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Service Commission

Exhibit No.

Issue: Energy Center 3 & 4

Construction Costs

Witness: Blake A. Mertens

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**

**Blake A. Mertens**

**July 2006**

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

Empire Exhibit No. 29NP  
Case No(s) ER-2006-0315  
Date 9-05-06 Rptr PF

**NP**

BLAKE A. MERTENS  
REBUTTAL TESTIMONY

REBUTTAL TESTIMONY  
OF  
BLAKE A. MERTENS  
ON BEHALF OF  
THE EMPIRE DISTRICT ELECTRIC COMPANY  
BEFORE THE  
MISSOURI PUBLIC SERVICE COMMISSION  
CASE NO ER-2006-0315.

1        **INTRODUCTION**

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

3        A. Blake A. Mertens. My business address is 602 Joplin St., 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  
6        Construction Project Manager.

7        **Q. PLEASE DESCRIBE YOUR EDUCATIONAL BACKGROUND.**

8        A. I graduated from Kansas State University in 2000 with a Bachelor of Science  
9        Degree in Chemical Engineering with a minor in Business. I am currently pursuing  
10       a Masters degree in Business Administration at Missouri State University.

11       **Q. PLEASE GIVE AN OVERVIEW OF YOUR PROFESSIONAL**  
12       **EXPERIENCE.**

13       A. I was employed by Black & Veatch Corp. immediately following my graduation  
14       from Kansas State University in May of 2000. From June of 2000 through  
15       November of 2001, I held roles as a technical analyst and energy consultant for the  
16       Strategic Planning Group of Black & Veatch's Power Sector Advisory Services in  
17       the Energy Services Division. Duties included assisting in power plant siting  
18       studies, economic analysis of potential power plants using production cost  
19       modeling, independent engineering evaluations of plant assets, and market analysis  
20       of the California energy crisis of 2000 – 2001. I went to work for Empire in  
21       November of 2001 as a Staff Engineer in Energy Supply where my duties included  
22       tracking of plant capital and operating & maintenance ("O&M") expenses,  
23       involvement in energy supply regulatory issues, evaluation of new generating  
24       resource options, assisting in the construction of new plant, and assisting in the  
25       modeling and tracking of fuel and purchased power costs. In 2003, my title was

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1 changed to Planning Engineer with similar duties but more responsibilities in the  
2 area of generation planning. In the fall of 2004 I took my current position as  
3 Combustion Turbine Construction Project Manager. In this position I am  
4 responsible for the construction of a 155 MW combustion turbine at Empire's  
5 Riverton Power Plant to be known as Riverton Unit 12.

6 **EXECUTIVE SUMMARY**

7 **Q. WHAT IS THE PURPOSE OF YOUR TESTIMONY?**

8 A. In this testimony, I will rebut the testimony of Staff witnesses David W. Elliott and  
9 Paul R. Harrison concerning the proposed disallowance of a portion of Energy  
10 Center Units 3 and 4 construction costs.

11 Staff proposes a disallowance of \$3,155,356 of construction costs related to Patch  
12 Construction, LLC ("Patch"), a contractor hired to perform work on the project. A  
13 contractual requirement for Patch was to provide a performance bond within 21  
14 business days of contract signing but Patch was unable to do so. In an attempt to  
15 complete the project in a cost and time effective manner, Empire entered into an  
16 Amendment to the contract, which pledged the assets of Patch, and the personal  
17 assets of Mr. and Mrs. Chester J. Patch as collateral to finish the scope of the  
18 project at their contractual cost. Ultimately, Patch was unable to meet the  
19 requirements. Patch was therefore terminated as a contractor for the project.  
20 Empire personnel managed the final phases of construction and start-up for the  
21 project. Because of this disruption, the cost to complete the activities associated  
22 with Patch's contract was higher than the contract amount. Staff's opinion is that  
23 the Company acted imprudently by exposing Empire to an unnecessary level of  
24 financial risk. Empire disagrees with this assessment and believes rather that  
25 Empire's management team did everything within its ability to effectively manage  
26 the overall construction project costs when all of the circumstances are considered.  
27 This project was budgeted at \$55 million and was completed with an unfavorable  
28 variance of only \$220,000 from the original budget. As a result, Empire believes  
29 the Commission should deny Staff adjustment of \$3,155,356.

