to five percent. GRU coal purchases totaled approximately $44 million annually in 2006 and 2007, including transportation. Based on the significance of coal purchases made, we focused our testing on procurement and contract administration of coal purchases.

Coal Procurement

GRU has a coal procurement strategy that is based on meeting forecasted coal requirements through long-term and short-term fuel supply agreements with coal suppliers. This strategy helps GRU to reduce risk, decrease price volatility and insulate customers from short-term price swings, while at the same time ensuring necessary supplies of quality coal. GRU implements this strategy through a combination of long-term and short-term contracts, as well as through spot market purchases.

GRU's Fuels Management Division is responsible for purchasing fuel, scheduling delivery, processing invoices and tracking fuel inventories and costs. Fuels Management works with a list of coal suppliers and broker information when determining a supplier for long and short-term contracts. Several factors are considered including tonnage offered, guaranteed Btu/lb minimums and the origin of the freight transport, as freight costs are included in GRU's analysis when selecting coal suppliers.

GRU owns and maintains approximately 100 rail cars and, through a long-term contract with CSX Corporation, utilizes CSX rails to continuously replenish the coal supply.

Approximately 600,000 tons of coal is used annually. GRU purchases coal through several supplier contracts. This includes a combination of three-year and one-year contracts. The long-term contract typically provides 70 percent of the coal supply, while the one-year contract accounts for approximately 25 percent of the supply. The remaining coal purchases are made through spot or one-time purchases. Spot market purchases allow GRU to secure coal at market prices that are based on current market conditions. These purchases are made when coal prices are advantageous over the long or short-term contracts or for testing the reliability of future suppliers.

Each contract GRU enters into requires the supplier to meet minimum quality components such as heat content or Btu/lb, ash content, sulfur dioxide and grindability.

Sampling

GRU coal contracts require an independent laboratory paid by the supplier to pull samples for testing from each shipment to be sent to Deerhaven. Coal is quality tested for sulfur content, moisture, ash, heat content (Btu) and coal size. GRU is notified of the test results within 48 hours of the shipment loading. Laboratory results of the coal must meet minimum contract specifications. If test results indicate quality is below minimum standards, GRU can either accept it at a renegotiated price or refuse the shipment. There have been a few incidences in the past year in which the initial laboratory results caused GRU and the supplier to have results re-tested and "refereed" based on quality standards. Based on the refereed sample, a price adjustment was made.

Each contract awarded includes a minimum Btu/lb. When laboratory tested Btu/lb falls below or exceeds the minimum, a price adjustment is made to reflect coal quality. Generally, greater Btu/lb coal produces a higher heat content which reduces the amount of coal needed to burn. Although GRU pays the incremental difference between the minimum Btu and the greater Btu shipped, the higher Btu content generally requires less coal to be burned, thereby reducing the total amount of coal needed. The current contract allows for coal tested within 100 Btu/lb less than the minimum requirement, with an appropriate price adjustment to reflect the lower quality. However, if the lab sample reveals that the coal is below that level, GRU will reject shipment prior to the coal arriving at Deerhaven. Our review of the samples and calculation for price adjustments based on Btu found that there were no material deviations from this practice.

Certified Scales

All coal contracts and shipments are billed at a per-ton rate. GRU relies upon the certified scales of the suppliers. Prior to payment, GRU compares the weights and volumetrics on the waybill created by the coal supplier and agrees it to the CSX invoice. CSX also charges based on a per-ton rate from origin.

Relying upon suppliers' scales is common practice within the utilities industry. However, it is also an area in which a client is dependent on suppliers to provide accurate data. Although GRU does have controls in place to ensure accurate weights, we noted one instance of a key control not being consistently followed. This is discussed further in Issue #2 of this report.

