Exhibit No.
Issue: Fuel and Energy
Witness: Richard L. McCord
Type of Exhibit: Supplemental
Direct Testimony
Sponsoring Party: Empire District
Case No. ER-2006-0315

Before the Public Service Commission
of the State of Missouri

Supplemental Direct Testimony

of

Richard L. McCord

July 2006

Denotes Highly Confidential

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SUPPLEMENTAL DIRECT TESTIMONY
OF
RICHARD L. MCCORD
ON BEHALF OF
THE EMPIRE DISTRICT ELECTRIC COMPANY
BEFORE THE
MISSOURI PUBLIC SERVICE COMMISSION
CASE NO. ER-2006-0315

I. INTRODUCTION

Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A. My name is Richard L. McCord and my business address is 602 Joplin Street, Joplin, Missouri.

Q. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A. I am presently employed by The Empire District Electric Company. ("Empire" or "Company") as the Director of Supply Management. I have held the position of Director over the area responsible for procurement and hedge activities surrounding natural gas, in addition to various other areas, since 1995. Prior to being Director, I worked as Manager and Staff Engineer in the System Operations department, which included Transmission/Generation Dispatch from 1987-1995. Prior to 1987, I was in Transmission Engineering where I began employment with Empire in Dec 1984. I hold a BS degree in Electrical Engineering from University of Missouri – Rolla. .

Q. WHAT IS THE PURPOSE OF YOUR SUPPLEMENTAL DIRECT TESTIMONY IN THIS CASE BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION ("COMMISSION")?

A. My testimony will provide a portion of the additional fuel and energy information requested by the Commission its Order Requiring Additional Information or Supplemental Filing (Order) issued June 20, 2006 in this case.

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Q. PLEASE DESCRIBE HOW YOUR TESTIMONY IS ARRANGED.

A. My testimony will respond to questions 2, 3 and 4 of the Order. I have arranged my testimony into sections. Specifically, in Section II of my testimony, I will provide the historical natural gas usage patterns for the Empire system. In Section III of my testimony, I will outline the overall cost of energy, including the cost of natural gas for the next 3 years utilizing various types of hedging instruments as of July 10, 2006, to fix the future cost of natural gas. In Section IV of my testimony, I will address the Commission's question involving an Empire hedging strategy that would provide the most benefit to customers over the next 3 years.

II. EMPIRE'S HISTORICAL NATURAL GAS USAGE PATTERNS

Q. PLEASE PROVIDE THE COMMISSION WITH INFORMATION ON EMPIRE'S HISTORICAL NATURAL GAS CONSUMPTION.

A. The following tables and graph show Empire's natural gas usage by month over the most recent five-year period:

Table 1 –Monthly Natural Gas Usage for Empire Generation

Month	2001	2002	2003	2004	2005
Jan	17,850	1,162,992	680,005	813,201	982,016
Feb	150,524	781,388	279,972	895,495	534,703
Mar	47,724	631,028	308,378	628,610	893,188
Apr	112,212	623,221	1,018,936	583,865	467,355
May	84,423	518,470	512,097	626,953	1,060,785
Jun	458,943	635,423	377,956	835,064	1,246,890
Jul	1,689,531	1,419,682	1,185,653	880,865	1,449,618
Aug	1,688,256	1,260,810	1,444,713	698,204	1,479,472
Sep	641,931	396,770	28,291	757,012	1,041,790
Oct	825,535	6,237	22,990	447,997	435,426
Nov	760,097	309,869	170,607	140,619	507,346
Dec	944,853	29,991	420,009	471,025	964,328
Total	7,421,879	7,775,881	6,449,607	7,778,910	11,062,917