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1 **Q. WHAT IS THE PURPOSE OF YOUR REBUTTAL TESTIMONY IN THIS**  
2 **CASE BEFORE THE MISSOURI PUBLIC SERVICE COMMISSION**  
3 **("COMMISSION")?**

4 A. In this testimony, I will rebut the testimony of Staff witnesses David W. Elliott and  
5 Paul R. Harrison concerning the proposed disallowance of a portion of Energy  
6 Center Units 3 and 4 construction costs.

7 **Q. WHAT WAS YOUR INVOLVEMENT WITH THE CONSTRUCTION OF**  
8 **ENERGY CENTER UNITS 3 AND 4?**

9 A. At the time of construction of Energy Center Units 3 & 4, my position at Empire  
10 was Staff Engineer – Energy Supply. With regards to the Energy Center Units 3 &  
11 4 construction project, I was responsible for tracking costs related to the overall  
12 project, assisting in the evaluation of contractors and contract negotiations, and  
13 working with Patch Cost Engineers to audit Patch Cost Reports and invoices. Once  
14 Patch was terminated, I spent the final few months of the project on-site assisting  
15 with construction and start-up management.

16 **Q. PLEASE SUMMARIZE THE ISSUE REGARDING ENERGY CENTER**  
17 **UNITS 3 AND 4 AND STAFF'S PROPOSED DISALLOWANCE OF**  
18 **CONSTRUCTION COSTS, AS YOU UNDERSTAND IT.**

19 A. By way of background, the Energy Center Units 3 & 4 construction project started  
20 in the fall of 2001 and was completed in the spring of 2003, a period of a little more  
21 than 1 ½ years from date of equipment contract signing to commercial operation  
22 date. This project was budgeted at \$55 million and was completed with an  
23 unfavorable variance of approximately \$220,000 from the original budget. Staff  
24 proposes a disallowance of \$3,155,356 of these construction costs which focuses on  
25 a single line item cost out of numerous categories of project costs that Empire  
26 effectively managed to meet its overall project budget of \$55 million.

27 **Q. PLEASE EXPLAIN.**

28 A. Empire utilized a multi-contract approach to construct Energy Center Units 3 & 4.  
29 One of the contractors, Patch Construction, LLC ("Patch"), was retained to perform  
30 engineering, installation, and procurement of balance of plant ("BOP") equipment  
31 activities for the Energy Center Unit 3 & 4 construction project. One of the

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1 contractual requirements for Patch was to provide a performance bond within 21  
2 business days of contract signing for the work that was to be performed under the  
3 contract.

4 **Q. WAS PATCH ABLE TO MEET THIS REQUIREMENT?**

5 A. No.

6 **Q. WHAT DID EMPIRE DO AS A RESULT?**

7 A. In an attempt to complete the project in a cost and time effective manner, Empire  
8 entered into Amendment 01 to the contract with Patch. This amendment, among  
9 other things, pledged the assets of Patch Construction, LLC, Patch, Inc., and the  
10 personal assets of Mr. and Mrs. Chester J. Patch as collateral to finish their scope of  
11 the project at their contractual cost.

12 **Q. WHAT HAPPENED?**

13 A. Ultimately, Patch was unable to meet the requirements of the original contract and  
14 Amendment 01. Patch was therefore terminated as a contractor for the project.  
15 Empire personnel managed the final phases of construction and start-up for the  
16 project. Because of this disruption, the cost to complete the activities associated  
17 with Patch's contract was higher than the contract amount.

18 **Q. WHAT IS THE STAFF'S POSITION?**

19 A. Staff contends that a portion of the costs above the original contract amount should  
20 be disallowed as plant-in-service. It is "Staff's opinion that the Company acted  
21 imprudently by exposing Empire to an unnecessary level of financial risk" (page 5,  
22 lines 20-21 of Paul R. Harrison's Direct Testimony).

23 **Q. HOW DO YOU RESPOND?**

24 A. Empire disagrees with this assessment and believes rather that Empire's  
25 management team did everything within its ability to effectively manage the overall  
26 construction project costs when all of the circumstances are considered.

