

Exhibit No.  
Issue: Fuel and Purchased Power  
Expenses, IEC, Energy Center Cost  
Witness: Brad P. Beecher  
Type of Exhibit: Rebuttal Testimony  
Sponsoring Party: Empire District  
Case No. ER-2004-0570  
Date Testimony Prepared: November 4, 2004

**Before the Public Service Commission  
of the State of Missouri**

**FILED<sup>3</sup>**

DEC 2 8 2004

**Rebuttal Testimony**

**of**

**Missouri Public  
Service Commission**

**Brad P. Beecher**

**November 2004**

**\*\*Denotes Highly Confidential Information\*\***

Exhibit No. 6 NP  
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Date 12-06-04 Rptr xf

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AFFIDAVIT

STATE OF MISSOURI )  
 ) ss  
COUNTY OF JASPER )

On the 2nd day of November, 2004, before me appeared Brad P. Beecher, to me personally known, who, being by me first duly sworn, states that he is the Vice President – Energy Supply of The Empire District Electric Company and acknowledged that he has read the above and foregoing document and believes that the statements therein are true and correct to the best of his information, knowledge and belief.

Brad P. Beecher  
Brad P. Beecher

Subscribed and sworn to before me this 2<sup>nd</sup> day of November, 2004

Patricia A. Settle  
Pat Settle, Notary Public

My commission expires:

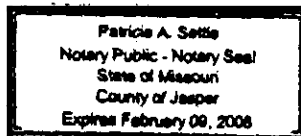


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BRAD P. BEECHER  
THE EMPIRE DISTRICT ELECTRIC COMPANY  
BEFORE THE  
MISSOURI PUBLIC SERVICE COMMISSION

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REBUTTAL TESTIMONY  
OF  
BRAD P. BEECHER  
ON BEHALF OF  
THE EMPIRE DISTRICT ELECTRIC COMPANY  
BEFORE THE  
MISSOURI PUBLIC SERVICE COMMISSION  
CASE NO. ER-2004-0570

1 **I. INTRODUCTION**

2 **Q. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

3 A. Brad P. Beecher. My business address is 602 Joplin Street, Joplin, Missouri.

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

5 A. The Empire District Electric Company ("Empire" or "Company"). I am Vice President –  
6 Energy Supply.

7 **Q. ARE YOU THE SAME BRAD P. BEECHER WHO PREVIOUSLY FILED**  
8 **DIRECT TESTIMONY IN THIS CASE BEFORE THE MISSOURI PUBLIC**  
9 **SERVICE COMMISSION ("COMMISSION") ON BEHALF OF THE**  
10 **COMPANY?**

11 A. Yes.

12 **Q. WHAT IS THE PURPOSE OF THIS TESTIMONY?**

13 A. The purpose of my rebuttal testimony is to respond to the positions taken in the direct  
14 testimony of other parties on fuel and purchased power expenses. I will also explain how  
15 natural gas prices have risen since the time Empire filed this case and how this increase has  
16 significantly impacted our anticipated level of fuel and purchased power expenses. I will  
17 also rebut the testimony of Staff witnesses David Elliot and Roberta McKiddy concerning

the proposed disallowance of a portion of the project costs related to the construction of Energy Center Units 3 & 4.

**II. FUEL AND PURCHASED POWER EXPENSE**

**Q. PLEASE PROVIDE A TABLE SUMMARIZING THE DIRECT TESTIMONY FILINGS OF EACH OF THE PARTIES AS YOU UNDERSTAND THEM.**

**A.**

**Direct Filing Positions<sup>1</sup>**  
**Total Company On-System Fuel & Purchased Power Expense**

		<b><u>Total On-System Fixed &amp; Variable Fuel &amp; PP \$</u></b>	<b><u>Average Nat Gas Price \$/MMBtu</u></b>
Staff	IEC Floor	107,436,748	3.20
	IEC Ceiling	130,888,272	5.62
OPC	Base	<sup>2</sup>	4.59
Explorer/Praxair	IEC Floor	110,000,000	3.20 <sup>3</sup>
	IEC Ceiling	120,000,000	4.20
Empire <sup>4</sup>	Base	123,017,390	4.71
	IEC Floor	105,000,000	3.02
	IEC Ceiling	125,000,000	5.50

**Q. WHAT IS EMPIRE'S CURRENT POSITION?**

A. Based on current gas prices as of October 27, 2004, Empire supports base rates of \$140,840,180. This new position reflects an increase of \$17,823,000 over our direct testimony filed position in April of 2004.

Alternatively, in direct testimony Empire also proposed an IEC rider as utilized by Empire as a result of our 2001 Missouri rate proceeding. We continue to support a properly crafted IEC mechanism which would be designed to allow Empire to recover all of it's prudently incurred fuel and purchased power charges.

<sup>1</sup> All Fuel & Purchased Power numbers are Total Company On-System – Not Missouri Jurisdictional

<sup>2</sup> OPC only filed gas costs in their Direct Testimony. They did file testimony on an all-inclusive number.

<sup>3</sup> Natural Gas prices for Explorer/Praxair were estimated by Empire.

<sup>4</sup> Empire filed tariffs that represented \$123,017,390 base rate expenses and an IEC tariff designed to collect \$20M.

1 **Q. WHAT CAUSED THIS SIGNIFICANT INCREASE FOR FUEL AND PURCHASED**  
2 **POWER COSTS?**

3 A. Quite simply an increase in natural gas prices.

6 **Q. CAN YOU PROVIDE A BRIEF HISTORY OF NATURAL GAS PRICES SINCE**  
7 **THE TIME THAT EMPIRE FILED THIS CASE?**

8 A. Empire filed this case based on a 2003 test year. At December 31, 2003 NYMEX natural  
9 gas futures for 2005 averaged 4.94 \$/MMBtu and for 2006 they averaged 4.72 \$/MMBtu.  
10 Empire filed the case on April 30, 2004. At that time the average NYMEX price for 2005  
11 was 5.62 \$/MMBtu and the average for 2006 was 5.18 \$/MMBtu. At the time of the pre-  
12 hearing conference on October 5, 2004, the average for 2005 grew to 7.09 \$/MMBtu and  
13 for 2006 it was 6.27 \$/MMBtu. At the time that this testimony was being prepared, on  
14 October 27, 2004, the average cost as indicated by NYMEX for 2005 was 8.04 \$/MMBtu  
15 and for 2006 it was 7.00 \$/MMBtu. I will utilize an average NYMEX price of  
16 \$7.50/MMBtu to represent current NYMEX pricing in the remainder of this testimony.  
17 The following chart summarizes the change in the natural gas price, and a graph appears as  
18 schedule BPB-1.

Event	Date	NYMEX Average 2005	NYMEX Average 2006
Test Year	12/31/2003	4.94	4.72
Case Filed	4/30/2004	5.62	5.18
Pre Hearing	10/5/2004	7.09	6.27
Basis of Rebuttal	10/27/2004	8.04	7.00

20  
21 **Q. HOW MUCH NATURAL GAS IS EMPIRE EXPECTED TO BURN IN A YEAR?**

1 A. In several Empire model runs for this case, the average annual gas burn is about 9,035,000  
2 MMBtu. In Staff's model runs, the average is roughly 10,544,000 MMBtu. The actual  
3 average natural gas consumption for the past three years has been 7,215,789 MMBtu.

4 The variability in consumption is caused by a number of factors such as natural gas  
5 prices, wholesale market prices, purchased power availability, plant outages and most  
6 notably weather. For examples in this testimony I will use a range of 8,000,000 to  
7 10,000,000 MMBtu for expected usage.

8 **Q. BASED ON THE RECENT INCREASE OF NATURAL GAS PRICES, WOULD**  
9 **THIS CHANGE THE AMOUNT OF FUEL AND PURCHASED POWER EXPENSE**  
10 **THAT THE COMPANY REQUESTED IN DIRECT TESTIMONY?**

11 A. Yes. Admittedly, based on the current market for natural gas and the expected market in  
12 the foreseeable future, Empire severely underestimated the price of natural gas at the time  
13 of filing this case. The price of natural gas is a key variable in the cost of serving our  
14 customers. For example, if Empire burned 8,000,000 to 10,000,000 MMBtu of natural gas  
15 in a year, then each \$1.00 increase in the price of natural gas would increase the natural gas  
16 expense by 8 to 10 million dollars.

17 **Q. WHERE IS THE PRICE OF NATURAL GAS EXPECTED TO BE FOR THE NEAR**  
18 **FUTURE?**

19 A. Empire agrees with Staff witness John P. Cassidy when he stated in his direct testimony on  
20 page 8 that "The Staff believes that given the current volatile state of natural gas prices no  
21 one can predict, with a reasonable degree of certainty, the natural gas prices that Empire  
22 will pay in the future to fuel their generating facilities." However, indicators for the next



few years may be provided by what you can buy for the future today, and by reviewing short term forecasts in various publications.

The first data for consideration is the NYMEX data in the table below.