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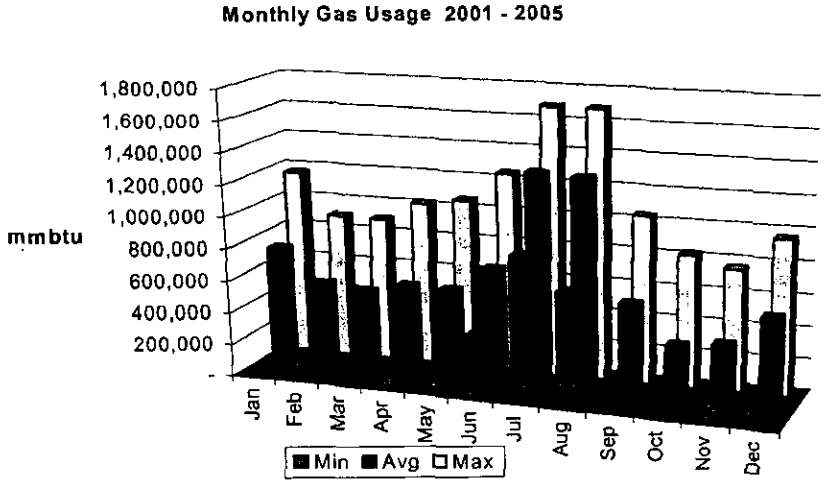
Table 2 – Range of Monthly Natural Gas Usage for Empire Generation

Month	Min	Avg	Max
Jan	17,850	731,213	1,162,992
Feb	150,524	528,416	895,495
Mar	47,724	501,786	893,188
Apr	112,212	561,118	1,018,936
May	84,423	560,546	1,060,785
Jun	377,956	710,855	1,246,890
Jul	880,865	1,325,070	1,689,531
Aug	698,204	1,314,291	1,688,256
Sep	28,291	573,159	1,041,790
Oct	6,237	347,637	825,535
Nov	140,619	377,708	760,097
Dec	29,991	566,041	964,328

Chart 1



As displayed in the tables and charts Empire's historical natural gas consumption has varied significantly both annually and monthly.

Q. WHAT CAUSES THE VARIABILITY IN NATURAL GAS USAGE ON EMPIRE'S SYSTEM?

A. As indicated in Table 1 and Chart 1, there has been extreme variability in the demand for natural gas by Empire's generating units from month to month and from year to year. This variability is due to several factors, but those that figure most prominently are weather, generating unit outages on both the Empire system and other neighboring utility systems, and the availability of spot or short-term electric purchases that can be made at a favorable price. Historically, the variations in usage in the months of January, February, July, August, November, and December are generally weather related. Incidentally, these months generally coincide with the peak demands for electricity on the Empire system. The remaining months' variability tends to be more related to generating unit outages than weather abnormalities. Of course there are exceptions to both of these general statements. As the historical data shows, only the months of July and August have significant levels of consistent demand for natural gas. Empire's annual peak demand also tends to occur during these two summer months.

III. COST TO HEDGE 100% OF EMPIRE'S ESTIMATED NATURAL GAS REQUIREMENTS OVER THE NEXT 3 YEARS

Q. HOW MUCH NATURAL GAS DOES EMPIRE EXPECT TO BURN OVER THE NEXT THREE (3) CALENDAR YEARS, 2007 THROUGH 2009?

A. As explained by Todd Tarter in his supplemental direct testimony Empire expects to consume **_____** MMBtu in 2007, **_____** MMBtu in 2008, and **_____** in 2009.

Q. HOW MUCH NATURAL GAS DOES EMPIRE ALREADY HAVE HEDGED OR UNDER CONTRACT FOR THE 3 YEAR PERIOD 2007 THROUGH 2009 AS A RESULT OF ITS EXISTING RISK MANAGEMENT POLICY?

A. Empire instituted a comprehensive risk management policy for its natural gas procurement in 2001. Through the ongoing operation of this policy, Empire has already fixed the price of a significant portion of its expected natural gas requirements for the calendar years 2007 through 2009. As of July 10, 2006, Empire has **_____** MMBtu of natural gas hedged at **_____**/MMBtu for calendar year 2007; **_____** MMBtu of natural gas hedged at **_____**/MMBtu for calendar year 2008; and **_____** MMBtu of natural gas hedged at **_____**/MMBtu for calendar year 2009.

Q. HOW MUCH ADDITIONAL NATURAL GAS DOES EMPIRE NEED TO HEDGE OR ACQUIRE TO HAVE 100 PERCENT OF THE COST OF ITS EXPECTED NATURAL GAS REQUIREMENT FIXED FOR THE THREE (3) CALENDAR YEARS 2007 THROUGH 2009?

