

Exhibit No.:  
Issues: Noranda Operations,  
Aluminum Industry and  
Fuel Adjustment Clause  
Witness: Donald Johnstone  
Type of Exhibit: Direct Testimony  
Sponsoring Party: Noranda  
Case Number: ER-2008-0318  
Date Testimony Prepared: August 28, 2008

AmerenUE

Case No. ER-2008-0318

Prepared Direct Testimony of

**Donald E. Johnstone**

On behalf of

Noranda Aluminum, Inc.

August 2008

BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI

In the Matter of Union Electric Company )  
d/b/a AmerenUE for Authority to File Tariffs )  
Increasing Rates for Electric Service )  
Provided to Customers in the Company's )  
Missouri Service Area. )

ER-2008-0318

AFFIDAVIT OF DONALD E. JOHNSTONE

STATE OF MISSOURI )  
COUNTY OF Jackson ) ss

Donald E. Johnstone, of lawful age, on his oath states: That he has reviewed the attached written testimony in question and answer form, all to be presented in the above case, that the answers in the attached written testimony were given by him; that he has knowledge of the matters set forth in such answers; that such matters are true to the best of his knowledge, information and belief.

Donald E. Johnstone  
Donald E. Johnstone

Subscribed and sworn to before me this 28<sup>th</sup> day of August, 2008.

Angela Hedges  
Notary Public

[SEAL]

My Commission expires: 8-15-09



Before the  
Missouri Public Service Commission

AmerenUE

Case No. ER-2008-0318

**Prepared Direct Testimony of Donald E. Johnstone**

1 Q PLEASE STATE YOUR NAME AND ADDRESS.

2 A My name is Donald E. Johnstone and my address is 384 Black Hawk Drive, Lake  
3 Ozark, Missouri, 65049.

4 Q BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

5 A I am employed as President of Competitive Energy Dynamics, L. L. C.

6 Q PLEASE SUMMARIZE YOUR EDUCATION AND EXPERIENCE.

7 A I have a bachelor's degree in electrical engineering from the University of  
8 Missouri at Rolla and I hold a master of business administration degree from  
9 Oklahoma City University. After five years of military service I have spent 35  
10 years working in the utility industry, first as an employee of an electric utility  
11 in the power operations and corporate planning departments. I have been

1 consulting in utility regulatory matters since 1981. My qualifications and  
2 experience are set forth in more detail in Appendix A.

3 **Q WHAT ARE THE PURPOSES OF YOUR TESTIMONY?**

4 **A** In this testimony I will introduce the witnesses appearing on behalf of Noranda,  
5 describe the service requirements of the Noranda Smelter, and describe  
6 aspects of the aluminum industry important to the matter at hand. I will also  
7 address the AmerenUE proposal for a fuel adjustment clause (FAC).

8 Noranda uses electricity provided by AmerenUE in its Smelter located in  
9 New Madrid County close to the town of New Madrid. In this testimony I will  
10 refer to the Noranda facility as the "Smelter."

11 **Q WHAT OTHER TESTIMONIES ARE BEING SUBMITTED FOR NORANDA?**

12 **A** Senator Robert Mayer and Representative Steve Hodges are providing  
13 testimonies that address the importance of Noranda as a socially responsible  
14 corporate resident of the State of Missouri. Commissioner Mark Baker of New  
15 Madrid County and Mr. Harvey Cooper of the Community Sheltered Workshop  
16 describe important contributions of Noranda to the Southeastern region. Mr.  
17 Steve McPheeters provides a factual perspective on Noranda as a part of the  
18 aluminum industry and also describes many of the favorable impacts of  
19 Noranda on the region, the State, and the Nation.

