

FILED³
SEP 29 2006
Missouri Public
Service Commission

Exhibit No.
Issue: Fuel and Purchased Power
Witness: Todd W. Tarter
Type of Exhibit: Rebuttal Testimony
Sponsoring Party: Empire District
Case No. ER-2006-0315

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

Rebuttal Testimony

of

Todd W. Tarter

July 2006

**** Denotes Highly Confidential****

Empire Exhibit No. 17NP
Case No(s) ER-2006-0315
Date 9-05-06 Rptr PF

NP

REBUTTAL TESTIMONY
OF
TODD W. TARTER
ON BEHALF OF
THE EMPIRE DISTRICT ELECTRIC COMPANY
BEFORE THE
MISSOURI PUBLIC SERVICE COMMISSION
CASE NO. ER-2006-0315

1 **I. INTRODUCTION**

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

3 A. My name is Todd W. Tarter. My business address is 602 Joplin Street, Joplin, Missouri.

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

5 A. I am employed by The Empire District Electric Company ("Empire" or "Company") as the
6 Manager of Strategic Planning.

7 **Q. ARE YOU THE SAME TODD W. TARTER THAT FILED DIRECT TESTIMONY**
8 **IN THIS CASE BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION**
9 **("COMMISSION")?**

10 A. Yes, I am.

11 **EXECUTIVE SUMMARY**

12 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY?**

13 A. The purpose of my rebuttal testimony is to respond to positions taken in the direct
14 testimony of other parties on the topic of on-system fuel and purchased power expense. In
15 section II, I have organized my testimony to address the direct testimony positions of the
16 Staff of the Commission ("Staff"), the Office of the Public Counsel ("OPC") and Praxair
17 and Explorer Pipeline ("Industrials") in that order. Throughout my testimony, I will
18 approach this topic from the standpoint of trying to determine the appropriate level of fuel
19 and purchased power expense to include in the Missouri retail rates to be effective

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1 beginning January of 2007. The OPC and Industrials have taken the position in direct
2 testimony that the current IEC should remain in place, but those parties also addressed the
3 issue of the appropriate level of fuel and purchased power to include in this case in the
4 event that the current IEC was terminated. I will also present an updated normalized on-
5 system fuel and purchased power model run in section III.

6 **Q. WILL YOUR TESTIMONY ADDRESS ALL OF THE COMPONENTS OF FUEL**
7 **AND PURCHASED POWER EXPENSE?**

8 A. No. My testimony will address on-system fuel and purchased power expense on a total
9 company basis. This includes variable on-system fuel and purchased power expense
10 calculated by a computer production cost model, purchase demand charges, natural gas
11 firm transportation charges, and other on-system fuel related expenses. Empire witness
12 Scott Keith will cover the topics of off-system sales and the appropriate rate case treatment
13 of a test year gain on unwinding natural gas contracts in his rebuttal testimony.

14 **Q. PLEASE SUMMARIZE THE REBUTTAL TESTIMONY YOU HAVE PREPARED.**

15 A. After reviewing the production cost model run of the Staff and the direct testimony of all of
16 the parties, it appears that the future cost of natural gas is a primary energy cost issue in
17 this case. Empire has made an updated normalized production cost model run based on
18 updated information including July 10, 2006 natural gas data for calendar year 2007
19 deliveries. Based on this model run Empire supports an annual total company fuel and
20 purchased power expense including demand charges of \$166,012,277 or 30.87 \$/MWh.
21 This amount is comprised of total variable fuel and energy costs from the production cost
22 model run of \$140,908,100 with the remaining \$25,104,177 assigned to purchase demand
23 charges, natural gas firm transportation charges, and other on-system fuel related expenses.

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1 The weighted average natural gas price in this updated run is ** ____ **/MMBtu. While
2 this is lower than the ** ____ **/MMBtu from the Company's initial filing, the total
3 \$/MWh from the update run is slightly higher than the initial run due to other changes and
4 a correction which will be described in this testimony. The testimony concludes by
5 comparing the Company's updated level of on-system fuel and purchased power expense to
6 that of the other parties based on their direct testimony, and with a table that summarizes
7 each of the Company's on-system fuel and purchased power model runs presented in this
8 rate proceeding to date.