27 **Q. IF THESE COSTS ARE DISSALLOWED, WHAT WILL BE THE IMPACT?**

28 A. Empire will have to expense the Missouri jurisdictional portion of these  
29 construction costs, meaning that Empire and its shareholders will have to bear these  
30 costs, which were incurred to provide service and reliable energy to Empire's  
31 electric customers.

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

2   A.   No.

3   **Q.   WHY NOT?**

4   A.   Empire was able to complete the construction project within .04 percent of the total  
5       original project budget and therefore believes, based on prior regulatory treatment  
6       utilized by Commission and Staff concerning new plant-in-service, that no  
7       legitimate issue exists relating to Energy Center Unit 3 & 4 construction costs.

8   **Q.   WHAT PRIOR REGULATORY TREATMENT ARE YOU REFERRING**  
9       **TO?**

10  A.   In the rate case that audited construction costs associated with Empire's State Line  
11       Combined Cycle (Case No. ER-2001-299), Staff utilized a "definitive estimate"  
12       standard to audit costs. To quote the Direct Testimony of Staff Witness Mark L.  
13       Oligschlaeger, page 4, lines 9-16: "As a starting point of its construction review,  
14       the Staff obtains the budget document that is used by the utility for cost control  
15       purposes. In most instances, this budget document is known as the "definitive  
16       estimate".

17  **Q.   HAVE OTHER STAFF MEMBERS USED SIMILAR TERMS IN PRIOR**  
18       **TESTIMONY WHEN DISCUSSING WHERE TO BEGIN CONSTRUCTION**  
19       **AUDITS?**

20  A.   Yes. In Case No. ER-2001-299, Staff Witness Cary G. Featherstone used the  
21       phrase "original estimate" at least nine (9) times when referring to the basis of  
22       proposed construction project cost disallowance.

23  **Q.   HOW MANY TIMES DOES STAFF REFERENCE "DEFINITIVE**  
24       **ESTIMATE" OR "ORIGINAL ESTIMATE" IN ITS DIRECT TESTIMONY**  
25       **IN THIS CASE?**

26  A.   None.

27  **Q.   OTHER THAN EMPIRE RATE CASES, HAS STAFF UTILIZED THE**  
28       **"DEFINITIVE ESTIMATE" OR "ORIGINAL ESTIMATE" STANDARD IN**  
29       **RATE CASES.**

30  A.   Yes. In Empire's Case No. ER-2001-299, which Mr. Oligschlaeger cites on page 5,  
31       lines 2-4 of his rebuttal testimony, and in a Union Electric case (Case No. EO-85-

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1 160 and EO-85-17) the Commission stated "[t]he definitive estimate is the proper  
2 starting point for an investigation of cost overruns and a determination as to  
3 whether costs incurred on the project are reasonable." (Report and Order, pp. 39-  
4 40). From this same testimony Mr. Oligschlaeger quotes:

5 In Case No. ER-77-118, Re: Kansas City Power & Light  
6 Company, the Commission was of "the opinion that the  
7 appropriate starting point for the calculation of any cost overrun  
8 would be the target used by the Company in controlling cost. The  
9 Commission is of the opinion, as in Case No. ER-77-118, that the  
10 Company's definitive estimate is the appropriate starting point for  
11 determining cost overruns. Kansas City Power & Light Company,  
12 24 MO.P.S.C (N.S.), (1981). (Ibid, p. 40).

13 **Q. YOU KEEP REFERRING TO EMPIRE'S CASE NO. ER-2001-299. WERE**  
14 **COST OVERRUNS AN ISSUE IN THAT CASE?**

15 A. Yes. During the construction of State Line Combined Cycle ("SLCC"), Empire  
16 encountered several obstacles that caused construction costs to exceed the "original  
17 estimate." When Empire filed its 2001 rate case to recover plant-in-service costs  
18 related to this project, the Staff argued that costs above the "original estimate"  
19 should be disallowed as plant-in-service. To quote Mr. Oligschlaeger's direct  
20 testimony in Case No. ER-2001-299, page 7, lines 6-7, "the original cost estimate  
21 for the SLCC unit project was approximately \*\* \_\_\_\_\_ \*\*." Later, on the  
22 same page, lines 10-12, he stated "the current construction cost estimate for  
23 completing the SLCC unit is approximately \*\* \_\_\_\_\_ \*\*, meaning total cost  
24 overruns for the project are expected to be approximately \*\* \_\_\_\_\_ \*\*."

