

Exhibit No.:
Issue: Rate Design
Witness: Maurice Brubaker
Type of Exhibit: Surrebuttal Testimony
Sponsoring Party: Noranda Aluminum, Inc.
Case No.: EC-2014-0224
Date Testimony Prepared: May 30, 2014

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

Filed
June 23, 2014
Data Center
Missouri Public
Service Commission

)
In the Matter of Noranda Aluminum, Inc.'s)
Request for Revisions to Union Electric)
Company d/b/a Ameren Missouri's Large)
Transmission Service Tariff to Decrease)
its Rate for Electric Service)
_____)

Case No. EC-2014-0224

Surrebuttal Testimony and Schedule of

Maurice Brubaker

On behalf of

Noranda Aluminum, Inc.

May 30, 2014



Project 9851

Noranda Exhibit No. 17
Date 6-16-14 Reporter KF
File No. EC-2014-0224

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

In the Matter of Noranda Aluminum, Inc.'s
Request for Revisions to Union Electric
Company d/b/a Ameren Missouri's Large
Transmission Service Tariff to Decrease
its Rate for Electric Service

Case No. EC-2014-0224

STATE OF MISSOURI)
COUNTY OF ST. LOUIS)

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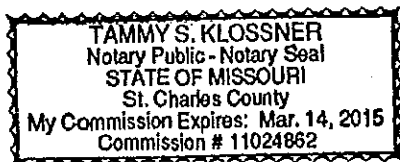
Affidavit of Maurice Brubaker


Maurice Brubaker, being first duly sworn, on his oath states:

1. My name is Maurice Brubaker. I am a consultant with Brubaker & Associates, Inc., having its principal place of business at 16690 Swingley Ridge Road, Suite 140, Chesterfield, Missouri 63017. We have been retained by Noranda Aluminum, Inc. in this proceeding on its behalf.
2. Attached hereto and made a part hereof for all purposes are my surrebuttal testimony and schedule which were prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. EC-2014-0224.
3. I hereby swear and affirm that the testimony and schedule are true and correct and that they show the matters and things that they purport to show.


Maurice Brubaker

Subscribed and sworn to before me this 29th day of May, 2014.




Notary Public

BEFORE THE PUBLIC SERVICE COMMISSION
OF THE STATE OF MISSOURI

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Surrebuttal Testimony of Maurice Brubaker

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Maurice Brubaker
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Case No. EC-2014-0224

Surrebuttal Testimony of Maurice Brubaker

1 I. Introduction

2 Q PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

3 A Maurice Brubaker. My business address is 16690 Swingley Ridge Road, Suite 140,
4 Chesterfield, MO 63017.

5 Q ARE YOU THE SAME MAURICE BRUBAKER WHO PREVIOUSLY FILED DIRECT
6 TESTIMONY IN THIS PROCEEDING ON BEHALF OF NORANDA ALUMINUM,
7 INC. ("NORANDA")?

8 A Yes.

9 Q WHAT IS THE PURPOSE OF YOUR SURREBUTTAL TESTIMONY?

10 A I will respond to certain of the points made by Ameren Missouri witnesses William R.
11 Davis and Matt Michels, and by Staff witness Sarah L. Kliethermes in rebuttal
12 testimony. The fact that I do not address every point raised by these witnesses, or
13 points raised by other witnesses, should not be interpreted as agreement with those
14 points or those witnesses.

Maurice Brubaker
Page 1

1 Q BEFORE BEGINNING YOUR RESPONSE TO THESE WITNESSES, PLEASE
2 BRIEFLY RECAP YOUR DIRECT TESTIMONY.

3 A In my direct testimony, I compared Noranda's \$30 per MWh rate request against the
4 average variable cost to serve Noranda and also against the change in Actual Net
5 Energy Cost ("ANEC") if Noranda were to close the smelter. In this surrebuttal
6 testimony, I update those calculations based on new information from my colleague,
7 Mr. Dauphinais, and based on the comments of Commission Staff and Ameren
8 Missouri witnesses.

