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Construction Audit
Witness: David W. Elliott
Sponsoring Party: MO PSC Staff
Type of Exhibit: True-Up Direct Testimony
Case No.: ER-2007-0291
Date Testimony Prepared: November 2, 2007

MISSOURI PUBLIC SERVICE COMMISSION

UTILITY OPERATIONS DIVISION

TRUE-UP DIRECT TESTIMONY

OF

DAVID W. ELLIOTT

KANSAS CITY POWER AND LIGHT COMPANY

CASE NO. ER-2007-0291

**Jefferson City, Missouri
November 2007**

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

NP

Staff Exhibit No. 127NP
Case No(s) ER 2007 0291
Date 11/9/07 Rptr PR

**BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI**

In the Matter of the Application of Kansas)
City Power and Light Company for)
Approval to Make Certain Changes in its)
Charges for Electric Service To)
Implement Its Regulatory Plan.)

Case No. ER-2007-0291

AFFIDAVIT OF DAVID W. ELLIOTT

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

David W. Elliot, of lawful age, on his oath states: that he has participated in the preparation of the following True-Up Direct Testimony in question and answer form, consisting of 5 pages of True-Up Direct Testimony to be presented in the above case, that the answers in the following True-Up Direct Testimony were given by him; that he has knowledge of the matters set forth in such answers; and that such matters are true to the best of his knowledge and belief.



David W. Elliott

Subscribed and sworn to before me this 1st day of November, 2007.



SUSAN L. SUNDERMEYER
My Commission Expires
September 21, 2010
Callaway County
Commission #06942088


Notary Public

My commission expires 9-21-10

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OF

DAVID W. ELLIOTT

KANSAS CITY POWER AND LIGHT COMPANY

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TRUE-UP DIRECT TESTIMONY
OF
DAVID W. ELLIOTT
KANSAS CITY POWER AND LIGHT COMPANY
CASE NO. ER-2007-0291

Q. Please state your name and business address.

A. David W. Elliott, P.O. Box 360, Jefferson City, Missouri, 65102.

Q. By whom are you employed and in what capacity?

A. I am employed by the Missouri Public Service Commission (Commission) as a Utility Engineering Specialist III in the Energy Department of the Utility Operations Division.

Q. Please describe your educational and work background.

A. I graduated from Iowa State University with a Bachelor of Science degree in Mechanical Engineering in May 1975. I was employed by Iowa-Illinois Gas and Electric Company (IIGE) as an engineer from July 1975 to May 1993. While at IIGE, I worked at Riverside Generating Station, first as an assistant to the maintenance engineer, and then as an engineer responsible for monitoring station performance. In 1982, I transferred to the Mechanical Design Division of the Engineering Department where I was an engineer responsible for various projects at IIGE's power plants. In September 1993, I began my employment with the Commission.

Q. Have you filed testimony previously before the Commission?

A. Yes. Please refer to Schedule I for the list of cases I have filed in.

Q. What is the purpose of your true-up direct testimony in the Kansas City Power & Light Company (KCPL) rate case, Case No. ER-2007-0291?

True-Up Direct Testimony of
David W. Elliott

1 A. The purpose of my true-up direct testimony is to address the Staff's
2 construction audit of KCPL's project to install selective catalytic reduction (SCR) equipment
3 at the La Cygne generating station.

4 **Executive Summary**

5 Q. Please provide an executive summary of your testimony.

6 A. The Staff audit uncovered no concerns in the amount that should be allowed in
7 rate base for the installation of the SCR equipment at La Cygne generating station.

8 **La Cygne SCR Project Description**

9 Q. Please describe the La Cygne SCR project.

10 A. This project consisted of the installation of SCR equipment on the existing
11 Unit 1 at the La Cygne Generating Station near La Cygne, Kansas.

12 Q. What does the SCR equipment do?

13 A. SCR equipment is designed to inject ammonia into the flue gas causing a
14 chemical reaction with the nitrogen in the flue gas to reduce the amount of nitrogen oxides
15 (NOx) emitted into the atmosphere.

16 **Construction Audit**

17 Q. Have you participated in the construction audit of generating units prior to this
18 case?

19 A. Yes. Please refer to Schedule 2 for the list of units for which I have
20 participated in a Staff construction audit.

21 Q. What is a construction audit?

True-Up Direct Testimony of
David W. Elliott

1 A. A construction audit is Staff's review of a construction project to determine the
2 final construction cost of the project and whether any adjustment to the final cost should be
3 made because additional costs incurred for the project were not prudent.

4 Q. Has the Staff previously performed a construction audit of any KCPL
5 generating unit?

6 A. Yes, the Staff last audited the construction of KCPL's Hawthorn Unit 6,
7 Hawthorn Unit 7, Hawthorn Unit 8, Hawthorn Unit 9, West Gardner Units 1-4, Osawatomie
8 Unit 1, and the Spearville Wind Farm. In addition, the Staff also audited the rebuild of
9 Hawthorn Unit 5. These audits were conducted during KCPL's last rate case, Case No. ER-
10 2006-0314.