25 **Q. WHAT WAS EMPIRE'S ORIGINAL ESTIMATE FOR CONSTRUCTION**  
26 **OF ENERGY CENTER UNITS 3 AND 4.**

27 A. \$55,000,000. Attached as Schedule BAM-1 is the Board Resolution approving this  
28 budget as well as an excerpt from Empire's December 2002 10-k.

29 **Q. BASED ON STAFF'S POSITIONS IN PREVIOUS RATE PROCEEDINGS,**  
30 **WOULD EMPIRE EXPECT STAFF TO CONSIDER THIS THE**  
31 **"ORIGINAL ESTIMATE" OR "DEFINITIVE ESTIMATE"?**

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1 A. Yes.

2 **Q. TO WHAT LEVEL OF COSTS WAS EMPIRE MANAGEMENT**  
3 **EXPECTED TO MANAGE COSTS?**

4 A. Empire's project management team was expected to manage costs to \$55,000,000,  
5 which was considered to be the "definitive estimate" or "original estimate" based  
6 on prior rate proceedings.

7 **Q. DOES STAFF AGREE THAT EMPIRE'S DEFINITIVE ESTIMATE WAS A**  
8 **PRUDENT PROJECTION OF COSTS FOR ENERGY CENTER UNITS 3**  
9 **AND 4.**

10 A. In response to DR-0332, which is an update to DR-0471 from Empire's previous  
11 rate proceeding Case No. ER-2004-0570, Staff states, "Staff believes that the  
12 Company's determination of \$55 million was an acceptable amount to use for the  
13 purpose of gaining approval from Empire's Board of Directors for the construction  
14 of Energy Center 3 and 4." However, Staff goes on to state "Staff believes this  
15 amount was not appropriate for the purpose of project control". This statement  
16 seems contradictory in itself and to prior rate proceeding testimony and begs the  
17 question "To what level of costs was Empire to manage?"

18 **Q. WHAT WAS THE FINAL COST TO COMPLETE THE CONSTRUCTION**  
19 **OF ENERGY CENTER UNITS 3 AND 4?**

20 A. During Empire's previous rate proceeding, it was determined during the  
21 construction audit the final cost of the project was \$55,220,301, not including  
22 AFUDC. (Please refer to schedule BAM-2). When compared to the original cost  
23 estimate, this represents a \$220,301 or 0.4% cost overrun.

24 **Q. WHAT IS STAFF'S PROPOSED LEVEL OF DISALLOWANCE?**

25 A. Staff recommends a disallowance of \$3,155,356.

26 **Q. IS THIS DISALLOWANCE RELATED TO THE OVERRUN OF THE**  
27 **ORIGINAL COST ESTIMATE?**

28 A. No.

29 **Q. WHAT IS THE DISSALLOWANCE BASED UPON?**

30 A. It appears that Staff is utilizing a different standard than in previous rate  
31 proceedings to audit the construction costs of Energy Center Units 3 & 4. Instead



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1 of utilizing the "original estimate" as a basis for the construction audit, Staff is  
2 scrutinizing the budget line item by line item. The line item Staff is using to  
3 calculate its proposed disallowance was the estimate to install, engineer, and  
4 procure BOP material. The actual cost to complete this line item was higher than  
5 the original cost estimate. Schedule BAM-3 presents the original cost estimate  
6 breakdown. Comparing Schedule BAM-3, the original cost estimate, to Schedule  
7 BAM-2, actual project costs, shows that no credit is given to line items that Empire  
8 was able to "outperform", for example Start-up Fuel and the BOP Fire System  
9 outside the BOP Contract. As stated earlier, Staff agrees with Empire's "original  
10 estimate" or "definitive estimate" but does not seem to be using it when auditing the  
11 actual costs of the project.