1 **SUMMARY**

2 Q PLEASE SUMMARIZE YOUR TESTIMONY.

3 A

- 4 • The continued operation of the Noranda Smelter is a matter of vital interest to  
5 the region and the State of Missouri, as further explained in the testimonies of:
  - 6 ○ Senator Mayer,
  - 7 ○ Representative Hodges,
  - 8 ○ Commissioner Baker,
  - 9 ○ Mr. Cooper, and
  - 10 ○ Mr. McPheeters.
- 11 • The Smelter provides revenues of roughly \$130 million per year while  
12 consuming 475 MW of electricity around the clock.
- 13 • The Smelter is in an industry with a history of decline in the United States, due  
14 in large part to the cost of electricity.
- 15 • The Smelter operates in a competitive world market such that cost increases  
16 cannot be passed on to customers.
- 17 • The Smelter is working aggressively on all fronts to provide a secure and  
18 profitable future - to the benefit of all concerned.
- 19 • The Ameren proposal for an FAC should be rejected because
  - 20 ○ the financial incentive for AmerenUE to minimize costs would be  
21 eviserated,
  - 22 ○ the insured cost of replacement power due to generator outages would  
23 create a rate yo-yo with rates going up and going down needlessly,
  - 24 ○ consumers would be put in the position of insuring the replacement  
25 power costs of every outage, large and small, subject only to  
26 imprudence investigations months or years later,
  - 27 ○ the larger issue of the AmerenUE financial health cannot be solved with  
28 the proposed FAC and needs to be considered in a separate proceeding.
  - 29

1 Q UNDER WHAT RATE DOES AMERENUE PROVIDE SERVICE TO THE SMELTER?

2 A AmerenUE provides service to the Smelter under the Large Transmission Service  
3 rate schedule. The service provided is firm and the Smelter consumes  
4 approximately 475MW around the clock - seven days a week. A measure of the  
5 Smelter's consistent use of the AmerenUE facilities is the ratio of the average  
6 use of electricity as compared to the peak use. In the Smelter's case the  
7 comparison is captured in a load factor of 98%. This leads to the efficient use  
8 of the Ameren facilities and services with one important result being a lower  
9 average cost per kWh delivered to the Smelter.

10 **PUBLIC INTEREST CONSIDERATIONS**

11 Q WHAT ARE THE PUBLIC INTEREST CONSIDERATIONS RELATED TO ELECTRIC  
12 UTILITY SERVICE FOR NORANDA?

13 A First, along with many other Missouri residents and businesses, the Smelter  
14 shares an interest in reliable and economical cost-based electrical service. In  
15 the particular case of the Smelter the dual needs for service that is economical  
16 as well as highly reliable are particularly critical due to the use and impact of  
17 electricity on the smelting operations.

18 On another level, the Smelter makes many contributions to the public  
19 interest in both economic and social terms. Those contributions include jobs,  
20 payroll, purchases from local suppliers, taxes, and many leadership

1 contributions to the communities surrounding the Smelter. Also, to state the  
2 obvious, the Smelter is making a very large energy purchase from another  
3 Missouri company, AmerenUE. Senator Mayer, Representative Hodges,  
4 Commissioner Mark Baker, Mr. Harvey Cooper, and Mr. Steve McPheeters  
5 explain the importance of the Smelter to Missouri in their testimonies.

## 6 **SMELTER PRODUCTS AND ELECTRICITY REQUIREMENTS**

7 **Q PLEASE DESCRIBE THE PRODUCTS PRODUCED BY THE NORANDA SMELTER**  
8 **AND THE MARKET INTO WHICH THE PRODUCTS ARE SOLD.**

9 **A** The plant produces four products: billet, rod, foundry products and primary  
10 ingots. The products are sold into markets that in most respects are world  
11 markets. Of course, the Smelter strives to exploit both its abilities to serve  
12 niches and its mid-continent location to sell to regional customers within the  
13 market. With respect to the State of Missouri, the Smelter is an export  
14 industry. This means that revenue from products sold mostly outside of  
15 Missouri flows into the State.

16 **Q PLEASE DESCRIBE THE PROCESS USED TO SMELT ALUMINUM.**

17 **A** The plant receives alumina via barge over the Mississippi river. The alumina is  
18 offloaded from the barges and moved to the Smelter by conveyer. There it is  
19 processed in one of the three production lines (pot lines) where electricity is  
20 used to break the bond between aluminum and oxygen in the alumina. The pot

1 lines operate at a high level of efficiency, over 90%, and the Noranda  
2 continuously strives for additional improvements. Generally the finished  
3 products are shipped via truck and to a lesser extent by rail.