NYMEX Futures \$/MMBtu

As of October 27, 2004

	2005	2006
Jan	9.900	8.175
Feb	9.865	8.135
Mar	9.405	7.875
Apr	7.670	6.715
May	7.295	6.495
Jun	7.315	6.510
Jul	7.340	6.520
Aug	7.360	6.550
Sep	7.320	6.525
Oct	7.345	6.533
Nov	7.665	6.786
Dec	7.955	7.184
Avg	8.04	7.00

Second, pursuant to Empire's hedging program on October 22, 2004 we hedged 400,000 Dth for November and December 2006 at an average cost of 6.72 \$/Dth. On October 25, 2004 we hedged 1,100,000 Dth for the second half of 2005 at an average cost of 6.83 \$/Dth. Combined with our previous positions, our 2005 actual hedged position is now 5,300,000 MMBtu at an average price of 4.71 \$/MMBtu, and our 2006 actual hedged position is 2,600,000 MMBtu at an average price of 4.65 \$/MMBtu.

Finally, others are predicting high prices to continue. According to the September 2004 newsletter "Short-Term Outlook for the Midwest Power Markets" the average cost of natural gas at the Henry Hub is expected to be 6.25 \$/MMBtu for 2005 and 5.94 \$/MMBtu for the first six months of 2006. The Energy Information Administration (EIA) "Short-

1 Term Energy Outlook" publication in September 2004, predicted natural gas to be in the  
2 \$6.14 range in 2005. A month earlier, this same EIA publication predicted natural gas to  
3 be in the \$6.60 range for 2005. Throughout 2004, the "Kiplinger Letter" has stated that the  
4 outlook for natural gas is to expect high prices for the next few years. A study by Energy  
5 Ventures Analysis in September 2004 stated that the natural gas supply/demand balance in  
6 the United States is likely to remain very tight until at least 2006. Many other sources can  
7 be quoted, but the main point is that while no one can predict prices with certainty, it seems  
8 reasonable to predict that the price is expected to remain well above the \$5.00 level for an  
9 extended time.

10 **Q. CAN YOU BRIEFLY EXPLAIN STAFF'S POSITION ON FUEL AND**  
11 **PURCHASED POWER BASED ON THEIR DIRECT TESTIMONY AS YOU**  
12 **UNDERSTAND IT?**

13 **A.** Staff recommends that an Interim Energy Charge (IEC) be adopted for a period of two  
14 years. This is similar to the IEC Empire had as a result of our 2001 Missouri rate  
15 proceeding. At the end of the two year period, a true-up audit would be performed to  
16 identify the actual prudently incurred fuel and purchased power costs. If the Company  
17 over collected its actual prudently incurred cost for fuel and purchased power, then it  
18 would refund any over collection of fuel costs, including interest. If the Company under  
19 collected prudently incurred costs associated with fuel and purchased power there would be  
20 no refund to customers.

21 To determine the "floor" and "ceiling" for the IEC proposal, Staff ran an hourly  
22 production cost model. The floor or base run used 3.20 \$/MMBtu natural gas. The ceiling  
23 run used Empire's then current hedged position for 2005 at that time (4,200,000 Dth at an

1 average price of 4.15 \$/MMBtu and 6.60 \$/MMBtu for spot gas), resulting in an overall gas  
2 price of 5.62 \$/MMBtu.

3 **Q. DO YOU HAVE ANY ISSUES WITH THE WAY STAFF USED THE COMPUTER**  
4 **PRODUCTION COST MODEL TO MODEL EMPIRE'S SYSTEM?**

5 A. Overall, with the exception of gas pricing, it appears that Staff's modeling is reasonable.  
6 With similar inputs, Company's model provides similar outputs to Staff's model in terms  
7 of total costs.

8 One area where we differ with Staff is on the modeling of spot purchase availability.  
9 Staff modeled with more spot purchase available. We disagree with Staff's assumption  
10 that the amount of spot purchase available in any hour of the month should be the  
11 maximum amount that was actually purchased in the same hour of the month based on an  
12 historical period. However in this case, with the level of purchase prices and natural gas  
13 prices in the models, the trade-off between spot purchase and Combined Cycle is close  
14 enough that the spot purchase availability issue is minimized with regard to total cost.

15 The primary issue is with the natural gas price.

16 **Q. WHAT ARE THE MAIN PROBLEMS WITH STAFF'S IEC PROPOSAL?**

17 A. First, it is missing two cost components relating to natural gas transportation. The  
18 components omitted represent a new firm gas transportation contract with annual expenses  
19 of approximately \$2.4 Million and expenses of approximately \$1.3 million for  
20 transportation losses and commodity charges for natural gas which Southern Star charges  
21 pursuant to their tariffs. Second, the IEC with a suggested floor having a 3.20 \$/MMBtu  
22 natural gas price is not attainable. When a low floor is combined with a two year term, it  
23 will force the Company to file a new rate case in only 13 months (eleven months prior to

1 the end of the IEC term). Third, the IEC ceiling proposed by the Staff is approximately  
2 \$10 Million lower than the Company's current expected costs.

3 **Q. EXPLAIN THE FUEL RELATED COSTS THAT STAFF EXCLUDED WHICH**  
4 **SHOULD HAVE BEEN INCLUDED IN FUEL EXPENSE?**

5 A. From the run supplied with their direct testimony, Staff did not include an annual \$2.4  
6 Million fixed natural gas firm transportation cost that the Company began paying in  
7 September, 2004. They also did not include any costs for natural gas losses or commodity  
8 charges Southern Star charges pursuant to their tariffs. These charges represent  
9 approximately \$1.3 Million dollars per year. However, after discussions with Staff, Staff  
10 has indicated that it will update their runs to include these costs. We believe this change  
11 will move Staff's Ceiling as reported earlier from \$130,888,272 to a total of \$134,578,890.

12 **Q. DO YOU AGREE WITH STAFF'S \$3.20 NATURAL GAS POSITION FOR BASE**  
13 **RATES (IEC FLOOR)?**

14 A. No. Staff's methodology now utilizes an historical average representing prices since  
15 Empire started its hedging program. Staff developed \$3.20/MMBtu by averaging a 32  
16 month history of the Company's overall hedged natural gas costs from November 2001  
17 through June 2004. Given our current hedged position and the current natural gas market  
18 that I have described, \$3.20/MMBtu natural gas in base rates is not achievable. We believe  
19 the Staff method is seriously flawed as it cannot be applied with any reasonableness today  
20 and provides no basis for future gas prices in future rate proceedings.

21 The Company should be able to collect its prudently incurred fuel and purchased power  
22 costs. As of October 25, 2004 the Company has 5,300,000 Dth of natural gas hedged for  
23 2005 at an average price of 4.71 \$/MMBtu. If the Company burns in the range of

8,000,000 to 10,000,000 MMBtu in 2005 then the Company must purchase spot natural gas in the range 0.24 \$/MMBtu to 1.50 \$/MMBtu in 2005 for the remaining needs to achieve an average of \$3.20 \$/MMBtu (See Table Below). It is not credible to assume we could purchase additional gas at such low costs.

Likewise, in 2006 the Company has 2,600,000 Dth hedged at an average price of 4.65 \$/MMBtu. If the Company burned in the range of 8,000,000 to 10,000,000 MMBtu in 2006 then the Company must purchase spot natural gas in the range 2.50 \$/MMBtu to 2.69 \$/MMBtu for the remaining needs in 2006 to achieve an average of \$3.20 \$/MMBtu (See Table Below).

2005			2006		
Total Gas Usage MMBtu	8,000,000	10,000,000	Total Gas Usage MMBtu	8,000,000	10,000,000
Annual %	100.0%	100.0%	Annual %	100.0%	100.0%
Avg Price \$/MMBtu	3.20	3.20	Avg Price \$/MMBtu	3.20	3.20
Hedged Nat Gas MMBtu	5,300,000	5,300,000	Hedged Nat Gas MMBtu	2,600,000	2,600,000
Annual %	66.3%	53.0%	Annual %	32.5%	26.0%
Avg Price \$/MMBtu	4.71	4.71	Avg Price \$/MMBtu	4.65	4.65
Remaining Nat Gas MMBtu	2,700,000	4,700,000	Remaining Nat Gas MMBtu	5,400,000	7,400,000
Annual %	33.8%	47.0%	Annual %	67.5%	74.0%
Avg Price \$/MMBtu	0.24	1.50	Avg Price \$/MMBtu	2.50	2.69

**Q. HOW WOULD YOU CHARACTERIZE STAFF'S MODEL RUN TO ESTABLISH THE IEC CEILING WITH AVERAGE NATURAL GAS PRICE OF \$5.62?**

A. Staff developed the natural gas price for this run by using the Company's hedged natural gas position for 2005 (it was 4,200,000 Dth at an average price of 4.15 \$/Dth at that time) and spot natural gas of 6.60 \$/MMBtu based on a forecast for 2005 from the August 2004 issue of the EIA publication "Short-Term Energy Outlook." We believe Staff made a fair effort to represent the gas prices which were prevalent when they filed their direct

1 testimony. However, based on the continued increase in indicated natural gas pricing, their  
2 IEC ceiling run seems to be more indicative of what natural gas costs could fall to in 2005  
3 under some set of circumstances. Thus, based on current natural gas prices, the Staff  
4 ceiling run is much more indicative of expected costs that would fall within the band of an  
5 IEC, but certainly are too low for a ceiling.