A. As of July 10, 2006 Empire would need to acquire or hedge **_____** MMBtu for calendar year 2007; **_____** MMBtu for calendar year 2008; and **_____** MMBtu for calendar year 2009 to fully fix the price of its expected gas consumption under normal weather and unit outage assumptions. These amounts are needed in varying quantities during the various months of each of the upcoming calendar years.

Q. WHAT HEDGING STRATEGIES CAN EMPIRE UTILIZE TO FIX THE PRICE OF 100 PERCENT OF ITS EXPECTED NATURAL GAS REQUIREMENTS FOR THE NEXT THREE (3) CALENDAR YEARS, 2007 THROUGH 2009?

A. As I indicated earlier, Empire has already fixed or hedged the cost of a significant portion of its expected natural gas consumption for each of these future calendar years through the application of its current Risk Management Policy ("RMP"). There are a number of strategies that can be used to fix the cost of the remaining natural gas requirements in each of these future calendar years. For purposes of this testimony, Empire has chosen to compare the costs associated with two (2) different hedging strategies and discuss three (3) other hedging strategies that could be used. A comprehensive analysis of the cost impact associated with the latter two strategies could not be completed in time to file with this testimony. The hedging approaches the Company reviewed are:

- Fixed price physical natural gas contracts
- Fixed price financial contracts commonly referred to as swaps
- NYMEX futures contracts
- Call options
- Collars

Q. HOW MUCH WOULD IT COST EMPIRE TO UTILIZE A FIXED PRICE PHYSICAL NATURAL GAS CONTRACT TO FIX ITS FUTURE NATURAL GAS COSTS FOR CALENDAR YEARS 2007 THROUGH 2009?

A. In order to perform this analysis Empire requested price quotes from various natural gas suppliers and analyzed the impact those price quotes had on the Company's expected production cost for the calendar years 2007 through 2009. On July 10, Empire solicited prices from gas suppliers to cover its remaining, non-hedged, natural gas requirements for each of the calendar years 2007 through 2009. The prices obtained from these suppliers represent the cost associated with natural gas delivered to the Production Zone on Southern

Star Central Gas Pipeline ("SSCGP") system. In terms of a cost per million British Thermal Units ("MMBtu"), the monthly prices quoted averaged **_____** in 2007, **____** in 2008, and **____** in 2009. The cash payments for these quantities would occur in the months delivery is taken. A monthly summary of these price quotes and associated calculations are included as Schedule RLM-1 to my testimony.

Schedule RLM-1

Quote Date 7/10/2006

Date	Budget Dths	Unhedged DThs	** ** SS Basis	** ** NYMEX	** ** Fixed Ind.	** ** ** ** SS Basis	** ** Price	** ** SS Basis	** ** NYMEX	** ** Price
Jan-07	** **	** **	** **	** **	** **			** **	** **	** **
Feb-07	** **	** **	** **	** **	** **			** **	** **	** **
Mar-07	** **	** **	** **	** **	** **			** **	** **	** **
Apr-07	** **	** **	** **	** **	** **			** **	** **	** **
May-07	** **	** **	** **	** **	** **			** **	** **	** **
Jun-07	** **	** **	** **	** **	** **			** **	** **	** **
Jul-07	** **	** **	** **	** **	** **			** **	** **	** **
Aug-07	** **	** **	** **	** **	** **			** **	** **	** **
Sep-07	** **	** **	** **	** **	** **			** **	** **	** **
Oct-07	** **	** **	** **	** **	** **			** **	** **	** **
Nov-07	** **	** **	** **	** **	** **			** **	** **	** **
Dec-07	** **	** **	** **	** **	** **	** **	** **	** **	** **	** **
Jan-08	** **	** **	** **	** **	** **			** **	** **	** **
Feb-08	** **	** **	** **	** **	** **			** **	** **	** **
Mar-08	** **	** **	** **	** **	** **			** **	** **	** **
Apr-08	** **	** **	** **	** **	** **			** **	** **	** **
May-08	** **	** **	** **	** **	** **			** **	** **	** **
Jun-08	** **	** **	** **	** **	** **			** **	** **	** **
Jul-08	** **	** **	** **	** **	** **			** **	** **	** **
Aug-08	** **	** **	** **	** **	** **			** **	** **	** **
Sep-08	** **	** **	** **	** **	** **			** **	** **	** **
Oct-08	** **	** **	** **	** **	** **			** **	** **	** **
Nov-08	** **	** **	** **	** **	** **			** **	** **	** **