9 **II. RESPONSE TO OTHER PARTIES' DIRECT TESTIMONY**

10 **Q. WERE THERE ANY ERRORS OR OMISSIONS IN STAFF'S FILING**
11 **CONCERNING EMPIRE'S NATURAL GAS FIRM TRANSPORTATION**
12 **CONTRACTS?**

13 A. Yes. In the Staff's initial filing, the costs associated with one of Empire's natural gas
14 transportation contracts was inadvertently omitted. This contract has been in place for
15 almost two years and the Company has been paying for service under this contract since
16 September of 2004. The contract has an annual reservation charge of approximately
17 ** ____ ** million (2006 level). This omission was brought to the Staff's attention during
18 the settlement discussions held the week of July 10th and the Staff has indicated that its
19 filing will be revised to include this cost.

20 **Q. WERE THERE ANY ISSUES WITH STAFF'S FILING CONCERNING**
21 **CONTRACT PURCHASES OF ELECTRICITY?**

22 A. No, not from a cost standpoint. But I want to correct a misstatement in Staff's direct
23 testimony. At page 4, line 16 of the direct testimony of Staff witness David Elliott, he
24 points out that "capacity purchases are made through contracts for the purchase of energy

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1 and capacity. Under such contracts the purchaser pays a monthly fixed cost for the ability
2 to receive a maximum amount of energy per hour (megawatts)....” At page 5, line 1, Mr.
3 Elliott continues by stating that Empire has “two capacity contracts representing the Jeffrey
4 Energy Center contract and the Elk River Wind Farm contract....” The Staff’s testimony is
5 correct in listing Empire’s contract purchases, but Mr. Elliott’s testimony implies that all
6 such contracts have a monthly fixed capacity charge. However, the Elk River Wind Farm
7 contract has no monthly fixed cost. It only has a cost per megawatt hour (“MWh”) of
8 energy actually received by Empire. Based on the review of Staff’s exhibits, it appears that
9 the costs of these two contracts were handled correctly.

10 **Q. ARE THERE ANY CORRECTIONS THAT SHOULD BE MADE TO STAFF’S**
11 **DESCRIPTION OF THE OPERATION OF EMPIRE’S UNITS?**

12 A. Yes, I need to correct a statement made in Staff’s testimony about Riverton Unit 7 and
13 Riverton Unit 8, although this misstatement did not appear to have an impact on Staff’s
14 modeling of the units in the Staff’s production cost model. In the direct testimony of Staff
15 witness Janis Fischer at page 16, line 5, she states “the use of petroleum coke as a blend
16 fuel reduces the capacity to 23 MW for Riverton Unit 7 and 45 MW for Riverton Unit 8.
17 The remainder of the capacity can be obtained by over-firing natural gas.” It is true that
18 Riverton Unit 7 and Riverton Unit 8 must over-fire with natural gas to obtain their rated
19 capacity, but the use of petroleum coke as a blend fuel has nothing to do with this operating
20 characteristic. These units operated in this same manner before petroleum coke was ever
21 used as a blend fuel at the Riverton Plant.

22 **Q. DID YOU REVIEW THE RESULTS OF THE STAFF’S PRODUCTION COST**
23 **MODEL?**

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1 A. Yes.

2 **Q. DO YOU HAVE ANY ISSUES WITH THE RESULTS FROM THE STAFF'S**
3 **PRODUCTION COST MODEL FOR EMPIRE'S SYSTEM?**

4 A. Overall, with the exception of the Staff's assumptions on natural gas pricing, it appears that
5 Staff's modeling of Empire's system is reasonable. The primary energy cost issues
6 between the Staff and the Company are related to the future cost of natural gas.

7 **Q. WHAT ISSUES ARE ASSOCIATED WITH STAFF'S NATURAL GAS PRICING**
8 **METHODOLOGY IN THIS CASE?**

9 A. First, the spot natural gas prices used by Staff are "backward looking" instead of a forward
10 view of natural gas prices. Staff utilized the weighted average of the actual natural gas spot
11 purchases for the twelve months historical period ending March 31, 2006, as part of the
12 estimate of the gas price used in its production cost model.