6 **Q. HAS EMPIRE ESTIMATED COSTS WITH A MODEL BASED ON THE STAFF'S**  
7 **NATURAL GAS ASSUMPTION OF 2005 HEDGED POSITON AND 6.60**  
8 **\$/MMBTU SPOT MARKET?**

9 A. Yes, even though the 6.60 \$/MMBtu price is 1.44 \$/MMBtu lower than the October 27,  
10 2004 NYMEX futures for 2005 we have made a model run for comparison purposes only.  
11 The model run was based on the data set that Empire used for the original base run (test  
12 year 2003). The following changes were made: (1) updated to the Staff's demand and  
13 energy, (2) updated to twelve-month ending June 2004 spot market purchase prices (same  
14 period as Staff) (3) updated to twelve-month ending June 2004 Jeffrey Purchase prices, (4)  
15 lowered Iatan coal costs to match Staff, and (5) updated the natural gas price to \$5.62 based  
16 on Staff's "ceiling" run. The total company on-system fuel and purchased power cost from  
17 this run was \$136,789,050 or \$26.86/MWh. The summary of this run is attached as BPB-2.  
18 This compares to the Staff model run of \$134,578,980 (\$130,888,272 as filed adjusted for  
19 the transportation contract \$2.4 M and Commodity charges and losses \$1.3 M)

20 **Q. HAS EMPIRE MADE A NEW MODEL RUN BASED ON THE HEDGED**  
21 **POSITION FOR 2005 AND NYMEX PRICES AS OF OCTOBER 27, 2004?**

22 A. Yes. The spot natural gas price utilized was 7.50 \$/MMBtu, which is the average of the  
23 NYMEX futures for 2005 and 2006 as of October 27, 2004. Weighted with Empire's

1 hedged position for 2005 produces an overall natural gas price of 6.02 \$/MMBtu. Total  
2 Company fuel and purchased power expense in this model run was \$140,840,180 or 27.66  
3 \$/Mwh. This model run is attached as BPB-3.

4 **Q. IF AN IEC WERE ADOPTED IN THIS CASE, WHAT TERM WOULD BE**  
5 **APPROPRIATE?**

6 A. Empire continues to support a term of five years instead of the two years suggested by Staff  
7 in direct testimony. This would provide better stability for Empire customers and  
8 investors. It would also limit the expenses and ease the workload on all parties involved in  
9 rate proceedings. As stated before, if a term of two years would be selected, the Company  
10 could be forced to file another rate case within a year of the rates becoming effective,  
11 especially if the base selected is too low.

12 **Q. CAN YOU BRIEFLY EXPLAIN THE OFFICE OF PUBLIC COUNSEL (OPC)**  
13 **POSITION ON FUEL AND PURCHASED POWER BASED ON THEIR DIRECT**  
14 **TESTIMONY AS YOU UNDERSTAND IT?**

15 A. At the time of filing direct testimony, OPC recommended the traditional method of  
16 incorporating a natural gas price into a fuel model to determine the appropriate level of fuel  
17 costs. OPC was not supportive of an IEC.

18 **Q. WHAT NATURAL GAS PRICE DID THE OPC RECOMMEND AND HOW DID**  
19 **OPC DEVELOP THIS PRICE?**

20 A. The OPC recommended 4.59 \$/MMBtu. We believe the OPC method is seriously flawed  
21 because it significantly understates current natural gas costs. OPC developed its price by  
22 using an average of four years—two historical and two future. The two historical years  
23 ranged from October 2002 to September 2004 and were based on NYMEX expirations.

1 The two future years ranged from October 2004 to September 2006 and were based on  
2 NYMEX future settlements as of September 16, 2004. Averaging this four year period  
3 resulted in a price of 5.42 \$/MMBtu. OPC then blended this with Empire's hedged  
4 position for 2005 at the time (4,200,000 Dth at 4.15 \$/Dth), based on Empire burning  
5 6,450,000 MMBtu of natural gas. That is, OPC utilized 65.1% of 4.15 plus 34.9% of 5.42  
6 to yield 4.59 \$/MMBtu.

7 **Q. IS THE OPC RECOMMENDATION OF 4.59 \$/MMBTU FOR NATURAL GAS A**  
8 **VALID PRICE FOR SETTING BASE RATES?**

9 A. No. This price does not reflect the changed natural gas market that I have described in this  
10 testimony.

11 My concerns with the methodology surround its reliance on historical natural gas prices  
12 to predict the future. In such a volatile period with natural gas prices on the rise, this can  
13 be a disastrous approach for Empire.

14 Secondly, even though we disagree with the methodology, the Company has reviewed  
15 Schedule JAB-2 which is a worksheet used by OPC to calculate natural gas price. The  
16 methodology averaged 48 monthly values. There were a few formula problems in the  
17 worksheet causing three of the values to be omitted with zeros averaged instead. Instead of  
18 5.42 \$/MMBtu, it should have been 5.66 \$/MMBtu after correcting the formulas. This  
19 would make the overall natural gas price be 4.68 instead of 4.59. Thirdly, the blended  
20 natural gas price was based on Empire burning 6,450,000 MMBtu in a year. This happens  
21 to be the amount of natural gas burned by Empire in 2003. Consistent with earlier  
22 testimony, a range of 8,000,000 to 10,000,000 MMBtu is more appropriate.



Q. HAS THE NATURAL GAS MARKET CHANGED SINCE OPC DEVELOPED THIS NATURAL GAS PRICE?

A. Yes. OPC's analysis was based on NYMEX futures as of September 16, 2004. OPC witness James A. Busch recognized that due to the volatile nature of natural gas prices, the market can change. He mentions on page 10 of his direct testimony, "Public Counsel recommends that the price should be \$4.59 per MMBtu. However, due to the current state of the natural gas industry, I reserve the right to update my estimation if significant market factors change in the near future." **With the significant upward movement since this filing, we expect that he will.**

Q. WHAT WOULD THE OPC METHODOLOGY FOR NATURAL GAS PRICE YIELD WITH NYMEX PRICES AS OF THE PREPARATION OF THIS TESTIMONY (OCTOBER 27, 2004)?

A. We believe the same methodology would now yield \$6.51/MMBtu (utilizing the same time period—October 2002 to September 2006—with NYMEX futures as of October 27, 2004 – See Calculations below) for spot natural gas as opposed to the \$5.42 developed in OPC's direct testimony.

	<u>History</u>		<u>Futures Begin Nov-04</u>						
	<u>1</u>		<u>2</u>		<u>3</u>		<u>4</u>	<u>Avg</u>	
1	<u>Oct-02</u>	<u>3.686</u>	<u>Oct-03</u>	<u>4.430</u>	<u>Oct-04</u>	<u>5.723</u>	<u>Oct-05</u>	<u>7.345</u>	<u>5.296</u>
2	<u>Nov-02</u>	<u>4.126</u>	<u>Nov-03</u>	<u>4.459</u>	<u>Nov-04</u>	<u>8.402</u>	<u>Nov-05</u>	<u>7.665</u>	<u>6.163</u>
3	<u>Dec-02</u>	<u>4.140</u>	<u>Dec-03</u>	<u>4.860</u>	<u>Dec-04</u>	<u>9.363</u>	<u>Dec-05</u>	<u>7.955</u>	<u>6.580</u>
4	<u>Jan-03</u>	<u>4.988</u>	<u>Jan-04</u>	<u>6.150</u>	<u>Jan-05</u>	<u>9.900</u>	<u>Jan-06</u>	<u>8.175</u>	<u>7.303</u>
5	<u>Feb-03</u>	<u>5.660</u>	<u>Feb-04</u>	<u>5.775</u>	<u>Feb-05</u>	<u>9.865</u>	<u>Feb-06</u>	<u>8.135</u>	<u>7.359</u>
6	<u>Mar-03</u>	<u>9.133</u>	<u>Mar-04</u>	<u>5.150</u>	<u>Mar-05</u>	<u>9.405</u>	<u>Mar-06</u>	<u>7.875</u>	<u>7.891</u>
7	<u>Apr-03</u>	<u>5.146</u>	<u>Apr-04</u>	<u>5.365</u>	<u>Apr-05</u>	<u>7.670</u>	<u>Apr-06</u>	<u>6.715</u>	<u>6.224</u>
8	<u>May-03</u>		<u>May-04</u>		<u>May-05</u>		<u>May-06</u>		

BRAD P. BEECHER  
REBUTTAL TESTIMONY NP

		<u>5.123</u>		<u>5.935</u>		<u>7.295</u>		<u>6.495</u>	<u>6.212</u>
9	<u>Jun-03</u>	<u>5.945</u>	<u>Jun-04</u>	<u>6.680</u>	<u>Jun-05</u>	<u>7.315</u>	<u>Jun-06</u>	<u>6.510</u>	<u>6.613</u>
10	<u>Jul-03</u>	<u>5.291</u>	<u>Jul-04</u>	<u>6.141</u>	<u>Jul-05</u>	<u>7.340</u>	<u>Jul-06</u>	<u>6.520</u>	<u>6.323</u>
11	<u>Aug-03</u>	<u>4.693</u>	<u>Aug-04</u>	<u>6.048</u>	<u>Aug-05</u>	<u>7.360</u>	<u>Aug-06</u>	<u>6.550</u>	<u>6.163</u>
12	<u>Sep-03</u>	<u>4.927</u>	<u>Sep-04</u>	<u>5.082</u>	<u>Sep-05</u>	<u>7.320</u>	<u>Sep-06</u>	<u>6.525</u>	<u>5.964</u>
							Average		<u>6.51</u>

1 **Q. CAN YOU BRIEFLY EXPLAIN THE POSITION OF WITNESS MAURICE**  
2 **BRUBAKER ON BEHALF OF EXPLORER PIPELINE COMPANY AND**  
3 **PRAXAIR, INC. (EXPLORER/PRAXAIR'S) ON FUEL AND PURCHASED**  
4 **POWER BASED ON HIS DIRECT TESTIMONY AS YOU UNDERSTAND IT?**

5 A. In Maurice Brubaker's direct testimony Explorer/Praxair supports a cost recovery  
6 mechanism such as an IEC with the upper end value of total company on-system fuel and  
7 purchased power to be \$120 million and \$110 million in base rates.