11 Q. Has the Staff performed construction audits of other electrical corporations
12 within the jurisdiction of the Commission?

13 A. Yes. Most recently, I participated in the construction audit of The Empire
14 District Electric Company's Energy Center Units 3 and 4 in 2004.

15 Q. Why does Staff believe a construction audit should be done on SCR
16 equipment, which is not a generating unit?

17 A. The purchase and installation of the SCR equipment on a generating unit is a
18 large capital expense. Staff believes that a construction expenditure of this magnitude should
19 be audited.

20 Q. What was your responsibility on this construction audit?

21 A. My responsibility on this construction audit was to review the changes to the
22 construction costs associated with the project to determine if the changes were prudent in
23 regards to the engineering aspects of the project.

True-Up Direct Testimony of
David W. Elliott

1 Q. Has the Staff identified any concerns with this project?

2 A. No.

3 Q. What did you review for the construction costs for this project?

4 A. I reviewed a KCPL breakdown of the additional construction costs and
5 discussed the reasons for these changes with the KCPL project engineer. In addition, KCPL
6 provided further information to the Staff to adequately explain and justify any additional costs
7 incurred for this project.

8 Q. What was the amount of changes in construction costs incurred by the
9 Company that the Staff reviewed for its construction audit?

10 A. The changes in the construction cost for this project resulted in KCPL's share
11 of the cost of the construction of the SCR to increase by ** _____ **.

12 Q. Does Staff have a concern with the amount of the additional costs for this
13 project?

14 A. No. This amount is less than KCPL's share of the amount of contingency
15 dollars in the original construction budget.

16 Q. Can you summarize what type of major cost increases or decreases there were
17 in the project?

18 A. Yes. Schedule 3 summarizes change order costs for the project.

19 Q. Is it unusual to have changes in costs on projects of this size?

20 A. No. Most construction projects have changes in costs. Generally the larger the
21 project, the more complex the project is. The more complex a project is, the more likely it is
22 that unforeseen situations will occur as construction progresses. This project also was a
23 retrofit type of project where new equipment was retrofitted to existing equipment. When

True-Up Direct Testimony of
David W. Elliott

1 retrofit projects are done, sometimes the amount of work increases in order to make the new
2 equipment fit properly to the existing equipment. Also, additional design work may be
3 necessary based on what conditions are found as the project moves forward.

4 Q. What types of changes were made through change orders?

5 A. I identified four categories in which the major change orders can be grouped.

6 These four categories are:

- 7 1. Costs associated with final design changes or final engineering
8 changes. Contracts may have been let before final design was
9 completed. Therefore there were cost changes due to work that
10 started before the final design, or final engineering was completed.
- 11 2. Costs associated with changes made by the Company. Changes
12 made by Company for more efficient or safer operation and/or
13 maintenance after construction started.
- 14 3. Costs associated with field changes. Changes made due to final
15 design decisions left to be worked out during actual construction.
- 16 4. Costs associated with miscellaneous changes. Changes made due to
17 unforeseen problems or obstacles encountered during actual
18 construction.

19 Q. Does this conclude your true-up direct testimony?

20 A. Yes, it does.

Previous Testimony Filed of
David W. Elliott

- 1) ER-94-163, St. Joseph Light & Power Co.
- 2) HR-94-177, St. Joseph Light & Power Co.
- 3) ER-94-174, The Empire District Electric Co.
- 4) ER-95-279, The Empire District Electric Co.
- 5) EM-96-149, Union Electric Co.
- 6) ER-99-247, St. Joseph Light & Power Co.
- 7) EM-2000-369, UtiliCorp United, Inc. and The Empire District Electric Co.
- 8) ER-2001-299, The Empire District Electric Co.
- 9) ER-2001-672, Utilicorp United, Inc.
- 10) ER-2002-424, The Empire District Electric Co.
- 11) ER-2004-0034, Aquila, Inc.
- 12) ER-2004-0570, The Empire District Electric Co.
- 13) HM-2004-0618, Trigen-Kansas City Energy Corp. and Thermal North America, Inc.
- 14) ER-2005-0436, Aquila, Inc.
- 15) HR-2005-0450, Aquila, Inc.
- 16) ER-2006-0314, Kansas City Power & Light Co.
- 17) ER-2006-0315, The Empire District Electric Co.
- 18) ER-2007-0004, Aquila, Inc.

Construction Audit Activities of David W. Elliott

- 1) Construction audit and testimony in Case No. ER-2006-0314 respecting Kansas City Power & Light Hawthorn Units 5,6,7,8,9; West Gardner Units 1,2,3,4; Osawatomie Unit 1; and the Spearville wind farm.
- 2) Construction audit and testimony in Case No. ER-2004-0570 respecting Empire Energy Center Units 3 & 4.
- 3) Construction audit and testimony in Case No. ER-2001-0299 respecting Empire State Line Combined Cycle Unit.
- 4) Preliminary construction audit review respecting AmerenUE Meremac combustion turbine, in May, 2000.

Schedule 3

Is Deemed

Highly Confidential

In Its

Entirety