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Dec-08	** **	** **	** **	** **	** **	** **	** **	** **	** **	** **	** **	** **
Jan-09	** **	** **	** **	** **	** **				** **	** **	** **	** **
Feb-09	** **	** **	** **	** **	** **				** **	** **	** **	** **
Mar-09	** **	** **	** **	** **	** **				** **	** **	** **	** **
Apr-09	** **	** **	** **	** **	** **				** **	** **	** **	** **
May-09	** **	** **	** **	** **	** **				** **	** **	** **	** **
Jun-09	** **	** **	** **	** **	** **				** **	** **	** **	** **
Jul-09	** **	** **	** **	** **	** **				** **	** **	** **	** **
Aug-09	** **	** **	** **	** **	** **				** **	** **	** **	** **
Sep-09	** **	** **	** **	** **	** **				** **	** **	** **	** **
Oct-09	** **	** **	** **	** **	** **				** **	** **	** **	** **
Nov-09	** **	** **	** **	** **	** **				** **	** **	** **	** **
Dec-09	** **	** **	** **	** **	** **	** **	** **	** **	** **	** **	** **	** **
Year	** **	** **	** **	** **								
2007	** **	** **	** **	** **								
2008	** **	** **	** **	** **								
2009	** **	** **	** **	** **								

Q. HOW WERE THESE NATURAL GAS PRICE QUOTES USED TO DEVELOP THE TOTAL EXPECTED FUEL AND PURCHASED POWER COST FOR EMPIRE FOR EACH OF THE CALENDAR YEARS IN QUESTION?

A. Mr. Tarter utilized these current price quotes for additional physical natural gas purchases in Empire's production model to arrive at an overall fuel and energy cost for the Empire system for each of the upcoming three calendar years. Other than the changes made to the cost of natural gas, the other production model inputs were left unchanged from those originally included in the development of Empire's 2007, 2008 and 2009 budget. As explained in Mr. Tarter's supplemental direct testimony, this process resulted in overall energy costs of **_____** in 2007, **_____** in 2008, and **_____** in 2009, including fixed charges. These costs equate to an average cost

of **_____** per Mwh in 2007, **_____** per Mwh in 2008, and **_____** per Mwh in 2009.

Q. WHAT ARE THE PROJECTED ENERGY COSTS IF EMPIRE USES A FINANCIAL SWAP CONTRACT TO FIX ITS COST OF NATURAL GAS FOR CALENDAR YEARS 2007 THROUGH 2009?

A. Again this analysis involved a request for price quotes from various suppliers, and an analysis of the impact of those price quotes on overall production costs through the use of our production model. On July 10, Empire also requested financial SWAP pricing from gas marketers to fix its remaining non-hedged natural gas requirements for calendar years 2007, 2008, and 2009. The quantities requested were identical to the volumes that were required in my earlier example. The SWAP prices obtained were based on settlement at the SSCGP pipeline system. In terms of an average cost per MMBtu, the SWAP prices quoted and the current natural gas Empire has under contract resulted in an average cost per MMBtu of **_____** in 2007, **_____** in 2008, and **_____** in 2009. The cash payments for these quantities would occur at time of settlement, unless a collateral threshold with a counterparty is reached requiring posting of cash prior to delivery As indicated in Mr. Tarter's supplemental direct testimony, if a SWAP hedging strategy is employed to fix the cost of natural gas for calendar years 2007, 2008 and 2009, Empire' projected cost of energy is **_____** in 2007, **_____** in 2008 and **_____** in 2009.

Q. WHAT IS THE IMPACT IF A NYMEX CONTRACT STRATEGY IS USED TO HEDGE THE COST OF NATURAL GAS FOR THE CALENDER YEARS IN QUESTION?