4 Q OVER THE PERIOD OF A YEAR WHAT WILL BE THE APPROXIMATE QUANTITIES  
5 OF ALUMINUM PRODUCED AND ELECTRICITY CONSUMED?

6 A On an annual basis the plant will produce 571 million pounds of aluminum and  
7 consume about 4.1 million MWh (475 MW at 98% load factor). During the test  
8 year the amount paid to AmerenUE was roughly \$130 million.

9 Q PLEASE DESCRIBE SOME OF THE IMPORTANT CHARACTERISTICS OF THE  
10 ELECTRICITY REQUIREMENTS OF THE SMELTER.

11 A First and foremost the supply must be reliable. The smelting process is  
12 continuous and cannot be cycled on and off. Any unmanaged interruption of  
13 the supply beyond an hour is very serious and would be likely to cause  
14 extensive damage to the process and create a major capital expense to repair  
15 and rebuild. The Smelter cannot predict with any certainty the future  
16 economic and operational impact should a major interruption occur in spite of  
17 all efforts to provide a reliable supply of power; the consequences could be so  
18 severe as to result in a permanent closure of the plant. Consequently,  
19 AmerenUE's ability to provide reliable service is extremely important.



1           Equally important is the impact of the cost of electricity on the  
2           economic viability of the plant. Electricity costs are important because  
3           electricity represents approximately 1/3 of the Smelter's operating cost and is  
4           the single largest operating cost. The Smelter's ability to remain viable  
5           depends on maintaining its ability to deliver a competitively priced product.  
6           Electricity has a large part to play in that. Of course, the prevailing market  
7           prices received for the products produced and other costs are all also  
8           important considerations. Although the Smelter is large, it is not a market  
9           maker so it must accept the market prices. Therefore, it is critical that all  
10          costs, and electricity in particular as the largest single cost, remain economical  
11          and under control.

## 12    NORANDA AS A PARTICIPANT IN THE ALUMINUM INDUSTRY

13   Q     WHAT HAS BEEN THE HISTORY OF ALUMINUM SMELTERS IN THE UNITED  
14           STATES?

15   A     The number of smelters and the quantity of primary aluminum produced in the  
16           US has been in general decline for many years. Given the electrical intensity of  
17           the smelting process there is no doubt that the cost of electricity has been a  
18           devastating consideration for most - perhaps all - of the smelters that have  
19           closed. The Noranda Smelter is a survivor.

1 Q IS NORANDA ACTIVELY MAKING PLANS TO SURVIVE AND SUCCEED IN THE  
2 FUTURE?

3 A Yes. I have been directly involved in their procurement of electricity for more  
4 than 10 years. The focus has always been on reliability and cost. That focus  
5 continues and is stronger than ever. Noranda is actively working on every  
6 aspect of their business to make it a stronger competitor with a cost structure  
7 that will enable it to continue to supply an expanding market. The continuing  
8 goal is a sustainable operation.

9 Q IS GROWTH A PART OF THE EQUATION?

10 A Yes. The Smelter is working on plans which, when they come to fruition, will  
11 further increase efficiency, increase production, and spread fixed costs over  
12 more units of production. One effect is to increase the consumption of  
13 electricity as a part of plans to increase its productive efficiency.

14 Q IS NORANDA FOCUSING ON ALL ASPECTS OF ITS OPERATION?

15 A Yes. While the importance of electricity looms large as the single largest cost,  
16 every aspect of the operation is under scrutiny for improvement. The  
17 objective is to pursue and achieve every measure that is necessary to secure a  
18 stable and profitable operation for years to come.

1 **FUEL ADJUSTMENT CLAUSE**

2 Q IS THE AMERENUE PROPOSAL FOR A FUEL ADJUSTMENT CLAUSE (FAC) A  
3 GOOD APPROACH TO RATEMAKING FROM THE PERSPECTIVE OF THE  
4 SMELTER?

5 A No. An FAC would increase the volatility of the cost of electricity for the  
6 Smelter and a particular concern is the possibility of large increases in cost for  
7 the Smelter. These concern are heightened because the proposal reduces the  
8 financial incentive for AmerenUE to control the net costs that would be subject  
9 to the proposed FAC, because the proposal would swap out regulatory oversight  
10 for the important financial incentives inherent in the traditional Missouri base  
11 rate approach to regulation, and because it would reduce the effectiveness of  
12 regulation as to several important consumer protections inherent in the  
13 traditional Missouri approach.