8 **Q. DID EXPLORER/PRAXAIR USE A PRODUCTION COST MODEL TO DEVELOP**  
9 **THEIR POSITION?**

10 A. To the best of my knowledge, they did not utilize a production cost model.

11 **Q. DO YOU AGREE WITH THE POSITION SET FORTH BY EXPLORER/PRAXAIR**

12 A. No. I believe the range that was recommended in Mr. Brubaker's direct testimony does not  
13 reflect the changed natural gas market that I have described. The Company does agree  
14 with his comments on page 8 when he states, "I believe the base amount should be set so  
15 that there is some realistic possibility that if Empire is aggressive in taking advantage of the  
16 purchased power market and in operating its coal-fired resources efficiently, it could beat  
17 the base amount (i.e., spend less) and thereby benefit along with customers." However, it  
18 is not realistic that natural gas prices could fall to a low enough level to achieve a base

1 level of \$110 million needed for the Company to realize the value of beating the base  
2 assumption. As stated earlier in this testimony, based on current NYMEX expectations, a  
3 level of \$140,840,180 is appropriate for base rates based on the current natural gas market.

4 **Q. WHAT AVERAGE NATURAL GAS PRICE IS NEEDED TO ACHIEVE A TOTAL**  
5 **COMPANY ON-SYSTEM ANNUAL FUEL AND PURCHASED POWER COST OF**  
6 **ROUGHLY \$110 MILLION THAT EXPLORER/PRAXAIR SUPPORTED IN**  
7 **DIRECT TESTIMONY?**

8 A. Based on the Company production cost model an average natural gas price of about 3.20  
9 \$/MMBtu is needed to achieve an annual cost of \$110 million.

10 **Q. WHAT AVERAGE NATURAL GAS PRICE IS NEEDED TO ACHIEVE A TOTAL**  
11 **COMPANY ON-SYSTEM ANNUAL FUEL AND PURCHASED POWER COST OF**  
12 **ROUGHLY \$120 MILLION THAT EXPLORER/PRAXAIR SUPPORTED IN**  
13 **DIRECT TESTIMONY AS AN IEC UPPER END (CEILING)?**

14 A. It is estimated that a natural gas price of about 4.20 \$/MMBtu is needed to achieve an  
15 annual cost of \$120 million. This is lower than the level that Empire suggests for base  
16 rates, and lower than the OPC base rate natural gas price.

17 **Q. COULD YOU PLEASE SUMMARIZE YOUR REBUTTAL FUEL AND**  
18 **PURCHASED POWER TESTIMONY?**

19 A. Yes. When determining the appropriate amount of fuel and purchased power expense the  
20 natural gas price is a key driver. Since the time that Empire filed this case, natural gas  
21 prices have risen dramatically. Current NYMEX futures (as of October 27, 2004) average  
22 8.04 \$/MMBtu for 2005 and 7.00 \$/MMBtu for 2006. In light of this changed and volatile  
23 environment, it is improper to set base rates on historical natural gas prices at this time.

1 Based on Empire's current hedged position and NYMEX futures as of 10/27/04, the  
2 Commission should establish base rates to recover fuel and purchased power expenses of  
3 \$140,840,180. Alternatively, the Commission should establish base rates and an IEC  
4 designed to allow Empire to recover its prudently incurred fuel and purchased power  
5 charges.

6 **III. ENERGY CENTER UNITS 3 AND 4 COST**

7 **Q. PLEASE SUMMARIZE THE CIRCUMSTANCES THAT GAVE RISE TO THE**  
8 **STAFF'S PROPOSED COST.**

9 A. Energy Center 3 & 4 was a \$55 million project which came in only **\*\*HC\_\_\_\_\_\*\*** over  
10 budget; a variance of only 0.4%. Staff's proposed disallowance of \$3,155,000 targets only  
11 one line item in an overall budget of \$55 million. It is Staff's opinion that Empire "acted  
12 imprudently by exposing Empire to an unnecessary level of financial risk" (page 6, lines 22-  
13 23 of Roberta McKiddy's Direct Testimony) during the construction project. Empire  
14 believes this to be an improper conclusion, based on the merits of the decisions made during  
15 this construction project, and also based on the regulatory treatment utilized by Commission  
16 and Staff in prior rate proceedings concerning new plant-in-service and definitive or original  
17 cost estimates.

18 Empire utilized a multi-contract approach to construct Energy Center Units 3 & 4. One  
19 of the contractors, namely Patch Construction, LLC ("Patch") was retained to perform  
20 engineering, installation, and procurement of balance of plant ("BOP") equipment activities  
21 for its Energy Center Units 3 & 4 construction project. The contract with Patch required  
22 them to provide a performance bond for the work that was to be performed under the  
23 contract within 21 days of contract signing. Patch was unable to meet this requirement. In

1 an attempt to finish the project in a cost and time effective manner Empire entered into  
2 Amendment 1 to the contract with Patch. Ultimately, Patch was unable to meet its  
3 obligations under the original contract or Amendment 1 and was terminated as a contractor  
4 on the project. Empire personnel took over management duties of the construction and  
5 completed the project. The final cost to complete the activities associated with Patch's  
6 contract was higher than the contract amount. Staff contends that a portion of these costs  
7 above the contract amount should be disallowed as plant-in-service.

8 **Q. DID EMPIRE ADDRESS THIS ISSUE IN DIRECT TESTIMONY?**

9 **A.** No.

10 **Q. WHY NOT?**

11 **A.** Empire was able to successfully manage the final cost of the entire project to virtually meet  
12 the total original project budget, which was the standard previously utilized by the Staff.

13 **Q. WHAT IS YOUR UNDERSTANDING OF STAFF'S STANDARD?**

14 **A.** In Empire's Case No. ER-2001-299 Staff audited the construction of Empire's State Line  
15 Combined Cycle. With respect to the auditing of construction projects, the Staff quoted the  
16 following Direct Testimony of Staff witness Mark L. Oligschlaeger, on page 4, lines 9-16.  
17 In that case Mr. Oligschleager testified, "As a starting point of its construction cost review,  
18 the Staff obtains the budget document that is used by the utility for cost control purposes. In  
19 most instances, this budget document is known as the "definitive estimate"." If actual costs  
20 meet the estimate, the costs have been allowed.

21 **Q. DO OTHER STAFF MEMBERS IN PRIOR TESTIMONY USE SIMILAR TERMS**  
22 **AS A MEANS OF WHERE TO BEGIN THE REVIEW OF A CONSTRUCTION**  
23 **PROJECT?**

1 A. Yes. In direct testimony and true-up testimony in Case No. ER-2001-299, Staff witness  
2 Cary G. Featherstone used the phrase "original estimate" at least nine (9) times when  
3 referring to the basis of proposed construction cost disallowances.

4 **Q. IS THIS THE GENERAL APPROACH STAFF HAS USED IN OTHER RATE**  
5 **PROCEEDINGS WHEN REVIEWING MAJOR CONSTRUCTION**  
6 **EXPENDITURES?**

7 A. Yes. Again, referring to rebuttal testimony of Mr. Oligschlaeger in Case No. ER-2001-299  
8 page 5, lines 2-4, he cites to Case No. EO-85-160 and EO-85-17, Union Electric Company  
9 (Union Electric), where the Commission stated "[t]he definitive estimate is the proper  
10 starting point for an investigation of cost overruns and a determination as to whether costs  
11 incurred on the project are reasonable." (Report and Order, pp. 39-40). Again, quoting  
12 from Mr. Oligschlaeger's testimony:

13 "In Case No. ER-77-118, Re: Kansas City Power & Light Company,  
14 the Commission was of "the opinion that the appropriate starting  
15 point for the calculation of any cost overrun would be the target used  
16 by the Company in controlling cost. The Commission is of the  
17 opinion, as in Case No. ER-77-118, that the Company's definitive  
18 estimate is the appropriate starting point for determining cost  
19 overruns. Kansas City Power & Light Company, 24 MO.P.S.C.  
20 (N.S.), (1981). (Ibid, p. 40)."

21 **Q. WAS THIS A SIGNIFICANT ISSUE IN EMPIRE'S CASE NO. ER-**  
22 **2001-299?**

23 A. Yes.

1    **Q.    WHY?**

2    A.    To again quote Mr. Mark L. Oligschlaeger from his direct testimony in Case  
3        No. ER-2001-299, page 7, lines 6-7, "The original cost estimate for the  
4        SLCC unit project was approximately \*\* HC \*\*." Later, on the  
5        same page, lines 10-12, "The current construction cost estimate for  
6        completing the SLCC unit is approximately \*\* HC \*\*, meaning  
7        total cost overruns for this project are expected to be approximately \*\*  
8        HC \*\*." In other words, when building State Line Combined  
9        Cycle, Empire experienced several obstacles during construction that caused  
10       actual costs to exceed the "original cost estimate". When Empire filed for  
11       rate recovery related to this plant-in-service cost, the Staff argued that the  
12       portion of the incurred costs above the "original cost estimate" should be  
13       disallowed as plant-in-service.

