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Witness: Sarah L. Kliethermes
Sponsoring Party: MO PSC Staff
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Case No.: EC-2014-0224
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MISSOURI PUBLIC SERVICE COMMISSION

REGULATORY REVIEW DIVISION

SURREBUTTAL TESTIMONY

OF

SARAH L. KLIETHERMES

**NORANDA ALUMINUM, INC., et al,
COMPLAINANT,**

v.

**UNION ELECTRIC COMPANY, d/b/a AMEREN MISSOURI
RESPONDENT**

CASE NO. EC-2014-0224

*Jefferson City, Missouri
May 2014*

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

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NP

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

Noranda Aluminum, Inc., et al,)	
)	
Complainants,)	
)	
v.)	Case No. EC-2014-0224
)	
Union Electric Company, d/b/a)	
Ameren Missouri)	
)	
Respondent.)	

AFFIDAVIT OF SARAH L. KLIETHERMES

STATE OF MISSOURI)
) ss
COUNTY OF COLE)

Sarah L. Kliethermes, of lawful age, on her oath states: that she has participated in the preparation of the following Surrebuttal Testimony in question and answer form, consisting of 9 pages of Surrebuttal Testimony to be presented in the above case, that the answers in the following Surrebuttal Testimony were given by her; that she has knowledge of the matters set forth in such answers; and that such matters are true to the best of her knowledge and belief.



Sarah L. Kliethermes

Subscribed and sworn to before me this 30 day of May, 2014.

SUSAN L. SUNDERMEYER Notary Public - Notary Seal State of Missouri Commissioned for Callaway County My Commission Expires: October 03, 2014 Commission Number: 10942086
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Notary Public

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RESPONDENT**

CASE NO. EC-2014-0224

Q. Please state your name.

A. My name is Sarah L. Kliethermes.

Q. Are you the same Sarah Kliethermes who filed rebuttal testimony in this matter?

A. Yes.

EXECUTIVE SUMMARY

Q. What items do you address in this testimony?

A. I will respond to the calculation of wholesale energy cost presented by Ameren Missouri witness Matt Michels. Based on my analysis of information provided in Mr. Michels's rebuttal testimony, as well as in Ameren Missouri responses to Staff Data Requests I have updated and refined several calculations and assumptions made in my rebuttal testimony.

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1 In particular, I will provide updated information regarding the following items:

- 2 1. A reasonable estimate of Ameren Missouri's wholesale cost of energy for
3 sale to Noranda, which is ** _____ ** per MWh,¹ at Noranda's
4 meter, or about \$130,700,000 - \$140,000,000 per year;²
5 2. The conclusion that there is no reasonable charge to Noranda at which
6 other customers' rates would be unaffected by Noranda leaving or
7 remaining on Ameren Missouri's retail service at a discounted rate,
8 because all calculations of that rate fall below the range of reasonable
9 estimates of the variable cost of providing service; and
10 3. An estimate of a rate that would provide the level of benefit to other
11 Ameren Missouri customers that Mr. Brubaker discusses in his testimony
12 concerning his proposed \$30.00 per MWh rate. That rate is approximately
13 ** _____ ** to ** _____ ** per MWh.³

14 Q. Are you providing a recommendation as to whether the Commission should
15 order changes to Ameren Missouri's rate design as requested by Noranda?

16 A. No. I have compiled and analyzed information to assist the Commission in
17 any analysis it may undertake. This testimony is not intended as a recommendation on any
18 policy considerations or legal issues that may be implicated by Noranda's complaint.

19 Q. What are the results of your updated analysis?

20 A. I have determined that the most reasonable historical amount, as discussed
21 below, to use as an estimate of Ameren Missouri's wholesale energy cost of providing service
22 to Noranda is approximately ** _____ ** per Megawatt-hour (MWh) at Transmission level,
23 or ** _____ ** per MWh at Noranda's meter, based on Ameren Missouri's four-year average
24 wholesale cost of energy to provide service to Noranda. A rate of approximately

¹ The recommended minimum rate described in my Rebuttal Testimony was ** _____ ** per MWh. Selection of different study periods results in a range of amounts. The lower figure is based on a four-year average of LMP prices, which reduces the impact of extreme prices, among other things. However the higher figure based on the 12 months ending April 1, 2014, is also useful in evaluating a reasonable estimate of the ongoing costs of wholesale energy.