Inventory

GRU's stated inventory policy is to maintain a 60 to 75 day supply of coal on-hand. We researched industry averages and found that the average inventory varies from 45 to 75 days, with many utilities using a 45 to 60 day range. However, several factors determine an optimum inventory supply, including dependency of coal as the primary energy supply, transit conditions and weather patterns. We believe that GRU's approach of maintaining a 60 to 75 day inventory is reasonable given extreme local and regional weather conditions that can affect both transit and energy supply.

Comparison of GRU Coal Contract Prices to Spot Market Prices

In an effort to evaluate the cost-effectiveness of long-term contracts, we performed a comparative analysis of spot market prices versus GRU's long-term and short-term contractual prices from 2006 through 2008.

Chart A

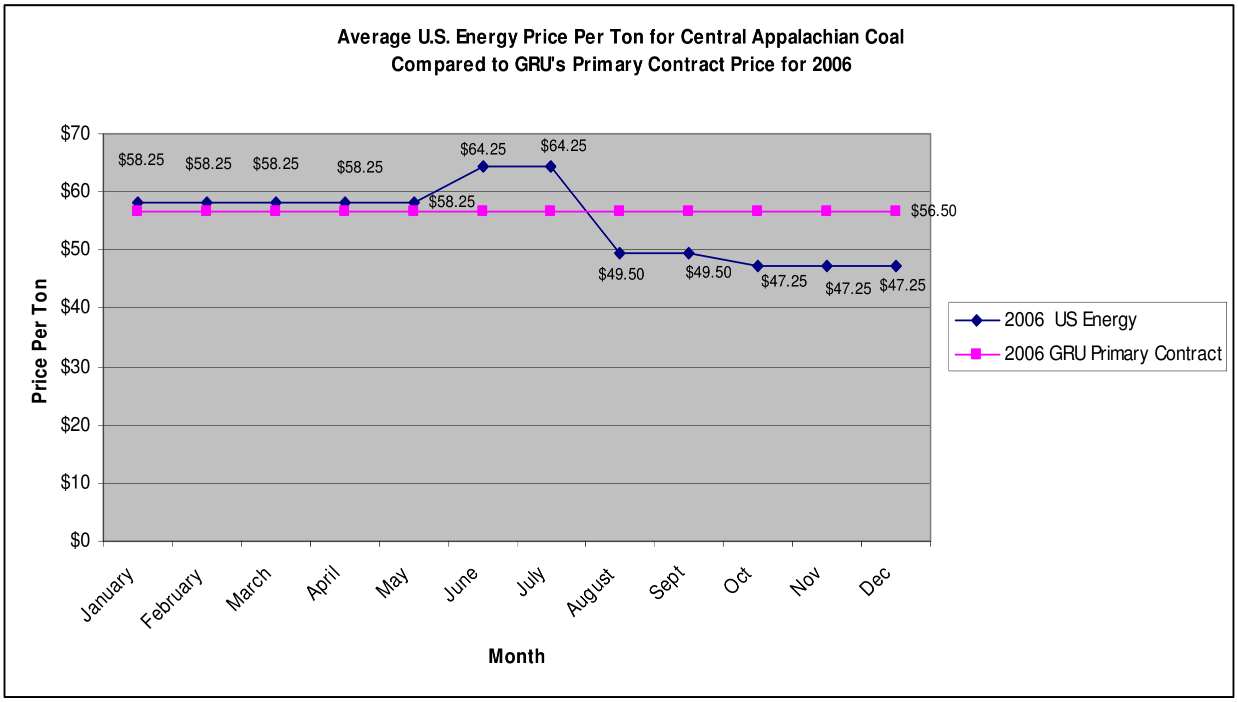
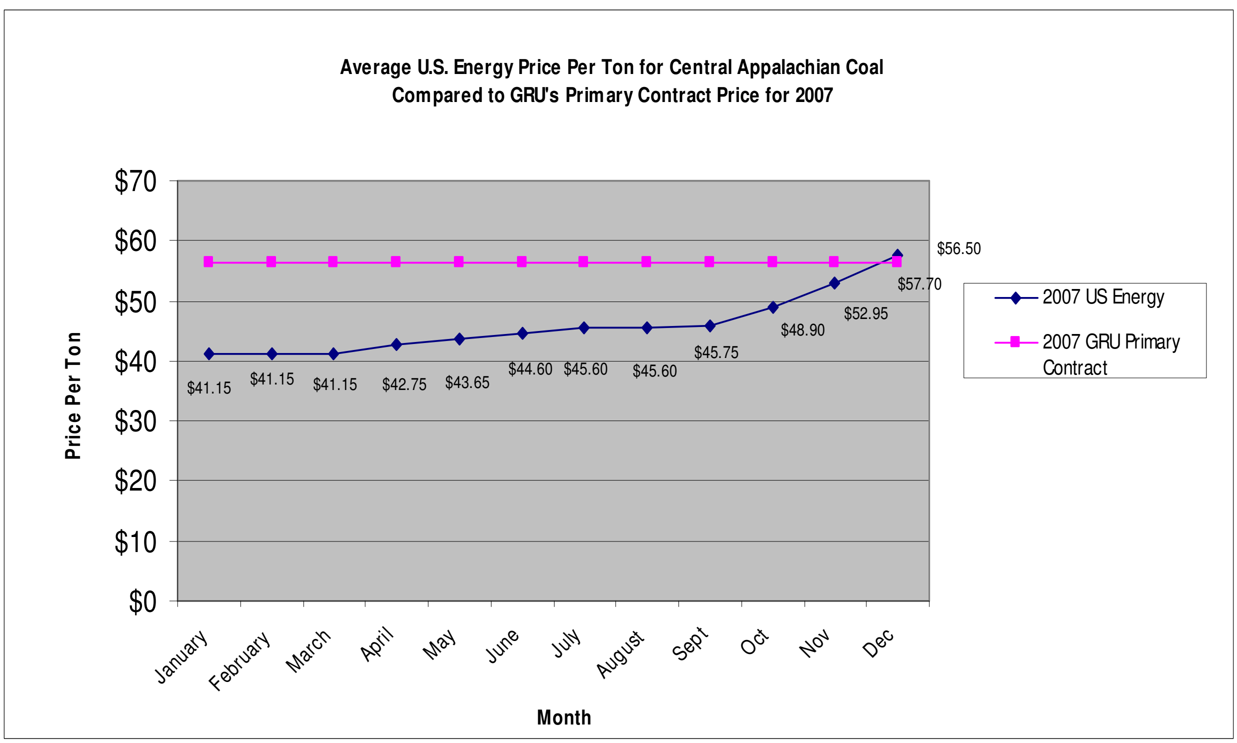