14   **Q.    TURNING BACK TO ENERGY CENTER UNITS 3 AND 4, WHICH**  
15   **ARE THE SUBJECT OF THIS CASE, WHAT WAS EMPIRE'S**  
16   **ORIGINAL BUDGET FOR THE ENERGY CENTER UNITS?**

17   A.    \$55,000,000. Attached, as Schedule BPB-4 is the Board Resolution  
18        approving this budget and an excerpt from our December 2002 10-K.

19   **Q.    BASED ON PREVIOUS RATE PROCEEDINGS, WOULD EMPIRE**  
20   **EXPECT STAFF TO CONSIDER THIS \$55 MILLION AMOUNT**  
21   **THE "ORIGINAL COST ESTIMATE" OR THE "DEFINITIVE"**  
22   **ESTIMATE?**

23   A.    Yes.

1 Q. TO WHAT BENCHMARK WAS EMPIRE'S PROJECT  
2 MANAGEMENT TEAM REQUIRED TO MANAGE ITS COSTS?

3 A. Based on Empire's past experience with Staff's ratemaking approach, the  
4 "definitive" or "original cost estimate" of the project.

5 Q. AS OF JULY 24, 2004, WHAT IS EMPIRE'S COST FOR THE  
6 CONSTRUCTION OF ENERGY CENTER UNITS 3 AND 4?

7 A. \*\* HC \_\_\_\_\_ \*\*. Please refer to Schedule BPB-5.

8 Q. DID THE STAFF AGREE THAT EMPIRE'S DEFINITIVE  
9 ESTIMATE WAS A PRUDENT PROJECTION OF COSTS FOR  
10 ENERGY CENTER UNITS 3 AND 4?

11 A. In response to DR-0471 submitted by the Company in this case, Staff  
12 member Steve Rackers stated, "The staff believes that the Company's  
13 determination of \$55 million was an acceptable amount to use to gain  
14 approval from Empire's Board of Directors for the construction of the  
15 Energy Center Units 3 & 4". However, Staff goes on to say, "this amount  
16 was not appropriate for project control", which leads to the question, "If not  
17 the "Accepted" and Board Approved budget, to what amount then is Empire  
18 to control costs?"

19 Q. DOES EMPIRE AGREE WITH THE STAFF'S ASSESSMENT THAT  
20 THE DETERMINATION OF A \$55 MILLION DEFINITIVE  
21 ESTIMATE WAS ACCEPTABLE?

22 A. Yes.



1 Q. WHAT IS THE AMOUNT OF THE STAFF'S PROPOSED  
2 DISALLOWANCE RELATED TO ENERGY CENTER UNITS 3 AND  
3 4?

4 A. The Staff is recommending a disallowance of \$3,155,356.

5 Q. IS THE STAFF'S DISALLOWANCE RELATED TO COST  
6 OVERRUNS BEYOND THE ORIGINAL COST ESTIMATE?

7 A. No.

8 Q. HOW MANY TIMES DID STAFF UTILIZE THE TERM  
9 "DEFINITIVE ESTIMATE" IN THEIR TESTIMONY IN THIS  
10 CASE?

11 A. None. It seems in this case Staff is using a different standard to determine  
12 disallowances than it has in previous proceedings. Apparently the Staff is  
13 second guessing individual line items within Empire's budget. The  
14 individual line item that estimated the cost to install, engineer, and procure  
15 BOP equipment turned out to be lower than the actual cost to complete this  
16 line item and Staff therefore wants to disallow a portion of this cost.  
17 Schedule BPB-6 presents the original budget and, once again, referring back  
18 to Schedule BPB-5 represents the final project costs. Looking at these two  
19 schedules, one will notice that Staff gives Empire no credit for line items that  
20 it "outperforms" budget, for instance Start-up Fuel and the Fire System  
21 outside the BOP Contract. Again, the proposed disallowance has nothing to  
22 do with cost overruns above the "definitive estimate" that both parties agreed  
23 was "acceptable".

1 **Q. PLEASE EXPLAIN EMPIRE'S SITUATION AROUND THE TIME**  
2 **IT WAS DETERMINED PATCH COULD NOT OBTAIN A**  
3 **PERFORMANCE BOND, WHICH LED EMPIRE TO ENTER INTO**  
4 **AMENDMENT 01 WITH PATCH.**

5 **A.** There were several issues Empire was dealing with around the time it was  
6 deemed that Patch could not obtain a performance bond.

- 7 1. Empire needed at least one of the new units on line to meet the 12% minimum  
8 Southwest Power Pool (SPP) capacity margin requirement before June 1, 2003.
- 9 2. Given that Patch could not obtain a performance bond, what was the most cost  
10 effective way to complete the project for our customers.
- 11 3. Given the Staff position in case ER-2001-299, what was the most effective way to  
12 minimize risk to our shareholders?

13 To further expand on item 1, SPP requires every load serving entity to maintain installed  
14 capacity equal to 12% in excess of its seasonal peak. There is no monetary penalty for  
15 not maintaining the contractually agreed upon capacity margin. Empire, however, takes  
16 its power pool obligations seriously. It is each member of the SPP's responsibility to  
17 maintain electric reliability for our customers. Mismanagement by any one member of  
18 SPP can jeopardize the entire system, resulting in unfortunate events like the blackout in  
19 August of 2003. A change in contractors at this late date was sure to delay the schedule  
20 and probably not allow us to meet SPP's requirements.

21 Item 2 required us to assess the potential costs to complete the project without Patch.  
22 We knew that if we replaced Patch, the next bidder was a higher cost. We also knew  
23 that if we replaced Patch there would be additional expense for re-work and transition.

1 On the other hand, we believed that if we managed Patch's financial involvement in the  
2 job, there was an opportunity to complete Patch's scope at the contract value and finish  
3 the project on schedule.

4 As for item 3, Staff's recent position on rate treatment of State Line Combined Cycle  
5 in 2001 (Case No. ER-2001-299) weighed in our decision process. In the SLCC case,  
6 Empire had deemed a contractor, Fru-Con, was in default of the contract and replaced  
7 them with another contractor at a higher cost. The replacement of Fru-Con with another  
8 contractor at a higher cost was the major basis cited by the Staff in their plant  
9 disallowance position in the previous case. If we replaced Patch with another bidder, we  
10 would have not only jeopardized meeting our SPP requirement, but we would have been  
11 repeating that which Staff judged as non-prudent in the previous case. By this point,  
12 we also knew that the Patch entities were not financially strong. If Empire continued  
13 with Patch we had to limit their financial involvement.

14 Based on what Empire knew at the time including a balance of all of the concerns  
15 outlined led us to believe that executing Amendment 01 with Patch provided for the best  
16 balance of all concerned.

17 **Q. IN STAFF WITNESS ROBERTA A. MCKIDDY'S DIRECT TESTIMONY SHE**  
18 **STATES THAT EMPIRE COULD HAVE AWARDED SEGA THE BID TO BUILD**  
19 **THE ENERGY CENTER UNITS 3 AND 4 SINCE EMPIRE COULD NOT OBTAIN**  
20 **A PERFORMANCE BOND FROM PATCH. WHO IS SEGA AND HOW DO YOU**  
21 **RESPOND?**

22 **A.** Sega is a Kansas City area engineering company, which was the runner-up bidder on  
23 Empire's Energy Center Units 3 and 4 project. If we had instead terminated Patch early and

1 retained Sega, we would likely be arguing about why we paid Sega more than Patch's  
2 contract value and we still would have in addition endangered meeting our summer of 2003  
3 SPP requirements. With 20/20 hindsight, it is likely that Sega likewise would not have been  
4 able to obtain a performance bond, which would have caused further delays and pushed us  
5 to the third bidder which was even higher than Sega.

6 **Q. WHY DO YOU ASSERT THAT IT IS LIKELY THAT SEGA WOULD NOT HAVE**  
7 **BEEN ABLE TO OBTAIN A PERFORMANCE BOND?**

8 A. Sega was the runner-up bidder on Empire's Energy Center Units 3 and 4 project. Sega was  
9 also the original winning bidder on a similar project for KCPL at the West Gardner site in  
10 February 2002. Like Patch, Sega could not obtain a performance bond. An e-mail Mr.  
11 Brown sent to Empire recently to confirm this fact is attached as Schedule BPB-7. Staff's  
12 own investigation has not lead to a contrary conclusion. In his response to Company DR-  
13 0468 Mr. Steve Rackers says, "The Staff has not researched or performed any analysis of  
14 the performance bond market during the late 2001 to early 2002 timeframe, or Sega's  
15 bonding capabilities in the 2002 timeframe."

16 **Q. WHAT DOES THIS LACK OF BONDING CAPABILITY BY SEGA MEAN?**

17 A. First, since Staff should utilize the "definitive estimate" standard, this means nothing.  
18 However, if the Commission decides Staff's new methodology should be followed then  
19 Sega's bid to complete the project is not a valid quantifier of the final costs to finish the  
20 project.

