

Exhibit No.:  
Witness: Keith Gregston  
Type of Exhibit: Direct Testimony  
Issue: Rate Design/Noranda Impact  
Sponsoring Party: Noranda Aluminum, Inc.  
Case No.: ER-2010-0036

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

**In the Matter of Union Electric  
Company, d/b/a AmerenUE's  
Tariffs to Increase Its Annual  
Revenues for Electric Service**

**Case No. ER-2010-0036**

**Direct Testimony of Keith Gregston**

On behalf of

**Noranda Aluminum, Inc.**

January 6, 2010

*Noranda*  
**Exhibit No. 422**  
**Date 3-26-10 Reporter pf**  
**File No. ER-2010-0036**

BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI

In the Matter of Union Electric  
Company, d/b/a AmerenUE's  
Tariffs to Increase Its Annual  
Revenues for Electric Service

Case No. ER-2010-0036

STATE OF MISSOURI )

SS

COUNTY OF ST. LOUIS )

Affidavit of Keith Gregston

Keith Gregston, being first duly sworn, on his oath states:

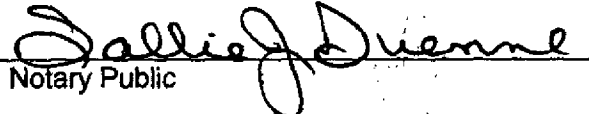
1. My name is Keith Gregston. I am the Executive Director of the Primary Metal Business and, until January 4, 2009, was President and General Manager of Noranda Aluminum, Inc., having its principal place of business at 391 St. Jude Industrial Park, New Madrid, Missouri 63869. Noranda is Union Electric Company's largest customer.

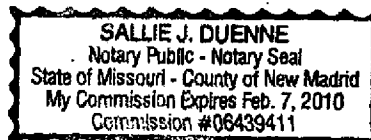
2. Attached hereto and made a part hereof for all purposes is my direct testimony, which was prepared in written form for introduction into evidence in Missouri Public Service Commission Case No. ER-2010-0036.

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

  
Keith Gregston

Subscribed and sworn to before me this 5 day of January, 2010.

  
Notary Public



**Direct Testimony of Keith Gregston**

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

2    A     Keith Gregston. My business address is 391 St. Jude Industrial Park, New Madrid,  
3           Missouri 63869.

4  
5    **Q     WHAT IS YOUR OCCUPATION?**

6    A     I was the President and General Manager of Noranda Aluminum, Inc. ("Noranda")  
7           from 2004 until January 4, 2010. Currently my title is Executive Director of Primary  
8           Aluminum. I am familiar with, and was responsible for, all aspects of Noranda's  
9           operations.

10

11   **Q     PLEASE DESCRIBE THE BUSINESS OF NORANDA.**

12   A     Noranda operates an aluminum smelter near New Madrid, Missouri ("New Madrid  
13           Smelter"), where it produces molten aluminum and later converts the molten  
14           aluminum to aluminum products such as billet, rod, foundry products and primary  
15           ingots. The New Madrid Smelter has been in operation since February 25, 1971.  
16           There, its primary product inputs are electricity and alumina. The alumina is delivered  
17           via barge over the Mississippi river. Alumina, also known as aluminum oxide, is  
18           produced from bauxite ore. Noranda processes the alumina through three production  
19           lines (pot lines). The pot lines contain reduction cells, or "pots," which are large steel  
20           containers lined with carbon. Within these pots, alumina is dissolved in a molten salt  
21           called cryolite. When a carbon electrode (anode) is lowered into the molten salt,  
22           direct current flows from the anode through the molten salt to the carbon cathode  
23           lining of the pot. The electric current breaks the bond between the aluminum and

1 oxygen atoms of the alumina with the oxygen atoms attaching themselves to the  
2 carbon atoms from the anode and the aluminum is set free. The aluminum, being  
3 heavier than the cryolite, settles to the bottom of the pot where it is removed on a  
4 daily basis. The reaction requires an enormous amount of electricity. Electricity must  
5 be constantly available to the pots since the pots will be damaged if the liquid metal  
6 resulting from electrolysis solidifies inside of the pots. When at full production, the  
7 smelter produces over 260,000 metric tons of aluminum per year. The aluminum is  
8 sold into a market that is a world market.

9  
10 **Q WHAT OTHER POSITIONS HAVE YOU HELD WITH NORANDA?**

11 **A** I have worked at the New Madrid Smelter since April 1972. Prior to becoming the  
12 President and General Manager, I was the Director of Operations. I have also served  
13 as an Operations Manager and an engineer. I have a metallurgical engineering  
14 degree from the University of Kentucky, which I obtained in 1971. I also graduated  
15 from the University of Michigan's Business School's Manufacturing Executive  
16 Program in 1998.

17  
18 **Q ARE YOU FAMILIAR WITH THE OPERATIONS OF THE NEW MADRID SMELTER,**  
19 **INCLUDING THE ECONOMICS OF PAST AND CONTINUED OPERATIONS OF**  
20 **THE SMELTER?**

21 **A** Yes.

22  
23 **Q ARE YOU FAMILIAR WITH THE LABOR FORCE USED AT THE NEW MADRID**  
24 **SMELTER?**

25 **A** Yes.