9 Q AFTER UPDATING AND RESPONDING TO OTHER WITNESSES, WHAT IS YOUR
10 CONCLUSION?

11 A The conclusion remains that Noranda's requested \$30 per MWh rate is reasonable
12 both when compared to the average variable cost to serve Noranda and when
13 compared to the change in ANEC and related charges.

14 Q IN ADDITION TO UTILITY RATE CONSIDERATIONS, WHAT OTHER FACTORS
15 ARE IMPORTANT IN EVALUATING THE NORANDA PROPOSAL?

16 A In addition to these considerations, the impact that the smelter has on the overall
17 economy is important. According to Dr. Haslag's studies, the average annual
18 economic benefit that the smelter provides to the state is in excess of \$300 million. It
19 would be appropriate for the Commission also to take these benefits into
20 consideration in evaluating the Noranda rate proposal.

1 **II. Response to Ameren Missouri Witnesses**

2 Q AT VARIOUS POINTS IN HIS TESTIMONY, INCLUDING AT PAGE 6, MR. DAVIS
3 IS CRITICAL OF THE NORANDA RATE PROPOSAL BECAUSE IT DEPARTS
4 FROM FULLY ALLOCATED EMBEDDED COST OF SERVICE. WAS THERE
5 EVER ANY PRETENTION THAT THE RATE PROPOSAL WAS BASED ON A
6 FULLY ALLOCATED EMBEDDED COST OF SERVICE AS IS TYPICALLY DONE
7 IN RATE CASES?

8 A No. In fact, at page 5 of my direct testimony, I specifically addressed this concept
9 and characterized the proposal as designed to retain at-risk loads that would not
10 otherwise be served by the utility if priced at fully allocated embedded cost of service
11 as is traditionally done in rate cases. The objective is to provide a rate that is low
12 enough to retain the customer's load and preserve the correlative economic benefits
13 that would be lost if the load were not served.

14 In my direct testimony, I explained that the basis for such a rate is typically a
15 price higher than average variable cost so that some contribution to fixed cost is
16 provided. As I discuss hereafter in my response to Ms. Kliethermes, the proposed
17 rate clearly is higher than average variable cost and is reasonable when evaluated on
18 that basis.

19 Q ON WHAT OTHER BASIS CAN THE RATE BE EVALUATED?

20 A In my direct testimony, I also evaluated the rate in reference to the estimated
21 reduction in Ameren Missouri's ANEC if the smelter were not served. I found that it
22 was reasonable as measured that way as well. This is a much more demanding
23 evaluation than the first (rate exceeds average variable cost) because it is based on
24 market prices that typically are higher than the average variable cost.

1 Q PLEASE DESCRIBE THAT ANALYSIS.

2 A In my direct testimony, I used a change in ANEC value (essentially the price at which
3 Ameren Missouri would sell into the MISO market the power that it would have
4 otherwise sold to Noranda) of \$27.05 per MWh. That figure was provided by
5 Mr. Dauphinais. In his surrebuttal testimony, Mr. Dauphinais has responded to
6 certain criticisms of his study that produced the \$27.05 per MWh of ANEC reduction
7 that I used in my direct testimony. His update shows an ANEC reduction of \$28.49
8 per MWh based on the 36 month period ended December, 2013, and \$27.91 per
9 MWh when based on the 36 month period ended April, 2014, with normalization to
10 remove the effects of the Polar Vortex Anomaly. Accordingly, based on
11 Mr. Dauphinais' surrebuttal testimony analysis, the reduction in ANEC, while larger
12 than \$27.05 per MWh, is still less than \$30 per MWh.

13 Q ARE THERE CAVEATS THAT SHOULD BE KEPT IN MIND WHEN PERFORMING
14 AN EVALUATION FROM THE PERSPECTIVE OF MARKET PRICES?

15 A Yes. As is well known, and vividly demonstrated in this case, the market prices can
16 fluctuate significantly. They can be influenced substantially by emergent events such
17 as hurricanes, financial market conditions and extreme temperatures, such as those
18 exhibited as a result of the Polar Vortex Anomaly that Mr. Dauphinais discusses. To
19 the extent that they play a role in Ameren's supply picture, market prices are a
20 component of average variable energy cost and if the changes are sustained, the
21 average variable energy cost will tend to move in the same direction.