13 **Q. HOW CAN THE USE OF A HISTORICAL COST OF NATURAL GAS**
14 **INFLUENCE THE OUTPUT FROM A PRODUCTION COST MODEL?**

15 A. The Staff's approach does not eliminate the impact of abnormal weather during the test
16 year. When trying to determine the correct level of costs in a rate case it is important to use
17 normalized weather data. When the Staff's spot natural gas price is based upon actual
18 historical prices and actual purchases during a given twelve-month period, this incorporates
19 the bias of the actual weather in that period.

20 **Q. CAN YOU PROVIDE AN EXAMPLE?**

21 A. Yes, January 2006, which was included in the historical period Staff considered, was one of
22 the warmest Januarys of the past 75 years based on NOAA temperature data. Typically
23 January is one of the coldest months of the year and as a result represents one of Empire's

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1 higher natural gas requirement months. In addition, January typically has some of the
2 highest spot natural gas prices when compared to the other months of the year. Because
3 January 2006 was so much warmer than normal, the Company did not purchase any spot
4 natural gas in that month. Whenever a weighted average cost of natural gas is calculated
5 based on a period without spot natural gas purchases in January, such as Staff has done in
6 this case, the calculation omits what are normally some of the higher prices for spot natural
7 gas. In addition, the January spot natural gas purchases usually have considerable
8 weighting in the overall average cost of natural gas.

9 **Q. WHAT OTHER CONCERNS DO YOU HAVE REGARDING STAFF'S NATURAL**
10 **GAS PRICING METHODOLOGY?**

11 A. In addition to the weather bias built into the Staff's average cost of natural gas, the Staff's
12 natural gas pricing methodology has an incorrect assumption associated with the quantity
13 of natural gas that is hedged by Empire at this time. The Staff included the Company's
14 actual financial and physical hedges for the forward looking 21 month period April 2006
15 through December 2007 as of March 31, 2006 in its original analysis. At the time the Staff
16 made this calculation about ** ____ ** of Empire's expected natural gas needs were hedged
17 for April 2006 through December 2007. The Staff then inappropriately and without
18 justification adjusted Empire's hedged natural gas position to represent 80% of the natural
19 gas consumed, with the remaining 20% attributed to the higher cost spot natural gas price.
20 This change in assumption or adjustment artificially lowered the average cost of natural gas
21 in the Staff's production cost model.

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1 **Q. DOES THE COMPANY'S CURRENT RISK MANAGEMENT POLICY**
2 **AUTHORIZE THE HEDGING OF UP TO 80% OF ITS NATURAL GAS**
3 **REQUIREMENTS?**

4 A. Yes. Empire's Risk Management Policy states that up to 80% of any year's expected
5 requirement can be hedged if appropriate, given the associated volume risk. But there is no
6 guarantee that because the Company has **** ____ **** hedged at a given price, that it can
7 hedge an additional **** ____ **** at that same price level. In fact, the Company has hedged
8 additional natural gas since Staff's analysis. As of July 2006, Empire has about **** ____ ****
9 of the expected natural gas needs hedged for the period Staff considered, and the weighted
10 average price of the hedged natural gas has increased by about 2%.

11 **Q. ARE THERE ANY OTHER ISSUES WITH THE STAFF'S TESTIMONY**
12 **CONCERNING FUEL AND PURCHASED POWER?**

13 A. Yes. There are issues associated with off-system fuel and purchased power cost and a test
14 year gain on unwinding natural gas contracts. These issues are discussed in the rebuttal
15 testimony of Empire's witness Scott Keith.

16 **Q. DID THE OPC USE A PRODUCTION COST MODEL TO DETERMINE THE**
17 **APPROPRIATE LEVEL OF FUEL AND PURCHASED POWER COSTS FOR THIS**
18 **CASE?**

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

20 **Q. WHAT WERE THE ISSUES RAISED BY THE OPC WITH REGARD TO ON-**
21 **SYSTEM FUEL AND PURCHASED POWER EXPENSE IN THIS CASE?**

22 A. Based on my understanding of the direct testimony of Ralph Smith, who presented
23 testimony on behalf of the OPC in this proceeding, the OPC is concerned about

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1 nonrecurring fuel costs that are related to Powder River Basin ("PRB") coal delivery
2 problems that occurred during the test year (See Ralph Smith Direct Testimony beginning
3 at page 10, line 17) and the natural gas prices that appeared in the Company's initial filing,
4 which were based on November 2005 natural gas cost information (See Ralph Smith Direct
5 Testimony beginning at page 7, line 19).