14 **FAC - FINANCIAL INCENTIVES**

15 Q WHY IS THE SMELTER CONCERNED WITH THE EFFECT OF THE FAC ON  
16 INCENTIVES?

17 A Financial incentive is a fundamental driving force in the free enterprise  
18 approach to markets and the economy. It is most certainly a driving force for  
19 the Smelter in that it must deliver its products at a competitive price in a  
20 world market to survive and prosper.

1 Q IS THE FACT THAT AMERENUE IS AN INVESTOR OWNED UTILITY RELEVANT?

2 A Yes. Of course, Missouri's electric utility industry continues to operate in the  
3 traditional regulatory fashion. It has neither been deregulated nor  
4 restructured as has occurred in some states. AmerenUE therefore remains a  
5 traditional regulated monopoly. There is the service obligation of AmerenUE  
6 that is a part of the consideration - with the benefits and obligations of a  
7 service franchise.

8 Q IN THE CONTEXT OF A STATE THAT CONTINUES WITH TRADITIONAL  
9 REGULATION OF INVESTOR OWNED ELECTRICITY SUPPLIERS, ARE THERE  
10 ALTERNATIVES TO THE INVESTOR OWNED UTILITY STRUCTURE?

11 A Yes. We have examples of several alternatives in Missouri, all with important  
12 distinctions. Alternative forms of organization include (1) investor owned  
13 regulated utilities such as AmerenUE, (2) public ownership such as the many  
14 municipal utilities in the State, and (3) the structure of the electric  
15 cooperatives that are by and large owned by their customers. Of the three,  
16 investor owned utilities have the highest financial costs largely because of the  
17 cost of investor supplied capital and income tax. In theory, an investor owned  
18 utility (IOU), in spite of the higher financial costs, may be preferred to either a  
19 publicly owned utility or a cooperative because the financial incentives  
20 inherent in the IOU structure lead to more efficient and economical service.  
21 However, if the financial incentives are not maintained, are not effective, or

perhaps even not needed as AmerenUE in part argues, then it would be logical to consider a move to a different form of ownership that would inherently lower the financial costs. Conversely, with the investor owned structure, financial incentives are essential to promote an economical result for consumers.

## **FAC - FINANCIAL RATINGS CONSIDERATIONS**

**Q WHAT IS THE PURPOSE OF FINANCIAL RATINGS OF AMERENUE?**

A The ratings provide an indication of AmerenUE's financial strength and the cost of capital.

**Q IS AMERENUE ONE PART OF A HOLDING COMPANY**

A Yes. That means that factors beyond any action of the Commission in this rate proceeding are also relevant to the ratings that effect AmerenUE. In other words, the circumstances of other affiliates are also a consideration for the rating agencies. However, it does not follow that circumstances of affiliates ought to effect rates or rate policy for AmerenUE.

**Q IS THE EXISTENCE OF AN FAC A CONSIDERATION IN THE FINANCIAL RATINGS?**

A The existence of an FAC is considered. However, AmerenUE has operated without an FAC for many years and the ratings have gone up and down in response to factors other than the FAC. There has been no FAC in years.

1           The primary focus of the Commission regarding the FAC should not be on  
2       comments of the ratings agencies, but rather on good regulatory policy and  
3       equitable decisions for customers and AmerenUE.

4    **FAC - THE RELEVANCE OF CAPITAL EXPANSION PLANS**

5    Q     **ARE THE CAPITAL EXPANSION PLANS OF AMERENUE AN IMPORTANT**  
6       **CONSIDERATION IN REGARD TO THE PROPOSED FAC?**

7    A     Yes. In my opinion it is the capital expansion plans that are the primary source  
8       of the financial strains. In MPSC Case No. EO-2007-0409 Noranda recently filed  
9       a statement expressing concerns with AmerenUE's compliance with the  
10      Integrated Resource Plan (IRP) rule. The revenue requirements modeled by  
11      AmerenUE in the IRP lead to a pattern of declining financial health and in  
12      Noranda's opinion and do not appear to be consistent with the requirements of  
13      the Commission's IRP rule.