1 Q DOES NORANDA HAVE A FAVORABLE LOAD CHARACTERISTIC?

2 A Yes. Noranda has a load of almost 500 MW that is very nearly constant. The load
3 factor of the load is approximately 98%. This means that the load is almost the same
4 in every hour. This is a natural characteristic of aluminum smelters because smelting
5 is a continuous process and when a pot line is operating the hour-to-hour variations
6 are quite small.

7 Q WHAT IS THE VALUE OF THIS TYPE OF LOAD?

8 A This uniform characteristic makes the load very attractive to a supplier. If power
9 prices are such that the smelter is able to operate, it will run at this level and provide
10 a guaranteed and predictable load for Ameren to serve at a known price.

11 Q ARE YOU AWARE OF AMEREN MISSOURI HAVING CHARACTERIZED
12 NORANDA'S LOAD IN A SIMILAR WAY?

13 A Yes. Noranda became a customer of Ameren Missouri on June 1, 2005 (after
14 hearings in Case No. EA-2005-0180). In his February 14, 2005 surrebuttal testimony
15 in that case, Ameren Missouri (then AmerenUE) witness Craig Nelson, who then was
16 Vice President – Strategic Initiatives, provided a similar characterization of the
17 Noranda load when he responded to a proposal made by one of the parties. At
18 page 15 of his surrebuttal testimony, Mr. Nelson noted:

19 "As Mr. Voytas' direct testimony explains, a key reason that service to
20 Noranda lowers AmerenUE's costs on a dollar per megawatt hour
21 basis versus the case where AmerenUE does not serve Noranda is
22 that Noranda is able to utilize unused, baseload energy that the
23 Company cannot sell in the off-system market. Noranda, with a
24 98-99% load factor, also provides more MWh sales over which to
25 spread AmerenUE's fixed costs." (Case No. EA-2005-0180)

1 Q IN JANUARY 2009 THE SMELTER SUFFERED A LOSS OF POWER AS A
2 RESULT OF A MAJOR ICE STORM. APPROXIMATELY 75% OF PRODUCTION
3 CAPACITY WAS LOST BECAUSE OF THE OUTAGE. MR. KIP SMITH TESTIFIES
4 IN HIS SURREBUTTAL THAT BUT FOR APOLLO, THE SMELTER MAY NOT
5 HAVE REOPENED AFTER THE ICE STORM. HAVE YOU BEEN ABLE TO
6 CALCULATE THE ADDITIONAL REVENUE THAT WAS PROVIDED BY
7 NORANDA, AS CONTRASTED TO THE REVENUES THAT WOULD HAVE BEEN
8 PRODUCED BY SELLING THE SAME AMOUNT OF POWER INTO THE MISO
9 MARKET, HAD NORANDA NOT RESUMED OPERATIONS?

10 A Yes. Please refer to Schedule MEB-Surrebuttal-1.

11 After extensive repairs, the smelter resumed full production by May 2010.
12 From then through December 31, 2013, the amount of revenue provided in excess of
13 the off-system opportunities was approximately \$150 million. Through April 30, 2014
14 (which includes the impact of the Polar Vortex Anomaly) the cumulative benefit is
15 approximately \$144 million. In other words, because Noranda did not close, forcing
16 Ameren to sell the power in the MISO market for less than it sold it to Noranda,
17 Ameren Missouri, and ultimately its ratepayers, benefitted by well over \$100 million.

18 **III. Response to Staff**

19 Q ON PAGE 7 OF HER REBUTTAL TESTIMONY, MS. KLIETHERMES DISAGREES
20 WITH YOUR CALCULATION OF AVERAGE VARIABLE COST ASSOCIATED
21 WITH SERVING NORANDA. ARE HER CRITICISMS VALID?