Chart B

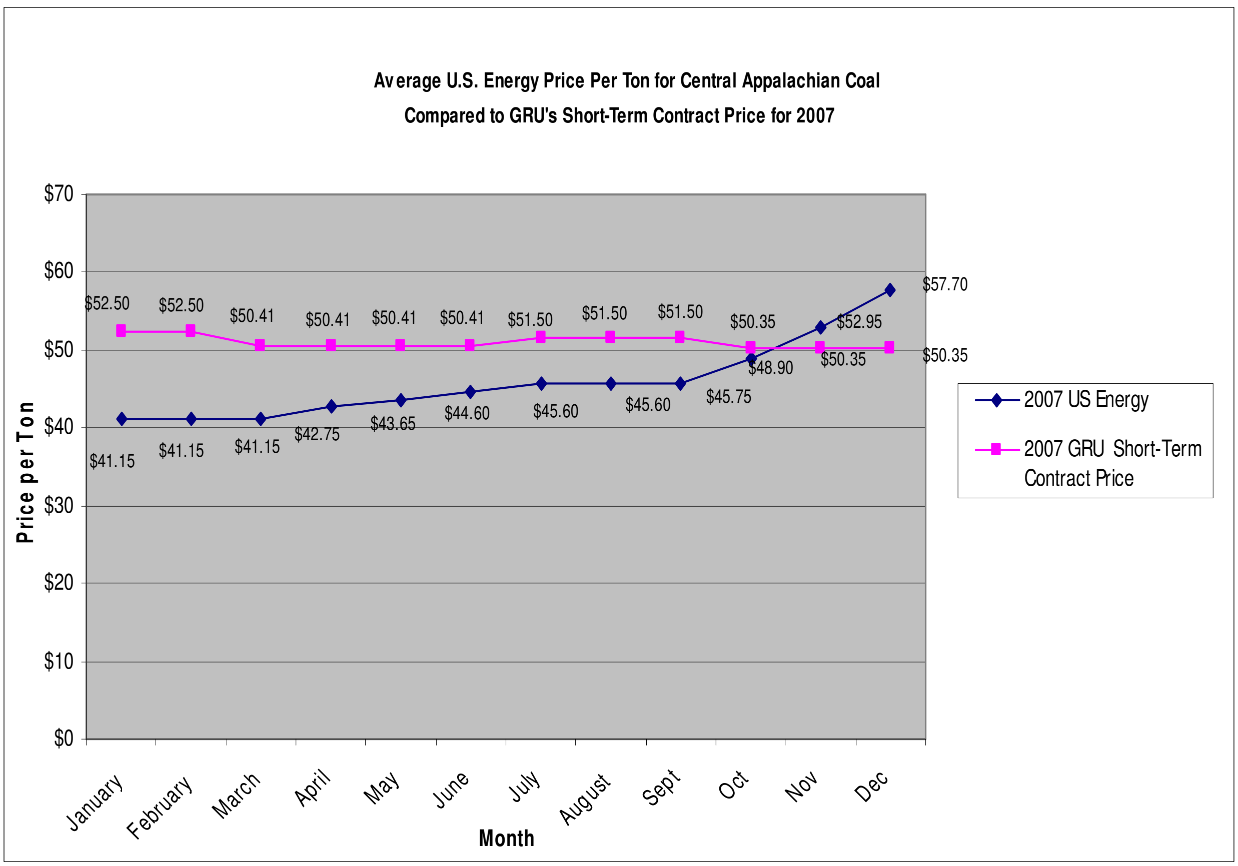


Charts A and B above compare the monthly spot market prices obtained from the U.S. Energy Department for Central Appalachian coal, using consistent quality parameters, to GRU's long-term contract price for 2006 and 2007. As noted on these charts, GRU's long-term contract price was $56.50 per ton. For the first seven months of 2006, monthly spot market prices exceeded GRU's long-term contract price from $1.70 to $7.75 per ton before the spot market prices dropped to $49.50 per ton in August 2006. In early 2007, spot market prices had dropped to $41.15 per ton, $15.35 per ton less than GRU's long-term contract price before steadily increasing throughout the year, with December spot market prices once again exceeding GRU's long-term contract price.

During 2007, GRU entered into short-term (one year) contracts with suppliers based on an analysis of market conditions. Short-term contract negotiations take place a couple of months before the contract begins and are based on current and expected future market conditions. GRU also takes advantage of true spot market pricing during the year to fill in for coal supplies when needed and when market conditions are favorable.