12 **Q. DO YOU HAVE ANY COMMENTS ON AN AUDITING STANDARD THAT**  
13 **COMPARES ACTUAL COSTS TO ORIGINAL COST ESTIMATES ON AN**  
14 **ITEMIZED BASIS?**

15 A. Yes. As stated in Mr. Elliott's Direct Testimony in Case No. ER-2004-0570, page  
16 14, lines 19-20, "most construction projects have cost overruns. The larger the  
17 project, the more complex the project. The more complex the project is, the more  
18 likely it is that unforeseen situations will occur as construction progresses." Due to  
19 this complexity to which Mr. Elliott alludes, at the beginning of a project it is  
20 difficult to pinpoint all categories of costs. For those categories of costs that are  
21 identified, it is often difficult to estimate the costs that will be associated with  
22 activities in that category. Often, at the time the original cost estimate is prepared,  
23 bids from contractors are not available and the original cost estimate is based on  
24 available industry information and previous construction project experience. Such  
25 was the case when the original cost estimate for Energy Center Units 3 and 4 was  
26 prepared. Since it is impossible to predict all costs accurately, an audit standard  
27 that compares the original cost estimate to actual costs line item by line item does  
28 not seem fair or reasonable, especially when only the line items with unfavorable  
29 variances are considered.

30 **Q. WHAT METHODS ARE UTILIZED BY PREPARERS OF ORIGINAL**  
31 **COST ESTIMATES TO ACCOUNT FOR UNKNOWN COSTS?**

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1 A. Preparers of original cost estimates do their best to categorize costs and estimate the  
2 costs of construction activities. To account for inaccuracies, unpredictable costs,  
3 and "unforeseen situations", as characterized by Mr. Elliott, that will be  
4 encountered during large construction projects, budgeters apply a contingency  
5 factor to the overall cost estimate.

6 **Q. DID EMPIRE'S ORIGINAL COST ESTIMATE FOR ENERGY CENTER**  
7 **UNITS 3 AND 4 CONTAIN CONTINGENCY?**

8 A. Yes.

9 **Q. WHAT AMOUNT OF CONTINGENCY WAS INCLUDED IN THE**  
10 **ORIGINAL COST ESTIMATE?**

11 A. As shown on Schedule BAM-3, Empire included a contingency of \$1,997,560, or  
12 approximately 3.6% of the total cost estimate.

13 **Q. WOULD YOU CONSIDER THIS A "NORMAL" AMOUNT OF**  
14 **CONTINGENCY?**

15 A. It is my experience that construction projects of this magnitude usually contain 5 -  
16 10% contingency. The amount of contingency Empire included is obviously below  
17 the lower end of this scale. But considering that the cost of the turbines was already  
18 under contract at the time the detailed cost estimate was derived, Empire's estimate  
19 appears to be an acceptable level of contingency.

20 **Q. WAS THE CONTINGENCY ESTIMATE USED DURING THE PROJECT?**

21 A. Yes. As it turned out, the contingency was used to cover the additional costs that  
22 were incurred related to the work that was to be completed under Patch's contract  
23 and for other construction issues that arose. Additionally, Empire was able to  
24 manage costs in other cost categories, such as Start-up Fuel and the BOP Fire  
25 System outside the BOP Contract, to offset some of the higher than estimated costs  
26 related to the Patch contract. It is Empire's opinion that this is a prime example of  
27 why contingency is included in the original cost estimate.

28 **Q. WHAT WERE THE CIRCUMSTANCES THAT LED TO THE EXECUTION**  
29 **OF AMENDMENT 01 BETWEEN EMPIRE AND PATCH?**

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

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- 1       1. Empire needed at least one of the new units on line to meet the 12% minimum  
2       Southwest Power Pool ("SPP") capacity margin requirement before June 1,  
3       2003.
- 4       2. Given that Patch could not obtain a performance bond, Empire had to  
5       determine the most cost effective way to complete the project for our  
6       customers.
- 7       3. Given the Staff position in Case No. ER-2001-299, Empire also had to  
8       determine the most effective way to minimize risk to our shareholders.