21 **Q. ARE THE ENERGY CENTER UNITS 3 AND 4 FULLY OPERATIONAL AND**  
22 **USED FOR SERVICE?**

1 A. Yes. They have served Empire's customers since April of 2003. As of October 1, 2004,  
2 Energy Center units 3 and 4 have started a total of 394 times and have generated 73,318  
3 MWH's for our customers with no rate relief.

4 **Q. WHAT IS PATCH'S CURRENT FINANCIAL STATUS?**

5 A. We filed suit against the Patch Corporate entities as well as against Mr. and Mrs. Patch  
6 personally in Jasper County Circuit Court. We received a judgment from the Court against  
7 the Patch entities. Since that time, all Patch entities have declared bankruptcy and the assets  
8 distributed to creditors. Empire received nothing.

9 **Q. BEYOND EMPIRE'S DISAGREEMENT WITH THE STAFF'S PROPOSED COST**  
10 **DISALLOWANCE, ARE THERE ANY STATEMENTS MADE BY MR. ELLIOTT**  
11 **OR MS. McKIDDY THAT YOU WOULD LIKE TO SPECIFICALLY DISPUTE,**  
12 **CLARIFY, OR CORRECT?**

13 A. Yes. While these may be viewed as minor details in the overall scope of the proposed  
14 disallowance, I feel it is appropriate that a few of the statements made specifically by Mr.  
15 Elliott in his direct testimony be clarified.

16 First, on page 12, lines 8-10 of Mr. Elliott's testimony he states, "the final project cost  
17 included an additional \$4,052,535 paid to the subcontractors above the approved adjusted  
18 contract amount." He also states in the following paragraph (page 12, lines 12-14) that the  
19 amount stated above was "the cost to pay the subcontractors to complete the project after  
20 Patch, the project construction contractor, was paid the full amount of its contract and the  
21 project was completed." To clarify, Empire had paid directly to Patch Construction, LLC an  
22 amount of \$3,442,774 for original contract scope up to the date Amendment-01 was signed.  
23 Up to that point, Patch had all subcontractor contracts and balance of plant

1 equipment/building purchase agreements directly in their name and Empire was paying  
2 Patch based on a percentage of project complete matrix. Upon the signing of Amendment-  
3 01 all of the major equipment and subcontractor contracts were transferred to Empire's  
4 name and Empire paid directly to Patch only costs directly related to the Energy Center 3 &  
5 4 project (i.e. direct labor, direct engineering, direct minor materials, etc.). This means that  
6 Empire did not pay to Patch its entire contract value. Rather, Empire paid most of the  
7 vendors directly to limit Patch's financial involvement. The \$4,052,535 utilized by Mr.  
8 Elliot represents the amount that was expended above the original contract value (plus  
9 approved change orders) to complete the items that were in Patch's original scope of work.

10 Second, on page 13, lines 1-2, Mr. Elliott makes a statement that Empire needed the  
11 capacity from the Energy Center Units 3 and 4 to meet its capacity needs in the summer of  
12 2003 and that if the project would have been delayed "Empire most likely would have had  
13 to purchase capacity through a short-term capacity agreement." While Empire agrees that it  
14 needed the capacity to meet its customer needs in the summer of 2003, Empire disagrees  
15 that a short-term contract was a possible alternative at the time.

16 Empire was making its decision in relation to keeping Patch as its general contractor in the  
17 late spring to early summer of 2002. At this time the ability to get firm transmission through  
18 the Southwest Power Pool (SPP), of which Empire is a member, was not feasible. In order  
19 to get firm transmission, Empire must submit to SPP a request for network transmission  
20 from a specific source. SPP then goes through a two step process to determine the cost of  
21 any upgrades that would be needed to make that request possible. Not only was this study  
22 process taking approximately 18-months to complete at the time because of the  
23 overwhelming number of requests SPP was processing, but the cost associated with the

1 upgrades to complete such requests was astounding. For example, Empire made a request  
2 for firm network service from a proposed coal plant in southwest Kansas (Sand Sage) in  
3 November of 2001. A response to this request was not received until the summer of 2003,  
4 more than 18-months after the initial submittal. With respect to costs, another SPP customer  
5 (KEPCO) made a request (Request #496617) for 9 MW of firm network service from  
6 Westar's service territory to Empire's service territory that returned a cost of approximately  
7 \$30 million. Numerous similar examples could be given with similar costs. Since firm  
8 transmission is required to count a purchased power resource as a firm resource, a short-  
9 term capacity agreement was likely not feasible at this time to meet Empire's summer of  
10 2003 customer needs or, as previously stated, the Southwest Power Pools minimum capacity  
11 reserve margin.

12 As another point of clarification or disagreement, in Mr. Elliott's testimony he refers to  
13 change orders as "cost overruns" or even "change order cost overruns" (see pages 14 and 15  
14 of Mr. Elliott's testimony). Empire does not believe that a change order should be classified  
15 as a "cost overrun". As Mr. Elliott points out in his testimony on page 14, lines 20-21 "The  
16 larger the project, the more complex the project is. The more complex a project is, the more  
17 likely it is that unforeseen situations will occur as construction progresses." Because of this  
18 complexity, it is Empire's opinion that change orders are a normal occurrence during a  
19 project of this scope and should not be largely categorized as "cost overruns" but rather  
20 changes in scope. While Mr. Elliott does not contend that any of Empire's change orders  
21 were imprudent, Empire wants to be clear that it does not view the change orders presented  
22 in Mr. Elliott's Schedule 11 as "cost overruns" in any way.

1 As a final point, it was stated in Mr. Elliott's testimony on page 17, lines 3-5 that "Staff has  
2 been informed by Empire, that it \*\* HC \_\_\_\_\_

3 \_\_\_\_\_ \*\* To clarify, during Empire's spring of 2004  
4 Integrated Resource Planning (IRP) meeting with Staff and OPC, \*\* HC \_\_\_\_\_

5 \_\_\_\_\_  
6 \_\_\_\_\_  
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11 \_\_\_\_\_  
12 \_\_\_\_\_  
13 \_\_\_\_\_  
14 \_\_\_\_\_ \*\*

15 **Q. PLEASE SUMMARIZE YOUR POSITION ON THE ENERGY CENTER UNITS 3**  
16 **AND 4 DISALLOWANCE ISSUE.**

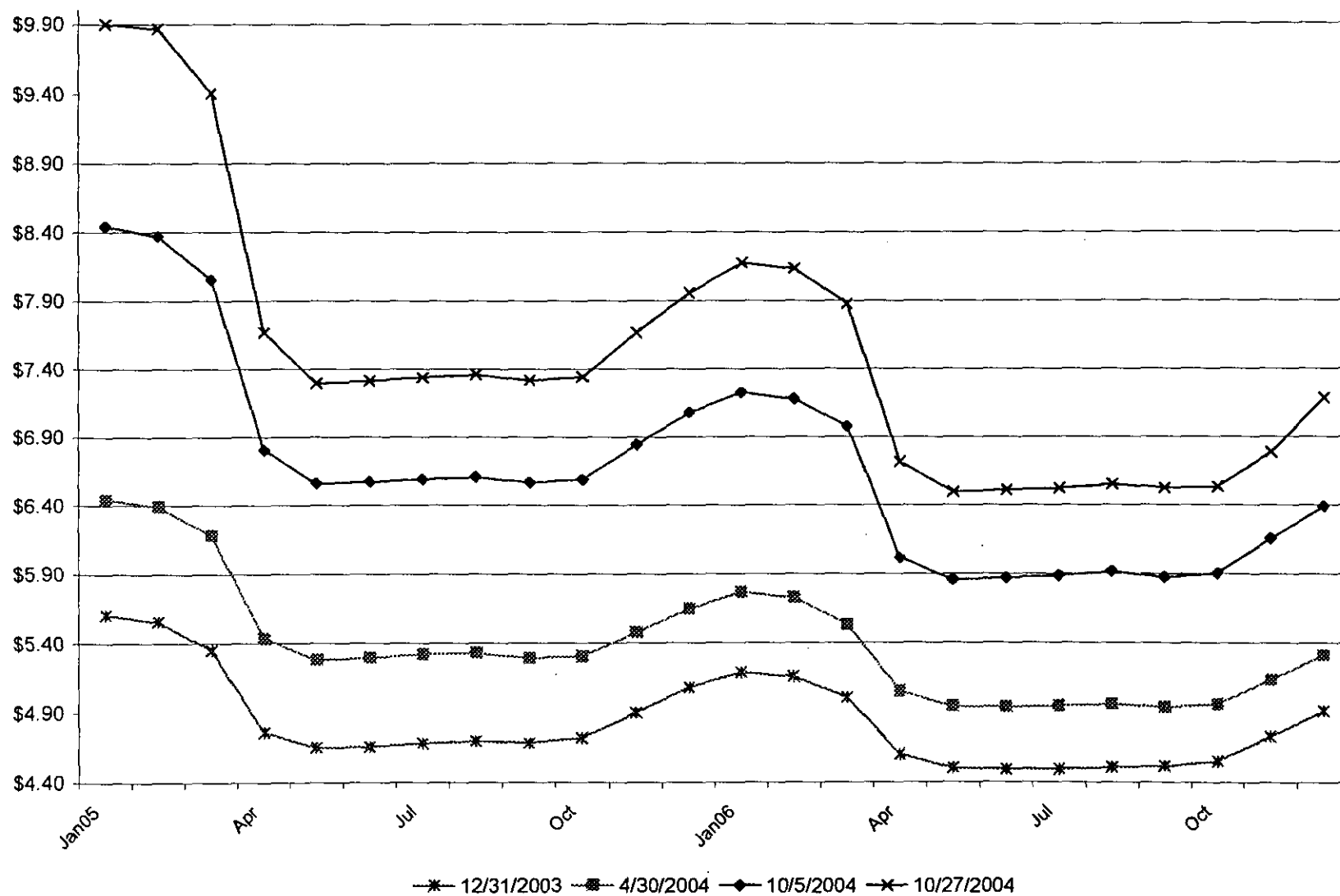
17 A. Based on previous "definitive estimate" standards set by the Commission and utilized by the  
18 Staff, as well as the timeline that I have given, the Commission should find that Empire not  
19 only prudently met the "definitive estimate" but also completed the construction project in a  
20 timely manner in order to meet Empire's customer needs and SPP requirements.