² These annual approximations are based on rounded results of calculations involving input of highly confidential numbers.

³ The recommended minimum rate to provide these benefits described in my Rebuttal Testimony was ** _____ ** per MWh.

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1 ** _____ ** to ** _____ ** per MWh at Noranda's meter is necessary to provide other
2 customers with the level of benefits assumed by Mr. Brubaker in his direct testimony. Staff's
3 recommended conditions which continue to be applicable to discounted service are described
4 in the rebuttal testimony of Staff Witness Mike Scheperle.

5 **ASSUMPTIONS AND ANALYSIS**

6 Q. How have your assumptions and the values of your inputs to your calculations
7 changed from those described in rebuttal testimony?

8 A. On May 14, 2014, I was able to have a phone conversation with Mr. Matt
9 Michels and Mr. Mark Peters, both employees of Ameren Missouri with experience with
10 MISO charges and wholesale electricity transactions. Based on that conversation and
11 additional research of Midcontinent Independent System Operator ("MISO") charges and
12 tariffs, I identified the following areas of correction to my rebuttal testimony:

- 13 1. It is more reasonable to use Locational Marginal Prices ("LMP")
14 information for the AMMO.UE Load Node than the various generation
15 node information used in portions of my rebuttal analysis.⁴ The impact of
16 this correction raises the estimated variable cost of energy at Noranda's
17 meter approximately \$.37 per MWh.
- 18 2. My use of two separate Ameren Missouri data request responses related to
19 experienced transmission costs resulted in a double counting of charges
20 under certain transmission schedules. Also, certain charges and revenues
21 were unintentionally omitted from my calculation of wholesale energy
22 costs. The net impact of including these other charges and revenues
23 directly related to load and the correction of the double-counting lowers the
24 estimated variable cost of energy at Noranda's meter approximately \$.66
25 per MWh.
- 26 3. It is more reasonable to use forecasted Schedule 26-A charges as used by
27 Mr. Dauphinais.

28 Below, I discuss the impact of the correction of these items on my calculations
29 presented in rebuttal testimony, and I have revised my recommendations based on these

⁴ I had misunderstood that these generation nodes are relevant in that the AMMO.UE Load Node is an aggregate price node per the MISO Tariff Module A Common Tariff Provisions part 1.9. Based on the discussion with Ameren Missouri, the generation nodes are not elemental nodes as described in 1.9.

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1 corrections and refinements. After reviewing Mr. Michels' Rebuttal Testimony, I have also
2 modified my method for developing an estimate of a rate that would provide the level of
3 benefit to other Ameren Missouri customers that Mr. Brubaker discusses in his testimony
4 concerning his proposed \$30.00 per MWh rate.

5 Q. Have you modified your underlying approach to finding Ameren Missouri's
6 wholesale cost of energy through the MISO to determine a reasonable estimate of Ameren
7 Missouri's cost of energy for providing retail service to Noranda?

8 A. No. Again, primarily, I have applied historical MISO Day-Ahead LMP to
9 Noranda's historical load, or applied a load factor adjustment to an average LMP calculation,
10 as applicable. I have made reasonable allowance for other costs associated with serving this
11 load.