A. This analysis involves the same series of steps that were used in the first two cases, obtain or determine prices for the natural gas component of the analysis, in this case a NYMEX futures contract, and use the production model to quantify the results. NYMEX contracts settle at the Henry Hub in Louisiana. There is typically a price differential between the Henry Hub and the Southern Star Central Pipeline system which provides natural gas transportation to the Empire system. This difference in price is referred to as basis differential. In order to make NYMEX contracts "effective" under FAS 133, Empire must place a corresponding basis contract in place at the same time. We expect the combination of NYMEX contracts and the basis contracts to approximate the costs calculated in the financial swap and physical estimates above so Empire did not complete an overall cost estimate with this alternative. As with the swap contract described above, cash margin payments would be required by Empire if the market dropped. This process is effectively how the financial swap prices for direct SSCGP quotes are developed by counterparties and therefore closely parallels the previously described SSCGP swap pricing. Price differences in the two methods can be attributed to timing of when quotes are prepared and individual counterparty risk and profit strategies.

Q. HOW CAN NYMEX FUTURES OPTIONS BE UTILIZED AS PART OF THE HEDGE STRATEGY?

A. My discussion will focus on NYMEX contracts although other types of contracts could be utilized. Call Options provide a way to purchase the right to buy the Nymex Contracts described previously, at a defined price per MMBtu, at a date in the future that is closer to the settlement date of the NYMEX contract, without having to commit to the NYMEX contract today. For example, monthly NYMEX contracts for Calendar 2007 could be

purchased on July 10, 2006. These contracts can be purchased at the market price value of natural gas on July 10 for those future months. Once purchased, Empire would be obligated to the volume and costs associated with the contract purchases on July 10th. As an alternative to making this sort of contractual commitment, Empire could purchase Call Options to cover the same volumes and price defined by the NYMEX contracts. This approach would allow Empire to not purchase the NYMEX contract if the market price for natural gas drops subsequent to the July 10th purchase date and prior to the settlement date of the NYMEX contract. In order to take advantage of the flexibility in this approach, Empire would have to pay an option premium of approximately 10-15% to the NYMEX futures price on July 10th.

Q. ARE THERE OTHER APPROACHES USING THE NYMEX FUTURES MARKET THAT REDUCE THE COST OF CALL OPTIONS WHILE STILL ALLOWING EMPIRE TO TAKE ADVANTAGE OF FALLING PRICES?

A. Yes. One can offset the cost of Call Options by committing to other option instruments where counterparties pay a premium for the right to sell you future NYMEX contracts or physical gas. This premium can then be used to pay the premium on Call Options you are purchasing. The most common way this is done is using a combination of Call Options and Put Options to create a collar. Put Options provide the owner of the option the right to "sell" futures contracts in contrast to Call Options that provide their owner the right to "buy" NYMEX contracts at some future date and defined price.

Q. PLEASE GIVE THE COMMISSION AN EXAMPLE OF USING A COLLAR TO FIX NATURAL GAS PRICES.

A. First, assume that January 2007 natural gas NYMEX contracts are priced at $10.35 per MMBtu on July 10, 2006. A purchaser, in order to be able to take advantage of falling natural gas prices , that may occur prior to the settlement date in the contract, would purchase January 2007 Call Option with an $11.35 per MMBtu strike price and at the same time sell a January 2007 Put Option with a $9.90 per MMBtu strike price. The premium on July 10th for the Call Option is $1.40 per MMBtu which must be paid to purchase the option on July 10th. The premium received from the sale of the Put Option is also approximately $1.40 per MMBtu. These two Option contracts create a "Costless Collar" around the January 2007 NYMEX futures contract that allows the holder to take advantage of the January 2007 NYMEX contract dropping in price from $10.35 to $9.90 per MMBtu. However, to obtain this advantage you must risk the price moving up from $10.35 to $11.35. In other words you must risk a $1 rise in price to get the opportunity to save $0.45. As I indicated earlier, given the filing deadlines associated with this testimony, Empire was unable to quantify the financial impact associated with the two option approaches to hedging.