6 **Q. DID EMPIRE RESTRICT THE OUTPUT OR AVAILABILITY OF ANY OF ITS**
7 **COAL UNITS OR CONTRACT PURCHASES IN ITS INITIAL FILING DUE TO**
8 **THE PRB DELIVERY PROBLEMS?**

9 A. No. None of the normalized fuel and purchased power model runs developed by the
10 Company for this rate proceeding have included constraints to reflect PRB coal delivery
11 problems. Furthermore, the results of the production cost simulations used in the
12 Company's initial filing and update run do not need to be adjusted to reflect PRB delivery
13 problems.

14 **Q. HAS EMPIRE UPDATED THE NORMALIZED ON-SYSTEM FUEL AND**
15 **PURCHASED POWER COSTS FOR THIS CASE BASED ON MORE CURRENT**
16 **INFORMATION?**

17 A. Yes. In section III of this testimony, I present an updated computer model run for
18 normalized, on-system fuel and purchased power costs. Empire has updated the natural gas
19 pricing in this run based on information as of July 10, 2006. This updated fuel information
20 will address the natural gas price concerns raised in Mr. Smith's testimony.

21 **Q. DID THE INDUSTRIALS (PRAXAIR AND EXPLORER PIPELINE) USE A**
22 **PRODUCTION COST MODEL TO DETERMINE THE APPROPRIATE LEVEL OF**
23 **FUEL AND PURCHASED POWER COSTS FOR THIS CASE?**

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1 A. To the best of my knowledge, they did not utilize a production cost model. I reviewed the
2 direct testimony of Maurice Brubaker, who presented testimony in this rate case on behalf
3 of these two industrial customers, and he made no mention of a production cost model in
4 his direct testimony.

5 **Q. WHAT WERE THE ISSUES RAISED BY THE INDUSTRIALS WITH REGARD**
6 **TO ON-SYSTEM FUEL AND PURCHASED POWER EXPENSE?**

7 A. Based on my review of Mr. Brubaker's direct testimony, the Industrials only adjusted
8 Empire's normalized computer model simulation to reflect changes to the natural gas
9 prices. Like the OPC, the Industrials pointed out that forward natural gas prices have
10 declined since November 2005. In addition, Mr. Brubaker also recommended an
11 adjustment to annual fuel and purchased power costs based on an abnormal test year gain
12 from unwinding natural gas hedge positions. This topic will be addressed for Empire by
13 Scott Keith in his rebuttal testimony.

14 **Q. WHAT ARE YOUR CONCERNS REGARDING THE INDUSTRIALS'**
15 **RECOMMENDED NATURAL GAS PRICE ADJUSTMENT TO EMPIRE'S FUEL**
16 **AND PURCHASED POWER EXPENSE?**

17 A. Based on my review of Mr. Brubaker's direct testimony, his method only considered the
18 natural gas component without considering other key parameters or the impacts of the
19 change of natural gas prices on the dispatch of Empire's supply resources. Mr. Brubaker's
20 adjustments for natural gas prices were made to the results of the production cost computer
21 model simulation that was provided in the Company's direct testimony from February
22 2006. This computer simulation has been updated and corrected, which I will explain later
23 in this testimony. I do agree with a statement from Mr. Brubaker's direct testimony at page

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1 10, line 14 concerning the unhedged portion of the natural gas cost where he states, "the
2 more current forward price information is, in my opinion, a more reliable indicator of the
3 prices that Empire will face during the time that the rates that will be set in this proceeding
4 are in effect." Mr. Brubaker's direct testimony also mentions that ratemaking is
5 "prospective". However, when Mr. Brubaker adjusted natural gas prices for the months of
6 January through June in the schedules attached to his direct testimony, he utilized the
7 actual January 2006 through June 2006 Southern Star Index prices, which are historical in
8 nature and not prospective. In other words, although he acknowledges the need to use
9 forward-looking prices, for half of the year Mr. Brubaker uses backward looking prices
10 instead of forward prices. Since Mr. Brubaker uses historical prices for January 2006
11 through June 2006, there is a question as to whether these natural gas prices may not be
12 weather normalized.

