

Exhibit No.:
Witness: Henry Fayne
Type of Exhibit: Direct Testimony
Issues: Rate Design and Noranda Issues
Sponsoring Party: Noranda Aluminum, Inc.
Case No.: ER-2011-0028

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

In the Matter of Union Electric)
Company, d/b/a AmerenUE's) **Case No. ER-2011-0028**
Tariffs to Increase Its Annual)
Revenues for Electric Service)

Direct Testimony of Henry Fayne

On behalf of

Noranda Aluminum, Inc.

February 10, 2011

DIRECT TESTIMONY OF HENRY W. FAYNE

1 **Q: PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.**

2 A: My name is Henry W. Fayne. My business address is 1980 Hillside Drive,
3 Columbus, Ohio 43221.

4 **Q: PLEASE BRIEFLY DESCRIBE YOUR BUSINESS AND EDUCATIONAL**
5 **BACKGROUND.**

6 A: Following my retirement from American Electric Power (AEP) at the end of
7 2004, I have been a consultant in the electric energy sector primarily negotiating
8 electric energy contracts for various aluminum smelters in the United States. I
9 was employed by AEP in various positions for thirty years from 1974 through
10 2004, including as Executive Vice President and Chief Financial Officer from
11 1998 until 2001, and as Executive Vice President Energy Delivery from 2001
12 until I retired in 2004. I have a bachelors degree in economics from Columbia
13 College and an MBA in finance from Columbia Graduate School of Business.

14 **Q: HAVE YOU TESTIFIED PREVIOUSLY?**

15 A: Yes. During my tenure at AEP, I testified before the regulatory commissions in
16 the states of Indiana, Kentucky, Michigan, Ohio, Oklahoma, Texas, Virginia and
17 West Virginia on behalf of various operating companies of AEP. I have also
18 testified before the Federal Energy Regulatory Commission. Since I retired from
19 AEP, I have testified before regulatory commissions in the states of Kentucky,
20 Ohio and West Virginia. I have also testified before this Commission in Case No.
21 ER-2010-0036 and Case No. EO-2010-0255.

22 **Q: WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS**
23 **PROCEEDING?**

1 A: The purpose of my testimony is to provide information regarding the cost of
2 electricity at other aluminum smelters and the regulatory treatment other states are
3 providing to support the continued operation of aluminum smelters.

4 **Q WHY IS THE COST OF ELECTRICITY OF SUCH IMPORTANCE FOR**
5 **ALUMINUM SMELTERS?**

6 A: Aluminum is a global commodity, much like copper, nickel, zinc and oil. It is
7 sold at a price that is based on global supply and demand and established by
8 trading activity on the London Metal Exchange, or LME. An individual smelter
9 is, in effect, a price taker and cannot set the selling price of the base product;
10 therefore, the success or viability of a specific smelting operation is determined
11 primarily by its cost of production.

12 The cost of production will vary among smelters based on the cost of goods and
13 services as well as the configuration of the plant. However, in general, the cost of
14 alumina, labor and electricity accounts for 75%-80% of the cost, with alumina and
15 electricity each comprising about one-third of the cost of production. The cost of
16 alumina tends to be tied to the LME price. As a result, it is the cost of electricity
17 that most significantly determines the ongoing success or viability of an
18 aluminum smelter, particularly in the volatile market we have recently been
19 experiencing.

20 That outcome is most dramatically shown by the shifts in production. In the U.S.
21 in 1978, there were 34 smelters, producing more than 4 million metric tons,

1 accounting for about 31% of the world supply. In 2011, there are only 10
2 smelters expected to be operating in the U.S., projected to produce about 1.9
3 million metric tons annually, which is projected to account for only 4.2% of the
4 world supply. In every instance, the smelter shut down because of high power
5 costs (HWF Exhibit-1 shows the U.S. smelters currently in operation; Alcoa
6 announced plans to restart its Massena East smelter).

7 **Q: AT THE OUTSET, YOU INDICATED THAT YOU WOULD PROVIDE**
8 **INFORMATION REGARDING THE ELECTRICITY RATES FOR**
9 **OTHER SMELTERS. WOULD YOU PLEASE PROVIDE THAT**
10 **INFORMATION?**

11 A: Exhibit HWF-1 shows the electricity rates for each of the US smelters operating
12 in 2010, as well as the rates for smelters outside the United States. As noted on
13 that exhibit, the source of the data is CRU, an independent business analysis and
14 consultancy group that is generally used in the industry as a source of such data.
15 As shown on that exhibit, according to CRU preliminary data, the electricity rate
16 for the New Madrid smelter in 2010 was \$38.05/Mwh, which resulted in New
17 Madrid having one of the three highest costs of electricity in the U.S. and a cost of
18 electricity more than 40% higher than the average for non-U.S. smelters,
19 excluding China. More importantly, if the Commission were to approve
20 AmerenUE's rate request, the rate for the New Madrid smelter on a proforma
21 basis is projected to be \$43.60/Mwh.

