

Exhibit No.:  
Issue: Fuel Model  
Witness: Charles T. Poston  
Sponsoring Party: MoPSC Staff  
Type of Exhibit: True-Up Direct Testimony  
Case No.: ER-2016-0285  
Date Testimony Prepared: March 1, 2017

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Missouri Public  
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**MISSOURI PUBLIC SERVICE COMMISSION**

**COMMISSION STAFF DIVISION**

**ENGINEERING ANALYSIS UNIT**

**TRUE-UP DIRECT TESTIMONY**

**OF**

**CHARLES T. POSTON**

Staff Exhibit No. 250  
Date 3-16-17 Reporter AF  
File No. ER-2016-0258

**KANSAS CITY POWER & LIGHT COMPANY**

**CASE NO. ER-2016-0285**

*Jefferson City, Missouri  
March 2016*

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TRUE-UP DIRECT TESTIMONY**

**OF**

**CHARLES T. POSTON**

**KANSAS CITY POWER & LIGHT COMPANY**

**CASE NO. ER-2016-0285**

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1                                   **TRUE-UP DIRECT TESTIMONY**

2                                   **OF**

3                                   **CHARLES T. POSTON**

4                                   **KANSAS CITY POWER & LIGHT COMPANY**

5                                   **CASE NO. ER-2016-0285**

6            Q.     Please state your name and business address.

7            A.     My name is Charles T. Poston and my business address is Missouri Public  
8   Service Commission, 200 Madison Street P.O. Box 360, Jefferson City, MO 65102

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

10           A.    I am employed by the Missouri Public Service Commission as a Utility  
11   Regulatory Engineer I.

12           Q.     Are you the same Charles T. Poston who, on November 30, 2016, filed direct  
13   testimony as a part of Staff's Revenue Requirement Cost of Service Report?

14           A.     Yes, I am.

15           Q.     What is the purpose of your true-up testimony?

16           A.     The purpose of my true-up testimony is to provide the fuel and purchased  
17   power expense from Staff's production cost model, as well as to discuss how changes to  
18   hourly load shape could impact model results.

19   **Changes to Staff's Production Cost Model for True-Up**

20           Q.     Has Staff's production cost model been revised for true-up?

21           A.     Yes. The time period considered for certain model assumptions was changed  
22   to reflect the true-up date of December 31, 2016. Additionally, energy purchased from the  
23   Osborn wind farm was accounted for in the updated model.

1 Q. What is the value of Staff's fuel and purchased power expense?

2 A. For known and measurable changes through December 31, 2016, Staff  
3 estimates the fuel and purchased power expense for Kansas City Power and Light Company  
4 ("KCPL") to be \$222,724,170.

5 **Impact of Changes to Hourly Load Shape**

6 Q. What do you mean when you refer to "changes to hourly load shape" for true-  
7 up?

8 A. In this testimony, the term "changes to hourly load shape" refers to the changes  
9 in shapes of hourly energy demand that are associated with MEEIA Cycle 2 energy efficiency  
10 programs.

11 Q. Has the hourly load shape used in Staff's production cost model changed due  
12 to energy efficiency programs?

13 A. No. KCPL does not have hourly load shapes for MEEIA Cycle 2 programs.

14 Q. Does the hourly energy demand from the net system input analysis used in  
15 Staff's production cost model include any savings from energy efficiency programs?

16 A. Yes. The total kWh values used by Staff witness Michael Stahlman were  
17 adjusted for the energy savings from MEEIA Cycle 2. Staff witness Seoung Joun Won used  
18 Mr. Stahlman's results for the net system input analysis that was one of the inputs to the total  
19 hourly energy demand used in Staff's production cost model.

20 Q. Will a change to hourly load shape impact the costs of coal, natural gas, oil, or  
21 nuclear fuel that are calculated by Staff's production cost model?

22 A. No. Power plant fuel costs are calculated based upon the amount of energy  
23 generated at each power plant and each power plant's efficiency. Power plants are dispatched

1 against the price of energy within the integrated marketplace and not against hourly energy  
2 demand. A change to the hourly load shape would not result in a change in how the power  
3 plants were dispatched into the market or to the resulting fuel costs.

4 Q. Will a change to hourly load shape impact the cost of energy purchased  
5 through renewable energy contracts?

6 A. No. The total amount of generation and the energy generation shape calculated  
7 for renewable energy facilities is based upon historical data. That generation is included as an  
8 input file to Staff's production cost model and is treated as a "must take" energy resource. A  
9 change to the hourly load shape will not change the contents of the input files that define the  
10 hourly generation at renewable energy facilities. The costs of renewable energy are governed  
11 by the price that was agreed to within each contract and will not be impacted by a change to  
12 hourly load shape.

13 Q. Will a change to hourly load shape impact the revenues or expenses related to  
14 energy sales and purchases within the integrated marketplace?

15 A. Yes. In each hour that is simulated in Staff's production cost model the sum  
16 total of all energy sources is compared against the energy demand. If the sum of available  
17 energy from conventional power plants and renewable energy facilities is greater than the  
18 energy demand in that hour, the excess energy is treated as a sale into the integrated  
19 marketplace. If the sum of available energy is less than the energy demand, energy is  
20 purchased from the integrated marketplace to ensure that demand is met. A change in hourly  
21 load shape would change the amount of energy being used at specific times of the day. The  
22 timing of any such changes would determine if total energy sales or purchases were increased  
23 or decreased.

True-Up Direct Testimony of  
Charles T. Poston

1 Q. How would changing hourly load shape impact the results of Staff's  
2 production cost model?

3 A. Without specific information about how the hourly load shape would be  
4 changed during every hour being modeled, it is not possible for Staff to accurately determine  
5 if any such changes would result in an increase or decrease in the costs necessary to meet load  
6 or to determine the magnitude of any changes in total costs. Since market prices vary on an  
7 hourly basis, the additional revenue or costs from changes in hourly energy demand due to  
8 energy efficiency programs would likewise vary on an hourly basis. The value of a megawatt-  
9 hour during an afternoon in July is much different than the value of a megawatt-hour during  
10 the early hours of the morning in March.

11 Q. Does this conclude your testimony?

12 A. Yes.

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

In the Matter of Kansas City Power & Light )  
Company's Request for Authority to )  
Implement A General Rate Increase for )  
Electric Service )

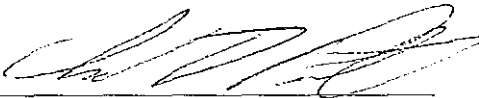
Case No. ER-2016-0285

**AFFIDAVIT OF CHARLES T. POSTON, P.E.**

STATE OF MISSOURI     )  
  )     ss.  
COUNTY OF COLE     )

**COMES NOW** Charles T. Poston and on his oath declares that he is of sound mind and lawful age; that he contributed to the foregoing True-Up Direct Testimony; and that the same is true and correct according to his best knowledge and belief.

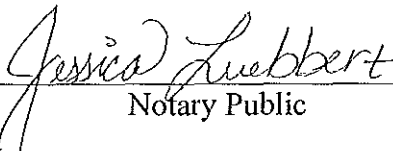
Further the Affiant sayeth not.

  
\_\_\_\_\_  
**Charles T. Poston, P.E.**

**JURAT**

Subscribed and sworn before me, a duly constituted and authorized Notary Public, in and for the County of Cole, State of Missouri, at my office in Jefferson City, on this 28<sup>th</sup> day of February, 2017.

JESSICA LUEBBERT  
Notary Public - Notary Seal  
State of Missouri  
Commissioned for Cole County  
My Commission Expires: February 19, 2019  
Commission Number: 15633434

  
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Notary Public