13 **III. UPDATED FUEL AND PURCHASED POWER MODEL RUN**

14 **Q. HAS EMPIRE UPDATED ITS FUEL AND PURCHASED POWER MODEL RUN?**

15 A. Yes. The Company has made a new production cost computer model run with the
16 PROSYM model. The PROSYM model has been utilized by the Company for all the on-
17 system fuel and purchased power dispatch simulation runs in this proceeding. A
18 description of the PROSYM model can be found in my direct testimony on page 17
19 beginning at line 4.

20 **Q. PLEASE SUMMARIZE THE CHANGES MADE TO THE UPDATED MODEL**
21 **RUN COMPARED TO THE MODEL RUN YOU PRESENTED IN YOUR DIRECT**
22 **TESTIMONY.**

23 A. The updated run contains the following changes: (1) the hourly loads have been changed
24 to match the hourly loads in the model run presented by Staff in its direct testimony; (2) a

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1 correction has been made to the number of scheduled outage days for each of the three
2 units that make up the Westar Jeffrey contract purchase; (3) the spot purchase availability
3 (capacity) has been changed to match the model run presented by Staff in its direct
4 testimony; (4) the minimum up time for the State Line Combined Cycle ("SLCC") has
5 been changed to match the model run presented by Staff in its direct testimony; (5) the
6 hedged portion of natural gas has been updated to reflect Empire's current, July 2006
7 hedged position for calendar year 2007; and (6) the spot natural gas prices have been
8 updated to reflect the amount needed to physically hedge the remaining expected natural
9 gas needs for 2007 based on price quotes from July 10, 2006.

10 **Q. HOW MUCH OF EMPIRE'S EXPECTED NATURAL GAS BURN FOR 2007 WAS**
11 **HEDGED AT JULY 2006?**

12 A. About ** ____ ** of the Company's expected natural gas needs for calendar year 2007 are
13 hedged at this time.

14 **Q. PLEASE PROVIDE MORE DETAIL ON THE NATURAL GAS PRICES USED IN**
15 **THE UPDATED MODEL RUN.**

16 A. The hedged natural gas used in the updated model run reflects the Company's hedged
17 position for 2007 as of July 10, 2006. The prices and corresponding volumes can be found
18 on page 5 of my supplemental direct testimony. The spot natural gas prices used in the
19 updated model run are based on the physical fixed price contract price quotes Empire
20 received on July 10, 2006 for 2007 deliveries. These prices can be found on pages 5 and 6
21 of my supplemental direct testimony.

22 **Q. WHY WERE THESE MORE RECENT NATURAL GAS PRICES USED FOR THE**
23 **UPDATED RUN?**

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1 A. The production simulation in Empire's initial filing was based on information available in
2 November 2005. Since that time natural gas prices have declined. The updated production
3 simulation contains recent forward looking natural gas price information for calendar year
4 2007, the period during which rates from this rate proceeding are likely to be in effect.
5 Natural gas price information from July 10, 2006 was used in the update of the Company's
6 production cost simulation to be consistent with the information presented in supplemental
7 direct testimony. These current natural gas prices have been used to model the future,
8 because they are the best proxy available for the non-hedged portion of Empire's natural
9 gas requirements at this time. However, due to the volatility of the natural gas market, the
10 future price of natural gas cannot be predicted precisely.