IV. APPROPRIATE HEDGING STRATEGY FOR THE NEXT 3 YEARS

Q. WHAT HEDGING STRATEGY DOES EMPIRE BELIEVE IS THE MOST BENEFICIAL OVER THE NEXT 3 YEARS?

A. Empire believes that its current RMP or hedging strategy has been shown to be effective in mitigating price volatility and we recommend that our approach continued to be used over the next three years. Empire's approach is a dollar cost averaging approach that purchases a portion of requirements over several years and targets low price points compared to

historical averages. Empire's approach is balanced and considers the extreme volatility and uncertainty in both natural gas pricing and volume demand that exists in the current environment. In addition, the approach is disciplined with benchmarks that require a commitment to minimum volumes by a date certain to avoid encountering a natural gas requirement without committed resources and being completely subject to spot market natural gas prices. Due to the high option premiums, 10 to 15 percent, associated with Put and Call Options in high price volatility markets, Empire has minimized the use of these types of contracts, judging them to provide little value compared to the costs. Of course, Empire's current approach is only one of many, and the Company is open to other strategies and methods if they have merit and pass regulatory scrutiny.

Q. BRIEFLY DESCRIBE THE HISTORY BEHIND EMPIRE'S POLICY.

A. During 2001 Empire developed and implemented its RMP. The RMP is attached to and more fully described in the direct testimony of Todd Tarter filed in this case on February 1, 2006. In general terms, the RMP requires Empire to hedge a minimum quantity of its natural gas requirements for periods extending at least three years beyond the current calendar year. For instance, the Empire RMP requires that by December 31, 2006, Empire must have at least 60% of its expected annual 2007 natural gas requirements hedged, at least 40% of its annual 2008 natural gas requirements hedged and at least 20% of its annual 2009 natural gas requirements hedged.

Q. HOW DOES EMPIRE ESTABLISH ITS EXPECTED NATURAL GAS REQUIREMENTS FOR FUTURE YEARS?

A. The departments and employees in Empire's planning groups utilize a computer model to simulate economic dispatch of the Empire generation and supply resources using normal

weather conditions. The output from this model is utilized to establish Empire's expected natural gas requirement.

Q. WHY HAS EMPIRE IMPLEMENTED THIS RISK MANAGEMENT STRATEGY?

A. Empire implemented this strategy primarily to limit the volatility of natural gas fuel costs. By hedging a portion of its natural gas requirements each year, Empire has limited the exposure to natural gas price spikes while at the same time giving up some of the opportunity to buy natural gas at the lower prices that may be available in the marketplace from time-to-time.

Q. HOW WOULD YOU CHARACTERIZE EMPIRE'S GAS HEDGING PROGRAM?

A. It has been effective.

Q. PLEASE EXPLAIN.

A. As part of the base objective of removing volatility, the strategy provides for known future costs that allow for improved budgeting and planning decisions. In addition, due to the rising natural gas market during the period that Empire has implemented this program, from the period Jan 2003 through December 2005 the Company's natural gas procurement plan, as outlined in the RMP, has enabled Empire to spend $28 million less on natural gas than if it had simply purchased all of its natural gas requirements at first of month index prices. Table 3 compares Empire's actual monthly costs through this period and the First-of-the-month ("FOM") Index prices for the same period.