22 A No. She has conflated average variable cost with the avoided wholesale market
23 price. Average variable cost and market price are quite different. The average
24 variable cost is, as I described it at pages 5 and 6 of my direct testimony, essentially

1 the total cost of the components that are included in Ameren Missouri's Fuel
2 Adjustment Clause ("FAC") divided by total retail sales. It essentially is those cost
3 components which vary with the number of kilowatthours supplied by the utility. It is
4 calculated using the variable cost components that are included in Ameren Missouri's
5 Commission-determined revenue requirement.

6 **Q HOW DOES THIS DIFFER FROM THE AVOIDED WHOLESALE MARKET PRICE**
7 **THAT MS. KLIETHERMES HAS USED?**

8 A The market price she used essentially is the price in the MISO market at a particular
9 time at a given location. The two are quite different and both have particular
10 meanings. Ms. Kliethermes has confused the two and thus her conclusions are
11 incorrect.

12 **Q WHAT DID YOU CALCULATE AS AVERAGE VARIABLE COST ASSOCIATED**
13 **WITH PROVIDING SERVICE TO NORANDA?**

14 A In my direct testimony, I derived a number of \$18.20 per MWh (1.82¢ per kWh) by
15 adding together the \$14.69/MWh (\$1.469¢/kWh) base of the FAC as established in
16 Case No. ER-2012-0166 (the most recent Ameren Missouri rate case) and the
17 then-current \$3.50/MWh (0.35¢/kWh) FAC factor (that excludes the effect of the
18 refund by Ameren Missouri resulting from the imprudence associated with
19 administration of its FAC).

1 Q HAS AMEREN MISSOURI RECENTLY PROVIDED A CALCULATION OF
2 AVERAGE ENERGY COST TO SERVE NORANDA?

3 A Yes. In its most recent rate case a fully embedded class cost of service study was
4 performed. In addition to determining the class totals, witness Warwick divided the
5 costs allocated to each customer class into the categories of Customer; Production –
6 Demand; Production – Energy; Transmission – Demand; and Distribution – Demand.
7 The only one of these buckets of costs that relates directly to, and varies in
8 accordance with, kilowatthours sold to customers is the Production – Energy
9 category.

10 Q WHAT AMOUNT OF AVERAGE ENERGY COST TO SERVE NORANDA WAS
11 IDENTIFIED BY MR. WARWICK IN AMEREN MISSOURI'S MOST RECENT RATE
12 CASE?

13 A In its most recent rate case, Mr. Warwick provided on his Schedule WMW-E3 an
14 analysis of the unbundled cost to serve each customer class. For Noranda, he
15 calculated a production energy cost, which includes fuel and variable purchased
16 power costs net of off system sales revenue, what he deemed to be variable non-fuel
17 production-related operation and maintenance expense and certain allocated
18 overheads. The total energy cost he identified for service to Noranda was
19 \$77.56 million, which equals approximately \$18.60 per MWh for service to Noranda.
20 This is higher than the \$14.69 per MWh FAC base because, as described above, it
21 includes certain non-fuel items. Combining that number with the FAC of \$3.50 per
22 MWh produces an average variable cost associated with service to Noranda of
23 \$22.10 per MWh.

1 Q PLEASE ELABORATE ON YOUR CHARACTERIZATION OF MS. KLIETHERMES'
2 NUMBERS AND WHY THEY SHOULD NOT BE USED.

3 A As indicated above, Ms. Kliethermes' numbers are not average variable cost, but
4 instead are avoided wholesale market prices and, as such, do not support her
5 conclusions.

6 Q IS THE \$30 PER MWH RATE REQUESTED BY NORANDA ABOVE THE
7 AVERAGE VARIABLE COST ASSOCIATED WITH PROVIDING SERVICE TO
8 NORANDA?

9 A Yes, it is, by nearly \$8 per MWh, or about \$33 million per year.

10 Mr. Dauphinais discusses Ms. Kliethermes' testimony in more detail and
11 points out other problems with her assumptions and calculations.

12 Q DOES THIS CONCLUDE YOUR SURREBUTTAL TESTIMONY?

13 A Yes.

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Cumulative Net Benefit of Sales to Noranda vs. to Market