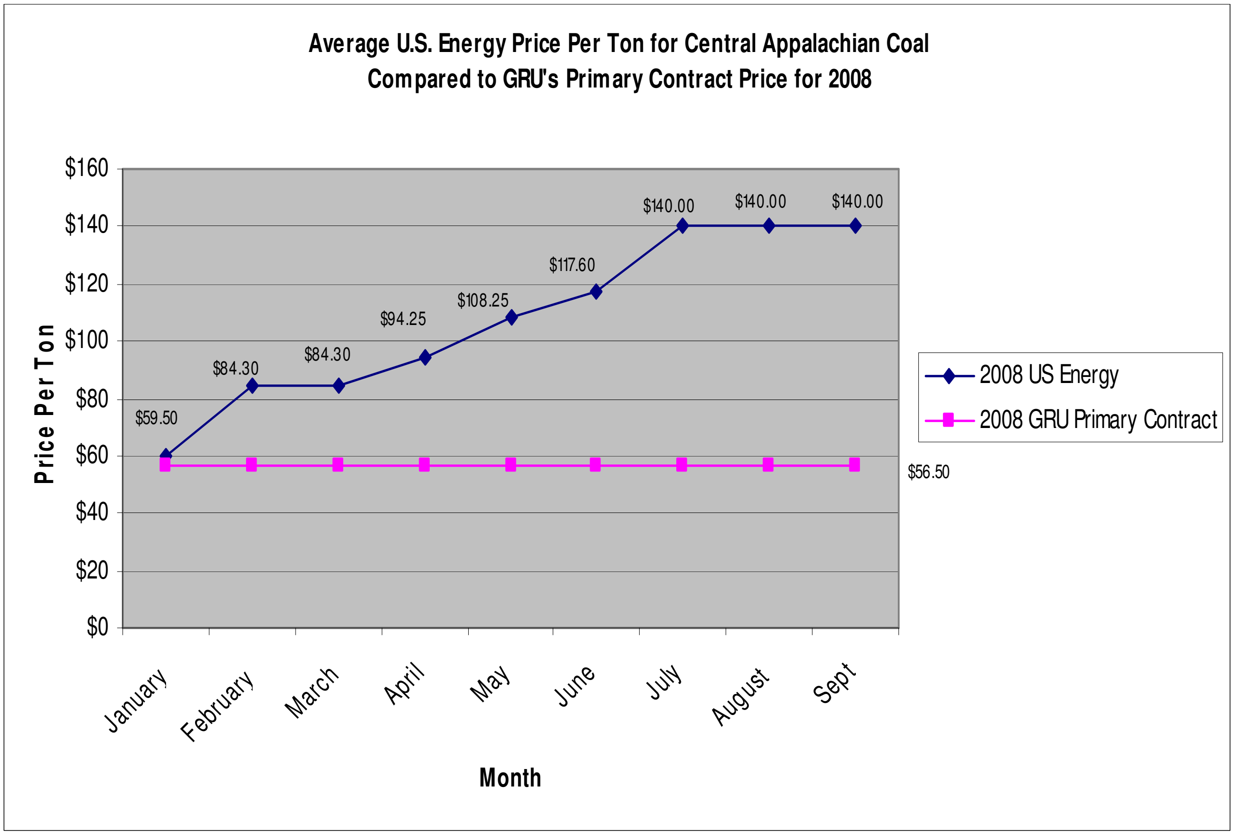
Chart C below reflects the average spot market price in 2007 compared to GRU's short-term contract prices. Although GRU paid a higher price per ton compared to spot market prices, the short-term contract enabled GRU to lock into more stable prices. The last three months of 2007 saw a jump in coal prices of more than 26%.

Chart C



In 2008, coal prices began climbing rapidly upward, reaching $140 per ton in July 2008. Chart D below compares GRU's primary long-term contracted price to monthly spot market prices.

Chart D



This chart clearly demonstrates how GRU's long-term contract provided a significant savings to GRU during the first nine months of 2008, when spot market coal prices more than doubled.

To summarize our analysis, GRU's long and short-term coal contract prices generally exceeded monthly spot market prices in 2007. Had GRU been able to obtain all of their coal supplies during 2007 at spot market prices, estimated cost savings would have totaled approximately $5 million. However, during the first nine months of 2008, GRU's approach resulted in a savings of approximately $14 million.

Based on our analysis, we believe GRU's long-term and short-term contracts have been effective in minimizing increased fuel costs and reducing rate volatility. However, based on current market conditions, it is likely that GRU will experience increased fuel costs in the next few years. These increased costs will hopefully be mitigated in part due to GRU's installation of the emission control retrofit at Deerhaven, which will provide GRU the opportunity to purchase lower grade, lower cost coal than what is currently required. This is discussed in greater detail later in the report.