1 Q ON WHOSE BEHALF ARE YOU APPEARING IN THIS PROCEEDING?

2 A Noranda.

3

4 Q WHY IS NORANDA INTERESTED IN THIS PROCEEDING?

5 A As indicated, the New Madrid Smelter uses large quantities of electricity in its  
6 aluminum production operations and it purchases that electricity from Union Electric  
7 Company. When the New Madrid Smelter is at full production, at current electric  
8 rates it pays Union Electric Company approximately \$140 million for electricity each  
9 year. That cost represents a little less than one-third of the New Madrid Smelter's  
10 cost of producing aluminum products and that cost would increase approximately 18  
11 percent, or approximately \$24 million, if Union Electric Company were granted the full  
12 amount of the increase that it has requested. This proceeding will have a substantial  
13 impact on the New Madrid Smelter's cost of doing business and its continued viability  
14 in Missouri, and thus we are vitally interested in the outcome of this proceeding.

15

16 Q WHAT IS THE PURPOSE OF YOUR TESTIMONY IN THIS PROCEEDING?

17 A First, to emphasize the importance to the New Madrid Smelter of having electricity  
18 costs that will allow it to remain viable. Second, to explain from my perspective why a  
19 sustainable electric rate for the New Madrid Smelter is not only in its best interest but  
20 in the public interest as well.

21

22 Q WHAT STEPS HAS THE NEW MADRID SMELTER TAKEN TO REDUCE ITS  
23 COSTS?

24 A The New Madrid Smelter recently took the unparalleled step of reducing its workforce  
25 by approximately twenty percent, from 1,120 employees to approximately 900

1 employees. In addition, the New Madrid Smelter has worked with its other suppliers  
2 on cost reduction measures.

3  
4 **Q HAS THE NEW MADRID SMELTER TAKEN ANY STEPS TO REDUCE ITS**  
5 **CONSUMPTION OF UTILITIES, INCLUDING ELECTRICITY?**

6 **A** Yes. In 2006, the New Madrid Smelter purchased a computerized system, called  
7 "PI," to monitor, track and more efficiently consume electricity and natural gas.  
8 Specifically, the system monitors all furnace natural gas usage and electricity usage  
9 at the smelter. That monitoring and tracking is specific to each melting, holding or  
10 bake furnace and each high to low voltage transformer at the smelter. PI is also used  
11 to track energy consumption by monitoring and tracking compressed air usage to  
12 maximize compressor system efficiency. By using PI, the New Madrid Smelter's  
13 management can monitor and track any point of energy use at the smelter and, as a  
14 result, the smelter has become more energy efficient.

15 In 2008, the New Madrid Smelter installed upgraded bake furnace firing  
16 systems which reduced natural gas consumption in the bake furnaces by 5 percent.

17 For 2010, the New Madrid Smelter has a project to replace metal halide high  
18 bay lights with fluorescent lights. This measure is expected to save 8,000 MWhs of  
19 electricity annually. It also is altering its operations to shut down water treatment  
20 pumps when they are not required. This is expected to save more than 700 MWhs of  
21 electricity annually. It also will have installed programmable thermostats in its office  
22 building in order to reduce electric and gas consumption there.

23 Last, the New Madrid Smelter has been approved to participate in a US  
24 Department of Energy "Save Energy Now" program. The New Madrid Smelter  
25 expects to obtain additional savings on its utilities as a result of that participation.  
26

1 Q HAS THERE BEEN A RECENT DISRUPTION OF POWER TO THE NEW MADRID  
2 SMELTER?

3 A Yes.

4

5 Q PLEASE EXPLAIN WHAT PRECIPITATED THAT LOSS OF POWER.

6 A In late January 2009 an ice storm hit Southeast Missouri. That storm downed many  
7 power lines outside of the facility's fence lines, eventually resulting in the loss of  
8 power to the facility. The loss of power was so significant that the smelter's pots  
9 "froze," resulting in a shutdown of 75% of the production capacity and damage to the  
10 pots.

11

12 Q HAS THE NEW MADRID SMELTER FULLY RECOVERED FROM THE OUTAGE?

13 A Not yet. However, we do have two of our three production lines back in full operation,  
14 and 47% of our third pot line has been returned to operation. We hope to have the  
15 third line in full operation before April 2010.

16

17 Q WHAT IMPACT DID THE POWER OUTAGE HAVE ON YOUR EMPLOYEES?

18 A We made the decision that the right thing to do was to not lay off any of our  
19 employees as a result of the power outage and to use them, to the extent possible, to  
20 repair the damage and return the pots lines to operation.

21

22 Q EARLIER YOU INDICATED THAT YOU WOULD ADDRESS WHY A  
23 SUSTAINABLE ELECTRIC RATE FOR THE NEW MADRID SMELTER WAS IN  
24 THE PUBLIC INTEREST. WHY IS SUCH A RATE IN THE PUBLIC INTEREST?

25 A I have lived and worked in Southeast Missouri for almost forty years, so I am familiar  
26 with Missouri in general and Southeast Missouri in particular. The New Madrid

1 Smelter is one of the largest, if not the largest, employer in Southeast Missouri. With  
2 respect to the State of Missouri, the New Madrid Smelter is an exporter, meaning that  
3 revenues from products mostly sold outside of the state flow into Missouri. The New  
4 Madrid Smelter pays wages that are significantly higher than other employers in  
5 Southeast Missouri. In addition, the New Madrid Smelter pays significant property  
6 taxes that keep the school systems viable. The poor economy has had an impact on  
7 everybody, but Southeast Missouri seems to be particularly hard hit. It is vital to our  
8 employees, to their families, to the community, to the merchants that our employees  
9 frequent, to our vendors and to their families, that the New Madrid Smelter remain  
10 viable. In order for the New Madrid Smelter to remain viable, it is absolutely critical  
11 that the smelter reduce its costs of operation, and the smelter's single largest cost  
12 remains its cost of electricity.

13

14 **Q DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?**

15 **A** Yes, it does.