22 **Q: WHY DO YOU EXCLUDE CHINA?**

1 A: China must be excluded because China heavily subsidizes its industry. In simple
2 terms, the high cost of electricity is offset by the low cost of labor.

3 **Q: WHY IS IT A CONCERN THAT THE NEW MADRID SMELTER HAS A**
4 **HIGH COST RELATIVE TO OTHER U.S. SMELTERS AND TO**
5 **SMELTERS IN THE REST OF THE WORLD?**

6 A: As Mr. Smith explained, aluminum is a commodity, sold at a price that is based
7 on global supply and demand established by trading activity on the London Metal
8 Exchange, or LME. The price is set by the marginal producer. Therefore, if other
9 producers have a lower cost of production, which is driven primarily by the cost
10 of electricity, then the selling price will reflect such costs, and the higher cost
11 producer will not be able to compete since the price will not cover the higher cost
12 of production. The New Madrid smelter competes with all other smelters,
13 regardless of location. If its costs are high relative to other producers, its
14 continued viability is at risk, particularly if the aluminum market suffers a
15 downturn.

16 **Q: AT THE OUTSET, YOU INDICATED THAT YOU WOULD DESCRIBE**
17 **THE REGULATORY TREATMENT THAT HAS BEEN PROVIDED IN**
18 **OTHER JURISDICTIONS TO ADDRESS THE SPECIFIC NEEDS OF**
19 **ALUMINUM SMELTERS. PLEASE PROVIDE THAT INFORMATION.**

20 A: As I explained above, aluminum smelters are uniquely energy intensive and
21 sensitive to the price of electricity. As a result, the number of smelters remaining
22 in the U.S. has declined dramatically. Several states, therefore, have taken steps
23 to support the continued operations of the smelters in their state and to protect the

1 high paying jobs. I have been involved in the negotiation of rates in Kentucky,
2 Ohio and West Virginia. In broad terms, the regulatory treatment has included
3 discounted rates in return for a commitment from the smelter to make capital
4 investments and retain a certain employment level. In some cases, the treatment
5 has tied the discount to the price of aluminum on the London Metal Exchange.

6 **Q: WOULD YOU PLEASE PROVIDE SOME SPECIFIC EXAMPLES?**

7 A: In Ohio, for example, pursuant to legislation passed to attract and retain energy-
8 intensive industry, the Public Utilities Commission of Ohio approved a 10-year
9 contract that provided a discounted rate tied to the LME and employment level at
10 the smelter. To the extent that the rate paid by the Hannibal aluminum smelter is
11 less than the tariff, the shortfall is allocated to other customers

12 In West Virginia, the Public Service Commission of West Virginia approved a
13 Special Contract for the Ravenswood smelter which indexed the price paid for
14 electricity to the LME; nonetheless, the smelter was shut down in 2009. However
15 since that time, in an effort to support a restart of the smelter, the legislature
16 passed a bill that provided a mandate for the Commission to approve special
17 contracts for energy intensive industry to attract and retain jobs; the legislation
18 authorizes the commission to allocate to other customers any shortfall created. In
19 addition, efforts are currently underway to determine if there are additional
20 mechanisms for the state to provide supplemental support

21 **Q: Does this conclude your testimony at this time?**

22 A: Yes, it does.

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STATE OF OHIO)

COUNTY OF FRANKLIN)

SS

Affidavit of Henry Fayne

Henry Fayne, being first duly sworn, on his oath states:

1. My name is Henry Fayne. I am a consultant residing at 1980 Hillside Drive, Columbus, Ohio 43221.

2. Attached hereto, and made a part hereof for all purposes, is my direct testimony, which was prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. ER-2011-0028.

3. I hereby swear and affirm that the testimony is true and correct.


Henry Fayne

Subscribed and sworn to before me this 9th day of February, 2011


Notary



JOSHUA J. WHITE
Notary Public, State of Ohio
My Comm. Expires Sept. 17, 2014

**ALUMINUM SMELTERS
COST OF ELECTRICITY
FOR THE YEAR 2010**

	Smelter	Company Owner	Smelter Production (000 TPY)	Cost of Electricity (\$/Mwh)
1	Ferndale	Italco	169.2	55.29
2	Mt. Holly	Century	223.0	51.56
3	New Madrid *	Noranda	255.9	38.05
4	Warrick	Alcoa	271.7	32.13
5	Hannibal	Ormet	183.3	31.46
6	Hawesville	Century	199.2	31.27
7	Sebree	Alcan	195.1	28.87
8	Massena West	Alcoa	130.0	18.38
9	Wenatchee	Alcoa	99.7	15.72
	TOTAL USA		1,727.1	35.26
	GLOBAL (Excl USA & China)		23,387.0	27.13

* Proforma cost of electricity projected to be \$43.60 if the proposed AmerenUE rate increase is approved

Source: CRU, an independent business analysis and consultancy group focused on mining, metals, power, cables, fertilizer and chemical sectors