12 **VARIABLE COST**

13 Q. What is your updated calculation of Ameren Missouri's variable cost of
14 providing retail service to Noranda?

15 A. The most reasonable estimate of Ameren Missouri's wholesale cost for serving
16 Noranda is ** _____ ** per MWh at Noranda's meter. This estimate is based on Noranda's
17 load factor applied to the 4-year average⁵ DA-LMP at the MISO AMMO.UE Load Node,
18 with allowance for Ameren Missouri's most recent experienced uplift, ancillary service,
19 transmission charges, other charges and revenues associated with serving load, MISO 2014-
20 2015 planning year rates for capacity costs, and Mr. Dauphinais's direct-filed value for
21 Schedule 26A. A four-year average reduces the impact of extreme prices, while not being so
22 long a time period as to require a separate adjustment for inflation. Also, the four-year period
23 ending March 31, 2014, is the longest and most recent period for which whole-years' data is

⁵ For the four year period ending March 31, 2014.

1 available after Noranda returned to full load from the ice storm. However, I do consider the
2 12 months ending April 1, 2014, in providing several of my recommendations and
3 components of recommendations as within a reasonable range of ongoing costs of wholesale
4 energy.

5 Q. What was Ameren Missouri's wholesale energy cost for serving Noranda in
6 the 12 months ending April 1, 2014?

7 A. Ameren Missouri's wholesale energy cost for serving Noranda for this time
8 period was ** _____ ** per MWh at Noranda's meter. Adjusting this amount to include
9 MISO 2014-2015 planning year rates for capacity costs, and Mr. Dauphinais's value for
10 Schedule 26A costs results in the amount of ** _____ ** per MWh at Noranda's meter.

11 CUSTOMER IMPACT

12 Q. What is your updated calculation of the rate impact on other Ameren Missouri
13 customers if Ameren Missouri ceased to serve Noranda?

14 A. Based on the variable cost calculations described above, I would expect the
15 other customers to experience a rate impact in the range of a \$12,300,000 to \$21,600,000
16 increase if Noranda left the Ameren Missouri system.⁶

17 Q. What is your updated calculation of the rate impact on other Ameren Missouri
18 customers if Ameren Missouri served Noranda at a rate of \$30.00 per MWh at Noranda's
19 meter?

⁶ Based on the variable cost calculations described in my Rebuttal Testimony, the range of increase described in my Rebuttal testimony was \$9,500,000 to \$20,300,000. Using other estimates of the cost of wholesale electricity for serving Noranda would produce different numbers. It is likely that updating the system-wide OSSM revenue quantification or the determination of new class revenues in a full-blown rate case would also have an impact.

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1 A. Based on the variable cost calculation described above, I would expect the
2 other customers to experience an approximate \$27,760,000 increase if Noranda paid a rate of
3 \$30.00 per MWh at its meter.⁷

4 Q. Why is the rate impact to customers if Noranda left the Ameren Missouri
5 system less than if Noranda paid a rate of \$30 per MWh?

6 A. Noranda is requesting to purchase energy from Ameren Missouri at a rate that
7 is below the cost to Ameren Missouri of purchasing the energy on the wholesale market, and
8 the difference between those prices is an additional cost to customers. If Noranda receives
9 service at a rate below variable cost, not only is Noranda not contributing to overhead, but it is
10 also increasing the total cost that other ratepayers must provide to Ameren Missouri over the
11 amount that they would pay if Noranda were not a retail customer.

12 Q. Are you recommending the Commission order Ameren Missouri to cease retail
13 service to Noranda?

14 A. No.

15 Q. Relying on the assumptions and quantifications you discuss, can you determine
16 a reasonable per MWh retail rate at which the impact of Ameren Missouri's continued
17 provision service to Noranda would be neither better nor worse in terms of the rate impact to
18 other retail customers?

19 A. No, not given my current estimates of the range of reasonable estimated cost of
20 wholesale electricity. In rebuttal I was able to determine a reasonable estimate that was based
21 on the higher LMPs associated with the most recent 12-month calculation, but above the low-
22 end range of a reasonable estimate of Ameren Missouri's ongoing cost of wholesale energy

⁷ Using other estimates of the cost of wholesale electricity for serving Noranda would produce different numbers. It is likely that updating the system-wide OSSM revenue quantification or the determination of new class revenues in a full-blown rate case would also have an impact.