14           In its recent statement Noranda also suggested that Commission  
15      guidance is needed to establish a method for providing the revenues necessary  
16      to maintain AmerenUE's financial health during anticipated capital expansion.  
17      I renew that recommendation. While I cannot predict the result, it is apparent  
18      that adoption of an FAC before the problem is thoroughly aired is simply  
19      premature. There is a problem, but it is not a problem that can be solved by  
20      adoption of an FAC in this proceeding because an FAC alone cannot reach the  
21      underlying problem.

1 **FAC - REGULATORY BURDEN**

2 Q WOULD AN FAC REDUCE THE REGULATORY BURDEN ASSOCIATED WITH THE  
3 SUBJECT COSTS AND REVENUES?

4 A No. It would instead increase the burden on the Commission, its staff, and  
5 every party that is concerned about the level of rates. There would be  
6 generating unit efficiency tests, surveillance reports, rate filings every four  
7 months and annual prudence reviews. Inasmuch as the prudence reviews would  
8 be the primary defense against excessive costs flowing to customers, the  
9 regulatory burden would be substantial. The burden leads to additional costs  
10 for regulators and, in turn, customers. While consumers would bear all of the  
11 additional regulatory costs, they in return would be left with not only higher  
12 and more volatile rates, but with fewer consumer protections under the  
13 AmerenUE proposal.

14 **FAC - MISSING CONSUMER PROTECTIONS**

15 Q WHAT ARE THE MISSING CONSUMER PROTECTIONS?

16 A Certainly a fundamental problem for consumers would be the trade off of a  
17 diminished financial incentive and the substitution of limited regulatory  
18 oversight in its place. The thousands of decisions related to fuel costs cannot  
19 possibly be individually reviewed for prudence so that once the financial  
20 incentive is eviscerated, consumers in many respects are left with little but  
21 good intentions.

1           Another fundamental issue is the automatic nature of the pass through  
2           of higher costs that are not caused by changes in the price paid for fuel. At  
3           first blush it might seem that the only benefit provided to AmerenUE by its  
4           proposed FAC is a protection from allegedly volatile fuel costs<sup>1</sup> by shifting the  
5           burden to ratepayers. But there is another benefit for AmerenUE at the  
6           expense of ratepayers. Under the proposed FAC there is tremendous erosion in  
7           the protection of consumers from extraordinary replacement power costs in the  
8           event of the outage of a low cost generator.

9    **Q    HOW WOULD THE OUTAGE OF A LOW COST GENERATOR INFLUENCE THE**  
10   **TOTAL COST THAT WOULD BE COLLECTED FROM RATEPAYERS UNDER THE**  
11   **PROPOSED FAC?**

12   **A**One obvious consideration in the determination of fuel cost is generating unit  
13           efficiency. As required by the Commission's FAC rule, there would be a testing  
14           program to monitor generating unit efficiencies. But also important is whether  
15           or not a generator, regardless of its efficiency, is available for service. Yet  
16           there is no mechanism to protect consumers from an increase in FAC rates in  
17           the event of a generator outage.

18           The additional cost due to an outage would take the form of higher fuel  
19           and purchased power costs, and lower off-system sales revenues, all of which

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<sup>1</sup> I do not agree that the fuel costs are sufficiently volatile and beyond the control of management to warrant the proposed FAC.



1 could be due to an equipment failure or an accident involving any base load  
2 generating unit.

3 Q HAS AMEREN PROTECTED ITSELF FROM THESE COSTS HISTORICALLY?

4 A Yes. In fact, Ameren has long had a policy of insuring against such exigencies.  
5 In the proposed FAC, AmerenUE expands the protections in two ways - both at  
6 the expense of customers.

7 First even though there would be insurance coverage for some of the  
8 increased costs (assuming AmerenUE continues to purchase the insurance), all  
9 of the costs, including the portion covered by insurance would be passed to  
10 customers. With a yo-yo effect rates would first go up to recover the insured  
11 costs and then later go down to refund the insured portion of the costs. In  
12 other words, the FAC as proposed would immediately pass through such cost  
13 increases to consumers and there would be a credit later to the extent of the  
14 insurance proceeds, if any.

