

Exhibit No.:  
Issues: Revenue Requirement  
Witness: Seoung Joun Won  
Sponsoring Party: MO PSC Staff  
Type of Exhibit: Surrebuttal Testimony  
Case No.: ER-2014-0351  
Date Testimony Prepared: March 24, 2015

**MISSOURI PUBLIC SERVICE COMMISSION**

**REGULATORY REVIEW DIVISION**

**SURREBUTTAL TESTIMONY**

**OF**

**SEOUNG JOUN WON, Ph.D.**

**THE EMPIRE DISTRICT ELECTRIC COMPANY**

**CASE NO. ER-2014-0351**

*Jefferson City, Missouri  
March 2015*

*Staff* Exhibit No. 227  
Date 4-14-15 Reporter XF  
File No. ER-2014-0351

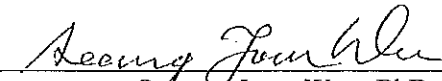
**BEFORE THE PUBLIC SERVICE COMMISSION**  
**OF THE STATE OF MISSOURI**

In the Matter of The Empire District )  
Electric Company for Authority to File )  
Tariffs Increasing Rates for Electric )                   Case No. ER-2014-0351  
Service Provided to Customers in the )  
Company's Missouri Service Area.        )

**AFFIDAVIT OF SEOUNG JOUN WON, PhD**

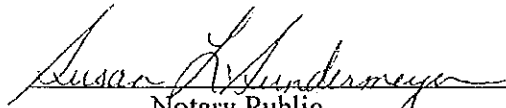
STATE OF MISSOURI     )  
                                  ) ss  
COUNTY OF COLE     )

Seoung Joun Won, PhD, of lawful age, on his oath states: that he has participated in the preparation of the following Surrebuttal Testimony in question and answer form, consisting of 3 pages of Surrebuttal Testimony to be presented in the above case, that the answers in the following Surrebuttal 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.

  
\_\_\_\_\_  
Seoung Joun Won, PhD

Subscribed and sworn to before me this 25<sup>th</sup> day of March, 2015.

SUSAN L. SUNDERMEYER Notary Public - Notary Seal State of Missouri Commissioned for Callaway County My Commission Expires: October 28, 2018 Commission Number: 14942086
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\_\_\_\_\_  
Notary Public

**SURREBUTTAL TESTIMONY**

**OF**

**SEOUNG JOUN WON, Ph.D.**

**THE EMPIRE DISTRICT ELECTRIC COMPANY**

**CASE NO. ER-2014-0351**

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1 assigned to a weekend of the test year, Staff reassigns the temperature to the highest weekday  
2 temperature of the month because of preserving the pattern of the actual peak demands.<sup>1</sup>

3 Q. What is the purpose of moving the extreme daily temperature from a weekend  
4 to a weekday?

5 A. Empirically, the peak demand for a month occurs on a weekday and not on a  
6 weekend. Because the weather model that estimates the monthly peak demands accounts for  
7 weekday and weekend days, extreme temperatures assigned to weekends will result in the  
8 weather normalized peak demand to be under estimated. Staff's model corrects this variation.

9 Q. Has Staff used this procedure of moving extreme temperature to weekdays  
10 from weekends in other rate case proceedings?

11 A. Yes. Staff has used this procedure in all electric rate cases since 2000,  
12 including Empire's last rate case, Case No. ER-2012-0345.

### 13 CONCLUSION

14 Q. Please summarize your surrebuttal testimony.

15 A. Mr. Quan's testimony notes that Staff moves extreme temperatures from the  
16 weekends to the weekdays.<sup>2</sup> In addition, he states that this procedure "increases the  
17 normalized energy by 19,061 kWh over my corrected calculations".<sup>3</sup> However, Staff's  
18 calculation correctly account for the weekend/weekday variation to not under estimate normal  
19 sales. To properly calculate monthly peak demands, the extreme daily temperatures need to  
20 be reassigned from weekends to weekdays. Staff has used this normalization procedure and  
21 continues to recommend its use.

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<sup>1</sup> The detail information of the calculation and assignment of the 30-year normal is presented in Staff's direct testimony and rebuttal testimony.

<sup>2</sup> Figure 5, Page 9, Rebuttal Testimony of Mark Quan.

<sup>3</sup> Lines 13-14, Page 8, Rebuttal Testimony of Mark Quan.

Surrebuttal Testimony of  
Seoung Joun Won, Ph.D.

1 Q. Does this conclude your surrebuttal testimony?

2 A. Yes, it does.