21 **Q. DOES THIS CONCLUDE YOUR REBUTTAL TESTIMONY?**

22 A. Yes it does.



## NYMEX Natural Gas Futures Price for 2005 - 2006 (\$/MMBtu)



## Schedule BPB-2

Avg Gas Price 5.61 \$/MMBtu

F & PP Cost  
(\$000's)

	<u>GWH</u>	<u>Incl Start</u>	<u>\$/MWH</u>	<u>Starts</u>	<u>GBTU Excl Starts</u>	<u>Avg HR Excl Starts</u>
Asbury 1	1,297.70	15,775.60	12.16	12	14,522	11,190
Asbury 2	24.80	490.00	19.76	33	454	18,286
Total Asbury	1,322.50	16,265.60	12.30	45	14,975	11,323
Iatan 1	583.20	3,902.70	6.69	14	5,847	10,026
Riverton 7	192.10	3,199.70	16.66	12	2,557	13,310
Riverton 8	292.00	4,336.40	14.85	9	3,509	12,016
Riverton 9 and 10	2.30	233.00	101.30	5	41	17,826
Riverton 11	0.80	79.40	99.25	5	14	17,375
Total Riverton	487.20	7,848.50	16.11	31	6,121	12,563
Energy Center 1	14.50	1,344.50	92.72	14	238	16,386
Energy Center 2	8.10	752.10	92.85	9	133	16,407
Energy Center 3	32.80	2,076.00	63.29	105	370	11,284
Energy Center 4	18.00	1,133.00	62.94	60	202	11,217
Total EC	73.40	5,305.60	72.28	188	943	12,841
State Line 1	68.10	5,211.90	76.53	21	926	13,596
SLCC 1x1	1,079.60	45,723.60	42.35	28	8,142	7,542
SLCC 2x1	53.70	2,196.30	40.90	19	386	7,184
Total SL	1,201.40	53,131.80	44.22	68	9,454	7,869
Gas Turb (incl Starts)	1,277.90	58,749.80	45.97	266	10,472	8,195
Total Thermal	3,667.70	86,454.20	23.57		37,339	10,180
Ozark Beach	59.20					
Total EDE (less fixed)	3,726.90	86,454.20	23.20			
WR-JP	1,051.70	14,370.00	13.66			
Spot Purch	313.70	10,888.00	34.71			
Total Purch	1,365.40	25,258.00	18.50	26.8%	PP % of NSI	
Total Model	5,092.30	<u>111,712.20</u>	21.94		SLCC 1x1 Hrs	Hrs
					SLCC 2x1 Hrs	6,006
PP Demand Charge		16,194				3,082
Undist-Oth-Train		1,639.04			MCF Gas	10,276.94
					Heat Cont Gas	1,019
					Avg Gas Cost	5.61 \$/mmbtu
Gas Fixed FT (test year)		3,285.04				
Gas Fixed FT (additional)		2,400.00				
Gas Dmd Commodity Chg		202.11				
Gas Dmd Losses Chg		1,357.14	241.91	additional GBTUs for losses (2.31%)		
Total Gas DMD		7,244.29				
Total FPP NSI	5,092.30	<u>136,789.05</u>	26.86			

## Schedule BPB-3

Avg Gas Price 6.02 \$/MMBtu

F & PP Cost  
(\$000's)

	<u>GWH</u>	<u>Incl Start</u>	<u>\$/MWH</u>	<u>Starts</u>	<u>GBTU Excl Starts</u>	<u>Avg HR Excl Starts</u>
Asbury 1	1,300.10	15,803.60	12.16	12	14,547	11,189
Asbury 2	26.70	526.00	19.70	33	486	18,217
Total Asbury	1,326.80	16,329.60	12.31	45	15,034	11,331
Iatan 1	583.80	3,907.70	6.69	14	5,854	10,027
Riverton 7	192.50	3,211.70	16.68	12	2,564	13,317
Riverton 8	293.00	4,353.30	14.86	9	3,521	12,016
Riverton 9and10	2.30	250.20	108.78	5	41	17,826
Riverton 11	0.80	85.50	106.88	5	14	17,375
Total Riverton	488.60	7,900.70	16.17	31	6,139	12,564
Energy Center 1	14.30	1,429.40	99.96	14	235	16,462
Energy Center 2	8.10	805.70	99.47	9	133	16,370
Energy Center 3	32.10	2,188.00	68.16	105	363	11,321
Energy Center 4	17.10	1,159.00	67.78	58	193	11,257
Total EC	71.60	5,582.10	77.96	186	924	12,904
State Line 1	66.90	5,487.60	82.03	21	909	13,580
SLCC 1x1	1,061.20	48,315.30	45.53	31	8,017	7,554
SLCC 2x1	47.90	2,105.20	43.95	18	344	7,186
Total SL	1,176.00	55,908.10	47.54	70	9,269	7,882
Gas Turb (incl Starts)	1,250.70	61,825.90	49.43	266	10,270	8,211
Total Thermal	3,646.80	89,628.20	24.58		37,220	10,206
Ozark Beach	59.20					
Total EDE (less fixed)	3,706.00	89,628.20	24.18			
WR-JP	1,056.00	14,431.00	13.67			
Spot Purch	330.00	11,637.00	35.26			
Total Purch	1,386.00	26,068.00	18.81	27.2% PP % of NSI		
Total Model	5,092.00	<u>115,696.20</u>	22.72		SLCC 1x1 Hrs	Hrs 5,934
					SLCC 2x1 Hrs	2,787
PP Demand Charge		16,194				
Undist-Oth-Train		1,639.04			MCF Gas	10,078.51
					Heat Cont Gas	1.019
					Avg Gas Cost	6.02 \$/mmbtu
Gas Fixed FT (test year)		3,285.04				
Gas Fixed FT (additional)		2,400.00				
Gas Dmd Commodity Chg		198.21				
Gas Dmd Losses Chg		1,428.17	237.24 additional GBTUs for losses (2.31%)			
Total Gas DMD		7,311.42				
Total FPP NSI	5,092.00	<u>140,840.18</u>	27.66			

Certified Copy of Resolutions  
Passed by the Board of Directors  
of  
The Empire District Electric Company  
on  
October 25, 2001

I, J. S. WATSON, Secretary-Treasurer of The Empire District Electric Company, a corporation organized and existing under and by virtue of the laws of the State of Kansas (hereinafter called the "Company"), DO HEREBY CERTIFY that the following is a true and correct copy of resolutions adopted by the Board of Directors of the Company at a meeting duly called and held on the 25th day of October, 2001; that at said meeting a majority of the Directors, constituting a quorum for the transaction of business, was present and voted in favor of said resolutions; and that said resolutions have not been amended or modified, rescinded or revoked but remain in full force and effect:

WHEREAS, the Company, intends to install two Pratt & Whitney FT-8 Aero Derivative combustion turbines (the "Turbines," and each, a "Turbine") at the Company's Energy Center Plant, and

WHEREAS, it is expected that the first Turbine be in operation by the summer of 2003, and the second Turbine be in operation by the summer of 2004;

WHEREAS, it is the intention of the Board of Directors of the Company to authorize and empower the Officers of the Company to negotiate, execute and deliver any and all agreements, instruments, contracts, or documents as shall be necessary or in their judgment desirable for the purchase, engineering, construction and installation of the Turbines;

NOW, THEREFORE, BE IT

RESOLVED, That the proper Officers of the Company be and they hereby are authorized to negotiate, execute and deliver a definitive agreement with P2 Energy LLC, a wholly owned subsidiary of Pratt & Whitney Power Systems, Inc., providing for the purchase by the Company of the Turbines for a price not to exceed \$35 million on such terms and conditions as the Officer

executing such agreement may approve (such approval to be conclusively evidenced by such Officer's execution thereof), and to take such further action as may be necessary to cause the engineering, installation and construction of the Turbines at the Energy Center with completion dates no later than June 1, 2003 and June 1, 2004 respectively, and that the total cost of the project not to exceed \$55 million excluding transmission and allowance for funds used during construction; and be it

FURTHER RESOLVED, That the proper Officers of the Company be and they hereby are authorized to take such further action, and to execute and deliver or file (or cause to be delivered or filed) such additional instruments, contracts, or documents as shall be necessary or in their judgment desirable to carry out the intent of the foregoing resolutions.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed the seal of the Company on this 25th day of October, 2001.