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1 for Noranda. I developed the reasonable estimate provided in my rebuttal testimony using the
2 following process:

- 3 1. Determine an annual amount of the "allowable" range of the harm to be
4 spread to other customers, based on the quantification of harm associated
5 with Noranda leaving Ameren Missouri's retail service,
- 6 2. Determine on a per-Noranda-per-MWh basis how much harm other
7 customers would absorb if Noranda left, using the low-end of the range of
8 the harm to customers of Noranda leaving Ameren Missouri's retail
9 service,
- 10 3. Establish a base rate, using the high-end of the range of variable cost,
- 11 4. Subtract the "allowable" harm to customers from the variable cost base
12 rate, and
- 13 5. Use the low-end of the range of variable cost for purposes of ensuring that
14 any reasonable rate exceeds the variable cost as a final screening measure.

15 There was a large enough difference in the 12-month and 4-year variable cost
16 estimates relied on for my rebuttal to find such a rate that fell within the range of reasonable
17 estimates of variable costs. However, using the updated variable cost range identified above,
18 there is no reasonable rate that would raise other customers' rates by the same amount as
19 Noranda ceasing to receive Ameren Missouri's retail service such that other customers' rates
20 would be unaffected by Noranda leaving or remaining on Ameren Missouri's retail service at
21 a discounted rate.

22 Q. Why is it not reasonable to set any rate for service below the variable cost of
23 providing that service?

24 A. Setting a rate for service below the variable cost of providing that service
25 would mean that other customers are not only no better off than if Noranda ceased to be an
26 Ameren Missouri customer, but they are worse off because other customers would be bearing
27 a portion of costs incurred to provide service to Noranda, that would not be incurred if
28 Noranda were not a customer.

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1 Some amount greater than ** _____ ** is therefore necessary to make a
2 determination that – considering rate impact only – other customers are benefited by Ameren
3 Missouri’s continued provision of service to Noranda at a discounted rate.

4 Q. Have you updated your calculation of an approximate per MWh retail rate at
5 which the impact of Ameren Missouri’s continued provision service to Noranda would
6 provide the level of contribution to cost-of-service described by Mr. Brubaker and
7 Mr. Dauphinais in their direct testimonies?

8 A. Yes. As discussed above, the contribution to Ameren Missouri’s cost-of-
9 service must be in excess of the variable cost to provide that service. My updated estimate
10 indicates that Noranda would need to pay a rate of approximately ** _____ ** to
11 ** _____ ** per MWh at Noranda’s meter, subject to the conditions described by Staff
12 Witness Michael Scheperle in his Rebuttal Testimony.⁸

13 **RECOMMENDATIONS**

14 Q. What are your recommendations for the Commission in this matter?

15 A. I recommend that if the Commission does redesign Ameren Missouri’s rates to
16 provide Noranda with an energy-only rate, and consistent with the recommendations of Staff
17 Witness Michael Scheperle, that the Commission:

- 18 4. Not consider any rate below Ameren Missouri’s variable cost of
19 approximately ** _____ ** per MWh, at Noranda’s meter, and⁹
20 5. Be aware that a rate of ** _____ ** to ** _____ ** per MWh, at
21 Noranda’s meter, is necessary to provide other retail customers with the
22 benefits of contribution to Ameren Missouri’s cost of service described in
23 the Direct Testimonies of Mr. Brubaker and Mr. Dauphinais.¹⁰

⁸ It appears that Mr. Brubaker assumes Noranda would contribute approximately \$12.3 million to Ameren Missouri’s cost of service, although he does not explicitly address the OSSM offset of approximately \$40 million.

⁹ The recommended minimum rate described in my Rebuttal Testimony was ** _____ ** per MWh.

¹⁰ The recommended minimum rate to provide these benefits described in my Rebuttal Testimony was ** _____ ** per MWh.

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Q. Does this conclude your testimony in this matter?

2

A. Yes.

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