11 **Q. BASED ON THE CHANGES YOU HAVE DESCRIBED, WHAT IS THE TOTAL**
12 **ON-SYSTEM FUEL AND PURCHASED POWER COST FROM THE UPDATED**
13 **PRODUCTION SIMULATION RUN?**

14 A. The total Company on-system fuel and purchased power costs, including demand charges
15 and fuel related expenses, from the updated run is \$166,012,277 or 30.87 \$/MWh. The
16 weighted average natural gas price from this run is ** ____ ** \$/MMBtu. A summary of
17 this run is attached to my testimony as Schedule TWT-1. The updated average fuel and
18 energy cost including demand charges of \$30.87 per MWh is slightly higher than the cost
19 of \$30.76 per MWh initially used in Empire's original filing on February 1, 2006.

20 **Q. HOW DOES YOUR UPDATE OF FUEL AND PURCHASED POWER COSTS**
21 **COMPARE TO THE STAFF, OPC, AND INDUSTRIALS' RECOMMENDED**
22 **FUEL AND PURCHASED POWER COSTS?**

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1 A. It is substantially higher and includes total variable fuel and energy costs of \$140,908,100.
2 By contrast, the Staff production cost simulation included variable fuel and energy costs of
3 only \$135,558,979. The primary reason for this approximately \$5.4 million differential is
4 the average cost of natural gas included in each model. The Company has used a forward-
5 looking average natural gas cost of ** ____ ** per MMBtu while the Staff production cost
6 model included ** ____ ** per MMBtu as an average cost of natural gas. The ** ____ **
7 per MMBtu differential in natural gas price multiplied by roughly ** ____ ** MMBtu
8 of natural gas consumed accounts for the roughly \$5.4 million differential. The OPC did
9 not use a production cost model to present its recommendations concerning fuel and energy
10 costs so there is really nothing to compare the Company's update against. However, as I
11 mentioned earlier, the Company's update of fuel and energy cost does address the PRB and
12 natural gas pricing issues raised by OPC witness Ralph Smith in his direct testimony. The
13 Industrials are in a similar position to the OPC in that they did not use a production cost
14 model to make a recommendation concerning fuel and energy costs. But Mr. Brubaker,
15 representing the Industrials, does make an adjustment to Empire's initial run for a
16 difference in natural gas prices. This adjustment would make the Industrials total variable
17 fuel and energy costs about ** ____ ** on a total Company basis at the time that
18 their direct testimony was filed (this excludes the natural gas unwinding issue, and is based
19 on a lower set of hourly loads, an incorrect number of outage days for the Jeffrey contract
20 purchase, and a lower natural gas burn than Staff's initial run and Empire's update run).
21 Because the Industrials adjusted Empire's initial model run and Empire has updated its
22 model run, it is assumed that the Industrials may need to modify their adjustment. In
23 addition, I have estimated that Mr. Brubaker uses an average cost of natural gas of about

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** _____ ** per MMBtu in his recommendation on natural gas price. As I mentioned earlier, this was based on a historical look at natural gas prices for half the year, and forward look at prices for the other half of the year. By contrast, the Empire production cost update includes an average cost of natural gas of ** _____ ** per MMBtu.

Q. PLEASE SUMMARIZE ALL OF THE COMPANY'S MODEL RUNS PRESENTED IN THIS RATE PROCEEDING TO DATE.

A. The following table summarizes each of the model runs that Empire has made to date in this rate proceeding.

| Run Description | Date | Total Cost With Demand (\$000s) | Avg \$/MWh With Demand | GBtu Natural Gas Consumed | Wtd Avg Cost of Natural Gas \$/MMBtu |
|---------------------------------------|----------|---------------------------------|------------------------|---------------------------|--------------------------------------|
| Normalized Run for Direct Testimony | 2/1/06 | \$162,888 | \$30.76 | ** _____ ** | ** _____ ** |
| Supp. Direct - Physical Hedging 2007 | 7/14/206 | ** _____ ** | ** _____ ** | ** _____ ** | ** _____ ** |
| Supp. Direct - Physical Hedging 2008 | 7/14/206 | ** _____ ** | ** _____ ** | ** _____ ** | ** _____ ** |
| Supp. Direct - Physical Hedging 2009 | 7/14/206 | ** _____ ** | ** _____ ** | ** _____ ** | ** _____ ** |
| Supp. Direct - Financial Hedging 2007 | 7/14/206 | ** _____ ** | ** _____ ** | ** _____ ** | ** _____ ** |
| Supp. Direct - Financial Hedging 2008 | 7/14/206 | ** _____ ** | ** _____ ** | ** _____ ** | ** _____ ** |
| Supp. Direct - Financial Hedging 2009 | 7/14/206 | ** _____ ** | ** _____ ** | ** _____ ** | ** _____ ** |
| Normalized Run for Rebuttal Testimony | 7/28/06 | \$166,012 | \$30.87 | ** _____ ** | ** _____ ** |