15 Second, although insurance is purchased to cover some of the cost of  
16 some of the outages, customers would be required to cover the replacement  
17 power costs of every outage. There is no minimum. There is no maximum.  
18 Every loss is automatically covered by the operation of the FAC. All costs  
19 would flow to customers in the FAC rate, subject only to the ability of the  
20 regulatory process to identify imprudence months or even years after the fact.  
21 In contrast to the current situation where AmerenUE must submit a claim to an

1 insurance provider, there would be no claim process. With the proposed FAC  
2 AmerenUE will have all of the money in the bank and the burden of getting  
3 anything back for customers would fall to regulators and customers.

4 In stark contrast, assuming base rate regulation continues, the causes of  
5 any outages, the increases in cost, and the potential and/or reality of  
6 insurance proceeds will all be available for consideration before rates are  
7 changed. Moreover, rates will be more stable because they will change less  
8 frequently and they will be based on normal levels of generator availability.  
9 But an overriding point is that AmerenUE will have a continuing financial  
10 incentive to minimize the costs.

11 Q DID THE COMMISSION REJECT THE AMEREN PROPOSAL FOR AN FAC IN  
12 AMERENUE'S LAST RATE CASE?

13 A Yes.

14 Q DO YOU RECOMMEND REJECTION OF THE CURRENT FAC PROPOSAL?

15 A Yes.

16 Q DOES THIS CONCLUDE YOUR TESTIMONY AT THIS TIME?

17 A Yes it does.

## Appendix A

### Qualifications of Donald E. Johnstone

1 Q PLEASE STATE YOUR NAME AND ADDRESS.

2 A Donald E. Johnstone. My address is 384 Black Hawk Drive, Lake Ozark, MO  
3 65049.

4 Q PLEASE STATE YOUR OCCUPATION.

5 A I am President of Competitive Energy Dynamics, L. L. C. and a consultant in the  
6 field of public utility regulation.

7 Q PLEASE SUMMARIZE YOUR EDUCATIONAL BACKGROUND AND EXPERIENCE.

8 A In 1968, I received a Bachelor of Science Degree in Electrical Engineering from  
9 the University of Missouri at Rolla. After graduation, I worked in the customer  
10 engineering division of a computer manufacturer. From 1969 to 1973, I was an  
11 officer in the Air Force, where most of my work was related to the Aircraft  
12 Structural Integrity Program in the areas of data processing, data base design  
13 and economic cost analysis. Also in 1973, I received a Master of Business  
14 Administration Degree from Oklahoma City University.

15 From 1973 through 1981, I was employed by a large Midwestern utility  
16 and worked in the Power Operations and Corporate Planning Functions. While  
17 in the Power Operations Function, I had assignments relating to the peak

1 demand and net output forecasts and load behavior studies which included such  
2 factors as weather, conservation and seasonality. I also analyzed the cost of  
3 replacement energy associated with forced outages of generation facilities. In  
4 the Corporate Planning Function, my assignments included developmental work  
5 on a generation expansion planning program and work on the peak demand and  
6 sales forecasts. From 1977 through 1981, I was Supervisor of the Load  
7 Forecasting Group where my responsibilities included the Company's sales and  
8 peak demand forecasts and the weather normalization of sales.

9 In 1981, I began consulting, and in 2000, I created the firm Competitive  
10 Energy Dynamics, L.L.C. As a part of my years in the consulting practice, I  
11 have participated in the analysis of various electric, gas, water, and sewer  
12 utility matters, including the analysis and preparation of cost-of-service studies  
13 and rate analyses. In addition to general rate cases, I have participated in  
14 electric fuel and gas cost reviews and planning proceedings, policy proceedings,  
15 market price surveys, generation capacity evaluations, and assorted matters  
16 related to the restructuring of the electric and gas industries. I have also  
17 assisted companies in the negotiation of power contracts representing over \$1  
18 billion of electricity.

19 I have testified before the state regulatory commissions of Delaware,  
20 Hawaii, Illinois, Iowa, Kansas, Massachusetts, Missouri, Montana, New  
21 Hampshire, Ohio, Pennsylvania, Tennessee, Virginia and West Virginia, and the  
22 Rate Commission of the Metropolitan St. Louis Sewer District.