Future Trends and Options Reviewed

Price Re-Openers

In the last few years a price re-opener has been used in longer term contracts by suppliers and customers. A price re-opener usually occurs midway through the term of a long-term contract. Re-openers typically allow the contract price to be renegotiated in order to remain more in line with the prevailing market price. In some circumstances, customers have the option to terminate the contract if the parties cannot agree on a new price. This approach can expose a customer to significant price increases should the price re-opener occur during rapidly escalating prices. However, as prices moderate or should trends indicate a downward turn, it is an option GRU may wish to consider in future contracts.

Management Comment

Staff agrees that price re-openers can be effective in adjusting long term contract pricing to market. We have used this option effectively in the past when it was more advantageous to exercise contract extension rights rather than go to the market. The typical price re-openers are designed to adjust the contract pricing (up or down) at the end of each contract year based on either an index (i.e. Coal Daily Price Index) or the utility secures bid quotations for comparable coal. One of the limitations with the approach is that it is unlimited in its adjustment (up or down) based on current market. One of the preferred methods used to cap potential price increases is through the use of Indexes with a ceiling and floor price. The floor allows the price to be adjusted down but protects the supplier from situations where the price goes below production cost. The cap allows the price to increase in up markets but limits the increase to a fixed amount and therefore limits exposure to significant price moves under extreme market conditions. Fuels Management (FM) has used the ceiling and floor price mechanism for past contracts and is currently exploring this mechanism in new contracts.

Coal Futures

The energy industry uses futures and options regularly in fuels other than coal. There is some movement in the industry to use this as a potential option to hedge purchases. However, it is not widespread and has not yet proven effective. However, some experts in the coal market predict that it is inevitable. GRU staff have been monitoring this trend and we encourage continuing to do so in the event this becomes a viable option in the future.

Management Comment

Staff agrees with City Auditor's Office (CAO) observation regarding the development of financial hedging programs for coal supply. The market for coal futures and options has grown exponentially in the last year. The rapid influx of hedge funds and traders to the market has led to some feeling in the industry that the fundamental link to the value of the underlying commodity had been eroded. Physical markets were performing with completely different market dynamics than the futures markets.

The recent collapse of commodity market pricing has led to a liquidation of financial positions by traders. FM is monitoring the market to determine how and when it will stabilize and will consider use some financial hedges in the future. Fixed Price contracts with market adjustment mechanisms perform the same function as financial hedges with a reduced level of risk and lower costs.

For the immediate period, forward priced contracts allows staff to lock in current favorable prices for future purchases. This physical hedge limits our exposure to volatile fuel markets.