Secretary-Treasurer

**UNITED STATES SECURITIES AND EXCHANGE COMMISSION**  
**WASHINGTON, D.C. 20549**

**FORM 10-K**

(Mark One)

- ☒ Annual report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934  
For the fiscal year ended December 31, 2002 or
- ☐ Transition report pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934  
For the transition period from \_\_\_\_\_ to \_\_\_\_\_.

Commission file number: 1-3368

**THE EMPIRE DISTRICT ELECTRIC COMPANY**

(Exact name of registrant as specified in its charter)

**Kansas**  
(State of Incorporation)

**44-0236370**  
(I.R.S. Employer Identification No.)

**602 Joplin Street, Joplin, Missouri**  
(Address of principal executive offices)

**64801**  
(zip code)

Registrant's telephone number: (417) 625-5100

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock (\$1 par value)	New York Stock Exchange
Preference Stock Purchase Rights	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. [ ☐ ]

Indicate by check mark whether the registrant is an accelerated filer (as defined in Rule 12b-2 of the Act). Yes ☒ No ☐

The aggregate market value of the registrant's voting common stock held by nonaffiliates of the registrant, based on the closing price on the New York Stock Exchange on June 28, 2002, was approximately \$459,862,868.

As of January 31, 2003, 22,595,071 shares of common stock were outstanding.

The following documents have been incorporated by reference into the parts of the Form 10-K as indicated:

The Company's proxy statement, filed pursuant to Regulation 14A under the Securities Exchange Act of 1934, for its 2002 Annual Meeting of Stockholders to be held on April 24, 2003.

Part of Item 10 of Part III  
All of Item 11 of Part III  
Part of Item 12 of Part III  
All of Item 13 of Part III

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## LIQUIDITY AND CAPITAL RESOURCES

Our construction-related expenditures, including AFUDC, totaled approximately \$73.7 million, \$71.8 million, and \$133.9 million in 2002, 2001 and 2000, respectively.

A breakdown of these construction expenditures for 2002 is as follows:

	Construction Expenditures (amounts in millions)
	2002
Distribution and transmission system additions	\$ 25.5
FT8 peaking units - Energy Center	31.7
Additions and replacements - Asbury	3.0
Additions and replacements - Riverton, Iatan and Ozark Beach	2.2
Additions and replacements - SLCC	2.0
Combustor system upgrade - SL	1.8
Fiber optics (Non-regulated)	2.0
Computer Services projects	2.1
General and other additions	3.4
Total	\$ 73.7

Approximately 63% of construction expenditures for 2002 were satisfied internally from operations. The other 37% of such requirements were satisfied from short-term borrowings and proceeds from our sales of common stock and unsecured Senior Notes discussed below.

We estimate that our construction expenditures, including AFUDC, will total approximately \$50.2 million in 2003, \$31.2 million in 2004 and \$32.6 million in 2005. Of these amounts, we anticipate that we will spend \$13.8 million, \$15.7 million and \$18.0 million in 2003, 2004 and 2005, respectively, for additions to our distribution system to meet projected increases in customer demand. These construction expenditure estimates also include approximately \$22.0 million in 2003 for two FT8 peaking units at the Empire Energy Center. In October 2001, we entered into an agreement to purchase these two FT8 peaking units, each having generating capacity of 50 megawatts. Both units have been delivered and are scheduled to be operational in the second quarter of 2003. We estimate that the cost of both of these units will be approximately \$55.0 million, excluding AFUDC.

Our net cash flows provided by operating activities increased \$40.6 million during 2002 as compared to 2001 due mainly to a \$15.1 million increase in net income and a \$13.0 million increase in the amount of the IEC collected from Missouri electric customers. The refund of this IEC (which totals \$18.7 million) during the first quarter of 2003 will have a material impact on our cash flows for the quarter although it will not have a material impact on earnings per share due to the non-recognition of these funds as operating revenue.

Our net cash flows used in investing activities decreased \$1.9 million during 2002 as compared to 2001 because of decreased construction expenditures due mainly to the completion of the SLCC in June 2001.

Our net cash flows provided by financing activities decreased \$48.5 million during 2002 as compared to 2001 mainly due to the repayment of \$37.5 million of our First Mortgage Bonds due July 1, 2002 and the repayment of \$33.0 million of short-term debt in 2002 as compared to \$14.0 million in 2001. We sold common stock in May 2002 and December 2001, Senior Notes in December 2002 and Trust Preferred Securities in March 2001 as described below. The proceeds from such sales in 2002 totaled \$12.3 million more than the proceeds from the 2001 sales.

We estimate that internally generated funds will provide at least 63% of the funds required in 2003 for construction expenditures. As in the past, we intend to utilize short-term debt to finance the additional amounts needed for such construction and repay such borrowings with the proceeds of sales of long-term debt or common stock (including common stock sold under our Employee Stock Purchase Plan, our Dividend Reinvestment and Stock Purchase Plan, and our 401(k) Plan and ESOP) and internally generated funds. We will continue to utilize short-term debt as needed to support normal operations or other temporary



# Expense Report for Energy Center FT8 TwinPac Project

Schedule BFB-5

Item	Payments	To Date
Pratt & Whitney FT8 TwinPac Contractual Cost <sup>1</sup>		
Reduction for spare parts that will convert to Inventory		
Pratt & Whitney Change Orders		
Unit 3 Cold Weather Package <sup>3</sup>		
Unit 4 Cold Weather Package <sup>3</sup>		
Unit 3 Enhanced Fire Suppression Enclosure <sup>3</sup>		
Unit 4 Enhanced Fire Suppression Enclosure <sup>3</sup>		
Fuel Forwarding Skid <sup>3</sup>		
Remote Controlling Package		
Water Wash Skid		
No. 4 - Remove Walkways		
No. 5 - Unit 2 Early Delivery		
No. 6 - CO Catalyst/Misc		
No. 8 - Closeout Reconciliation		
Patch BOP Contractual Cost		
Project Completion Cost		
Patch Change Orders		
Jeff Asbell Contracting		
Black & Veatch QA/QC Personnel		
Water Well		
Warehouse/Shelving		
Labor During Construction		
Security Guards During Construction		
Property Tax During Construction		
Misc Tools and Equipment		
Extend Power to New Well Site and Site Construction Power		
Furniture and Misc. for New Control Building		
Attorney, Consultants, and Other Outside Services		
Overheads		
Environmental Permitting and testing		
Lubricants for first fill		
Project Insurance		
Inventory System		
→ Fire System Outside of BOP Contract		
Paving Outside of BOP Contract		
Painting Outside of BOP Contract		
→ Natural Gas and Fuel Oil for Startup and Testing / Incremental Test Energy		
Telephone, Radio, and Network Additions		
Office Facilities for Pratt & Whitney		
Miscellaneous		
Travel		
Contingencies		
<b>Total</b>	<b>55,220,301</b>	
<b>Board Approved Budget</b>		<b>55,000,000</b>
<b>Variance</b>		<b>220,301</b>

Note: Above values do not include AFUDC.

## Expense Report for Energy Center FT8 TwinPac Project

Schedule BFB-6

Item	Contractual or Budget Amount	Payments To Date	Remaining Budget
Pratt & Whitney FT8 TwinPac Contractual Cost <sup>1, 2</sup>			
Reduction for spare parts that will convert to inventory			
Options Added to Contract:			
Unit 3 Cold Weather Package <sup>3</sup>			
Unit 4 Cold Weather Package <sup>3</sup>			
Unit 3 Enhanced Fire Suppression Enclosure <sup>3</sup>			
Unit 4 Enhanced Fire Suppression Enclosure <sup>3</sup>			
Fuel Forwarding Skid <sup>3</sup>			
Remote Controlling Package			
Water Wash Skid			
Patch BOP Contractual Cost			
Water Well			
Warehouse and shelving			
Labor During Construction:			
Project Management/Supervision			
Operating Technicians			
Security Guards During Construction			
Property Tax During Construction			
Misc Tools and Equipment			
Extend Power to new well site and site construction power			
Furniture and Misc. for new Control Building			
Attorney, Consultants, and other outside services			
Overheads			
Environmental Permitting and testing			
Lubricants for first fill			
Project Insurance			
Inventory System			
→ Fire System outside of BOP Contract			
→ Natural gas and fuel oil for startup and testing			
Telephone, radio, and network additions			
Office facilities for Pratt & Whitney			
Construction power, temporary storage, and misc.			
to support construction and startup			
Contingencies			
<b>Total Board Approved Project Budget</b>	<b>55,000,000</b>		

<sup>1</sup>Includes 846,097.95 for spare parts, 102,000 for remote monitoring, and 343,000 for evaporative coolers.

<sup>2</sup>See "Payment Schedule" worksheet for dates and amounts of payment.

<sup>3</sup>Added to P&W Payment Schedule.

**Blake Mertens**

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-----Original Message-----

From: John Brown, Jr. [mailto:jbrown@segainc.com]

Sent: Tuesday, September 28, 2004 1:38 PM

To: Brad Beecher

Subject: Bonding in 2002

Brad-

Per your request I offer the following information about Sega's Bonding experience in 2002.

Sega was a bidder on your Gas Turbine Generator installation project at the Energy Center in Sarcxie, MO. in December 2001. \*\*

We were informed by Empire in January 2002 that they had selected Patch as the successful Bidder therefore Sega was not required to produce a Bond.

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If you have any questions I would be glad to discuss the subject in further detail.

John Brown, Jr., PE  
President, CEO  
Sega, Inc.  
913-681-2881

11/3/2004