9       To further expand on item 1, SPP requires every load-serving entity to maintain  
10      installed capacity equal to 12% in excess of its seasonal peak. Although it is each  
11      member of the SPP's responsibility to maintain electric reliability for its customers,  
12      mismanagement by any one member of SPP can jeopardize the entire system,  
13      resulting in unfortunate events like the blackout in August of 2003. Empire  
14      reasonably concluded that a change in contractors late in the project was sure to  
15      delay the schedule and probably not allow the Company to meet SPP's  
16      requirements.

17      Item 2 required Empire to assess the potential costs to complete the project  
18      without Patch. Empire knew that if it replaced Patch the next bidder was a higher  
19      cost. Empire also knew that if it replaced Patch there would be additional expense  
20      for re-work and transition. On the other hand, Empire believed that if it managed  
21      Patch's financial involvement in the job, there was an opportunity to complete  
22      Patch's scope at the contract value and finish the project on schedule.

23      As for item 3, Staff's recent position on rate treatment of State Line Combined  
24      Cycle in 2001 (Case No. ER-2001-299) weighed on our decision process. In the  
25      SLCC case, Empire had deemed a contractor, Fru-Con, was in default of the  
26      contract and replaced them with another contractor at a higher cost. The  
27      replacement of Fru-Con with another contractor at a higher cost was the major basis  
28      cited by the Staff in its plant disallowance position in the previous case. If Empire  
29      replaced Patch with another bidder, Empire would have not only jeopardized  
30      meeting its SPP requirement, but it would have been repeating conduct that Staff  
31      judged as imprudent in the previous case. By this point in the project, Empire also

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1 knew that the Patch entities were not financially strong. If Empire continued with  
2 Patch, Empire had to limit Patch's financial involvement. Based on what Empire  
3 knew at the time and balancing all relevant concerns that I have outlined above,  
4 Empire concluded that executing Amendment 01 with Patch provided for the best  
5 balance of all concerned.

6 **Q. WHAT DOES STAFF SUGGEST AS ALTERNATIVES TO ENTERING**  
7 **INTO AMENDMENT 01 WITH PATCH?**

8 A. In Staff witness Paul R. Harrison's Direct Testimony, page 11, lines 12-13, he states  
9 "elimination of Patch from consideration would have resulted in Sega being  
10 awarded the contract to install EC3&4."

11 **Q. WHO IS SEGA AND HOW DO YOU RESPOND TO STAFF'S PROPOSED**  
12 **ALTERNATIVE?**

13 A. Sega is a Kansas City area engineering company that was the runner-up bidder on  
14 the Energy Center Unit 3 & 4 construction project. While this may have been a  
15 possible alternative, if Empire had terminated Patch and hired Sega to perform the  
16 work, it is likely that Staff would have contended that any termination charges  
17 related to the Patch contract should be disallowed. Additionally, conversations with  
18 Sega management after the completion of the Energy Center 3 & 4 project show  
19 that it is likely Sega would not have been able to obtain a performance bond for the  
20 project either. This would have pushed us to the third bidder, Bibb-Kiewit, and  
21 further delayed the project.

22 **Q. WHY DO YOU CONTEND THAT IT IS LIKELY SEGA WOULD NOT**  
23 **HAVE BEEN ABLE TO OBTAIN A PERFORMANCE BOND FOR THE**  
24 **PROJECT EITHER?**

25 A. Sega was the runner-up bidder on Empire's Energy Center Units 3 and 4 project.  
26 Sega was also the original winning bidder on a similar project for KCPL at the West  
27 Gardner site in February 2002. Like Patch, Sega could not obtain a performance  
28 bond for the KCPL project. An e-mail Mr. Brown sent to Empire in April 2004  
29 confirming this fact is attached as Schedule BAM-4. Staff's own investigation has  
30 not led to a contrary conclusion. In his response to Company DR-0330, an update to  
31 DR-0468 in Case No. ER-2004-0570, Staff states, "the Staff has not researched or

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1 performed any analysis of the performance bond market during the late 2001 to  
2 early 2002 timeframe, or Sega's bonding capabilities in the 2002 timeframe."

3 **Q. WHAT DOES THIS LIKELY INABILITY TO OBTAIN A PERFORMANCE**  
4 **BOND BY SEGA MEAN?**

5 A. If one were to utilize the standard of "definitive estimate" or "original cost  
6 estimate," it may mean nothing. However, if it is decided to use Staff's new  
7 proposed methodology of scrutinizing the original cost estimate line item by line  
8 item, it means the Sega bid should not be considered as a valid qualifier and instead  
9 the third bid should be utilized.