Coal Price Increases

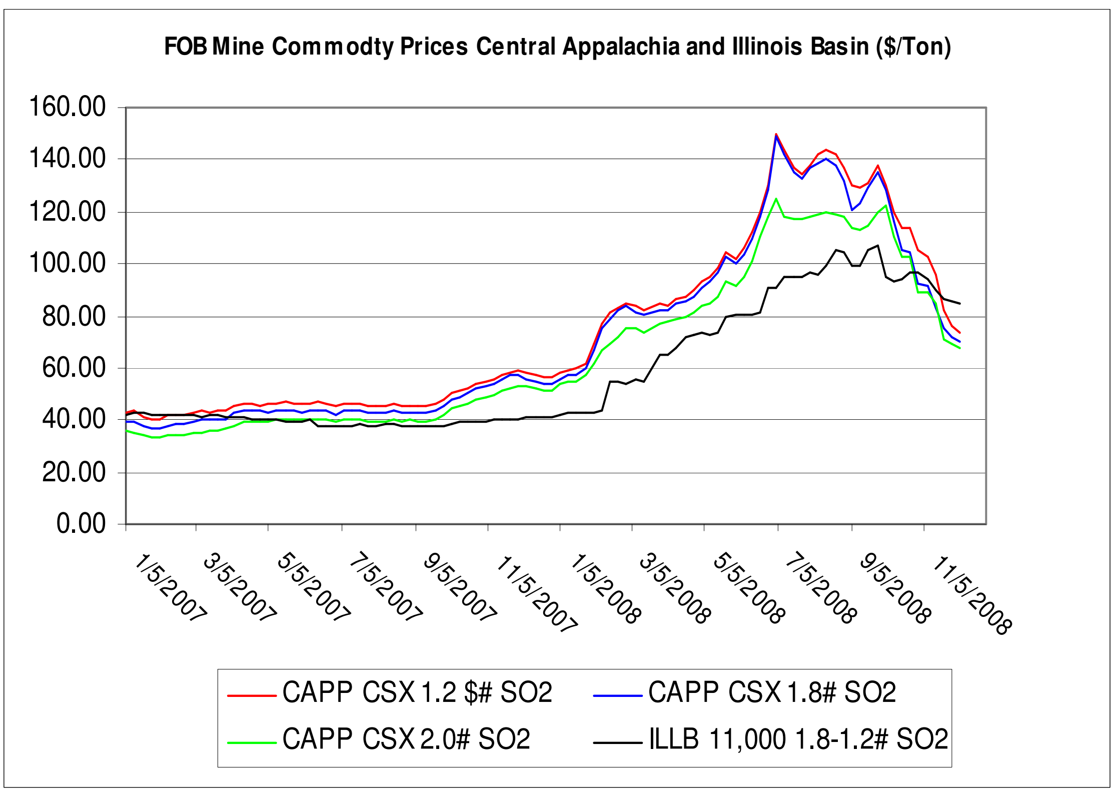
At the end of 2008, GRU's long-term contract expires, requiring GRU to rebid this contract. Based on current market conditions, new long-term and short-term contracts will likely be at significantly higher prices than those experienced over the last three years. Recent pressures from overseas markets have had significant impacts on coal prices. Market conditions are enabling suppliers to receive higher prices per ton then have been experienced in many years.

In 2009, the Deerhaven Air Quality Control System is expected to be completed. The retrofit will result in the installation of scrubber systems which will remove particulates and gases from exhaust steams. This enhancement will enable GRU to purchase a lower grade coal, while still meeting Environmental Protection Agency guidelines. This flexibility to purchase lower grade coal will hopefully provide customers with ongoing savings from purchasing higher grade coal. However, there will be some constraints as GRU will require two grades of coal during the next contract process, until the scrubber is fully functional, which may limit the pool of potential suppliers. Despite GRU's future ability to purchase lower quality coal during the next contract process, it is expected that even the lower grade coal prices will be significantly higher than the prices GRU has experienced in the last three years.

GRU has also reviewed the possibility of purchasing coal from Central and South America which would then require barging and rail transportation. Although some utilities do this effectively, Gainesville's location has not made it a cost-efficient and viable option. Fuels Management continues to monitor and evaluate this option and if the costs become economically feasible, this may be an option in future years.

<u>Management Comment</u>

At the time the CAO was conducting its audit, the domestic coal market had been driven to historically high levels and prices. The chart below illustrates coal prices in the Central Appalachia and Illinois Basin from January 2007 through November 2008.



The FOB mine price for Central Appalachian Compliance coal increased from $58.25/ton ($2.33/MMBtu) in January 2008 to a peak of $148.50/Ton ($5.94/MMBtu) in July 2008.

Due to declines in the inflated prices of oil and natural gas, fuel switching from coal to gas by utilities and reductions in demand for power in some regions, the compliance coal market has declined by $74.25/Ton to its current price of $74.00/Ton ($2.97/MMBtu) at the mine.

Coal prices continue to decline. GRU anticipated the decline and immediately solicited RFP's for long term coal supply. These proposals received, which are under evaluation, potentially allows GRU to lock in much lower coal prices than we experienced earlier in the year for it customers for two to three years. GRU/Energy Supply Management has authorized FM to enter negotiations for a long term contract(s) for medium sulfur coal immediately.