As indicated, the updated production cost simulation produces a total cost of \$166,012,277 or an average cost of \$30.87 per MWh. This updated analysis is based on a more current set of assumptions and produces results that are very close on a \$/MWh basis to the results of the initial Empire production cost simulation originally filed on February 1, 2006.

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

2 **A. Yes, it does.**

On-System F&PP Summary
Missouri Rate Case Update Run (7/28/06)

Schedule TWT-1

NP VERSION

| | F &PP Cost (\$000) | | | | | | | |
|---------------------------|-----------------------|-----------|-------------------|---------------|---------------|--------------|-------------|---------------|
| | <u>GWH</u> | <u>CF</u> | <u>Incl Start</u> | <u>\$/MWH</u> | <u>Starts</u> | <u>Hours</u> | <u>GBTU</u> | <u>Avg HR</u> |
| Asbury 1 | * | * | * | * | * | * | * | * |
| Asbury 2 | * | * | * | * | * | * | * | * |
| Total Asbury | * | * | * | * | * | * | * | * |
| Iatan | * | * | * | * | * | * | * | * |
| Riverton 7 | * | * | * | * | * | * | * | * |
| Riverton 8 | * | * | * | * | * | * | * | * |
| Riverton 9 | * | * | * | * | * | * | * | * |
| Riverton 10 | * | * | * | * | * | * | * | * |
| Riverton 11 | * | * | * | * | * | * | * | * |
| Total Riverton | * | * | * | * | * | * | * | * |
| Energy Center 1 | * | * | * | * | * | * | * | * |
| Energy Center 2 | * | * | * | * | * | * | * | * |
| Energy Center 3 | * | * | * | * | * | * | * | * |
| Energy Center 4 | * | * | * | * | * | * | * | * |
| Total EC | * | * | * | * | * | * | * | * |
| State Line 1 | * | * | * | * | * | * | * | * |
| State Line CC | * | * | * | * | * | * | * | * |
| Total SL | * | * | * | * | * | * | * | * |
| Gas Turbines | * | * | * | * | * | * | * | * |
| Total Thermal | * | * | * | * | * | * | * | * |
| Ozark Beach | * | * | * | * | * | * | * | * |
| Total EDE (less fixed) | * | * | * | * | * | * | * | * |
| WR-JP | * | * | * | * | * | * | * | * |
| Spot Purch | * | * | * | * | * | * | * | * |
| Total Purch | * | * | * | * | * | * | * | * |
| Wind Energy | * | * | * | * | * | * | * | * |
| Total Model | * | * | * | * | * | * | * | * |
| Purch Power Demand Charge | | * | * | * | | | * | * |
| Undist-Oth-Train | | * | * | * | | | * | * |
| Gas Fixed FT | | * | * | * | | | * | * |
| Gas Dmd Commodity Chg | | * | * | * | | | * | * |
| Gas Dmd Losses Chg | | * | * | * | | | * | * |
| Total Gas DMD | | * | * | * | | | * | * |
| Total FPP NSI | * | | 166,012.28 | * | | | | |

Undist-Oth-Train and Gas FT not allocated to generating units in this summary report
Slight inconsistencies may occur due to rounding

AFFIDAVIT OF TODD W. TARTER

STATE OF MISSOURI)
) ss
COUNTY OF JASPER)

On the 27th day of July, 2006, before me appeared Todd W. Tarter, to me personally known, who, being by me first duly sworn, states that he is the Manager of Strategic Planning of The Empire District Electric Company and acknowledges 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.

Todd W. Tarter
Todd W. Tarter

Subscribed and sworn to before me this 27th day of July, 2006.

Patricia A. Settle
Pat Settle, Notary Public

My commission expires: _____.