10 **Q. WHO IS THE THIRD BIDDER AND HOW MUCH HIGHER WAS ITS BID**  
11 **THAN SEGA'S.**

12 A. Bibb-Kiewit was the third highest bid. Bibb-Kiewit's bid was \$1,297,000 higher  
13 than Sega's.

14 **Q. WAS EMPIRE REQUIRED TO MAKE CONTRACTORS PROCURE**  
15 **PERFORMANCE BONDS FOR THE ENERGY CENTER UNIT 3 & 4**  
16 **PROJECT?**

17 A. No. To Empire's knowledge, neither the Staff nor the Commission itself has a  
18 policy, statute, or regulation in place that would require Empire, to make its  
19 contractors procure a performance bond for construction projects. Staff agrees with  
20 this conclusion in response to DR-0333 and DR-0334. Empire took it upon itself to  
21 have the performance bond provision in Patch's contract. When Patch was  
22 ultimately unable to procure the performance bond, Empire management considered  
23 all of its alternatives and signed Amendment 1 with Patch as the best means to  
24 minimize risk and complete the project on schedule.

25 **Q. ARE THERE ANY OTHER FACTORS THAT SHOULD BE CONSIDERED**  
26 **IF STAFF'S LINE ITEM BY LINE ITEM METHODOLOGY IS UTILIZED**  
27 **BY THE COMMISSION?**

28 A. Yes. Upon contract signing with Patch, Empire paid to Patch a "down payment" of  
29 \$1,136,000, representing 10% of the total contract value. Had Empire terminated  
30 Patch after the 21 business days it had after contract signing to obtain the  
31 performance bond, this is money that would have already been expended to Patch.

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1 With 20/20 hindsight, Empire believes this money would not have been recoverable  
2 from Patch.

3 **Q. IS THE PRACTICE OF PAYING A CONTRACTOR A "DOWN**  
4 **PAYMENT" NORMAL IN THE CONSTRUCTION INDUSTRY?**

5 A. It has been my experience that it is. In fact, the contract Empire signed with Pratt &  
6 Whitney for the purchase of the turbines that were installed as part of the Energy  
7 Center 3 & 4 construction project required a 10% down payment. As part of the  
8 Riverton Unit 12 project currently ongoing at Empire's Riverton Power Plant, down  
9 payments with almost all major contractors and equipments suppliers is the norm.  
10 Contractors require this provision so they have a neutral cash flow and are not using  
11 short term debt to finance the customers' projects.

12 **Q. CONSIDERING SEGA'S LIKELY INABILITY TO OBTAIN A**  
13 **PERFORMANCE BOND AND THE DOWN PAYMENT THAT WAS**  
14 **EXPENDED TO PATCH PRIOR TO KNOWLEDGE OF ITS INABILITY**  
15 **TO OBTAIN A PERFORMANCE BOND, WHAT IS EMPIRE'S POSITION**  
16 **AS IT RELATES TO STAFF'S PROPOSED DISALLOWANCE?**

17 A. Again, Empire believes that the "definitive estimate" or "original estimate" standard  
18 established in prior rate proceedings should be utilized as the basis for the audit.  
19 However, if the Commission decides to use Staff's proposed line item by line item  
20 methodology, Empire contends that the Staff's proposed disallowance of  
21 \$3,155,356 should be decreased by two amounts: 1) the amount that the third  
22 bidder's bid (Bibb/Kiewitt) was higher than Sega's bid (\$1,297,000), and 2) the  
23 amount of the down payment that was expended to Patch prior to knowledge of  
24 their inability to procure a performance bond (\$1,136,000). This would decrease  
25 Staff's proposed disallowance to \$722,356. In addition, it could also be argued that  
26 the first invoice from Patch, dated March 29, 2002 (30 business days after Patch  
27 contract signing) and totaling \$892,309, would have been paid to Patch and  
28 unrecoverable since it was not completely evident at the 21 business day milestone  
29 (March 18<sup>th</sup>, 2002) that Patch would be unable to procure a performance bond for  
30 the project.