ISSUE #1

Contract Extensions Should be Considered for Short-Term Contracts

Discussion

Twenty years ago it was common within the coal industry to have long-term contracts with suppliers that locked into a fixed rate over a significant number of years ranging from ten to twenty years. However, when coal prices decreased, utilities were unable to take advantage of the lower market rates. A shift was made in the industry to develop long-term contracts that ranged from three to five years in length with short-term and spot purchases contributing to the purchases made.

GRU Fuels Management uses a combination of long-term contracts, typically three years in length, and short-term contracts, typically one year in length, and spot market purchases as needed, when prices or inventory dictate, to maintain coal levels. This methodology is consistent with the practices within the utilities industry. However, some utilities include contract extensions of two or three years with short term contracts. Supplier contract extensions are usually tied to an agreed upon price index and are executed if both parties agree at the end of the initial contract. Extending the contract may be cost beneficial with either increasing or declining fuel prices as it allows both parties to save staff costs involved in preparing requests for proposals and responses as well as locking into a rate that may have a minimizing impact on customer fuel charges during an increasing fuel market.

Conclusion

Short-term coal contracts are limited to one and two years and do not include optional extensions.

Recommendation

We recommend management consider extensions for short-term contracts as is GRU's current practice with long-term contracts. This would provide additional staff savings preparing requests for proposals and potentially minimize the impact of rising fuel costs to customers.

Management Response

Staff agrees with CAO concept of the use of extensions for short term contracts, if feasible. However, while a specific extension option was not written into the contract for the two short term contracts, in both cases for the short term contracts that expired, FM sought to extend the contracts but was unable to reach agreement on the price with the supplier. Even with the option included in the contract, the result would have been the same since the option would require agreement on price for both parties. FM generally uses short term contracts to evaluate the performance of new suppliers without taking on the risk of a long term contract. Both GRU and the supplier go into the deal with the understanding that mutually acceptable performance and agreement on a long term price will lead to a longer contract.

ISSUE #2

Suppliers Certified Scale Documentation Process Should Be Strengthened

Discussion

Coal is purchased and shipped on a per-ton basis. Costs for purchases and transit are based on weight recorded at the point of origin. Scales are used to invoice coal and transit costs. All suppliers have scales in which the rail car is weighed and then loaded with coal to measure the total tonnage shipped to a client. The vendor then creates a waybill that is sent to GRU and CSX. When the coal is delivered, CSX bills GRU based on tonnage. Some utilities use their own scales when measuring coal to match against the vendor's scale. However, the costs of installing, operating and maintaining scales are significant, as a result, many utilities rely upon supplier scales with the caveat within the contract that the scale must be independently certified on an annual basis.

Certified scales are to be used by coal suppliers to weigh all coal delivered to Deerhaven. Since coal supplier and rail transport contract prices are based on tonnage, scales must be accurate to ensure GRU is receiving and paying for the tonnage purchased. Our testing found no discrepancies between the coal suppliers and CSX with regard to weight shipped based on waybills and invoices. However, a required copy of the annual scale certification was not on file at GRU.

Conclusion

Although a copy of the scale certification was later forwarded to cover the time-frame tested, GRU should ensure that coal vendors comply with the terms of the contract. Obtaining copies of scale certification provides GRU greater assurance that supplier scales used to measure coal can be relied upon, helping to ensure the tonnage recorded is accurate for coal purchase and transportation costs.

Recommendation

We recommend GRU ensure all scale certificates are received annually by suppliers, reviewed and maintained in the suppliers file. Each year, the primary contractor should be contacted to provide a copy of the most recent scale certification to ensure suppliers' scales can be relied upon to accurately reflect quantities purchased and invoiced.

Management Response

Staff agrees with the CAO that the Management Control Process for supplier scale certification has not been followed consistently. Staff agrees that the process of verifying scale certifications must be consistently maintained and the supporting documentation audited internally each year. This issue has been discussed with FM Staff and corrective action has been implemented.