Table 3 Empire Natural Gas Costs 2003-2005 Compared to Williams FOM Index

Gas Consumption

Does not include firm transportation, does include derivative gain/loss

Date	MMBTU	$	$/MMBTU		Williams index from GPR V v	
2003 Jan	680,005	1,245,580.04	1.8317		3,141,623	4.620
Feb	279,972	781,012.27	2.7896		1,433,457	5.120
Mar	308,378	(1,198,060.46)	(3.8850)	includes $2.8 million gain on derivatives	2,636,632	8.550
Apr	1,018,936	4,392,651.22	4.3110		5,769,216	5.662
May	512,097	1,672,905.99	3.2668		2,679,292	5.232
Jun	377,956	714,291.63	1.8899		2,154,349	5.700
Jul	1,185,653	4,311,526.32	3.6364		6,129,826	5.170
Aug	1,444,713	6,082,577.77	4.2102		6,602,338	4.570
Sep	28,291	(159,051.63)	(5.6220)	includes $793K gain on derivatives	134,948	4.770
Oct	22,990	(167,815.51)	(7.2995)	199,175 dth sold, includes gain on sale	98,627	4.290
Nov	170,607	437,368.24	2.5636		713,137	4.180
Dec	420,009	1,819,128.65	4.3312		1,839,639	4.380
	6,449,607	19,932,114.53	3.0904		33,333,084.25	5.168
2004 Jan	813,201	3,636,660.35	4.4720		4,618,982	5.680
Feb	895,495	3,656,930.38	4.0837		4,714,781	5.265
Mar	628,610	1,738,053.62	2.7649		2,929,323	4.660
Apr	583,865	2,617,103.34	4.4824		2,869,696	4.915
May	626,953	3,192,948.90	5.0928		3,404,355	5.430
Jun	835,064	4,159,243.16	4.9807		5,085,540	6.090
Jul	880,865	3,342,406.02	3.7945		5,153,060	5.850
Aug	698,204	2,410,407.77	3.4523		3,992,330	5.718
Sep	757,012	2,662,850.53	3.5176		3,635,172	4.802
Oct	447,997	2,076,656.72	4.6354		2,132,466	4.760
Nov	140,619	(1,129,012.93)	(8.0289)	includes $1.9 million gain on derivatives	987,145	7.020
Dec	471,025	2,510,185.88	5.3292		2,920,355	6.200
	7,778,910	30,874,433.74	3.9690		42,443,204.93	5.456
2005 Jan	982,016	6,046,166.68	6.1569		5,659,358	5.763
Feb	534,703	3,537,963.88	6.6167		3,062,779	5.728
Mar	893,188	5,337,933.83	5.9763		5,094,744	5.704
Apr	467,355	2,538,609.00	5.4319		3,081,272	6.593
May	1,060,785	6,377,977.59	6.0125		6,937,534	6.540
Jun	1,246,890	7,646,217.11	6.1322		7,322,985	5.873
Jul	1,449,618	8,657,651.63	5.9724		9,329,741	6.436
Aug	1,479,472	5,020,409.97	3.3934		9,760,077	6.597
Sep	1,041,790	10,466,004.16	10.0462		8,727,075	8.377
Oct	435,426	4,125,965.73	9.4757		4,436,991	10.190
Nov	507,346	2,782,725.54	5.4849		5,372,794	10.590
Dec	964,328	11,430,780.99	11.8536		8,524,660	8.840
	11,062,917	73,968,406.11	6.6862		77,310,009.39	6.988
Savings 2001-2005		124,774,954			153,086,299	
Savings 2003-2005					28,311,344	

As discussed earlier in my testimony, Empire's RMP is not rigid in that it enables the employees in charge of implementing the RMP to insert business judgment into the decisions associated with determining when and how much natural gas to hedge.

Q. DO YOU EXPECT EMPIRE'S RMP TO BEAT THE NATURAL GAS MARKET PRICES BY A SIMILAR AMOUNT IN THE FUTURE?

A. No. As I stated before, Empire's goal is to provide some price stability by taking out the absolute highs and lows in the natural gas market. When the results of the strategy are compared to individual spot month market prices, Empire's costs may be higher or lower than spot market prices. Empire's approach to natural gas procurement is based on a long term view of the natural gas market and the mitigation of price volatility in the long run.

Q. PLEASE RECAP THE COST OF ENERGY EMPIRE WOULD EXPECT TO INCURR IF THE VARIOUS APPROACHES TO NATURAL GAS HEDGING THAT YOU DISCUSSED EARLIER IN YOUR TESTIMONY ARE USED.

A. The following table recaps the results under each of the different approaches to hedging the price of Empire's open natural gas positions for calendar years 2007, 2008 and 2009.

Scenarios	Calendar 2007	Calendar 2008	Calendar 2009
Fixed Price-Physical	** **	** **	** **
Average Cost-Physical-Mwh	** **	** **	** **
SWAP	** **	** **	** **
Average Cost-SWAP	** **	** **	** **

As indicated the costs under the fixed physical forward result in costs that are slightly lower than those that can be locked in under the SWAP approach. If either of these two approached are implemented, the costs associated with each would represent fixed costs that will not decline if the natural gas market declines over the next three calendar years.

Q. DOES THIS CONCLUDE YOUR SUPPLEMENTAL DIRECT TESTIMONY?

A. Yes.