BLAKE A. MERTENS  
REBUTTAL TESTIMONY

1   **Q. WAS EMPIRE EVER ABLE TO RECOVER MONIES FROM PATCH**  
2   **RELATED TO THE CONTRACT FOR ENERGY CENTER UNITS 3 AND**  
3   **4?**

4   A. No. Empire filed suit against the Patch corporate entities and the personal owners  
5   of those entitites, Mr. and Mrs. Chester Joe Patch, in the Jasper County Circuit  
6   Court. Empire ultimately received a favorable judgment from the court. Upon  
7   award of this judgment, the Patch corporate entities and the personal owners of the  
8   companies filed for bankruptcy protection and all assets were distributed to  
9   creditors. Empire received nothing as a result of these bankruptcy proceedings.  
10   Please refer to Company witness Gary Lentz's Rebuttal Testimony for further  
11   information regarding Empire's attempt to recover money for the Patch entities.

12   **Q. YOU HAVE ALLUDED TO TESTIMONY AND DATA REQUESTS IN**  
13   **PRIOR RATE PROCEEDINGS CONCERNING THIS ISSUE. WAS**  
14   **ENERGY CENTER 3 AND 4 CONSTRUCTION COSTS AN ISSUE IN**  
15   **PRIOR RATE PROCEEDINGS?**

16   A. Yes. In Empire's 2004 rate case, Case No. ER-2004-0570, Energy Center Unit 3  
17   and 4 construction cost disallowance was an issue.

18   **Q. WERE THERE ANY DISALLOWANCES TO PLANT-IN-SERVICE**  
19   **RELATING TO ENERGY CENTER 3 AND 4 AS A RESULT OF THOSE**  
20   **PROCEEDINGS.**

21   A. No. A "Stipulation and Agreement As To Certain Issues" was signed as part of  
22   those rate proceedings. This stipulation and agreement is silent on the issue of  
23   Energy Center 3 & 4 plant-in-service disallowance. Empire never settled on an  
24   "amount of construction overrun costs that would be included in rate base" (Direct  
25   Testimony, Paul R. Harrison, page 6, line 6) as Mr. Harrison asserts in his Direct  
26   Testimony as part of this "black box" stipulation and agreement.

27   **SUMMARY**

28   **Q. PLEASE SUMMARIZE YOUR POSITION ON THE ENERGY CENTER**  
29   **UNITS 3 AND 4 PROPOSED DISALLOWANCE TO PLANT-IN-SERVICE**  
30   **ISSUE.**

BLAKE A. MERTENS  
REBUTTAL TESTIMONY

1   A.   In prior rate proceedings the Commission and Staff have utilized a "definite  
2       estimate" or "original estimate" standard as a baseline to audit construction project  
3       costs. Based on this standard and the circumstances that were prevalent at the time  
4       of the Energy Center Unit 3 and 4 construction project, the Commission should find  
5       that Empire effectively managed the construction project to meet the "definitive  
6       estimate" and completed the project in a timely manner. Contrary to Staff's  
7       assertion that Empire's decisions caused "additional unnecessary costs to complete  
8       the construction of EC3&4" (Direct Testimony, Paul R. Harrison, page 6, lines 2-3),  
9       Empire contends that all the costs related to the construction of Energy Center 3 and  
10      4 were prudently incurred in order to meet Empire's customer needs and its SPP  
11      requirements.

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

13   A.   Yes, it does.



**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

AeroDerivative  
Page 2

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

Schedule BAM-2

## Expense Report for Energy Center FT8 TwinPac Project

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

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.

Message

**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 Sarcoxie, 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



**AFFIDAVIT OF BLAKE A. MERTENS**

STATE OF MISSOURI )  
 ) ss  
COUNTY OF JASPER )

On the 27<sup>th</sup> day of July 2006, before me appeared Blake A. Mertens, to me personally known, who, being by me first duly sworn, states that he is the Combustion Turbine Project Construction Manager 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.

  
\_\_\_\_\_  
Blake A. Mertens

Subscribed and sworn to before me this 27<sup>th</sup> day of July, 2006

  
\_\_\_\_\_  
Pat Settle, Notary Public

My commission expires

